Haptic listening
Aesthetic studies of operative traits of sensation in rock recordings

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Abstract

This thesis is the result of an investigation into rock recordings' power of endowing listening with a *haptic* function. It seeks to clarify and refine our ways of thinking, mapping, referring to and studying the sonic details that a haptic way of listening joins with. A haptic sensitivity is close-range and gradual, and a haptic way of listening consists in closely following, feeling and registering bit by bit the textures and reliefs of the sonic materials as they form and deform in their ways of flowing and vibrating. Thus, it contemplates the intricate, variegated and varying traits of the sensuous complexity of the sounds, including both their movement and complexion, as it follows differences that are intrinsic to them, instead of differences that work as formal relations imposed on them; and it encounters the forces that are rendered sonorous in this rich and intensive material heterogeneity, and what is expressed in them.

This investigation centres on the aesthetic notion of 'sensation', and on the cases when the haptic function is born of its operative traits or 'diagram'. It starts from the observation that sensation can be a primary, intense and meaningful way of making sense of a rock recording. It mainly draws on Deleuze and Guattari's philosophy and aesthetic thought, and presents a critical study, from the point of view of rock aesthetics, of the distinction they establish between, on one side, their concepts of 'intensity', 'sensation', 'haptic' and 'becoming', and on the other, the world of recognition, representation and signification. It addresses the questions and problems that haptic listening poses to our studies and discussions about sound and rock music, and to our listening practices, including some relevant distinctions that these problems demand when thinking about movement, rhythm, form, texture and timbre in music. This thesis proposes some *constructive categories* that can be useful for the aesthetic study of operative traits of sensation in rock recordings. It presents the results of an exploration of sonic differences made on the grounds of haptic sensitivity, in the form of a compendium of types of sonic haptic formations that can be found at work in rock tracks, which comprises three aspects: *grain, edge* and *consistency* (incl. density and elasticity); and eight elements: *flat fields and other long sounds; wavering fields and other wavering sounds; cuts, protuberances and hollows; glides; springs; swellings; blasts; and broken tones.* They are organised and developed as constructive categories, because their purpose is not to describe, classify and systematise these sounds, but to experiment with their variables and creative potentials of destratification, in order to address their function in a diagram that can bring forth expressive-intensive-material flows, and the new sonic formations that come across in a sensation. This investigation integrates insights from a number of other intellectuals that have given attention to these problems, such as Henri Bergson, Friedrich Nietzsche, Allan Moore, Tim Ingold, Ian Buchanan, Elizabeth Grosz and Éric Alliez. Both the examples and case studies contemplate some aesthetic principles derived from both Deleuze's Logic of Sensation and Deleuze and Guattari's work, such as neutralisation; isolation; adjacency on a single plane; deformation; zones of scrambling; and vortical movement.

Abstract and keywords of each part

Introduction: It presents and explains the philosophical and aesthetic concepts and perspectives that this thesis draws on, and the crucial questions that the problems addressed have raised. It develops arguments concerning the importance of developing a logic of sensation for rock recordings based on Deleuze and Guattari's work, and connects them with their philosophical concepts of 'intensity', 'sensation', 'becoming', 'chaos', 'passage to the limit', 'multiplicities', 'couple materials-forces', 'continuous variation', 'difference', 'repetition', 'strata' and 'diagram'. It introduces the concept of haptic listening, and the project of developing a constructive typology for sonic differences made on the grounds of *haptic sensitivity.* It ends with the acknowledgement and a brief discussion on the body of scholarship on music and Deleuze and Guattari.

Part I: It presents a series of aesthetic and philosophical considerations that concern Deleuze and Guattari's ontology of sensation, and expands on all the cardinal concepts I work with. The relevance of the notions of intensity, haptic sensitivity and sensation to the aesthetic study of rock recordings is elaborated in more detail, and with some examples. The argumentation draws on rock writer Lester Bangs's thought; Deleuze's critique of Kant and his break with phenomenology; Nietzsche's thought on vitalism, 'value' and the 'new'; and the relation Guattari has established between the negotiation between 'chaos and complexity' and the possibility of 'mutant subjectivities'. It discusses some issues around the difference between aesthetics and empirical approaches, on the basis of the difference between 'perception' and 'sensation', and between the collaboration of the faculties and the passages to the limit of sensibility, in relation to Deleuze's aesthetic notion of a 'resemblance through non-resembling means'. The ontology of sensation is condensed in terms of what I propose to refer to as an *expressive-intensive-material reality* specific to becoming, which demands connecting the project of developing constructive categories for aesthetic studies, with Deleuze and Guattari's notion of 'strata'. It presents a brief overview of the haptic tradition, centred on the thought of Herder and Riegl on aesthetics. Finally, it addresses some implications that thinking directly about the intrinsic movement of the sonic materials has to our ways of understanding the senses of movement and rhythm in music, mainly drawing on some of Bergson's postulates. *Keywords: intensity, sensation, aesthetics, the movement of the sonic materials, rock recordings, haptic sensitivity and haptic listening.*

Part II: It presents a constructive typology of sonic haptic formations oriented to the study of operative traits of sensation in rock recordings. The introduction addresses the distinction between descriptive and constructive categories. It summarises the relevance to the present purposes of Deleuze and Guattari's concept of 'strata'. It explains the practical distinction I propose to make between aspects and elements, and addresses a view on macro and micro

distinctions in terms of a continuum based on the 'molecular' level of sonic flows. It brings into play Deleuze and Guattari's relation between the 'molecular', a haptic sense of 'clarity', and 'zones of proximity' or 'zones of intensity' related to 'traits of becoming', in processes of 'becoming-other', which can be related to the aesthetic notion of a 'resemblance through non-resembling means'. It reflects on the power of 'saturation' in the diagrammatic passage to the level of intensity. It draws on useful insights by anthropologist Tim Ingold, in relation to haptic sensitivity, surfaces and cuts. It considers an elementary surface as the ground of haptic sensitivity, even in the encounter with immersive sonic materials. It ends with a brief recapitulation of the difference between pattern and flow. Different sections are dedicated to specific categories providing key defining features of certain types of sonic haptic formations with a view of their pertinence and usefulness to the study of operative traits of sensation. They are all presented in different ways and illustrated with examples. *Keywords: types of sonic haptic formations, constructive categories, strata, molecular, grain, edge, density, elasticity, penetrability/impenetrability, flat fields, wavering fields, cuts, protuberances, hollows, glides, springs, swellings, blasts and broken tones.*

Part III: In-depth aesthetic studies of individual works, applying the contents of Part I and Part II. It presents four studies or rock tracks by Nick Drake, Deerhunter, Van Morrison and Pixies. *Keywords: studying sensation, haptic listening, principles of deformation, isolation, adjacency on a single plane, neutralisation, vortical movement.*

Style Guide

All references are provided in conformity with the *MHRA Style Guide,* Third Edition (2013) in two forms: (1) When first mentioned in a chapter of the body of the thesis, the source is cited in full in a footnote; (2) Full references are also listed in an alphabetical list at the end of the thesis. Likewise, the functional elements of writing, punctuation and spelling follow the same style guide.[1]

[1] *MHRA Style Guide*, ed. by Brian Richardson, Robin Azlewood, Derek Connon, Malcom Cook, Gerard Lowe, Graham Nelson and Chloe Paver, third edition (Modern Humanities Research Association, 2013).

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Introduction

Some sensuality I can't explain
Spacemen 3, 'Transparent Radiation (Flashback)'
The Perfect Prescription, 1987

Bacon […] is one of those artists who, in the name of
a very intense life, can call for an even more intense life.
Gilles Deleuze
Francis Bacon. The Logic of Sensation, 1981

Whether our concern is to inhabit this world or to study it — and at root these are the same,
since all inhabitants are students and all students inhabitants —
our task is not to take stock of its contents but to follow what is going on.
Tim Ingold
Being Alive: Essays on Movement, Knowledge and Description, 2011

Things do not need to be hectic, fast or loud to be *intense.* This consideration applies to anything in the world, including sounds and rock recordings. *Intensity* is not restricted to certain *qualities*. The sounds of a rock recording (or of any piece of sound art or music), can be intense when they are loud, but also when they are quiet; when they are many, but also when they are a few; when they are harsh, but also when they are soft; when they are long, but also when they are short; when they are rough, but also when they are smooth; when they are variegated, but also when they are monotonous; when they move towards a climax, or when they reach it, but also when they move aimlessly; when they gain momentum, but also when they stay quiescent; when they are sharp-edged, but also when they are muffled or damped; when their pulsations accelerate, but also when they slow down; when they contract, but also when they expand, or when they dissipate; when they stand out as separate sounds, but also when they blend together; when their harmonies, melodies, metric organisations and rhythmic figures are complex, but also when they are simple; when they are unexpected, but also when they are predictable and anticipated; when they are thick, but also when they are thin; when they fade in, but also when they fade out; when the ways they change over time are marked or abrupt, but also when they are subtle or gradual; when they are polished, but also when they are raw; when they are scrambled or left to chance, but also

when they are orderly arranged or controlled; when they fall together on the beats, but also when they fall apart; when they are consonant, but also when they are dissonant; and so on. There is indeed an immensely rich variety of qualities in the sounds of rock recordings that can become relevant features in an aesthetic study. *Yet, studies based on qualities, regardless of how detailed they can get, are insufficient evidence to give an account of what makes a sonic entity intense.* They can be sufficient evidence to interpret the sonic entity in terms of representation, specification, signification, various forms of organisation and interaction, spatiotemporal relations and psychophysical responses, for example, which are all important and widely discussed subjects of scholarly enquiry around music, but none of these interpretive processes directly involves or refers to the intensity of the listening encounter.

Reflecting on the ways the sounds of a piece of music come across, and on how they relate to the ways they are crafted, performed, composed and produced, can be aimed at very different interpretive processes. I propose to focus on the distinction between two main kinds: the processes where qualities are the producers of the meaning, effect or value; and the processes where the meaning, effect or value is produced through the intensity of the encounter and qualities are only a sub-product. In the first kind, the meaning, effect or value is interpreted *on the basis* of grasping certain qualities, whether it is directly attached to them or rendered possible by them, whether via convention or via perceptual/embodied processes, like when we directly associate a rapid speed with virtuosity, or when an acceleration of the pulse of a piece of music has and animating experiential effect in ourselves. In the second kind, something else is going on.

In order to speak about *intensity* we need another kind of evidence. In my music studies, the interpretative processes I listed above (namely representation, specification, etc.) have proven unable to provide satisfactory grounds from which to explain the way I listen to and make sense of rock recordings, and more specifically in the most *intense, sensuous, invigorating, meaningful and valuable* listening encounters I have. This has led me to a quest for insight on this problem in the fields of philosophy and aesthetics, where I have found ample help — of course, not without challenges— in the concepts of 'intensity', 'sensation' and 'haptic' sensitivity, developed by philosophers Gilles Deleuze and Félix Guattari, which I have linked with some critical reflections by rock writer Lester Bangs and my own critical aesthetic studies of rock recordings.

By way of introduction, I have started from the observation that the 'intensity' of a sound cannot be attributed to the sound having this or that quality (or qualities). As copiously argued in Deleuze's corpus, *this is mainly because qualities, as well as quantities, external relations and qualitative variations, are objects of recognition, they are recognisable traits, whereas the level of experience where intensity takes place is not the level of experience where recognition takes place.* To be sure, both levels are important. One can contribute to the way

the other takes place, and they work together in the form of *passages* from one to the other, in either direction, but they are fundamentally different, and should be distinguished at any rate. Above all, recognition is not the condition of intensity and intensity should not be considered subsidiary to recognition. These different levels involve different exercises of the senses.[2] In other words, the senses are not occupied with recognising when one is in the middle of an intensity: something else needs to happen for an intensity to take place.

General goals, specific goal and structure of the introduction

This investigation has two general goals. One is to gain clarity and a deeper understanding about the kind of interpretation one is addressing, when speaking or writing about a piece of music and a listening experience. The other is to develop ways of combining comparative and non-comparative ways of thinking, and distinguishing between extrinsic relations and intrinsic differences. In line with Deleuze and Guattari, I affirm that intrinsic non-comparative differences are essential when we want to address the 'intensity' of listening, in the special cases when this intensity is directly the intensity of the sonic 'materials', 'sensation' and 'becoming'. The specific goal is *to set constructive grounds for the aesthetic study of the operative traits of sensation in rock recordings,* and to address rock recordings' power of endowing listening with a 'haptic' function. The insights I present here concern rock recordings, but this does not necessarily prevent them from being pertinent and relevant to other repertoires, which can be the matter of further investigations.

In this introductory chapter, I commence by presenting the concepts of 'intensity', 'recognition' and 'sensation', in a discussion connected with the practice of listening to rock recordings. This comprises some preliminary notes on recognition and intensity; an introduction to Deleuze's Logic of Sensation; a brief introduction to Deleuze and Guattari's view on the intensive material reality of 'sensation' and 'becoming', that is inseparable from its 'material traits of expression'; and some preliminary comments on the sense of infinity and the passage to the limit. Then, I explain what I mean by *haptic listening*, and I introduce the project of developing constructive categories for sonic differences made on the grounds of haptic sensitivity, that can be encountered in rock recordings, and, chiefly, that can be oriented to the aesthetic study of operative traits of sensation in rock recordings.

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[2] I am borrowing the expression 'exercise of the senses' from Deleuze's *Difference and Repetition*. See for example Gilles Deleuze, *Difference and Repetition,* trans. by Paul Patton (London: Bloomsbury Academic, 2014), p. 184. The opposition between 'recognition' and 'intensity' is most explicitly and extensively discussed in this book, but it is also present in all of Deleuze's and Deleuze and Guattari's books I have used in this thesis. Deleuze also traces it back to the work of other philosophers such as Nietzsche, Spinoza and Kierkegaard, and connects it to the thoughts of some artists such as Artaud, Beckett and Bacon.

INTRODUCTION TO RECOGNITION, REPRESENTATION, AND THEIR OPPOSITION TO 'INTENSITY'

In simple terms, *recognisable traits* are habitually the basis for most of our experiences and learning processes. For example, they can *specify* things and events in the world (as when we say «this is this, this is that» in the form of categories), and they can *represent* things and events of the world. These are things and events that the experiencer can *identify,* and which can provide a necessary fixedness and replaceability for various forms of organisation and interaction, and various kinds of interpretations. In its common usage, and as the verb itself indicates, *recognising* is a way of encountering something as something that one already knows. It consists in grasping a (small or large) number of cues or qualities that are enough and sufficiently invariant and homogeneous to match that already known thing, which is always a *category.* Qualities are recognisable traits and therefore also categories.[3] Chiefly, by recogni*sable* I mean that whether the traits have been recognised, are being recognised or could be recognised in the future, the kind remains the same.

As explained by Deleuze in *Difference and Repetition* (1968),[4] when something is recognised or recognisable, what is grasped is *only* what is *also* (or could *also* be) grasped by other faculties, this is why they are the object of 'common sense'.[5] I expand on this argument in I.1. A category is what can be perceived as the same thing, or similar enough to be taken as the same, *despite being sensed differently.* In this way, one, two or more different things can fall within the same category and be identified as the same thing despite their singularity or change, and despite their different nature, presentation or ways of being in different faculties or sensory domains. In this process, the encountered entity is replaced with the category, and *represented* by it. Thus, recognition and representation, as Deleuze often suggests, are deeply entangled and remain at one and the same level. They are both characterised by 'a model of cancelled difference' and their 'inability to conceive of difference in itself'.[6] 'The postulate of recognition was […] a first step towards a much more general postulate of representation',

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[3] Etymologically, the Latin root *'qualis'*, means 'of a kind, of such a kind'. Entry 'Quality', in *Oxford Dictionary of English.* Thus, it refers not to a singular trait but to *a kind* of trait, that is a *category*. This etymological meaning corresponds to the meaning of the term 'quality' I am using here, which is in line with its most common usage in academic literature.

[4] All the years provided in parentheses are the years of original publications. For all references I have used published English translations, when available.

[5] Recognition is an 'empirical exercise in which sensibility grasps only that which could also be grasped by other faculties'. Deleuze, *Difference and Repetition,* p. 184. In this thesis, I am using the terms 'the senses' and ' the faculties' in the sense used by Deleuze: 'the senses' refers to any sensory domain (e.g. visual, auditory, tactile, etc.) and 'the faculties' refers to any faculty such as 'understanding', 'imagination', 'memory', 'perception', 'conceptualisation', 'thought', and so on. Usually the term 'faculties' also includes the senses and all the different sensory domains in Deleuze's usage, and should be considered 'even for faculties yet to be discovered'. Ibid*,* p. 188.

[6] See for example, Ibid*,* p. 177-182, 140 and 223.

writes Deleuze.[7] This proposition suggests that recognition precedes and presupposes representation. However, it also suggests that the other way round is also the case, since they both *replace* the encountered difference with something else, something that stands for it, and which is therefore representing it in some way or another. Not only representation is based on grasping recognisable traits and making relations between them, but also what is recognised is always a category, and therefore already a representation. In short, *they presuppose each other.* This is not explicitly stated by Deleuze, but I think it can be clearly inferred from his work.

Overall, Deleuze's firm critique is addressed to both recognition and representation, and to their union. For example, as expressed in the following lines:

> […] how derisory are the voluntary struggles of recognition. Struggles occur only on the basis of a common sense and established values, for the attainment of current values (honours, wealth and power). A strange struggle among consciousnesses for the conquest of […] the trophy of pure recognition and representation. Nietzsche laughed at the very idea that what he called will to power could be concerned with this.[8]

I share the view that there is a radical difference between these 'struggles of recognition', on the one side, and the 'problems' that philosophy, aesthetics, and things that are objects of *intense encounters* and *really make us think,* are concerned with, on the other. I elaborate on the relevance for the present purposes of some aspects of Nietzsche's notion of 'will to power' in section I.2, for I find it helpful to keep coming back to it, in the ongoing process of elucidating what problems I find the most pressing and worthy of one's full dedication in an aesthetic practice.

According to Deleuze, there is 'an object not of recognition but of a fundamental *encounter*', which is opposed to recognition and representation.[9] According to Deleuze, this object involves a 'completely other model' required for 'the new', that can allow us to address unknown territory, as I expound in I.1.4. This has to be based on an element capable of carrying the senses and faculties 'to their respective limits', as I expound in I.1.2:

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[7] '[…] difference becomes an object of representation always in relation to a conceived identity, a judged analogy, an imagined opposition or a perceived similitude. Under these four coincident figures, difference acquires a sufficient reason in the form of a *principium comparationis*. For this reason, the world of representation is characterised by its inability to conceive of difference in itself; and by the same token, its inability to conceive of repetition for itself, since the latter is grasped only by means of recognition, distribution, reproduction, and resemblance in so far as these alienate the prefix RE in simple generalities of representation. The postulate of recognition was therefore a first step towards a much more general postulate of representation.' Deleuze, *Difference and Repetition,* p. 182.

[8] Deleuze, *Difference and Repetition,* p. 180.

[9] Ibid, p. 183-4. [emphasis in the original]

> This element is intensity, understood as pure difference in itself, as that which is at once both imperceptible for empirical sensibility which grasps intensity only already covered or mediated by the quality to which it gives rise, and at the same time that which can be perceived only from the point of view of a transcendental sensibility which apprehends it immediately in the encounter.[10]

The sensible can be either perceptible or imperceptible, as Deleuze encourages us to notice. In other words, 'perception', which is the exercise of grasping recognisable traits or qualities, is not the only way of sensing. This is precisely why I have focused on the difference between 'perception' and 'sensation' in this thesis. Properly speaking, the process of apprehending something 'immediately in the encounter' is not 'perception', and not even 'direct perception' as developed in the ecological approach to perception inaugurated by psychologist James Gibson in the 1960s and 1970s. Yet, when a work of art comes across in a sensation, in the sense developed in Deleuze's Logic of Sensation,[11] there are processes that involve both domains in the form of passages from one to the other. Thus, perception remains relevant and necessary, in the artworks' processes of attaining 'sensation' and its 'intensive reality'.[12] When I have to address the perceptual domain in my work, I draw on the principles of ecological perception, because I concur with musicologist Allan Moore's explanation of their advantages for music analysis, as a reliable empirical basis for theories of representation, and processes of recognition.[13] I also rely on ecological perception because it includes active 'exploratory perception' that can be performed directly with the body, its movements and the sensory systems,[14] and because I think that the ecological approach is also the most ethical basis for an empirical approach to our interaction with the world, since it is founded on the ecological interdependence, inseparability and mutuality of animal and environment (of course, including human animals).[15] Although Deleuze uses the word 'perceived' in this quote for the apprehension of intensity 'immediately in the encounter', he is clearly referring to a different

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[10] Deleuze, *Difference and Repetition,* p. 189.

[11] Gilles Deleuze, *Francis Bacon. The Logic of Sensation*. trans. Daniel W. Smith (London: Bloomsbury, 2017).

[12] Ibid*,* p. 33.

[13] See Allan F. Moore, *Song Means: Analysing and Interpreting Recorded Popular Song* (Surrey: Ashgate Publishing Limited, 2012)*,* p. 243-258.

[14] See for example, James J. Gibson, *The Senses Considered as Perceptual Systems* (London: George Allen & Urwin Ltd., 1966), p. 123-129.

[15] For example, as Gibson writes, his key concept of 'affordance' 'cuts across the dichotomy of subjective-objective and helps us to understand its inadequacy'. James J. Gibson, *The Ecological Approach to Visual Perception: Classic Edition* (Psychology Press, 2014), p. 121. On the 'mutuality', see p. 4. On 'direct' perception see p. 119. In this book I found particularly helpful some of Gibson's notes about the visual perception of textures; and I have also considered relevant to my work some of his notes on haptic sensitivity from *The Senses Considered as Perceptual Systems*.

mode of perception or sensing. As I explain throughout the thesis, the opposition between sensation and perception, is important and, more often than not, clearly established, in both the rest of his work and his collaborative work with Guattari, and their concept of 'intensity' is at the heart of this opposition. 'Perception' usually stands for the empirical exercise of the senses that is consistent with Gibson's focus on grasping 'invariants', which they contrast with attending to the 'continuous variation' of things, of material things in flux and their heterogeneous nature, which is another way of sensing that is chiefly related to a haptic sensitivity. Gibson's invariants, in this sense, correspond to what Deleuze and Guattari describe as the exercise of 'uprooting variables from the state of continuous variation, in order to extract from them fixed points and constant relations', for example.[16] Moreover, already in many occasions in *Difference and Repetition,* Deleuze privileges 'sensation' for addressing a sensibility in the immediate encounter.[17] Their implementation of this opposition explains Deleuze and Guattari's choice for the concept of 'sensation' to refer to works of art and to guide their aesthetic reflections, especially in Deleuze's *Francis Bacon. The Logic of Sensation* (1981), Deleuze and Guattari's *What is philosophy?* (1991), and Guattari's *Chaosmosis. An ethico-aesthetic paradigm* (1992).[18] Furthermore, a reevaluation of the relations between aesthetics, philosophy and science, is paramount in these works, and seems to work partly towards what Guattari called a 'proto-aesthetic paradigm', to differentiate it from 'institutionalised art',[19] as well as from the commodification of art, both of which largely drive and sustain oppressive processes of standardisation, as I expound in I.2. In my nearly thirty years of inhabiting the world of 'institutionalised art', I have witnessed in any attempt to renovate the knowledge and the ways of thinking about music, according to the demands of specific old or new repertoire from different practices and contexts, a clear, constant and escalating tendency to prioritise scientific arguments over properly aesthetic arguments in essays, investigations and conversations, as if aesthetics could not produce evidence of its own, or as if empirical evidence should automatically exert a position of authority over aesthetics under the claim of being more objective. A similar situation has happened with cultural studies and sociology, and their claim of being more intersubjective, resulting in a tendency to dismiss the fact that the aesthetic discipline does not have to subsidiarily depend on other disciplines but can have a place of its own. I believe this is a pressing problem, which Guattari's 'proto-aesthetic paradigm' can help us to carry on addressing and rectifying. Moreover, as pointed out by philosopher Éric Alliez, Deleuze's work after the years of *Difference and Repetition*, constitutes a move from a 'transcendental empiricism', and from an

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[16] Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*. *Capitalism and Schizophrenia,* trans. by Brian Massumi (London: Continuum, 2008), p. 451.

[17] See for example, Deleuze, *Difference and Repetition,* p. 190-191.

[18]; Gilles Deleuze and Felix Guattari, *What Is Philosophy?* trans. Hugh Tomlinson and Graham Burchell (New York: Columbia University Press, 1994); and Félix Guattari, *Chaosmosis. An Ethico-Aesthetic Paradigm*, trans. by Paul Bains and Julian Pefanis (Bloomington: Indiana University Press, 1995).

[19] Guattari, *Chaosmosis,* p. 101.

'engagement with structuralism', to an 'ethico-aesthetic constructivism', chiefly through the collaboration with Guattari and their co-written work.[20] Thus, all the philosophical insights I take from Deleuze's work from the 1960s on, are the ones that are consistent with the *constructivist* approach. I bring them into play as an aid towards my main purpose of developing aesthetic evidence in its own right. Furthermore, most of the concepts I learn from studying philosophy, and apply to my aesthetic studies, can be argued to have developed from aesthetic practices, or to have been developed in close relation to aesthetic practices among others. To be sure, since Deleuze and Guattari argue that 'concepts' are what philosophy produces and 'sensations' are what art produces, then aesthetic reflections are in a sort of a middle ground, where concepts are produced to speak and think about aesthetic sensations and their own principles. Moreover, since I do not separate aesthetics from life itself, at the same time as I do not separate life itself from our ways of thinking and from philosophical matters, I consider the three disciplines, namely aesthetic practices (incl. art), aesthetic reflections and philosophy, to be already significantly entangled. Thus, for the present purposes, I focus on philosophical concepts that one can find in one way or another, *already* speaking about art and aesthetics, in the form of a 'transdisciplinarity', as developed by Alliez, where 'art is seen to come ontologically ahead of philosophy', in a sense that has nothing to do with a discipline exerting a position of authority over another, but with a collaborative programme of 'transdisciplinary experimentation', which is a consistent continuation of Guattari's 'ethico-aesthetic paradigm'.[21]

Returning to the distinction between perception and sensation, whether consciously or unconsciously, in ways that are biologically based or acquired through processes of enculturation and learning, in different orders and with different degrees of detail, at a certain level and more often than not, we use our senses to recognise, identify and make relations between categories, in the form of qualities, things or experiences that work as necessary *landmarks* (i.e. fixed entities, reference points) to navigate the world. For example, as I mentioned above, these recognisable traits correspond to the kind of 'properties' called 'invariants', 'invariant information' or 'constant properties' in the ecological approach to perception. This approach describes the empirical process by which 'the senses considered as perceptual systems' grasp a sufficient outline, or a sufficient set of cues, that *specify* and allow the *identification* of the encountered thing, so it can *afford* something to the experiencer, who is then able to use it, interact with it, interpret it, *or even feel it,* accordingly. However, we do not only navigate the world's landmarks, and we do not only encounter and feel invariant information. Our senses can operate in other ways, in which we can encounter 'intensity' or 'difference in itself'.

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[20] Éric Alliez, 'Ontology of the Diagram and Biopolitics of Philosophy. A Research Programme on Transdisciplinarity', *Deleuze Studies*, 7.2 (2013), 217–30.

[21] Alliez, 'Ontology of the Diagram and Biopolitics of Philosophy', p. 217 and 225.

A piece of music can affect a listener in a myriad of manners, and one can think of a range of different things that the sounds of pieces of music can do. For example, they can evoke other events, as when they prompt the memory of a personal experience; they can tell stories or convey a sense of narrative; they can represent things and events, including identities, concepts, experiences, places, weather phenomena, situations, movements, shapes, styles and other sounds; they can symbolise, signify or connote things by means of codes or conventions; they can produce clichés, facile or sensational impacts; they can combine and organise in all sorts of abstract (i.e. non-representational) shapes, figures, patterns or arrangements; they can specify their sources and render them unrecognisable; they can specify stylistic features and rub against them;[22] they can trigger all sorts of responses such as emotions, involuntary movements, cross-domain mappings, cross-modal interactions, mimetic responses, an inclination to dance or move the limbs; or they can attain and sustain a 'sensation'. All of them have been important subjects of musicological enquiry,[23] but the latter has remained largely unaddressed. They can all affect listeners in ways that can be deemed important to them, but only 'sensation' directly and always implies 'intensity' and discloses an intensive material reality, in a clear, precise and durable way. With the exception of sensation, all of them can remain at a level of readings of the kind *«this is this, this is that; this represents this, this represents that; this signifies this, this signifies that; this evokes this, this evokes that; this triggers this, this triggers that; this affords this, this affords that; and so on»,* which are all based, in different ways, on grasping recognisable traits and making relations between them. Sensation, on the other hand, involves a 'tension' between recognition and intensity, and a passage from one level to the other. They are all based on *external relations,* but sensation is based on *intrinsic differences*. All of them can be analysed by means of measures, spatiotemporal representations and descriptions of qualities and qualitative variations, but these are not enough to analyse the operative traits of sensation.

Introduction to Deleuze's Logic of Sensation

In 1981, Deleuze takes 'sensation' as the central concern of his study of Francis Bacon's painting, accounting for, and developing thereby, an aesthetic 'logic of sensation' that is not

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[22] I am alluding to Moore's concept of 'friction'. Moore, *Song means*, p. 163-178.

[23] To name a few examples of the relevant literature on these interpretive issues: an account on narrative relations, expectation and emotion can be found in Leonard Meyer, *Emotion and Meaning in Music* (Chicago: The University of Chicago Press, 1956); on representation based on embodied cognition and ecological perception in Moore, *Song means*; on relations between music perception, action and motion in Eric F. Clarke, *Ways of listening. An Ecological Approach to the Perception of Musical Meaning* (New York: Oxford University Press, 2005); on mimetic principles in Arnie Cox, *Music & Embodied Cognition. Listening, Moving, Feeling, & Thinking* (Bloomington: Indiana University Press, 2017); on cross-domain mapping in Lawrence Zbikowski, Conceptualizing Music: Cognitive Structure, Theory, and Analysis (New York, 2002); on cross-modal, submodal and supramodal perception in Daniel Leech-Wilkinson and Helen M. Prior, ed., *Music and Shape* (New York: Oxford University Press, 2017).

only relevant to Bacon's work. Moreover, the concept of 'sensation' is of the utmost importance in Deleuze and Guattari's later definition of works of art in general: 'The work of art is a being of sensation and nothing else'.[24] 'Sensation', in this aesthetic and philosophical sense, is a complex concept. It is not simply a bodily feeling or a sensory impression on the body, neither in the empirical nor in the phenomenological sense. Neither is it a psychosomatic response triggered by some external or internal stimulus. Sensation is not perception, and should not be confused with an emotion. Although Deleuze credits phenomenologists like Maurice Merleau-Ponty and Henri Maldiney with advancing an analysis of sensation, he also argues that phenomenology cannot really give an account of it.[25]

As Deleuze presents it, in line with Bacon's reflections, 'sensation' is the way the work of art comes across when 'it acts immediately upon the nervous system', instead of coming across as a representation or an object of recognition. It comes across as an 'excessive presence' or an 'insistence', which is what acts 'directly on the nervous system' and 'makes representation […] impossible'. One still encounters a form (i.e. a material formation), 'the sensible form related to the sensation', which is not 'an abstract form', and is 'the opposite of the form related to an object that it is supposed to represent'. With regard to painting, Deleuze calls it 'the Figure', with a capital letter, to distinguish it from the 'figurative' and 'figuration'. It is a sort of a self-standing new formation, made of the work's materials and its operative traits. To begin with, The Logic of Sensation provides two major foundations to address the problem of both what this form and what this immediate action on the nervous system consist in: one is a 'fundamental deformation' (related to 'the event, the changeable, the accident' as opposed to a form expressing an 'essence'); and the other is Deleuze's and Deleuze and Guattari's philosophical elaboration of artist and poet Antonin Artaud's idea of the 'Body without Organs',[26] which they often abbreviate to 'BwO'. I shall briefly introduce them in what follows.

The form that comes across *in a sensation, and as a sensation,* is a formation that emerges gradually, 'at every moment', from an 'intense movement' that consists in 'a deformed and deforming movement'.[27] Its second main characteristic is that it emerges from chaos. It is made of *traits* that are 'irrational, involuntary, accidental, free, random', 'asignifying', 'nonrepresentative, non illustrative and nonnarrative'. *These traits are not qualities.* As Deleuze writes: 'They are traits of sensation': 'Sensation is not qualitative and qualified, but

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[24] Deleuze and Guattari, *What Is Philosophy?,* p. 164-166.

[25] See for example Deleuze. *Francis Bacon. The Logic of Sensation*, p. 32-36 and footnote p. 129.

[26] See for example Ibid, p. 86 and 33-35. The concept of the 'body without organs', is also very important in Deleuze's *The Logic of Sense:* Gilles Deleuze, *The Logic of Sense,* trans. by Constantin V. Boundas, Mark Lester and Charles J. Stivale (London: Bloomsbury Academic, 2015); and also largely developed by Deleuze and Guattari in *A Thousand Plateaus.*

[27] Deleuze. *Francis Bacon. The Logic of Sensation,* p. 13.

has only an intensive reality'.[28] Thus, Deleuze derives his logic from a primary distinction between the 'qualitative or qualified' and the 'intensive', and hence between qualities and the traits of sensation. Yet, these traits are 'not sufficient in themselves',[29] but must be rendered 'operative' by means of a 'tension': they need to scramble and break with 'givens' from the world of recognition and representation, but without destroying them all, for a complete destruction would render them inoperative. Yet, they chiefly have to *neutralise* these readings.

One of the main operations of the traits of sensation is the *neutralisation* of the exercises of the senses that consist in recognising things, and interpreting representations, identities, resemblances, forms of organisation, or any kind of interpretation based on grasping recognisable traits. They are capable of neutralising these readings, only insofar as there is a preservation of those givens. Hence, the necessary tension, but also the necessary scramble and destruction because it is the neutralisation that "wins", giving way to a different kind of formation and a different way of sensing and making sense. They enter a process that involves *an element of chaos*, a 'necessary catastrophe', but something emerges from it: 'To emerge from the catastrophe…', writes Deleuze. Only in some cases the form of an artwork is made of *traits* that are capable of attaining the sensation; and only in some very special cases the sensation is made 'clear and precise', as Deleuze teaches us. These are the cases when the *new formation* that emerges from *chaos* is also something 'clear and precise', but no longer a representation or an object of recognition, neither an abstract composition. The *set of operative traits of sensation,* is also called the 'diagram':[30]

> The diagram is indeed a chaos, a catastrophe, but it is also the germ of order or rhythm. It is a violent chaos in relation to the figurative givens, but it is a germ of rhythm in relation to the new order of the painting.
>
> The diagram must not eat away the entire painting, it must remain limited in space and time. It must remain operative and controlled. The violent methods must not be given free reign, and the necessary catastrophe must not submerge the whole. […] Not all figurative givens have to disappear; and above all, a new figuration, that of the Figure, should emerge from the diagram and make the sensation clear and precise.[31]

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[28] Deleuze. *Francis Bacon. The Logic of Sensation,* p. 33.

[29] See for example Ibid, p. 3 and p. 70.

[30] When I say 'operative traits of sensation', as in my thesis title, I am merging two of Deleuze's expressions that refer to these traits, namely 'operative set of traits' and 'traits of sensation' As Deleuze writes for the case of painting: 'The diagram is the operative set of traits and color-patches, of lines and zones'. These traits are 'nonrepresentative, nonillustrative, nonnarrative. They are no longer significant or signifiers: they are asignifying traits. They are traits of sensation […]'. Ibid, p. 70-1. The 'diagram' is also a very important concept in Deleuze and Guattari's co-written work.

[31] Ibid, p. 71 and p. 76.

The central argument of my thesis is that rock practices eminently work with this kind of tension, and make new sonic formations emerge from chaos. It is possible to appreciate in rock recordings these 'violent methods' that neutralise readings of the kind *«this is this, this is that; this represents this, this represents that; this signifies this, this signifies that; this evokes this, this evokes that; this triggers this, this triggers that; this affords this, this affords that; and so on»,* that is readings based on extrinsic relations. Consequently, my central question is how to study the 'diagram' of a rock recording, and I have set out the project of gathering the necessary understandings and developing tools to do it. What emerges from the diagram and its element of chaos in a sensation, is not only *a new formation,* but also a 'transitory organ' or *a transitory sensory function.* In other words, along with this new order or rhythm, the sensation also consists in what Deleuze refers to as a 'new clarity', this time attributed to the sensibility, the way of sensing, of the one that is seeing the painting.

This 'new clarity' is 'the formation' of 'a haptic vision of the eye', which is the visual sensitivity to the intense movement of deformation, and which I think we can call *haptic listening* for the case of sounds, pieces of music and sound art. In fact, 'this haptic function born of the diagram' is always transitory.[32] It is based on the 'body without organs', as I explain next, and it directly depends on the 'singularities' of the encountered entity — I address Deleuze and Guattari's concept of 'singularity' in I.1 and I.2.

The 'nervous system' that Deleuze and Bacon refer to, is more of a 'nervous wave' that flows through the body; and this body is more of a mutable bundle of 'flesh and nerve', with variable 'zones', 'thresholds' and 'levels'. It can be thought of with the aid of the concept of the 'body without organs'. As presented in The Logic of Sensation: 'The body without organs is opposed less to organs than to that organisation of organs we call an organism. It is an intense and intensive body'. It is defined by the series: 'without organs - to the indeterminate polyvalent organ' - to 'the *temporary and provisional presence* of determinate organs', with transitory functions and positions. It has a 'vitality', an 'intense kind of life', that the organism lacks or imprisons. As explained by Deleuze, the sensation is produced when the wave encounters a force that acts on the body and determines a 'transitory organ', which 'will change if the force itself changes'. At the same time, *this force is rendered sensible through its effect, which is a material deformation and its precise ways of deforming* (e.g. contracting, dilating, contorting, breaking, vibrating, thickening, roughening, stretching, swelling, dissipating, etc.). The 'excessive presence' that Deleuze refers to, is a 'material presence',[33] which is exactly that: a 'deformation' as 'the "place" of a force'.[34] 'This is the relationship not of form and matter, but

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[32] Deleuze. *Francis Bacon. The Logic of Sensation,* p. 33-38, 89-90, and 113.

[33] Ibid, p. 35-9.

[34] Ibid, p. 81.

of materials and forces', as Deleuze writes.[35] The body without organs is 'beyond the organism' (i.e. beyond the object of cognitive sciences and empirical psychology), and 'at the limit of the lived body' (hence, out of reach for phenomenology, which, according to Deleuze, 'merely invokes the lived body').[36] Only on the basis of this understanding, is it possible to address the non-generalisable singularities of a work of art (among other things), their immanence, their moving and invigorating power, and their intensive reality, if one is interested, with Deleuze and Guattari, in elucidating the ontological considerations that can allow us to think of, understand, speak of, and study the things and events that cannot be generalised, as the 'condition of real experience'.[37]

Finally, when a work comes across in a sensation there is still an interpretation of meaning. Yet, here again Deleuze makes a rigorous distinction between a meaning that is inferred from a representation, and a meaning inferred from a sensation. For instance, he says that a sense of 'cruelty' that is inferred from 'a representation of something horrible', is something very different from a sense of 'cruelty' that has become 'nothing other than the action of forces upon the body, or sensation (the opposite of the sensational)'. As he explains: 'When sensation is linked to the body in this way, it ceases to be representative and becomes real'; 'an intense realism'; the 'realism of deformation', as he mentions further on.[38] Thus, the non-representational nature of 'the form related to the sensation', is also linked to this key opposition: 'Sensation is the opposite of the facile and the ready-made, the cliché, but also of the "sensational"'. As Deleuze and Bacon, insistingly remind us: 'The violence of sensation is opposed to the violence of the represented (the sensational, the cliché). The former is inseparable from its direct action on the nervous system, the levels through which it passes, the domains it traverses'. 'Sensation' in this aesthetic sense, chiefly involves a 'constitutive difference of level', that is directly related to the intense movement of deformation.[39] Deleuze tells us that 'when Bacon speaks of sensation':

> [He] constantly says that sensation is what passes from one "order" to another, from one "level" to another, from one "area" to another. This is why sensation is the master of deformations, the agent of bodily deformations. In this regard, the same criticism can be made against both figurative painting and abstract painting: they

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[35] Deleuze. *Francis Bacon. The Logic of Sensation*, p. xi.

[36] 'Beyond the organism, but also at the limit of the lived body, there lies what Artaud discovered and named: the body without organs. "The body is the body / it stands alone / it has no need of organs / the body is never an organism / organisms are the enemies of bodies."' It 'does not lack organs, it simply lacks the organism, that is, this particular organisation of organs'. Ibid, p. 33 and 35.

[37] See for example Deleuze, *Difference and Repetition,* p. 85-86 and 201. 'In fact, the condition must be a condition of real experience, not of possible experience. It forms an intrinsic genesis, not an extrinsic conditioning.' I consider this point in more detail in the body of the thesis.

[38] Deleuze. *Francis Bacon. The Logic of Sensation*, p. 34 and 90.

[39] Ibid, p. 27-37.

> pass through the brain, they do not act directly upon the nervous system, they do not attain the sensation, they do not liberate the Figure — all because they remain *at one and the same level*. They can implement transformations of form, but they cannot attain deformations of bodies'.[40]

Philosopher Elizabeth Grosz, who has taken up this aesthetic notion of 'sensation', also emphasises this opposition:

> Material production — the production of commodities — while it may generate sensation, is nevertheless directed to the accomplishment of activities, tasks, goals, or ends. The production of commodities, even "artistic commodities", directs itself to the generation of pre-experienced sensations, sensations known in advance, guaranteed to affect in particular sad or joyful ways.[41]

Thus, in line with this understanding, I reserve the word 'sensation' for the opposite of these ready-made or already known sensations, which do not involve the 'constitutive difference of level'. This problem and its far-reaching implications has also been thoroughly elaborated by Guattari in *Chaosmosis*. He chiefly encourages us to place and evaluate the 'function' of 'artistic consumption' 'in relation to the increasing uniformity of the life of individuals', and makes explicit the relevance of this problem to the sphere of rock:

> It can move in a direction parallel to uniformisation, or play the role of an operator in the bifurcation of subjectivity (this ambivalence is particularly evident in the influence of rock culture). This is the dilemma every artist has to confront: "to go with the flow", as advocated, for example, by the Transavantgarde and the apostles of postmodernism, or to work for the renewal of aesthetic practices relayed by innovative segments of the Socius, at the risk of encountering incomprehension and of being isolated by the majority of people.[42]

This is notably the dilemma that not only rock artists have to confront but also rock listeners, and dedicated listeners/musicians/scholars working on the aesthetic study of rock recordings. I think that the insights I present in this thesis can help us work towards this 'renewal'.

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[40] Deleuze. *Francis Bacon. The Logic of Sensation*, p. 28.

[41] Elizabeth Grosz, *Chaos, Territory, Art. Deleuze and the Framing of the Earth* (Chichester: Columbia University Press, 2008), p. 4. — I am grateful to my first supervisor, musicologist Dr Leah Kardos for the recommendation of including Grosz's insights.

[42] Guattari, *Chaosmosis,* p. 132.

I believe that the aesthetic study of rock recordings, rock musicology, and our appreciations and ways of speaking about rock music in general would benefit from the development of a logic of sensation. My plan for this investigation has been to gather the necessary understandings and elaborate on the necessary problems that can allow us to study operative traits of sensation in rock recordings, and thereby, rock recordings' power of endowing listening with a haptic function. As such, my aesthetic studies have to deal with the material deformation of sound, and therefore, with the haptic traits of sonic materials, such as their thickness, roughness, elasticity, sharpness, their ways of contracting and expanding, of welding and breaking, and so on.

Although I have grounded this task on many of Deleuze's insights with regard to Bacon's painting, I have not taken it as a simple transfer of notions. I have thought and re-thought this logic from within the world of sounds, listening and rock music, and I have complemented it with other relevant literature from the spheres of musicology (mainly the rock musicology developed by Moore), rock criticism (especially Bangs's writings), philosophy and aesthetics (Deleuze, Deleuze and Guattari, Guattari, Henri Bergson, Aloïs Riegl, Johann Gottfried Herder, Henri Maldiney, Christoph Cox, Elizabeth Grosz, Éric Alliez and Ian Buchanan), anthropology (Tim Ingold), and the ecological approach to perception (Gibson). Nonetheless, I am far from suggesting that this list is exhaustive. It merely corresponds to what I have prioritised so far, because I think that, in one way or another, the insights of these writers and researchers go most directly to the point, in relation to the problems that propel the present project.

Introduction to Deleuze and Guattari's concept of 'intensity'

I have presented my purpose in two ways: to be able to give an account of what makes *a sonic entity intense,* and to be able to refer to *the intensity of a listening encounter*. Some brief preliminary clarifications are then necessary in this respect.

First of all, Deleuze and Guattari's concept of 'intensity' refers to *both* the intensity of the encounter and the intensity of the encountered entity, simultaneously. They say that 'intensities' is what populates the body without organs, by passing and circulating through it.[43] Intensities or 'continuums of intensities' are what the body encounters, but also what the encounter consists in. It is no longer possible to say where the encountered entity ends and the encounter begins. However, one is still perfectly aware of the polarity of an inside encountering an outside, a polarity that regenerates in the process of becoming with the outside. The two instances are merged in a 'becoming', and the same goes for the sensation and its 'intensive reality'. This is why they say that 'we become with the world', as I expound in I.2. This unity goes beyond the phenomenological unity of the sensing subject and the sensed

[43] See for example Deleuze and Guattari, *A Thousand Plateaus,* p. 169.

object, because it is not considered from the point of view of the unity of a subject, as I expound in I.1. and I.2. Only in certain events, we can witness the intensity of the sounds and the intensity of the listening encounter as one and the same intensity. Therefore, when addressing the intensity of an experience, one has to clearly determine the encounter one is referring to, because, for example, it is not the same to refer to the encounter with the sounds, than to refer to the encounter with the physical response that the sounds have triggered in oneself. I explain this point and provide an example in I.1.3.

Secondly, I am posing questions of *what makes* something intense, as an *analytical inquiry* about *a constructive process*: How are 'material traits of expression' capable of constituting intensities? How do they make 'material flows' become an 'intense matter'?[44] This focus is a key aspect of the central question of my thesis: What are the traits *at work* in an artwork that comes across in a sensation? I am also posing the question of *what we are referring to when we say* that something *is* 'intense' (or 'an intensity', 'intensities' or 'intensive') as an *ontological question.* More precisely, since 'sensation', in Deleuze's logic, is a 'material sensation' with an 'intensive reality', which concerns *the reality of* a process of 'becoming', I shall seek to elucidate, with the aid of Deleuze and Guattari's work, the ontological grounds on which these notions and processes are based and interconnected.

Since my project concerns sonic materials, I have given priority to the task of understanding Deleuze and Guattari's position about the status of 'intensities' vis-à-vis material entities or material flows. In *A Thousand Plateaus* (1980), they argue that they can indeed be found working at the same level as an 'intense matter' or 'intensive traits',[45] and they develop a close but complex relation between them, to which I think Deleuze's *Logic of Sense* (1969) can provide some decisive assistance, as I introduce in I.1.4. I have dedicated section I.1.5 to this problem, and its connection to the question of how to understand and experiment with the analytical tools I attempt to develop. One of Deleuze and Guattari's central arguments, which is the one I am concerned with here, is that there is 'a reality specific to becoming', which *is* 'intensive', and 'material', and particularly in a work of art that comes across in a sensation it is also 'expressive'.[46]

In order to elucidate what kind of 'material reality' this is, I draw both on the problem of the stratified/destratified entities developed in *A Thousand Plateaus,* and on the problem of the corporeal/incorporeal entities developed in *Logic of Sense.* In both cases, the second term can also be a material entity. Thus, we already have a distinction between at least two kinds of material realities, and one might be speaking of, thinking of, or coming across one or the

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[44] See for example Deleuze and Guattari, *A Thousand Plateaus,* p. 120-1, and 169.

[45] As they write: 'An intensive trait starts working for itself'. Ibid, p. 16.

[46] Ibid, p. 263.

other, or a passage from one to the other. In a nutshell, from *A Thousand Plateaus* we learn that 'material flows' and their 'traits', and our encounters with them, can swing back and forth, in both directions, between 'continuums of intensities' and 'strata'. Strata imprison 'continuums of intensities', while destratification can free them and bring them forth.[47]

The operative *traits* that constitute what Deleuze and Guattari call a 'diagram' or 'machine' can function as agents of destratification (which they also call 'deterritorialisation'). A very important point is that 'strata' ultimately consist in 'spinoffs' or 'thickenings' on the 'destratified plane of consistency', i.e. the plane that constructs 'continuums of intensities'. Moreover, when they define the diagram as a 'matter-function', they say that it does not have 'distinct forms' of content (i.e matter) and of expression, but only 'traits' of content and of expression, 'between which it establishes a connection', as I discuss in I.1.5: 'The diagram retains the most deterritorialised content and the most deterritorialised expression in order to conjugate them'.[48] Studying Deleuze and Guattari's corpus has encouraged me to consider the problem of their ontology of sensation, with the inseparable triplet of an expressive-intensive-material reality in mind at all times, and with 'intensity' acting as what unites expression and matter in a given occasion, in ways that can only be studied on a case to case basis.

THE SENSE OF INFINITY AND THE PASSAGE TO THE LIMIT

Deleuze and Guattari observe that when we experience an intensity we *closely* notice details that habitually go unnoticed, not simply because they are too small or too many, for example, but chiefly because they are not the kind of details that can be recognised, and that can be represented or represent things. *Since we cannot experience an intensity via extrinsic relations,* the kind of details we encounter in an intensity cannot be reduced to cues, qualities, outlines, or any kind of recognisable trait. They are details of another kind. They are 'infinitesimal' details *of* what they call a 'molecular material'.[49] As they write for the case of music: 'Music molecularizes sound matter and in so doing becomes capable of harnessing nonsonorous forces such as Duration or Intensity'.[50] As we become increasingly aware of these details, they *multiply* into swarms of differences, and then towards a sense of infinity, and they *connect and*

[47] Deleuze and Guattari do indeed use these verbs 'to imprison' and 'to free' for these processes. See for example, *A Thousand Plateaus*, p. 45, 178 and 78.

[48] Ibid, p. 156.

[49] Ibid, p. 106.

[50] Ibid, p. 378.

grow into a continuity, which is another form of infinity.[51] They can affect us intimately and intensely. They belong to an *intensive* material reality where things are 'heterogeneous' and in 'continuous variation', continuously flowing, changing and vibrating. This is the level where 'repetition' is not repetition of the same, but gains and grows.[52] It is the level at which chance and chaos intervene. It is the level of 'turbulent flow' and a 'vortical movement': a movement 'distributed by turbulence', that exhibits consistent rhythmic formations, 'that can rise up at any point', and at the same time 'holds space and simultaneously affects all of its points, instead of being held by space in a local movement from one specified point to another'.[53] Our senses dispense with these details most of the time in our everyday lives. They are not practical, so we get used to dismiss them. Yet, the sensuousness or sensuality of our encounters depends on them, because our *sensitivity to deformation* is based on them, a crucial principle by which *haptic sensitivity* operates, as I address later on.

In an intensity we have a glimpse of how material reality stretches out interminably, in different senses. It is like momentarily being able to grasp things usually out of reach. As explained by Deleuze and Guattari, the sensory faculty invested in the encounter is carried to a limit,[54] a threshold in our sensitivity that becomes *a liminal zone*, that we can explore, and where we can catch that glimpse of what exceeds our reach and our possibilities. The *sonic blasts of granular distortion*, that are not only ubiquitous in rock recordings but also subject to ample experimentation in rock practices, are a notable example of how sonic entities can open up this liminal field of exploration. Sometimes, as we join with these sounds, they start swarming with differences, connecting and growing into intricate and consistent masses of sound, thickening and expanding, multiplying or blending, roughening or smoothing, flowing and vibrating in many different ways. We can start noticing more and more details of their involved textures at different scales, and sometimes we start noticing more than one sonic mass and complex mixes of masses, where each mass appears, we could say, as more diffused than a distinct layer but less diffused than a total blend.

Concerning these sonic elements, these granular sonic multiplicities, rock writer Lester Bangs observed in 1970, in a piece entitled 'Of pop and pies and fun. A program for mass liberation in the form of a Stooges review, or, who is the fool?', that:

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[51] I am borrowing the notions of 'continuous variation' and 'infinitesimal' details from *A Thousand Plateaus*. See for example, their list of 'dynamic nomadic notions': 'becoming, heterogeneity, infinitesimal, passage to the limit, continuous variation'. Ibid, p. 400.

[52] The argument I am hinting at here, which I think is relevant to thinking about repetition in music as I discuss throughout the thesis, is central and thoroughly developed in Deleuze's *Difference and Repetition.*

[53] See Deleuze and Guattari, *A Thousand Plateaus,* p. 401.

[54] See for example, Deleuze, *Difference and Repetition,* p. 184-85, 189-90 and 310-11.

> … properly conceived and handled noise is not noise at all, but music whose textures just happen to be a little thicker and more involved than usual, so that you may not hear much but obscurity the first time, but various subsequent playings can open up whole sonic vistas you never dreamed were there. So you play the record, many, many times, slowly making your way to the heartland of its diffuse complexity, then revelling long in its multiplicity, finally growing slowly tired of it months and innumerable playings later since any record gets old eventually.[55]

In a certain sense, this gradual disclosure of the complex nature of the sonic materials starts happening as one sustainedly joins with them. It brings about an enhanced awareness and receptivity to their details and movements, and to how they feel, how they affect, what they do, intensely. Thus, we can start appreciating that the intricate details of the blasts of granular distortion can have a notable power to free 'continuums of intensities'. However, I would also argue that in rock recordings this is just the tip of the iceberg.

In this thesis, I have followed this power in a wide range of haptic sonic aspects, elements and variations in rock recordings, such as the all-pervasive rasping sound of the guitar string in the minimalist track 'Know' by Nick Drake (*Pink Moon,* 1972); the ways of falling apart of the guitar riff and drums in Bardo Pond's 'Back Porch' (*Bufo Alvarius,* 1995), as well as its very smooth guitar glides; the immoderate use of delay in the sonic swellings of Butthole Surfers's 'Kuntz' (*Locust Abortion Technician,* 1987); the textural function of the /s/ alliteration in A.R. Kane's 'Baby Milk Snatcher' (*Up Home!,* 1988); the broken tones in Crocodiles's 'Soft skull' (*Summer of Hate,* 2009); the variety of grain-scales and brush-like strokes in the sonic sweeps of Suicide's 1977 homonymous album; the adjacency of soft fine grain and sharp high-pitch edges in the compound guitar-strings-voices in Elliot Smith's 1995 homonymous record; the aggregates of glides and snare rolls botching culmination in Fugazi's 'Suggestion' (*13 songs,* 1989); the dense, busy, sharp-edged and variegated masses of sound overtaking the mix in many tracks by The JAMC and A.R. Kane; the extreme isolation of timbres, revealing their rich micro-scale details in many tracks of the Breeders's *Title T.K.* (2002); the irregularity of the vocal entries and the swirling and overflowing repetitions in the vortical movement of Van Morrison's 'Madame George' (*Astral Weeks,* 1968); and an interminable etcetera. I elaborate on some of these and other cases in the body of the thesis.

Coming back to the example of the distortion, these masses of sound can easily lose their power, in particular when they are turned into clichés. Crucially, this power is not in the qualities of these masses of sounds, or any sound, because qualities do not carry listening to its limit. This aesthetic problem requires an exploration on a case to case basis, but also an

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[55] Lester Bangs, 'Of pop and pies and fun. A program for mass liberation in the form of a Stooges review, or, who is the fool?', in *Psychotic Reactions & Carburetor Dung*, ed. by Greil Marcus (London: Serpent's Tail, 2014), p. 48.

awareness of the fact that it involves a way of listening. For example, a relevant point about the *rich masses* of granular distortion is that their richness can easily go unnoticed. I think we should reflect on two opposed tendencies in our ways of listening to rock recordings: one that involves 'the illusion of an annulment of difference';[56] the other, a passage to an awareness of a previously concealed difference, and an opening to more and more difference and the intensive reality of 'difference in itself'. This has to do with the following.

The sense of 'small difference' implied in the notions of infinitesimal details and continuous variation should not be understood according to criteria of identity and resemblance, as explained by Deleuze, which are always 'external'.[57] In other words, it should not be understood as "less difference", but in the sense of following and joining 'bit by bit' the materials in the encounter. It bears repeating: 'Intensity' is 'an element which is in itself difference', not comparative difference, but 'difference in itself'.[58] In line with philosopher Henri Bergson,[59] Deleuze and Guattari point at how these details reveal the fundamentally heterogeneous, turbulent, continuous and continuously moving or changing nature of material reality, which we set aside in our tendency to focus on our representation and measurements of it, regardless of how detailed these can get. In other words, I share these philosophers's view that we tend to mistakingly take these projections as reality itself. From this point of view, all discrete and stable material formations are an illusion of an annulment of difference. For in reality things are never completely discrete, never completely stable or homogeneous.

This understanding has a series of implications. One of them is that the material entities demand to be thought of, and treated as, *multiplicities and flows* of the couple materials-forces, as opposed to 'the matter-form model', that 'assumes a fixed form and a matter deemed homogeneous'.[60] Both Bergson and Deleuze take 'change' and 'difference' as the basis. Here, Bergson's 'change' and Deleuze's 'difference in itself' merge. In Deleuze's analysis: 'It is always differences which resemble one another, which are analogous, opposed or identical: difference is behind everything, but behind difference there is nothing'.[61] In Bergson's analysis: '*there are changes, but there are underneath the change no things which change:*

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[56] In a footnote, Deleuze comments that 'Léon Selme showed that the illusion of an annulment of difference must be all the greater the smaller the differences realised within a system […]'. Deleuze *Difference and Repetition,* p. 168.

[57] See for example, Ibid, p. 153-4 and p. 363.

[58] Ibid, p. 189.

[59] Bergson's discussion on 'movement' and his view of material reality is also an important basis for the ontological considerations of my thesis. I have mainly worked with Henri Bergson, *Matter and Memory*. trans. N.M. Paul and W.S. Palmer (New York: Zone Books, 1988).

[60] Deleuze and Guattari, *A Thousand Plateaus,* p. 450.

[61] Deleuze *Difference and Repetition,* p. 71.

change has no need of a support'.[62] This means that material formations are always changing at different rhythms of different tensions, as described by Bergson,[63] which is related to his concept of 'duration'. The slow rhythm of some changes can give us the illusion of an underlying fixedness, but if we look more closely at the material formations and the sensibility they raise as we join with them in an encounter, we can become aware of their fluid, ever changing nature. Also, the exercise of recognising things via cues gives the illusion of equivalence or resemblance, which allows us to identify qualities and other categories. However, following Deleuze's advice, we must not turn that illusion into the error of bypassing the intensive reality of difference in itself.

HAPTIC LISTENING

Deformation is in itself 'continuous variation', and, as such, it can only be encountered and experienced as a flow. It implies the act of following *bit by bit*, and a close-range sensitivity, so that one can join with its movement as it deforms oneself. It is indivisible and unstoppable. When it is not perceived "from a distance" as qualitative variation, it can bring about passages from the level of recognition to the level of intensity. As emphasised by Deleuze, deformation can be an intense movement in a sensation, an intense effect at the level of pure becoming.

Deformation is a crucial principle by which the sense of touching and being touched operates at, at least, three levels: at the microscopic level of the mechanoreceptors of the nervous system (which we are not directly aware of); at the level of some functions of the haptic system as a perceptual system; and at level of the haptic sensitivity proper to sensation. From its ecological approach to perception, Gibson wrote in 1966: 'All living tissue, from single-celled protozoan up, seems to be sensitive to *deformation*. By that is meant a change of shape, a non-rigid motion'.[64] This observation applies to all of the three levels just mentioned. Gibson is referring to the first two, and also to sensation but in a different sense. His central concern is 'perception', which is based on the pick-up of recognisable traits, i.e. 'invariants', and on some complementary descriptions of the functioning of organs and their mechanoreceptors, at a microscopic level. It is only the qualitative variation of deformation that is perceived as 'invariant information', but joining with its continuous variation in a sensation is something different.

Gibson's take on 'sensation' is diametrically opposed to the aesthetic sense of the term. 'There are many possible meanings of the term sensation', he writes, 'but this is one: the detection of

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[62] Bergson [with italics in the original], in Christoph Cox, *Sonic Flux: Sound, Art, and Metaphysics*. ProQuest Ebook Central edn (Chicago: University of Chicago Press, 2018), p. 33.

[63] Bergson, *Matter and Memory,* p. 193.

[64] Gibson, *The Senses*, p. 106. [emphasis in the original]

the impression made on a perceiver while he is primarily engaged in detecting the world [sic.]'.[65] In turn, when sensation is attained in aesthetic practices, this relation is flipped over: sensation takes the primary place, and the works of perception fulfil a secondary role. There are passages from perception to sensation, and vice versa; they work by relays. As Deleuze explains: 'Bacon himself formulates this problem, which concerns the inevitable preservation of a practical figuration at the very moment when the Figure asserts its intention to break away from the figurative'.[66] Thus, in order to address the aesthetic sensation, it is still necessary to address perception but only in a subsidiary way, and keeping in mind that the formation that comes across in a sensation, when the break with the figurative actually occurs, has an entirely different nature than something that is perceived.

All in all, when dealing with perception, and thereby with recognition and representation, as that necessary stage in the process, I rely on some of Gibson's observations. Sometimes, I also allude to sensory principles that I extract from other empirical and phenomenological approaches that are consistent with ecological perception. In any case, in this investigation, any empirical study that I may consider useful in a given occasion, is only brought into play in a way that is subsidiary to the aesthetic questions posed by 'sensation'. When listening to a guitar bend, for example, one can perceive it, recognise it and identify it: «this is a bend». One can even grasp many of the details of its qualitative variation (e.g. the note it reaches, the interval it covers, its metric duration, its position in a melodic line, the technical skill of the performer in making it sound smooth, in tune, a tempo and generally flawless, etc.), or interpret it as a representation of another bending material. Yet, joining with its deforming movement in a sensation is a very different thing and the deformation itself intensifies. Hence, Deleuze's characterisation of 'sensation' as 'the master of deformations', quoted above. Interestingly enough, Gibson explains that the investigations that lead to *haptic perception* started by investigations about 'sensation', but those findings were useless from an empirical point of view because 'the aim of an inventory of all basic sensations was never achieved', and has remained an impossible task.[67] Since the inputs of perception and sensation do not correspond, Gibson was able to focus on the former and to radically dispense with the latter. As he concludes: 'In short, there can be sensationless perception, but not informationless perception'.[68]

The haptic dimension of sound can be considered within the logic of these two different levels, that is either at the level of ecological perception (e.g. affordances, a recognisable feel),

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[65] Gibson, *The Senses*, p. 99.

[66] Deleuze, *Francis Bacon. The Logic of Sensation,* p. 29.

[67] 'Boring has written the history of this effort (1942) and his two chapters on "tactual sensibility" and "organic sensibility" describe the problems and frustrations of those who tried to classify the body senses and pin them down to corresponding receptors and stimuli.' Gibson, *The Senses*, p. 98-99.

[68] Ibid, p. 2.

or at the level of intensity in a sensation. My focus is on haptic sonic traits that I have found at work as operative traits of sensation in specific cases. From those findings I have mapped some consistencies, recurrences, and effective processes which I have organised into types of haptic sonic formations, with the aid of perceptual traits, an aid that, I must insist, remains subsidiary to the central task at all times. Therefore, I have developed them not as descriptive but as constructive categories in close connection with Deleuze and Guattari's concepts of 'intensity' and 'strata'. I treat 'strata' as the condition of possibility of passages from one level to another (i.e. from the world of recognition, perception and representation to intensity and sensation, and vice versa), and for differences in degree, on the basis of their ontology as 'thickenings' on the 'plane of consistency', and of how they can be either imprisoning or freeing intensities.[69] The cues of ecological perception are practical for purposes based on 'affordances', but we should also be careful not to take these cues as the only way in which things come across as having a certain stability or uniformity.

The word 'haptic' comes from a Greek term that means 'to touch',[70] but it is the complexity of what is ordinarily meant by 'touching' or 'feeling' that led researchers from different disciplines to the adoption of the 'haptic', as a broader concept than the 'tactile' and the 'kinaesthetic', in all their modalities, but more precise than the 'feel'. Haptic modes of experience have been approached from a comprehensive range of disciplines.[71] The sense I am primarily concerned with in this thesis is based on the aesthetic understanding that can be traced back to art theorist Aloïs Riegl, who was a pioneer in addressing the possibility of a 'haptic' way of seeing, chiefly in relation to the contemplation of Egyptian bass-relief,[72] and I mainly draw on the accounts of this haptic function that Deleuze, Deleuze and Guattari, Maldiney, and Ingold have developed thereon. However, as philosopher Herman Parret illustrates, it is a modality of seeing that in art history can also be traced even further back to

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[69] See Deleuze and Guattari, *A Thousand Plateaus,* p. 78 and 45.

[70] In Deleuze's account: 'from the Greek verb *aptô* (to touch)'. Deleuze, *Francis Bacon. The Logic of Sensation*, p. 138 [see Chapter 14, note 2]. Gibson, in turn, uses the meaning 'able to lay hold of', also from Greek, and also explained as the sense of touch: Gibson, *The Senses*, p. 97.

[71] To name a few: empirical psychology and psychophysics (e.g. Susan Lederman, Roberta Klatzky); film studies (e.g. Laura Marks, Lisa Coulthard, Catherine Constable, Matt Denny, Timotheus Vermeulen), architecture (e.g. Ana Araujo); computer science and haptic technologies (e.g. Stefano Papetti, Charalampos Saitis, John McDowell); geography (e.g. Mark Peterson); ecological perception (e.g. James Gibson), anthropology (e.g. Tim Ingold); art history, aesthetics and philosophy (e.g. Riegl, Maldiney, Deleuze, Claire Colebrook). They have developed more or less different understandings according to their different objects of study. In the context of the production of technological/digital commodities, the word is used to denote the vibration produced by certain devices in order to simulate the feel of certain events. For example, it is the kind of vibration of the joystick of a video game used to simulate gunshots or hitting objects. This understanding pertains to the context of the development of the so-called 'haptic technologies', and should be radically distinguished from the aesthetic/philosophical/ ecological understanding developed in the present investigation.

[72] Aloïs Riegl, *Late Roman Art Industry*. trans. Rolf Winkes. 2nd edn (Rome: Giorgio Bretschneider Editore, 1985). By historically, I mean in the history of aesthetic studies in the so-called Western world, from Greek literature onwards.

the work of Gottfried Herder.[73] In section I.3, I present a review of Riegl's and Herder's accounts that together can be argued to constitute relevant foundations of a haptic tradition. In a recent account, Ingold illustrates the haptic modality as follows:

> Think, for example, of the waves of the sea or the rippling waters of a stream, or a wheat-field swept by the wind. A haptic vision seeks not to freeze the surface corrugations in some momentary form, so that they may be modelled in the mind through a one-to-one mapping of data points on the surface and in the model, but to join with the currents and with the wind. It is to feel the waves, the ripples and the swish of the field as movements.[74]

As explained by Deleuze, the movement of deformation is 'a movement "in place", a spasm',[75] like the movements of contraction and expansion of any material, the movements of waves, ripples or swishes, or the movement that takes place when feeling a rough or smooth texture for example, which are all based on our sensitivity to deformation in the surface of contact. It is not the movement of a separate object that changes location, as I address in I.4. This is the kind of movement that takes place in a sensation. As all these writers observed, haptic sensitivity can be a function of different sensory domains. For example, Deleuze and Guattari suggest that the experience of a 'haptic space' 'may be as much visual or auditory as tactile'.[76] The writers that have studied the haptic function have mainly explored haptic vision, whereas haptic listening has remained to a great extent unaddressed in the fields of aesthetics and philosophy, as well as in musicology and music theory.

From a different angle, we can think about how plain our haptic sensitivity to sound becomes if we reflect for a moment on the fact that disturbing sounds are very difficult to ignore. We can distinguish between two kinds of factors involved in this difficulty. They can be difficult to ignore when their meaning is offensive, for example, or they can be difficult to ignore simply because the listener is *in contact* with them and sensitive to that contact. In a video interview, rock bassist and songwriter Kim Deal (Breeders, Pixies) described why, sometimes, she cannot stay in a place where they are playing music that she cannot stand, and that she

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[73] Herman Parret, 'Spatialiser Haptiquement de Deleuze à Riegl, et de Riegl à Herder', *Actes Sémiotiques* , 112, 2009 <https://doi.org/10.25965/as.2570>

[74] Tim Ingold, 'Surface Visions', *Theory, Culture & Society,* 34 (2017), p. 103.

[75] Deleuze. *Francis Bacon. The Logic of Sensation*, p. 31.

[76] Deleuze and Guattari, *A Thousand Plateaus*, p. 544. Interestingly enough, from the point of view of 'perception', Gibson is perhaps hinting at the possibility of a haptic way of 'looking or listening' in one of his comments, which unfortunately he does not develop further. Gibson's 'haptic system' is 'the perceptual system by which animals and men (sic) are literally in touch with the environment', then he suggests: 'When we say *figuratively* that a man (sic) is in touch with the environment by looking or listening, the metaphor is something to think about, but we can put this off until later'. Gibson, *The Senses,* p. 97.

cannot 'zone out' either. Her spoken and gestural description seems to me a good example of the second factor:

> …it's like something tapping you, "tap tap tap tap tap" [while moving the finger repeatedly towards the ear], just like what the fuck [looking around], it's those sss, just ew! [i.e. expression of disgust], beep beep beep beep, ew! [shaking and flinching at the thought of the sounds].[77]

I think this comment directly challenges a tendency that has largely prevailed throughout centuries of music literature, to emphasise the seemingly intangible or immaterial nature of sounds, in comparison with solid or visual things, hence disregarding their material nature — a point I come back to in I.1.7. Of course, the materiality of sounds comes across in ways that are not equivalent to those of solid or visual things, but this is not the point. In Deal's description, the term 'tapping' is used in the sense of being *touched* by quick blows, as when someone taps you on the shoulder — a form of calling another person's attention that I personally find particularly disturbing when unnecessary. She is applying this verb to the feel of sonic blows 'tapping you' on 'the ear'.[78] Like Deal, and probably many other listeners, I also find particularly disturbing and unbearable the tapping of unwanted sounds. This 'tapping' is thus what explains Deal's body gestures of flinching and recoiling, not only in discomfort but also as if trying to avoid contact with the sounds. Drawing on my own experience and other similar accounts, I argue in this thesis that this form of sensitivity to sounds by touch, or contact,[79] is not metaphorical. The 'tapping' of sounds does not establish an extrinsic relation with other forms of tapping. Moreover, this 'tap tap tap tap tap' is not only a rhythm of short and regular durations *between onsets*, but also a rhythm of sonic strokes or protuberances, each one a little contraction of the material and a little hit on the listener. In other words, when we listen to successive sounds, they do not only go one after the other, but they also all go towards the listener, performing different forms of contact, different ways of touching, and we can contract them as a continuous material surface with protuberances (as well as with plains, cuts and hollows), that is *a sonic relief,* which can be pleasurable, uncomfortable, or have many other effects beyond the pain/pleasure duality, depending on the case.

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[77] Paula Van Den Elsen, 'The Real Deal. A Documentary About the Breeders', (Netherlands: 2002) <https://www.youtube.com/> [Accessed 3 March 2018] [My transcription AB]. I provide an extended transcription of this conversation in Appendix 1.

[78] It is important to briefly mention that the concept of 'the ear' I use throughout this thesis stands for the whole aggregate of parts and functions engaged in listening at a given time, including the mind, and other body parts or appendages, as I will develop later.So, in this sense 'the ear' actually means a more or less stable "organ" of a kind of listening, as I am only focusing on the kind of listening that, anatomically and physically involves the ears, but which ecologically and aesthetically, reaches further in and out the ears and the body space.

[79] 'Contact' understood in its etymological sense from Latin *contactus*, which root *contact-* means 'touched, grasped, bordered on', and comes from the verb *contingere,* which is composed by *con-* 'together with', and *tangere* 'to touch'. Entry 'contact', in *Oxford Dictionary of English.*

Both in perception and sensation, and both for sounds that attract us or repel us, we can be haptically sensitive to the material nature of sounds. In the specific cases when this way of touching/being touched by sounds happens through the determination of a transitory organ of haptic listening in a sensation, I argue that it is useful to think about this organ and ourselves as a listening membrane, which accounts for both, the sense of a sensitive listening "skin" or "flesh", and the sense of connecting the entire mass of the inside to the entire mass of the outside, as I explain in I.2, which is in line with Deleuze and Guattari's definition of 'sensory becoming' as 'the action by which something is ceaselessly becoming-other (while continuing to be what they are)',[80] as I explain in I.1.4.

In relation to discussing how the sounds of a recording *feel*, Moore put forward the following consideration in 2012:

> Although a recording may be made up of instruments playing melodies, rhythms and harmonies (the stuff of conventional music theory), it will also carry a 'feel'. It is this feel that is frequently the first aspect to attract (or repel) a listener, but it is also often the hardest to discuss.[81]

I think there are different factors involved in why 'this feel' is 'often the hardest aspect to discuss'. In this thesis I propose to investigate two of them. Of course, we can consider the 'feel' as being not only 'the first aspect to attract (or repel) a listener', but also as unfolding further differences throughout the track, which may be found operating in various more or less meaningful and intense ways. The first factor has to do with the need of developing further some music categories, in order to make it feasible to discuss certain *aspects* such as roughness, sharpness and density, certain *elements* such as glides and swellings, and certain *variations* such as movements of contraction-expansion and vortical movements, which have not been tackled directly or thoroughly enough in the available literature about music. This constitutes one of the complementary objectives of this investigation. Haptic details constitute an underdeveloped dimension of sound in the study of music and sound art. I think this is not only due to the neglect of the so-called 'secondary domains' of texture and timbre,[82] but also to other pending challenges in our ways of thinking about music and listening. For example, Moore defines timbre as 'the actual, *recognisable, quality* of the sound-sources', and posits that:

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[80] Deleuze and Guattari, *What is Philosophy?,* p. 177.

[81] Moore, *Song Means,* p. 29.

[82] Ibid. I expand on this point in I.4.

> The most important question to ask of timbre, and that contribute to the way timbre signifies, again concern deviations from implicit norms. Such modifications tend to operate on various continua: from 'harsher' to 'smoother' , from 'thinner' to 'thicker', from 'more distanced' (i.e. controlled) to 'more indulgent'. And there is necessarily an historic dimension to this schema, too.[83]

Haptic aspects, such as the ones mentioned in these examples of continua, are without doubt a determinant factor in the recognition of sound sources, and in the ways they can be modified, or rendered unrecognisable. While I concur with the importance of this question, my thesis observes how haptic aspects go beyond this function and therefore *beyond the domain of timbre.* I attempt to demonstrate that, like any other music domain, the haptic domain can work in conjunction with any other domain, but it exceeds them, and can also be treated as a music domain in its own right. Thus I have set out the project of developing and organising a set of constructive categories for *sonic differences made on the grounds of haptic sensitivity,* that rock listeners and scholars may find useful when analysing, communicating and discussing the ways that certain sonic details can be related to their interpretations. A haptic sensitivity to sounds depends on *a fundamental dynamic contact with the sonic materials*, which includes a contact with their textures, their movements in place, their forms in formation, their heterogeneity and infinitesimal details, their vibratory nature, their ways of flowing, and so on. It also includes the sense of being immersed in thick or hazy sonic environments, for example, or on the contrary, feeling a sound's compact thickness. It includes the sense of being beaten, pricked or scratched by the sharp or rasping sonic edges of attacks and strokes; and the sense of being carried, pulled and pushed by sonic flows, or of being oneself flooded with sound, among many other possible senses. The types of sonic haptic formations I call 'categories' for practical purposes and not in the Kantian sense as I explain in the body of the thesis, are chiefly developed in a 'constructive' way, in order to study operative traits of sensation. The aesthetic principles I have borrowed from Deleuze's Logic of Sensation and Deleuze and Guattari's *A Thousand Plateaus*, and observed in rock recordings are: 'neutralisation', 'deformation', 'isolation', 'adjacency on a single plane', 'zones of scrambling' (or 'zones of indiscernibility'), 'turbulent flow' and 'vortical movement', 'aggregates' and 'multiplicities', 'molecular levels', 'saturation' and 'broken tones'. They are directly connected to their philosophical concepts of 'chaos', 'multiplicity', 'continuity', 'infinity', 'passage to the limit', 'intensity', the 'couple materials-forces', 'continuous variation', 'difference' and 'repetition'.

In the aesthetic approach I develop here, I focus on the *tensions* and *passages* between the level of recognition/representation and the level of intensity/sensation. Music practices, the aesthetic discipline and music analysis certainly need to resort to processes based on

[83] Moore, *Song Means*, p. 44-5.

recognition and representation, for they are always a part of any experience, and they are necessary to indicate relevant details. As also put forward by Moore:

> In order to discuss how a musical experience was, we need to communicate its *changing effect* on us, and we therefore need to be able to identify parts of pieces precisely in order to do this.
>
> Too often in the literature, whether academic, journalistic, fan posting, or whatever, interpretations are made without adequate anchorage in the details of an actual aural experience.[84]

As I indicated before, I share Moore's position that Gibson's ecological approach provides appropriate grounds to deal with perception, invariant information and theories of representation. At one level we can extract details that can be *recognised* in subsequent listenings and provide this 'adequate anchorage' for the purpose of 'identification' and 'description'. These can work as the traits that allow the *specification* of sonic details in any domain, such as haptic qualities, timbres, pitches, scales, chords, durations, formal relations, and so on, as well as *representative* and *narrative* traits, which I subsume under the umbrella of *givens based on recognisable and representative traits, which kind/function can be further specified*. However, I think that Moore's critique can also apply to the purpose of studying sensation, which is also in need of addressing both a 'changing effect', and an 'adequate anchorage' in the aesthetic principles involved in the operations of passage to the level of intensity/sensation, which must also be anchored in the encountered sounds. When a work of art comes across in a sensation, what comes across is what I call a new formation, or a *new sonic formation* for the case of artworks made of sound, which is what Deleuze calls by many names in The Logic of Sensation such as 'the form related to the sensation', a 'new order', an emerging 'rhythm', a 'resemblance through non-resembling means' (I.3) and 'the Figure'. Above all, as I have also mentioned in previous paragraphs, the work only achieves this new formation, by means of a practical figuration, or the 'inevitable preservation' of those 'givens', as a sort of preliminary stage in the process, which is necessary for the tension and the passage that characterise the 'constitutive difference of level' of the sensation to take place. Thus, when studying sensation we still have to address the givens. Yet, since the operative traits of sensation immediately destroy them and neutralise them, in order to give way to the new formation made of traits of sensation, the study has to address these operative traits of sensation in their own right. One of the main contentions of my thesis is that the sonic traits of a piece of music that can be related to the way it attains the sensation, can be distinguished, analysed and explained, but they are not recognisable/representative traits. They are traits of a different kind. They are operative traits, which constitutes the specific object of a *constructivist aesthetic enquiry*. The focus of my thesis shifts from the problem of discussing

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[84] Moore, *Song means,* p. 5-6. [My emphasis].

'how a musical experience was', to the problem of discussing the operations involved in a work of art coming across in/as a sensation in the encounter, how it constructs and creates new formations made of 'traits of sensation', which are 'material traits of expression' that bring forth 'continuums of intensities', a problem that can only be addressed by means of a process of construction. Yet, as Francis Bacon warns us with regard to painting, which I think we must also bear in mind at all times with regard to music:

> It is a very, very close and difficult thing to know why some paint comes across directly onto the nervous system and other paint tells you the story in a long diatribe through the brain.[85]

Scholarship on music and Deleuze and Guattari

There is an extensive body of scholarship on music and sound studies that draws on Deleuze and Guattari's work in rigorous and constructive ways. For example, the two edited books *Deleuze and Music* (2004), and *Musical Encounters with Deleuze and Guattari* (2017), present a comprehensive range of studies in the area.[86] They effectively apply Deleuzo-Guattarian concepts such as 'multiplicities', 'becoming', 'refrain', 'affect', among many others, to the study of a variety of issues and music practices (e.g. improvisation, experimentation, dance, hip hop, jazz, metal, pop), in connection to subject-matters of the utmost importance such as confronting racism and sexism, and reinforcing minority positions, feminism and queer subjectivities, among others, which are all relevant to my work, and should certainly be relevant to any work and to all aspects of our lives. I believe that the important place that the field of aesthetics can occupy in our political, cultural and ethical concerns and agency, is significantly founded on its distinctive capacity to provide a space of indetermination to create and think freely, which allows for *experimentation* and for the free unfolding of our ways of being, that can result in a free production of subjectivities, both individually and collectively. Specifically, I argue that the aesthetic principles of Deleuze's Logic of Sensation are not only highly relevant to the aesthetic study of rock recordings, but are also notably concerned with providing this space and giving an account of processes of experimentation that take place in it. I have also focused my investigation on the haptic dimension of sounds, because it is directly connected to the ways sensation intensifies the effects and gives more power to the meanings that we find in, and construct with, rock recordings, in line with Deleuze's rationale.

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[85] Bacon in Deleuze, *Francis Bacon. The Logic of Sensation,* p. 28.

[86] Ian Buchanan and Marcel Swiboda, eds., *Deleuze and Music* (Edinburgh University Press, 2004); Pirkko Moisala, Taru Leppänen, Mila Tiainen, and Hanna Väätäinen, eds., *Musical Encounters with Deleuze and Guattari* (London: Bloomsbury Academic, 2017).

My thesis is partly aimed at contributing with a programme against the cliché, which Deleuze and Guattari were also particularly and emphatically adherent to.[87] It is concerned with the ways in which standardisations, commodifications and institutionalisations of aesthetic practices, contribute to the perpetuation of many forms of oppression. So, I have chosen to address the aesthetic problems that can make a practice move in the opposite direction. I have found many consistencies between my agenda and that of other scholars working on music and Deleuze and Guattari. For example, I have reflected with their publications about the importance of not treating art as an end in itself, and of not closing the arts in a system (e.g. Bidima, Buchanan) — I expand on this point in I.2. By way of introduction, it is apposite to say that I think this position entails avoiding the adjective 'musical' whatsoever, as I do in my work,[88] because there is no real essence to what music is. For example, as Buchanan explains: 'while music is a problem of the refrain according to Deleuze and Guattari, the refrain itself is neither the beginning of music nor in itself musical, but the properly anti-musical content of music'.[89] This is related to the consideration that 'refrains' are at work in all aspects of life and the variety of forms of lives and becomings that constitute the world, including music. Deleuze and Guattari's concept of the 'refrain' is very complex, and can be related to Deleuze's understanding of 'repetition' as the opposite of 'generality' (or the opposite of repetition of the same or the similar), in tandem with his reading of Nietzsche's notion of 'eternal return'. Although I do not develop these concepts explicitly in my thesis, the way they are implied in all the problems I deal with, is well encapsulated in the following excerpt from Deleuze and Guattari's *A Thousand Plateaus*:

> It is odd how music does not eliminate the bad or mediocre refrain, or the bad usage of the refrain, but on the contrary carries it along, or uses it as a springboard. […] Not that a folk song, a bird song, or children's song is reducible to the kind of closed and associative formula we just mentioned. Instead, what needs to be shown is that a musician requires *a first type* of refrain, a territorial or assemblage refrain, in order to transform it from within, deterritorialise it, producing a refrain of *a second type* as the final end of music: the cosmic refrain of a sound machine.[90]

A set of operative traits of sensation can be a 'sound machine' from which that second type of 'refrain' or sonic formation can emerge. Evidently, not only the song's chorus of a rock track is

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[87] It is explicitly treated in both Deleuze, *Francis Bacon. The Logic of Sensation,* as I already mentioned, and in Gilles Deleuze and Felix Guattari, *What Is Philosophy?*, p. 149-150, 204 and 214.

[88] I am grateful to my first supervisor in the first phase of my PhD, Prof. Allan Moore, for commenting about the inadequacy of the adjective 'musical', which made me think of the problems of its, indeed, far-reaching essentialist reverberations.

[89] Ian Buchanan, 'Introduction', in *Deleuze and Music,* ed. by Ian Buchanan and Marcel Swiboda (Edinburgh: Edinburgh University Press, 2004), p. 1.

[90] Deleuze and Guattari, *A Thousand Plateaus,* p. 385.

a form of 'refrain', but it can be any of its various usual elements, such as riffs, drum-kit patterns, shouts, instrumentation, and a long etcetera. Any of them can be either used as a 'springboard' in this way, or become too 'territorialised', sometimes to the extreme of becoming a cliché. Thus, I have been following how sonic haptic traits can become these springboards in rock recordings.

I have also been dwelling on other issues that these publications on Deleuze, Guattari and music or sound art also contemplate. For example, Marie Thompson's consideration of 'the ways in which the material (e.g. bodies, environments and atmospheres) is entangled and inextricable from the seemingly immaterial (e.g. thought, meaning, language and discourse)', and the key role of this approach in overcoming culturally inherited dualisms, such as the 'body/mind' and the 'nature/culture' divides, coincides with my own agenda.[91] Many of these scholars, and others, emphasise the materiality of sound, and the musicians' 'intimate understanding of music's materiality', as Thompson writes. Another example is Christoph Cox's book on sound art,[92] which also integrates Deleuze and Guattari's philosophy and emphasises both the materiality of sound and the need to overcome these dualisms. However, Cox's disciplinary field is a '*realist* ontology' that differs from Thompson's 'onto-epistemology', as they state and debate.[93] In my studies, although I address some common problems and insights that these approaches also deal with, my approach does not strictly correspond to any of them. I have extracted and constructed the ontological considerations I ground my thesis on, from my own reading of Deleuze and Guattari's philosophy and aesthetic thought. As previously introduced, these are concerned with 'a reality specific to becoming', which is the basis of the ontology of sensation I focus on, that concerns inextricably what I have proposed to call an expressive-intensive-material reality and, as such, never leaves 'matters of expression' out of the equation. This reality is primarily grounded on the 'plane of immanence' where intensities circulate, but it is also perpetually constituted by movements, passages and tensions between strata and this plane. Recognition, identity, representation, organisation and resemblance can only be grounded on strata, but strata themselves ultimately belong to the plane of immanence: they are its 'spinoffs', 'animated and defined by relative speeds of deterritorialisation', as Deleuze and Guattari clearly state.[94] Thus, I focus my studies on these movements, tensions and operations of passage. The ontological considerations I work with constitute what Guattari calls a non-generalisable 'ontological

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[91] Marie Thompson, 'Experimental Music and the Question of What a Body Can Do', in *Musical Encounters with Deleuze and Guattari*, ed. by Pirkko Moisala, Taru Leppänen, Mila Tiainen, and Hanna Väätäinen (London: Bloomsbury Academic, 2017), p 150-1.

[92] Cox, *Sonic Flux.*

[93] Marie Thompson, 'Whiteness and the Ontological Turn in Sound Studies', *Parallax*, 23.3 (2017), 266–82; and Christoph Cox, 'Sonic Realism and Auditory Culture: A Reply to Marie Thompson and Annie Goh', *Parallax*, 24.2 (2018), 234–42.

[94] Deleuze and Guattari, *A Thousand Plateaus,* p. 78.

domain' with its own 'ontological consistency',[95] as I explain in I.1.5 in more detail. My disciplinary field is aesthetics, philosophy and music (or art made with sound) in an entangled transdisciplinarity, that is consistent with an important part of Deleuze and Guattari's work and can be effectively connected to Guattari's formulation of an ethico-aesthetic paradigm. Thus, although I do not work directly within other disciplines such as cultural studies, sociology or semiotics, I explicitly treat discourse and meaning as fundamental to my work, and I do not separate cultural, social, political and ethical matters from the ontology of sensation. With Deleuze and Guattari, I am more interested in meanings and discourses whose constitution is not primarily grounded on identities, representations and significations, but on subjectless intensities or becomings, as I largely argue in Part I, which are not expressionless, and thereby always involve social and cultural concerns. Therefore, my approach can certainly be subject to constructive collaboration with other approaches and disciplines.

I also bring into play some of Jean-Godefroy Bidima's reflections that I found directly relevant to my approach in I.2, yet I do not elaborate on his account on haptic sensitivity, for I have applied a different emphasis. While Bidima emphasises a haptic sense that results from summoning other senses, or all the senses, I focus on a sense's *own* emergent haptic function that is born of the diagram in a sensation. Bidima's allusion to the fact that a sense can 'overflow its own region' and reach other's, is also an important aspect of Deleuze's logic. However, Deleuze pays especial attention to the cases when a sense's way of overflowing to other regions in a sensation is by changing and expanding its own, instead of summoning other senses. To be sure, Deleuze does integrate the non-segregation of the senses as 'the rhythmic unity of the senses', for which he credits phenomenology, and the summoning of other senses, notably illustrated with Bacon's series of screaming popes (1950-1953), for example. However, he does so only from the point of view of the BwO and the wave that determines in it a transitory haptic function, which, for the case of these paintings, would be a haptic function of vision which then overflows towards the auditory region.[96] The process is more complex, as usual, and I am not saying that Bidima's reading is wrong: it is only a matter of emphasis. In the process of attaining the sensation there can be a minimum of a summoning or recalling other sense's experiences, only 'at the very moment' when the encountered entity breaks with this cross-modal sensitivity of the organism, in order to generate each time a haptic sensitivity of the BwO, that is transitory and proper to the sense involved in the encounter. For example, I illustrate this with the way a sense of snakeskin in a rock recording is achieved as a purely sonic skin that can be clearly distinguished from a representation or a cross-domain mapping, which can, in turn, be argued to only participate as that practical preliminary stage of the process of attaining the sensation (III.2). Moreover, the movements of deformation proper to the haptic sensitivity of any sensory domain are

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[95] See for example, Guattari, *Chaosmosis*, p. 47 and 52.

[96] Deleuze, *Francis Bacon. The Logic of Sensation,* p. 29.

rhythm, which is one of its characteristics along with the close-range and gradual sense, for example, that allow for subsuming under the same notion of 'haptic' something that any sense can acquire. Yet, we must bear in mind that, in its Deleuzo-Guattarian sense, the haptic sensitivity proper to the aesthetic sensation is not the result of a sensory domain drawing on the experience of another sensory domain. Deleuze often emphasises how the Figure is a purely 'pictorial fact' of 'the visual whole', with regard to painting. The Figure comes across through the formation of 'a haptic eye', instead of via summoning the tactility proper to another sensory organ.[97] This is an aspect of Deleuze's move beyond phenomenology.

Particularly relevant to my research, are the insights we learn from a 'non-audist' perspective, put forward by Taru Leppänen in 'Unfolding Non-Audist Methodologies in Music Research: Singing Hip Hop Artist Signmark and Becoming Deaf with Music'.[98] Unlike my research, this chapter does not make explicit an intention to develop ways of addressing sonic haptic traits in aesthetic studies. Yet, Leppänen connects the Deleuzo-Guattarian notions of sensation, vibration, becoming, haptic and the rhythmic unity of the senses, in ways that partly coincide with my approach. Although my focus is on the haptic function of the ear, I fundamentally maintain, in line with Leppänen, that there is no clear-cut boundary between non-Deaf and Deaf listening and haptic listening. I share percussionist Evelyn Glennie's view that 'hearing sound and feeling vibration' cannot be completely separated (as quoted in the same chapter). For a non-Deaf, the sonic flows that are listened to include sonic vibrations that resonate through the ear, and that are combined with sonic vibrations that are felt in other zones or organs of the body. There is no clear-cut separation between sounds and sonic vibrations, and this fact is especially relevant to what I call *the haptic dimension of sounds,* for which d/Deaf musicians have a vantage point, and can ultimately be argued to be much more attuned to, since becoming more sensitive to the vibratory nature of sound is a fundamental part of it. What I propose to call *haptic listening* is a way of listening that closely follows the sonic material flows at their 'molecular levels',[99] which is what makes it possible to become with them. It depends on a gradual and close-range sensitivity to their ways of flowing, deforming and vibrating, that reveals finer distinctions at different scale levels (including micro and macro levels), as they bring about a transitory organ, that will be determined and will vary according to the encountered sonic singularities and intensities that circulate within and around us, in the listening encounter, investing different zones in different ways. From these notes, I can only conclude that my own investigation and listening practice oriented to sensation and haptic listening indeed involve what Leppänen calls 'becoming Deaf', since they involve increasing our receptivity to sonic materials, in ways that are radically different from

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[97] See for example, Deleuze, *Francis Bacon. The Logic of Sensation,* p. 70 and 113.

[98] Taru Leppänen, 'Unfolding Non-Audist Methodologies in Music Research: Singing Hip Hop Artist Signmark and Becoming Deaf with Music', in *Musical Encounters with Deleuze and Guattari*, ed. by Pirkko Moisala, Taru Leppänen, Mila Tiainen, and Hanna Väätäinen (London: Bloomsbury Academic, 2017).

[99] See for example, Deleuze and Guattari, *A Thousand Plateaus,* p. 106 and 369.

what we are accustomed to use audition for, in our most habitual ways of listening that correspond to what we call hearing and the perception of sound.[100] They consist in being and becoming more attuned to sonic details that are different from the ones we have been conditioned to be and become more attuned to. Thus, they involve changes in the exercises of the senses, that reveal the continuities that Glennie and Leppänen are referring to. As eloquently explained by Leppänen: 'Instead of treating Deaf and non-Deaf as distinct categories or identities, the concept of becoming transforms the subjectivities of a Deaf and a non-Deaf from fixed identities, from being, into open and dynamic materialities'.[101] Furthermore, the emphasis put on a departure from standard identities, on becoming minoritarian, is also consistent with the pressing task of realising that there is too much at stake in our tendencies to abide by models of cancelled difference, or of difference as degrees of deviance from norms, which are especially regrettable if we fall into the error of taking them as the real or the conditions of real experience. Although many of the published Deleuzo-Guattarian approaches to music and sound art are indeed thrilling, I have centred my efforts on studying directly and thoroughly Deleuze and Guattari's work myself, and on addressing directly the sounds of rock recordings and haptic listening, focusing on both the formation of a haptic function of listening in a sensation, and the new sonic haptic formations that can work as, and emerge from, operative traits of sensation.

STRUCTURE OF THE THESIS

The thesis is divided in three parts. The first part is dedicated to the considerations that construct the ontological consistency of Deleuze and Guattari's aesthetic notions of 'sensation' and 'haptic'. It attends to connections between discourse about rock recordings (or music) and these notions, and establishes their relevance to the aesthetic study of rock recordings. It is divided in in four chapters. The first chapter elaborates on Deleuze and Guattari's concepts of 'intensity', 'sensation', 'haptic', and 'sense', and comprises seven sections that address: relevant aspects of Deleuze's break with both Kant's 'unity of the subject' and phenomenology; a discussion about the difference between aesthetic and empirical approaches; a presentation of Deleuze's key account on the 'new' which he takes from Nietzsche and is the sense of the word 'new' I use when I speak of the new sonic formation that comes across in a sensation; the status of sensation vis-à-vis materials, the status of intensity vis-à-vis materials, and the status of expression vis-à-vis materials; some issues about the operations of passage in a sensation and about how to determine the body one is

[100] A very interesting reflection on differences between hearing and listening, which are in line with this consideration, has been put forward by composer Pauline Oliveros in her publications about her Deep Listening practice. See for example, Pauline Oliveros, *Deep Listening* (Lincoln: iUniverse, 2005), p. xxi-xxiii; and Pauline Oliveros, *Quantum Listening* (Ignota, 2022), p. 30-39.

[101] Leppänen, 'Unfolding Non-Audist Methodologies in Music Research: Singing Hip Hop Artist Signmark and Becoming Deaf with Music', p. 39 and 45.

addressing in a logic of sensation applied to sounds and rock recordings. In the second chapter I define my ethico-aesthetic agenda more directly, centring on the problems of what I understand as a practice of caring, which contemplates a constant revaluation of values, raising our sensibility to 'alterity', and what I propose to conceptually and experimentally explore as the listening membrane. The third chapter is an overview of the haptic tradition in aesthetics. It focuses on the insights of two main precursors: Herder and Riegl, in complementarity with some secondary literature on this intellectual lineage, as well as with Deleuze and Guattari's approach to the haptic function. The fourth chapter is a review of the notion of movement in music, which brings into play Bergson's understanding of 'real movement', to discuss the difference between movement as a change of place and a movement in place.

In Part II, I present some constructive categories for the analysis of sonic haptic traits in rock recordings. It is aimed at gathering and developing a vocabulary, a typology, some principles and operations, and an organisation of differences made on the grounds of haptic sensitivity. These differences are developed into *constructive* categories because they are oriented towards the study of operative traits of sensation in rock recordings. The main criteria I have implemented for this selection is their usefulness and pertinence for that purpose, but this does not prevent them from potentially being useful in discussing other interpretive issues. This part is divided in two sections: 'II.1. Aspects', which refers to issues of grain, edge and consistency (including density and elasticity); and 'II.2. Elements', which refers to relatively discrete sonic haptic formations, that can be taken as relatively separate sonic components of a haptic variegation. The variations of these aspects and elements refers back to the section on the movement of sonic materials (I.4).

In Part III, I implement the contents of Part I and Part II, in a series of aesthetic studies of individual rock tracks, that are aimed at figuring out the sonic traits that can be argued to operate in a sensation in each case. The aim is to demonstrate that an interpretation of meaning based on sensation is different from other kinds of interpretations and requires a different treatment. I present four examples centred on different matters: the neutralisation of recognisable traits in 'Know' by Nick Drake; the neutralisation of anaphonical readings in 'Snakeskin' by Deerhunter; vortical movement, turbulence and overflow in 'Madame George' by Van Morrison; and the role of harmony in the construction of a sense of fluid forces in the form of sonic tides, waves, currents and whirls in 'Ana' by Pixies.

1. Notes on intensity, sensation, haptic sensitivity, sense and discourse about rock recordings

1.1. Intensive milestones

This section is a preliminary reflection about a series of interconnected consistencies between what I consider to be a key statement by Lester Bangs on the practice of listening to rock recordings, and the concepts created by Gilles Deleuze and Félix Guattari that I work with in my thesis. I make these concepts intervene in Bangs's account of what happens in the encounter with a record that can intensely and irreversibly change the listener. I observe the reach of Bangs's critical writing beyond the personal, towards fundamental philosophical, ontological and aesthetic problems that I argue are embedded in it. I end with a brief account on a constructive dialogue I established with the micro-phenomenological work of philosopher Claire Petitmengin, that can preliminarily help and encourage the reader to start noticing introspectively some relevant distinctions I work with throughout the thesis, as it also helped me in an initial stage. In particular, all these notes can be useful for distinguishing in one's listening experiences what I propose to call 'intensive milestones' from other events. Still, it should be noted that neither empirical nor phenomenological approaches can directly and fully give an account of the specific problems that these intensive milestones raise, as I explain in following sections.

INTENSIVE MILESTONES IN LESTER BANGS'S DISCOURSE

Intensity is a concept that effectively works as a cornerstone for the more precise problems I have centred my enquiry on, namely those posed by *sensation*, and *the power of rock recordings of endowing listening with a haptic function*. As already introduced, I am mainly drawing on Deleuze and Guattari's development of these concepts.

Intense listening encounters are important events to dedicated rock listeners. This postulate is at the basis of all the questions I address in this thesis. For example, in 1971 rock writer Lester Bangs described the experience of listening to certain sounds and certain records, as follows:

> All these were milestones, each one fried my brain a little further, especially the *experience* of the first few listenings to a record so total, so mind-twisting, that you authentically can say you'll never be quite the same again.[102]

The aesthetic studies I develop here will probably make more sense to listeners who feel this way about some (a few or many) of their own listening experiences, and for whom, perhaps needless to say, experiencing and encountering this kind of intensity is deemed positive, life-affirming and important. Here, I endeavour to bring together the necessary understandings that can allow us to carry out aesthetic studies of rock recordings from the point of view of these intensities, and without them losing a central place. Of course, each listener has their own 'milestones', which can or cannot be shared with those of others. Yet, this is beside the point, because listeners may also be inclined to give an account of what they experience, to understand what is going on in their encounters with the sounds and in how they make sense of them, to think about the music they listen to, both on their own and together with other listeners, and to communicate and discuss their interpretations. Overall, I believe that in the field of aesthetics, in cooperation with philosophy and relevant insights from other disciplines, these listeners can find and work on understandings that can help them develop the necessary skills and language to successfully engage in such intellectual practice and discussions.

Most of the times, it is the very process of trying to explain the sense one is making of a piece of music that enables a deeper understanding and a better appreciation,[103] especially when it is bundled with an effort to elucidate the kind of interpretation one is making, to understand its implications, and to refer directly to the sonic entity. Not only do some listeners make a profession out of this practice, whereas music critics, musicologists, or any kind of writer that writes about music, but thinking and discussing about music can also be decidedly beneficial for both making music and our ongoing listening practices. As emphasised by musicologist Allan Moore: 'We must not forget that the commentators work under the same historical and social conditions as the composers: as Richard Middleton put it [...]: "discourse and practice produce each other"'.[104]

I believe that gaining deeper understandings about both our experiences and the things we love is vital, because it is the only way of overpowering forces of stagnation and oppression, a point I explicitly develop in section I.2. I share the view that the provocations that works of art and aesthetic practices generate, are a notable way of expanding, in all possible senses:

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[102] Lester Bangs, 'Psychotic reactions and Carburetor dung: A tale of these times', in *Psychotic reactions & Carburetor dung*, ed. by Greil Marcus (London: Serpent's Tail, 2014), p. 12. [emphasis in the original]

[103] I am grateful to my first supervisor in the first phase of my PhD, musicologist Dr Allan Moore, for this important reflection.

[104] Allan F. Moore, 'The Fall and Rise of Modernism', *Critical Musicology Newsletter,* 4 (1995), p. 3.

expanding our bodily possibilities, our minds and ways of thinking, our knowledge, our awareness, our sensitivity, the places and soundscapes we inhabit, our room for experimentation, etcetera. In line with the philosophical corpus I have been studying through the years I have been developing this thesis, it is finding these openings and ways of opening the barriers we encounter within and around us, not once but over and over again, that I find vital in itself.

Bangs's general description of what these 'milestones' have in common, is consistent with the concept of 'intensity' I am working with, and its manifestation in what I propose to call *haptic listening*. These concepts are certainly not explained or defined in this passage, but I think they are certainly suggested by it, in a profound and provocative way. It is also possible to observe this consistency in many other parts of Bangs's pieces of writing, as I show in some other parts of the thesis. For now, let's preliminarily note how these lines suggest these concepts, in order to sketch out some key considerations, that I will develop later on in more detail.

In the first place, there is *no model of recognition* implied in Bangs's description, but, on the contrary, it refers to something that is fundamentally *new*, which has gone beyond any previously experienced effects, and is different from the kind of effects that could be recognised in future experiences.[105] The intensity that can be inferred from the repetition of the submodifier 'so' is related to a power to *change* you. Whether or not this change is related to a change that can be discussed in terms of identity is a derivative question. Here, Bangs is neither explicitly nor implicitly referring to how the music allows you to recognise things in it that you can identify with, or to the process of building an identity that could be recognised and reaffirmed in future listenings, as the open nature of the change described at the end of the sentence suggests. In the second place, there is *no allusion to a representation.* The intensity of the experience is neither related to what could be valued as an inventive or meaningful way of achieving a representation with sounds, nor to the excitement that could result from figuring out an enigmatic or complex representation, for example. On the contrary, in these experiences, the sounds *have done* something to the listener,[106] something that felt like the brain being fried and the mind being twisted, with no representation of such events involved. So, while these are general and metaphorical descriptors, they nonetheless refer to a sense of being directly, materially, intimately and strongly affected. I can see a parallel between what Deleuze thinks of the work of certain philosophers such as Kierkegaard or Nietzsche, and what Bangs thinks of the rock recordings that he considers 'milestones'. They are not proposing 'a new representation of movement', writes Deleuze: 'Rather, it is a question

[105] As I explain in the introduction, according to Deleuze, Nietzsche's idea of the 'new' refers to this difference in kind. Deleuze's concept of 'intensity' as 'difference in itself' is related to this idea. See 'Introduction' of the thesis.

[106] I am grateful to my supervisor, Dr Leah Kardos, for suggesting this expression.

of producing within the work a movement capable of affecting the mind outside of all representation […]; of inventing vibrations, rotations, whirlings, gravitations, dances or leaps which directly touch the mind'.[107]

This leads to my third point, as Bangs's descriptors chiefly suggest a *material contact* in the listening experience. The sounds were *touching* 'the mind', or whatever we can call that *sensitive surface of contact* or *membrane* that is being touched or touches in the act of listening. Other concepts may be equally relevant to refer to the part or zone of the body or the organ that is determined when this way of making sense takes place, as I explain in the following section I.2. Nevertheless, I will keep the concept of 'the mind' in play, like Deleuze, Bangs and the other intellectuals I work with do, which is, of course, not without a body, not without matter, and works together with other terms like the senses, the sensory domains and/or the faculties. In line with these writers, I also keep in play some metonymic expressions like 'the ear' or 'the brain'. The main point here is that the abrasive and contorting mechanical events implied in the 'brain-frying' and 'mind-twisting' effects, suggest *a way of listening* where the listening sensory and mental faculty involved does not sense, become aware, think, detect, experience, interpret, and so on, without experiencing the sensuous nature of that material contact, not as an accompanying sensory impression while being primarily engaged in another activity,[108] but in a primary way that is central to its activity. The sounds are encountered and made sense of *haptically*.

In the fourth place, when Bangs recounts that each milestone 'fried [his] brain', he is specific about the fact that they did so 'a little further', which can be taken as pointing to a threshold in the sensory experience, *a powerful liminal sonic zone,* where listening explores its own limits when exploring these sounds. Thus, I am suggesting a consistency with Deleuze's understanding of the way the passage to the level of intensity operates, by carrying the senses and the faculties 'to their respective limits'.[109] This means that the encounter raises sensibility to something that is not recognised or recognisable. On the one hand, as the term 'limit' indicates, the sensory faculty goes beyond what it already does and knows, to 'unknown' and 'unrecognisable' territory. On the other, as the word 'respective' indicates, what is encountered is something that cannot be grasped or attained by other faculties. This is a paramount difference that I also present in the next section in more detail.

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[107] Gilles Deleuze, *Difference and Repetition,* trans. by Paul Patton (London: Bloomsbury Academic, 2014), p. 10.

[108] I am alluding to Gibson's definition of 'sensation', but with an inverted emphasis, as I explain in the 'Introduction'.

[109] Deleuze, *Difference and Repetition,* p. 189.

Finally, Bangs's description suggests the unsettling provocation or the disruption that works of art can consist in. It suggests events of 'a very special violence', as Deleuze puts it,[110] which are at the heart of Deleuze and Guattari's programme of freeing thought and the senses from their complacent habit of relying and remaining on processes of recognition and representation. In general, it is possible to find striking consistencies between Bangs's reflections and Deleuze and Guattari's philosophy, and the short statement I am discussing here encapsulates some of the ones that are cardinal in my investigation.

I have set forth the project of carrying out aesthetic studies of operative traits of sensation in rock recordings, drawing on Deleuze's 'logic of sensation', where the haptic function of listening that is determined in the sensation, is precisely the opposite of a sensory function and way of thinking that would conform to the models of recognition and representation. As explained by Deleuze, 'it is not figures already mediated and related to representation that are capable of carrying the faculties to their respective limits, but, on the contrary free or untamed states of difference in itself; not qualitative opposition within the sensible but an element which is in itself difference': 'This element is intensity'.[111] (See also Introduction). Thus, all these and other consistencies allow me to think of Bangs's use of the word 'milestones' as *intensive milestones,* and to critically observe that a great deal of the aesthetic criteria he puts forward resonate with the interconnected concepts of 'sensation', 'intensity', 'sense' and 'haptic' sensitivity I extract from Deleuze and Guattari's corpus.

MICRO-PHENOMENOLOGY'S PRELIMINARY ASSISTANCE

If we want to follow and understand what is going on in our intensive milestones, when a rock recording comes across in a sensation, we first need to clearly understand the distinctions between the following experiences, effects, interpretations or responses:

- A sensation is not a triggered psychophysical response.
- A sensation is not a representation of a thing or an event.
- A sensation is not an emotion.
- A sensation is not an identity.
- A sensation is not a recognisable feel.

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[110] Deleuze refers to this special sense of 'violence' both with regard to Francis Bacon's paintings: See for example, Gilles Deleuze, *Francis Bacon. The Logic of Sensation*. trans. Daniel W. Smith (London: Bloomsbury, 2017), p. xi, p. 30, 44, 58, 71 and 75-6; and with regard to the act of thinking, sensibility, and 'intensity' in *Difference and Repetition*, as I develop below in 'Notes on sensation and its intensive reality', see for example p. 185, 188 and 190. All the philosophical implications of this 'violence' developed in *Difference and Repetition* are certainly beyond the scope of my thesis. I am only bringing into play some considerations that are pertinent to the present aesthetic purposes.

[111] Deleuze, *Difference and Repetition,* p. 189.

At the beginning of my research's journey, these kinds of experiences and interpretations were, sometimes more difficult to distinguish, and more difficult to put into words. As my research progressed, these distinctions gained clarity for me, both in the relevant literature as well as in my own listening sessions. It also became clearer that none of them corresponded to the aesthetic question I wanted to address. In this process, I found help in the work of philosopher Claire Petitmengin, who explores and studies the difficulties of describing experience at the micro-phenomenological level. Thus, I engaged in a conscious and dedicated practice of paying more attention to my own responses and experiences, and thereby noticing and recognising what is actually happening in one's subjective experiences and in different processes of making sense. This practice helped me to distinguish not only between these different experiences, but also and chiefly between a subjective or an afforded experience, and the 'encounter' proper to the aesthetic sensation. As I explain in I.1.4. and I.2. encountering involves turning oneself towards alterity, for the sensation belongs to what Deleuze and Guattari call 'sensory becoming' which 'is the action by which something is ceaselessly becoming-other (while continuing to be what they are)'.[112] Since I am certainly not discarding the fact that we are partly subjects, I think that it is important to become aware not only of one's becomings, but also of one's experiences, and of the passages from one to the other, and that we can improve in developing this awareness. However, the approach I develop here fundamentally considers the level of 'becomings' and 'encounters' as the primary productive ground, which is at the limit of 'experiences', and in relation to which sometimes, after the intense encounter, we can notice the subjective experience working as a by-product at a different level. Encountering and experiencing are complementary and equally important. Petitmengin's research, strategies and findings seem to me helpful in both areas, though in different ways. She addresses a series of obstacles that she summarises as: dispersion of attention (absence of consciousness); absorption in the objective i.e. the goal (absence of reflective consciousness); confusion between experience and representation; not knowing 'what to look for'; degrees of precision (access to details); the impossibility of real time access; and the difficulties of putting into words.[113] Descriptions of experiences and encounters are in themselves difficult, whether or not they concern sensation. As explained by Petitmengin, all these difficulties are closely related to the difficulties of becoming aware of processes that conceal certain dimensions of our experiences and encounters, and making lists of the "concealers" we may find can be highly beneficial, in any discipline. To sum up, I have realised with the aid of both the Deleuzo-Guattarian and this introspective micro-phenomenological angle that these two, namely the encounter and the experience are each

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[112] Gilles Deleuze and Felix Guattari, *What Is Philosophy?* trans. Hugh Tomlinson and Graham Burchell (New York: Columbia University Press, 1994), p. 177.

[113] See for example Claire Petitmengin, 'On the Veiling and Unveiling of Experience: A Comparison Between the Micro-Phenomenological Method and the Practice of Meditation', *Journal of Phenomenological Psychology*, 52 (2021), 36–77; and Claire Petitmengin, 'Describing One's Subjective Experience in the Second Person: An Interview Method for the Science of Consciousness', *Phenomenology and the cognitive sciences* (2006), 229-69.

other's limit, and that they have to be distinguished. Even for the case of the aesthetic sensation, we can explore the benefits of the complementarity between phenomenology and aesthetics, which in Deleuze's Logic of Sensation are also in constant interdisciplinary dialogue. I find that descriptions of experience, *for oneself,* can sometimes be a useful stage in my aesthetic studies, as long as it remains subsidiary to the main task of studying the work's expressive power in a sensation, which is at the core of my approach. This power, as I explain throughout the thesis, is based on what my research, including both my own thoughts and practices, and my own reading of Deleuze and Guattari's corpus in connection with the other relevant literature, finally led me to define as the expressive-intensive-material reality of a becoming specific to the aesthetic sensation, which is ultimately not based on the unity of a subject or what happens at the level of one's subjective experience, but on what happens at the limit of oneself, beyond experience. Hence, in resonance with Deleuze and Guattari's definition of 'sensory becoming' quoted above, I find it helpful to think of what I am, not as a listener subject, but as a listening membrane, as I explain in I.2.

1.2. 'Discord of the faculties': Deleuze's account on the encounter, intensity, sensibility at its limit, the imperceptible, sensation, thought and passive synthesis.

In this section I explain some aspects of Deleuze's philosophical/aesthetic concept of 'intensity', with a view to understanding sensation's 'intensive reality'. It comprises the problem of the discord of the faculties; the difference between encountering and recognising; intensity as the limit of sensibility; the close connection between thought and sensibility; and the 'imperceptible', which is implied in the difference between perception and sensation. This is followed by an introduction to some of Deleuze's arguments about the break that these problems entail with Kant's philosophy, and thereby with any enquiry that grounds reality, thought, experience and sensation on the 'unity of the I' and 'the form of the Same' (I address the break that the aesthetic notion of 'sensation' entails with phenomenology in I.2.). The discussion addresses Deleuze's notion of 'passive synthesis', and the difference between the condition of possible experience and the condition of real experience.

Making Deleuze's *Difference and Repetition* work in tandem with *Francis Bacon. The Logic of Sensation*, has helped me to study some essential aspects of sensation's 'intensive reality'.[114] Principally, I am referring to the question of what happens in the 'encounter' that makes it radically different from processes of 'recognition and representation'. This is the question I focus on in what follows, mainly drawing on insights from the chapter entitled 'The Image of Thought'. We learn from these pages that 'an object of recognition' is the opposite of 'an object […] of a fundamental *encounter*'.[115] I have already pointed in the introduction at the affinity between recognition and representation, so here we just have to keep in mind that Deleuze's critique of recognition (as a foundation for thought, behaviour, experience, and so on) directly affects the world of representation, and both models are based on a 'cancellation' of both 'difference in itself' and 'true repetition' (See Introduction and Notes on 'repetition' in I.4). Moreover, Deleuze consistently uses the terms 'recognition' and 'encounter' as antonyms, as well as 'the object of recognition' and 'the object of encounter', or any derivative. This opposition is key to the concept of 'intensity', because 'difference in itself' can only be *encountered,* and 'intensity' is 'difference in itself'. More precisely, 'intensity' is a 'presentation' of 'difference in itself', among others. However, it is the one that is most directly connected to

[114] Quoted in the introduction. Deleuze. *Francis Bacon. The Logic of Sensation,* p. 33.

[115] Deleuze, *Difference and Repetition,* p, 183.

the faculty called 'sensibility' (or sensitivity):[116] 'The intensive or difference in intensity is at once both the object of the encounter and *the object to which the encounter raises sensibility*'.[117] In other words, the encounter and nothing else can raise sensibility to intensity, and what is raised by an encounter with intensity is sensibility. To be sure, it is sensibility *at its limit*. Thus, the encounter is itself also a limit where a faculty confronts its limit and thereby its own element. As Deleuze explains, what happens in the encounter is the opposite of the collaboration of the faculties upon 'a supposed same object', which is no longer a faculty's own element. Moreover, Deleuze gives *sensibility at its limit* a privileged place among the faculties, as some sort of 'origin'. For example, it is this sensibility that 'forces memory' to be carried to its own limit and remember 'that which can only be recalled'.[118] According to Deleuze, sensibility at its limit (or in the encounter) is also what 'forces sensation', and what 'forces thought'. Here, his use of the verb 'to force' explicitly implies a 'violence', as I illustrate below. Concerning the connection between sensibility, thought and intensity, he writes: 'It is true that on the path that leads to what is to be thought it all begins with sensibility. Between the intensive and thought, it is always by means of an intensity that thought comes to us'.[119] Finally, when addressing the 'encounter' (or sensibility at its limit), Deleuze tends to privilege the use of the word 'sensation' rather than 'perception', because, as he explicitly states, what is sensed in the encounter, namely 'intensity', is 'imperceptible'. As I mention in the introduction, according to Deleuze, 'intensity' is both 'imperceptible for empirical sensibility which grasps intensity only already covered or mediated by the quality to which it gives rise', and at the same time, it is what sensibility 'apprehends […] immediately in the encounter.[120] Or, as he insists in other pages, 'intensity in itself' is revealed 'at the original moment at which it is neither qualified nor extended' and, as such, it is both 'imperceptible', and 'the proper limit of sensibility'.[121] I have therefore briefly introduced three of the main components of what happens in the 'encounter' that makes it radically different from processes of 'recognition and representation': *limit, own element (difference), and violence.* I shall explain these components in more detail in what follows.

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[116] I use the words 'sensibility' and 'sensitivity' interchangeably, in conformity with their definitions in the Oxford Dictionary. In the present context I use them to subsume all our sensory faculties or domains under one faculty, in line with Deleuze's usage. It can also include sensitivity to emotions or meanings, but in my approach, I consider these sensitivities when they are mediated by or subsidiary to the problem of sensation and not the other way round.

[117] The others presentations of 'difference in itself' that Deleuze considers are 'disparity in the phantasm, dissemblance in the form of time, the differential in thought', though they all seem to still involve intensity at some point, since they are all constrained by some form of sensibility as origin. Deleuze, *Difference and Repetition,* p 190. [My emphasis].

[118] Ibid, p184-5.

[119] Ibid, p. 188-190 [My emphasis].

[120] Ibid, p. 189.

[121] Ibid, p. 311.

First of all, what recognition and representation lack is a fundamental 'violence', as Deleuze insistently explains. Of course, he is not referring to a represented violence, let alone to the act of being violent towards others or oneself, but to what fundamentally makes our faculties really work:

> Each faculty must be borne to the extreme point of its dissolution, at which it falls prey to triple violence: the violence of that which forces it to be exercised, of that which it is forced to grasp and which it alone is able to grasp, yet also that of the ungraspable (from the point of view of its empirical exercise). This is the threefold limit of the final power.

This can happen to any faculty, as well as in the communication between them. The question we must pose, according to Deleuze, is, for example: 'What forces sensibility to sense? What is it that can only be sensed, yet it is imperceptible at the same time?' — imperceptible 'from the point of view of its empirical exercise'. And we can pose this question for any faculty, that is not only for sensibility but also for reason (or thought), imagination, language, memory, and any other, and 'even for faculties yet to be discovered'.[122] For any of them, 'every time it is a free form of difference which awakens the faculty'. Whether a faculty encounters something of the outside world, or something that has been communicated by another faculty, the 'object of encounter' is that 'free form of difference'. Thus, in the second case, what is communicated to another faculty is then 'metamorphosed and does not form a common sense',[123] because a different/new encounter takes place. The object of encounter is what a faculty 'alone is able to grasp'. In the case of sensibility (or a sensory domain) it is 'that which can only be sensed', in the case of imagination it is 'that which can only be imagined', and so on. Deleuze tells us that his concern is not to establish 'a doctrine of the faculties', but 'only the nature of its requirements', and to welcome the 'uncertainty about the outcome of research', which is related to the 'complexity in the study of the particular case of each faculty', and of 'new faculties' that can arise. The most pressing requirement is to allow them to have limits, so that they can be carried to their limits, because faculties that have 'no proper limit', 'are imposed and have an exercise only under the form of common sense'.[124] Common sense 'always implies a collaboration of the faculties upon a form of the Same or a model of recognition',[125] whether with one faculty acting as the legislator over the others, or in 'a free accord' between them. Conversely, when a faculty is carried to its limit: 'rather than all the faculties converging and contributing to a common project of recognising an object, we see divergent projects in which, with regard to what concerns it essentially, each faculty is in the presence of that

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[122] Deleuze, *Difference and Repetition,* p. 188.

[123] Ibid, p. 190-1.

[124] Ibid, p. 188-9.

[125] Ibid, p. 180.

which is its "own"'. Thus, it is by being carried to its own limit, beyond what it already knows, that a faculty encounters what it 'alone is able to grasp', and thereby is forced to really work. There is both an inherent violence in the process, and a dependence on sensibility for both 'that which forces sensation' and 'that which forces thought'.[126] What this violence breaks with is the 'collaboration' or the 'harmonious exercise' of the faculties: 'Discord of the faculties', writes Deleuze, where 'each confronts its limit, receiving from (or communicating to) the other a violence which brings it face to face with its own element'.[127] This can partly explain why the passage to the intensive domain can notably (though not exclusively) happen with works of art, when they centre on experimenting with the sensory domain and the material details that are immediately part of the encounter, constituting a sensitive membrane that directly connects the inside and the outside (see next section I.2).

In 'common sense', and therefore in recognition and representation, there is no fundamental encounter, no such violence, and therefore no 'final power'. What is this final power? It consists in multiple interrelated elements that can be gathered from Deleuze's work, in complementarity with the philosophical work of Bergson, Nietzsche and Guattari. It is the power that comes with being able to grasp true repetition. It is the kernel of the passage to the intensive. It is the condition of the new, of new ways of being and doing, of being able to grasp non-comparative difference, real movement, and real change, both in things and in our own subjectivities (instead of being condemned to be a fixed and already modelled unified subject, and taking this subject as the reference of everything we encounter). Thus, it is also a violence against the axiomatics that stop our faculties from really working in these senses, and which make them work only as forms of habit where nothing really new can happen. Power is at stake: not power over others, not comparative power, but one's own power, one's own growth in intelligence and sensibility, for example. What is at stake is our capacity to really think; our capacity to access the sensuous complexity of the materials we encounter; and a real access to *alterity* and the unknown, even and especially in a familiar music practice. This power is thus needed to become more sensitive to all the sensible and material things we encounter, including sounds, and *to become with them* (See I.2).

Deleuze's critique is directed towards the 'sovereignty' of 'common sense' (i.e. 'the form of the Same') and 'good sense' (i.e. 'the contribution of the faculties in each case'), which 'complete each other in the image of thought'. As he explains:

> Recognition may be defined by the harmonious exercise of all the faculties upon a supposed same object: the same object may be seen, touched, remembered, imagined or conceived… […] No doubt each faculty — perception, memory, imagination, understanding, has its own particular given and its own style, its

[126] Deleuze, *Difference and Repetition,* p. 190-191.

[127] Ibid, p. 185-6.

> peculiar ways of acting upon the given. An object is recognised, however, when one faculty locates it as identical to that of another, or rather when all the faculties together relate their given and relate themselves to a form of identity in the object. Recognition thus relies upon a subjective principle of collaboration of the faculties for "everybody" — in other words, a common sense as a *concordia facultatum;* while simultaneously, for the philosopher, the form of identity in objects relies upon a ground in the unity of a thinking subject, of which all the other faculties must be modalities.[128]

An object presents itself in different ways to different senses and faculties because it is an irreducible 'multiplicity', which is what Deleuze and Guattari deal with in the philosophy they developed thereafter. All things, objects and ourselves, are multiplicities, as largely argued in *A Thousand Plateaus,* the alternative to grounding reality on a unified thinking subject and 'the form of identity in objects', is to ground it on 'multiplicities' and 'continuous variation', as well as on 'intensity' and 'difference in itself'. There are aspects of Deleuze's critique of Kant's philosophy involved in this distinction, so I shall briefly present some of the arguments of these opposed views that I think are relevant for my thesis. According to Deleuze, Kant objected against Descartes that in the formula, «I think therefore I am», 'it is impossible for determination to bear directly on the undetermined', but there must be a form in which the undetermined is *determinable.* In other words, he noticed that there was no mention to 'how is it that this undetermined ["I am"] is determinable by the *"I think"* [the determination]'. So Kant's answer to this question was that 'the form under which undetermined existence is determinable by the "I think" is that of time', that is, it 'can be determined only *within time* as the existence of a phenomenon, of a passive, receptive phenomenal subject *appearing within time*'. This receptive subject lives the activity of thought 'like an Other within itself', and therefore: 'Time signifies a fracture of the I and a passivity in the self'. According to Deleuze, one of the main problems in Kant's account of this 'passive position' (which he also called 'receptivity or intuition') is that he didn't endow it with 'the power of synthesis', and left all possible synthesis only to activity, and therefore to 'intentions', 'concepts of understanding', an 'image of thought' and the 'world of representation'.[129] The observation of this fracture did not lead him to overcome 'the unity of a thinking subject', as the condition of possible or real experience. This has major implications:

> Kant defines the passive self in terms of simple receptivity, thereby assuming sensations already formed, then merely relating these to the *a priori* forms of their representation which are determined as space and time. In this manner, not only

[128] Deleuze, *Difference and Repetition,* p. 176.

[129] Deleuze's reading is that 'it is impossible to maintain the Kantian distribution, which amounts to a supreme effort to save the world of representation: here, synthesis is understood as active and as giving rise to a new form of identity in the I, while passivity is understood as simple receptivity without synthesis'. Ibid*,* p. 112-4.

> does he unify the passive self by ruling out the possibility of composing space step by step, not only does he deprive this passive self of all power of synthesis (synthesis being reserved for activity), but moreover he cuts the Aesthetic into two parts: the objective element of sensation guaranteed by space and the subjective element which is incarnate in pleasure and pain.[130]

Conversely, in Deleuze's account, there is a 'passive synthesis', which is the 'contraction' on which reality and the living present are grounded. Without this synthesis there is no 'internal genesis', but only things that are 'already formed' and external relations with the '*a priori* forms of their representation'. According to Deleuze: 'A dynamic space must be defined from the point of view of an observer tied to that space, not from an external position'.[131] It must be constructed step by step and from within, and this 'construction' is the power of passive synthesis. Sensations are the result of this process: 'receptivity, understood as a capacity for experiencing affections, [is] only a consequence, and […] the passive self [is] more profoundly constituted by a synthesis which is itself passive (contemplation-contraction). The possibility of receiving sensations or impressions follows from this'.[132] Here, 'contraction is not a matter of reflection', it is 'by no means memory, nor indeed an operation of the understanding'. It is 'a synthesis of time';[133] a 'synthesis of continuity in the form of *continua repetitio*' that engenders 'space from within';[134] and a 'primary vital sensibility' — I come back to this point below. Moreover, 'the element of this internal genesis' is 'an intensive differential element', which is what ensures this 'synthesis of continuity at a point in order to engender space from within'. It is on the basis of endowing passivity with 'the power of synthesis' that reality can really retain 'difference in itself' as its ground, where things are never absolutely identical to one another, or replaceable by one another, or dependant on a priori principles or categories, and where repetition is understood not as generality but in terms of Nietzsche's concept of 'eternal return', which 'affirms difference', 'affirms dissemblance and disparateness, chance, multiplicity, and becoming'.[135] In turn, in the *Critique of Pure Reason,* Kant takes the 'principles existing *à priori* (independent of experience)' as 'the indispensable basis of the possibility of experience itself, and consequently prove their existence *à priori*.' And he continues: 'For whence could our experience itself acquire certainty, if all the rules on which it depends were themselves empirical, and consequently fortuitous?'[136] Whereas in Deleuze's rationale the

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[130] Deleuze, *Difference and Repetition,* p. 126.

[131] Ibid*,* p. 31.

[132] Ibid*,* p. 113.

[133] Ibid*,* p. 94.

[134] Ibid*,* p. 32.

[135] Ibid*,* p. 391.

[136] Immanuel Kant, *Critique of Pure Reason*, trans. by J. M. D. Meiklejohn (New York: Prometheus Books, 1990), p. 3.

factors are radically inverted and experience does not presuppose a priori principles that make it possible. As he writes: 'Even the point of departure — namely, sensibility in the encounter with that which forces sensation — presupposes neither affinity nor predestination. On the contrary, it is the fortuitousness or the contingency of the encounter which guarantees the necessity of that which it forces to be thought. There is no amicability […]'.[137] Here we can draw a distinction between Kant's notion of 'certainty' and Deleuze's notion of 'affirmation'. 'Fortuitousness' or 'chance', among other events, may not provide a 'certainty' that depends on already known principles, but it can be approached as an 'affirmation'.[138] An experience can be affirmed without it having to be based on preconceived rules of cognition. The central difference is that the very elaboration of possible rules or principles in thought, actually depends on the fortuitousness of the encounter, in Deleuze's view, because thinking is a 'necessity' that results from it. Something has to 'force' it. Otherwise, the act we call thinking is not really thinking. Against the 'presuppositions' that thinking is constantly happening in everyday acts of recognition, and that the possibility of thinking alone guarantees both that we are capable of thinking and that we do it, Deleuze, in line with other philosophers, considers that, on the contrary, 'thought only thinks when it is constrained or forced to do so'.[139]

Furthermore, Deleuze argues that the 'passive synthesis' relates to a 'primary sensibility that we *are.* We are made of contracted water, earth, light, air — not merely prior to the recognition or representation of these, but prior to their being sensed'. Thus, Deleuze asks the question of 'whether or not the self itself is a contemplation'.[140] Although this question is beyond the scope of my present work, it is worth mentioning, because it resonates with my own concern with sensibility and contemplation as vital aspects of life and the practices we live through. I think that an ontological understanding of ourselves as also made of contracted sound, can account for the value we bestow on issues of 'sensation' when listening to rock recordings. Moreover, as mentioned above, Deleuze places sensibility and intensity at the origin of thought and not the other way round. Overall, we must keep in mind that sensibility has different levels, and that the passages from the passive to the active syntheses operate in different ways. Therefore we can summarise the series as follows: from a 'contemplation-contraction' as a 'primary vital sensibility' that contracts things 'prior to their being sensed', to 'sensation' or 'that which can only be sensed', to 'thought' in the active synthesis. Deleuze argues that one of the aims of his analyses of repetition, difference and passive synthesis has been to show that:

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[137] Deleuze, *Difference and Repetition,* p. 190-191.

[138] As defined by Deleuze: 'In its essence, difference is the object of affirmation or affirmation itself'. Ibid, p. 66.

[139] I am alluding to Heidegger's argument quoted by Deleuze. See Ibid, p. 189-190.

[140] Ibid, p. 96-7.

> […] receptivity must be defined in terms of the formation of local selves or egos, in terms of the passive synthesis of contemplation or contraction, thereby accounting simultaneously for the possibility of experiencing sensations, the power of reproducing them and the value that pleasure assumes as a principle.

Moreover, he concludes that 'the reality principle determines an active synthesis only in so far as it is founded upon the preceding passive syntheses'. In other words, not only there is a passive synthesis in Deleuze's account, but it is the condition of the active synthesis, the condition of the reality that it can address, encounter and experience, the condition of 'the possibility of experiencing sensations', the condition of thought, and so on. Furthermore, Deleuze emphasises that it is necessary to add another dimension to the series: 'there is no movement beyond the passive synthesis towards an active synthesis without the former also being extended in another direction, one in which it utilises the bound excitation in order to attain something else — even while it remains a passive and contemplative synthesis'. He says that although the passive is the basis for the active, they persist simultaneously, 'finding new formulae at once both dissymmetrical and complementary with the activity'. This 'something else' that the passive synthesis attains simultaneously is a 'virtual' object. It is an extension of the passive synthesis which establishes relations with activity that do not coincide with the goals set out by the active synthesis, and it does not coincide with what is intended by a subject.[141] Only on the basis of this understanding we can account for 'reality' (i.e. 'the objects supposed as reality or as supposed for the connection'), and thereby for sensation's 'intensive reality' in our aesthetic practices.

[141] Deleuze, *Difference and Repetition,* p. 126-8.

1.3. Aesthetics versus empirical approaches

In this section I address some of the specifics of the aesthetic approach to sensation I develop in this thesis, in comparison to empirical evidence, and to some of the empirical approaches that musicology usually draws on. The discussion centres on the difference between 'perception' and 'sensation'. First, I consider the relevance of the ecological approach to perception as well as its fundamental differences with an aesthetic approach to works of art as 'beings of sensation' in the Deleuzo-Guattarian sense. I bring into play Deleuze and Guattari's discussion about thresholds of perception and the 'imperceptible', which they chiefly consider in connection with 'movement' and 'becoming'. I relate these insights to the concept of 'intensity' as addressed in previous sections. Then I discuss the problem of 'resemblances', and I present Deleuze's aesthetic notion of a 'resemblance through nonresembling means', which I compare with the empirical evidence of 'cross-domain mapping', the musicological notion of 'anaphones,' as well as the issue of triggered responses.

The aesthetic discipline should have *a place of its own* and produce *its own evidence*. One of the crucial reasons for preserving the field of aesthetics in this way, has to do with the cases when the central event in the encounter with an artwork, is not 'perception' but 'sensation'. Empirical approaches focus on 'perception', which as explained in the 'Introduction', consists in grasping cues that can work as recognisable cues. I use the word 'perception' in a sense that is consistent with both Gibson's ecological approach to perception, and the distinction between sensation and perception that I extract from Deleuze and Deleuze and Guattari's work. According to Gibson, 'invariants' or 'invariant information' is what *specifies* what a surface or an object *affords* the perceiver/experiencer. This process is independent of sensation, and therefore addressing sensation is not needed in the study of perception. Thus, Gibson also radically distinguishes between sensation and perception. He explains that there can be 'sensationless perception', and 'the active observer gets invariant perceptions despite varying sensations'.[142] In turn, 'varying sensations' are essential in an encounter with an artwork, in the way it comes across, as well as in other encounters with other things in life.

'Invariants' constitute 'information about the permanent environment' or the 'permanent properties of the environment'. Invariants are not only sufficiently stable to afford an experience or a form of interaction in the present, for the first time, but they can also be recognised in the future and afford the same thing. In Deleuze and Guattari's ontological explanation (also consistent with Bergson's) those 'permanent properties' can be considered as 'slowed down' matter, or 'thickenings' or 'strata' on the plane of consistency (see I.1.5).

[142] James J. Gibson, *The Senses Considered as Perceptual Systems* (London: George Allen & Urwin Ltd., 1966), p. 3-4.

They suggest that we can, in turn, look at the movements, differences and variations, instead of looking at what is permanent and invariant from the point of view of perception. Of course it is usually not practical or useful to do this, but I share their view that attending to the movements where perception 'confronts its own limits',[143] is of vital importance. According to them, perception belongs to the plane of organisation, and sensation to the plane of immanence (also called the plane of consistency or intensity), and we can pass from the plane of organisation and its invariants, to the plane of immanence, consistency or intensity that is always in 'continuous variation' and consists in 'multiplicities'. Deleuze and Guattari define artworks as 'beings of sensation'. They say that 'art extracts percepts and affects (which must not be confused with perceptions and feelings)', and it produces 'affects that surpass ordinary affections and perceptions'.[144] In turn, perception is what we ordinarily use our senses for. As Gibson explains, 'what the object affords us is what we normally pay attention to', and in this *interaction* many features become irrelevant. As he writes in *The Senses Considered as Perceptual Systems* (1966): 'The hypothesis is that constant perception depends on the ability of the individual to detect the invariants, and that he ordinarily pays no attention whatever to the flux of changing sensations' [sic].[145] Or, as he writes in *The Ecological Approach to Visual Perception* (1979):

> The meaning is observed before the substance and surface, the colour and form, are seen as such. An affordance is an invariant combination of variables, and one might guess that it is easier to perceive such an invariant unit than it is to perceive all the variables separately. It is never necessary to distinguish all the features of an object, and, in fact, it would be impossible to do so. Perception is economical.[146]

While it is true that it is impossible to sense all the features of an object, and this also applies to sensation, this is beyond the point. Perception is economical in a sense in which the sensuous and expressive complexity of the material traits of an artwork is far from economical. Finally, what an object affords is based on interaction and experience, which are based on the point of view of an experiencer interacting with the world, which is different from the 'becoming with the world' proper to sensation and intensity in the Deleuzo-Guattarian sense, which belong to the 'encounter'. Therefore, keeping in mind the necessary passages from one to the other, 'affordances' are based on the unity of the subject of experience, and the intensity of the encounter cannot be based on this unity, which is a point I discuss in I.2.

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[143] Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*. *Capitalism and Schizophrenia,* trans. by Brian Massumi (London: Continuum, 2008), p. 311.

[144] Deleuze and Guattari, *What is Philosophy?,* p. 164, 24 and 65.

[145] Gibson, *The Senses,* p. 3.

[146], James J. Gibson, *The Ecological Approach to Visual Perception: Classic Edition* (Psychology Press, 2014), p. 126.

COMPLEMENTARITY BETWEEN AESTHETICS AND ECOLOGICAL PERCEPTION

Perception and sensation work in complementary ways both in an encounter with an artwork as a 'being of sensation' and in its aesthetic study. As I also explained in the 'Introduction', the process by which a work of art comes across as a sensation, according to Deleuze's logic, involves the preservation of givens from the world of recognition and representation. Thus, perception is relevant and we can rely on the grounds of the ecological approach to perception for this part of the process. There are at least three reasons for defending a collaboration between aesthetics and the ecological approach to perception, as long as we make plain and keep in mind their fundamental differences. One key factor is that these disciplines meet at the scale-level of the phenomena or events they deal with, even if these phenomena or events are different in kind. This is the scale-level of things that are available to the "naked" senses, i.e. things that the senses can grasp, perceive, feel or sense directly, in the sense that there is no need of using a technological device to project or map data from the object that is unavailable to the senses. For example, the sounds that can be directly sensed are different from their projection on a spectrogram of audio data, and from any form of measurement of the parameters of sound signals. Thus, neither ecological perception's nor aesthetics' primary objects of study are the sound signals or sound waves studied by acoustics and physics, neither are they the chemical reactions studied by chemists, or the mapping of electric impulses in the brain studied by neurology and cognitive sciences, for example. Moreover, Gibson usually emphasises that ecological perception is different from the ways perception is studied with participants in a laboratory setting. The events have to be observed in their natural settings, and this is also something it shares with aesthetics. At this level, these disciplines also meet in the sense that they do not establish clear-cut boundaries between ourselves and the world or environment.

Secondly, I share the view that Gibson made decisive improvements in the ways we understand perception and our ecological relation to the environment. For example, concerning the surfaces of the environment, he put forward the 'radical hypothesis' that 'to perceive them is to perceive what they afford', which 'implies that "values" and "meanings" of things in the environment can be directly perceived'. In Gibson's definition: 'The affordances of the environment are what it *offers* the animal, what it *provides* or *furnishes,* for good or ill'.[147] For example, musicologists Allan Moore and Eric Clarke have demonstrated the efficiency of these grounds for the study of processes of recognition and representation in pieces of music.[148] Therefore, the perception of the practical givens that participate in the process through which sensation is attained in an artwork, can be effectively understood with

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[147] Gibson, *The Ecological Approach to Visual Perception,* p. 119.

[148] See for example Allan F. Moore, *Song means: Analysing and interpreting recorded popular song* (Surrey: Ashgate Publishing Limited, 2012); and Eric F. Clarke, Ways of listening. An Ecological Approach to the Perception of Musical Meaning (New York: Oxford University Press, 2005).

the aid of Gibson's concept of 'affordances', both for the case of recognitions and representations, which, as I also explained in the 'Introduction' presuppose each other.

In the third place, as psychologist Alan Costall highlights, Gibson 'replaced the stimulus-response formula [...] with an "ecology of embodied agency" and exploration of the material conditions — affordances and information — that supports our being in the world'.[149] This emphasis on 'agency' and the 'exploration of the material conditions' is also key in aesthetic practices, although in different ways. For example, as I explain in subsequent sections, the aesthetic practice I call haptic listening requires voluntary shifts in our attitudes and in the exercises of our senses that can be oriented to ways of increasing our receptivity to alterity, both through contemplation and through active exploration and experimentation.

THRESHOLDS OF PERCEPTION, MOVEMENT AND SENSATION

Evidently, movement is not invariant, it is by definition and essentially the opposite: 'continuous variation'. But we ordinarily grasp it or feel it by means of its invariants as qualitative variation and spatiotemporal relations. As Deleuze and Guattari assert:

> Movement has an essential relation to the imperceptible; it is by nature imperceptible. Perception grasps movement only as the displacement of a moving body or the development of a form. Movements, becomings, in other words, pure relations of speed and slowness, pure affects, are below and above the threshold of perception.

The 'displacement of a moving body' and 'the development of a form' — very much in line with Bergson as I expound in I.4 — are invariants that we perceive as movement because we relate them to movement and we credit them for it. In other words, they indicate that there is movement, but they are, like qualities, only by-products. Therefore, Deleuze and Guattari are pointing at the fact that when we *perceive* movement, we perceive it at a 'relative threshold of perception' that operates 'only as a function of a perceptible form and a perceived, discerned subject. So that movement in itself *continues* to occur elsewhere'. In other words, they write: 'If movement is imperceptible by nature, it is so always in a relative relation to a given threshold of perception, which is by nature relative and thus plays the role of a mediation on the plane that effects the distribution of thresholds and percepts and makes forms perceivable to perceiving subjects'.[150]

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[149] Costall, Alan, 'Bringing the body back to life: James Gibson Ecology of Agency' in *Body, Language and Mind. Volume I: Embodiment.* ed. by Tom Ziemke, Jordan Zlatev, and Roslyn M. Frank (Berlin, New York: De Gruyter Mouton, 2007), p. 55.

[150] Deleuze and Guattari, *A Thousand Plateaus,* p. 309-10.

In order to understand these assertions, we must keep in mind with Deleuze and Guattari that the permanent properties, the discerned subjects and objects, and their perceptible mediating qualities, that correspond to the stratified plane of organisation, are themselves 'animated and defined by relative speeds of deterritorialisation': 'absolute deterritorialisation is there from the beginning, and the strata are spinoffs, thickenings on a plane of consistency that is everywhere, always primary and always immanent'.[151] I elaborate on this in I.1.5.

An important difference that they point at, is that the plane of organisation 'renders perceptible without itself being perceived, without being capable of being perceived'; whereas on the plane of immanence:

> […] the principle of composition itself must be perceived at the same time as that which it composes or renders. In this case, movement is no longer tied to the mediation of a relative threshold that it eludes ad infinitum; it has reached, regardless of its speed or slowness, an absolute but differentiated threshold that is one with the construction of this or that region on the continuous plane.

It is useful to highlight three propositions that we can extract from this quote. First, it means that even for things that are seemingly invariant, still or slowed down (i.e. invariant from the point of view of the exercise of the senses through which an experience or interaction for a perceiving subject is afforded), one can jump from one plane to another. This is why they emphasise: 'regardless of its speed or slowness'. Secondly, they specify that it is 'differentiated' because it is not 'formless', but in a process of forming or deforming, in the middle of its movement but still rendering sensible some sort of formation, which I address as an expressive-intensive-material formation. Thirdly, in a listening encounter with a rock recording, we can relate this principle of composition to the operative traits of sensation that we can follow along with what they render sonorous: forces, new rhythms, new formations, sensation, new voices, new unique and provocative personae, new forces of desire, and so on.

Deleuze and Guattari also say that movement, the imperceptible movement, can also be perceived, and that there is 'no contradiction' in that, because of the two kinds of threshold of perception, the 'relative' and the 'absolute': 'It is in jumping from one plane to the other, or from the relative thresholds to the absolute threshold that coexists with them, that the imperceptible becomes necessarily perceived'. What was imperceptible on the plane of organisation becomes perceptible on the plane of immanence. I think that we can clarify this by saying that when reaching the 'absolute threshold' the mode of perception itself has changed. Overall, the 'relative threshold of perception' is always a function of perception, that is of a 'mediating perception', which can be related to the way perception isolates what it needs in a given process of specification, according to Gibson. Movements, becomings and

[151] Deleuze and Guattari, *A Thousand Plateaus,* p. 78.

affects are always below or beyond this threshold. The 'absolute threshold' is the plane of immanence, where movement becomes perceptible and sensation is the intense movement of this absolute threshold. Deleuze and Guattari are using the same word, 'perception', 'perceptions' or 'to perceive' for the two planes and for what they are arguing to be two radically different exercises of the senses. In contrast, in *What is Philosophy?*, where they treat artworks as 'beings of sensation', they implement the word 'percepts' which they distinguish from 'perceptions', and they establish the distinction between sensation and perception in a clearer way:

> What is preserved — the thing or the work of art — is *a bloc of sensations, that is to say a compound of percepts and affects.*
>
> Percepts are no longer perceptions; they are independent of a state of those who experience them. Affects are no longer feelings or affections; they go beyond the strength of those who undergo them.[152]

In my thesis I have opted for avoiding to use the verb 'to perceive' for the exercise of the senses that grasps 'the form related to the sensation' and movement on the plane of immanence, for which I use other more suitable verbs such as 'to sense', or 'to follow and feel', in order to mark the distinction in a more practical and clear way.

'Intensity' is also 'imperceptible', as Deleuze explains in *Difference and Repetition* (see I.1.2.); it is 'imperceptible' from the point of view of the empirical exercise of the sense that grasps it already mediated by the quality that it gives rise. In this sense, intensity in the immediate encounter is inseparable from a sensibility at its limit, which we can connect to the absolute threshold. All in all, Deleuze and Guattari's distinction between percepts and perceptions, and affects and affections, resonates with Deleuze's distinction between intensity in the encounter and the empirical exercise of the senses, which itself resonates with the distinction they are establishing in *A Thousand Plateaus* between 'mediating perception' and movement as 'becoming'. This mediating perception cannot encounter intensity. Sensation (and its intensive reality) can only be encountered on the plane of immanence. Also in accordance with *Difference and Repetition,* in *A Thousand Plateaus* they draw on Kierkegaard's 'marvellous motto: "I look only at the movements",' to argue that one can orient the senses towards movement, and jump from one plane to another. They also argue that Kierkegaard is right in saying that 'there is no movement that is not infinite; that the movement of the infinite can occur only by means of affect, passion, love […]; and that this movement as such eludes any mediating perception because it is already effectuated at every moment'. The movement that eludes mediating perception corresponds to 'becoming', and becoming involves a 'zone of proximity' a 'becoming with the world' where 'one has suppressed in oneself everything that prevents us from slipping between things and growing in the midst of things'. Thus, in line

[152] Deleuze and Guattari, *What is Philosophy?,* p. 164.

with the sensibility at its limit as the condition of 'intensity' in *Difference and Repetition,* Deleuze and Guattari write that in becoming: 'Perception will confront its own limit: it will be in the midst of things', just as movement itself is always in the midst of things, because it 'is effectuated at every moment'.

Another key relation is the one between this absolute threshold and the level of the molecular, which I address in Part II. They explain that 'the imperceptible becomes necessarily perceived at the same time as perception becomes necessarily molecular', and in short, as they write: 'everybody/everything is the molar aggregate, but becoming everybody/everything is another affair, one that brings into play the cosmos with its molecular components'.[153] This idea of a becoming as a 'zone of proximity' and as being in the midst of things, involves a rupture with the object-subject divide, but in a different way than the ecological mutuality's way of breaking with this divide on the basis of interaction and affordances.

Resembling and nonresembling means

The aesthetic notion of 'sensation' that I am working with, refers to the cases where 'sensation' is the 'object of encounter' and not a secondary effect of some other way of grasping the encountered entity. As Deleuze writes: 'The privilege of sensibility as origin appears in the fact that, in an encounter, what forces sensation and that which can only be sensed are one and the same thing, whereas in other cases the two instances are distinct'.[154] According to Deleuze's rationale, the two instances are distinct, for example, when a sensation comes as a result and after the faculties have worked together in combination in the process of interpreting an object. In such cases, the object that has forced sensation is no longer 'that which can only be sensed' (i.e. the object of a fundamental encounter), but something that has to be somehow completed by other faculties that are not directly participating in the encounter. The collaboration of the faculties is the opposite of a sense confronting its own limit (or perception confronting its own limit, or sensibility at its limit).

The concept of 'cross-domain mapping' from the field of 'embodied cognition' is a good example of this collaboration of the faculties, for it is a way of perceiving that grasps the aspects of the encountered entity that recall previous experiences of other sensory-motor domains. Musicology has referred to this process to provide empirical evidence for the *analogies* we make when listening to music. For example, as defined by musicologist Lawrence Zbikowski and quoted in Moore's *Song Means*: 'Cross-domain mapping is a process through which we structure our understanding of one domain (which is typically unfamiliar

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[153] Deleuze and Guattari, *A Thousand Plateaus,* p. 308-11.

[154] Deleuze, *Difference and Repetition,* p. 190.

or abstract) in terms of another (which is more often familiar and concrete)'.[155] Ecological perception can also work as a collaboration of the faculties in our experiences, for example, when perceptual cues afford the memory or imagination of an experience on the basis of some similar, imitative or identical features. Moore illustrates this possibility for listening with his analysis of Annie Lennox's 'Walking on Broken Glass' (*Diva,* 1992), where 'the timbre of the keyboard' and 'the delicate avoidance of downbeats in both sound-sources', 'are telling us how to cognise particular features of our interaction with broken glass'. This understanding, as Moore suggests, can 'lie behind possibly all attributions of extra-musical meaning to specifically musical processes'.[156]

I think we also have to address the possibility of a different process, that correspond to Deleuze's elaboration of the problem of producing a 'resemblance through non-resembling means',[157] and is directly related to the zones of proximity proper to becoming, I discussed above. As Deleuze and Guattari argue, some artists 'do not pursue resemblance', they retain an extract only 'the essential lines and movements of nature; they proceed only by continued or superposed "traits" or "strokes"', which are 'not imitative or structural'.[158] The new formation that comes across in/as a sensation is a 'resemblance through nonresembling means', and I share Deleuze's view that this type of resemblance is paramount to aesthetic practices. Yet, as I mentioned before, the empirical evidence that can give an account of representation and recognition is also relevant to this process. My approach takes the empirical as subsidiary and secondary vis-à-vis the evidence that the aesthetic discipline can develop in its own right. To be sure, the process of *producing a resemblance with nonresembling means,* partly depends on resembling traits or analogies that can be related to 'cross-domain mapping' and 'ecological perception', but only in so far as they enter a process in which they are disfigured and neutralised, so that a different logic becomes necessary. In other words, the process involves both the preservation of these givens and the break with them, and therefore aesthetics and empirical approaches are complementary approaches, but nonetheless radically different. As Moore suggests, the empirical evidence of ecological perception and embodied cognition is 'an awareness worth achieving' for all extra-musical meaning that involves analogical readings. In my approach, this is also relevant to the 'practical figuration' of the logic of sensation, where *analogical readings* appear but only to be intervened, destroyed and *neutralised* by operative traits of sensation that can bring forth another type of 'resemblance', that result in another kind of formation and another kind of interpretation, which are non-representational and unrecognisable. So, it is a matter of

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[155] Moore, *Song Means,* p. 14.

[156] Ibid, p. 253.

[157] See Deleuze, *Francis Bacon. The Logic of Sensation,* p. 79 and 111.

[158] Deleuze and Guattari, *A Thousand Plateaus,* p. 309. [They are making reference to Chinese poetry, but then they relate this thought to all art forms].

implementing this interdisciplinarity in an adequate way. The problem of achieving a 'resemblance with non-resembling means' involves the distinction between a sensory domain carried to its limit, that encounters 'its own particular given' in 'its own style', on the one hand, and the 'harmonious exercise' of the faculties upon 'the form of identity' in the given, on the other, which is the philosophical correlate of 'cross-domain mapping'. Notwithstanding the above, I share Moore's view that it is also important to compare the evidence of 'embodied cognition' with a 'semiotic understanding' where the relationship between extra-musical meaning and specifically musical processes 'is accepted merely because they have become linked through association over a period of time'.[159] This seems to me another good justification to rely on the ecological and embodied empirical evidence when implementing the necessary interdisciplinarity I am referring to, rather than semiotics. Finally, it is important to mention that the words of titles and lyrics are important elements of most rock tracks. They can establish relations of resemblance with the sounds in different ways. I take those relations as an important axis of aesthetic study, as many musicological studies also do. In the following paragraphs I address in more detail the distinction between Deleuze's notion of 'resemblance through nonresembling means' and the musicological notion of 'anaphone', and I end with a case study that illustrates the complementarity and differences between aesthetics and empirical approaches. In particular, this example is focused on the distinction between the aesthetic sensation and a triggered response, that also reveals the distinction between the intensity of the encountered sounds and the intensity of the way the body feels in a response to the sounds, which constitutes one of the main foundations of this thesis.

Resemblances through nonresembling means

There is a insightful aesthetic distinction developed in Deleuze's Logic of Sensation for the study of Bacon's painting, between resemblances created through 'resembling' and 'nonresembling' means. I think this distinction is highly relevant for the analysis of resemblances in certain rock tracks, and therefore in my studies I attempt to demonstrate the way it applies to sounds in individual cases. As explained by Deleuze, in the first type, the resemblance is said to be 'the producer' because it takes place as a means of construction: there are units that act as relations that can be identified and recognised. 'The relations between the elements of one thing pass directly into the elements of another thing which then becomes the image of the first', as he writes. This translation presupposes a prior organisation of the elements of the 'model' in a set of relations that act as the 'figurative' or 'codified' traits that resemble the ones of the copy. In the second type, the resemblance is said to be 'the product' because it takes place *only* as an effect, and it is produced 'through sensation'. It 'emerges as the brutal product of nonresembling means.' It is 'nonfigurative and

[159] Moore, *Song Means,* p. 256.

noncodified'.[160] Yet, 'nonresembling means' are not formless or without sense. The crucial difference is that there are no resembling units that can be recognised or identified, and the resemblance can only be grasped, and is only modelled, by following and feeling the continuous variation of the material elements of the work in question. Thus, it involves a haptic function and this especial type of resemblance only emerges out of this gradual and close range sensory activity. There are nonetheless certain units that still act as recognisable or representative givens, but only in an initial functional way, because they are immediately *scrambled* and *neutralised* by the 'operative traits' that create the 'new resemblance' — or what Deleuze and Bacon call the 'fact', the 'Figure' or the 'sensation'. The more one joins closely with the material haptic traits of the work, following their fine details and their continuous variation, the more the first type of resemblance evidences its status of 'loose resemblance', and the second type sharpens, when the operations of sensation succeed. I think that some rock tracks encourage this way of following and sensing the sounds and succeed in producing resemblances through nonresembling means. This distinction between resembling and nonresembling means functions as the cornerstone of how to treat 'resemblance' when studying sensation, as it will become clearer in some of my examples in Part II and Part III, where I explore different facets of this problem.

Anaphones

The concept of 'analogy' has been widely used in almost every field of study to designate a partial correspondence, similitude, or proportion between different things. Every analogy involves resemblances, but an analogy does not refer to *any* perceived resemblance, because it involves a 'judgement' of its significance, meaningfulness or explicative power. 'Anaphone' is a notion that has been used in musicology to address analogies articulated with sounds, that is when the sounds of a piece of music resemble something else, as a significant aspect of an interpretation. In musicologist Philip Tagg's definition: 'Some instrumental sounds act anaphonically […] in that they resemble sound, touch or movement that exist outside musical discourse'.[161] There are different approaches to these resemblances or anaphones. Tagg's approach is semiotic, whereas according to Moore, 'rather than consider them part of a non-arbitrary semiotic, it seems they specify sound-sources in the environment in very much the way ecological perception describes'.[162] As Moore specifies in another publication:

> Anaphones are musical events, at the level of the phoneme or larger, which act semiotically to iconise aural, visual, and kinetic events in everyday experience. […] Despite the value of this particular concept, I make little use of semiotics per se, the

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[160] Gilles Deleuze. *Francis Bacon. The Logic of Sensation*. p. 79-80.

[161] Philip Tagg, *Music's Meanings: A Modern Musicology for Non-Musos* (New York & Huddersfield: The Mass Media Music Scholars' Press, 2012), p. 308.

[162] Moore, *Song means,* p. 244.

> foundation of this methodology resting on theories of ecological perception (particularly as developed and utilised by Eric Clarke) and embodied cognition (especially concepts of image schemata and conceptual blending).[163]

Likewise, here I privilege considering 'anaphones', and any other form of representational givens, on the basis of ecological perception and embodied cognition. An approach that centres on 'resemblances through nonresembling means', should be distinguished from other musicological approaches that prioritise resembling means, namely resemblances made in the form of representation (incl. anaphones), association, mimesis (incl. motor theories), correspondence, metaphor, cross-domain mapping, and so on.[164] Any of these forms of resemblance may participate in the production of the new formation in a sensation, but, it bears repeating, only to be neutralised in some way so that the nonresembling means prevail.

Finally, as mentioned in the 'Introduction', haptic listening does not operate by means of resembling the haptic function of other sensory domains, but it has a haptic function of its own. Likewise, it does not operate by resembling other haptic ways of experiencing things, but it gives rise to a haptic experience in its own right. Here, we must keep in mind the difference between experience and encounter. Haptic listening primarily concerns a haptic encounter which can give rise to a haptic experience, just like intensity can give rise to qualities, in line with Deleuze's rationale. In other words, the sense of the concept of haptic listening I am proposing in this thesis primarily concerns the encounter with the sounds. The fact that different haptic details and the haptic function of different sensory domains can *share* some principles, designated by the concept of 'haptic', does not mean that the haptic function of one sensory domain has to establish a cross-domain mapping or any form of perceived resemblance with the haptic function of another, in order to function. In other words, different haptic functions have some *common principles which manifest differently*. They manifest differently in different sensory domains such as the tactile, auditory, visual, kinaesthetic, and so on, but they also manifest differently each time in the 'provisional and temporary' functions of the BwO, that can take place within any of them in different encounters with different things.

This does not mean that haptic listening cannot be explored as a perceptual system. As a matter of fact, at one level we can indeed perceive the haptic qualities of sound, and

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[163] Allan Moore, 'Beyond a Musicology of Production', in *The Art of Record Production*, ed. by Simon Zagorski-Thomas and Simon Frith (Cambridge: Cambridge University Press, 2014), p. 100.

[164] I am thinking of Zbikowski's reliance on 'cross-domain mapping', Leech-Wilkinson and Helen Prior's book on 'shape' where they address motor theories, sub-modal perception, etc., and Arnie Cox's mimetic theory, for example. Lawrence Zbikowski, *Conceptualizing Music: Cognitive Structure, Theory, and Analysis* (New York, 2002); Daniel Leech-Wilkinson and Helen M. Prior, ed., *Music and Shape* (New York: Oxford University Press, 2017); and Arnie Cox, *Music & Embodied Cognition. Listening, Moving, Feeling, & Thinking* (Bloomington: Indiana University Press, 2017).

resembling means can operate in interpretations that remain at the level of recognition and representation. Yet, this is not the sense of the aesthetic concept of haptic listening that I am developing in this thesis, where these perceptual haptic qualities are just a sub-product. Haptic listening, in its properly aesthetic sense, is not a perceptual system, but only works in complementarity with the perception of haptic sonic details or other perceptual details, and above all, haptic listening is not based on extrinsic relations to other ways of experiencing things haptically, and sounds have a haptic dimension in their own right.

BEYOND TRIGGERED RESPONSES: 'SUBWAY SONG' / THE CURE

The following example is intended to show in an obvious, simple and compelling way the importance and the necessity of distinguishing between the evidence provided by empirical approaches in general, and the evidence that aesthetics should produce for itself.

The track 'Subway Song' from The Cure's album *Three Imaginary Boys* (1979), provides a good illustration of the tension between the plane of intensity and sensation, on one side, and the plane of recognition, perception and affordances, on the other, in the aesthetics of rock recordings. Before carrying on reading, in order not only to imagine but to fully make sense of the point I am going to make, I recommend the reader to listen to the whole two-minutes track, preferably with headphones in a quiet place…

The loud and unexpected sound at the end of the track can make the listener jump. At least it has made me jump, and it had made me jump more than once, sometimes even when I was expecting it. This clear and short psychophysical response, that acts directly upon the nervous system, can certainly feel intense. But can we say that this intensity, namely the intensity of the response that has been triggered by the sound, is the same as the intensity of the sound? Is it not the way the sound feels different from the way the jump feels? By asking oneself these questions after the experience, the difference can become apparent: one can notice that, when the senses have oriented themselves towards the way the bodily response feels, they have shifted away from the sound. In other words, the surface of the bodily response can take over in such a way that feeling the surface of one's own body responding to a sound implies loosing contact with the surface of the sound, and therefore stop feeling it. The whole programme of my thesis is to observe the relatively rare cases when this division is not the case. It is something that one can actually aim at, by experimenting with a different attitude in the listening experience. In the case of this track, for example, if one listens to it again, one can aim at not loosing contact with the loud sound at the end, whether or not one jumps at its outset. It seems to me that this sound can reveal its own intensity, through the sensuous complexity of its own expressive-intensive-material reality (see I.1.5).

The jump response can be interpreted at both an ecological level and a narrative level. On the one hand, it can be simply understood as an habitual or instinctive behavioural pattern that can be activated with *any* sudden loud sound, in line with the ecological approach to perception, and with any empirical approach to the study of perception and action. From this point of view, it is a practical response that can help the perceiver to become quickly aware of a threat, whether it is the danger of physical harm to the ear, or the specification of another threatening element or event in the environment, which one could be momentarily confusing this sound with. In pieces of music, as well as in films and other artistic practices, this function of the ear is very commonly exploited to provoke this response in fictional environments, where the the loud sound represents the threatening element.

This leads to the second level, where we can consider this function in a narrative. 'Subway Song' gives shape in elaborate detail to a frightening scene, depicted by the lyrics and the sonic details that can be taken as representing elements of the scene, and as a series of narrative relations. I specify these representations in the next paragraph. In this context, the sudden loud sound at the end can also be related to the track's subject matter, as representing a decisive moment in the narrative of the depicted scene itself: as if suddenly something really bad and violent would have happened. Moreover, the very loud element bursts into the quietest section, when the scene was actually fading out and one was getting the sense that the frightening situation was coming to an end. This is a factor in the narrative that can effectively intensify both the response the loud sound triggers, and the experience it affords, in relation to the interpretation of meaning it affords, from an ecological/embodied point of view.

It could be argued that the track is crafted in a way that all its sonic details have a clear role in the construction of the scene. Some of them work more straightforwardly as resembling traits than others, that are markedly intervened and neutralised, and are thus capable of reaching a different kind of resemblance, intensifying the effect. The *representation* of the scene unfolds as follows: We get from the lyrics that there is someone walking in the subway at night with the feel of being followed, sensing 'echoes of footsteps', and not daring to 'turn around'. Many sonic elements, in relation to the lyrics, can easily be taken as *representing* things of this scene, on the basis of resembling traits: e.g. the pace of the footsteps by the hi-hat regular pulse, which is also marked by the bass guitar line and the voice in some moments; the fast last passing trains by the harmonica; the 'echoes of footsteps' by the echo on the hi-hat (i.e. its counterpart at the left side of the stereo laterality), but also by the twofold cymbal on the downbeat, by the momentary isolated soft snare directly accompanying the line 'echoes of footsteps follow close behind' with a regular pulse and a salient fine-grained texture, made of its echoic and reverberant sound, while all the rest of the instruments drop from the mix, and then, later on, by the momentary fingers' clicks. It is as if the echoed object itself were elusive and equivocal: at one moment it is something/somewhere, at another something/somewhere

else. Thus, the echoes are marked by variety and changes that can be argued to work as resembling means turning into nonresembling means. The rich texture of the harmonica could also be argue to work in this way, towards sensation. The melodic line of the bass guitar that repeats a loop that starts moving upwards and then leaps to a lower pitch to end moving a semitone downwards, can be felt as imitating the body gesture of starting walking forward but then stopping to look back. In addition, an unpeopled atmosphere is created by the sparse texture, with distinct timbres and onsets (separated in the timeline and in the mix), and with the treatment of the vocal sound, that renders it 'intimate', by its 'proximity' and the "dry" quality with a special compression and equalisation that separates it from the rest. Here, I am applying Moore's model for the analysis of 'proxemic zones', which can be related to principles of ecological perception and embodied cognition. This model provides the tools to give an account of 'the perceived distance between persona and listener, modified by the intervention in this space of any other musical material sources', and also in connection with the ways the relations between 'persona/environment' (e.g. in front or engulfed by the environment represented by the other instruments) and the ways the persona is articulated through expressive vocal sounds (e.g. whispers, breath intakes, shouts, etc.).[165] In 'Subway Song', even though the voice is that of a narrator conveying the experience of a protagonist (the 'she'), it can effectively feel like an inner voice in one's head or in the protagonist head, or the voice of someone in very close proximity to oneself. which could be related to the presence 'close behind' of the lyrics. The ambiguity in fact creates more suspense in the narrative. The sonic effect can also encourage the listener to "walk in the protagonist's shoes" in a compelling way, which seems to me a skilful achievement, especially in relation to my next point. A notable study of the different ways in which recorded songs articulate 'subject-positions' has been carried out by Clarke, also on the basis of ecological perception.[166] The intimate delivery of the voice also contributes to conveying a sense of fear, since fear is a very intimate feeling. Yet, it is not a frightened voice. In other words, it is not the persona of the track that fears, but he is not simply describing the fear and the frightening situation either. Instead, the voice feels like the feeling itself, in relation to those sonic details that produce the effect of that inner voice in the head of the one who is suffering the frightening situation, an interpretation that can be in constant conflict with the repetition of the pronoun 'she', but which can also be taken as kind of compassionate. The list of details constructing this scene could go on and on. To a great extent, this scene is more of a state of affairs, a tense and frightening status quo, that focuses more on the moment than on a progression proper to a narrative (and the harmonic stability certainly grounds this). However, this is still a form of narrative setting, for there are still things going on that convey a story, and things that seem to be building up the suspense for events to happen.

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[165] Moore, *Song means,* p. 184-191.

[166] See Clarke, Eric, 'Subject-Position and the Specification of Invariants in Music by Frank Zappa and P. J. Harvey', *Music Analysis*, 18.3 (1999), 347–74.

At the end of the verse, in a crucial turning-point in the narrative, the persona seems to become the threatening element and the cause of the fear himself. In the last utterance 'but she dare not turn around', the whispered echo-like *repetition* of the last two words changes their sense. The persona turns into someone asking the protagonist to 'turn around'. Whispers having creepy connotations is a common narrative subterfuge, but here the effect is much more complex: the change of sound and sense of the same words, in a passage from a narrator to the actual presence of someone calling the protagonist, is carried out as a two-stages gradual process (the two echo-like repetitions), which is brilliantly combined with the change of the bass timbre (noisy reverb), harmonic function (to IV), subdivision of durations, and contour (first chromatically remaining within the first two notes range (one tone) and then replacing the descending semitone for and ascending tone, in a reversal of the previous gesture, that could be interpreted this time as rushing forward — whether representing the movement of the protagonist or the threatener).

In the context of this whole scene, *the unexpected loud sound* and the response it triggers can be experienced as directly participating in the narrative. In other words, this sound also affords an experience and interpretation of meaning that works within the narrative. Yet, the sound is also long, and consists in much more than its (unexpected) loudness. Through its loudness, what also comes to the fore is its rough grain and intricate density, created by means of various blended layers, and high levels of reverb, chorus, and probably other signal processings, gradually modified. Within this complex density, something appears to be hidden and revealed, as if camouflaged within the huge blast: *a strange sort of raucous and tormented bestial shout* becomes suddenly discernible (even though it was there from the beginning of the loud sound). It deforms and is engulfed by some kind of force that finally takes over completely. In the decay part of the sound the space seems to get deeper and deeper, in the sense of more and more spacious and hollow as something gets further and further away within it.

A listener may content with interpreting the different cues of the loud sound as *representing* some terrible event or some evil character, but if one follows closely the complex haptic details, they can stop working as the resembling traits of a representation and they can bring about a new kind of presence in a sensation, an excessive and intense presence and the event that comes with it, inseparably. They are capable of endowing listening with a haptic function that joins with these sonic materials at the level of their own intensity in the encounter. As the sonic materials gradually reveal their sensuous and expressive complexity, they also gradually reveal *a new sonic formation/figure/event* emerging in a sensation. The hidden shout that emerges from the materials remains intrinsic to them, and intrinsic to this new formation, that comes across as the 'brutal product' of nonresembling means. It is made of non-recognisable and nonrepresentative traits. The increasingly rich material heterogeneity and intense movement of deformation of the loud sound, intervene the practical and inevitable

preservation of recognisable or representative givens. These givens, and to be more precise, what is left of them, are what we can perceive and interpret as that overwhelming or overwhelmed shout being engulfed by a giant mass with a strong current, which can stand, via resembling traits, for the presence of someone shouting in the middle of a horrific event and being violently taken away. Yet, as the givens and resembling traits are intervened, scrambled and neutralised, they stop working as such and the sound produces a resemblance through non resembling means. The interpretation no longer works at the level of recognition and representation. The operative traits of sensation take over in this intensive-expressive-material saturation, and any form of one-to-one correspondence, where the sonic details resemble something they are supposed to represent, or work as the copy of a model, is completely botched. I must insist, one needs to follow and feel the sonic materials gradually in their continuous variation and rich heterogeneity for the extraordinary new formation to appear intensely for itself as a sensation. Following and feeling gradually is the opposite of grasping one-to-one correspondences of extrinsic relations. What is intense is no longer one's response or one's experience but the encountered sounds themselves, with the unprecedented emergent sense they construct, and the expressive forces they render sonorous. In line with Deleuze's logic, I think that by being inferred from the sensation, the horror or any meaning one may be interpreting from this new sonic event/formation/Figure, is multiplied both because it is not represented, and also because it goes beyond the triggered response.

Summing up, the loud sound intervenes the depicted scene in a violent way, but this violence is not an event within the narrative. It neutralises the narrative reading itself. This is what Deleuze calls a chaos-germ from which something new emerges, which he usually calls a 'germ of rhythm', a 'new order', a 'fact' or a 'Figure' — with a capital letter in order to distinguish it from a 'figuration' achieved via resembling means, which is a representation (see 'Introduction' and I.1.6). I usually call it a new sonic formation for the case of rock tracks. This loud sound in 'Subway Song' is capable of creating a passage to the level of the intensity of the sounds in the encounter (different from the intensity of the response or the experience). By being a very clear, precise and powerful operative trait of sensation, it makes the sensation itself very clear, powerful and precise. As I have mentioned above, according to Deleuze and Guattari, on the plane of immanence 'the principle of composition itself must be perceived at the same time as that which it composes or renders'; and the 'absolute but differentiated threshold […] is one with the construction of this or that region on the continuous plane'. However, one could argue that from the outset of this track, the clarity of its fine haptic differences, their rich heterogeneity in, for example, the incisive highly signal-processed harmonica and the texture of the bass, which work together in rhythmic connection/contrast, seem to immediately work at the level of the intensity of the sounds and to encourage the listener to follow the track haptically. Thus, one could also argue that there are other sounds throughout the track that work as neutralisers of the narrative reading, and

that sensation is thus attained and sustained in other moments of the track. To be sure, depending on the way of listening, the whole track could sustainedly come across as an intensive presence in a sensation, constantly botching the perceptual exercises of the senses and the narrative and representational readings, and creating new formations. Yet, here I have focused on the loud sound at the end for a number of reasons. First of all, because of its explicative power in the context of this thesis, since it allows us to easily become aware of the notorious difference between the intensity of the triggered response and the intensity of the sound, or the way the jump feels versus the way the sound feels. Second, because of the very marked tensions and radical passages it creates between the different levels proper to the 'constitutive difference of level' of the sensation, both with the rest of the track and within itself. In other words, if the way the sensation can be achieved was not clear throughout the track, it can certainly become clearer with the intervention of this sound. Third, because it is the most chaotic sonic material of the track. This sound achieves a striking and compelling clarity as a *neutraliser* of the narrative reading, which includes the perceptual/embodied cognitive level in two ways: the triggered response and the afforded experience/narrative. The high tension that the loud sound establishes with these interpretations is based on three main factors: First, the abundance of finely crafted cues that depict the frightening scene in great detail, make it *feasible* for the listener to engage with the narrative/representational reading throughout the whole track. Second, the loud sound can effectively trigger a psychophysical response in the body of the listener, which intensity creates the tension with the intensity of the sound as one can notice that one can be feeling and following one or the other. Moreover, this effect can also participate in the narrative meaning as a sudden horrific event. Third, the loud sounds includes the apparition of the hidden shout that sounds like a beast or monster that could be interpreted either as the attacker or the victim, and therefore also participate in the narrative. The loud sound brings in an element of chaos that is very powerful, for it is very localised and, at the same time, far-reaching as it is capable of neutralising both the narrative reading of the whole track, and the triggered response and narrative reading within itself. Therefore, it is a very powerful operative trait of sensation, if it is capable of doing all that at once. As I address in I.1.5 in more detail, this power lies in its saturation: there is a lot going on in this sound (e.g. in its rich material heterogeneity, the complex textures and layering, the intense movements of deformation, the embedded shout as a material trait of expression, etc.). This study demonstrates the key complementarity between aesthetics and some useful empirical approaches in a study of sensation. We must be aware of how perception works in order to understand how sensation is attained, and we can rely on readings based on the principles of ecological perception and embodied cognition when dealing with the resembling means, and all the representative and recognisable components of the track. Yet, the study of sensation ultimately requires a focus on the tensions and the operations of passage between these components and the non-representational and non-recognisable level of intensity.

1.4. The 'new', 'sense', and the status of 'sensation' vis-à-vis the materials

This section reflects on the difference between the principle of comparison and the intrinsic differences proper to 'intensity'. It explains its relation to the difference in kind between recognisable traits and traits of sensation, and its implications to our understanding of the concept of the 'new'. It draws on Deleuze's concepts of 'becoming', 'sense', 'attributes', 'effects', 'events-singularities' deployed in Logic of Sense, in order to define the level of reality where the new in encountered in a non-comparative manner. It presents Deleuze and Guattari's postulate that a 'meticulous relation with the strata' can result in encounters at the level of intensity whereas a meticulous relation with corporeal entities cannot. It relates this problem to the difference and complementarity between 'sense' and 'denotation' in our reflections and propositions. It ends with a clarification of the status of 'sensation' vis-à-vis the materials, in light of all these postulates.

Recognisable traits work for the establishment of generalities. They can have narrative, representative, framing, regulating, normative, symbolic and signifying functions. They can be represented, coded, measured, outlined, substituted, categorised, systematised and identified. All the interpretive processes that remain at the level of grasping recognisable traits, and making relations between them, are based on the *principle of comparison*. According to Deleuze, this is the principle by which things are encountered and thought of only in a relative manner, on the basis of extrinsic relations, as similar, analogous or identical to something else, as different from something else, as opposed to something else, as the copy of a model, and so on. So, through this principle, we *primarily* sense or make sense of what we are encountering, *by means of* comparing it with something that is not in the encounter, something already known and that can be attained by other faculties, something that can work as its representation or the represented thing. Thus, we primarily think about something that is not in the encounter in order to make sense of the encountered entity.

Conversely, intensity, and sensation's 'intensive reality', is fundamentally sensed and made sense of through *non-comparative intrinsic differences.* This is why we can experience *new sensations.* Or, perhaps, the adjective 'new' is superfluous from this point of view, for a sensation is always *new.* Therefore, the aesthetic notion of sensation should also be distinguished from any kind of *recognisable feel*, which would still be a recognisable event grasped by means of its recognisable traits. In order to address *the feel of sounds,* empirical psychology, and other scientific, critical, theoretical, musicological and phenomenological approaches, can successfully remain at the level of perception, recognition and

representation. Yet, in order to address sensation, the aesthetic discipline needs to add another level to its analysis.

The difference between recognisable traits and the 'traits of sensation' is 'both formal and in kind'. As I indicate in the 'Introduction', both to be able to recognise something that one already knows, or to be able to recognise something in the future, including something one is encountering for the first time, depends on the same kind of traits. As explained by Deleuze, this consideration is key to Nietzsche's understanding of 'the new', as 'difference' in a non-relative manner, as 'difference in itself', which therefore cannot become established, for its 'forces' differ from 'the forces of recognition'. Intensity can be understood as 'pure difference in itself', and thus as always new:

> Nietzsche's distinction between the creation of new values and the recognition of established values should not be understood in a historical relative manner, as though the established values were new in their time and the new values simply needed time to become established. In fact it concerns a difference which is both formal and in kind. The new, with its power of beginning and beginning again, remains forever new, just as the established was always established from the outset, even if a certain amount of empirical time was necessary for this to be recognised. What becomes established with the new is precisely not the new. For the new, in other words, difference — calls forth forces in thought which are not the forces of recognition, today or tomorrow, but the powers of a completely other model, from an unrecognised and unrecognisable *terra incognita*.[167]

According to Deleuze's reading of Nietzsche, things can be 'new' in a non-comparative manner, to which the experience of 'becoming' along with the sense of 'flow', can attest, for they can only be experienced as such *in their flowing nature,* that is in a state of constant emergence in the midst of things, or what Deleuze call 'immanence' (see I.2). Intensity and sensation are 'becomings'. In order for the encountered things to affect us intensely, and in order for us to be able to become with them (as we do with air, cities, sound, and everything we inhabit), at least at a certain level they have to change us directly and materially in the encounter in a non-comparative way; and for us to be able to be aware of these processes, we have to make sense of them in the encounter in a non-comparative way, at least at some level. The notions of 'becoming', 'sense', 'attributes', 'effects', 'events-singularities' that Deleuze deploys in *Logic of Sense*, can help us to understand this level of reality. First of all, it happens in the unstoppable time of flow and becoming, 'whose characteristic is to elude the present', whereas 'the fixing of presents' is the time of corporeal entities and their denotable 'fixed qualities' and 'states of affairs', that allow us to recognise them 'today or tomorrow'. With no present there are no corporeal entities, but there can still be a material entity that we are still

[167] Deleuze, *Difference and Repetition,* p. 179.

sensitive to, intimately so, as Deleuze emphasises. For instance, drawing on a text by Émile Bréllier, he refers to the example of *flesh being cut*, to draw attention to the Stoic distinction between 'properties' or 'qualities', on the one side, and 'attributes', on the other. 'Being cut' is 'not a new property but a new attribute'. To be sure, something happens to the 'being' (i.e. the corporeal entity) but *the cut* is sensed and makes sense as such 'at the limit': it is 'a way of being' that 'finds itself somehow at the limit, at the surface of being'.[168] According to Deleuze, Plato had already invited us to make this distinction between these two dimensions, namely 'the fixing of presents' and 'a pure becoming',[169] but it was the Stoics who discovered that the entities that belong to the dimension of becoming are 'incorporeal" entities', that '"frolic on the surface"' of corporeal entities: 'The Stoics discovered surface effects'.[170]

In a nutshell, according to Deleuze, the different things we can say about things are the 'many relations inside a proposition'. Thus, he distinguishes four types of relations: 'denotation', 'manifestation', 'signification' and 'sense'. As he explains, we use 'denotation' to indicate or represent physical reality, that is, a 'state of affairs' which is external to the proposition, like the qualities, quantities and mixtures of bodies or physical objects, sounds included. 'Manifestation' 'concerns the relation of the proposition to the person who speaks and expresses himself [sic.]', and 'is presented as a statement of desires and beliefs'. 'Signification' is 'a question of the relation of the word to *universal or general concepts'*, and the elements of the proposition signify 'conceptual implications capable of referring to other propositions, which serve as premises of the first', so it 'is defined by this order of conceptual implication where the proposition under consideration intervenes only as an element of a "demonstration"'. Finally, 'sense' is defined as *'the expressed of the proposition'*, it 'is an incorporeal, complex, an irreducible entity, at a surface of things, a pure event which inheres or subsists in the proposition'.[171]

Deleuze and Guattari's concept of 'strata', which they ultimately define as 'thickenings' on the 'plane of consistency', are hence becomings and not corporeal entities. They belong to the world of sense and sensation at the surface of the corporeal, but which should not be confused with the corporeal. This is why 'a meticulous relation with the strata', can 'bring forth continuums of intensities for a body without organs', whereas a meticulous relation with

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[168] Here, the expressions: 'not a new property but a new attribute'; and 'a way of being' that 'finds itself somehow at the limit, at the surface of being', is taken from the paragraph written by Émile Bréllier, that Deleuze quotes. Gilles Deleuze, *The Logic of Sense,* trans. by Constantin V. Boundas, Mark Lester and Charles J. Stivale (London: Bloomsbury Academic, 2015), p. 6.

[169] Ibid, p. 1.

[170] Ibid, p. 5-6. The expression 'frolic on the surface' is from the paragraph written by Émile Bréllier, that Deleuze quotes.

[171] Ibid, p.14 and 19.

corporeal entities cannot.[172] Yet, at their most stratified states, they are defined by a 'formed matter' and a form of expression that can have a 'relative invariance'.[173] So, when addressing this state of the strata, and when speaking about their material traits, we must keep in mind that we are not using the relation of the proposition that corresponds to the 'denotation' of an 'external state of affairs',[174] but the relation of the proposition that corresponds to their sense. We have to avoid falling into the error of confusing denotation and sense. Moreover, as Deleuze explains, 'all denotation presupposes sense', and 'we position ourselves *straight away* within sense whenever we denote'.[175] This is how a meticulous relation with the stability of stratified states of matter can allow us to interpret, for practical purposes, some of their processes and traits as the relations, mixtures and qualities of the corporeal dimension of beings, as science and empirical approaches do, in order to describe and *denote*, to reproduce and predict, and so on. The concept of strata can work as a practical connector between the corporeal and the incorporeal, but only insofar as we do not confuse denotation with sense. Thus, when we speak about strata, we are primarily speaking of 'sense', which is the relation of the proposition that refers to the incorporeal entity *at the surface* of the corporeal entity, as its result. This result does not work through a direct "cause and effect" logic, but involves a very complex 'double causality': 'incorporeal sense, as the result of the actions and the passions of the body, may preserve its difference from the corporeal cause only to the degree that it is linked, at the surface, to a quasi-cause which is itself incorporeal. The Stoics saw clearly that the event is subject to a double causality'.[176] Incorporeal 'events', 'attributes' or 'effects' are 'neither agents not patients, but results of actions and passions'.[177] The way of being affected *intensely* in encounters with 'difference' and 'the new' in a non-relative manner, is not the same as being acted upon, in an empirical way, as in a triggered response for example. It does not work at the level of corporeal entities 'which act and are acted upon', but these 'becomings' are all the more 'intimate and essential to bodies', precisely and paradoxically because of their neutrality, as Deleuze highlights throughout the book.[178] Chiefly, this 'dualism' corporeal/incorporeal, which corresponds to the difference between being and becoming (and between beings and ways of being) is 'not at all the dualism of the intelligible and the sensible, of Idea and matter, or of Ideas and bodies. It is a more profound secret dualism hidden in *sensible and material* bodies themselves'.[179]

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[172] Deleuze and Guattari, *A Thousand Plateaus*, p. 178.

[173] Ibid, p. 49.

[174] Denotation, as defined by Deleuze is 'the relation of the proposition to an external state of affairs (*datum*)'. Deleuze, *The Logic of Sense*, p. 13.

[175] Ibid, p. 17.

[176] Ibid, p. 97.

[177] Ibid, p. 6-8. [My emphasis].

[178] Ibid, p. 5-6.

[179] Ibid, p. 1-2.

‘Sensation’ belongs to the world of incorporeal sense and becoming. Yet, its status vis-à-vis materials and concepts demands careful consideration, which is what Deleuze and Guattari do in *What is Philosophy?* (1991). They explain that the becoming of a concept and the becoming of a sensation are not the same becoming:

> Aesthetic figures are not the same as conceptual personae. It may be that they pass into one another, in either direction, like Igitur or Zarathustra, but this is insofar as there are sensations of concepts and concepts of sensations. It is not the same becoming. Sensory becoming is the action by which something is ceaselessly becoming-other (while continuing to be what they are), sunflower or Ahab, whereas conceptual becoming is the action by which the common event itself eludes what is. Conceptual becoming is heterogeneity grasped in an absolute form; sensory becoming is otherness caught in a matter of expression.[180]

I address some aspects of this ‘becoming-other’ in I.2. When they posit that ‘the event is immaterial’,[181] they are referring to concepts and distinguishing it from the ‘material sensation’, as Deleuze calls it in the Logic of Sensation. As Deleuze and Guattari explain, not only sensation cannot be preserved without a material capable of lasting, but they also argue that in a sensation, ‘it is difficult to say in fact where the material ends and sensation begins’. ‘And yet, in principle at least, sensation is not the same thing as the material’. So, they explore how, in aesthetic practices, in some cases ‘the plane of the material ascends irresistibly and invades the plane of composition of the sensations themselves to the point of being part of them or indiscernible from them’,[182] and in other cases the sensation is ‘projected onto the well-prepared technical plane of composition in such a way that the aesthetic plane of composition covers it up’. In short, they distinguish between two approaches to the relation between the material plane and the plane of sensation: in the one case ‘the material passes into the sensation’, and the sensation does not exist outside this passage; and in the other case, ‘the sensation is realised in the material, and does not exists outside this realisation’. In the second case, ‘the sensation is not realised in the material without the material passing completely into the sensation’. Thus, we must keep in mind that these poles, these ‘two states of sensation’, are in constant transitions, combinations and coexistencies are constantly being produced.[183] And above all, in both cases: Whether one or the other is the case depends on the relation between the technical plane of the composition and the aesthetic plane of composition. As they write: ’aesthetic composition is the work of sensation’ and it should not be confused with ‘the work of the material that often calls on science’. The relation between

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[180] Deleuze and Guattari, *What is Philosophy?,* p. 177.

[181] Ibid, p. 156.

[182] Ibid, p. 166.

[183] Ibid, 166-7 and 193-4.

the technical and the aesthetic 'constantly varies historically'. My investigation focuses on the ways in which the materials pass into the sensation, because of my focus on haptic listening. They also say of this state of sensation that it is the case where 'the materials rise up' and that brings about 'new powers of texture'. For the case of painting, they explain that 'the surface can be furrowed or the plane of composition can take on thickness insofar as the material rises up'.[184] My own project of exploring haptic reliefs and textures in music is related to this pole. This is why I centre my attention on 'molecular flows' and haptic traits that are intrinsic to the sonic materials, yet, above all, I do so only insofar as it goes hand in hand with an exploration of how the materials become expressive. As I show in the introduction to Part II, exploring the molecular level of molecular flows, is itself the condition for exploring how the materials become expressive. The molecular is not necessarily the small-scale level, but when it is followed at a large-scale it establishes a continuity with the small-scale level. Consequently, I have dedicated next section to elucidate the status of intensity or 'continuums of intensity' vis-à-vis material flows, and their relation to 'expression'.

[184] Deleuze and Guattari, *What is Philosophy?*, p. 191-194.

1.5. The expressive-intensive-material reality of sensation

In this section I present some relevant aspects of Deleuze and Guattari's ontology of 'sensation' and its implications. I start by recalling that sensation has both an 'intensive' and a 'material' reality. I base the reflection on Guattari's postulate that there is no 'univocal ontological foundation' but only 'ontological domains' with their own 'ontological consistency'. Then, I bring into play Deleuze and Guattari's decisive concept of 'strata', with the aid of Buchanan's reading. Finally, I complete the clarification by considering the necessary and fundamental 'expressive' component of this ontological domain. I illustrate these considerations with an example of a rock track, Fugazi's 'Suggestion' (13 songs, 1989), focusing on the power of its intense grainy-vexed shouts to attain the sensation and disclose its expressive-intensive-material reality. I end the section with a discussion on the 'ontological resistance' of the materials that integrates insights by Cox and Bergson, and a brief recapitulation.

In *Francis Bacon. The Logic of Sensation*, Deleuze states clearly that 'sensation' has an 'intensive reality': 'Sensation is not qualitative and qualified, but has only an intensive reality'.[185] What does he mean by this? What is an 'intensive reality'? What is the 'intensive reality' of 'sensation'? In this section I deal with these questions and their implications.

As I summarised in the introduction, Deleuze's logic helps us to understand that when a work of art comes across in a sensation, the process involves an emergent haptic sensitivity to an emergent material formation. The haptic is a close-range and gradual sense that involves a sensitive contact with materials. It is by following and feeling them haptically that the new formation and its rhythm emerge as sensation. The materials of the work are thus brought to the fore in a sensation. In these cases, we could broadly say that the details of the materials become more important than when a form is imposed on them, for it is from their intrinsic movement and haptic traits that the artwork comes across as sensation. This way, the sensation has not only an intensive reality but also a *material* reality. Deleuze also speaks about 'each material sensation' and 'the material synthetic unity of a sensation'.[186] Moreover, as I also mention in the 'Introduction', Deleuze and Guattari explicitly talk about an 'intense matter' and 'intensive traits' in *A Thousand Plateaus*; and they consider the close and primary dependence of sensation on the artwork's materials in *What is Philosophy?* as I explain in I.1.4. Thus we must ask: what sort of reality is this *intensive material reality* of sensation? What does it consist in? What are its conditions of reality and possibility? What is its ontology according to Deleuze and Guattari?

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[185] Deleuze. *Francis Bacon. The Logic of Sensation,* p. 33.

[186] Ibid, p. 29.

First of all, I think that Guattari's position on ontology, expressed in *Chaosmosis,* can help us to establish the first fundamental point regarding these questions*:* 'Beneath the diversity of beings, no univocal ontological plinth is given, rather there is a plane of machinic interfaces'.[187] A full philosophical study of the problem of ontology is beyond the scope of my investigation, but it is still necessary to establish some clear ontological bases, that can provide the necessary consistency to the concepts I am working with. First of all, I am considering the most general definition of 'ontology' as the branch of philosophy that deals with questions about 'what exists, what the stuff of reality is made out of', and 'what the most general features and relations of these things are'.[188] I think one should immediately attach to this definition, the problem of whether one is referring to a single fundamental reality for everything we take to exist, or to one amongst various different types of realities. In line with Deleuze and Guattari, I approach my studies from the latter position, posing the question in the form of what *this or that reality* is made out of. Deleuze and Guattari write about several types, e.g. a 'dominant reality', a 'mental reality', an 'intensive reality', and so on. This is consistent with Guattari's concept of 'ontological heterogenesis', which means that there is no 'univocal ontological foundation' and 'no generalised syntax', but one can discern, on each occasion, different 'ontological domains' with their own 'ontological consistency'.[189] Therefore, concerning sensation's intensive material reality, we must be extremely careful not to treat these statements as a series of syllogisms, for they do not imply that 'what the stuff of reality is made out of' is only intensive, or only material, or that all the materials of a material reality are only and always intensive, and so on. We must be careful not to treat the intensive as the essential nature of a single and straightforward material reality, which one can simply access or not. This is a path to confusion, which I found myself sometimes following in my investigation's journey. We have to understand that the problem is much more complex.

Secondly, Deleuze and Guattari's notion of 'passages' — a notion I have been focusing on throughout my whole investigation — is key to understanding the ontology they were putting forward, which the explanations and emphasises provided by Buchanan, among others, have helped me understand more clearly. As Buchanan summarises:

> At its most elementary, their ontology consists of a dual system of an organised transcendental plane sitting on top of an unorganised immanent plane. These two

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[187] Félix Guattari, *Chaosmosis. An Ethico-Aesthetic Paradigm*, trans. by Paul Bains and Julian Pefanis (Bloomington: Indiana University Press, 1995), p. 58.

[188] Thomas Hofweber, 'Logic and Ontology', ed. by Edward N. Zalta and Uri Nodelman, *The Stanford Encyclopedia of Philosophy*, 2023, <https://plato.stanford.edu/> [accessed 14 April 2024]

[189] Guattari, *Chaosmosis*, p. 28, 39, 52 and 58 (for example).

> planes which go by many names, in Deleuze and Guattari's work, are inseparable — they are each other's limit and each other's condition of possibility'.[190]

According to Deleuze and Guattari, materials can be stratified or destratified. The former belong to the plane of organisation, the latter to the plane of immanence (or consistency or intensity). The first process consists in 'giving form to matter' and 'imprisoning intensities'; the second reveals an 'unformed matter' or 'a flow of matter in continuous variation',[191] and it consists in freeing intensities. In other words, the process of destratification is necessary to construct and free continuums of intensities. They add that the diagram or 'abstract machine', which works on a plane of consistency, *'constructs continuums of intensities'*; and 'the plane of consistency 'creates continuity for intensities that it extracts from forms and substances'. In other words, intensities can only flow freely on a plane of consistency, because it is a plane of 'continuous variation', which is the necessary condition for intensities to flow freely and thus to be brought fore. Deleuze and Guattari say that intensities 'pass or circulate',[192] so they are always in a state of becoming and immanence. We should now highlight the fact that 'continuums of intensities' are *constructed* and therefore we can infer from this that they are not 'already there': what is already there is the fundamental continuity proper to the plane — very much in line with Bergson's view of reality — and the intensive reality has to be constructed, or something has to be constructed for the intensities to be able to flow. Summing up, a process of stratification or destratification is a passage from one plane to another, freeing intensities or imprisoning intensities. Yet, are imprisoned intensities no longer intensive? The point I consider next, directly answers this question.

Thirdly, Deleuze and Guattari encourage us to keep in mind that any entity that we encounter on the 'plane of organisation', as stratified formed matter, itself, primarily belongs to the 'plane of consistency or immanence', which is the plane that has an intensive reality. The entities that we encounter as stratified formed matter are its thickenings or spinoffs, but they always retain something of it. As they write:

> […] we cannot content ourselves with a dualism or summary opposition between the strata and the destratified plane of consistency. The strata themselves are animated and defined by relative speeds of deterritorialization; moreover absolute deterritorialization is there from the beginning, and the strata are spinoffs,

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[190] Ian Buchanan, *Assemblage Theory and Method. An Introduction and Guide*, 1st Edition (Bloomsbury Publishing, 2020), p. 52, <https://www.perlego.com/> [accessed 22 September 2024].

[191] Deleuze and Guattari, *A Thousand Plateaus,* p. 448.

[192] Ibid, p. 169.

> thickenings on a plane of consistency that is everywhere, always primary and always immanent.[193]

This is why Buchanan writes that the plane of organisation is 'sitting on top' of the plane of immanence. Thus, 'imprisoned intensities' are still intensive at some level, they are still 'animated and defined by relative speeds of deterritorialisation', which is a concept that involves 'destratification', but they do not come across as such. Thus, we can say that Deleuze and Guattari's view is that materials, both at their most stratified and destratified have an ontological resistance which is the continuity of their consistency, or the continuity of the plane they ultimately belong to.

In the fourth place, we have to address directly what they mean by 'real'. An example of one of their reflections on the 'diagram' as a 'matter-function', can help us to think about this problem:

> Whereas expression and content have distinct forms, are really distinct from each other, function has only "traits", of content and of expression, between which it establishes a connection [...]. A matter-content having only degrees of intensity, resistance, conductivity, heating, stretching, speed, or tardiness; a function-expression having only "tensors", as in a system of mathematical, or musical, writing. Writing now functions on the same level of the real, and the real materially writes.[194]

When Deleuze and Guattari speak of 'the same level of the real', they are referring to 'a reality specific to becoming', which is an ontological domain with its own ontological consistency. This is what allows them to observe that things can achieve a greater reality, in the sense that they can become more real within this domain, with 'tensors' and 'intensive variables' as conditions of reality within this domain. I think it is relevant to connect this thought with Bacon's thought when he explains that his creative process involves asking himself: 'how do I feel I can make this image *more immediately real* to myself? That's all'.[195] For Deleuze and Guattari, intensity is linked to reality in a way that representation, signification and recognition are not, precisely because it is linked to 'a reality specific to becoming', as largely addressed in *A Thousand Plateaus*. 'A becoming', according to Deleuze and Guattari, 'is not a correspondence between relations'; 'neither is it a resemblance, an imitation, or, at the limit, an identification'; it does not occur in the imagination; it is 'perfectly real'. 'But what reality is

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[193] Deleuze and Guattari, *A Thousand Plateaus,* p. 78.

[194] Ibid*,* p. 156.

[195] Deleuze. *Francis Bacon. The Logic of Sensation,* p. 30 [My emphasis].

at issue here?' — they ask.[196] Their answer is based on a series of arguments that can be found throughout all their literary corpus, and concerns, among other issues, their view on 'repetition', 'representation', the 'body without organs', and 'strata' and 'destratification', for example. Many of them concern their critique of the 'too general' for the real, and of the 'extrinsic', still within comparative thinking, but which ultimately leads to a close relation between 'the real' and the cluster heterogeneity-complexity-continuity, in a move towards non-comparative thinking. This is related to Bergson's critique and his view of 'reality', which I bring into play in my considerations about the movement of the sonic materials in I.4.

In the fifth place, my focus on the materials should not be taken in a formalist sense devoid of meaning or expression. On the contrary, I treat the constructive analysis of sonic materials, as an analysis of what Deleuze and Guattari call 'material traits of expression', where materials and expression are inseparable. As they write, this kind of analysis is about addressing 'less a form capable of imposing properties upon a matter than material traits of expression constituting affects'.[197] As pointed out by Buchanan: 'Intensities go by many names in Deleuze and Guattari's work — for example, affects and becomings are the most important […]'.[198] I also infer from Deleuze and Guattari's work, that it is indeed well-founded to say, then, that 'material traits of expression' are capable of constituting intensities and traits of becoming.[199] Moreover, in line with these philosophers, I treat the sonic material flows one encounters in a sensation in a piece of music as already saturated, not only with rich material details, but also with meanings and traits of expression, inseparably. We can consider them as 'traits' of a 'matter-function' at the level of the diagram (i.e. the set of operative traits one can refer to, map and study the principles of), and we can come across the new formation or the aesthetic figure they constitute, and become with them in a 'zone of indiscernibility' or 'proximity' (see introduction to Part II) at the level of the sensation and intensity. 'Material traits of expression' also establish a 'conjunction' with other flows in a given event, and I do not give an ultimate primacy to any of these other flows. I simply focus on the ones that I can genuinely speak about, by virtue of having been in real connection/becoming with them. The disciplinary priority I give to the sonic materials in the aesthetic approach I am developing here has to do with my focus on haptic sensitivity (deformation, sensuous complexity, chaos and new sonic formations, etc.) as an essential aspect of 'sensation'.

All my case studies address questions of meaning and expression, and they all have the potential to open up avenues of collaboration and complementarity with other approaches. Moreover, given that the material flows I explore include verbal language, starting from the

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[196] Deleuze and Guattari, *A Thousand Plateaus,* p. 262-3.

[197] Ibid, p. 451.

[198] Buchanan, *Assemblage Theory and Method*, p. 37.

[199] See for example, Deleuze and Guattari, *A Thousand Plateaus,* p. 309-10.

title of a track and the lyrics, and mainly the fact that the voice is an inextricable amalgamation of words, singing, sonic matter and expression, questions of discourse are deliberately and inevitably explored in my studies. As I explain in I.2, my position with regards to art, is that meanings, experiences and the production of subjectivities are intensified and, are indeed made 'more real', as 'life itself' (as I argue in relation to my recourse to the principle of the 'membrane', and also to Bangs's discourse about rock recordings), when they result from 'the non-representational nature of the diagram'[200] in a sensation (also the opposite of signification, recognition, the sensational, identification, mimesis, and so on). 'Real' in this sense corresponds to the reality specific to becoming, and also to the reality of an intrinsic construction and production. Therefore, I think, with Deleuze and Guattari, that the replacement of the matter-form dialectic, with the couple material-forces, can be the measure of our own power to overcome forces of oppression. The complexity-heterogeneity-continuity of a 'rich and consistent' material that the couple materials-forces brings forth, is a powerful thing in works of art, only insofar as we do not separate the 'traits of expression' from it. In other words, the couple 'materials-forces' has to be addressed with what is 'expressed in' them, as Alliez rightly emphasises:

> […] in the absence of a "rupture between thought and the creative act" […], the only conception that counts is that which *surfaces* in full immanence in a continuous becoming in which the principle of construction can only be perceived along with that which it expresses *in forces* outside of any kind of working of form for itself or any pure forming of forces.[201]

In this sense, the same critique to an inappropriate formalism (e.g. as emphasised by many musicologists) can be directed to an inappropriate materialism (e.g. as emphasised by Iain Campbell, for example — reference below). My reliance on Deleuze and Guattari's concept of 'material traits of expression' is based on both the fact that expression is paramount, but also the fact that treating expression as something that the material would only be the means of 'communicating', would amount to coming back to a disjunction content-expression based on a matter-form dialectic, where only the form imposed on matter would be the conveyor of the expressed meaning.

We also learn from *A Thousand Plateaus* that a stratum has two variables, a form of content (i.e. formed matter) and a form of expression, that we can distinguish and separate in order to analyse their relations. Yet, we cannot do that with the material traits of expression of a

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[200] I share Alliez and Deleuze's view that this 'immanence of the diagram involves a question of politics'. See Éric Alliez, 'Ontology of the Diagram and Biopolitics of Philosophy. A Research Programme on Transdisciplinarity', *Deleuze Studies*, 7.2 (2013), p. 219.

[201] Éric Alliez and Brian Massumi, 'Performing the Ethico-Aesthetic Paradigm', *Performance Research*, 19.3 (2014), p. 24. [Emphases in the original and the quote within this paragraph: "rupture between thought and the creative act", is is from painter Henri Matisse].

diagram. For example, if we observe in a rock track, on one side, the conceptual sense we make of its lyrics and the non-verbal gestural language or code of the voice as expression, and, on the other side, the haptic traits of sound or other sonic formations as the material content, when the diagram intervenes this dual reality radically changes as the diagram makes language, bodies, and materials 'pass to the limit'. As Deleuze and Guattari write:

> It is as though an intense matter or a continuum of variation were freed, here in the internal tensors of language, there in the internal tensions of content. […] We witness a transformation of substances and a dissolution of forms, a passage to the limit or flight from contours in favour of fluid forces, flows, air, light, and matter, such that a body or a word does not end at a precise point. We witness the incorporeal power of that intense matter, the material power of that language. A matter more immediate, more fluid, and more ardent than bodies and words'.[202]

An abstract machine or diagram 'makes no distinction between content and expression'. The condition for this union, for these indissoluble 'material traits of expression', is the same condition of reality of continuums of intensities, namely fluidity, continuous variation, the infinitesimal and heterogeneity.[203] This is why Deleuze and Guattari insistently draw attention to the level of 'molecular flows' when discussing about music, among other practices and phenomena. 'The very words "matters of expression", they write, imply that expression has 'a primary relation to matter', and they explain how this primary relation involves '*material* components that are in exceptionally close contact with molecular levels. The whole question is thus whether or not the molar-molecular relation assumes a new figure here'.[204]

This is the question I therefore try to base my constructive categories on, as I discuss at the beginning of Part II. For example, we can witness how certain shouts in rock records make the expressive-intensive-material reality of their words-sounds-singing flow particularly powerful, while others are easily turned into clichés. This is why it requires studies on a case to case basis, as the one I present in the next example. As Deleuze and Guattari also emphasise: 'Abstract machines thus have proper names (as well as dates), which of course designate not persons or subjects but matters and functions', and these names designate an intensity.[205]

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[202] Deleuze and Guattari, *A Thousand Plateaus,* p. 120-1

[203] See also, Ibid, p. 106-7.

[204] Ibid, p. 369.

[205] Ibid, p. 157.

GRAINY-VEXED SHOUTS: 'SUGGESTION' / FUGAZI

The shouts in Fugazi's 'Suggestion' (*13 songs*, 1989) have a notable diagrammatic function. The lyrics of this track seem to speak of personal experiences related to problems of racism and sexism. In the first part, they explicitly comment on prejudice according to one's body and skin, and in the second part, they comment on something that could be interpreted as a situation of sexual harassment. The voice in the first part engages in passages from singing to shouting at key moments of the song form, with marked contrasts, which is a stylistic mark of hardcore punk and grunge (and other related rock styles) that started to become something of a stylistic norm in that period. The material traits of expression that the shouts constitute have what Deleuze and Guattari call 'a grain of absolute Intensity', since it is not divisible into an intensive grain and an intensive expression. It is a perfect 'conjunction of Matter and Function':[206] the grainy sound of the shout is not separable from the expression of vexation, annoyance, and an intention to show a truth that is frustratingly not part everybody's ways of thinking, like asking: «Don't you see how stupid and bad this is? Don't you get it?», all through the material-expressive energy of the grainy shout. In the grain, inextricably, the expression of indignation is made *stronger,* particularly because the grain is so clear, with such distinctively noticeable beats, and very loud. The passages contribute to the effect, but also the functions of the other instruments become part of the diagram. As it is frequently the case in Fugazi, the bass guitar remains a firm armature, while the guitars become all sorts of agents of destratification, passing from hectic activity to the slightest quiet glides (almost accidental, but too finely performed to be so), appearing and disappearing, falling together/apart in subdivisions and syncopations, which are themselves completely glued to the notes of the bass in octaves. In all these increasing heterogeneity, bass guitar, guitars and drum kit are held together in a very tight aggregate, constantly intervened by agents of destratification, or what Deleuze and Guattari call 'lines of flight', from the most short and quiet, to the most loud and long. Another notable example are the molecular aggregates of glides and rolls to which all the instrument join in, either propelling momentum or botching culmination. Intercalations are present everywhere, making the mix a rich, elaborated and saturated material.

Within this full diagram, the passages to the shouting voice are accompanied by the instruments, yet the grain of the voice takes over, like the sound of a powerful boosted distorted guitar solo. This is how shouts in rock practices usually sound like, in a becoming-guitar, but this case seems to me much more grainy thick and intense than usual, a feature that is nonetheless not unusual in Ian MacKaye's singing. So much of what the voice and words are expressing is compressed in the grain, and explodes, hence the economy of words. As Deleuze and Guattari write in one of their discussions about this 'molecular level' of music, its 'grain of absolute Intensity' and its 'generalised glissando': 'an immense coefficient of

[206] Deleuze and Guattari, *A Thousand Plateaus*, p. 157. '[…] it is always a question of a conjunction of Matter and Function'.

variation is affecting and carrying away all of the phatic, aphatic, linguistic, poetic, instrumental, or musical parts of a single sound assemblage — "a simple scream suffusing all degrees" (Thomas Mann)'.[207] The conjunction of social, political and cultural flows with the music flow is made extremely clear and powerful through the diagram. In a very marked contrast, the long coda or C-section turns the track into a quiet reflection (no shouts), expressing a series interconnected moments of a situation, from different angles (the 'she', the 'he' and the 'we') that suggests members of an audience or social group witnessing the 'she' (woman or girl) being molested in public. The lyrics also emphasise the lack of reaction from the public (e.g. 'we sit back, like they taught us / We keep quiet like they taught us'; 'We don't want anyone to mind us / We play the role that they assigned us').

At this point in the track, I can't help but thinking of the socio-political flow that has conjoined intensely with it. Behaviours create flows, contagious flows, spreading flows, and a normalisation of flows. Some of the most serious and pressing problems like racism and sexism, for example, still prevail and remain the norm in people's behaviours. Everybody acts surprised. We say things like «I can't believe these things are still happening», and all around you, whoever you ask about it, would usually emphatically affirm not to be part of this flow, yet it is somehow, so clearly, still the mainstream. So, we evidently have to do more and try harder to change it. The track ends: 'We blame her, for being there' and then very quietly MacKaye speaks out: 'But we are all here / we are all…' followed by the sudden final shout: grainy clear and loud: 'GUILTY!' — abruptly interrupted in a sharp cut, that intervenes as another operative sonic *haptic* material trait of expression in the diagram.

'"Saturate every atom", as Virgina Woolf said', write Deleuze and Guattari, adding: 'every part of the machine is saturated, this is where its power lies'.[208] I also found Woolf's advice particularly suggestive so I went to the source. It is actually a note to herself as a writer, from her diaries in the entry 'Wednesday, November 28th' in '1928':

> The idea has come to me that what I want now to do is to saturate every atom. I mean to eliminate all waste, deadness, superfluity: to give the moment whole; whatever it includes. Say that the moment is a combination of thought; sensation; the voice of the sea. Waste, deadness, come from the inclusion of things that don't belong to the moment; this appalling narrative business of the realist: getting on from lunch to dinner: it is false, unreal, merely conventional. Why admit anything to literature that is not poetry? — by which I mean saturated?[209]

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[207] Deleuze and Guattari, *A Thousand Plateaus*, p. 107.

[208] Ibid, p. 362-3.

[209] Woolf, Virginia, *Writer's Diary* (United Kingdom: Delphi Classics, 2017) <https://www.perlego.com> [accessed 24 March 2024]

The power of Fugazi's 'Suggestion' and of countless rock recordings and other artworks certainly lies in these processes of 'saturation', performed in so many different ways, but which operate and can be studied in their diagrams as I expand on in Part II and Part III.

Final discussion of the section

The problem of ontology and reality, with regard to Deleuze and Guattari's corpus and music and sound studies, can be linked up with a recent debate, that has involved a number of scholars on sound art, Deleuze, and sonic materialism, such as Christoph Cox, Annie Goh, Marie Thompson, and Iain Campbell, among others.[210] Some of the issues addressed in this debate are relevant to my research, and I think I have already clarified my position on them in this section and the 'Introduction', particularly in relation to what I have summarised in a triple concept as the expressive-intensive-material reality specific to becoming, on the basis of my reading of Deleuze and Guattari's corpus, and with the aid of publications by Alliez and Buchanan. I share Deleuze and Guattari's and Cox's view, that materials present what Cox calls an 'ontological resistance',[211] which is sometimes consistent with these and other writers' interest in the materiality of sound. My focus on haptic listening, including the complexities of haptic traits at all scale-levels, involves an interest in how rock tracks manage to hold heterogeneities together without them ceasing to be heterogenous, as explained by Deleuze and Guattari, since it is in remaining rich and saturated, where their power of becoming expressive-intensive-material entities lies (see Part II). I also concur in that musicians, sound artists and listeners may or may not join with, contend with, or become more sensitive to this 'ontological resistance', so it involves a certain conduct towards the materials. As Cox explains in *Sonic Flux* (2018):

> Sound is not a neutral substratum that is given form from without. Rather, it is replete with capacities and tendencies of its own with which any appropriation of the sonic must contend. The intensive properties of pressure, density, speed, viscosity, elasticity, and temperature play decisive roles in the sonic field. As vibration, sound is difference or variation […]. It is also repetition — vibrational

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[210] See for example, Marie Thompson, 'Whiteness and the Ontological Turn in Sound Studies', *Parallax*, 23.3 (2017), 266–82; Iain Campbell, 'Sound's Matter: 'Deleuzian Sound Studies' and the Problems of Sonic Materialism', *Contemporary Music Review*, 39.5 (2020), 618–37; Christoph Cox, 'Sonic Realism and Auditory Culture: A Reply to Marie Thompson and Annie Goh', *Parallax*, 24.2 (2018), 234–42; and Annie Goh, 'Sounding Situated Knowledges: Echo in Archeoacoustics', *Parallax*, 23.3 (2017), 283–304.

[211] Cox, 'Sonic Realism and Auditory Culture', p. 236. I am using Cox's concept, but in doing so I am not defending his idea that 'onto-epistemology supposes that the material real offers no ontological resistance'. As clarified by Campbell, Goh and Thompson are not supposing that in their onto-epistemological approaches, and they are not saying that nature does not exist without culture. See Campbell, 'Sound's Matter', p. 624.

> difference that recurs, endures, and is extended in time. This duration is itself variation, for sound comes into being, alters and dies or dissipates.[212]

I see this approach as consistent with Deleuze and Guattari's emphasis on the replacement of the dialectic matter-form, with the couple materials-forces, which they explain in terms of '*variable intensive affects*, now resulting from the operation, now making it possible: for example, wood that is more or less porous, more or less elastic and resistant'.[213] This is also consistent with their reliance on Simondon's notes about 'an intermediary dimension' between 'form and matter', that is a 'molecular' dimension 'a space unto itself that deploys its materiality through matter, a number unto itself that propels its traits through form'. In my thesis, I have adopted Cox's expression 'the intensive domain of sound', mainly by virtue of Deleuze and Guattari's notion of an 'intensive matter' that the diagram is capable of 'freeing' and 'bringing forth' in an artwork. As I explained above, I am developing a constructivist approach to it, and an approach that involves not detaching its intrinsic 'matters of expression' from it. This emphasis on the resistance of the sonic materials is also consistent with Bergson's observations of a fundamental continuity and heterogeneity of matter and movement, as I expound in I.4. In order to allow for this resistance to be part of our understandings and experiences, Bergson asks: 'how is the contraction effected — the contraction no longer of homogeneous movements into distinct qualities, but of changes that are less heterogeneous into changes that are more heterogeneous?' As I mention in the introduction, this view grounds reality on movement and change, and material reality on what Deleuze and Guattari call material flows, which are never completely homogeneous and never within 'empty containers' (e.g. homogeneous space and any 'rigid abstraction'). Rather, as Bergson writes, they are 'supple realities which permit of degrees': 'Extension and tension admit of degrees […].[214]

Summing up, what I infer from my investigation on the matter is that, in the case of the aesthetic sensation, this reality of becoming, is 'expressive', 'intensive' and 'material', inseparably. This ontological domain can guide the development of my constructive typology in a way that is appropriate for the aesthetic study of the haptic traits of diagrams of rock recordings. As emphasised in Buchanan's reading of Deleuze and Guattari, a very fundamental aspect of their philosophical project is finding 'specific causalities' — also called 'creative' causalities —, which I think can be the project of music analysis, if one pursues that

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[212] Christoph Cox, *Sonic Flux: Sound, Art, and Metaphysics*. ProQuest Ebook Central edn (Chicago: University of Chicago Press, 2018)., p. 43.

[213] Deleuze and Guattari, *A Thousand Plateaus*, p. 450.

[214] Henri Bergson, *Matter and Memory*. trans. N.M. Paul and W.S. Palmer (New York: Zone Books, 1988)., p. 247.

initiative.[215] He draws attention to the following line from *A Thousand Plateaus*: 'Invoking causalities that are too general or are extrinsic (psychological or sociological) is as good as saying nothing'.[216] For the case of rock recordings, the intensity of an encounter with its sounds when they come across as sensation is a non-generalisable intrinsic becoming. Consequently, an analysis has to aim at determining its 'specific causality', each time, which can be done with by focusing on the study of the diagrams of rock recordings, and this has to be principally carried out as an *experimental* analytical practice.

However, this practice must simultaneously consist in continuously striving for clearer understandings of what sensation is, how it differs from other processes, why it is important, how it relates to a practice of caring about the music one listens to and about listening itself, how it relates to meaning and giving value, and to existential questions. Therefore, it is a practice that also requires connecting with the thoughts of others that have engaged in thinking and writing about these matters. Now, from the repeated practice of finding 'specific causalities' (which include all these different questions), one can distil and extract certain principles that I would not call general, but recurrent, consistent and effective, within the aesthetic discipline, and that can reveal an 'ontological consistency', which can work in constructive ways. This is exactly what I think Deleuze has done when developing his Logic of Sensation, and it is what allows me to borrow principles from it and work with them in new ways for the study of diagrams in rock recordings.

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[215] Ian Buchanan, 'Deleuze and Guattari's Differential Method', in *YouTube* (presented at the Social Ontologies After Deleuze, Filosofický ústav AV ČR, Department of Contemporary Continental Philosophy, Institute of Philosophy, Czech Academy of Sciences, 2022) <https://www.youtube.com/> [Accessed 04 October 2024]

[216] Deleuze and Guattari, *A Thousand Plateaus*, p. 312.

1.6. Disruption, sensuality and no ambivalence of feeling

In light of the problems introduced, this section discusses some key principles of the operations of passage from the level of recognition to the level of intensity in a sensation, in aesthetic practices. It focuses on the the passage to the intensive limit of sensibility, and brings back into play the consistencies between the considerations by Deleuze and Bangs presented in I.1.1. Moreover, in line with Deleuze's postulate of the connection between thought and sensibility, I specify that these operations of passage work on two flanks simultaneously, creating both a sensuous provocation and an intellectual provocation, which are better understood as contiguous, with no clear-cut boundary. This means that they can constitute one and the same sensibility, discarding a body-mind divide. To finish this section, I explain Deleuze's assertion that the violence of the sensation should not be confused with an ambivalence of feeling, which is something that should be kept in mind when thinking about rock recordings.

To recapitulate, in Deleuze's account of the passage to the level of intensity, 'the violence of that which forces thought' and the violence of that which 'forces sensation' is the violence that carries a faculty to its own limit (I.1.2).[217] Broadly speaking, I share the view that this form of 'violence' is a very important element in many forms of art, and it is what I am interested in exploring about what artworks can do. For example, as philosopher Henri Maldiney writes: 'A philosopher is a disruptor. It is there its common trait with the artist, if it is true, as G. Braque says, that art is made to perturb and science reassures'.[218] Yet, this disruption or perturbation is just one element, for we must not forget the sensuous provocation of the movements that 'directly touch the mind', suggested by Deleuze and Bangs (I.1.1). This all leads back to my preliminary considerations, concerning the consistency between Bangs's reflections and Deleuze's account of the passage to the level of intensity. Whether Bangs is writing directly about the listening encounter, or about its aftermath, whether he is problematising the ways he feels about his own experiences, or its acts of giving value to certain pieces or taking it away from them, the profuse vocabulary that Bangs develops to refer to all kinds of haptic movements and traits, is ostensibly alluding not simply to a gratifying and complacent sensuous experience, but also to something that in some way unsettles, challenges and even destroys. He alludes to the intensity of something that changes you, in a way that is far from easy to understand. For example, Bangs refers to abrasive, contorting, blasting, immersive, overflowing, contracting-expanding, attractive-repelling, dizzying, turbulent and vortical

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[217] Deleuze, *Difference and Repetition,* p. 185

[218] Henri Maldiney, 'L'Esthetique des Rythmes (1967)', in *Regard Parole Espace*, ed. by H. Maldiney, Bernard Rordorf and J.P Charcosset (Lausanne: Editions l'Age d'Homme, 1973 & 1994), p. 147. [My translation] *'Le philosophe est un perturbateur. C'est là son trait commun avec l'artiste, s'il est vrai, comme dit G. Braque, que l'art soit fait pour troubler et que la science rassure.'*

movements, which can be considered through Deleuze's principles as capable of forcing sensation, touching and affecting the mind, passing to the limit, disclosing an intensive materiality, an excessive and insistent presence, and forcing thought, bringing about 'a chaos, a catastrophe', which is also 'a germ of rhythm' and of a 'new order'. What emerges from these operations and this element of chaos is what I have decided to call a *new sonic formation* for the case of rock recordings. In the passage to the level of intensity that an artwork can achieve, there is both a sensuous provocation and a disruptive provocation. Yet, the sensuality and the disruption do not merge in an ambivalent way here. The special kind of violence Deleuze refers to, concerns both flanks, and in one of them it is more a question of *sensuous or sensual complexity*, than it is a question of pleasure alone. The possibility of accessing a sensuality that is proper to the intensive domain of the materials, is directly connected to the disruptive nature of certain operations, as I illustrate throughout this thesis, without producing and ambivalence of feeling.

Overall, when Bangs writes things like: 'I was starved for some sounds that might warp my brain a little'; 'The song was a shlockhouse grinder, completely fatuous'; 'the revelations waiting in thirty-five or forty five minutes of blasting sound'; 'the eternal promise that *this* time the guitars will jell like TNT and set off galvanic sizzles in your brain'; 'desultory vortex'; 'pulverise my lobes and turn my floor into wormwood'; '[…] repeats certain phrases to extremes that from anybody else would seem ridiculous', '[…] is interested, obsessed with how much musical or verbal information he can compress into a small space, and, almost conversely, how far he can spread one note, word, sound or picture.', 'churning out rock 'n' roll that thundered right back to the very first grungy chords and straight ahead to the fuzztone subways of the future'; 'the best way to describe it would be to say that he sounded raspy and cocky and loose and lewd'; 'replete with igneous feedback blankets';[219] and so on; I think he is mapping and keeping record of the kind of operations and the kind of provocations that concern 'sensation', in the form of inventive, expressive, graceful and critical music reviews in the field of literature and rock criticism.

My own agenda has been to dwell on these operations and provocations in the field of aesthetics and music analysis, in order to study what they consist in, along with their philosophical and ontological implications, and to write about them in constructive explanatory ways. Of course, other rock writers frequently use similar expressions and also tap into some of the aesthetic and philosophical questions I am focusing on.[220] However, the problems that Bangs suggests, and sometimes explicitly reflects on, are more directly consistent with the present purposes. Thus, when it comes to complement my studies with relevant rock literature, I have mainly worked with them.

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[219] Lester Bangs, *Psychotic Reactions*, p. 5-11, 22, 55-56 and 303.

[220] E.g. Julian Cope, Nik Cohn, Kevin Courier.

It is a characteristic of sensation and its action upon the nervous system, to pass from one level to another, as Deleuze, following Bacon, frequently points out.[221] This is a disruptive passage. It disrupts our habits of searching for *recognisable traits,* and of grounding our experiences and understandings on the interpretive process that remain at the level of grasping recognisable traits and of making relations between them. Thus, it is by disrupting these habits that they can make intensities circulate and bring *the intensive domain of the materials* to sensory awareness.

As I mention in the 'Introduction', the *operative traits of sensation* create what Deleuze calls 'a catastrophe' or 'a zone of scrambling' in the work, *in order to neutralise* the kind of readings based on the models of recognition, representation, signification, and all their derivative interpretive processes. Although these models present differences between them, what Deleuze largely demonstrates is that they all share what impedes them from accessing the level of intensity. In other words, they share what precludes the encounter with 'difference in itself' and 'true repetition', and they share the principle of comparison, which radically distinguish them from Deleuze's Logic of Sensation. Just like any work of art, rock recordings always present a whole range of 'givens' based on these models, which are the kind of traits that can be recognised and thus have specifying, representative, narrative, organising, symbolic and signifying functions. Some spectators or listeners may content with making sense of works of art by means of readings of the kind «this is this, this is that, this represents this, this represents that…» which remain at one level, and are based on making *extrinsic* relations. In any artistic sphere, many works do as well encourage this kind of readings, which lack what Deleuze calls the 'tension' of the 'constitutive difference of level, the plurality of constituting domains' that sensation envelops.[222] The disruptive nature of the passage from one level to another chiefly involves 'the inevitable preservation' of recognisable traits and their violent neutralisation. These traits are only preserved, that is they only appear in the work, 'at the very moment' when the operative traits of sensation are in the process of destroying them, so that the new formation can break away from fulfilling any other function than being encountered as a 'being of sensation' (see 'Introduction' and previous sections). Thus, since the other traits only appear as what is being dismantled and breaking with, and the other functions only participate as what is being neutralised, the *tension* between recognition and intensity is particularly extreme in a sensation. According to Deleuze, this tension is what 'abstract form' lacks, for example. One of the reasons one can find in the sphere of rock some notably powerful ways of attaining sensation, is precisely its abundance of givens based on models of recognition and representation, which rock recordings always carry with them, together with the ways they are violently targeted, through what Deleuze

[221] See for example Deleuze, *Francis Bacon. The Logic of Sensation,* p. 28-30.

[222] Ibid, p. 29.

call 'violent movements' and 'violent methods'.[223] In turn, the so-called abstract pieces of music avoid this kind of givens from the beginning, and the ones that remain are not targeted in this way. We must add to this reflection that evidently, most practices in the mainstream music industry are also full of them, but they either do not target them, or they have turned the targeting operations themselves into clichés or sensationalist effects. This is why Deleuze says that 'Francis Bacon's painting is of a very special violence'. It is special, because it is not, as Bacon distinguishes, 'that of the spectacle', but 'that of sensation',[224] 'Sensations' operate at the level of 'intensity', but only when they have not been turned into formulas or clichés, as I explain in the 'Introduction' with the aid of Grosz's reading of Deleuze's philosophy.

When I interpret Bangs's vocabulary as suggesting sounds touching the mind in both a sensuous and disruptive manner, it is not in the sense of the listener being at the same time attracted to the sounds and repelled by them. Neither is it in the sense of simultaneous pleasure and pain, or sensuality and disgust. This means that it is not in the sense that Deleuze refers to as the 'psychoanalytical hypothesis of ambivalence'. As he indicates drawing on Bacon's thought, we must not confuse 'the levels of sensation — that is, the valencies of the sensation — with an ambivalence of feeling'.[225] The concept of 'violence' that Deleuze uses in relation to sensation, intensity and haptic sensitivity is different. When applied to intensity in a rock recording, it is important to bear in mind that the sounds are not representing violence, neither are they violent themselves in the sense of being literally painful and physically or psychologically damaging. I think one can *fully* appreciate 'brain-frying' and 'mind-twisting' rock sounds, as Bangs calls them, at a safe loud volume, for example. Furthermore, controversial, distressful or offensive contents or meanings can be inferred from the sensation in rock recordings, but the sensuous provocation of the sensation, does not make them less controversial, less distressful or less offensive. In other words, it does not make them okay, on the contrary the sensation can make the interpreted meaning even worse, especially when it involves sharp and targeted critique to oppressive forces. Butthole Surfers's recordings are a clear example of this deep form of critique — I treat one of their tracks as an example of a 'swelling' type of haptic formation in II.2.6. What I find a key point in Deleuze's logic is that there is no lack of meaning in works of art that primarily come across in a sensation. On the contrary, the meaning is 'multiplied', when inferred from the sensation, as I insist on at many points of the thesis. Thus, in relation to the double provocation of sensuality and disruption, we should listen carefully to what Bacon was saying. As quoted by Deleuze:

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[223] Deleuze. *Francis Bacon. The Logic of Sensation,* 75.

[224] Ibid*,* p xi.

[225] Ibid p. 30.

> At one point [of the interviews], Sylvester [the interviewer] suggests: "since you talked about recording different levels of feeling in one image … you may be expressing at one and the same time a love of the person and a hostility towards them … both a caress and an assault?" To which Bacon responds, 'That is too logical. I don't think that's the way things work. I think it goes to a deeper thing, how do I feel I can make this image *more immediately real* to myself? That's all.[226]

The clarification I present in the previous section I.1.5, explains what this 'more immediately real' can mean in Bacon's thought, in line with Deleuze and Guattari's ontology of sensation. Accessing the sensuous complexity and the intensive domain of the materials can make the encountered 'image' or 'sonic formation' more real, whereas the habitual exercises of the senses can conceal or overlook the 'more immediately real'. Our senses are habitually occupied in grasping the 'givens' of the world of recognition and representation, which are the very things that are preventing us from accessing the sensuous complexities and disruptive challenges of an expressive-intensive-material reality of sonic (de)formations, unless they are violently intervened.

Rock musicology's emphasis on disruptions, dissonances (Biamonte), friction (Moore), defiance, blurring (Osborn),[227] and so on, is not simply a question of something like the so-called "rules that are made to break them" formula in art, which has become something of a generalised cliché. These processes should be carefully examined on a case to case basis, as these musicologists do, for they can have many different functions, they can show tendencies or recurrent events. In this thesis I observe that sometimes they have narrative and representational functions, organising functions, or signifying functions, which all remain at the level of recognition, as the disruption itself is taken as a cue or recognisable trait, or as a signifier. My endeavour is to ask those disruptions whether or not they are capable of generating passages to the level of the intensity of the sonic materials, and to understand what is expressed in those passages. So my task is to observe the problems this angle present to music analysis and the interpretation of meaning in listening practices, as well as to writing and discussing about rock.

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[226] Deleuze. *Francis Bacon. The Logic of Sensation,* p. 30 [My emphasis].

[227] I am referring to: Nicole Biamonte, 'Formal Functions of Metric Dissonance in Rock Music', *Music Theory Online,* 20 (2014); Moore, *Song Means* (2012), and Brad Osborn, 'Rock Harmony Reconsidered: Tonal, Modal and Contrapuntal Voice-Leading Systems in Radiohead', *Music Analysis,* 36 (2017), 59-93.

1.7. What body? Whose body?

This section presents some relevant arguments that sustain the application of Deleuze's Logic of Sensation to rock recordings. It criticises the common assumption that sound is fundamentally immaterial and disembodied, whereas only the materials that we can see or, say, touch with the hands, are not. Thus, it reflects on how sounds are not only material entities but material parts of our bodies, and that recordings are capable of capturing, and retaining something of, the presence of sonic bodies. Thus, they are capable of experimenting and working creatively with this possibility, and they can even reach the insistent and excessive presence of a body that sensation attains in works of art, as per Deleuze's logic. This point is illustrated with two examples of rock recordings: the becoming excessive of the performing body in the guitar performance of Butthole Surfers's 'Something'; and the creation of an intensive sonic-wordy portrait of a body in Pixies's 'I've been tired'.

The replacement of 'the couple matter-form' with 'the coupling material-forces', is a problem that concerns any material, including the sounds of music, as largely explained by Deleuze and Guattari in *A Thousand Plateaus.*[228] Therefore, I share the view that we should avoid starting from a position that assigns materials and bodies to painting or sculpture, on the one side, and immaterial and disembodied entities to music, on the other. Both the visual and the sonorous arts can play with axes that move in both directions from abstract to figurative, code or representation to sensation, embodied to disembodied, immaterial to material, and so on, in many different ways. To be sure, whether an artwork is addressing itself to something material or immaterial, embodied or disembodied, should be considered on a case to case basis, and both painting and music can produce forms and movements that can be grasped either as ethereal or material, in different ways. An example of this in painting is the 'disembodied play of light and colour' of impressionism, that Deleuze contrasts with the logic of sensation.[229] So, it seems to me that when Deleuze says that painting is capable of discovering 'the material reality of bodies', whereas music 'strips bodies […] of the materiality of their presence', constituting a 'sonorous body' that is 'immaterial and disembodied', I take it as related to a way of listening and a certain repertoire (Deleuze is alluding to a reflection on a Requiem by Mozart, for example), rather than to an essential characteristic of music and sound. It is habitually assumed that the presence of a visual body in a painting is more straightforward than the presence of a sonic body or a body made of sound in a recording, but we must immediately realise that this assumption is an error. Bodies sound. Bodies can be directly heard. Sounds are material parts of our bodies. Bodies, body parts, body movements

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[228] See for example Deleuze and Guattari, *A Thousand Plateaus*, p. 105-6.

[229] Deleuze. *Francis Bacon. The Logic of Sensation*, p. 27.

and all sorts of bodily expressions can be heard. They can be captured, represented, moulded or deformed with sound in a recording. On the one hand, sounds can represent the visual or tactile body parts, for example. Yet, on the other hand, bodies can become sonically present themselves, in the same room or in a recording, where they are still the direct presence of the sonic body at the moment when it was recorded. Of course, and especially they are present creatively but that does not make them less present. It is not necessarily to interpret them fictionally. The need of fiction only comes when one is trying to compare this presence, with a subject that we think of as the artist, a real person that may or may not be genuinely like the fictional 'persona'.[230] In The Logic of Sensation, Deleuze is pointing at three interconnected processes: (1) painting's attempt 'to release presences beneath representation, beyond representation', (2) a 'direct action on the nervous system', which is an intense and expressive movement; and (3) attending to 'material existence', 'material presence', the 'material reality of bodies', a body that discovers 'the material reality of which it is composed'.[231] My argument in this thesis is that these interconnected processes can also be found at work in pieces of music. In a recording, sometimes one can attend to the presence of a body. Sometimes the interpretation in question, the way of listening, is not about the persona as a representation of someone, but someone who is present as a sonic body that through its deformations carries intensities, singularities, expressions, contents, renders sonorous forces and so on…

Thus, Deleuze himself clarifies that 'from another point of view, the question concerning the separation of the arts […], loses all importance. For there is […] a common problem'. While each sensory domain has its own peculiarities and its own peculiar ways of encountering something in the world, we can consider with Deleuze and Guattari that the problem of tapping into forces, which includes the close relation between force and sensation and 'the coupling material-forces', concerns all the arts. In any case, in The Logic of Sensation, Deleuze does leave open the possibility of "hystericising" music, which basically means the possibility of making sounds impose their material presence, insistently and excessively, in ways that could release *the presence of bodies* and their material reality beneath representation and beyond representation, in a direct action on the nervous system.[232] I think that the haptic traits of sound, rhythmically integrated in lines, masses, muddles, repetitions, and all sort of sonic formations, can eminently constitute the required sets of techniques for achieving this. They can be as refined as the 'colour-patches' and 'lines' techniques of painting that Deleuze refers to, and they can work equally well as operative traits of sensation. My thesis is that (some) rock recordings are a good example of this. Not only having realised that the way I listen to rock recordings, and value them, concerns 'sensation' more than representation, narrative, recognition, signification, and so on, but also the enormous variety of sonic haptic

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[230] See Moore, *Song Means,* p. 179-214.

[231] Deleuze. *Francis Bacon. The Logic of Sensation*, p. 37-40.

[232] Ibid.

traits that exist, not only in rock recordings but also in the rest of the world, which already and constantly reveal the material nature of sound and the material presence of bodies, seems to me enough preliminary evidence to start suggesting this, and embarking on a project of studying such techniques.

Thus, I think that Deleuze's suggestion that not only the body, but also 'material existence and material presence', are closer to painting than to music, needs more careful consideration. From this point of view, he writes that '[the] adventure of painting is that it is the eye alone that can attend to material existence and material presence'. In the same lines he also argues that the sonic flows of music 'pass through bodies' but 'find their consistency elsewhere', whereas painting 'discovers the material reality of bodies with its line-color systems and its polyvalent organ, the eye'.[233] Although he does says that music 'knows all about waves and nervousness', and refers to the ear as 'a polyvalent organ for sonorous bodies', an to music's power of 'putting an ear in the stomach, in the lungs, and so on', he says that this 'involves our body, and bodies in general, in another element', by which he means an 'immaterial' element. In turn, I think that sonic flows can also find there consistency in bodies, and discover 'the material reality of bodies', as well as their own material reality, in artworks, in ways that they would not discover otherwise. The ear can also attend to 'material existence and material presence', in its own ways, but in ways that are consistent with Deleuze's ontology of sensation. Although it is true that we tend to associate, more directly, the material presence of a body with its visual or tactile presence, because we tend to exclusively think of our bodies as solid material entities, we must not forget that sounds are also material entities, and that our bodies are also made of sound. They do not only emit sound but sound also resonates and materially vibrates within them. Bodies have sonorous traits as well as visual, and all the others. Sounds are a material part of the body, so the body does not end where the visual or the tactile domains end. Both sounds and colours are capable of rendering sensible forces in the deformation of a body. In haptic listening, we can become sensitive to the whole of the deformation, with all its deforming details and all of the forces that it renders sonorous, at the surface of listening.

So, let's dwell for a moment on the question of what body and whose body we are referring to when a rock recording attains the sensation and liberates the Figure, to borrow Deleuze's expression. First of all, we have seen that in the logic of sensation, 'the diagram' comprises the practical preservation of givens from the world of recognition and representation, which its operative traits scramble to create the new formation. Second, we must keep in mind that the sensation cannot be treated speculatively, but can only be a real object of aesthetic consideration after it has happened, after it has been lived by a listener. Therefore, whether

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[233] Deleuze. *Francis Bacon. The Logic of Sensation*, p. 39.

we are referring to the body of the performer, the body of the 'persona',[234] the body of someone mentioned in the lyrics, the body represented by non-verbal sounds, or the body of the listener, this body, the body of the recording, will only be able to pass to the intensive level of a new formation, if it is lived as both *undergoing* and *sustaining* the sensation. Thus, the sensation is both: it is what resonates haptically within the listener as an effect (what the recording sustains in the encounter), at the same time as the encountered body, the body that the music is rendering sensible, comes across as undergoing the sensation, and not as a representation or an object of recognition. The sensation is what the listener lives, when they live the body of the recording as undergoing the sensation, which is the equivalent of what Deleuze means, for the case of painting, when he says: 'Sensation is what is painted. What is painted on the canvas is a body, not insofar as it is represented as an object, but insofar as it is experienced as sustaining *this* sensation […]'.[235] One can think of many ways a recording has of presenting or representing a body, such as the depiction of a body in the words; recorded sounds of a living body, like the sound of the voice, the breathe, the clapping of hands, the viscera, the heartbeat, or the representation of such sounds; the representation of movements of the body such as walking, running, jumping, swimming, resting, and so on; the representation of a body, body parts or body movements, either in a purely sonic portrait or in a portrait made of a combination of sounds and words; the sonic bodily gestures of a performer; and so on. Thus, some of these body sounds are objects of recognition and others are representations.

As an object of recognition, a voice or an instrumental bodily gesture, for example, are sounds that can do more than simply specify a sound-source that is not present. We can actually recognise the presence of a body, if we consider the voice (including the breathe and every vocal and mouth sound) or the instrumental gestures as part of the body of the performer.[236] These are the most nuanced parts of *the recorded sonic body,* and therefore the most interesting if we compare them with claps or steps, for example. Altogether, these sounds can *present* a body, they are themselves the sonorous parts of a body. Yet, sometimes they can do

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[234] I am referring to the notion of the 'persona' of a track developed by Moore, which is 'an artificial construction' 'projected by the singer', 'that may, or may not, be identical with the person(ality) of the singer', but which still has to be constructed in the listening experience on the basis of the sonic details of the track. See Moore, *Song Means,* p. 179 -214.

[235] Deleuze. *Francis Bacon. The Logic of Sensation*, p. 27. In the original in French, Deleuze writes: 'La sensation, c'est ce qui est paint. Ce qui est paint dans le tableau, c'est le corps, non pas en tant qu'il est représenté comme object, mais en tant qu'il est vécu comme éprouvant telle sensation […]'. So, this is literally: 'insofar as it is lived as undergoing *this* sensation'. The translator's use of the verb 'to sustain' seems to me a very eloquent choice to refer to *what the painting does to the observer,* because it emphasises the fact that what is sustained is an effect, and includes the fact that the sensation lasts during the encounter. Yet, the body that is painted does both, it undergoes and sustains the sensation. The sensation is what the observer lives, when it lives the painted body as undergoing the sensation.

[236] Music theorist Samuel Wilson presents a relevant study of 'the musical instrument as a prosthetic augmentation of the human body' in Samuel Wilson, 'The Composition of Posthuman Bodies', *International Journal of Performance Arts and Digital Media*, 13.2 (2017).

so excessively, especially in that process explained by Deleuze where 'the body escapes from itself. But in escaping the body discovers the materiality of which it is composed, the pure presence of which it is made, and which it would not discover otherwise.'[237] Hypothetically, we could think that playing with the recognisable-unrecognisable axis of 'timbre', where the body escapes from itself by making itself an unrecognisable sound source (I.5), is in itself an effective technique to bring about its excessive presence in a sensation. However, this hypothesis must immediately be rejected, since it does not reach the passage from one level to another that Deleuze and Bacon insistently bring up. The process of recognising or not being able to recognise, or observing how much is left of what the source was, and how much it has changed, including all the effects of unearthliness, and all the possible connotations that can be associated to this, is a comparative exercise. This exercise, the pure act of rendering the source more or less unrecognisable, or completely unrecognisable, never leaves the world of recognition in itself. When the sonic traits are rendered unrecognisable the body indeed escapes from itself, but not necessarily to discover its material reality. let alone its intensive materials reality. Other techniques are necessary to effectively complete the process Deleuze is reporting. Otherwise, we are back to *separating sounds from sound source, and to merely consider if they specify it or not. This* amounts to separating the sounds from the sonic body and the possibility of its flows to populate a body without organs.

As we are dealing with a present sonic body in the recording, we are still taking it as something that the sounds are specifying (or rendering more or less unrecognisable). Thus, the sounds are still standing for something else, and therefore an excessive presence of the sonic body is made impossible through this route. This is why the exercise of recognising the sonic body is only a preliminary stage that has to be almost immediately neutralised, and then it has to remain neutralised at least for a duration that allow the new sonic body of the recording to appear clearly. This is indeed an intricate aesthetic matter: what does this 'almost immediately' mean? When does the shift in the exercise of the senses happen? How much of the recognisable body has to remain available to the senses, to come back when needed, so that it doesn't become a question of simply rendering something completely or partly unrecognisable? How and how much do the operative traits have to intervene or scramble the recognisable body of the first stage of the process? We learn from Deleuze's logic two essential answers to these questions: deformation and chance. It is only through deformation that the body can escape from itself, become-other '(while continuing to be what they are)',[238] and thus only to become its own 'excessive presence' and to discover 'the materiality of which it is composed, the pure presence of which it is made'. Chance is the only way of making the deformation an intensive movement instead of a qualitative variation,

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[237] Deleuze. *Francis Bacon. The Logic of Sensation*, p. 39.

[238] As I quote in I.1.4.: 'Sensory becoming is the action by which something is ceaselessly becoming-other (while continuing to be what they are)' and 'sensory becoming is otherness caught in a matter of expression'. Deleuze and Guattari, *What is Philosophy?,* p. 177.

because it is the only way of bringing in the necessary element of chaos. This is why Deleuze says that 'sensation is the master of deformations'. For the case of representation (as the first stage of a practical figuration in the sensation), the principle is the same, and it is equally intricate. For the sensation to be durable, clear and precise we have to be able, as listeners, to come back to the recognisable or representative traits of the work at all times, at the same time as the traits of sensation are constantly operative, so that if we come back to the world of recognition and representation we can be effectively taken back to the intensive domain of the new formation, the intensive sonic body or bodies of the recording. By way of introduction, I shall provide two examples of bodies, that achieve this excessive presence and liberate the in a sensation.

BODY 1: THE OSCILLATING GUITAR SLIDE OF BUTTHOLE SURFERS'S 'SOMETHING'

The guitar slide is a deformer par excellence. In the introduction of this track, it is played in the form of a constant, fast and loose oscillation within a reduced pitch range, never reaching the same pitches but never escaping the range either. Even though it is *chance* that determines the exact notes and values of the oscillation, one can clearly follow them in haptic listening. It is double-tracked so the loose randomness is multiplied, and creates an intricate haptic formation. It is very clearly not pure chaos, but the chaotic element presents itself as the complexity of a gliding oscillatory complexion with many edges. Two main factors contribute to this clarity: the fact that chance is contained within a reduced range, and its isolation, being only in company of a simple drum kit pattern with clear and marked beats, that perfectly works as an unadorned "armature" for the unceasingly deforming and intricate complexion of the double-tracked guitar. Each guitar part at one side of the stereo also contributes with the clarity of the complexion. Thus, it all begins with a strange guitar sound that one can almost immediately recognise as specifying a performance technique, i.e. the slide, and a bodily gesture, i.e. the fast random oscillations. Thus, one can recognise the presence of the sonic body of the recorded performance, with all its aspects, and almost immediately it is intervened by the restricted play of chance and chaos, and all the other operative traits I have just brought fore, without rendering it completely unrecognisable, but shifting the exercise of the senses of the listener to a function that is no longer to recognise, via the presence of a body that has become excessive. The insistence of the deforming movements of its operative traits, are rendered all the more operative by remaining isolated and contained, and all the more intensive by the power of chance. The excessive presence of this sonic body is no longer an object of recognition, but only because it comes across as a 'sensation', discovering the intensive gliding materiality of which it is composed.

BODY 2: AN INTENSIVE SONIC-WORDY PORTRAIT OF A BODY: 'I'VE BEEN TIRED' / PIXIES

Pixies's track 'I've been tired' contains a lyric that effectively creates a short but intense image of a body. It appears in the second verse from 1'23":

strong legs strong face voice like milk breast like a cluster of grapes

If we extract this lyric from the track, we have a portrait of a body in a line of words, which effect can be argued to be already self-sufficient in its power of making a body, a poetic image of a body,[239] coming across in a sensation, like an intense line of a poem. Some of the traits involved in this effect are the following: (1) It is a series of body parts that take precedence over the rest of the body, for the artist, whose first gesture is to select them, and gather them. This enumeration contrasts with the narrative sentences and dialogues that the rest of the song had been using, and thereby generates an abrupt shift and an impetuous accumulation of words, a wordy swelling. (2) Its rhythm, already there when one reads the line, but also present in the singer's delivery in the track, starts by stressing the nouns, i.e. the body parts, in the downbeat, and ends up by stressing the adjectives or attributes. The final attribute is rhythmically elongated into an attributive phrase. Thus, there is both a point of inflection in the centre 'voice like milk', the word 'like' being where we would have expected the noun to be, expanding the rhythm, which carries on expanding thereafter. (3) It smoothly connects these distinct body parts into a new formation. There is a series of connectors: the repetition of the adjective 'strong' at the beginning, the passage from the face to the voice, which are anatomically close, the passage from the attribute of the voice 'milk' to 'breast', which are also anatomically close, and finally the description of the breast, which not only can transport us to the archetypal sensuality of grapes (a symbol found in Greek sculpture, for instance) but also resonates with the 'cluster' of body parts that this line is composed of. I do not possess the scholarly skills to analyse poetry, but I can feel how the rhythm established at the beginning by the two-words units 'strong legs / strong face' is interrupted by a new grouping of three words 'voice like milk', which when followed by the connection between milk and breast, creates a continuous flow until the end, emphasised by the rhyme «breast-grapes», and produces the elongation and expansion.

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[239] I am using the notion of 'poetic image' in the sense developed by Bachelard in *The Poetics of Space.* My project, and the project set out by Deleuze's aesthetic logic, is also similar to that of Bachelard in that: 'Because of its novelty and its action, the poetic image has an entity and a dynamism of her own, it is referable to a direct *ontology*. This ontology is what I plan to study.' The aesthetic 'sensation' is also 'referable to a direct ontology. To be sure, Bachelard's project concern the 'poetic image' in the 'imagination', as Deleuze and Guattari explain, whereas here I am concerned with the intervention of this poetic image in the 'sensation', It is as if it were taking back from the imagination to the intensive reality of the sensation, but still, many of Bachelard's insights seem to me to apply to the relation between language and singing that is involved in a sensation in a recorded song. Gaston Bachelard, *The Poetics of Space,* trans. by Maria Jolas (New York: Penguin Classics, 2014), p. 2.

Now if we come back to the track, the sonic traits of the voice are not representing the attributes of this body, there is no representation of strength, of milk or grapes, but the voice connects to this body as its effect. The voice is the body of the artist that is thinking of the presence of *this body.* In the act of portraying it in words, at certain points the line of words starts having an effect on the voice: it deforms it, rendering sonorous a force, which is this body's power. The voice begins with a very assertive enunciation, and from the word 'voice' onwards, it starts to become thinner (and higher in pitch), more contracted and a bit rougher, in a flow that moves subtly back and forth between these states. When it contracts in the form of a thin and grainy materiality, and reaching certain maximums in this contraction (almost suffocating), like in the words 'like', 'breast' and 'of', this voice can be felt as rendering sonorous and almost unlivable force, to borrow Deleuze's expression,[240] that even makes it subtly drop off the mix and off the pace, after 'milk' and after 'grapes'. At the same time, we must not forget that the singer is also creating/performing this line of words in which the presence of this body manifests, and the very way of wording it, as we have seen, not only brings about a poetic image, but is already undergoing a process of deformation, thereby rendering sonorous the same force that deforms the voice. Therefore, what has been created in this part of the track is an expressive-intensive sonic-wordy portrait of a body. It is a portrait of a body but it *does not represents a body.* It is a different kind of form that comes across not as a representation but as sensation. The representative traits, such as the adjectives or attributes in the lyrics, are neutralised as soon as the movements of deformation start taking place, both in the sounds and the lyrics. And there is no recognisable or identifiable emotion in the tone of the voice. Thus, I am referring to two dimensions of the creative performance captured in the excessive presence of two bodies. The portrait is tied to the voice that depicts it. The intense effect on the observer, which deforms both his voice and his writing, are the very traits of the portrait, and thus the portrait is constructed from within, this 'within' being the link between the body of the observer and the body of the portrait. In this way, the traits of the portrayed body, come across in the effect it is having on the body (i.e. the voice) of the observer (i.e. the singer-writer). The force the voice expresses by being deformed by it, is not an emotion but something like a force of desire that is non-classifiable. A previous line of the first verse resonates, 'I'm a humble guy with healthy desire', which may seem comical, but takes more the character of a confession, and expresses a form of brutal honesty coming from very deep, as it is also very high-pitched and thus thinned out, like the voice of the portrait. Moreover, with the same sonic characteristics, the line that ends the second verse, 'be one of your babies even if you have no one', is followed by a thin line of feedback in the guitar, like affirming the excessive presence, like its echo, and affirming this deformation effected by a force that is almost leaving the singer with no voice. Summing up, we have two bodies in two dimensions captured in a recorded performance, the lyrical and the vocal. A force of desire is not represented by the haptic traits of the voice of the singer, but it acts upon it/them. The voice changes in the presence of the other body which itself creates

[240] Deleuze. *Francis Bacon. The Logic of Sensation*, p. 33.

by depicting it in a poetic image. The songwriting is also deformed by the force. The poetic portrait of the body is made of both the deforming line of words and the deforming sonic haptic traits of the voice. By creating the poetic sonic-wordy portrait of a body that comes across in the sensation, the body of the performer/writer/singer/speaker comes itself across in a sensation, as the track breaks with representation at all these levels at once.

2. A practice of caring and the listening membrane

This chapter is an argumentation on the importance of a practice of caring within an aesthetic practice, and an exposition of its main aspects. Namely, a constant evaluation of values and an understanding of our polyvalent and indeterminate organ of listening, and ourselves, as a listening membrane, which can account for a series of relevant matters, such as our haptic sensitivity to sound; and the way we think about this inside-outside polarities, which can be regenerated each time, according to the singularities of the work in our listening encounters. These aspects of a practice of caring can allow us to address the receptivity to and connection with alterity, and the process of becoming with it.

In this thesis, I propose an approach to the aesthetic study of rock recordings, where questions of 'meaning', 'experience' and 'subjectivity' are considered as dependent on questions of 'intensity' and 'sensation', *and not the inverse.* This means that I have focused my enquiry on the cases where the genesis or production of the former is a result of the latter. These are the cases where intensity and sensation come first in the encounter, and not as a consequence or in association to some other interpretive/experiential processes. In such cases, the sounds are not a means to represent, signify, trigger or recognise something, as in a recourse to an already known and already classed experience; they neither produce nor stand for something else, but meanings, experiences or subjectivities are produced *with the sounds* and all their intricacies and singularities, inseparably, in the material sensation, which is not merely triggered but indeed created.

The main consequence of this distinction is that, the sounds of the artwork, that is, the self-standing sonic material formation that comes across in a sensation, can have a direct, coextensive and fundamental bearing on its effect. In other words, *the producer and the produced equally matter,* and nothing is really produced or created in the encounter with an artwork without a real *becoming with the sounds.* In such cases, *the singular and intense character of the experience, meaning or subjectivity produced by a rock recording is the measure of the singular, expressive and intense character of its sounds.*

For example, if a rock track expresses anger in its sounds and words, when this anger is not triggered, represented, signified or made recognisable but inferred from the sensation, what is expressed is a unique, unclassifiable and unprecedented form of anger, which is a nervous material stirring before it could be even called anger, and is inseparable from the attributes or singularities of the materials and material formations that make it a unique work. We could

then witness in such process, the anger being 'multiplied', as explained in Deleuze's Logic of Sensation.[241] This also means that, without falling into a formalist approach,[242] in this approximation the details and movements of the sonic materials of a piece of music, matter more than in approaches that treat them as a means to ends based on models of recognition and representation. Furthermore, in line with Deleuze and Guattari's emphasis, what matters is not a form imposed upon sounds to mean something, but the 'couple materials-forces' and its 'material traits of expression' that are capable of constituting 'intensities' (the necessary emphasis on expression is addressed in I.1.5).

From this point of view, a very important ontological concern is that the sonic materials already have a form, which is a moving form, a form in formation-deformation (I expand on this point in I.4), with all kinds of rhythms of contraction-expansion; *a form that is inseparable from the materials and the forces that determine it from within*. Chiefly, these material formations at different scale levels, have 'singularities', 'flows', 'properties of contact' and 'traits of expression' that have a very close relation to chaos, and what makes a work in this sense unique and intense is this close relation to chaos as their condition. They retain something from chaos that is irreplaceable, irreproducible, imperceptible, unrecognisable, new, and, for all those reasons, *intense*.

As I have already largely referred to, I am implementing Deleuze and Guattari's concepts of 'intensity' and 'sensation'. Sensation has 'an intensive reality', and it is attained in works of art by means of a set of 'operative traits', which goes by name of 'diagram' or, in other works by Deleuze and Guattari, also as a 'machine'. This is the 'possibility of fact'. The 'fact' is the sensation, but the fact is also both the *new formation* that comes across in the sensation, and the formation of a *haptic sensitivity.* In other words, what the 'machine' produces is both a haptic function and a new formation, all in/as the sensation. When this happens, what is encountered, whether it is colours, sounds, or any other material, has also an intensive reality. The intensive material formations that haptic sensitivity follows in a sensation are not the result of pure chaos, but, as explained by Guattari: 'The machine, every species of machine, is always at the junction of the finite and the infinite, at this point of negotiation between complexity and chaos'. Guattari's analysis mainly refers to the problem of 'psychosis', which 'ontological apprehension […] is in no way synonymous with simple chaotic degradation, with a trivial increase in entropy', but it is 'a matter of reconciling chaos and complexity'.[243] Yet, his

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[241] Gilles Deleuze, *Francis Bacon. The Logic of Sensation*. trans. Daniel W. Smith (London: Bloomsbury, 2017), p. 29.

[242] In simple terms, as put by Moore, 'formalism' is 'the position that music means only itself'. Allan F. Moore, *Song means: Analysing and interpreting recorded popular song* (Surrey: Ashgate Publishing Limited, 2012), p. 14.

[243] Félix Guattari, *Chaosmosis. An Ethico-Aesthetic Paradigm*, trans. by Paul Bains and Julian Pefanis (Bloomington: Indiana University Press, 1995), p. 111 and 80.

analysis is indeed encompassing the 'production of subjectivity' in general, and he advocates for the centrality of aesthetics and creativity in this possibility.

Overall, music that is capable of disclosing intensity in a very clear, expressive, meaningful and durable way is *an unusual thing.* Most music that the music industry supplies, especially that which we stockpile and reproduce out of nostalgia, or that which we listen *in order to* go with the mainstream flow, tend to only imprison intensities and conditions most of our ways of listening. More often than not, what one experiences as a listener are only preconfigured responses. This does not mean that we cannot find music in the mainstream that is capable of disclosing intensity, or that some preconfigured responses cannot give rise to processes of disclosing other intensive domains (i.e. not the intensities that the piece of music is made of). It only means that it is a very special event when a piece of music, or part of it, comes across in a sensation, making it clear and precise. Moreover, sometimes our listening habits prevent us from becoming aware of the intensive dimension of sound in rock recordings, and some may content with never becoming aware of it. I believe there is very much at stake in this position and in the possibility of encountering music that is capable of disclosing intensities, of constructing and producing meanings, experiences and subjectivities through this very process, as I argue in this section.

CENTRING ON THE SOUNDS

To begin with, I share rock musicologist Allan Moore's view that in order to address the aesthetics of rock recordings we need to centre on the sounds:

> Our concern has to begin with the sounds, because *until we cognise the sounds*, until we have created an internal representation on the basis of their assimilation, *we have no musical entity to care about,* or to which to give value. Once sounds have been produced, nobody is in a position to exclusively determine how they are to be taken (the appropriation by racist skinhead culture of millenarian reggae is a prime example).[244]

This view is also in line with the general challenge pointed out by Richard Middleton in 1993: 'Somehow, we need to find the ways of bringing the patterns created in the sounds themselves back into the foreground, without as a consequence retreating into an inappropriate

[244] Allan F. Moore, *Rock: The Primary Text. Developing a Musicology of Rock*. 2nd edn. (Aldershot: Ashgate Publishing Limited, 2001), p. 16-17.

formalism. And if we can do this, we may well find that we are contributing to an advance in *general* music analysis'.[245]

The sonic entity has remained my major concern since I started my studies in rock musicology in 2008 (and also in the music practices I have engaged with since my childhood, and during my academic classical guitar performance studies from 1996 until 2008). My lifelong interest in rock sounds, aesthetics and music analysis, immediately resonated with Moore's emphasis on 'the sounds themselves' (which he calls 'the primary text') and his encouragement to *freely* make sense of the pieces of music one listens to, especially in relation to freedom to disagree with others' interpretations, particularly with those of people in positions of power.[246] I also concur with the position that 'our concern with the music includes, but does not begin from, the way it is used: in other words, the aesthetic question is primary', and can be complemented with research from other disciplines.[247] Moreover, I also think that the acts of 'caring' and 'giving value' are an essential part of an aesthetic practice, and I guide my work by the close connection one can find between studying something and caring about it. These considerations, along with the central programme of developing 'tools of understanding' for a non-formalist approach to music analysis, are aspects that the approach I develop here and Moore's approach have in common. However, my approach differs in that I have centred my investigation on a process and a kind of meaning that are not based on the logic of representation in general, so that creating 'an internal representation' of the sounds is not what primarily determines the entity to care about, but it is still a relevant part of the process.

This process is 'sensation', and since in a sensation there has to be a 'tension' created by the presence of some representative and recognisable traits of a 'practical figuration', one still needs to draw on 'reliable basis' for representation and recognition. This means that all the musicological work done in that area is also relevant to my approach, and can be effectively brought into play to explore and elucidate the nature of this tension in different cases. As I mentioned before, I share Moore's view that the ecological approach to perception and some

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[245] Middleton, Richard, 'Popular Music Analysis and Musicology: Bridging the Gap', *Popular Music*, 12.2 (1993), 177–90, p. 177. Other writers on rock music, such as Moore and Albin Zak, for example, have endorsed this position too. Overall, it is important to critically observe that there is such as thing as an inadequate or inappropriate formalism. As Moore explains, echoing many musicologists before him: 'Consideration not only of musicological, but also of historical, political and sociological approaches is necessary to acquire anything like a rounded picture of the music'. But I especially share his emphasis, as he continues: 'The problem is that the importance of the sounds is too often ignored'. Moore, *Rock. The Primary Text,* p. 6.

[246] Moore, *Song Means,* p. 1

[247] Moore, *Rock: The Primary Text*, p. 16-17.

insights from theories of cross-domain mapping and embodied cognition constitute this 'reliable basis',[248] yet I always treat them in a subsidiary way.

What different approaches to the study of music call 'the sounds' is certainly not a univocal entity. For example, semiotic signs, acoustic signals, perceptual invariants, material flows, and so on, are all different sonic entities, and each of them is far from univocal too. However, we still need to be able to define and understand the characteristics of the entity one is dealing with. A crucial distinction I propose to start with, is the one between listening to *the sounds in themselves,* and at least three other ways of considering the sonic entity: (1) listening to *the sounds as standing for something else* (e.g. as signifiers, or representative and recognisable traits); (2) *using* the sounds for something else than listening (whether or not one is also listening in an ancillary way); (3) or considering *something else as standing for the sounds,* like a visual representation or a discourse about them, in order to understand the sounds. Of course, what they are 'in themselves' is a very complex question for three main ontological reasons. In the first place, they are things 'in formation', always moving and always changing, like anything in the world, so as Bergson extensively argued, there is no primary fixity, but what is primary is change. In the second place, also in line with Bergson's arguments, sounds are heterogeneous entities whether we take one sound or a compound of sounds, the sonic formation is always both heterogeneous and undissectable. On the other hand, because sounds are part of complex entities, they are made of multiple different components, they conjugate different flows, and they are constructed both in each listening encounter and through series of listening encounters. This means that we cannot completely isolate them in order to contemplate them, but we can still focus on them, for by being part of larger entities they do not cease to be sounds 'in themselves'.

My endorsement of the use of the term 'themselves' should not be confused with an endorsement of the idea of a predetermined sense that is already given by nature or history. Moore is indeed careful not to imply this. He is mainly distinguishing a concern with 'the sounds themselves' from approaches that are primarily concerned with discourses about them and the ways they are used, which therefore address sounds in a roundabout way. He explicitly holds the position that reality is neither only subjectively constructed nor strictly determined by nature or the environment.[249] In Moore's approach, the sounds 'afford' a range of possible interpretations, in ways that are consistent with the findings of ecological perception and embodied cognition. My purposes differ from Moore's in that instead of

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[248] As Moore writes: 'To my mind, it is only with the theoretical understanding of cross-domain mapping that we have reliable basis for all theories of representation — we now understand the sort of operation our brains (inevitably) make to enable representation to take place. It is possible that a motive for formalism (the position that music means only itself) may be the lack of empirical evidence for theories of representation. That evidence, that justification, it seems to me, we finally have. Moore, *Song Means,* p. 14.

[249] Ibid, p. 6

looking for perception and representation, I am centring my enquiry on non-representational operations and interpretations, and the difference between sensation and perception, mainly with the aid of Deleuze and Guattari's philosophy. However, I make use of many of the tools of Moore's methodology, which I find useful for both perception and the problems of sensation. In the approach I am developing here, *in the sounds themselves* there is both an ontological resistance of the sonic materials (see I.1.5.) and processes that our desires and subjectivities are part of. A constructive process of sense making and sensory becoming has to include both.

Caring and Giving Value

Towards the last stages of my research, with the aid of additional literature that includes Nietzsche's *The Will to Power* (1901); Guattari's *Chaosmosis* (1992); Deleuze's 'Immanence: a life' (1995) and *Kant's Critical Philosophy. The doctrine of the Faculties* (1963); Deleuze and Guattari's *Kafka. Toward a Minor Literature* (1975) and *What is philosophy?* (1991);[250] Bidima's chapter 'Music and the Socio-Historical real: Rhythm, Series and Critique in Deleuze and O. Revault d'Allonnes'; and Alliez's article 'Ontology of the diagram and biopolitics of philosophy. A research programme on transdisciplinarity' (2013); among others, I have managed to develop further what I mean by *a practice of caring* in an aesthetic practice, and to explain the imperative of developing aesthetic studies grounded on an '*ontological consistency',* to borrow Guattari's useful concept (see I.1.5).

First of all, I think that the central purpose of caring about rock recordings (and works of art in general) is, in a certain sense, "to keep them alive", that is to prevent them from losing their *power*. But, what power? Their power of what? After much contemplation, reading, studying, reflection and involvement in rock practices (mainly as a listener, but also as electric guitarist, singer and songwriter), I came to the conclusion that Deleuze and Guattari's philosophy has generated the most spot on answer for this question: what keeps them alive is their power to free or disclose 'intensity', which is also the power by which they can be or remain 'new', stand up alone, and preserve a compound of created sensations in itself, as explained by Deleuze and Guattari.[251] It is also the power by which they are capable of "keeping ourselves alive", of course not in the sense of immediately preventing us from dying in a given situation, but in the sense of maintaining the possibility of invigoration, increase in strength, and all those intensive forces of life that Nietzsche contemplates, and that led him to the concept of

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[250] These are the years when they were first published in the original language. The list of references is in the bibliography and in the footnotes when mentioned in this section.

[251] 'Standing up alone does not mean having a top and a bottom or being upright (for even houses are drunk and askew); it is only the act by which the compound of created sensations is preserved in itself — a monument, but one that may be contained in a few marks or a few lines, like a poem by Emily Dickinson.' Gilles Deleuze and Felix Guattari, *What Is Philosophy?* trans. Hugh Tomlinson and Graham Burchell (New York: Columbia University Press, 1994), p. 164.

'will to power'. As Nietzsche says: 'Art is the only opposing force which is superior to the will to deny life in all its forms'.[252]

This view should not be confused with a view of art as an end in itself. On the contrary, to borrow Lester Bangs's expression, it is 'life itself'. So, with the addition of 'in all its forms', Nietzsche is making explicit the transversality of art's possible reaches, that can cover all aspects of life (i.e. social, political, ethical, psychological, scientific, and so on). But is it the *only* opposing force? I think it is, but only with the proviso that art is not considered as a 'system', but in Guattari's sense of a 'proto-aesthetics' (see 'Introduction'). Avoiding systems in general is a point that is emphatically made in the preliminary notes to *The Will to Power*,[253] and although I fundamentally concur with Nietzsche's view, I think there are some systems that work as useful tools, as long as they do not become rules and laws. A good example is the modal system synthesised in Moore's methodology to analyse the harmony of recorded popular songs, which is 'descriptive rather than prescriptive',[254] as explained by Moore, and which can also be *constructive* as I explain in this thesis in my last example (III.4). Philosopher Jean-Godefroy Bidima explains Deleuze and Guattari's challenge to the idea of 'art as a system', or more precisely as a 'total system'. As he quotes from *A Thousand Plateaus*: '"In no way do we believe in a fine-arts system; we believe in very diverse problems whose solutions are found in heterogeneous arts"'. According to Bidima the totalisation leads to 'a consideration of the work of art' as 'an end in itself functioning through its own demands', to which Deleuze objects, 'because for him "art is never an end in itself; it is only a tool for blazing life lines" […]. Art is only a means of setting in motion within us our becoming. Thus one must not close the system'.[255] Art as an end in itself leads and has led to its segregation, elitism or commodification, and thereby precisely to stagnation, standardisation and oppression, and away from true experimentation as the only means to bring back its liberating and invigorating powers.

So, the first aspect of a practice of caring is a fundamental *vitalism,* which is a constant in the literature I have been plugging into, not only in the philosophical literature but also in many aspects of Moore's musicological corpus and Bangs's critical/creative writings. For example, it

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[252] Friedrich Nietzsche, *The Will to Power*, trans. by R. Kevin Hill and Michael A. Scarpitti (UK: Penguin Books, 2017), p. 484.

[253] 'I distrust all systems and systematists, and avoid them: perhaps one will discover just behind this book the system which I avoided… The desire for a system, for a philosopher, morally speaking is a refined form of depravity, a disease of character; immorally speaking, it is the willingness to appear more stupid than one is — more stupid, that is, stronger, simpler, more untutored, more formidable, commanding, tyrannical …'. Nietzsche, *The Will to Power,* preamble, no page number.

[254] Moore, *Song means,* p. 74. See also p. 19.

[255] Jean-Godefroy Bidima, 'Music and the Socio-Historical Real: Rhythm, Series and Critique in Deleuze and O. Revault d'Allonnes', in *Deleuze and Music* , ed. by Ian Buchanan and Marcel Swiboda, trans. by Janice Griffiths (Edinburgh: Edinburgh University Press, 2004), p. 180.

is significant that Moore defines the purpose of a great part of his aesthetic studies in the following terms:

> […] to make available for explicit use those processes that develop out of an encounter with the music by which a track's meaning can be addressed, by which its enlivening of our experience can be focused on, in order to show what effect musical detail has on that enlivening, why it is important that is sounds just like *this* rather than like *that*. Exactly what meaning a track has is only for an individual listener to determine, but how meaning can be created from it is explored here.[256]

Meanwhile, Guattari asks a similar aesthetic question for future artists: 'How are sounds and forms going to be arranged so that the subjectivity adjacent to them remains in movement, and really alive?'[257] The role of the listener is obviously not arranging the sounds, but a listener can certainly contemplate and explore how they have been arranged in a singular work, and focus on figuring out consistencies between those arrangements and the senses of enlivening, remaining in movement and really alive. By becoming aware of those consistencies in our aesthetic studies and in our creative practices, we can enter in a vital practice of *a constant revaluation of values,* in the way Nietzsche has shown, as the only way of preventing our listening and music practices from becoming stagnant, and things from becoming easily transformable into clichés. I shall briefly introduce some considerations about this component.

First, this practice consists primarily in a revaluation not of things but of values, that is, of the value one is ascribing to something at a given moment. What is this value? How can I define it? Different things, notably works of art, create 'new values', so we cannot simply apply inherited recognisable values to them, or simply establish them to recognise them in the future (I.1.4). It is maintaining 'the lack of absolute standards' what is most important. A full understanding of what Nietzsche means by a 'revaluation of all values' is completely out of the scope of my thesis, and certainly the subject of much debate in philosophy, as I have noticed. My plan is nevertheless to carry on studying his philosophy and to progressively gain deeper understandings of it. So far, and with Deleuze, Guattari and Bergson, every time I plug into Nietzsche's idea of a constant 'revaluation of values', it markedly awakens my critical angle which itself immediately resonates with my rock angle.

Concerning the close connection I consider here between vitalism, power, ontology and a constant revaluation of values, my reading of Nietzsche's coincides with the one deployed by Henrik Rydenfelt in his article 'Valuation and the Will to Power: Nietzsche's Ethics with

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[256] Allan F. Moore, *Song means: Analysing and interpreting recorded popular song* (Surrey: Ashgate Publishing Limited, 2012), p. 164.

[257] Guattari, *Chaosmosis*, p. 133.

Ontology'. As he explains, Nietzsche 'is not realist about value — according to him, nothing is intrinsically valuable. However, things, actions, beliefs, and values can be evaluated with reference to their capacities in serving our fundamental quest for power'. Not tyrannical power, not power over others, but in the sense of Nietzsche's 'ontological idea of will to power', from which, as Rydenfelt argues, we can derive 'some ethical stances' and where 'Nietzsche attributes no intrinsic value to (the *achievement* of) power, but claims instrumental value to what increases power'.[258]

Deleuze's 'immanence', the break with phenomenology, and Guattari's 'mutant subjectivities'

A work of art can be 'life itself', and thereby it can have an invigorating power. In line with Deleuze, Guattari, and Nietzsche, it seems to me that this can be the case only when it is encountered 'in immanence'. Sensation and its 'intensive reality' are 'in immanence'. Something is 'in immanence' when 'it is not in something, *to* something', but only 'in itself', that is when 'it does not depend on an object or belong to a subject'.[259] As The Raincoats sing: 'I hear the music outside, and I am the music inside, no side to fall in'.[260] I found it very clarifying that Deleuze implemented the concept of 'a life' to define and explain 'immanence': 'We will say of pure immanence that it is A LIFE, and nothing else'; 'the immanent that is in nothing is itself a life'.[261] Thus, the immanent is not *in a consciousness* ('no side to fall in'), and this is why phenomenology cannot give an account of it. As Deleuze expounds in the 'Fifteenth series of singularities' of *Logic of sense:* 'A consciousness is nothing without a synthesis of unification, but there is no synthesis of unification of consciousness without the form of the I, or the point of view of the Self'.[262] Or as he puts it in 'Immanence: a life': a consciousness 'is expressed, in fact, only when it is reflected on a subject that refers it to objects'. But if something 'in immanence' does not come across in a consciousness, how do we come across it? How are we aware of it?

Deleuze thinks of *a coextensive and unrevealed immediate consciousness* to explain this. First, we must keep in mind that in Deleuze's definition 'the transcendental field is defined by a plane of immanence, and the plane of immanence by a life'. Then, his explanation goes as

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[258] Henrik Rydenfelt, 'Valuation and the Will to Power: Nietzsche's Ethics with Ontology', *Journal of Nietzsche Studies*, 44.2 (2013), 213–24.

[259] 'Absolute immanence is in itself: it is not in something, or *to* something; it does not depend on an object or belong to a subject'. Gilles Deleuze, 'Immanence: A Life', in *Pure Immanence. Essays on a Life*, trans. by Anne Boyman (New York: Zone Books, 2001), p. 26.

[260] I am referring to the track 'No side to fall in' (*The Raincoats*, 1979).

[261] Deleuze, 'Immanence: A Life', p. 27.

[262] Gilles Deleuze, *The Logic of Sense,* trans. by Constantin V. Boundas, Mark Lester and Charles J. Stivale (London: Bloomsbury Academic, 2015), p. 105.

follows: '[…] as long as consciousness transverses the transcendental field at an infinite speed everywhere diffused, nothing is able to reveal it'; 'That is why the transcendental field cannot be defined by the consciousness that is coextensive with it, but removed from any revelation'. The consciousness that is coextensive with the plane of immanence 'is an absolute immediate consciousness whose very activity no longer refers to a being but it is ceaselessly posed in a life'.[263] Therefore, when pure life reveals itself, the immediate consciousness that is coextensive with it is not revealed, and phenomenology loses its object of study. A life is made up of events and singularities, continues Deleuze, that are merely actualised in subjects and objects. These events and singularities are 'virtualities', which, just like the 'incorporeals' I bring into play in I.1.4, are fully real: 'What we call virtual is not something that lacks reality but something that is engaged in the process of actualisation'. A difference between 'virtuals' and 'incorporeals', that I infer from both Deleuze and Guattari's philosophy and the secondary literature on it, is that the latter work in the opposite direction: Incorporeals refer to the surface-effect or the surface-event when we pass from actualised things (i.e. *beings*) to the time and reality of *becoming* that eludes the present, which is also the level of intensity. As explained by Daniela Voss, 'incorporeals are not beings, but rather a way of being, an effect resulting from the interaction of bodies'.[264] As Deleuze writes: *It is by following the border, by skirting the surface, that one passes from bodies to the incorporeal.*[265] On the whole, the difference between these two notions seems very subtle, or perhaps even non-existent and I am over-interpreting it. Yet, it seems to me more a matter of emphasis on the 'potential' or on the 'effect', when we think about it. In any case, both virtual events and incorporeal events are 'in immanence'.

This philosophical problem of immanence, leads us to the understanding that it is not our 'actions and passions' (i.e. what we do and what things do to us) what 'leads us into a life', but events and singularities in themselves. As in Deleuze's example of the wound: 'A wound is incarnated or actualised in a state of things or of life; but it is itself a pure virtuality on the plane of immanence, that leads us into a life: My wound existed before me…'[266] By shifting the object of study from consciousness to life itself, we move, with Deleuze, from phenomenology to ontology, we stop asking what there is for a consciousness, and we start asking what there is, and with Guattari, what there is in a certain ontological domain, so that we can really take into account alterity, the resistance of the materials, the nature of things in themselves and of the events and singularities that an intense life is made of, and we can base our studies on it. In a nutshell, alterity as part of life. Following Deleuze and Guattari, and in connection to what they explain as the reality specific to becoming, and in connection to the aesthetic study of

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[263] Deleuze, 'Immanence: A Life', p. 26-28.

[264] Voss, Daniela, 'Deleuze's Rethinking of the Notion of Sense', *Deleuze Studies*, 7.1 (2013), 1–25

[265] Deleuze, *The Logic of Sense*, p. 10. [Emphasis on the original]

[266] Deleuze, 'Immanence: A Life', p. 31.

rock recordings and sensation, the ontological domain I explore has an expressive-intensive-material reality (I.1.5). In short, I think that a practice of caring that is grounded on a fundamental vitalism has not only to comprise an ontology, but to make explicit and develop an ontological project.

When phenomenologists give an account of the unity of subject and object, or the sensing and the sensed, they do it from the point of view of a consciousness. For example, as put by Erwin Straus: 'The Now of sensing belongs neither to objectivity nor to subjectivity alone, but necessarily to both together. In sensing, both self and world unfold simultaneously for the sensing subject'. Straus's is a reflection that goes back and forth from a unity for/in the subject, to a immanent unity object-subject, but it is clear that it is ultimately a unity 'for the sensing subject': 'the sensing being experiences himself and the world, himself in the world, and himself with the world' [sic.].[267] Deleuze and Guattari's formula of our relation to the world is radically different:

> We are not in the world, we become with the world; we become by contemplating it. Everything is vision, becoming. We become universes. Becoming animal, plant, molecular, becoming zero.[268]

Becoming with the world by contemplating it should not be confused with the experience of myself and the world together in myself. The difference between experience and encounter, is at the core of the difference between phenomenology and ontology. (I return to this in the 'Conclusions'). *Contemplation* is an essential aspect of an ontological project, and also of a politics of caring. Ontological investigations require the contemplation of something that is not in myself: an alterity. This is how I can really become *with the world*, rather than with my experience of the world. I find Guattari's idea of a subjectivity being 'adjacent' to the sounds and forms, very suggestive in several senses. In the first place, it resonates with the closeness or contact by which a new formation can come across in a sensation (i.e. a haptic function). It also suggests the idea of listener and sounds becoming something else together, a new composite entity. Finally, it suggests that a singular arrangement can have the power to keep subjectivity 'in movement and really alive', which also implies the possibility of changing and becoming, or what Guattari calls 'mutant forms of subjectivity', in processes that may go even beyond the duration of listening.[269] To be sure, the sensation/new formation of the artwork is encountered 'in immanence', and therefore it does not depend on a subjectivity *a priori,* but, following both Guattari's and Deleuze's rationales, it is connected to the possibility of what Guattari calls the 'production of subjectivity'.

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[267] Erwin Straus, *The Primary World of the Senses. A Vindication of Sensory Experience* (New York: The free press of Glencoe, 1963), p. 351.

[268] Deleuze and Guattari, *What Is Philosophy?,* p. 169.

[269] Guattari, *Chaosmosis,* p. 89.

As Deleuze explains in *Logic of Sense*: 'Far from being individual or personal, singularities preside over the genesis of individuals and persons'.[270] Guattari brings into play processes of 'subjective resingularisation' in his account on the 'production of subjectivity'. On the one hand, a 'resingularisation' is considered as the counteraction to all the homogenising processes that dominate everything everywhere. As Guattari puts it, the artwork can shove 'our noses up against the genesis of beings and forms, before they get a foothold in dominant redundancies'.[271] On the other hand, 'resingularisation' is related to the ontological heterogeneity of singularities, which is itself always joined to an element of chaos, and constitute the condition of possibility of creation, genesis, becoming, change and renewal. In short, there's an adjacency to singularities in becoming with the world by contemplating it.

In short, for the time being, the elements of Guattari's very complex transversal treatise that I am considering here are mainly the ones related to vitalism; the consistency with the ontological heterogeneity and continuity of materials and movements that I have taken from Bergson's *Matter and Memory* (I.4.); the essential element of chaos in the possibility of new formations that is also in Deleuze's Logic of Sensation; the imperative of a counteraction against the forms of 'standardisation' and 'everyday banality'; the congruence I see with Nietzsche's firm determination to immerse himself in a sweeping and continuous revaluation of values; the problems of codes and of the dominance of the signifier, especially in the capitalist regime, and the fight against the mechanics of social domination — in aesthetic practices, I see all these aspects as definitely related to the preservation of sensation, which operative traits we encounter as singularities.

I am referring to the possibility of changing, as changing into something *new*, not into something one has already envisaged or planned, or that has been already shaped for us by the market or any kind of institution. Activities and processes that drive change, such as creativity, renewal and experimentation can be found operating at the core of aesthetic practices. As observed by Guattari: 'Patently, art does not have a monopoly on creation, but it takes its capacity to invent mutant coordinates to extremes: it engenders unprecedented, unforeseen and unthinkable qualities of being'.[272] The report by Bangs that I invoke in section I.1., which concerns encounters with rock recordings that reach the status of one's 'intensive milestones', 'that you authentically can say you'll never be quite the same again', can surely resonate with many other dedicated rock listeners. There is an emphasis on the 'irreversibility' of the change, but also on the opening and openness to new changes and becomings, that also resonates with Guattari's considerations deployed in *Chaosmosis*. Very

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[270] Deleuze, *Logic of Sense*, p. 105.

[271] Guattari, *Chaosmosis*, p. 90.

[272] Ibid, p. 106.

much in line with Nietzsche, Guattari bestows great importance to 'the aesthetic power of feeling' in life,[273] that can go hand in hand with changes of mentality, and 'radically mutant forms of subjectivity'.[274] This is not to say that this is the purpose of aesthetic practices, or that we should use aesthetic practices for this purpose. It is just part of them; an important part. When Nietzsche reflects on the power of certain 'aesthetic states', in his practice of 'revaluating all values', he writes, for example, about the *'expansion'* and *'refinement'* of 'perception'; the development of an '"intelligent" *sensibility'* or 'the power of understanding at the slightest hint or suggestion'; 'strength' in the sense of physical exertion, not only as 'muscular control' but also as 'suppleness of, and delight in, movement, as dance, as ease and *presto*'; also 'strength' in the sense of 'fearlessness' and 'adventurousness'; an enhanced sexuality; an enhanced sensuality; and enhanced 'visionary' states.[275] They all correspond to processes of becoming more sensitive via experimentation, an intensification and improvement of one's sensitivity, and a movement towards an 'extreme receptivity'.[276]

There is a vitalism involved in this kind of changes, which has different facets. They are like the evidence of forces that go not only beyond the principle of survival, towards an intensification of life,[277] but also beyond one's own life and survival as a separate organism or subject. As put by Guattari, it includes not only all 'animal and vegetable species', but also 'incorporeal species such as music, the arts, cinema, the relation with time, love and compassion for others, the feeling of fusion at the heart of the cosmos'.[278] In *Francis Bacon. The Logic of Sensation*, Deleuze reflects on a series of factors that separate 'sensation' and its 'intensive reality' from phenomenology's concerns with the organism and the subject. The most important of them, in my view, is 'the *temporary and provisional presence* of determinate organs', that is implicated in the constitutive difference of level of a sensation, this is not what happens to the organism, to the lived body, or to the subject. Hence, Deleuze argues that the phenomenological hypothesis is insufficient, and, as I explain in the 'Introduction', he consequently brings in the notion of the 'body without organs'. Philosopher Éric Alliez also emphasises the decisive role of this concept in Deleuze's move not only beyond

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[273] Guattari, *Chaosmosis,* p. 101.

[274] Guattari is writing about 'blocks of sensations formed by aesthetic practices […] whose function is to elude significations attached to trivial perceptions and opinions informing common sentiments'. He explains that 'this extraction of deterritorialised percepts and affects from banal perceptions and states of mind takes us from the voice of interior discourse and self-presence — and from what is most standardised about them — on paths leading to radically mutant forms of subjectivity.' Ibid*,* p. 89.

[275] Nietzsche, *The Will to Power,* pp 448-450.

[276] Ibid*,* p. 457.

[277] See also Grosz, Elizabeth, *Chaos, Territory, Art. Deleuze and the Framing of the Earth* (Chichester: Columbia University Press, 2008).

[278] Guattari, *Chaosmosis,* p. 120.

phenomenology but also beyond structuralism, and not only in the Logic of Sensation, but also and already in the Logic of Sense:

> *Francis Bacon. The Logic of Sensation* […] can be considered as directly and autonomously related to the Logic of Sense, short-circuited by the hysteria of Artaud's Body without Organs, which endows sensation with a radically non-phenomenological logic […]. The volcanic eruption of the Body without Organs in the very middle of the structuralist logic of sense (13th series) in truth had already put an end to this philosophical project for Deleuze himself.[279]

We have seen that phenomenology addresses the unity between subject and object but only from the point of view of the subject. Now, we should add that phenomenology also addresses the unity of the senses and their intercommunication, that Deleuze indicates in the following terms: 'Between a colour, a taste, a touch, a smell, a noise, a weight, there would be an existential communication that would constitute the 'pathic' (nonrepresentative) moment of sensation'.[280] However, as he then argues, this phenomenological concern doesn't really deal with the passage from one level to another and the transitory organs:

> every sensation implies a difference of level (of order, of domain), and moves from one level to another. Even the phenomenological unity did not give an account of it. But the body without organs does give an account of it, if we look at the complete series: without organs - to the indeterminate polyvalent organ - to temporary and transitory organs.

Deleuze's critique also points at how the philosophical traditions that have grounded 'the transcendental field' on a personal or individual consciousness, cannot really address 'true genesis':

> But the question of knowing how the transcendental field is to be determined is very complex. It seems impossible to endow it, in the Kantian manner, with the personal form of an I, or the synthetic unity of apperception, even if this unity were to be given universal extension. On this point, Sartre's objections are decisive. But it is no more possible to preserve for it the form of consciousness, even if we define this impersonal consciousness by means of pure intentionalities and retentions, which still suppose certain individuation. The error of all efforts to determine the transcendental as consciousness is that they think of the transcendental in the image of, and in the resemblance to, that which it is supposed to ground. In this

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[279] In a footnote in Alliez, Éric, 'Ontology of the Diagram and Biopolitics of Philosophy. A Research Programme on Transdisciplinarity', *Deleuze Studies*, 7.2 (2013), 217–30.

[280] Deleuze, *Francis Bacon. The Logic of Sensation,* p. 32.

> case, either we give ourselves ready-made, in the "originary" sense presumed to belong to the constitutive consciousness, whatever we were trying to generate through a transcendental method, or, in agreement with Kant, we give up genesis and constitution and we limit ourselves to a simple transcendental conditioning. But we do not, for all this, escape the vicious circle which makes the condition refer to the conditioned as it reproduces its image.

And Deleuze argues that phenomenology did not really overcome this 'vicious circle':

> Phenomenology wanted to renew our concepts by giving us perceptions and affections that would awaken us to the world, not as babies or hominids, but us, by right, beings whose proto-opinions would be the foundations of this world. But we do not fight against perceptual and affective clichés if we do not also fight the machine that produces them. By invoking the primordial lived, by making immanence an immanence to a subject, phenomenology could not prevent the subject from forming no more than opinions that already extracted clichés from new perceptions and promised affections. We will continue to evolve in the form of recognition; we will invoke art; but without reaching the concepts capable of confronting the artistic affect and percept.[281]

The alternative to a 'transcendental conditioning' that Deleuze and Guattari worked on, is an 'oscillatory rhythm' between two planes, the plane of organisation and the plane of immanence (or intensity or consistency), which, as explained by Buchanan, 'are inseparable' and 'they are each other's limit and each other's condition of possibility'.[282] (See I.1.5).

Most of the more intricate aspects of this 'very complex' question, as Deleuze emphasises, certainly go beyond the scope of my research. My aim here is to establish the importance of keeping in play the possibility of 'the new' in a non-relative manner, and our engagement with the plane of immanence, continuums of intensities and the generation of new formations. This requires *ontological considerations* that can effectively orient ourselves to a contemplation of 'alterity'.[283] Summing up, my understanding of what a practice of caring consists in involves all these facets, and my overriding aim is to lead my aesthetic practices by it. I want to contemplate works of art and study their operative traits of sensation, in order to contemplate the singular way in which an expressive-intensive-material new formation is achieved, to critically question what it demands, and to explore the reconfiguration of values

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[281] Deleuze and Guattari, *What is Philosophy?,* p. 150.

[282] Buchanan, Ian, *Assemblage Theory and Method. An Introduction and Guide*, 1st Edition (Bloomsbury Publishing, 2020), p. 52, <https://www.perlego.com/> [accessed 22 September 2024]

[283] See for example, Guattari's 'domains of alterification' — put as a process involves our own becomings as part of a machinic or diagrammatic process. Guattari, *Chaosmosis,* p. 45.

this generates, each time. This requires constructive categories that are always in the process of growing, on a case to case basis (when artistic practices are always evolving practices). I share the view that, to keep up a constant revaluation of values via aesthetic studies, is the necessary condition for a constant renewal of ways of effectively going in the absolute opposite direction of all the oppressive forms related to processes of standardisation. A practice of caring is a programme against the cliché, which is essential to our possibility of 'becoming with the world' and living intensely. A practice of caring demands to critically engage with the challenges that works of art constitute, and therefore, it demands a constant revaluation of values, according to the demands of the different artworks in different occasions, which is what allows for change, the new, becoming-other and vitality. As Guattari has emphasised, aesthetic practices have an enormous potential of being beneficial to social and cultural changes through the production of subjectivities. Any discipline or field of study or experimentation has the potential of engaging in a practice of caring, which can also be an strong connector between disciplines, and a crucial factor in their renewal, and in the production of really mutant subjectivities, to freely create and find/construct meaning collectively and individually.

THE LISTENING MEMBRANE

A vitalist approach, in the Nietzschean sense, to the practice of listening, demands, in my view, thinking about who we are, not as listening subjects but as listening membranes, because the membrane is that limit of oneself at which one lives by connecting the inside and the outside, and by placing them into a dynamic *contact.* 'Membranes', as posited by Deleuze, 'carry potentials and regenerate polarities'. In the the 'Fifteenth Series of Singularities' of the Logic of Sense, Deleuze borrows some biological insights from Gilbert Simondon, to elaborate on the importance of 'membranes'. He integrates them to his accounts on the 'genesis' and the 'neutral surface-limit' of 'sense' and its 'event-singularities'. As Simondon writes (quoted by Deleuze): 'The living lives at the limit of itself, on its limit', and the 'membrane' is this limit: 'it is here that life exists in an essential manner'. We are certainly alive all the time, but we are not always living at the limit of ourselves where life generates itself as a result of everything that happens on that fundamental *contact.* For life has a 'characteristic polarity', which is what makes it exist as such, and which is 'at the level of the membrane', as Simondon explains.

The usefulness of thinking about the listening membrane as the "organ" (of the BwO) and the surface-site of haptic listening in an encounter, and *especially as the living listener of haptic listening*, who 'lives at the limit of itself, on its limit', lies in a series of factors that constitute its 'membrane' principle. I have inferred these factors from Deleuze and Simondon (in Deleuze)'s account, but I have also integrated them to my thoughts on the practice of listening taking my own risks: (1) It is not simply a sensitivity to a surface, but it connects inside and outside in a way in which 'the entire content' of one's interiority is in a dynamic contact with the external

world, with a constant *possibility of real change* in both sides. This means that all of one's interiority is at its limit, facing and 'actively present' to the external world (the sounds for the case of listening). (2) The contact is dynamic because it consists in events and singularities that have effects on both sides. This entails a vital intrinsic genesis, life itself is being generated and lived 'at the level of the membrane', and this genesis is intrinsic to that dynamic contact which involves processes of deformation — the fundamental principle of haptic listening. (3) This contact also maintains the 'metastability by which it exists'. I can think about this self-maintained 'metastability' as allowing for this life to be a living flow, but at the same time to change, to depend on and integrate the external world in a way that keeps it alive, without changing it in a way in which there would be no more membrane, and this life would therefore stop being a flow. In other words, it stays a life, a living flow, while living at its limit and changing. (4) Also related to this previous point is the 'characteristic polarity' of life. As Deleuze explains, the 'vital and properly superficial potential energy' of this life 'is not *localized* at the surface but it is rather bound to its formation and reformation'. Thus, the surface of the membrane may form and reform. One can think that this is according to the forces it encounters and the external content that the interiority integrates through that contact. Yet, the membrane remains. The polarity can be regenerated but the fact that there is a polarity remains, and this is what guarantees the interiority of living. In short, no membrane, no interiority. The membrane is a polarised membrane. The "membranic" encounter with the outside is always lived from the side that is facing the outside, *'on the "in-side" of the limit',* writes Simondon, but without falling back into oneself as a subject that merely acts and to whom things happen, and lives, in those terms, a life that has a subject other than itself.[284] To emphasise Simondon and Deleuze's point: the living being does not lives *within* itself but *at its limit.* (4) The experience at the level of the membrane has a sort of neutrality, and, paradoxically, one is all the more sensitive to the external world, its details come across as more immediate, sharp and rich, and the event is all the more intimate and intense, because it is neutral. It is not subjective, because *all of one's interiority* is turned towards the outside, all of it is in contact with it. Thus, this polarity doesn't mean that it is a life as lived by a subject.

This principle can be very useful for pondering about what happens with all aesthetic practices, and it is certainly related to the vitalist aesthetic approach I am striving to develop. For example, if we take our listening practices and encounters as 'life itself' (Bangs), we can see that we really exist and live as listeners, that is, as *a listening life,* at the level of a listening membrane. We can see that this life is really lived and kept alive, intrinsically creating itself, by being in contact with the sounds, in this manner of connecting inside and outside that needs the entire interiority — all of oneself, all that lives and thinks within us, all our living

[284] As with 'becoming': I am drawing on, and adapting, the excellent clarification by Deleuze and Guattari 'that a becoming lacks a subject other than itself'. Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*. *Capitalism and Schizophrenia,* trans. by Brian Massumi (London: Continuum, 2008), p. 262.

matter, all that we know, who we are, what we feel, all our past experiences, our faculties and skills, our expectations and fears, our all encompassing classification as 'living'— with the external content, that is, the sounds (with all their properties, energetic materiality, movements, variable intensive affects, contents, expressions, forces or presences). Of course, as I understand this, not everything manifests, we are not aware of all of the contents that are in contact at the level of the membrane, but we can be aware of the events and singularities at the surface, which are the result of the connection between all of one's interiority with the encountered exteriority. The entirety of one's interiority faces the outside and will be somehow moved, agitated and changed. Simondon writes: 'the entire mass of living matter that is contained in the internal space is actively present to the external world at the limit of the living'.[285] Although the processes proper to biological living matter do not directly explain the processes of the living material 'becoming', many of the traits of the membrane principle reported by Simondon and Deleuze, can be observed in a haptic way of listening. Chiefly, it involves not only a sensitive listening "skin" at the surface of the sonic materials, but through that surface, it also connects the entire material mass that constitute the inside of our way of being (so far), with the entire mass of the sonic materials, including all the aspects of this alterity. This is why, for example, by sensing the material traits of the sonic surface we gain access to the material traits of the sonic mass, such as its density or elasticity, and all the aspects and elements I present in Part II. It is in this connection with alterity at the level of the membrane that the living listener lives at the limit of itself, and which therefore carries potentials as potentials of real change.

Thus, when Deleuze writes that a membrane 'carries potentials and regenerates polarities', I posit he means the following: It 'carries potentials' because it establishes the dynamic *contact* that has an essential direct incidence in *how* life generates itself. This 'how' is not predetermined, but, as life lives on the membrane, it is always open to eventualities and carries potentials. This life lives in the time of becoming, in/as 'the world of sense':

> Furthermore, this world of sense, with its events-singularities, offers a neutrality which is essential to it. And this is the case, not only because it hovers over the dimensions according to which it will be arranged in order to acquire signification, manifestation, and denotation, but also because it hovers over the actualisations of its energy as potential energy, that is, the realisation of events, which may be internal as well as external, collective as well as individual, according to the contact surface or the neutral surface-limit which transcends distances and assures the continuity on both its sides.

The membrane 'regenerates polarities' because we enter a process where inside and outside are no longer what they were before the event, before their encounter. It may be that our

[285] Deleuze, *Logic of Sense,* p. 106-7.

point of view ceases to be that of a subject and is turned into the point of view of this life-generating limit and contact. It may be that we no longer see things from the point of view of ourselves as the subjectivity or the interiority we were so far, but we witness, for example, our interiority changing, and our relation to exteriority changing, the limits between these two realms moving, our sensitivity to what we encounter increasing, reaching out "like tentacles", or, on the contrary, diminishing and our interiority recoiling into itself. Indeed, we can think of the regeneration of polarities in our listening practices. Imagine yourself about to listen to a record. There is clearly an inside that has not yet been in contact with the sounds, and an outside that you know is an alterity or outside world you are about to encounter. There is a pre-established polarity. Once you play the record, that polarity may prevail if you simply experience it from within. For example, experiencing certain responses, internally processing in any manner, thinking of the memory it has triggered, or trying to remember what it reminds you, lingering over internal associations, comparing what is happening with your expectations/anticipations, like a judge, etc. But, if the sounds start coming across through a sensitivity to deformation (haptic listening), you might find yourself at your limit, and somehow truly living, having moved from the level of a listening subject to the level of the listening membrane. Thus, you may pass from listening to a record as something you just experience to something that you really encounter and become with. An expectation, for example, would no longer be turned towards yourself as its judge *in relation to* what you encounter, but it would be *directly facing* what you encounter: actively present to be dynamically deformed, changed, renewed, or, at the limit, probably to dissipate.

3. The haptic tradition

In this section I present some relevant insights of two important writers that drew attention to haptic sensitivity with regard to art before Deleuze and Guattari, namely Johann Gottfried Herder (1744-1803) and Aloïs Riegl (1858-1905). Some reflections by Henri Maldiney and Herman Parret on the subject assist this overview. The presentation revolves around five guiding subject-matters that comprise the sense of touch, issues of distance, impenetrability, the gradual sense and the ground, respectively. I also discuss how these issues are transversally connected to Riegl's notion of 'will to art' ('Kunstwollen'). It is divided in five sections: i. 'Preliminary notes'; ii. The sense of touch in Herder's thought'; iii. 'From optical vision to haptic vision: Riegl's move'; iv. 'Herder and sound'; v. 'Penetrability - Impenetrability'.

As I regard it in this thesis, *haptic listening* is a way of listening that is *close range* and *gradual,* revealing properties of the sonic materials that would go otherwise unnoticed in listening, and unproblematised in an aesthetic study. It works like the sense of touch in that it depends on closely following and joining with the surface, the flow, the consistency, the textures, formations and intricacies of the materials, through our sensitivity to deformation. Yet, it is not like the sense of touch, in that it does not work as an *analogy* to touching other things. Neither does it consist in a *recollection* of previous 'tactile' or 'haptic' experiences, that invokes other sensory domains that are not directly involved in the encounter. In other words, when listening becomes haptic in the encounter, it has *its own* haptic function and encounters *purely sonic* haptic traits. To be sure, in the problems I address here, analogies and cross-modal recollections may be found in some cases participating, *subsidiarily* and only as a *preliminary stage*, in particular operations of passage, but only insofar as the passage ends in listening encountering its own haptic function and a sonic haptic world in its own right.

The meaning of 'haptic' I use in this thesis, is mainly based on Deleuze and Guattari's account, that bespeaks of a way of perceiving and sensing. This can be a function of any sensory domain, and has bearing not only on aesthetic practices but also on encountering and inhabiting anything in the world. It is related to their elaboration of the concept of the 'body without organs', in that the 'haptic' is not the function of a 'determinate organ', but of a 'provisional organ'.[286] It is a 'transitory function' that primarily depends on the singularities of the encountered 'materials-forces', as I have explained in previous sections. It is a central aspect of Deleuze's aesthetic 'logic of sensation' with regard to painting, but it also

[286] Gilles Deleuze, *Francis Bacon. The Logic of Sensation*. trans. Daniel W. Smith (London: Bloomsbury, 2017), p. 35.

significantly connects with all of Deleuze and Guattari's philosophical and aesthetic postulates, especially but not exclusively with the ones they put forward in *A Thousand Plateaus*, including the importance of 'molecular flows' in some of their discussions about music.[287] It is more thoroughly asserted towards the end, in the section called 'The Aesthetic Model: Nomad Art', from the chapter '1440: The Smooth and the Striated'. In this section, they treat it both as a kind of 'space', and a kind of 'function', in concurrence, co-dependence and co-determination. Although much of their discussion concerns vision, and the difference between a 'haptic' and an 'optical' vision, they note that 'haptic space' 'may be as much visual as auditory or tactile',[288] as I mention in the introduction.

In order to consistently explain how these principles work in the world of sound — as my own thesis centres on the relevance of some of the principles of Deleuze's 'logic of sensation' to the aesthetic study of rock recordings—, it has been vital to integrate insights from *A Thousand Plateaus* and other works. In The Logic of Sensation the 'haptic' is defined as a 'function born of the diagram', which partly means that certain operative traits of the artwork are capable of giving rise to both a new, unprecedented formation or a 'Figure', that comes across in a sensation, and a new, unprecedented sensory function that lasts while the sensation lasts. The specifics of this 'provisional and temporary' function can only be determined on a case to case basis, according to the singularities of the work, yet, there is a constant aspect: this function is always 'haptic', and as such, it has some defining features.

Deleuze and Guattari were certainly not the first in thinking about the haptic function of the senses. It has been given thorough consideration as a function of sight in relation to painting, relief and sculpture, notably by art historians and theorists Johann Gottfried Herder and Aloïs Riegl, whose works date from the ends of the 18th and 19th centuries, respectively.[289] So, in this section I shall briefly present some of the ideas of these two precursors, the ones I found most relevant to haptic listening, in relation to some complementary literature.Deleuze and Guattari's account, can also allow us to appreciate the far-reaching significance of the aesthetic problem of haptic sensitivity, in the fields of art history and theory, and those of philosophy and aesthetics, revealing a weighty *haptic tradition*. I have extracted from Riegl

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[287] See for example, their idea of a 'generalised "glissando"' in music: Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*. *Capitalism and Schizophrenia,* trans. by Brian Massumi (London: Continuum, 2008), p. 107.

[288] "It seems to us that the Smooth is both the object of a close vision par excellence and the element of a haptic space (which may be as much visual as auditory or tactile). The Striated, on the contrary, relates to a more distant vision, and a more optical space — although the eye in turn is not the only organ to have this capacity." Ibid, p. 543-4.

[289] Riegl's *Historical Grammar of the Visual Arts*, was written while he took 'a leave of absence in 1897-1898', from his job as a professor at the University of Vienna. It was 'posthunously published by his students' (p. 12). Riegl's *Late Roman Art Industry* was originally published in 1901. Herder's *Sculpture. Some Observations on Shape and Form from Pygmalion's Creative Dream,* was written between 1770 and 1778, and the essays called *Critical Groves* are spread from 1796 on.

and Herder a series of problems that not only are fundamental to the haptic sense, but also pertinent to the domain of listening, music and sound art. As I demonstrate in different parts of my thesis, what we mean by *the sense of touch*; issues of *distance* in the ways of sensing; considerations around the *impenetrability/penetrability* of material entities; the *gradual* way of sensing; and the problem of the *ground* and the *figure-ground* relations, are all interrelated problems that concern haptic sensitivity. All these provide a common ground to promote further thinking about the complexity of haptic listening in its own right, and not as a simple transfer of notions from the visual domain. In this particular presentation I focus on the ways Riegl and Herder drew attention to these issues.

PRELIMINARY NOTES

We know from Deleuze and Guattari's work that they took the notion of a 'haptic' sensitivity from Riegl — and more precisely from Maldiney's reading of Riegl, according to their footnotes —.[290] They credit Riegl for the key move from the 'tactile' to the 'haptic', that allows us to refer to it, not only as a way of touching with the hands, skin and the joints' sensitivity to movement and physical exertion, for example — as studied by Gibson in his account of the haptic system, for example —, but also as a way of seeing and listening. Moreover, what is most decisive about this move is that it is not considered to work by analogy, metaphorically or as a perceptual cross-modality, but as a way of listening in its own right, a way of seeing in its own right, and a way of touching in its own right. In line with some distinctions previously established by Riegl, Deleuze and Guattari oppose the couple close vision-haptic space to distant vision-optical space, in the case of vision. As they write in *A Thousand Plateaus:*

> "Haptic" is a better word than "tactile" since it does not establish an opposition between two sense organs but rather invites the assumption that the eye itself may fulfil this nonoptical function. It was Aloïs Riegl who, in some marvellous pages gave a fundamental aesthetic status to the couple, close vision-haptic space.[291]

In an article from 2009 published in *Actes Sémiotiques* and entitled 'To spatialise haptically: from Deleuze to Riegl, and from Riegl to Herder',[292] philosopher Herman Parret traces back the concept of the 'haptic' throughout the work of these philosophers and art theorists,

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[290] This is also stated by philosopher Herman Parret in Herman Parret, 'Spatialiser Haptiquement de Deleuze à Riegl, et de Riegl à Herder', *Actes Sémiotiques* , 112, 2009.

[291] Deleuze and Guattari also credit Wilhelm Worringer for contributing with criteria for the concept, however I did not have the time to add his account in this overview. I have added insights by Maldiney in other sections of the thesis, concerning rhythm as movements of contraction and expansion of the material, which is certainly related to haptic sensitivity. Deleuze and Guattari refer to Riegl's *Die Spätrömische Kunstindustrie*, but I have found more helpful The grammar. Deleuze and Guattari, *A Thousand Plateaus,* p. 543 and footnote p. 644.

[292] Parret, 'Spatialiser Haptiquement de Deleuze à Riegl, et de Riegl à Herder'. [My translation]

adding others' contributions (e.g. Diderot). Although the disciplinary context of this article is semiotics, many of the insights developed by Parret are relevant to an aesthetic approach to haptic sensitivity and to the historical lineage of the aesthetic reflections on it. In line with all the preceding writers, Parret's central purpose is to offer *an alternative* to dominant approacheswhich,while attempting to overcome the centrality of vision in the ways we spatialise, often do so in a naturalising and reductionist manner. According to Parret's reading of Deleuze and Guattari's work, the main characteristics of 'haptic space' are: (1) A 'fluid space of forces' involving continuity and no landmarks, a nomad course (e.g. related to the acts of wandering, straying), and a nomad line that is free itself from points and directions; (2) A single plane, a surface with no depth in the sense of 'the absence of an organised depth'; (3) He opposes the distance of 'optical space' to a 'presence', free of the desire of representation, which he relates to close-range nature of haptic sensitivity and a 'proximity' that also implies a suspension of a narrative —also key in my approach and a logic of sensation for rock recordings, since 'narrative installs a dialogic structure that presupposes the separation between events from the background, and this is how form and ground distinguish themselves from one another in contrast and dialectic'. Thus, he specifies that the sense of proximity of the haptic modality comprises both inner and outer proximity, i.e. between elements in the work, and between the work and oneself, which is notably what Egyptian bass-relief and Francis Bacon's paintings share according to Deleuze's reading of Riegl. The sense of a gradual, nomad, sensitivity and course, that is repeatedly highlighted in Deleuze and Guattari's work, is also present in Herder's discussions on matters of speed, as I have noticed in his *Sculpture,* andpresent in the following notes.

In my investigation, I first studied the concept of the haptic in Deleuze's 'Logic of Sensation', followed by 'A Thousand Plateaus', while at the same time following Deleuze in considering Maldiney's reading of Riegl in 'Art and the Power of the Ground', and 'The Aesthetics of Rhythm'.[293] Then I approached Riegl's book on style, which focuses on ornament, and it wasinitially hard to find a clear connection with haptic listening. In the last stages of my investigation, I discovered some chapters of Riegl's *Historical Grammar of the Visual Arts* and *Late Roman Art Industry*, I hadn't been able before. It was especially through the Grammar that I gained a deeper understanding of Riegl's considerations of the different ways of seeing, and the fundamental historical and aesthetic grounds it provides for my own work.[294]

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[293] Henri Maldiney, 'L'Art et Le Pouvoir Du Fond', in *Regard, Parole, Espace* (Lausanne: Editions l'Age d'Homme 1973 & 1994); and Henri Maldiney, 'L'esthetique des rythmes (1967)', in *Regard Parole Espace*, ed. by J. P. Charcosset, H. Maldiney & Bernard Rordorf (Lausanne: Editions l'Age d'Homme, 1973 & 1994), pp. 147-72. [My translations].

[294] Aloïs Riegl, *Historical Grammar of the Visual Arts*, trans. by Jaqueline E. Jung (New York: Zone Books, 2004) <https://archive.org/> [Accessed 20 April 2024]; Aloïs Riegl, *Late Roman Art Industry*, trans. by Rolf Winkes (Giorgio Bretschneider Editore, 1985) <https://archive.org/> [Accessed 20 April 2024]

THE SENSE OF TOUCH IN HERDER'S THOUGHT

During the 1760s and 1770s, philosopher and art theorist Johann Gottfried Herder accorded 'the sense of touch' a fundamental position within aesthetics:

> I am interested only in the application of touch to aesthetics, a significant portion of which would thereby be quite transformed. Namely, the beauty of form, of a body, is not a visual but a tactile concept, thus every one of these beauties must originally be sought in the sense of touch.
>
> The beauty of bodies, as forms, is thus tactile; all aesthetic terms that describe such beauty, regardless of the context in which they are used, derive from touch: rough, gentle, soft, tender, full, in motion — all these and countless others derive from touch.[295]

Of course, it is not necessarily 'beauty' the value that might be guiding one's aesthetic study. In relation to the purposes of my thesis, I think this position also applies to the 'power' of artworks to attain sensation and intensity. As Herder states on the same pages, 'aesthetics, in keeping with its name, ought precisely to be the philosophy of feeling'. As explained by Jason Gaiger in his introduction to Herder's eminent work *Sculpture* (1770-1778), Herder was living in a time when, in art literature, the use of the word 'aesthetics' in its modern sense' was incipient, being first employed by Alexander Gottlieb Baumgarten in 1735. As Gaiger reports, it is 'derived from the ancient Greek word *aisthesis* that means 'perception' or 'sensation'. Baumgarten used it 'to describe "a science of perception in general", a science that also encompasses "philosophical poetics", or the study of artworks'.[296] Similarly, Maldiney also gives it this double sense in his definition: on the one hand, in 'its widest an most primitive sense', aesthetics refers to the Greek 'sensation', and 'encompasses the whole field of sensible receptivity'. In this sense, saying that 'rhythm is aesthetic' means that 'it belongs to the order of sensing'. In its 'narrow' sense, aesthetics refers to artistic sensitivity, which in Maldiney's account is determined by 'rhythm' — I deal with Maldiney's approach to rhythm in connection to my thesis in next chapter I.4.[297] In the philosophical line of thought I am working with, that seems to me to have found its best expression in Deleuze and Guattari's

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[295] Johann Gottfried Herder, 'Critical Forests', in *Selected Writings on Aesthetics* , ed. by Gregory Moore, trans. by Gregory Moore (Princeton: Princeton University Press, 2006), <https://www.perlego.com/> [accessed 3 February 2024]

[296] Johann Gottfried Herder, *Sculpture. Some Observations on Shape and Form from Pygmalion's Creative Dream,* ed. and trans. by Jason Gaiger (Chicago: University of Chicago Press, 2002), p. 7, <https://press.uchicago.edu/> [accessed 11 January 2024]

[297] Henri Maldiney, 'L'esthetique des rythmes (1967)', in *Regard Parole Espace*, ed. by J. P. Charcosset, H. Maldiney & Bernard Rordorf (Lausanne: Editions l'Age d'Homme, 1973 & 1994), p. 153. [My translation].

corpus, the emphasis is put on 'sensation', and Herder's emphasis on the sensuous form of bodies suggest a likemindedness. In any case, it bears repeating that perceptual traits and traits of sensation work together in artworks (and any other part of life) in different ways. Coming back to Baumgarten and Herder's context, according to Gaiger: 'it is necessary to recall the distrust with which sensory knowledge had been regarded by philosophers in a rationalist tradition that reached back at least as far as Plato'. Baumgarten worked on demonstrating the great importance of the aesthetic discipline, which unlike investigations based on pure reason, 'is directed towards the plenitude and complexity of sensations', and to the 'particular character of sensory knowledge [that] resides in the richness and vividness of its representations'. Herder praised Baumgarten's 'achievement in introducing the term "sensible" and "sensuous" (*sensitivus*) in his definition of aesthetics'. But, as Gaiger remarks: 'Whereas Baumgarten sought to incorporate aesthetics as a second domain of inquiry *alongside logic*, Herder recognised that this new "science" had important consequences for logic itself. Likewise, it seems relevant to remark the opposite positions of the two main direct philosophical influences in Herder's education, namely Immanuel Kant and Johann Georg Hamann. In relation to this link, it is especially interesting to bear in mind the relevant insights from Deleuze's critique of Kant that I discuss in I.1. and I.2. As Gaier tells us:

> Kant imbued Herder with a powerful sense of the vocation of philosophy, schooling him in the analytic method of ascending to general principles only on the basis of secure and verifiable evidence, while encouraging him to trust in the human capacity for rational reflection and self-detemination. From Hamann, Herder learned to emphasise the importance of feeling and to recognise the irreducible contributions of language and of local and historical context to the supposedly universal claims of reason.[298]

In both *Sculpture* and 'Critical Forests', although he enthusiastically and critically dwells on the different facets of this problem, we can observe how 'the importance of feeling', which is chiefly derived from 'the sense of touch', prevails in his reflections on art. He argues, for instance: 'For what are properties of bodies if not relation to our own body, to our sense of touch? The light that strikes my eye can no more give me access to concepts such as solidity, hardness, softness, smoothness, form, shape, or volume than a mind can generate embodied, living concepts by independent thinking'.[299] He criticises the process by which sight takes over touch, in our sensibility and understanding:

> We become accustomed to taking in with a single glance what originally we had to make out gradually by touch. When our hand encounters a body, its image is at the same time projected onto our eye; our mind connects the two together and the

[298] Herder, *Sculpture,* p. 6-8.

[299] Ibid, p. 36.

> swift idea proper to seeing runs ahead of the slow concept proper to touching. We believe we see something when in fact we touch it and where only touch is appropriate. Eventually, we see so much and with such rapidity that we no longer feel things, even though our sense of touch remains the solid foundation and guarantor of seeing. in all of these cases *sight* is but *an abbreviated form of touch.* The rounded *form* becomes a mere *figure,* the *statue* a flat *engraving.* Sight gives us *dreams,* touch gives us *truth'*.[300]

Herder is thus expressing that the very way of touching is being changed, as a result of a replacement of its own concepts by the concepts we derive from the way sight behaves. Thus, we can link this point to the future progress on this reflection by Riegl, and by Deleuze and Guattari further along the line. Herder is certainly planting the seed of the possibility of a haptic/optic divide in any of the senses, as we can also observe in his fine analysis of sonic bodies that I add below. It is also important to note that there is a marked insistence not only in the characteristic gradual movement of touch, but also in a slow movement, that is able to take *more* in. When Herder says that he is interested in 'the application of touch to aesthetics', we can infer that he is interested in a transformation of our way of seeing, which has to learn from the sense of touch, so that we can address the properties of things that 'derive from touch', as quoted above.

What is at stake in the transformation endorsed by Herder, is the possibility of feeling bodies by accessing 'the fullness of bodies', and thereby their vividness, sensuality, flow and movement, richness and truth. These are all leading aesthetic criteria in Herder's observations, and 'bodies' is a key concept. It is remarkable how the form of the bodies of Greek sculpture is treated in Herder in terms that are very much in line with Deleuze and Guattari's concept of 'materials-forces', with which I work with in my thesis, as well as being absolutely tied to the haptic function. Herder's body is not 'already formed', but has to be gradually followed. To explain this, Herder uses a distinction between 'surface', which he relates to completely flat shapes, with no solidity; and 'bodies, which he relates to 'forms', with 'volume', 'angles', 'solidity, hardness, softness, smoothness', and so on. The first is what we can see, the second what we can touch. As he writes in 'Critical Forests': '*sight reveals merely shapes,* but *touch alone reveals bodies';* and 'we know bodies, pleasing forms, solid shapes', 'volume, angles and forms' 'only with the aid of touch'. When Herder uses the word 'surface', and links it to shapes that are 'solely *surfaces exposed to light*', he is referring to a completely flat surface, a surface without texture, without flowing voluminous curvatures, without hardness or softness. Neither with any of what Deleuze and Guattari call 'variable intensive affects' or 'properties of contact', which refer to all the sensuous aspects of materials and forms (the meaning of these notions has been addressed in previous sections). Thus, I am simply reminding the reader that the way I use the word 'surface' in my work is the

[300] Herder, *Sculpture,* p. 37-8.

antithesis of Herder's: all these rich material properties can only be contacted by touch or the haptic function *at the surface,* — this relates to 'sense' as the relation of the proposition that can say something about a sensitivity related to becoming — and this surface is quite the opposite of completely flat surfaces or 'solely *surfaces exposed to light*'.[301]

The crucial point of Herder's defence of the sense of touch, and the horizon of his long discussion about the radical differences between sight and touch, is to gain the capacity of 'seeing the object as if one were feeling or grasping it'.[302] Whether we have to think of this exercise of the senses as 'cross-domain mapping' (see I.1.3), or as a function of sight that is *its own,* requires, in my view, an analysis on a case to case basis. Overall, both Herder and Riegl insistently establish the idea that it is about recalling experiences of touch, that this is how the eye can see the object *as if* it were touching it. However, following Deleuze and Guattari and my own experiences, my thesis maintains the possibility of haptic vision, haptic listening, or haptic touch in their own right, instead of by means of grasping the aspects that can awake a memory or an image (i.e. in the imagination) of a tactile experience, or a cross-modal perception, and so on. Nonetheless, this difference does not prevent Herder and Riegl's considerations from being key to a haptic function at the limit of sensibility where it is no longer about a collaboration of the faculties (see I.1.2). For example, regarding Herder's analysis of Greek sculpture, he refers to processes and properties such as feeling 'curves', 'roundness', 'marble that stirs', which suggest that liminal sensibility. He even frequently emphasises a non-analogical, non-multi-domain reading of a direct encounter: 'And why, if they are not exaggerated, are these feelings no metaphors? Because they are experiences,' which can be related to a different eye, a vision becoming touching and feeling.

His absorbing discussion on 'drapery', is another point of his work where he explicitly suggests this. He observes the simultaneity of hiding and clothing proper to 'wet drapery'. According to Herder, feeling 'obliged to clothe the beautiful body, the Greeks found in wet drapery a solution to the problem of clothing the statues 'in such a way that nothing is hidden', so that the body can 'retain its stature and its beautiful rounded fullness'. So, since in a sculpture nothing can really show through, and since, in this sense, because it is a solid three-dimensional object, 'sculpture is created for the hand, not for the eye', they found a way of deceiving the hand, and then the eye 'must follow'. Thus, both the hand and the eye believe they are touching 'both clothing and the body at once', as the haptic starts revealing itself as a new function. Wet drapery offered the *only way* of deceiving the hand that touches, and the eye that now touches in the same way as the hand', writes Herder.[303] These are only a few of the aesthetic reflections that can allow us, with Parret, to credit Herder with the achievement

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[301] Herder, *Sculpture,* p. 35.

[302] Herder, 'Critical Forests'.

[303] Herder, *Sculpture,* p. 50-1.

of 'the haptic theory of sensibility', even though it was Riegl that explicitly introduced the concept of 'haptic'.

From optical vision to haptic vision: Riegl's move

At the end of the 19th century, art historian and theorist Aloïs Riegl elaborated on a series of reflections that make us realise 'the significance of the distance at which the visual faculties apprehend a natural thing for the viewer's internal comprehension of that thing, and by extension, for a man's contest with such objects in art'.[304] For the case of vision he explains in general terms that in 'near view' or direct proximity the viewer get a two-dimensional (or flat) surface; then if the viewer backs away, 'the eye is able to observe certain aspects of the object that recall tactile experience', and at an optimal range the viewer gets what he calls the 'modelling' as a 'convincing' three-dimensionality. He called this range 'normal view'. As the distance exceeds this view, the 'modelling' gradually disappears, and the viewer only gets a 'solid surface' that is once again completely flat or two-dimensional. Thus, he brought into play 'tactile experience' to the way of seeing, which led him to distinguish between two kinds of surfaces: 'Tactile and optical surfaces are thus two separate things: the optical is always planar, the tactile is typically irregular, three-dimensional, volumetric; only exceptionally is it regular'. Therefore, he explained that the work of art looks 'fundamentally different according to which surface the artist depends on', and that 'in the study of art history it is crucial to realise that these surfaces are different'.[305] According to Riegl, the particular purpose or 'will' (i.e. *kunstwollen*) of an aesthetic practice in different periods in art's history is significantly determined by the distance at which a work of art was meant to be seen, and the way of seeing within this distance along with the features of what the artwork would allow and encourage. He famously called it *kunstwollen* or 'will to art',[306] that dependence on what a particular practice expresses as its intentions, what its manoeuvres seem to be consistently directed to, and what kind of ideal or what purposes it sets for itself.

For example, according to Riegl, ancient Egyptian art 'was directed toward the greatest possible objectivity in the representation of material individual objects'. Thus, concerning the 'material' part of the agenda, the sense of touch in direct or recalled tactile experience was seen as providing 'the conviction of impenetrability'. As Riegl writes: 'Our sense of touch is indispensable for arriving at a conviction of the impenetrability of the external objects, but it is not necessary in order to learn about their extensions'. Therefore, the sense of individuality and unity was provided by the 'extensions' of 'height and width (outline, silouhette)' which were ultimately considered 'indispensable in order to arrive at any notion of the individual

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[304] Riegl, *Historical Grammar of the Visual Arts,* p. 188.

[305] Ibid, p. 396-7

[306] According to the translator's definition it is 'internal or external force producing art, artistic will, artistic desire'. Riegl, *Late Roman Art Industry.*

material object', and for 'extensions', 'the sense of vision is more useful', as Riegl explains. So, in order to give unity to these extensions, grasped all at once, they relied on the visual perception of *the plane* with its dimensions of height and width. The reason for focusing on the plane was also because they contrasted it with 'space', which according to the ancient artists's view could not give a sense of 'material essence' and had to be limited, along with the sense of depth, which did not seem necessary and was suppressed whenever possible. Thus their visual arts were 'intended to be responsible for representation of objects as individual material phenomena not in space (here after meaning always deep space) but on a plane'. 'But', Riegl asks, 'how can material individuality be recognised within the plane, if it does not emerge from the plane at least a little?'

According to Riegl, the whole project took three main phases of visual arts. The first phase was tactile and close range (i.e. 'Nahsicht'), and 'ancient Egyptian art expresses it in its purest form'. As Riegl writes:

> The greatest adhesion to the purse sense perception of the (seemingly objective) material individuality of objects and, therefore, the possible greatest assimilation of the material appearance of the work of art to the plane, yet not the optical plane, imagined by our eye at a distance from the objects, but the tactile plane suggested by the sense of touch, because on this level of development, to be certain about (touchable) impenetrability also means having the conviction of the material individuality. From the optical [i.e. visual] point of view, this is the plane which the eye perceives when it comes so close to the surface of an object, that all silhouettes and, in particular all shadows which otherwise could disclose an alternation in depth disappear.

The Egyptians also put an emphasis on the effectiveness of symmetry to 'bestow completeness on material entities on a surface plane': 'The main accent, however, is placed on the silhouettes which are kept as symmetrical as possible, because symmetry reveals to the exterior an uninterrupted tactile connection with the plane in the most convincing manner'; it 'belongs to the dimensions of the plane' and 'it is limited, if not destroyed, by depth'.

The second phase involved 'alternations of depth (projections)', in a way that they were 'not only admitted but willingly granted', since the purpose of visual arts (still the 'absolute purpose', writes Riegl) 'is still to awake a perception of tactile impenetrability as a condition of material individuality'. Thus, 'the eye is now the most important recording organ allowed to perceive the existence of the projecting partial forms', which are 'mainly disclosed through shadows'. Chiefly, he writes:

> To perceive the the eye has to move a little from the *Nahsicht* [i.e. close view]: not too far away, so that the uninterrupted tactile connection of the parts are no longer visible (*Fernsicht*), but rather to the middle between *Nahsight* and *Fernsicht*; we may call it *Normalsicht*. This kind of perception, which characterises the second stage in ancient art, is tactile-optical and, from the optical point of view, more precisely *Normalsicht;* its purest expression is the classical art of the Greeks.

The third phase, consists in objects 'endowed with full three-dimensionality', and in the addition of space, which 'appears to be recognised, but only as long as it adheres to material individuals; that is an impenetrable coherent space measured cubically, not infinite deep space between individual material objects'. The latter sense would be the case of what Riegl points out as an achievement of Modern art (by which he means art after these three phases of Antiquity). Thus the third phase also prioritises 'material individuals', so that the 'individual form is not placed in space, but on the plane'. He says that the plane is even more emphatic, 'even though individual forms take shape more in regard to the third dimension'. Previous tactile connections are dissolved:

> The plane is no longer tactile because it contains interruptions achieved through deep shadows; it is on the contrary, optical — colourful whereby the objects appear in *Fernsicht* [distant view] to us and whereby they also blur into the environment. The perception of objects characterising this third phase of ancient art is thus essentially optical and in particular *fernsichtig* represented in its purest form through the art of the Late Roman Empire. The shadows are deep and appear to be dividing up the plane. The common responsibility of antiquity, which is to mark off clearly the unity of material individuality during this final phase of antiquity is essentially and intentionally transferred to a supporting subjective consciousness. With the innovating reduction of the plane a stricter observation of symmetry takes place.[307]

Thus, while the sense of depth in space was emphatically avoided in previous phases, because comprehending depth in a representation in this way involved the aid of 'a much more complicated process of thought', which would then obscure the reliance on the experience of touch. Thus, the normal range is also markedly opposed to the distant range of the third phase and is the main distinction between the haptic and the optical. The tactile function of the eye can acquire two different ranges, the close and the normal. Deleuze and Guattari, Maldiney, Ingold and Parret's reading of Deleuze and Guattari, for example, certainly focus on the tactile close range of vision, that connects with the first Egyptian phase, especially as achieved in Egyptian bas-relief. What Riegl is observing in the larger time-scale is a general

[307] Riegl, *Late Roman Art Industry,* p. 22-25.

move from the representation of the individual shape on a plane, to the representation of the individual shape in space. Riegl infers a general postulate from these phases:

> Antiquity knew unity and infinity only on the plane. Modern art, however, searches for both in deep space; late Roman art stands exactly in between, because it has separated the individual figure from the plane and thus overcome the fiction of a level ground which gives birth to everything. Yet still following antiquity it recognises space as an enclosed individual (cubic) shape and not yet as an infinite free space.

What he calls late Roman is the period between the reigns of Constantine the Great and Charlemagne. Yet, he explains that 'in the creation of art [in the Roman Empire] the dominant role remained with the same nation that held this position with unprecedented success throughout antiquity', by which he means Greece.[308]

Riegl's move chiefly involves considering the plane and the surface as notions that are no longer reserved for flat surfaces, as in Herder's usage of the word 'surface' for example in *Historical Grammar of the Visual Arts* (written in 1897-1898). In relation to the intervention of the sense of touch in vision, he develops a distinction between what he calls the 'subjective surface' and 'objective surface'. The subjective surface corresponds to Herder's flat surface, and Riegl considers it to be a sensory deception, a 'deceptively unified two-dimensionality': 'distant view leads us to see a flat plane where in reality a modelled, three-dimensional surface exists'. In turn, 'objective surface' provides the impression of three-dimensionality.[309] Thus, Herder is basically foreseeing Riegl's 'objective surface' in his essays on sculpture.

With the aid of these distinctions, Riegl rigorously explores the difference between 'modelling' and 'silhouettes', and serves very usefully my ownpurposes. The former concept involves a special connection between the figures and the ground, a connection itself grounded on their shared material, which is given great attention in Maldiney's reading of Riegl, as well as in Deleuze's Logic of Sensation. The adjacency of different instrumental layers on a single plane is a principle that I closely study in a great numberof my examples. This adjacency is a condition for the haptic experience of any relief, and it gives all movements of deformation their great power. As explained by Maldiney, when the elements are 'a motivation' of the ground, the way of seeing them is 'a modulation of its continuity'.[310] For

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[308] Riegl, *Late Roman Art Industry,* p. 13-14.

[309] According to Riegl: 'For any given thing, we have thus to distinguish three elements: (1) *form,* which is fundamental to the object; (2) *objective surface,* which, being an intrinsic component of form, is equally fundamental to the whole; (3) *subjective surface,* which is a mere illusion of the visual faculties.' *Historical Grammar of the Visual Arts*, p. 188-9.

[310] Maldiney, 'L'art et Le Pouvoir Du Fond', p. 197. [My translation].

example, in some Egyptian reliefs, the contours are the hollow engraved lines that divide the ground and the figures in a very sharp and precise way. The figures' curved and relief features are engraved in a much shallower manner, and both the flat surfaces that function as ground and the figures are both on exactly the same plane and made of the same material.

There is one example of a battle in the edition of the Riegl's Grammar I am using,[311] that I have found to perfectly illustrate what I consider Maldiney means when he writes about an aspect of the adventure of the gradual haptic sense that consists in 'a series of abandons and retreats, held by the appearance-disappearance of the motif'.[312] The example I am referring to is a naval battle: hectic, hellish and crowded, with clearly delineated people clashing, jumping and falling in all directions;dead bodies being carried by the water; other bodies involved in all kinds of different actions; a scene impossible to grasp all at once in a single glance, but only succeeding by following the surface gradually. Of course I am not observing the real material work, only a photographic reproduction, yet the effect is still at work, and one can simply imagine how much more powerful it might be in presence of the real relief. It also perfectly illustrates what Riegl means when he writes that: 'Anyone who carefully examines ancient Egyptian images will recognise that they are conceived for strictly near viewing. With even the slightest movement beyond a near viewpoint, all modelling vanishes and they become like flat mirages'.[313] Many rock music tracks achieve this sense of figures held together on the same plane that perfectly retain their individuality. I am always astonished by how well the rock band Bardo Pond achieves this, for example. Especially the case of tracks that swarm with grainy details made with different distortions pedals, that have frenzied wandering lines, constantly slipping out of other instruments' beats for example, restlessly appearing and disappearing: a listening that forfeits closely joining with its sound and following them gradually would simply end getting just a noisy 'flat mirage'.

As explained by Maldiney, in the first edition of *Late Roman Art Industry* from 1901, 'the word 'haptic' is not used. Yet in response to some criticism, he acknowledges that the term 'tactile' was a bad choice and should be replaced everywhere by 'haptic''.[314] Likewise, although Riegl does not employ the term 'haptic' in *Historical Grammar of the Visual Arts*, as confirmed in the translator's preface,[315] we can assume that the distinction between the 'optical' and 'tactile' when associated to distant view and close view (and also normal view), respectively, and thus

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[311] The example I am referring to is 'Naval Battle of Egyptian troops against the Sea people. Relief from outer wall of the main temple of Ramses III, Medinet hHbu, Thebes, Dynasty 20 1187-1156 BCE'. Riegl, *Historical Grammar of the Visual Arts,* p. 456.

[312] Ibid, p. 195

[313] Ibid, p. 191.

[314] Maldiney, 'L'art et Le Pouvoir Du Fond', p. 194.

[315] Riegl, *Historical Grammar of the Visual Arts,* p. 47.

to subjective surface and objective surface, should also require the replacement requested by Riegl.

HERDER AND SOUND

According to Parret, Herder was also interested in the slipping of hearing into touching and wrote: 'Touching is so close to hearing: its characteristics such as hard, rugose, soft, wooly, velvety, hairy, rigid, smooth, flat, bristly, etc., which are characteristics that only apply to surfaces and do not act in depth, they all resonate as if one would feel them by touch".[316] Although I have not found this quote in Gregory Moore's edition of *Selected Writing on Aesthetics*, I have found a very important and fertile point concerning what I am proposing to call *haptic listening*. Herder observes the difference between 'relations and proportions' and the way the ear 'feels'. The distinction and determination of tones provide 'nothing but relations', writes Herder. Yet, he argues that relations such as 'high pitch and low, loudness and softness, consonant and dissonant intervals, the synchronous and the consecutive, and so on', 'explain nothing of the simple tone, nothing of the energy it exerts on the hearing, nothing of the charm it possesses both in isolation and in succession: these relations explain none of this'. Thus, he concludes that 'relation cannot be the original source of pleasure in tones and can explain nothing of the first feeling of their effect'.[317] Consequently, he refers to an 'immediate sensation' that is already the power of 'a single tone', abstracted from all subsequent tones'. The power of one tone, according to Herder is 'a greater inner mass, than the sum of all the sensations arising from all the relations, from all the harmonies of an extended piece'. Likewise, according to him 'the relation of the overtones' that Rameau develops is also incapable of explaining sensation; it explains 'nothing of the first moment of sensation', by which he does not mean a short moment at the beginning of the sound, but an immediacy of the encounter, very much in line with Deleuze's own philosophy.

Here, I think it is relevant to connect Herder's ideas on sound, as well as Riegl's link between 'modelling' and haptic sensitivity, with the common idea of 'sculpting sound' in music studies, especially put forward in relation to artistic composition in the studio, which started to gain attention in musicology in the 1990s, but was already considered part of common practice by rock music producers. To name a few examples: In Gracyk's account 'Even before the emergence of rock around 1965, producers like Ahmet Ertegun and Phil Spector self-consciously approached records as sculptured sound, and not merely as rock and roll that happened to be recorded'.[318] In Albin Zak's account: 'Using sound processors interactively in

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316 Parret, 'Spatialiser Haptiquement de Deleuze à Riegl, et de Riegl à Herder', section n°4.

317 Herder, 'Critical Forests'.

318 Gracyk, Theodore, *Rhythm and Noise. An Aesthetics of Rock* (London: Duke University Press, 1996), p. 18.

these ways extends the range of sound sculpting techniques by adding further layers to the relationships between a track's sounds and the forces that shape them'.[319] In Lelio Camilleri's account: 'the possibility of composing not notes but the 'sound matter' of the piece, like a sculptor carves the stone, requires a new awareness on behalf of composing musicians, as well as new analytical strategies from the music's critics, in order to take into account these new features of music in recorded format'.[320] Developing such analytical strategies is in great part what my thesis can and should be considered as contributing to.

PENETRABILITY - IMPENETRABILITY

There is an incredible amount of insights in both Herder and Riegl's work, along with the complementary literature, that have opened up new avenues of exploration, and are directly relevant to haptic listening, able to fill several volumes in their own right. For time and space constraints I have selected the problem of penetrability and impenetrability in order to finish this overview for now. While, as we can infer from both Riegl and Herder, the sense of touch (and haptic sensitivity) involves a fundamental impenetrability, this impenetrability is actually an access to what I call here the 'consistency' of the encountered material entity, that reveals the thickness, voluptuousness and fullness of a body —including sounds. This is what Herder means when he says that touch 'perceives things *in depth*', which is different from the optical depth of the third phase Riegl is referring to. This is also the way Herder uses the concept of 'body': ' the body seen by the eye remains but a surface, whereas the surface that is touched by the hand is grasped as a body',[321] so that sculpture is in charge of giving that 'body' impression to vision. Again, this use of the surface should be distinguished from the haptic surface, which Riegl called objective surface, that is the three-dimensional modelling, which he opposed to the two dimensional silhouettes. Thus, impenetrability is what allows us to access the properties of contact —to borrow Deleuze and Guattari's expression— of the materials and material formations. Yet, we have to problematise this sense because sometimes materials are encountered as penetrable, which is eminently how sonic materials can also be immersive, while other sonic materials can be more compact. Would not thickness acquire two senses here? Indeed, when speaking about a thick sound we could be either referring to a compact thickness o immersive thickness, depending indeed on its degree of penetrability, as I explore in my category of 'density'. Materials, like water, mud and sound, can be haptically penetrable. Thus within the impenetrability proper to the sense of touch, there is, at another level, differences between impenetrable and penetrable materials. For the case of sound, we must keep in mind that a sound that comes across as immersive still has

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[319] Albin J. Zak, *The Poetics of Rock. Cutting tracks, Making Records*. (Berkeley: University of California Press, 2001), p. 120.

[320] Lelio Camilleri, 2010. "Shaping sounds, shaping spaces." *Popular Music* 29 (2), p. 200.

[321] Herder, *Sculpture,* p. 37

haptic traits, and therefore the contact is still established at the level of an elementary surface, the surface of the listening membrane and its haptic sensitivity (I.2.).

4. The movement of the sonic materials

In this chapter I elaborate on the distinction between the movement of the materials, as a movement that is intrinsic to them, proper to their own processes of formation and deformation (i.e. the movement of unformed material flows), and the movement that is produced as a result of interrelations between formed materials, which emblematic image is that of separate bodies changing their place (i.e. their location in space). I attend at this radical distinction in our approaches to sonic materials and the sense of movement in music, and to its implications for music analysis in comparison with established musicological approaches. I draw on Deleuze and Guattari's insights on the replacement of a 'matter-form dialectic', with the 'couple materials-forces', and thus on their distinction between 'formed' and 'unformed' matter. The latter is not without form but in constant processes of forming and deforming. I integrate their emphasis on the fact that the movement that is proper to the materials can only be sensed by following and feeling their continuous and heterogeneous ways of flowing. I also base these arguments on Bergson's observation of the continuity and heterogeneity of movement and the material universe as they present themselves in our sensations. In Bergson's view of reality, real movement is the movement of material changes. I also draw on Maldiney's processual notion of 'a form in formation' that is 'the rhythm of the material' (which is consistent with Bergson and Deleuze and Guattari's thought). When grounded on their fundamental heterogeneity and continuous variation, the term 'sonic materials' can be distinguished from formed sonic components. Accordingly, I argue that the notion of 'the movement of the sonic materials' should be reserved for their intrinsic rhythm, which is not based on movements from one place to another and displacements, but on a 'movement in place'. I show, with some examples, the implications that this conception of movement has in rhythmic formations in the arrangement of beats, across the stereo field, and in building senses of momentum. This approach shifts the attention from structural interrelations between different elements to their adjacency. It entails a view of the relation between the micro and the macro elements as a continuum, instead of extrinsic relations between levels, relations based on expectations, and relations between reference structures and actual sound. I maintain that the heterogeneous haptic traits of sonic materials are intrinsic to both their ways of moving, and the sonic formations (in movement) we can encounter in pieces of music. The chapter is divided in eight sections: 'Bergson's observations on movement'; 'Preliminary notes on rhythm and rhythmic formations'; 'Movement as displacements in musicology and notes on vibration'; 'A 'movement in place''; 'Facilitation'; 'The form is the rhythm of the material'; 'Turbulent flow'; 'Notes on texture'.

The form is the rhythm of the material…
Henri Maldiney, 'L'Esthetique des Rythmes (1967)'

Sounds move. They can also represent the movement of something else, and, sometimes, they neutralise that representational reading and bring their own movement, that is *the movement of the sonic materials*, to the fore.[322] Another well-known type of representation is the one oriented to represent to ourselves the movement of the sounds, by mentally or graphically projecting into 'homogeneous' spatiotemporal grids, the onsets of the sounds as points (i.e. durationless instants) and the relations between onsets, such as their weak and strong accents and their relative durations, as well as the relations between onsets and points or axes of reference. This long-standing technique is very useful to recognise, indicate and reproduce patterns, figures, subdivisions, tempi, durations, directions, distances, trajectories, metric relations and the arrangement of locations in the stereo mix, and their variations, for example. Sometimes, what is projected on the homogeneous spatiotemporal plane is not points or onsets but zones, which serve the same purposes. This technique is also useful to observe how the sounds play in conformity or against those grids and those kinds of configurations. Yet, I think philosopher Henri Bergson is right in emphasising that these representations, which only retain of movement 'changes in length' and are thus based on a definition of movement as variation of distance and change of place, are fundamentally a hindrance to our possibility of understanding 'real movement' as it takes place directly in the 'material universe' in a way that is not separated from our sensations of it.[323] Thus, I think he is right in insisting that we should therefore avoid treating them as representations of movement. Of course, they are useful tools for practical needs. However, Bergson extensively argues against the misleading habit of projecting everything all the time into 'homogeneous time' and 'homogeneous space', and encourages us to free our view of reality from this 'rigid abstraction born of the needs of action', and to substitute it for 'supple realities which permit of degrees'.[324] For the specific purposes of my investigation, I share the view that we should avoid *basing* our understanding of movement *on* spatiotemporal representations of movement. Furthermore, I think that this basis includes the comparative approach that consists in looking, not directly at the movement, but at the ways things play in conformity or

[322] I have already pointed at the fact that sounds are material entities in the introduction and first section. However, they are not always treated as such. A non-representational way of listening to sounds can bring their material nature to the fore, and therefore the real movement of the sonic materials can only be thought of in a non-representational way. I develop this point in this section.

[323] See for example, Henri Bergson, *Matter and Memory*. trans. N.M. Paul and W.S. Palmer (New York: Zone Books, 1988), p. 193-4, and p. 209.

[324] Ibid, p. 247.

against these representations, including the cases where these representations are perceptual grids that the music itself makes explicit as it unfolds. This is an argument that I think is in line with both Bergson's insights on movement and Deleuze and Guattari's philosophy, as I explain in what follows.

Although many musicologists have turned their attention to the 'flow' of music,[325] in order to overcome some predominantly motionless perspectives on 'form' and 'change', two issues remain, in my view, still debatable, namely, the extent to which these accounts manage to effectively go beyond the 'periodically punctuated' conception of 'rhythm' and 'motion'; and whether they only consider certain forms of movement to the cost of others. More precisely, in the present investigation, I am bringing to the fore a form of movement that, as I argue in this section, has been systematically overlooked or not treated thoroughly enough, which is *not* the movement of something that goes *from one place to another*, but a *movement in place.*[326]

In any case, that rhythm is fundamentally movement is not open to doubt in musicology, whether one is dealing with temporal, spatial or material aspects, entities or events, and whether the sounds are taken as cues that specify movement; as resembling traits that represent movement, or as operative traits that create and conserve movement, among other possibilities. In order to make explicit the approach operating here, I would like to elucidate some elements of the distinction just mentioned, between a 'change of place' and a 'movement in place', and to focus on movement as a 'change of form', and more precisely, as a 'form in formation' or a 'deformation' that is intrinsic to the materials. I think that finding ways of developing skills to address this sense of rhythm is still a pending task for music analysis.

Music theorist and musicologists largely concur with the view that any kind of representation of movement in spatiotemporal structures cannot account for 'real movement'. For example, music theorists Guilherme Schmidt Câmara and Anne Danielsen, in a critical discussion on 'groove', which by definition involves a sense of movement in music, emphasise that 'the ineffable state of being in the groove, is in fact, impossible to come to terms with; the very act

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[325] See for example: Hasty, *Meter as Rhythm*; Andrew Friedman, 'Momentum: A Phenomenology of Musical Flow' (Harvard University, 2014); and Timothy S. Hughes, 'Groove and Flow: Six Analytical Essays on the Music of Stevie Wonder' (University of Washington, 2003).

[326] I am borrowing this expression from Deleuze's work on Bacon's aesthetics: 'what interests Bacon […] is a movement "in-place", a spasm, which reveals a completely different problem characteristic of Bacon: *the action of invisible forces on the body* (hence bodily deformations, which are due to this more profound cause).' Gilles Deleuze. *Francis Bacon. The Logic of Sensation.* trans. Daniel W. Smith (London: Bloomsbury, 2017), p. 31.

of endeavouring to grasp it a posteriori disassociates one from the immersive groove experience itself'.[327] On the one hand, I agree in that this is ultimately a fact, in the two senses that this thought is suggesting: First, in the sense that, at a certain limit, there are always aspects of being immerse in something that are inexpressible. And second, in the sense that trying to explain something while one is in the middle of the encounter obviously takes you out of it. And this is all not only true for groove, but for any other kind of conception and experience of real movement in music. Yet, on the other hand, I think immersive or intense encounters also *make us think* —as Deleuze insists on in *Difference and Repetition*, for example —, during the event and after the event, so that these facts do not really prevent us from entertaining these thoughts. In other words, they do no mean that we cannot succeed in expressing *some* of those inexpressible aspects. They do not destroy the possibility of addressing the issue, gaining deeper understandings and engaging in successful discussions about movement in music. The ineffability of certain aspects of experience do not prevent us from genuinely enquiring about what is going on and how to best understand it. There are still different approaches to movement and some of them can more effectively address the points raised in Bergson's critique than others. Thus, I think that one must attempt to address this when thought comes in this way, as a necessity, and we must clarify and develop one's position. Indeed, Câmara and Danielsen do too develop their own position of what they think is the best approach to explaining groove.

In most accounts on movement in music, when we have to address the sonic aspects and formations that can be credited for the creation of the sense of movement, what is usually agreed, emphasised and kept in mind is the first aspect of the argument I have put forward, namely the fact that we should avoid treating movement as its representations on spatiotemporal grids. However, more often than not, it is still the ways the sounds play in conformity or against these grids, what is credited for the creation of the sense of movement in music, and this is not really an effective move towards relinquishing an understanding of movement as variation of distance. But some still provide some useful subsidiary tools.

For example, Câmara and Danielsen consider a definition of 'groove' that refers to both rhythmic patterns characteristic to different styles, and 'the pleasurable quality', 'as well as the appeal to dance and movement emanating from such patterns when they are performed in the optimal manner'. Thus, they consider groove as having different understandings that can be interrelated, namely 'pattern and performance', 'pleasure and "wanting to move", and a "state of being". The latter concerns 'groove as a state of being', emphasising how 'groove is

[327] Guilherme Schmidt Câmara and Anne Danielsen, 'Groove', in *The Oxford Handbook of Critical Concepts in Music Theory*, ed. by Alexander Rehding and Steven Rings, Online edition, Oxford Academic (Oxford: Oxford University Press, 2018), p. 288.

about how things are in "real time" — how the groove unfolds performance, right then and there'.[328] Regarding the study of patterns, they have indeed paid attention to details that 'often elude traditional notation-based representations of rhythmic structure', arguing that they have 'a structural impact as well'. Accordingly, they have addressed how details such as 'microrhythm', wherein 'both temporal (timing and duration) and sonic (intensity and timbre) aspects of rhythmic events' 'interact', features in 'grooves'. They focus on that interaction between temporal and sonic aspects that create the pattern, as well as on the 'interaction between sounding rhythm and reference structures, which usually goes on automatically and imperceptibly', including both explicit and implicit (or 'basic') reference structures. They also include how 'the pattern (including basic reference structures) may also change along the way, generating always fresh expectations at the micro, meso and macro levels', and thereby they focus on 'the critical interaction between this virtual structure and the actual sound'.[329]

A brief parenthesis is necessary at this point. Their integration of those 'sonic aspects (i.e. intensity and timbre)' can be considered as an advancement in the musicological task of overcoming the long-standing priority given to the so-called 'primary domains', which overlooks important aspects of recorded song and music in general. This is a project I adhere to. As explained by Moore:

> Established music theory distinguishes primary from secondary domains of the musical fabric on the grounds of Leonard B. Meyer's 'justification', of their propensity to engage in syntactic relationships. Thus, primary domains encompass melody and harmony, metre and rhythm; secondary domains, which 'shape' the primary, encompass texture, timbre and location.

Primary domains corresponded to what Moore refers to as 'content', in the sense that they were what the composition was about and could convey, and the secondary domains were merely a subsidiary 'articulation' or 'shaping' of that content. Therefore, studies in music analysis and popular music, chiefly propelled by Middleton and Moore in the 1990s, started to effectively overcome this hierarchy. We can infer from this discussion that primary domains were also, but not exclusively, the ones that could be more readily represented on paper. It was therefore often assumed that they were the ones that could be more readily treated as substanceless or immaterial structures devoid of those 'sonic aspects' that Câmara and Danielsen are referring to, and that Moore has also effectively integrated to the analysis and interpretation of recorded popular song. As Moore observes in 2012, in relation to this discussion: 'It is only in very recent years that properly serious academic attention has been

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[328] Câmara, and Danielsen, 'Groove', p. 276.

[329] Ibid, p. 273-4 and 80.

given to what I call the 'tactility' of sound in a recording'.[330] Overall, with this turn, what was also given more attention to, was what philosopher Theodor Gracyk called 'precise details of timbre', pointing at micro details such as matters of 'grain', when writing about some of the 'shifts in aesthetic qualities that occur when volume increases', for example.[331] These micro details can also be related to Câmara and Danielsen's concern with some of the complexities of what they call 'microrhythm', that they treat in terms of the interaction of temporal and sonic aspects.

Concerning 'timbre', as I have argued in the 'Introduction', my position is that haptic details should not be restricted to their function in the study of timbre, and be treated as a music dimension in their own right, for although they are indeed key in the sound qualities that work as cues for the recognition of a sound source or the representation of events with timbres, and although they are also key in experimentations with the recognisable or non-recognisable axis of timbre, they can do much more than that and they can be treated differently, they can be haptic traits of another kind, and the very different way in which they are rendered operative in the diagrams of sensation attest to this.

Concerning the sense of 'movement', I think we can also consider haptic traits as intrinsic to it, and movement as intrinsic to them. From a certain point of view, rhythm can involve the movement of the materials in a way in which the temporal and the sonic (including the sonic haptic traits) are not separable. In other words, the exercise of separating the temporal and the sonic and observing their interaction, is futile if we want to look directly at the movement. I think this limit I am pointing at is in line with Bergson's postulates that I present in this chapter, and also consistent with Deleuze and Guattari's take on the replacement of the matter-form dialectic with the couple materials-forces. Sometimes, haptic traits can be encountered as forming rhythm themselves, creating rhythm from within in their movements of contraction and expansion, for example, instead of as an element which only in 'interaction' with other elements would construct the sense of rhythm.

While Câmara and Danielsen's emphasis on a 'state of being' for groove, is also applicable to the approach to 'rhythm' I present here, when it comes to the aesthetic study of patterns and frameworks that the music makes explicit as it unfolds, and that can be related to rhythm, my approach differs. Depending on one's purposes, the fact that the movement of sonic materials can form rhythm from within, can also entail an alternative way of treating frameworks or patterns, one that does not involve a frame of reference that our expectations interact with. There is an alternative way in which the variations in a repeated pattern, do not playing

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[330] Allan F. Moore, *Song means: Analysing and interpreting recorded popular song* (Surrey: Ashgate Publishing Limited, 2012), p. 29.

[331] Theodore Gracyk, *Rhythm and Noise. An Aesthetics of Rock* (London: Duke University Press, 1996), p. 32, 107 and 111.

against our expectations, but are sensed directly as a *deformation in a longer duration of tension,* drawing on Bergson's rationale. This is of course especially relevant to the study of operative traits of sensation, and perhaps not relevant to the study of groove. All in all, from Câmara and Danielsen arguments, I infer that the perceptual 'reference structure' they are referring to, is still *a representation* we make to ourselves of the actual sonic formation, which we then treat as a grid in conformity with or against the 'sounding rhythm' plays. And as they argue, this interaction between expectations and the actual sounds, whether at an analytical or at an automatic perceptual level, seems to work for the analysis of groove, and the rhythmic patterns that sustain it. Yet since my project does not directly concern 'groove', I have dedicated this section to clarifying some important distinctions that can allow us to address the sense of movement and rhythm, as directly created through the movement of sonic materials and their haptic traits.

Addressing and analysing *the movement of the sonic materials,* poses a series of problems and demands ontological considerations. In an analysis of the operative traits of sensation in rock recordings, the available tools developed in the fields of music theory and musicology are indeed necessary, and should be brought into play in complementary ways. The problems pose by sensation do not require changing conventional concepts and techniques of 'established music theory' themselves, but keeping an eye on their limitations, possibilities or possible adjustments from this point of view, which have to be assessed on a case to case basis. Whether or not we need to address movement at this expressive-intensive-material level ultimately depends on both the details of the piece of music and the kind of interpretation one is addressing. Here, I focus on the cases where this material level (in Bergson and Deleuze and Guattari's understanding) is primary in the process of making sense of an individual work.

I use the expression 'established music theory', which I borrow from Moore,[332] because I find it pertinent and practical to refer to the body of notions and knowledge about music available in the theoretical literature, that became established and holds a position of authority in institutions and practices of the so-called Western music traditions, sometimes at the cost of other, equally relevant, contributions.[333] This knowledge should be treated carefully, as explained by Moore. Music studies often fall into the error of assigning it 'a priority', as if everything that wouldn't follow its norms were to be understood as 'deviations'. Instead, the concept of 'deviations' or 'detours' is reserved in Moore's methodology to stylistic 'friction' at a specific, more or less global or local, level. Thus, 'friction' also concerns 'what happens when

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[332] See for example my previous quote from Moore, *Song Means,* p. 29.

[333] Richard Middleton also uses the concept of 'established music theory'. See Richard Middleton, *Studying Popular Music* (Milton Keynes: Open University Press, 1990), p. 192.

what happens is not what you expected to happen', as Moore writes, in a play of style-specific expectations.[334] Above all, I share Moore's view that one should understand a particular music practice as 'establishing norms in its own right'. For instance, as he asserts, 'popular harmony' should not be regarded as 'a deviation of the norms of Western tonality', and the harmonic norms one can encounter at work in individual cases 'may or may not accord particularly strongly with those found in the music of Bach, Beethoven or Brahms'.[335] I address issues of harmony in detail in the case study III.4. All in all, I think it is necessary to reassess each time, for each case study, if this knowledge is useful and appropriate, if it needs adjustments, or if its assumptions are just not right for the repertoire and the issues under consideration. Furthermore, I also think it is necessary to keep in mind that while the interaction between expectations and actual sounds is an important carrier and producer of meaning, it is just one possible principle among others. In particular, in an aesthetic study of operative traits of sensation, it can act as a complementary principle but it is not the central principle.

In this section, I look into how an approach to the aesthetic study of rock recordings *based on* the movement of sonic materials affects the way we understand the notions of 'movement' and 'rhythm', along with a number of more specific problems around them. I mainly draw upon the philosophical work of Bergson, Maldiney, Deleuze and Guattari, whose reflections on these notions, based on the *heterogeneous, continuous and continuously changing nature of material entities,* constitute a tenable and percipient ontological basis for the present purposes. One of the central arguments that these thinkers concur with, is that it is possible and very important to think about movement directly from the point of view of the ways it is encountered, before and beyond its projection on a homogeneous spatiotemporal plane. So, we need to distinguish between the *homogeneity* of devices such as measures or relative estimates, relative distances and locations, points, lines, stationary shapes, outlines and categories, on the one hand, and the *heterogeneity* of the materials, on the other. We need to start from the basis that *flow* is not a special case, but the nature of sound and any other material.[336] We need to distinguish between movement as a 'change of place' and a 'movement in place'.[337]

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[334] Moore, *Song Means*, p. 7.

[335] Ibid, p. 70

[336] This is the approach of what Deleuze and Guattari call 'nomad' or 'eccentric' sciences: which use 'a hydraulic model rather than being a theory of solids treating fluids as a special case; ancient atomism is inseparable from flows, and flux is reality itself or consistency'. Deleuze, Gilles and Félix Guattari, *A Thousand Plateaus*. *Capitalism and Schizophrenia,* trans. by Brian Massumi (London: Continuum, 2008), p. 398.

[337] I am borrowing the concept of 'change of place' from Bergson's critique, and the concept of a 'movement in place' from Deleuze's logic of sensation, as will become apparent in this section.

Concerning the latter, thinking of a movement that is not the movement of separate objects that go from one place to another is the necessary basis to address both the sense of *deformation* and the moving formations based on the *turbulence, heterogeneity and continuous variation* of the material fluxes, which are fundamental to haptic listening. For example, it is necessary to address the critical implications that this has in the ways we come across, experience, understand and refer to, *rhythmic formations*, the *movements across the stereo field,* and the *sense of momentum*. When experienced as a movement in place, rhythmic formations include the haptic traits of the sonic materials in a fundamental way, for example in their *movements of contraction and expansion,* and in their forming textures and reliefs. I illustrate this point below in the sub-section 'Preliminary notes on rhythm and rhythmic formations'. The lateral movement across the stereo field is no longer the change of location of a sound, but a stroke or a "caress". Listen for example to the tambourine sound that crosses the stereo from right to left in Spiritualized's 'If I were with her now' (*Lazer guided melodies*, 1992), which in the initial section has a marked distortion and reverb that gives it a brushy kind of swish, and then in the second section that is bleaker, it is presented in its direct, more recognisable, tambourine form. Or listen to the synthesised compound sound (combining a micro-grained layer with a macro-grained layer), in David Bowie's 'Little Wonder' (*Earthling,* 1997) that also crosses the field from right to left, and changes each time in a variety of ways. In the first example one could say it is a sort of shivering caress, and in the second example, it is more of a scratching stroke, that goes to a drilling stroke when the macro-grained layer is presented on its own (e.g. 0'44"). In both cases it can be experienced as the impression it creates continuously in one and the same place, as it materially presses against and across our listening "skin", an "ear-mind-skin", which in this case can be a suggestive/pertinent way of calling the temporary emergent organ (of the 'body without organs') that takes place at level of the listening membrane of haptic listening, that is sensitive to the intricate details of the surfaces of the sonic materials in movement (see I.2.), in other cases it might be more suggestive to call it the listening "flesh", or simply the sensitive listening membrane. By the same token, the sense of momentum, related to an increase in speed and a definite sense of direction and forward motion, from the point of view of the movement of the sonic materials is no longer centred on a goal-oriented motion, but on the exertion created by the sustained contraction of the sound, that renders sonorous its impetus or force. This exertion is experienced itself in haptic listening as a contraction in our listening "flesh". For example, the usual addition of intercalary beats in a sequence for the purpose of gaining momentum, can be listened to not only as an acceleration but also as a contraction. The sense of speed and agitation that result from the additional beats is usually accompanied by longer notes that hold them together, like glue, and they generate together a contracted impetus, through a densification, that result from the concentration and multiplication of elements in this double

sense: obviously more beats equals more density, but also, as a note is prolonged, it saturates the soundscape, as what comes with it is the rich heterogeneity of the intricate complexion of the material, which is itself movement at a micro-level, blurring the distinction between texture and movement. To be sure, when a track gains momentum, the sense that it will reach culmination is still, by definition, always present, but when it is the result of a moment-by-moment exertion it is intensified. Listen for example to the bridges (i.e. the passages from one section to another that have a connective function) in Fugazi's 'Suggestion' (*13 songs*, 1989). The changes are simple: The kick drum adds beats to the sequence by playing every quaver and generating thereby the sense of contraction and speed. The bass prolongs the notes in a more legato articulation (e.g. the lower a is prolonged until the next note and the higher a glides down). The cymbal sound is also prolonged, producing a hazy density. They all join the longer and repeated syncopated notes in the guitars that started to gain momentum a bit earlier, initiating the bridge. There is an increase in density and a marked change towards no break between notes, that holds everything together and saturates the mix with the finer haptic details of the individual sounds. The harmony is doing a traditional goal-oriented cadence towards the tonic, with the guitars repeating $\hat{2}$ and resolving through $\hat{7}$. Yet, it is very different to primarily attribute the sense of momentum, its impetus and force, to the goal-oriented details (i.e. subdivision to quavers, syncopation and melodic cadence), than to the exertion, i.e. the contraction of the flesh of our listening membrane, that results from the way they work together with all the other details in a contracting movement, all of which, in this particular example, turns the moment when the culmination is botched all the more intense.

BERGSON'S OBSERVATIONS ON MOVEMENT

Philosopher Henri Bergson dedicates a considerable extent of *Matter and Memory* (1896) to discussing 'movement' and the regrettable consequences of our habit of thinking of it, and experiencing it, as a 'change of place'. Bergson's position is that movement and materials are inseparable, and that they are both fundamentally 'continuous' and 'heterogeneous'. This is the way they are truly lived by consciousness, argues Bergson, when we 'place ourselves face-to-face with immediate reality'.[338] In contrast, the view of movement as a 'change of place' implies a radical 'division' and 'homogenisation' of the material world, into *separate and unchanging bodies*, separate from each other, from oneself, and from the equally unchanging ground, environment or space they traverse. Thus, their changes of position and distance from points of reference is the only changes that these material entities undergo. Not only the moving body and the ground do not change in any other way in the duration of the movement, but nor does the person that is perceiving them. Thus, in order to think about movement, a

[338] Bergson, *Matter and Memory,* p. 218.

body is taken as a point in 'homogeneous space' and its movements is thought of as a sequence of points. This view allows us to calculate or estimate velocities and distances, and to draw trajectories as geometrical lines, for example. The movement is taken to be 'divisible' just like the space and the line we use to represent it. Thus, the division has two facets: it is the division of 'material extensity' into separate objects with clear-cut outlines, and the division of 'time' into discrete points with a certain position in a timeline. This is what Bergson criticises as a 'spatialisation' of time and the 'solidification' of materials.

Bergson's reflections can provide a good start to elucidate the nature of these two different approaches to movement, and to meditate on their impact on our ways of understanding movement in music. I compare these reasonings with some aesthetic and musicological accounts on 'rhythm' and 'movement', as the discussion unfolds. To begin with, at the core of Bergson's postulates is the affirmation of the existence of 'real movement': 'that there is real motion no one can seriously deny: if there were not, nothing in the universe would change, and, above all, there would be no meaning in the consciousness which we have of our own movements'. Likewise, I have started this section from the postulate there is 'real movement' in sounds. Sounds move as they change, and a sound is always changing in its very nature, from its moment of emission, and throughout its all journey and dissipation. Therefore, if there is real movement, we should be able to give an account of it in a non-relative way, but this is not commonly the case. As described by Bergson in the following lines:

> The mathematician, expressing with greater precision an idea of common sense, defines position by the distance from points of reference or from axes, and movements by the variation of the distance. Of movement, then, he only retains changes in length; and as the absolute values of the variable distance between a point and an axis, for instance, express either the displacement of the axis with regard to the point or that of the point with regard to the axis, just as we please, he attributes indifferently to the same point, repose or motion. If, then, movement is nothing but a change of distance, the same object is in motion or motionless according to the points to which it is referred, and there is no absolute movement.

Thus, Bergson's key question: 'But if there is absolute motion, is it possible to persist in regarding movement as nothing but a change of place?'[339] According to Bergson, some of the major problems of this 'common sense' understanding of 'movement' as 'changes of place' or 'displacements', are its relativity and arbitrariness; the recomposition of 'movement' and 'material extensity' in ways that bring them to immobility, discontinuity, homogeneity and

[339] Bergson, *Matter and Memory,* p. 193-4.

divisibility; and that it fails to refer to real/absolute/encountered/experienced movement, because it excludes from the evidence of movement, the sensations and qualities that are part of it. Let's expound on some elements of Bergson's argumentation in more detail. The prevailing habit of perceiving and understanding movement only in a 'relative' manner, by means of relative displacements of a point (or axis) with regard to another, requires the superimposition of a plane, that we can only imagine, where time and space are 'homogeneous and infinitely divisible'. Thus, on this plane we can recompose movement by means of those devices such as lines, points and stationary shapes, which allow us to measure distances, velocities and durations, outline trajectories, specify locations, and so on. Moreover, the focus on those *relative displacements* requires the division of 'material extensity' into separate bodies or objects, separate from each other and from the time and space they traverse, so that they can be actually located anywhere and move location without affecting the whole. Thus, we 'set up a material universe that is discontinuous, composed of bodies that have clearly defined outlines and change their place, that is, their relation to each other'.[340] These independent bodies, 'which are both stable as to their qualities and mobile as to their positions', can only establish 'superadded' relations with each other.[341] One of the main problems of this habit of thought, according to Bergson, is the illusion that these representations of movement coincide with 'real movement', and can give an account of it. For example, as indicated by Bergson, what 'facilitates this illusion is that we distinguish moments in the course of duration, like halts in the passage of the moving body', and 'it seems that the moving body must occupy, at that precise moment, a certain position, which thus stands out of the whole'. He explains that one finds it 'extremely difficult not to attribute to the moving body itself the immobility of the point of which, for a moment, I make it coincide'. This also applies to the stationary shapes of trajectories and contours, or any kind of fixed image. One of the consequences is the tendency to confuse movement with the trajectory it draws in space as 'the line along which it passes', and to treat it like this line.[342] The interpretations based on the principles of this plane, like skeletons, lack the heterogeneity and continuity of movement, as it is really given to us. Bergson's position is that, 'real

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[340] Ibid, p. 197.

[341] As explained by Bergson, 'we constitute bodies which are both stable as to their qualities and mobile as to their positions, a mere change of place summing up in itself, to our eyes, the universal transformation'; and 'we feel ourselves obliged to establish between the severed terms a bond which can only then be external and superadded. For the living unity, which was one with internal continuity, we substitute the factitious unity of an empty diagram as lifeless as the parts it holds together.' Ibid, p. 208-9 and p. 183.

[342] 'Has not movement itself drawn the line? Has it not traversed in turn the successive and juxtaposed points of that line? Yes, no doubt, but these points have no reality except in the line drawn, that is to say motionless. And by the very fact that you represent the movement to yourself successively in these different points, you necessarily arrest it in each of them; your successive positions are, at bottom, only so many imaginary halts. You substitute the path for the journey, and because the journey is subtended by the path, you think that the two coincide'. Bergson, *Matter and Memory,* p. 189-90.

movement' is 'given to my consciousness as an undivided whole',[343] that even though there are 'multiple objects', their separation 'cannot be absolutely definite and clear-cut';[344] and that 'rest' is not 'anterior to motion'.[345] What we distinguish as 'movement' and 'rest' are 'durations of different tensions', which are 'different rhythms', for absolute 'immobility' does not really exist, and 'we have no longer the choice between mobility and rest'.[346]

Hence, Bergson's advice is to find and develop ways of experiencing and describing movement as a 'change of aspect' that is 'effected' 'on the *whole'*, 'a change of which we should then have to ascertain the nature'.[347] We need to 'grasp the reality of movement when it appears to me, within me, as a change of state or quality'. I share Bergson's view that our ways of thinking about movement and the moving entities we encounter in the world, can be grounded on either of those two fundamentally different kinds of details. On the one hand, they can be grounded on the *homogeneous traits* that allow us to fix and divide things, so that their movement can be addressed, for example, as relative changes of location at different speeds, which speeds are also measured by relative changes of distance between points in time and space. On the other hand, they can be grounded on the *heterogeneous traits*, which do not allow us to fix and divide things with precision, but which, in turn, allow us to address the 'changes of aspect' both of things and of the whole field of sensory awareness, as well as the 'changes of state' within oneself. Thus, this second ground is necessary, in Bergson's argument, to address the 'partial coincidence' between the indivisible flow of our sensations of movement, and the material moving entities we encounter in reality. Based on what can be accessed through introspection as well as through encountering the world and becoming with the world, Bergson put forward a very important consideration: if we can *experience* movement as a *heterogeneous and undivided* flow, if we can consciously grasp those fundamental features in our 'sensations of movement', then there must be something in *reality*, in the material things, in real movement, in time and in matter itself, that is also *heterogeneous and undivided.* For both, reality and our consciousness of it, *must coincide, at least partially,* not only because our senses and faculties are also a part of 'material extensity', but mainly because there must be a continuity between matter and consciousness for our

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[343] Ibid, p. 189-191.

[344] Ibid p. 208.

[345] 'Accustomed to seek its fulcrum in a world of ready-made motionless images, of which the apparent fixity is hardly anything else but the outward reflection of the stability of our lower needs, [our imagination] cannot help believing that rest is anterior to motion, cannot avoid taking rest as its point of reference and its abiding place. Therefore it comes to see movement only as a variation of distance […]. Ibid, p. 217.

[346] Ibid, p. 193.

[347] Ibid, p. 196.

senses and faculties to be able *to borrow from the encountered matter what they contract as things and events in the world*. In Bergson's argument, there is no real distinction between the material changes as they happen in our 'sensations of movement', and 'movement' as it happens in material extensity: '*All* sensations partake of extensity'.[348] Thus, one of the most lamentable consequences of the habit of understanding movement as a 'change of place', in Bergson's view, is the destruction of any correspondence between movement, and our sensations of it, which he refers to as 'quality':

> Having assimilated movements to space, we find these movements homogeneous like space; and since we no longer see in them anything but calculable differences of direction and velocity, all relation between movement and quality is for us destroyed. So that all we have to do is to shut up motion in space, qualities in consciousness, and to establish between these two parallel series, incapable, by hypothesis, of ever meeting, a mysterious correspondence.[349]

Movements are continuous and full of heterogenous details, to which our sensations and perceptions can attest, but we simply brush them aside. Bergson's argument is that it is not simply that we are missing certain aspects which could be accounted for if we would go into further detail. His point is that the very projection into homogeneous space is in itself incapable of giving an account of any aspect whatsoever, that is of any of the traits that we directly extract or contract from the continuity and heterogeneity of movement and material extensity. In other words, any representation into that space, no matter of how detailed it can get, would remain 'denuded of quality'.[350] Here, Bergson is not making a distinction, in our experiences, between qualities as 'recognisable traits' and the traits that 'can only be sensed' and belong to the level of 'intensity', which Deleuze addresses in detail. He is nonetheless setting some ontological grounds for that distinction. What Bergson calls 'quality' refers to the continuous and heterogeneous traits that we can encounter directly in an experience, and the recognisable traits that the most common academic and non-academic use of the term 'quality' refers to, are too 'denuded' of the continuous and heterogeneous traits that Bergson is pointing at. Overall, Bergson's arguments coincide with Deleuze and Guattari's arguments, and we must keep in mind Deleuze and Guattari's problem of 'strata' and their emphasis on the passages, in both directions, between the level of the relative stability and separability of material things that allow them to conform the 'plane of organisation', and the level of their always changing, continuous and heterogeneous nature on the 'plane of immanence', which is

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[348] Bergson, *Matter and Memory,* p. 216.

[349] Ibid, p. 218.

[350] Ibid, p. 217.

not always available in our encounters with things, or not always relevant (i.e. passages from the level of recognition to the level of intensity and vice versa).

Conversely, thinking exclusively of matter and the material world as a web of separate bodies that can only establish superadded relations with each other, has led, according to Bergson, to 'the hypothesis of a consciousness with inextensive sensations, placed over against an extended multiplicity', with no partial coincidence and which makes it impossible to render intelligible 'the process by which we grasp, in perception, at one and the same time, a *state* of consciousness and a *reality* independent of ourselves'.[351] The usual way of solving the problems posed by this dichotomy, has been to consider 'the divisibility of matter as entirely relative to our action thereon'.[352] Thus, this habit has been a matter of turning our attention *only* to the traits that can be homogenous enough to allow us to make use of things in predetermined ways. This solution is simply based on a more or less conscious decision to just ignore the continuity and heterogeneity of things and events, and to confine our ways of thinking only to what can be done by means of making the encountered entities coincide with our ways of dividing them and fixing them for practical purposes.

PRELIMINARY NOTES ON RHYTHM AND RHYTHMIC FORMATIONS

The different approaches to music that can be found in academic and non-academic literature, generally meet in the point that 'rhythm' is the music dimension on which *the sense of movement* of a piece of music is based, without necessarily agreeing on their understanding of what 'movement' is. As musicologists usually comment, with few exceptions, this understanding is rarely made explicit, let alone problematised.[353] The entry 'rhythm' of the

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[351] Bergson, *Matter and Memory,* p. 203-4.

[352] Ibid*,* p. 219. Bergson is criticising the habit by which the flow of consciousness is seen as a parallel series, never meeting with the movement of matter. When we encounter something, a gap is created between a sensation attributed to the aspects or appearance of a thing, and its existence.

[353] For example, as suggested by Robert Gjerdingen (1999), quoted by musicologist Eric Clarke: 'if musicians — and listeners in general —concur in sensing motion in music, there is little agreement about the *nature* of the motion…' Eric F. Clarke, *Ways of listening. An Ecological Approach to the Perception of Musical Meaning* (New York: Oxford University Press, 2005), p. 70. Or as suggested by Justin London: 'When music theorists muddle through issues of rhythm, meter, duration, grouping, tempo, phrasing and the like, we often forget that we are also meddling with broader issues of time, motion, temporal continuity, and temporal experience'. Justin London, 'Hasty's Dichotomy', *Music Theory Spectrum,* 21 (1999), p. 260. Some exceptions are: Clarke's discussion of the question: '*what* is moving and in what kind of space does this motion occur?' Clarke, *Ways of listening.* p. 70; Robert Adlington's discussion on 'experiences of change that are at odds with the ways in which we commonly understand time'. Robert Adlington, 'Moving Beyond Motion: Metaphors for Changing Sound', *Journal of the royal musical association,* 128 (2003), p. 297; and Larson's discussion of 'musical forces', among others. Steve Larson, *Musical Forces. Motion, Metaphor, and Meaning in Music*. (Indiana University Press: 2012). I enlarge on these accounts later on in this section.

Oxford Music Online (or *Grove Music Online*), begins by mentioning that 'in etymological discussions of the term there is a tension between rhythm as continuously "flowing" and rhythm as periodically punctuated movement',[354] and centres on the second perspective, in line with many academic usages.[355] 'Punctuated movement' corresponds to a view of movement as changes of place and displacements. What primarily determines 'rhythm' from the perspective of 'punctuated movement' is the 'location' of the 'onsets' of sounds, in a metrical or non-metrical 'timeline'. The location of sound-sources in 'space' is usually taken as a different dimension, that is not 'rhythm' but 'spatialization',[356] but the same principle applies to both, as well as to the ways of thinking of pitches and melodic contours, or any of the music variables that we represent with points and locations, including the cases when these are not points but zones around an approximate centre point. In other words, a 'location' can be a point in space, a point in time, or a point in a pitch-based scale or a continuum. In this section, I begin by centring the discussion on 'rhythm' and 'time', but its applicability to 'space' and 'pitch' should be borne in mind, and will be also considered in this section and throughout the thesis.

An onset is the moment when a sound begins, conceived as a point, and the location and displacement of an onset, is always relative to other points of reference. If the onsets of different series of sounding notes can be synchronised with the same pattern of points on a timeline, they can be said to 'express the "same" rhythmic pattern'.[357] This rhythmic pattern is what is frequently called a 'pattern of durations', which is primarily determined by durations from onset to onset. As also indicated in the encyclopaedic entry I am referring to, 'musical durations (and hence rhythmic groups) are almost exclusively recognised from note onset to onset'. *An onset is a durationless instant*, and everything that happens during the duration of the sound is fundamentally dismissible in a pattern of durations. In other words, only the relative location of the onset is relevant, the movement of the sonic materials is not. The produced sense of movement and rhythm is therefore the effect of relations between onsets.

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[354] Justin London, 'Rhythm', in *Grove Music Online* (2001), p. 1.

[355] A notable exception is the reflection on the 'continuity' of rhythm expounded by musicologist Christopher Hasty. The difference with my approach to rhythm, is mainly a matter of focus. Hasty's observations focus on the articulation of the *temporal* flow, by means of projection. He addresses the question of how we project durations as they gradually unfold, and the way meter and rhythm build themselves from within, in their becoming, instead of as already formed structures, based on a number of types. In turn, I focus on the *material* flow, and the *haptic* variations of sound. The way I bring the metric-temporal aspects into play is, nonetheless, consistent with many of Hasty's insights, but only to an extent since the repertoire is different and I am not focusing on the study of 'metre', but only bring it into play when it is related to haptic variations. Hasty, *Meter as Rhythm*.

[356] See for example, Allan F Moore, Patricia Smith and Ruth Dockwray, 'A Hermeneutics of Spatialization for Recorded Song', *Twentieth-century music,* 6 (2011), 83-114.

[357] London, 'Rhythm', p. 5. Another important defining feature of a pattern of durations is that its durations are *recognised.*

To be sure, there is a number of secondary sonic relevancies that are usually considered to be part of the form of a pattern of durations, such as the distribution of accents, the duration from onset to end (where the end of a sound is also conceived as a point), the duration of silences between end-points and onsets, the interplay of patterns and metre, and the variety or uniformity in other dimensions such as pitch, timbre and dynamic level, especially through their effect on accents and segmentation (usually based on criteria of proximity and similarity).[358] When taking rhythm as a pattern of durations, these features are all subsidiary to the position of points on a timeline.

The durations of a *pattern* of durations, that is the durations that are determined by positions of durationless onsets in a timeline, are not really 'durations' in the sense developed by Bergson, but distances between points. The points only 'change their place' in the timeline, 'that is their relation to each other'. In Bergson's sense of the term, 'duration' is not the amount of time (i.e. 'homogeneous' or 'abstract' time) that a certain movement lasts or takes, but it is what Deleuze and Deleuze and Guattari call its 'becoming', which definition I provide in previous sections (see for example I.1.4. and I.2.). This means that the 'duration' of a movement coincides with the 'real movement', which has its own rhythm(s),[359] and can partially coincide with our sensations of the material changes involved. From the point of view of time, we tend to 'attribute instants to duration' whereas 'it cannot have any'.[360] The sense of time implied in a duration is indivisible, continuously passing, unfolding, changing and extending during the course of the duration. So, Bergson argues that when divided into instants, a duration cannot coincide with the movement and the continuous flow of time and matter. Therefore, the durations that form patterns, are the opposite of the sense of 'duration' as 'becoming' suggested by Bergson, and the measures of 'homogeneous time' cannot give an account of a 'duration', in the bergsonian sense.

When rhythmic patterns are conceived as 'punctuated movement', only marking or grasping the *onsets* of the sounds, suffices to feel and conceive movement in a piece of music, while the whole journey of the sounds, where its grain, edge and consistency unfold, which extend all the way between points, are regarded as secondary or extraneous to movement. If we listen, for example, to the drums of Amon Düül II's 'Archangel's Thunderbird' (*Yeti*, 1970), from when a repetitive order is established, and we appreciate how relevant to the sense of

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[358] See discussion on Meyer's account of these criteria in London, 'Rhythm', and Middleton, *Studying Popular Music*.

[359] 'In reality there is no one rhythm of duration; it is possible to imagine many different rhythms which, slower or faster, measure the degree of tension or relaxation.' Bergson, *Matter and Memory,* p. 207.

[360] Ibid*,* p. 190.

movement that this drum set can achieve, are *the contracting sound* of the closing half-open hi-hat, and *the expanding sound* of the long cymbal, we can start envisaging the restrictions of exclusively putting into practice the understanding of rhythm as patterns of durations. From the point of view of 'durational values' and 'durational patterns',[361] these continuous movements of contraction-expansion are extraneous to 'rhythm' and the rhythmic formation they create along with the durations. These cymbals would be conventionally treated as 'accents' marked by changes of timbre and texture within a pattern of durations and a metre, thus embodying a secondary function. In turn, I would suggest that, from another point of view, the sonic traits of the 'continuous variation' of these cymbals, can be experienced not only as the kernel of the movement that this drum kit is achieving, but also an intrinsic component of rhythm, as I explain later on in this section. Therefore, these sounds and the rhythmic formation they create demand a different understanding. A chief question is to determine whether it is 'movement' or 'rhythm', or both, that need a different understanding. Of course, this problem can be illustrated with countless of other possible examples. Yet, by way of introduction, I think that an appreciation of the liveliness of these cymbals' movements of contraction-expansion, with their marked haptic traits, and the ways they inextricably connect with the other elements of the track in an intricate rhythmic aggregate, can work as a suggestive introductory example to reflect on. My endeavour here is to think about the meaning and reach of the notion of 'rhythm', in order to adequately include these non-punctuated movements in our discussions about it. Accordingly, I am not seeking to provide a best possible understanding of rhythm that can apply once and for all to every context, case and occasion, but just one that can be appropriate for the aesthetic problems posed by the movement of the sonic materials in certain rock recordings.

If we primarily take into account the onset positions, and we consider the other variables in a subsidiary way, the rhythm of the drum kit of 'Archangel's Thunderbird' could be satisfactorily described as a pattern in the following usual terms. First, we can take the hi-hats as marking the quavers of a 4-beat metre, where the 'beat' or 'metric unit' is the crotchet (see Figure 1). Of course, we could also use a 4-beat metre where the hi-hats correspond to the beat (the crotchet) in a more conventional way. However, I have opted for the first option in order to fit in one bar the whole pattern or rhythmic formation before it is repeated. So the *pattern* itself is formed of 8 regular hi-hat quavers with two 'accents' (in the 1st and 6th quavers) marked by changes of timbre: the upbeat closing half-open hi-hat in the second quaver of the third beat, and the long cymbal in the first beat. This is played over a sequence of alternate kicks and snares that complete the pattern. First the kick on the first beat, then the snare on the second beat, and then their subdivided alternation into semiquavers (see Figure 1). This

[361] London, 'Rhythm', p. 16-17.

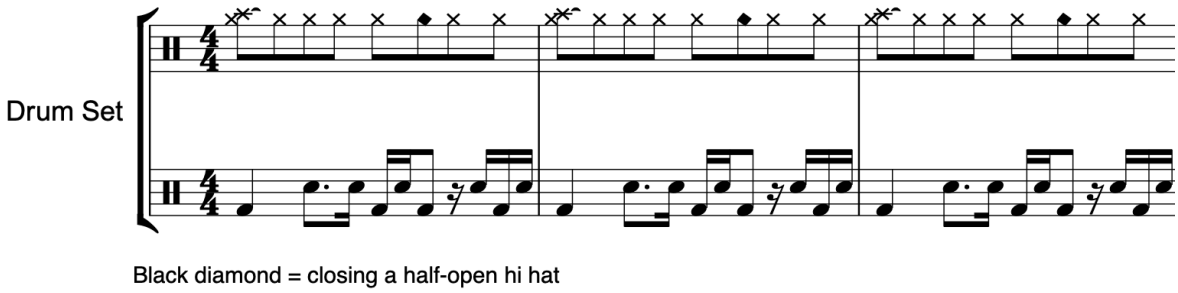
subdivision forms a faster 4-notes rhythmic group or figure (snare-kick-snare-kick), within the pattern, that repeats once. The second instance of this figure is separated from the first by a duration of a dotted quaver (if we start counting from the onset of the last kick). In relation to the metre, the position of each instance is different: the last kick of the second is elided with the first beat of the whole pattern, whereas there is no overlap in the first instance, and its last kick is not a downbeat but an upbeat. This makes the two rhythmic figures themselves feel slightly different: one can be felt as an inverted version of the other, one propelling towards the upbeat, the other towards the down beat.

The elision encourages a segmentation 3-1, so there is also a single 3-notes figure (snare-kick-snare) nested in the pattern. We could also add the measure of the tempo, 116 bpm, as another feature of the pattern of durations, which could be broadly characterised as not slow but not very fast. Again, only the onsets of the sounds are needed for determining a tempo, which can be defined as a sense of speed determined by the *inter-distance* of consecutive onsets. Of course, the experiential process of *figuring out* a pattern like this takes less time than putting it in words, for it can happen in direct perception and almost intuitively, especially in cases when one is familiar with the instrumental performance in question, due to the well-known close relation between perception and action. However, both the verbal account and the perception require some form of dismembering and grouping, so one can aim at rendering the verbal description as consistently as possible with one's own 'intuitive segmentation'.[362] Moreover, one can gain awareness of more sonic details through the exercise of verbalising or schematising the pattern. So far, I have taken into account the recognition of timbres and onsets positions (in relation to pulse and metre) as configuring the rhythm. However, I have already been passing back and forth from the groupings to the sense of movement, in the propulsion and inversions. This can be taken already as a step towards considering the pattern as a rhythmic formation from the point of view of the movement of the sonic materials. We can see how this system itself already allows for passages from the spatialisation of movement as relations and variations of distance between onsets and the arrangement of timbres, towards movement as continuous variation. For example, if we follow and feel the inversions as being constituted through a non-rigid motion or material deformation, and we can already explore this passage between the metric arrangement of sounds in a pattern and the material continuum from which the inversion emerges not as a shape but as movement. In short, in this case, the constructive exercise of describing the

[362] I am using the words of musicologist Richard Middleton who describes the analytical method of Nicolas Ruwet, for example, as 'checking intuitive segmentation through more formal procedures'. In line with the concerns of my investigation Middleton problematises the selection of parameters in Ruwet's and in any method in terms of which parameters are to be regarded as pertinent and on what grounds? Middleton, *Studying Popular Music,* p. 189 and 183.

pattern helped me to realise that there was an inversion of a figure, which I could then follow more closely and became the rhythm of the materials instead of a pattern.

Figure 1: Sketch of drum kit pattern in 'Archangel Thunderbird' by Amon Düül II



All in all, this description seems strikingly incomplete, if rhythm is to be considered beyond patterns as the music dimension on which the sense of movement is based. 'Patterns of durations' cannot in themselves give an account of the *movements of contraction and expansion, and all forms of non-rigid motion,* for groups of onsets are void of the *continuous variation* of the sonic materials.

Likewise, timbres and dynamic levels only require a minimum number of cues to be recognised, and this recognition does not require the listener to feel the movement and changing aspect of their continuous variation. In turn, it seems to me that from the moment when one joins with the movement of these notorious continuous variations, everything changes: the "ear" itself, that is our sense of listening, can acquire a different function, namely a *haptic* function, which can also become the way of listening to the other elements, which perhaps did not in themselves have the power to prompt this function in the first place. The contracting hi-hat takes all the duration of the quaver in closing, ending in the completely closed hi-hat hit of the next quaver, that works as its limit of contraction. The expanding cymbal, superimposed to the pattern for more than a crotchet, can be felt as a sonic haze, or as a *hazy opening* in conjunction with the reduction in the kick-snare activity. The clear-cut element of the second beat, a solitary aggregate of snare and closed hi-hat stands out in the middle of this opening, *protruding*. Thus, I am taking the *continuous variation* of what happens 'during the duration' of the sounds as the kernel of movement, and the onset positions as subordinated to it, providing a secondary order that can function as a necessary *frame* or *armature*. Moreover, I am grasping the onsets of the sounds not as points but as attacks with characteristic surfaces, which can thereby be felt haptically as edges of the sonic

material. From this point of view, the elements that surround the closing hi-hat, also participate in the formation of these contracting-uncontracting phases (I am using the prefix un- to denote reversals here). The first instance of the snare-kick-snare-kick figure *together with* the regular hi-hat, create a sense of increasing activity that not only seems to *build towards* the moment of contraction of the closing hi-hat, but also executes a form of *jagged pumping*, which works in itself as a deformation of *one and the same* material. This continuity can be firstly based on the timbral continuity of the regular hi-hat (remaining a hi-hat sound whether closed or closing), and the other timbres *cling to* the hi-hat and its continuity, so the different timbres work as different *textural* stages of the deformation. Therefore, I think there is a fundamental distinction to make between a combination of timbres and a *haptic variegation,* or *a haptic aggregate.* The second instance of this aggregate, just after the closing hi-hat, works as a *reversed pumping movement* of the first, this time *towards* the maximum expansion achieved by the long cymbal. Considering this alternate movement as metrically inverted versions of the same rhythmic figure made of onsets, the sense of inversion depending on if the figure ends in an upbeat or a downbeat, is simply not enough to describe the sense of the movement I am considering here. To be sure, the change in the metrical disposition certainly contributes to the sense of reversal, which can be understood either as a stationary shape or a forming and deforming reversal. Moreover, the metrical disposition does not in itself give an account of the sense of 'pumping' that participates in the contracting-uncontracting movement.

MOVEMENT AS DISPLACEMENTS IN MUSICOLOGY AND NOTES ON VIBRATION

The view of movement as changes of place or displacements is the most common view in musicology. For example, this understanding is consistent with Clarke's use of the concept of 'spatial displacement in time' in his definition of 'motion'.[363] It is also consistent with musicologist Steve Larson's focus on the location of onsets in the linear variables of 'durations and pitches', in his concept of 'musical forces'. According to Larson, 'forces' are closely related to 'motion' in that they are 'tendencies to move in certain ways', and we hear 'sound as motion' via 'metaphor', as 'a special type of analogy, one that involves cross-domain

[363] As indicated in a footnote, Clarke uses '"motion" to denote the abstract category of spatial displacement in time, and "movement" to denote specific examples of particular spatial displacements.' Eric F. Clarke, *Ways of listening. An Ecological Approach to the Perception of Musical Meaning* (New York: Oxford University Press, 2005)., p. 209.

mappings'. Thus, he explains that the experience of 'physical forces', such as 'gravity, magnetism and inertia', 'shapes our experience of musical motion'.[364]

Clarke's ecological approach focuses on the *specification* of 'real movements', as 'perceptually real events that happen not to be present'.[365] The possibilities suggested by Clarke for '*what* is moving', include: *the listener,* when they 'subjectively identify' with the specified or represented motion; *the performer or the sound source,* when sounds are perceived as evidence of the movement involved in its production; or *something else,* which could refer either to 'the abstract and metaphorical movement of musical material' or 'the imagined movements of fictional characters'. Any of these perceived movements can work as evidence of 'sensorimotor contingencies'. Clarke distinguishes between 'truly perceptual' and 'metaphorical', and between the ecological principle of affordances and the principle of cross-domain mappings, which can, nonetheless 'achieve a somewhat similar outcome'.[366] In any case, none of these principles consider the possibility of listening directly to the real movements of the sonic materials, in our perceptions and sensations. Clarke presents the general view that 'since motion is a property of objects in space', and 'there is, after all, no real space that musical materials inhabit (so the argument goes), and musical elements (pitches, rhythms, textures, etc.) have no concrete material existence', then 'the whole idea of musical motion — if taken literally — is a nonstarter'.[367] He specifies in a footnote that 'in terms of physics, of course, sound is always the vibratory movement of the molecules of the medium — but this is an ecologically irrelevant level of description'.[368] In turn, I share the view that the material vibratory movement of sounds is not necessarily irrelevant in our listening experiences, neither from an ecological nor from an aesthetic angle. There is a continuum between the micro and macro levels of vibration and thresholds of perception between them that can vary in different occasions. The fact that we do not perceive or listen to the vibrations at levels that are not accessible for the human naked senses, does not mean that the we cannot hear the vibratory nature of sound at all. On the contrary, I can feel it as always present, Depending on the way of listening it can be ecologically perceptible and aesthetically sensible in the haptic dimension of sound, swarming with restless micro details that produce

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[364] '[…] our experience of physical motion shapes our experience of musical motion in specific and quantifiable ways - so that we not only *speak* about music as if it were shaped by musical analogs of physical gravity, magnetism and inertia, but we also actually *experience* it in terms of 'musical forces'. Steve Larson, *Musical Forces. Motion, Metaphor, and Meaning in Music.* (Indiana University Press: 2012), p. 1-2 and 21-22.

[365] Clarke, *Ways of listening,* p. 71.

[366] Ibid, p. 74 and 203.

[367] Ibid*,* p. 67.

[368] Ibid*,* p. 209.

a vibratory haptic grain, for example. We can directly perceive and feel the highly vibratory nature of the electric grain of a distorted guitar sound, for example.

The argument that we can sometimes access the vibratory nature of seemingly steady sounds is consistently maintained by the intellectuals I am gathering here. For example, coming back to Bergson, when he says that there is 'no real distinction' 'between quality and movement', he is explicitly suggesting that the apparent motionless qualities of things, can be *resolved into vibrations* in our experiences. Bergson is exposing two different experiential processes. On the one hand, the process by which 'to perceive means to immobilize'; and on the other hand the process by which we can develop attunement to vibrations. In Bergson's view, not only there is real motion, but everything is continuously moving. Therefore, he presents a view of 'matter', and the 'material universe', as an 'uninterrupted continuity' of 'numberless vibrations'.[369] Matter shares this vibratory nature with sensation. The concept of 'sensation', as developed by philosophers Erwin Straus, Deleuze, Maldiney and Elizabeth Grosz, emphasises the possibility and importance of feeling vibrations, and with them rhythm (vibrations as an intrinsic aspect of rhythm), and is consistent with Bergson's understanding of sensation and quality as inseparable from real movement. It is a form of 'becoming' that evidences a common ground, a common becoming, a common material reality (the 'molecular level' and its relation to this common becoming as a 'zone of proximity' that Deleuze and Guattari emphasise and I address in Part II), between the sensing being and the sensed material. As suggested by Straus, in a passage also highlighted by Grosz and Maldiney: 'I become only insofar as something happens, and something happens (for me) only insofar as I become'.[370] As Grosz writes: Sensation is something that 'subject and object share, yet it is not reducible to either subject or object or their relation'.[371] Deleuze aesthetic studies insistently considers that possibility of passage from a level of cancelled difference, to the level where materials are vibration, which is related to 'intensity'. Concerning sound, Cox also points at the importance of those passages from one level to another in our experiences: the level of 'intensity' where sound is 'vibration' and 'a nonlinear flow of matter and energy on par with other natural flows';[372] and the level of its 'concretisation, actualisation, and coding — the various ways it has been seized, slowed, and organised into more or less discrete forms, structures and entities'. Thus, Cox emphasises both the 'distinction between the intensive and the actual', and that they 'present a continuum', the intensive being the material condition of

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[369] Bergson, *Matter and Memory,* p. 208.

[370] Erwin Straus, *The Primary World of the Senses. A Vindication of Sensory Experience* (New York: The free press of Glencoe, 1963), p. 351.

[371] Elizabeth Grosz, *Chaos, Territory, Art. Deleuze and the Framing of the Earth* (Chichester: Columbia University Press, 2008), p. 8.

[372] Cox, *Sonic Flux,* p. 43.

the material formations we encounter.[373] (I explain Deleuze's distinction between the 'virtual' and the 'actual' in I.2.) In line with Deleuze, Cox observes how artworks have the power to bring about those passages: 'The richest works of sound art, I suggest, are unique among audible phenomena in that they disclose the intensive dimension of sound and its processes of actualization'.[374] Thus, the argument is that the intensive level of material reality is 'ordinarily hidden' but 'certain experiences (notably aesthetic ones)' 'disclose' it, and bring it to 'sensory awareness', so that, sometimes, it can be 'apprehended via the senses'.[375] Summing up, vibrations are regularly overlooked in our experiences, again because they are useless from the point of view our practical action upon things. Bergson explains that the independence of our action upon surrounding matter becomes more and more assured in the degree that we free ourselves from the particular rhythm which governs the flow of this matter. Thus, 'for the greater facility of action and of language',[376] we carry out a 'division' and 'solidification of the real', or we only focus on the most solidified things and aspects of things: 'perception effects the division of matter into independent objects', while 'our memory solidifies into sensible qualities the continuous flow of things'.[377] In these operations of 'division' and 'solidification' we do not need to be consciously attuned to the vibrations and the continuity of things and events, and we do not need to experience sensations. As explained by Bergson, the 'utilitarian work of the mind' can content itself with perceiving, experiencing and thinking about things (including oneself) as having *clear-cut limits* and *motionless qualities*, and with connecting one thing to another only by means of relations.

In another facet of the same argument, Grosz explains that material vibrations *can* be felt in experiences that go 'beyond the need for mere survival'.[378] She contrasts processes for which most vibrations are useless, to other processes such as 'expression and intensification' that she links to the 'force' of 'vibration', from a Darwinian perspective:

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[373] Ibid, p. 29.

[374] Ibid, p. 8.

[375] Ibid, p. 5, 8, 28-29 and 221. And expanded in a footnote: 'Deleuze maintains that, while morphogenetic processes are ordinarily hidden and intensive differences tend to be canceled in the actual entities of empirical experience, exceptional physical and mental states caused by vertigo, delirium, and psychedelic drugs allow these processes to be perceived and felt. Moreover, he argues that modern and contemporary art, cinema, and music explore these intensive processes and bring them to sensory awareness, as do the "minor sciences" of metallurgy, hydrodynamics, and nonequilibrium thermodynamics'. (p. 221).

[376] Bergson, *Matter and Memory,* p. 183.

[377] Ibid, p. 210.

[378] Grosz, *Chaos, Territory, Art*, p. 7.

> There is something about vibration, even in the most primitive of creatures, that generates pleasurable or intensifying passions, excites organs, and invests movements with greater force or energy. This force is not directed to survival, to the acquisition of pragmatic skills, except perhaps indirectly; instead it is linked to expression and intensification, to sexual selection […]. Living beings are vibratory beings: vibration is their mode of differentiation, the way they enhance and enjoy the forces of the earth itself.[379]

The problem, according to Bergson, is that while we are conscious in our sensations of the undivided continuity of movement and the vibrating nature matter, we have acquire the habit of overlooking it and dismissing it. Furthermore, also in line with these writers, and expressly suggested by Grosz, I start from the basis that sounds are also material and vibrating, that their effects on the listener can be experienced as real movement, and that *the textures* of single sounds or sonic aggregates, which are commonly taken as motionless qualities, can, in turn, also be primarily experienced as real movement and rhythm.

In some musicological accounts, 'movement' is not restricted to 'rhythm'. For example, Clarke discusses 'motion' in relation to the 'event-detecting nature of the human auditory system',[380] where 'timbre', 'pitch', 'loudness', 'texture' or any music domain can be perceived as *specifying,* or derivatively *representing,* movement,[381] not the movement of the sounds themselves but of their sound-sources and the represented objects and subjects. In other words, Clarke's approach to 'movement' is not centred on 'rhythm', but on any of 'the motion-specifying properties of sound',[382] and 'rhythm' is *just one* of the music dimensions on which the sense of movement can be based. The comprehension of 'rhythm' as 'punctuated movement' that is the most common in in 'established music theory', sustains this position. In Clarke's analyses, for example, the treatment of the domain of 'rhythm' mostly revolves around the perception of patterns, groups, figures, proportions, regular and irregular orders, structures, outlines, and so on, which all involve details that can be considered within the domain of 'relations between onsets'. Thus, it is perhaps the limitations of confining 'rhythm' to this domain that has encouraged Clarke to separate matters of movement from matters of rhythm, and to consider 'rhythm' as just one possible way of conveying motion among others, for it would only be able to convey 'punctuated movement'. As a matter of fact, the questions addressed by Clarke do

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[379] Ibid*,* p. 33.

[380] Clarke, *Ways of listening,* p. 63.

[381] I am not making a distinction between the terms 'motion' and 'movement' in this discussion. This derivative relation between specification and representation is discussed in my introduction.

[382] Clarke, *Ways of listening,* p. 75.

not require movement and rhythm to have a special relation, for it is possible to consider the ways 'movement' is being specified or represented without resorting to the concept and domain of 'rhythm'. There are several factors concerning the understanding of these notions, along with an emphasis on the 'perception of meaning', that make Clarke's approach useful for addressing the level of 'recognition' in our interpretations, and thus consistent within its reach. However, while I share Clarke's view that any music domain can be related to the sense of movement, I also share the view of other intellectuals that, in some cases, when one is addressing what Bergson means by 'real movement' (non-represented, non-projected in spatiotemporal grids and not based on displacement or change of location), rhythm and movement have a privileged and close relation, so that any kind of trait can be relevant not only to the formation of movement but also to the formation of rhythm. Thus, the problem turns into whether or not, in those cases, rhythm should be explored as a supra-dimension. Thus, I think that both the general agreement that rhythm is the music dimension on which the sense of movement of a piece of music is based, and the widespread interest in developing these notions in conjunction, that one can observe in music practices and theories, are not misleading. The main aesthetic challenge is, in my view, to develop an understanding of these notions that can enable us to explore this direct connection in our encounters with the sounds.

Summing-up. the tension between a 'continuously flowing movement', and a 'periodically punctuated movement', is, in my view, not merely of etymological interest, but also of ontological interest (as many other etymological insights do indeed reveal). It is directly related to a tension between the divisibility of homogeneous or abstract time and space, and the indivisibility of material extensity and its intrinsic movements, as they take place in our consciousness when we are 'face-to-face with immediate reality', as argued by Bergson.

A 'MOVEMENT IN PLACE'

Thinking about movement and experiencing it as *a change of place* of separate objects or bodies, has a series of implications that makes it impossible to refer to *the movements of material changes*. Recall, for example, the visual event of a white cloud dissipating into the blue sky, or the auditory event of a hazy cymbal dissipating into silence. That dissipation, that way of disappearing as the ground surfaces, that material change, is a real movement. It takes place in a certain way in my sensory encounter with it, which cannot be described as something moving from one place to another, or as a large number of small particles changing their position in space (although it could be represented by those particles at a chemical molecular level for practical purposes, for example, in the case of the cloud). Likewise, we can

think of a multitude of different movements, happening everywhere, all the time, and in all kinds of material entities, including sonic entities, that evidence the ineffectiveness of this rationale. For instance, the movement of any form of gradual or abrupt material change we may encounter, such as the movement of something contracting, expanding, being cut, thickening, thinning down, roughening, protruding sharply, coarsely or smoothly, melting or vanishing, and so on, along with the movement of the different rhythmic compounds that these events may form, would be all completely overlooked from a view of movement as a change of place. The movement of a material change is a moving form. In other words, in material changes, form and movement are inseparable. This moving form is made of the material features of the encountered entity. Moreover, there is movement even in the encounter with an entity that appears to us as having unchanging material features. This movement is also a material change subsisting in the very event of haptically feeling the material features, but we are not always aware of it. Thus, for example, there can be movement not only in something roughening but also in its roughness, and we can therefore think of a texture as an event, and not only as a thing or still appearance. The changes and textures of sonic materials are events which movement cannot be approached as a change of place and needs to be approached as a 'movement in place'.[383] This argument has been put forward by Deleuze, Deleuze and Guattari, Maldiney, Bergson, and Ingold among other intellectuals of the twentieth and twenty-first centuries. It constitutes, in my view, a distinction that makes a paramount difference in our reflections and experiences of movement in music, and that is especially relevant to *haptic listening*.

An approach to the movement of material changes as a 'movement in place' is not a common subject of musicological enquiry, but has been addressed in other disciplines. By way of introduction, a wide-ranging example is presented in an article by Ingold, to which I frequently turn in this thesis, about 'surfaces, and ways of treating them, as primary conditions for the generation of meaning'. Ingold brings into play a reference to this kind of movement by art critic John Ruskin, who attributes it to the 'the surface of the earth', which 'in the textures of its meadows and forests, rocky outcrops, moor and heath', 'moves but cannot leave its appointed place'.[384] Ruskin's suggestion of a 'movement in place' in the textures and reliefs of the surface of the earth, is consistent with the theoretical arguments I have gathered here. One of those arguments is developed by Deleuze in his 'logic of sensation'. He brings to the fore and discusses the sense of 'deformation', as a different kind of movement, which does

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[383] I have adopted this way of naming this kind of movement from Deleuze, Gilles *Francis Bacon. The Logic of Sensation*. trans. Daniel W. Smith (London: Bloomsbury, 2017), p. 31. As I explain throughout this section, it is completely consistent with the relevant points made by the other philosophers and intellectuals occupied with this problem.

[384] Tim Ingold, 'Surface Visions', *Theory, Culture & Society,* 34 (2017), p. 99; and Ruskin's quote in the same article, p. 104.

not consist in things changing their position in space, but it is still movement: 'it is a movement "in-place," a spasm', writes Deleuze, it is not 'displacement', but the 'elasticity' of 'sensation' ('its *vis elastica*'),[385] and so on. I think that this kind of movement can strikingly reveal itself both in sonic textures or in the haptic dimension of sound in general, and in the ways sound changes. Yet, it can be very difficult to verbalise it and explain it, both in general and for individual cases. It is possible to notice how the vague descriptions of the 'feel' in music discourse, are partly a symptom of this difficulty and certain habits of thought that somehow avoid speaking and thinking about this different kind of movement directly. This problem largely prevails in the habits of thought that rely exclusively on the existing categories and principles of reason and of language, both in the sphere of music and in general, without considering their limitations and other possibilities. In short, reducing, shrinking, fixing, for practical reasons can become a problem. Consequently, I have been centring a great deal of my aesthetic studies on this kind of movement, on the ways it takes place in sounds, and more specifically in the sounds of individual pieces of music that may fall, in one way on another, within the province of rock recordings. The different challenges that this sense of movement presents in each individual piece of music, makes the need of going beyond the reductions and generalisations supplied by our habitual mind frames the most evident and pressing.

FACILITATION

Bergson insistently argues that the reason for excessively relying on the representation of movement based on changes of place, is 'for the greater facility of action and of language'.[386] While it can be useful and unproblematic in many situations in our lives, works of art, including rock recordings, can be particularly resistant to conforming to this *facilitation.* As pointed out by many philosophers and art theorists, it is possible to explore in art history a consistent drive to provoke the exact opposite, as I discussed in the introduction. In relation to this point, I think it is relevant to bring into play some evidence of this persevering agenda.

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[385] When Deleuze says, 'what interests Bacon is not exactly movement, although his painting makes movement very intense and violent. But in the end, it is a movement "in place", a spasm, which reveals a completely different problem characteristic of Bacon: *the action of invisible forces on the body* (hence the bodily deformations, which are due to this more profound cause)', we can infer that what he means by 'not exactly movement', is that the movement he is referring to, i.e. the movement of Bacon's painting, is of a different kind. It is not what we *normally* call movement, it is not the displacement of contours, and it is not the changes of place of separate objects or particles. ('even when the contour is displaced, the movement consists less of this displacement than the amoeba-like exploration the Figure is engaged in inside the contour'). Deleuze. *Francis Bacon,* p. 31.

[386] The error of empiricism, in Bergson's view, 'is not that it sets too high a value on experience, but that it substitutes for true experience, that experience which arises from the immediate contact of the mind with its object, an experience which is disarticulated and, therefore, most probably, disfigured — at any rate arranged for the greater facility of action and of language. Bergson, *Matter and Memory*, p. 183.

In his essay entitled 'The aesthetics of rhythms (1967)', Maldiney begins by stating that philosophers and artists share a drive 'to disrupt', while 'science reassures', for example. He observes two different attitudes towards art in the course of history, suggesting that they have marked different contexts or eras, with two different outcomes: one in which 'the role of art is only to order life's decor, a life which sense is decided outside it'; and another in which art is — has been or could be (again) — 'the most lively of life', for it allows us to 'inhabit' a place where we take place and a time when we are present, where ethics and aesthetics merge, so that the senses we make of life, and in life, are also decided within it.[387] From my perspective, this reflection directly resonates with rock writer Lester Bangs's explanation of his own relation to the music he listens to: 'Because the best music is strong and guides and cleanses and is life itself'.[388] This power is also consistent with Cox's exploration of sound as a 'primary flux' of forces that are made sonorous. As he explains, we can have two different understandings of sound, in the same way that we can experience and distinguish between two understandings of the concept of 'life', one that refers to this or that individual living thing, and the other that refer 'the life that passes through individuals but it is irreducible to them':

> In this conception, then, the sonic arts render audible the primary becoming that precedes and exceeds individuals, subjects, and objects, an intense flux driven by differential material forces, thresholds and gradients. At the same time they constitute a distinct stratum within this becoming: a *sonic* flux. We will see that this sonic flux is not simply a philosophical posit but a sensuous reality discovered, investigated, and made manifest by experimental composers and sound artists throughout the twentieth and twenty-first centuries.[389]

Another possible example, undoubtedly among many others, is the following reflection by poet Ezra Pound in his essay entitled 'Vorticism' (1914), where both a resistance to abide by pre-established systems of facilitation, and, closely related to this, a way of working that gives primacy to the heterogeneous nature of material reality, are succinctly expressed:

> Any mind that is worth calling a mind must have needs beyond the existing categories of language, just as a painter must have pigments or shades more

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[387] Henri Maldiney, 'L'esthetique des rythmes (1967)', in *Regard Parole Espace*, ed. by J. P. Charcosset, H. Maldiney & Bernard Rordorf (Lausanne: Editions l'Age d'Homme, 1973 & 1994), p 147-8. [My translation in all quotes].

[388] Lester Bangs, 'Psychotic Reactions and Carburetor Dung: A Tale of These Times (1971)', in *Psychotic Reactions & Carburetor Dung*, ed. by Greil Marcus (London: Serpent's Tail, 2014), p. 13.

[389] Cox, Christoph, *Sonic Flux: Sound, Art, and Metaphysics*. ProQuest Ebook Central edn (Chicago: University of Chicago Press, 2018), p. 31.

> numerous than the existing names of the colours. The vorticist uses the "primary pigment". Vorticism is art before it has spread itself into flaccidity, into elaboration and secondary application.[390]

The 'flaccidity', 'elaboration' and 'secondary application' that Pound is referring to, the 'decor' that Maldiney is referring to, and the kind of action and language that Bergson is referring to, along with the examples discussed in the introduction such as Deleuze's conduct towards the 'cliché', the 'facile' and the 'ready-made', and Grosz's distinction between Deleuze's notion of 'sensation' and sensations that are guaranteed to affect in particular ways, are all pointing at a process of taming works of art and reality, a process that can be counteracted. The very act of thinking can be argued to be at stake in our habits of facilitating things for the mind, as Pound is suggesting in the sense of using the already existing categories, and also as largely discussed in Deleuze's *Difference and Repetition*. In the sphere of musicology, the importance of confronting facilitation has also been stressed by Moore, with regard to the interpretation of meaning in songs. 'As a listener, you're not fed these meanings on a plate',[391] writes Moore, encouraging us not only to notice how we actually participate in the meanings that songs have, but also to understand the importance of doing so.

Pound's reflections suggest that this opposition between 'challenge' and 'facilitation' has been a problem *within* the world of art, and that it should definitely not be taken for granted. I think this should not simply be reduced to an "art equals challenge" formula, because of the simple fact that we can appreciate different aesthetic criteria in different arts and contexts, that vary not only from context to context, but also within a particular context. However, the criterion that involves having those needs that go beyond what is already available, predetermined, and what brings 'facility' to action and language, is, in my view, not only very important to art, awareness and life itself, for it is what allows us to remain sensitive to events we might otherwise overlook, and motivated and engaged with the world and the things we love, and so on, but also it is *an appropriate response* to the huge crisis that all kinds of oppressive forces that systems have perpetuated. This criterion consistently transpires in the different expressions of modernist art, in which we should include rock recordings — or at least some of them, but it can also be found in any art movement, period or context. All in all,

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[390] Ezra Pound, 'Vorticism', *Fortnightly Review,* 96 (1914), p. 466. I am indebted to my supervisor musicologist Leah Kardos for pointing at the relevance of this artistic movement co-founded by Pound and Wyndham Lewis among others, to my thesis. Pound has been argued to have been influenced by Bergson's philosophical work, as described in Johnathan Pollock, 'Pound, Bergson, and the Vortex of Memory', in *Cross-Cultural Ezra Pound*, ed. by John Gery Walter Baumann, and David McKnight (Clemson: Clemson University Press, 2021), pp. 163-172.

[391] Moore, *Song Means,* p. 1.

this agenda is obviously not always a priority for artists, neither is it always successfully carried out.

'THE FORM IS THE RHYTHM OF THE MATERIAL'

'Traits' are material formations, and they can also, sometimes separately and sometimes simultaneously refer to traits of expression. As my thesis title expresses, I privilege the use of the concept of 'traits' rather than 'form' or 'qualities', and I focus on the study of operative traits of sensation, which belong to the diagram (see I.1.5.) However, these are also the traits of a 'form in formation', which I simply call a 'formation', a '(de)formation', or a 'new sonic formation' when it is the 'formation' that comes across in a sensation. I have borrowed the notion of 'formation' from Maldiney's 'form in formation', and also from Ingold's discussion about it (see II.1.3.1), Therefore I also keep the root 'form' in play. In line with these writers, I use the word 'formation' rather than 'form' in order to emphasise its emergence, its construction (as a process) and its 'movement in place', but also to refer to a self-standing new entity that comprises, in one way or another, all the traits and elements in play. However, these traits are not merely the parts of the formation, but they have been rendered operative to make the formation emerge. Thus, these traits belong to the set of operative traits that constitute a machine or diagram. I have borrowed the notion of 'trait' from both Deleuze and Guattari's *A Thousand Plateaus* and Deleuze's *Francis Bacon. The Logic of Sensation*. Chiefly, in their work, the word 'trait' can refer to both a trait of a stratum, that is of formed matter, and a trait that has become an agent of destratification, that is an operative trait, which is 'unformed matter'. Here, 'unformed' does not mean 'without form' but a 'matter-movement' constantly *deforming and reforming.* As I have already explained in previous sections, the notion of 'traits' allows for passages from strata to destratification, from the formed to the unformed, from recognition to intensity. They are simultaneously the traits of the diagram and the traits of the material flows, and are thus capable of engendering and entering processes of destratification, that can allow us to encounter the power of an 'intense matter'. Thus, it is what allows us to observe and experiment with passages from one level to another. The condition of possibility of these passages, is Deleuze and Guattari's argument that strata are themselves 'thickening' on the 'destratified plane of consistency', so although they belong to what they call the 'plane of organisation' they still also belong to the 'plane of consistency' where 'continuums of intensities' are constructed. Yet, a trait on the plane of organisation is still different in kind from an 'intensive trait' on the plane of consistency, in a material trait of expression of a diagram, or a trait of an 'intensive matter'. Thus, the kind on is referring to must be specified in every occasion. As I explained in I.1.5. intensities can be imprisoned in strata, or freed and brought forth in processes of destratification. In order to address the

sense of passage from one plane to another, Deleuze and Guattari also use 'substance' and 'form' to refer to the forms and substances of expression and content at the level of strata, and they use matter and function, together as a couple 'matter-function' for the diagram, suggesting that the word 'trait' ultimately has the capacity to refer directly to 'function', to 'material traits of expression' that are capable of constituting intensities, to the moment when expression and content are no longer distinguishable, and even to 'intensive traits' or traits of an 'intensive matter'.

The aesthetic concept of 'form' I am implementing here, refers to a *material* 'form in formation' that cannot be separated from 'rhythm'. Thus, I have found helpful to borrow this concept from Maldiney's essay 'The aesthetics of rhythm (1967)': This sense of the form in formation […] is properly the sense of rhythm'.[392] As I argue in this thesis, the operative traits that create this formation in rock recordings can belong to any music dimension. Thus, any issues of harmony, melody, patterns of duration, texture, and of any dimension, can be relevant to discuss a sonic 'form in formation'. Unlike other approaches to 'form', the way I use the concept here is not only considered as the result of an organisation, but can be the result of both *organising* and *muddling* components and principles, as well as to both the stable and the changing, the quiet and the energetic, the multiplying and the unifying, *formation* and *deformation*, large-scale and small-scale, and to all kind of textural details from the less heterogeneous to the more heterogeneous. Thus, it can refer to any way in which the sounds are formed and arranged, or deformed and scrambled.

The possible intrinsic relation between rhythm and form is notably expressed in Maldiney's aesthetic formula: 'the form is the rhythm of the material'.[393] The problem is that we tend to understand form as 'fixed', and as a 'template' or a 'model' that we can reproduce and impose on material things. Thus, only sometimes the form is the rhythm of the material. The possibility of experiencing the movement of material changes and textural differences as rhythm rests, to a great extent, on *a manner of engagement* with the encountered thing (e.g. a piece of music, a painting or a landscape), or the exercise of the senses involved, which consists in giving up our habit of only grasping a fixed outline or set of qualities, and only making (superadded) relations between separate parts, in order *to follow* with the senses, bit by bit, the 'continuous variation' of the material, from which the form and the rhythm, *then,* emerge. Thus, this 'form' is not fixed, even in paintings and sculptures. According to Maldiney,

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[392] Maldiney, 'L'Esthetique des Rythmes (1967)', p. 157.

[393] Ibid, p 163. *'La forme est le rythme du matériau, qui accède par là à une existence inédite; est ce rythme exige une certaine technique de rencontre (agressivité et sympathie surmontées) avec la matière a transformer. Le rythme n'est pas de l'ordre de ses éléments fondateurs. Mais il n'est rien sans eux. Ni eux sans lui sont des éléments rythmiques (dotés par example d'un autre rythme rémanent).'*

the ‘materials’ are the ‘founding elements’ of *rhythm*, and the creation of rhythm requires a certain ‘encounter technique’ with them, which I infer as from the point of view of both artist and audience. However, rhythm ‘transcends them through them’. This means that, if taken independently, these material elements, along with the patterns or shapes they form, would not be sufficient to explain or feel rhythm: ‘rhythm is not of the order of its founding elements’, writes Maldiney, and yet, if you remove their *resistance* the rhythm would dissipate.[394]

TURBULENT FLOW

First of all, I start here from the observation brought forth by Deleuze and Guattari (which is consistent many of Bergson’s arguments I bring into play here) that sonic materials, like any material entity, at some level or in some state, are turbulent flows, and turbulent forces are directly related to the formation of vortical movement (as I explore in a case study in III.3). They credit what they call a ‘nomad’ or ‘minor’ science for addressing this directly, along with all the ‘nomadic notions’, such as ‘becoming, heterogeneity, infinitesimal, passage to the limit, [and] continuous variation’, for example.[395] Turbulence is something that can observed directly, and which can be more or less evident depending on the case. In the second place, it should be kept in mind that it is not a detailed study of the physics or the geology of turbulence what can explain the aesthetics of turbulent sonic flows in pieces of music or sound art. There is no direct correspondence, as emphasised by Buchanan. However, we can notice that some scientific descriptions, can indeed provide certain helpful tools for understanding, but only insofar as they are used in a completely new way. Thus, following Deleuze and Guattari’s strategy, which has been eloquently explained by Buchanan (hence, whose explanation I paraphrase here), what I do, and attempt to do, is to extract, that is to

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[394] Maldiney, 'L'Esthetique des Rythmes (1967)', p. 163. This point is also at the heart of Beardsley’s aesthetic notion of ‘regional qualities’ or ‘regional properties’: ‘some complexes have qualities that are not qualities of their elements’. ‘What is important for discourse about art is that the regional qualities of a complex have two aspects: they have novelty, in that they are not to be found in the parts when separated, but they also depends upon the parts and their relations.” Monroe C. Beardsley, *Aesthetics: Problem in the Philosophy of Criticism* (New York: Harcourt, Brace & World, Inc., 1958). p. 83-5. I extend my thanks to Allan Moore for pointing at this. Note that these ‘regional qualities’ can have ‘novelty’, not only in that they are not found in the separate components, but in that the regional quality can be new in itself. In all the philosophical and aesthetic references that participate in the present discussion, the term ‘quality’ is sometimes used as a ‘recognisable trait’, hence not new in itself, and sometimes as the ‘aspects’, ‘attributes’ or ‘intensities’ that sustain sensation and novelty in itself. It is important to notice this difference in every occasion. This discussion is developed in more detail in the introduction.

[395] See for example, Deleuze and Guattari, *A Thousand Plateaus,* p. 400-1, and 410-11. — Democritus and Archimedes are some examples of pre-socratic philosophers that developed a nomad science, according to Deleuze and Guattari.

destratify, some of the characteristic traits of turbulent flows, as described by sciences (minor and major), and use them in new ways in the field of aesthetics.[396]

In his approach to sound art, Cox, drawing on theories of the dynamics of fluids that can be traced back to 'the early atomists' (e.g. Lucretius), reflects on the fact that at different scale-levels, turbulence can consist in highly organised structures of flowing formations, or in chaotic multiplicities:

> Before turbulence was identified with disorder or noise. Today we know this is not the case. Indeed while turbulent motion appears as irregular or chaotic on the macroscopic scale, it is on the contrary highly organised on the microscopic scale. The multiple space and time scales involved in turbulence correspond to the coherent behaviour of millions and millions of molecules. Viewed in this way, the transition from laminar flow to turbulence is a process of self-organisation.[397]

This approach to the movement of fluids is also considered by Deleuze and Guattari.The scientific principle that explains these passages in the dynamics of fluids is the way a 'laminar flow' can be disturbed by a very slight, spontaneous and unpredictable deviation: the 'clinamen'. It explains what happens when a stable flow (also called laminar flow) ceases to be stable and can be spontaneously turned into turbulent flow, which will form a new stability or a new order, by self-organising, which can perhaps then, at another level, become a new laminar flow. There are indeed in pieces of music different scale-levels available for contemplation, so the level of turbulence of certain sonic flows and the ways they can be found distributing and organising the other levels, is an question that, in my opinion, is awaiting further exploration. This principle can also be related to the logic of sensation in the ways chaos in the material movements can be the germ of rhythm or a new order, as explained by Deleuze. For its part, turbulence is said of flows because it is like chaos in movement, though it is not pure chaos since it is also a flow, that can be encountered as a stratum (a flowing stratum). I have already brought into play Deleuze and Guattari's relation between chaos and sensation's intensive reality. For example, dissonance has a chaotic element. According to Cox, the significance of dissonance in the way highlighted by Nietzsche and Deleuze, has to do with its power to present'a play of forces and intensities' and a

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[396] Buchanan's explanation, with the example of the use of 'rhizomes' by Deleuze and Guattari, is: 'If they use rhizomes (biological) to explain certain types of psychological behaviour (techno-semiological) they do so by extracting — that is destratifying — several of this particular plant variety's traits, specifically the way it can branch or put down roots from any part of its body, and using them in a new way. There is however no correspondence between the rhizomes as it is understood in plant biology and as it is used in Deleuze and Guattari's psychology. Ian Buchanan, *Assemblage Theory and Method. An Introduction and Guide*, 1st Edition (Bloomsbury Publishing, 2020), , p. 41, <https://www.perlego.com/> [accessed 22 September 2024]

[397] Christoph Cox, 'Marina Rosenfeld & Christoph Cox Lecture.' *Youtube,* uploaded by California College of Arts, CCA, 20 November 2014, <https://www.youtube.com/> [Accessed 4 October 2022]

'material conditioning', the genesis of forms through intensive, forces, vectors, thresholds, and gradients'.[398] We can hear, that dissonance is accompanied by countless small beats that produce a rough grain (Part II.1. 1.1. 'Grain'): at one level the micro-beats of dissonance come across in a stable way, simply as a rough texture, but at another level one can notice its chaotic and turbulent complexion, as I discuss in the introduction for the case of blasts of granular distortion, for example. This turbulent aspect of dissonance can constitute a 'genesis of form' in a way that the notion of 'tension' of established music theory cannot give an account of. Cox's argument (and Deleuze and Nietzsche's) might suggest that smooth textures and consonance can more easily dispense with an appreciation or an access to that intense material level, and more readily become cues for recognition, fixed forms of organisation, and representation; whereas in many cases the turbulence and chaos proper to rough textures and dissonance can more effectively elude those functions. However, the problem is far more complex, as surely both the smooth surfaces of consonance can also disclose intensities, for they are not less material;, and the rough surfaces of dissonance can easily become objects of recognition, representation and clichés. So, it depends on the case, and on the way of listening, but it is still vital not too dismiss the turbulence of material flows, and the element of chaos that it can present at certain scale levels, which can work like portals to the intensive.

By contemplating the heterogeneity and infinitesimal details of sonic materials in a rigorous way, I have realised that a sonic entity is, or can be encountered as, a *turbulent fluent* that forms *haptic aggregates and variegations*, which movement is their 'form in formation'. Therefore, I am proposing, in this thesis, ways of grounding our reflections on 'rhythm' and 'sonic movement', in the material heterogeneity and continuous variation of sonic entities, and of considering the homogeneous parameters, or any kind of recognisable trait, as I develop in individual cases, in a subsidiary way. As discussed in the introduction, the concepts of 'continuous variation', 'properties of contact' and 'haptic function', among others, developed by Deleuze and Guattari, and Maldiney's concept of 'form in formation', are helpful intellectual tools to address our encounters with material heterogeneities and their continuous movements, including sounds. As I develop throughout the thesis, the 'properties of contact' the we can feel in the encounter with a sonic material entity, can be thought of as *sonic haptic aspects, elements and variations.* Even in the cases where the sounds do not present pronounced variations in their journeys, their unvarying *textures* can still form a 'continuous movement' in the encounter between sounds and listener, as in the case of a 'rasping' sound, for example. Coming back to Ruskin comment: I also think it is possible to experience *the feel of textures* as movement. Even when a texture is not changing, feeling a texture also consists in a material change that takes place in the sensory encounter with it, and therefore it also consists in a movement.

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[398] Cox, *Sonic Flux,* p. 29.

From this point of view, a single sound already has a rhythm and a texture, and these two dimensions tend to blend when one starts an aesthetic reflection from the effect of changes at an infinitesimal level. I share the view that a paramount question in our way of thinking about movement, is the question of whether one is subordinating 'movement' and 'form' to the requirements of models that necessarily set aside the infinitesimal details and the continuous variation of material events, in order to consider the aspects that can be measured and recognised, or, conversely, whether one is starting from the basis that it is the heterogeneous, infinitesimal and continuously varying traits of the sonic material what primarily brings about 'movement' and 'form', in order to consider their ways of changing and becoming figures and sound-worlds, and then from the questions that arise from there, the homogeneous measures, outlines and categories can be brought into play in a subsidiary way.

NOTES ON TEXTURE

Thus, I have dedicated this section to gaining some clarity about the differences and principles that we need to understand, if we want to address this kind of movement. I have brought into play the notion of 'texture'. To begin with, the *contracting sound* of a closing hi-hat and the *hazy sound* of a cymbal are *different textures in themselves*. Therefore, I think it is necessary to make another distinction between (1) 'texture' as the *interweaving* of different sounds, which turns to the *interrelations* between *separate* sonic strands or layers, and (2) 'texture' as the *textured surface* that both one sound or an aggregation of some or many sounds may have. By making this distinction, I am suggesting that in the prevalent development of music theory and music analysis, historical, institutional and available in online media we have not only neglected the domains of 'timbre' and 'texture' by treating them as 'secondary domains', but we have also failed to distinguish between these two kinds of 'texture', and between 'timbre' and the 'haptic' domain, which corresponds, in part, to the second kind of texture I propose to consider. Every single sound is already textured. As James Gibson reminds us, 'a perfectly homogeneous and perfectly smooth surface is an abstract limiting case'.[399] The main difference between my approach and Gibson's approach, as I explained in the introduction, is that he is occupied with how perception works and I am occupied with how sensation works, and how it can be produced in works of art, as passages from perception to sensation. Thus, 'perception' is still relevant.

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[399] James J. Gibson, *The Ecological Approach to Visual Perception: Classic Edition* (Psychology Press, 2014), p. 25-28.

SUMMARY OF THE CHAPTER

I have centred this chapter on the distinction between a movement that is intrinsic to the materials i.e. a 'movement in place', and a movement as displacements of separate entities that is based on extrinsic relations. I have gone through some of the implications I find of this distinction for music analysis and our conceptions of the senses of movement and rhythm in music. The ontological grounds I have considered here are directly relevant to haptic listening and its close range and gradual contact with the sonic materials, as I show in more detail in the next parts of the thesis (Part II and Part III). If we only take movement as the change of location of separate entities, we cannot really address the movement that is intrinsic to haptic sonic traits in its own right. Thereby, we cannot really address the expressive-intensive potential of these moving traits of becoming traits of sensation, that requires an enhanced sensitivity to the suppleness and saturation, the movements of contraction-expansion, the textural details, the rich heterogeneity, turbulence and continuity of the sonic materials, and all these finer distinctions.

Moreover, considering these haptic aspects or any sonic material aspect as only playing a complementary role in the configuration of a rhythmic *pattern,* or a pattern of durations, is different from taking them as *the primary* way *a rhythmic formation is created.* From the point of view of the movement of the sonic materials, I think it is no longer suitable to call this rhythmic formation a 'pattern', for a pattern is based on stationary locations of objects or points in the arrangement. As I explained with the example of the drum kit section of Amon Düül II's 'Archangel's Thunderbird', I am not suggesting that a pattern is not a useful *complementary* tool to study rhythm. I am suggesting the benefits of inverting the roles of what is primary and what is secondary in this complementarity. To base our aesthetic studies on a view of movement that takes the sonic material aspects as separate from the temporal aspects, only in interaction with one another, and, on the contrary, to base them on a view of movement as primarily emerging from the movement of the materials, their ways of flowing and vibrating, of forming and deforming, which therefore also intrinsically include the temporal sense of duration, are radically different approaches. Furthermore, separating the temporal from the sonic, amounts to projecting the temporal on the homogeneous spatiotemporal grids based on changes of distance. This is why this approach to the study of rhythm, reduces rhythm to pattern, where the sonic material aspects only play a secondary role, usually in the form of qualities (i.e. perceptual cues), and it is primarily the interactions between 'reference structures' and 'actual sounds' (Câmara and Danielsen, as discussed at the beginning of the chapter), and between points of reference and displacements, what is credited for the sense of movement. Plays of expectations in the interactions between sounds and structures of reference are the most common way of understanding rhythm and

movement in established musicological approaches in general, and can be clearly related to the habit of crediting changes of distance and displacements for the sense movement that Bergson was criticising. A view of movement and rhythm in music based on these displacements and expectations, is a view that is exclusively restricted to comparative thinking. Alternatively, I think we *can* base our aesthetic studies of rhythm and movement in a non-comparative way of thinking, and that we do have to base it on changes of distance and any form of interactions between reference structures and the sounds.

The problem of comparative and non-comparative thinking is one of the core philosophical/ ontological problems of my thesis. What I am referring to as 'thinking', includes processes of making sense in encounters and experiences, and in our reflections after-the-event, in a way that does not completely divide thinking from sensing. All the arguments I have gathered and elaborated on here sustain the possibility and benefits of thinking of the senses of movement and rhythm in music in a non-comparative way, by attending directly at the movement of the sonic materials. Thus, we can follow Bergson's advice, which, as I have explained in this chapter, is in line with Deleuze and Guattari, and Maldiney, Grosz and Cox's thought:

> Matter thus resolves itself into numberless vibrations, all linked together in uninterrupted continuity, all bound up with each other, and traveling in every direction like shivers through an immense body. In short, try first to connect together the discontinuous objects of daily experience; then resolve the motionless continuity of their qualities into vibrations on the spot; finally, fix your attention on these movements, by abstracting from the divisible space which underlies them and considering only their mobility (that undivided act which our consciousness becomes aware of in our own movements): you will thus obtain a vision of matter, fatiguing perhaps for your imagination, but pure, and freed from all that the exigencies of life compel you to add to it in external perception.[400]

We can listen to 'real' movement (in the Bergsonian sense) and think directly about it. We can address it directly in our aesthetic studies instead of taking a detour via all kinds of projections, relative distances and interactions between actual and reference structures, that established approaches tend to credit for movement but are not really saying anything about it, as they deprive it from its 'mobility', from its continuous and heterogeneous variation, the power of the 'supple realities' that it is made of, and the power of its singularities and intensive affects. As I have already mentioned, grids, patterns and comparisons are useful tools, but the reflection I have put forward here demonstrates the radical importance of

[400] Bergson, *Matter and Memory,* p. 208.

inverting the hierarchy, that is of taking these tools based on *extrinsic relations* as secondary and the *intrinsic movement of the sonic materials* as the primary sense. My conclusion is that this is the way to avoid the trap, so thoroughly denounced by Bergson, of misunderstanding the nature of and expressive potential of movement, which is highly relevant to the study of music.

Part II. Some constructive categories for the study of sonic haptic traits in rock recordings

In this part, I present a series of types of sonic haptic formations oriented to the study of operative traits of sensation in rock recordings. It is a constructive typology that includes three haptic aspects: grain, edge and consistency; and eight haptic elements: flat fields and other long sounds; wavering fields and other wavering formations; cuts, protuberances and hollows; glides; springs; swellings; blasts and broken tones. I provide definitions for each one of them and their sub-types when relevant, along with some concise historical and technical considerations, and I examine how they can work constructively for studying what Deleuze and Guattari call 'diagrams' and 'beings of sensation', with the aid of some brief examples of possible case studies.

The introduction contains a presentation of how Deleuze and Guattari's concept of 'strata' can help us to develop these types of sonic haptic formations as constructive categories for the present purposes. It explains the distinction between 'aspects' and 'elements' I am proposing to use, and distinctions within strata in relation to it. It also explain the relevance for haptic listening of their key emphasis on the notion of 'molecular flow' and 'zones of proximity', for it is at the level of the molecular that the senses join haptically with the materials and their finer differences that not only create a new clarity, but also a 'molecular proximity' that is where intensities can circulate, where we become with the world, and a properly aesthetic form of resemblance is produced and able to attain a 'becoming-other' that has nothing to do with imitation and identity (i.e. a resemblance through non resembling means as discussed in I.1.3). It ends with an introduction to the 'elementary surface' where the contact is established in haptic listening, and a brief recapitulation of the difference between pattern and flow.

In this part, I present a compendium of *types of sonic formations,* that I have found in an exploration as a rock listener of *sonic differences made on the grounds of haptic sensitivity.* They are defined and developed as *constructive* categories that can be useful for the study of the *sonic haptic traits* in rock recordings that participate in diagrammatic operations (I present Deleuze and Guattari's notion of the 'diagram' in the introduction of the thesis and in I.1.6). Thus, they are specifically oriented to the study of operative traits of sensation. However, this does not prevent them from being useful for other purposes in relation to other kinds of interpretations.

These types of formations are considered with the aid of Deleuze and Guattari's concept of 'strata', which, as I explain in I.1.5. is what allows them to work as operative traits of sensation. The stratified formations are perceptible and needed to indicate the sonic traits

one is referring to in an aesthetic study. However, since they are 'thickenings' or 'spinoffs' on a plane of consistency that constructs continuums of intensities, one can observe both the processes of destratification that has formed the stratum in question (imprisoning intensity), and the processes of destratification of the stratum in question producing a new form in de/formation (disclosing intensity). These movements of destratification is what the operative traits of the aesthetic sensation (i.e. the diagram, or the machine or abstract machine) do; it is how they are rendered operative, and how they can bring forth or free continuums of intensity. These two opposite directions are clearly expressed in Buchanan's reading of the 'problem of strata', as he explains: 'The abstract machine is an amphibious concept; it simultaneously constitutes the unity of composition of the stratum and constructs 'continuums of intensities' on the plane of consistency'. And in this sense, I share his view that 'it is a very pragmatic concept'.[401] Thus, since my focus is on what brings forth continuums of intensities, the way I propose to address these movements here does not consist in describing traits but in constructively studying their 'machinic' or 'diagrammatic' operations, in their (factual or potential) ways of achieving the sensation. With this aim in mind, the concept of 'strata' remains key, because, it is what ontologically allows for the passages from one state to another, from one level to another. Considering how strata are formed is *also* an essential part of the project of both, studying the operative traits of sensation, and *mapping* a constructive typology of haptic traits or formations that can help us in that task. As Deleuze and Guattari write: 'What distinguishes the map from the tracing is that it it entirely oriented toward an experimentation in contact with the real'. It does not reproduce, it constructs. This way, one can lay [it] out on the plane of consistency',[402] and produce what I would then call, a map of intensive milestones.

My secondary criteria of selection include historical 'friction', and the focus on some categories that are marked both by their ubiquitousness and variety in rock recordings, from 1950s until today, in ways that suggest they have been subject to creative experimentation. (I sometimes include some examples of other repertoire). This can bring into the discussion, for illustrative and practical purposes, the identification of instrumental sources, and some concise attention to their historical and technological development. Although, an aesthetic appreciation cannot completely dispense with these issues, I do not discuss them in depth because they are beyond the scope of this thesis. I do not claim this compendium to be exhaustive. They are resonances of my dedicated listening practice and many years of inhabiting and studying rock sounds, in parallel with reading the relevant literature from the fields of philosophy, rock criticism, aesthetics, ecological perception, anthropology and musicology. Thus, they are also resonances of this literary corpus, as well as of my discussions

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[401] Ian Buchanan, *Assemblage Theory and Method. An Introduction and Guide*, 1st Edition (Bloomsbury Publishing, 2020), p. 44, <https://www.perlego.com/> [accessed 22 September 2024]

[402] Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*. *Capitalism and Schizophrenia,* trans. by Brian Massumi (London: Continuum, 2008), p. 13 and 68.

with other listeners and academics. All in all, I have developed these categories in conjunction with the widespread use of a vocabulary that refers to a haptic sensitivity to sound in various contexts.

It is important to recall that, as previously explained, a discussion on sonic haptic traits is not, and should not be confused with, a discussion on timbre (see 'Introduction'). In other words, it is different to observe the haptic qualities that can be involved in processes of recognition of a sound source, and issues around that subject-matter, than to observe the haptic traits of sound in their own right, in a way that is not subsidiary to that function. Haptic traits can be found operating in conjunction with any other of the music dimensions developed in music theory and rock musicology.

Many of the considerations of anthropologist Tim Ingold for the study of material surfaces from the point of view of haptic vision and haptic touch,[403] have been very helpful for the present purposes. When listening to sonic material surfaces, sometimes, we simply make broad distinctions, as when simply noticing the difference between rough and smooth sounds, and their attached connotations and values, for example, which are nonetheless already differences based on a haptic sensitivity, but only at the perceptual level of recognition. In turn, our way of engaging with sonic surfaces can feel more like 'abiding with them', or 'dwelling in them', to borrow Ingold's expressions, in ways that have the potential of freeing Deleuze and Guattari call 'continuums of intensity' in 'zones of proximity' and its 'molecular level (I refer to these concepts below). It is by becoming sound dwellers in this sense that the distinctiveness of the haptic modality reveals itself most clearly, as 'close range' and gradual, so that feeling and registering finer distinctions of the surfaces of things matter, as they do for everything and anything one is most intimately, closely and persistently in contact with in life.

THE DISTINCTION BETWEEN ASPECTS AND ELEMENTS, AND DISTINCTIONS WITHIN STRATA

Here, I am making a distinction between *aspects* and *elements* for practical purposes. In simple terms, I reserve the category of 'aspects' for haptic traits that a single sonic material is made of. This is a material that is never completely homogeneous but sufficiently homogeneous to be heard as *one.* In other words, aspects belong to a sound that is impossible to dissect for the naked ear. Yet, this in-dissectible sonic material formed by its aspects can also, in turn, form an element. In other words, any haptic formation is both forming as an aspect and forming as an element. For instance, we can observe the 'elasticity' of a sonic material, attributable to its gradual pitch fluctuation for example, and we can also observe

[403] Tim Ingold, 'Surface Visions', *Theory, Culture & Society,* 34 (2017), 99-108. Other work by Ingold has also been helpful: Tim Ingold, 'Transformations of the Line: Traces, Threads and Surfaces', *Textile,* 8 (2010), 10-35; and Tim Ingold, Being Alive: Essays on Movement, Knowledge and Description (Taylor & Francis Ltd - M.U.A, 2011).

that it is a discrete 'glide' in a certain part of a melody. Likewise, we can observe the 'density' and 'grain' of a sonic material, and we can also observe that it is a 'mass', for example, or a 'flat field' at work in the track. At all times, we must subordinate this division to 'the materiality's power of variation', as emphasised by Deleuze and Guattari. This means that the element is certainly not a form imposed upon a matter, but it is itself made of the aspects of the matter, which can be thought of as both what they call '*variable intensive affects*' as the properties of the matter, and 'an entire energetic materiality in movement', which is what 'the formed and formable matter' consists in, 'carrying *singularities* […] that are already like implicit forms that are topological [based on surface contact and deformation], rather than geometrical [or spatiotemporal], and that combine with processes of deformation'.[404] Both haptic elements and haptic aspects are based on what Deleuze and Guattari call 'properties of contact' (i.e. what prevents the 'haptic' 'from remaining homogeneous and striated'),[405] and 'forms in formation' (Maldiney — see I.4.), which are formations based on that 'energetic materiality in movement'. Finally, I must insist on the fact that one sound is always an heterogeneous material, so it is *only relatively* that one considers it as "one" sound, and it is also only relatively that I also reserve the category of 'elements' for compounds or aggregates of more than one sound, when it is useful and relevant to consider them as such.

I also draw on some distinctions proper to 'strata', in order to explore certain dynamics between and within these aspects and elements. First, both aspects and elements can be observed at different levels, and we can distinguish a number of types of levels: (1) the one that goes from the small-scale (i.e. micro or infinitesimal) to the larger-scale (macro); (2) the one that goes from the 'molecular' (a matter-flow that is more 'supple' and 'merely ordered') to the 'molar' (a material formation that is more 'rigid' and 'organised'); (3) and the one that distinguishes between content (or matter, or material) and expression (or function). These terms do not establish fixed correspondences between them, and their relations can only be determined on a case to case basis. The first thing to keep in mind, is that, ultimately there is 'no real distinction' between my aspects and elements, but only a practical one, just as there is no real distinction between 'substance' and 'form' for strata's content and expression (which both have both substance and form), in Deleuze and Guattari's conception, but only 'a mental or modal distinction', for they are both material formations.

The molar/molecular distinction is one of the kernels of Deleuze and Guattari's definition of strata. According to them, strata 'consist of giving form to matter, of imprisoning intensities or locking singularities into systems of resonance and redundancy, of producing upon the body of the earth molecules large and small and organising them into molar aggregates'.[406] Yet, as

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[404] Deleuze and Guattari, *A Thousand Plateaus,* p. 450-1.

[405] Ibid*,* p. 411.

[406] Ibid*,* p. 45-6.

processes of stratification and destratification, and passages from one level to another, are always occurring and in motion, aggregates are not only molar. For example, in the first place, it is not uncommon to find in rock recordings *un/disorganised and even chaotic aggregates*, that cannot be said to constitute a molar aggregate, but rather a molecular aggregate (e.g. 'L.A. Blues' by The Stooges — *Fun House,* 1970). However, this in itself does not take from it a possible diagrammatic power. On the other hand, a series or group of molecules does not have to be part of a chaotic/unorganised whole in order to remain merely ordered rather than organised. An example of this, is the series of uniformly repeated snare beats at the beginning of 'Soft as Snow (But Warm Inside)' by My Bloody Valentine (*Isn't Anything,* 1988), which exhibits no pattern and no organisation apart from the exactness of the tempo, and the little break of that pulse after the first 6 beats, that re-phases it and moulds a subtle division into two groups. The sounds are thus not really organised but merely ordered in a series of beats (31 in total) that together form an uninterrupted molecular flow. The same example serves a second clarification: *a molecule can be small or large,* as Deleuze and Guattari suggest in the above quote. Of course, one of the most common-place principles of music and repetitions in general, is how a flow can be created with successive discrete units, that are contracted into a continuity. *These units can appear at different scale levels that should be distinguish from the molecular and the molar.* At the level of a sonic matter-flow, the materials and the units remain molecular, and do not form molar aggregates. A condition for a formation to remain haptic is to remain molecular, so that it can be gradually followed at close-range in order to be encountered as a new haptic formation. Here, I am referring to the haptic function of a sensation. When we grasp these units as being organised into patterns, or into other types of organisations or structures, there is a passage to the level of the molar which in itself is no longer a haptic formation in a sensation. A large-scale molecular formation, flow or aggregate should then be distinguished from a molar formation, flow or aggregate. Yet, after grasping a pattern, for example, one can join with the molecular level of the materials, and a passage from the molar organisation to the molecular level of a haptic formation can happen, and can bring about a new formation, that results from this new passage, and integrates some of the traits of the pattern which now become molecular. In short, the molar is always more stratified than the molecular. Coming back to 'Soft as Snow…', I think it is a good example of large molecules. Two factors sustain this reading: the continuity in the materiality that the repetition of uniform beats creates; and the rich and consistent material of each snare sound, at the level of its infinitesimal details. The molecule is not simply larger but evidences a molecular continuum throughout the different scale-levels. What I find most important about *large molecules* is that each one of them, each one of Colm Ó Cíosóig's snare strikes here, has already *a rich haptic complexion,* and one can closely notice its grain, edge and consistency (inc. density and elasticity, as lack of elasticity in this case) — i.e. its aspects —, so that the aggregate formed by more than one of those sounds makes a true and complex haptic relief emerge, and be contracted at a larger scale-level. Thus, Deleuze and Guattari's consideration strikingly applies to these sounds:

> It is no longer a question of imposing a form upon a matter but of elaborating an increasingly rich and consistent material, the better to tap increasingly intense forces. What makes a material increasingly rich is the same as what holds heterogeneities together without their ceasing to be heterogeneous.

As they explain, 'what holds them together in this way' are 'three factors': 'intercalated elements, intervals, and articulations of superposition'.[407] When the bass enters at the twelfth beat, we witness exactly this. With its smooth texture and its elastic ever-changing melodic contour, the bass are markedly different from the snare, but not less rich in its complexion, These two heterogeneous elements are not simply held together (on the basis the same regular pulsation), but they are held together without them ceasing to be heterogeneous, because both their material traits are markedly singular, rich and consistent, already tapping into intense forces through their molecular complexity. «Saturate every atom», was one of Virginia Woolf's takes on creative writing, on how she wanted to write, as Deleuze and Guattari refer to in the same pages (see I.1.5). It is *through* this rich and consistent elaboration of haptic complexions, that we can listen to what is expressed in these intense forces. The insistence, complexity and robustness of the drums create a truly excessive presence. Every molecule, as well as the molecular flows, are also saturated with traits of expression: traits of strength, vehemence, unleashed vital energy, a brutal straightforwardness, in the drums; and traits of malleability, softness and coldness, *sprezzatura*, in a passage from finding one's way to leading the way. Strong effects, I would argue. This is the power of saturation. The same regular pulsation is a feature that really, straightforwardly, holds drums and bass together here, while remaining, extremely and intensely heterogeneous, both in their traits of content and of expression. The fact that this way of playing and making a rock track was notably anti-norm at the time, can be argue to become, by virtue of these operations, a secondary problem in a critical listening, if we think with Deleuze and Nietzsche of 'the new' and the establishment of new values in an non-relative manner, but in relation to the intrinsic power of an artwork to generate it by preserving sensation (and Guattari). Thus, in my approach treat as primary the problems posed by the material traits of expression of a diagram (whether found at work in a very short excerpt or in a whole track or album), and I treat the problems of detours from norms as complementary in a subsidiary way, yet certainly still a matter of great import in the aesthetic discipline.

Just one more thing to say about sonic molecules here. Molecular masses can have variable magnitudes, without their ceasing to be masses. For example, listen to the difference between the mass of Ride's 'Dreams Burn Down' in the instrumental chorus (e.g. 2'14"), and the mass of the first beat of Pixies's 'Bone machine' (I consider how both these examples work as

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[407] Deleuze and Guattari, *A Thousand Plateaus,* p. 362-3.

'Blasts'). The sense of magnitude can be to a great extent related to a matter of duration, in the sense of long or short sounds, but it can involve the heterogeneity or homogeneity, and the density of the material, as I explore in my entries 'Density' and 'Flat Fields'. Thus, a molecular mass can be heterogeneous and form and aggregate itself without (yet) being molar.

MOLECULAR FLOWS AND ZONES OF PROXIMITY

There can be molar haptic formations and molecular haptic formations. When we are referring to the haptic function born of the diagram of an artwork encountered as being of sensation, then, as I wrote above, the condition for the formation to remain haptic is to remain molecular. In turn, molar haptic formations, are not the ones followed and felt haptically at the level of the intensity of a being of sensation, but are only grasped as a recognisable feel or as any kind of stratified perceptual cue, that can afford different experiences.

The molecular flows or molecular components that constitute the sonic haptic formations that come across in a sensation, are supple and saturated. They concern 'clarity', in the sense defined by Deleuze and Guattari as follows:

> Clarity in effect concerns the molecular. [...] This is precisely what clarity is: the distinctions that appear in what used to seem full, the holes in what used to seem compact; and conversely, where just before we saw end points of clear-cut segments, now there are indistinct fringes, encroachments, overlappings, migrations, acts of segmentation that no longer coincide with rigid segmentarity. Everything now appears supple, with holes in fullness, nebulas in forms, and flutters in lines.[408]

The most important criteria in the project of distinguishing different types of haptic sonic formations I have undertaken, concern the possibility of bringing forth the suppleness and saturation of the molecular level of sonic flows. By elaborating a haptic typology one can have at hand the names and basic principles of certain ubiquitous types of haptic formations that have the potential of the whole series of effects of the diagram: becoming operative traits of sensation, being part of a *new* formation, of being followed at their *molecular* level through a threshold of perception to finer differences (both at the level of a relative and of an absolute threshold as I discuss in I.1.3.), of achieving this clarity, and so on.

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[408] Deleuze and Guattari, *A Thousand Plateaus,* p. 251.

I have discussed in I.1.3. Deleuze's aesthetic notion of a 'resemblance through non resembling means'. This idea can work directly in tandem with Deleuze and Guattari's discussion on 'zones of proximity', which are also 'zones of intensity', which concern the 'molecular level', and account for traits of 'becoming-other'. This problem is relevant to all the case studies that involve a neutralisation of representations or anaphonical readings, as well as the ways certain instruments acquire the traits of others. As they reflect on in *A Thousand Plateaus:* 'Singing or composing, painting, writing, have no other aim: to unleash these becomings':

> […] becoming is not to imitate or identify with something or someone. Nor is it the proportion of formal relations. Neither of these two figures of analogy is applicable to becoming: neither the imitation of a subject nor the proportionality of a form. Starting from the forms one has, the subject one is, the organs one has, or the functions one fulfils, becoming is to extract particles between which one establishes the relations of movement and rest, speed and slowness that are *closest* to what one is becoming, and through which one becomes. This is the sense in which becoming is the process of desire. This principle of proximity or approximation is entirely particular and reintroduces no analogy whatsoever. It indicates as rigorously as possible a *zone of proximity or copresence* of a particle, the movement into which any particle that enters the zone is drawn.

They also call this 'zone of proximity' a 'molecular proximity'. Molecular formations are 'not molar subjects, objects or form that we know from the outside and recognise from experience, through science, or by habit'. They state that it is in this sense that 'all becomings are already molecular'. As they write: 'Proximity is a notion, at once topological and quantal, that marks a belonging to the same molecule independently of the subjects considered and the forms determined'. So, the process of 'becoming-other', involves a 'shared or indiscernible' trait, something that belongs to both entities simultaneously at the molecular level.[409] For example, when sonic glides are felt and followed haptically in rock recordings, they can become this kind of shared trait, and they can be a privileged axis of experimentation in this sense, as I illustrate with Love and Rockets's 'Kundalini Express' (II.2.4): 'the *becoming-guitar-bend* of a vocal glide and the becoming-vocal-glide of a guitar bend', or both becoming a larger entity and constructing a new formation. I also explore experimentation with glides in this molecular sense with the example of Sonic Youth's 'Mary-Christ' (II.2.8.). To be sure, any haptic trait can become this kind of shared trait involved in unleashing becomings. Also in the case of instruments becoming other instruments, Iggy Pop's introductory shout in The Stooges's 'T.V. Eye' presents a notable zone of proximity with the sound we remember of a distorted guitar, and the sound of the distorted guitar riff that then follows. The historical proximities I discuss in 'II.1.1. Grain' between growling saxophones, the roar of blues singers (which involved perhaps in some cases also 'becoming-animal'), saturated amplifiers,

[409] Deleuze and Guattari, *A Thousand Plateaus,* p. 300-303.

overdrive, distortion and fuzz pedals, rock 'n' roll shouts, and so on, could be probably better understood, in many cases, not as imitations but as these molecular proximities. A generalised 'becoming-molecular'. Thus, 'grain' is a notable case of this sort of 'particles' that Deleuze and Guattari were writing about, as glides and any other haptic component can be, too. All haptic components are always potentially molecular components shared by different sound-sources, both creating rich and consistent sonic compounds and establishing these zones of molecular proximity, from which new formations emerge and botch any form of analogy. Yet, we have to keep in mind that only in some cases the sensation is made clear and precise.

The electric guitarist from the band Heldon, Richard Pinhas — who, among other things, was also producer of the early post-punk band Métal Urbain — wrote about Deleuze, Nietzsche and music. He reflects about both the so-called classical and popular music spheres. His account of 'modulation' processes[410] in relation to rock music, can be directly connected with Deleuze and Guattari's idea of molecular flows and a 'generalised "glissando"' in music, which is basically a metaphor to refer to an approach to the materials based on their 'continuous variation' and their continuity-heterogeneity at the intensive-expressive-material level. Thus, his discussion about 'modulation', reveals, for example, a more fluid approach to harmony. First, as we find in every basic treatise on classical harmony, he explains that 'classical theories of harmony often present the technique called modulation, mainly as a tonal relation, a displacement in the pitch scale, a form of momentary resolution, a passage or transition […], which repeats in a different tonality a sequence previously expressed'. Then, in contrast, he proposes the concept of *continuous synthesised modulation*, to refer to something that only bears a distant relation with this traditional understanding. Inspired on Wagner, its variations are multiple, it is an 'operator of heterogeneous, and actual inflection, a curvature in the composition plane'. It creates a 'real upheaval in the structure of the work, an inner shock'; a 'qualitative metamorphosis (material and formal), inscribed simultaneously within the harmonic, rhythmic and dynamic domains'. It creates a real 'modulative or modular continuum'.

THE ELEMENTARY SURFACE

What we encounter haptically is always *an elementary surface.* In other words, the encounter always establishes a surface of contact where the haptic features unfold. As discussed in previous sections, the word 'contact' should be understood here as a form of 'proximity' that is based on our sensitivity to deformation. It is not a proximity in the sense of a neutral observation of the location and relative distance between separate things (aka geographical distance), but it has to do with the possibility of being materially and intensely affected by

[410] Richard Pinhas, *Les Larmes de Nietzsche* (Paris: Flammarion, 2001) <https://archive.org/> [Accessed 23 May 2024]

what we encounter in the form of sensations. It is when we feel closely affected, regardless of the location assessed from a third-person viewpoint. Sensation operates as a sensitivity to our own deformation when being in touch or affected by something. When we perceive something else deforming we can also experience a sense of deformation as a sensation, as a 'wave that flows through' our 'flesh and nerve' in Deleuze's logic;[411] and there is also deformation in the very site of touching or being touched, which we can be more or less aware of. The different details of the sonic surface determine a way of pressing against our listening 'flesh and nerve' (e.g. brush-like or block-like). In haptic listening we become aware of the deformation that takes place in that way of pressing. We can distinguish between a way of listening to sounds that is detached, and a haptic way of listening. In the former, the process of grasping sonic cues for the interpretation of meaning can be carried out independently of any sensation or intensity, of any way of being affected by the sounds, and of any awareness of the feel of the haptic traits of the sonic surfaces.

Ingold also emphasises that this distinction does not depends on a proximity in terms of location or measurable/estimative distances. He argues that we can sense haptically things that are at a distance, and that there is also non-haptic touch. For example, when it concerns apprehending something by touch, the evidence of the latter is 'nowhere more than in the operation of touch-sensitive electronic devices, in which everything depends on the precise point of contact at the fingertip, not on any feeling for the screen'. The non-haptic way of touching surfaces, 'alights on surfaces only to pass directly through or to bounce directly off them, not to remain there.' In turn, to sense a surface haptically is 'to register every bump or hollow, every crease or fold […] as a variation intrinsic to the surface itself'. Ingold also indicates that this distinction applies to any sense modality: 'The fundamental distinction between a perceptual space defined on the one hand by unfettered oscillatory movement, and on the other, by measured point-to-point connection is independent of the particular sensory modality involved.' We can experience 'a knowledge of forms so objectively detached from the visceral conditions of existence as to be unsullied by the vagaries of sensory experience'.[412] In listening, this is what happens when, for example, we figure out a rhythmic figure only by means of point-to-point durations between onsets, or between onsets and silences, with different stresses, disregarding the continuous variation of sound and the way it determines the sense of rhythm (as discussed in detail in I.2.). The first sense of rhythm is practical, but it is different from the one we can grasp by following the surface and remaining there.

A sonic haptic surface is not a sort of object with isotropic features, which would be available all at once, and would be the same regardless of the way they unfold in the experience. On the

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[411] Gilles Deleuze, *Francis Bacon. The Logic of Sensation*. trans. Daniel W. Smith (London: Bloomsbury, 2017), p. 34.

[412] Tim Ingold, 'Surface Visions', 101-102. The word 'optical' refers to vision, so I am calling the opposite of the haptic simply non-haptic, for the domain of listening and in general.

contrary, a sonic haptic surface is also a flow, it is the surface of the sonic flow, and its features are exactly the way they are felt *as* they unfold. They are surfaces because they can be contracted as such in our consciousness of the material continuity of the flow. Thus, the formations that result from material deformation, can only be grasped as they unfold, and we have intricacies of sonic textures that can only be grasped bit by bit as continuous variation.

No matter how long; how dense; how thin, airy and vast; how short, compact and sharp-edged; how penetrable and deep; how monotonous; or how intricate and heterogeneous a sound might be: *sonic surfaces* are *the necessary condition* of the determination of any of the other haptic 'aspects' and 'elements' I address in this section, and the 'aggregates' and 'variations' I include in both. They are the site of the haptic encounter where haptic feature unfold, even in an immersive sound, in order to feel its haptic features we need a surface of contact. In other words, haptic categories are all surface-aspects, surface-elements, surface-aggregates, and surface-variations. They are the result of a movement in place (see I.2.), that constitutes the feel *of the surface, at the surface, by skirting the surface.*

Different surfaces are usually thought of as corresponding to different timbres, and commonly treated as different layers. However, these determinations can be misleading for a number of reasons. In the first place, while certain haptic traits can function as timbral qualities, a discussion about timbre, as I have posit previously, is a discussion about the aspects of sound that allow sound-source recognition, and about the play of thresholds between recognisable/ unrecognisable sources. Thus, discussions about haptic traits can overlap but do not correspond to discussions about timbre. In the second place, we can also distinguish different surfaces nested within the same timbre, or different timbres within what we are hearing as one sonic surface. In the third place, a view of the mix, or the music's fabric or texture, as interrelated layers can radically differ from the effect of adjacency that different sounds can have when followed haptically. For example, the chaotic sounds of Radiohead's 'National Anthem' (*Kid A*, 2000) hold together on the basis of that sense of adjacency, rather than on an exercise of making relations between layers. I discuss this sense of adjacency, which replaces the background/foreground order, in more depth in Part III. Finally, since in haptic listening what we encounter is the traits of the surface of the sonic materials, all sounds could potentially hold together as only one big surface with different traits. Therefore, what we call this or that surface can only be determined on a case-to-case basis, in relation to the interpretation in question. Different surfaces can reveal different sonic formations, such as the *aspects* and *elements* I address here. Finally, since sounds can be more or less blended together in a rock track, sometimes it is more precise to refer to certain surfaces as *zones*.

The haptic traits of a sonic surface can, for example, form a *texture* or a *haptic complexion*.[413] As Gibson reminds us, a texture is seldom homogeneous:

[413] I am borrowing the concept of complexion from Ingold, 'Surface Visions'.

> The texture of a surface arises from two main facts: first, a natural substance is seldom homogeneous but is more or less aggregated of different homogeneous substances; and second it is seldom amorphous but is more or less aggregated of crystals and chunks and pieces of the same stuff. Hence the surface of a natural substance is also neither homogeneous nor amorphous but has both a chemical and a physical texture; it is generally both conglomerated and corrugated. It has what I will call pigment texture and layout texture. It is generally both speckled and rough.[414]

This consideration seems to me helpful to bear in mind when discussing relations between *pitch and haptic traits*, if we think of them as *pigment and layout, respectively*. it is important to be aware of how pitch can tend to become a haptic trait, for example in the case of contours, or of high nominally unpitched frequencies, that are sharp and piercing, or in the case of a cluster that brings with it a lot of beatings and haptic roughness. In other cases the pitch variable can be more markedly distinguished from the haptic traits of a sound, but still both can conform the sense of texture, since a sonic surface made of sounds of a high register, and thus constituting a high-pitch zone, is also *haptically different* from a surface made of sounds of a low register. In any case, we can always distinguish pitch from haptic traits. I expand on this distinction when addressing grain and pitch in the first aspect.

PATTERN VERSUS FLOW

As I have explained in previous sections, sound is a material entity. It is certainly a material entity of a special kind, but it is not less material than any of the other things we can encounter in the world with our senses. Since all materials are flows, we can see that one of the most notorious characteristics of sounds in comparison to other materials is that we can apprehend their flow directly in real time. Conversely, depending on the way of listening we can also fix sonic flows, and dismiss their continuity, extracting from them *only* what we fix as cues that will provide enough information for the function we are ascribing to the sound. For example, this is how we can reproduce a same *pattern* with different sonic materials, whereas if we follow the sonic materials haptically we will notice that they are different *sonic formations*. Above all, patterns are useful tools and we can grasp them as a recognisable structure without falling into the error of taking them as all there is of the formation and the rhythm (I come back to this point in the Conclusions). In more general terms, recognisable structures and the sonic formations that are determined by the materials and their molecular ways of flowing are different in kind. Here I do not focus on an analysis of patterns, but on an analysis of the sonic formations that rise up when we listen to sounds haptically, bearing in

[414] Gibson, *The Ecological Approach to Visual Perception,* p. 25.

mind that the accents and metric organisations of a pattern may coincide (in the sense of superposing a representation in a grid to something) with edges and the repeated ordering of elements in the relief of a sonic haptic formation, and there are always passages in our sensitivity from grasping recognising stable, fixed or discrete cues, to fluid and always changing haptic aspects and elements, that do not work as cues.

Some sonic haptic categories for the analysis of rock recordings	
ASPECTS	
1. Grain	
No noticeable beats	Smooth surface
	Fine Grain
	Coarse Grain
Noticeable beats	Granular or Serrated Grain
	Irregular or Jagged Grain: marked by irregularity
	Macro-grain
2. Edge	
Piercing edge	
Sharp edge	
Smooth edge	
3. Consistency	
Density -Large scale (spread)	Dense consistency
	Hazy or airy consistency
Density - Small scale (contracted)	Thick consistency
	Thin consistency
Elasticity-Rigidity	
ELEMENTS	
1. Flat fields	
2. Wavering fields	
3. Cuts, Protuberances and hollows	
4. Glides	
5. Springs	
6. Swellings	
7. Blasts	
8. Broken tones	

1. Aspects

1.1 Grain

Every sound can be listened to as a sonic surface, and every sonic surface has a texture, but only a sufficiently spread sonic surface (i.e. from a certain duration on, depending on the sound), will show the haptic aspect called 'grain'. This concept has been used in a similar sense by composer Pierre Schaeffer, for example, who in 1966 drew attention to the following sonic event: 'the bassoon bass layer allows us to hear simultaneously both a low tonic note and what we call the "grain", which is precisely the perception of distinct beats'.[415] Thus, a multitude of beats can be so close to each other that we perceive and feel them as the grain of a sonic surface.

From the angle of acoustics, the phenomenon of beatings has been observed in relation to the pitch variation of two simultaneous sine waves, evidencing 'three perceptual regimes':

> When the sine waves are very close in frequency, they are heard as a simple pleasant tone with slow variations in loudness (beats). Somewhat further apart in frequency, the beating becomes rapid and rough, dissonant. Then the tones separate and are perceived individually, gradually smoothing out as the tones draw further apart.[416]

From the point of view of the aesthetics of rock and haptic listening, I find this observation helpful to illustrate how, in general, pitch relations can generate rough sounds or smoothen them out. In rock music, a distortion pedal, for example, generates rough sounds by producing inharmonic overtones (non-linear device). However, we need to establish some distinctions, according to the different phenomena of study of acoustics and aesthetics. In the first place, in the description from acoustics, we are presented with a continuum from rough to smooth, which is helpful only as far as sine waves are concerned. When listening to the real sounds as we encounter them in the environment, including the sounds of rock recordings, we are not given a continuum, but much more complex differences take place. These differences cannot be described if we think of grain as always having the same structure and only varying in degree from rougher to smoother. This difference in degree is indeed relevant when sounds do have a similar kind of grain, but it is also important to address how the grain varies in kind,

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[415] Pierre Schaeffer, *Treatise on Musical Objects: An Essay across Disciplines*. trans. Christine North and John Dack (Oakland: University of California Press, 2017), p. 156.

[416] William A. Sethares, *Tuning, Timbre, Spectrum, Scale*. Second ed. (London: Springer, 2005), p. 46.

which involve other details of its structure or form. In rock practices, roughness became not only a criterion of value, and a stylistic feature in rock music, but it has also been subject to ample experimentation and careful craft, with differences that are varied and have a huge impact in our experiences and interpretation of meaning. Consequently, here I propose to make some simple but relevant distinctions, that will help us to choose a more precise vocabulary when writing about them, and can provide a categorical basis from which we will still have to describe finer distinctions on a case to case basis.

First, I propose to distinguish between two broad categories. Sometimes, at a small-scale level of detail, we can still distinguish beats, as copious protuberances, attacks or hits, like the drops of a profuse rain as they make contact with the ground. Sometimes we do not distinguish them as different beats. Thus, the first category is the kind of grain with *no noticeable beats*. In other words, the scale-level is too small to exhibit them, but we can somehow still feel that the grain is made of them. Within this category we can distinguish three sub-categories: (1) simply a *smooth surface*, with no grain, or at least where a description of grain is not relevant; (2) *Fine grain*; (3) *Coarse grain*. The second broad category is the kind of grain that exhibits *noticeable beats*. Of course we are still looking into the small-scale level of sound. Here we can use the distinction between three sub-categories: (1) *Granular grain,* which could also be called serrated grain; (2) *Irregular grain,* which could also be called jagged grain; (3) *Macro-grain,* with beats that are distinguishable in a much more distinct succession.

In the second place, I would like to briefly reflect on the relation between pitch and grain. As Schaeffer's simple example illustrates, we can hear grain and pitch as different aspects of the sound. From the point of view of acoustics, dissonance and roughness are somehow conflated. Dissonance indeed produces micro-beats, and these beats play a role in the perception of the sound as dissonant. However, when listening to dissonance, we can still hear a pitch, pitches or a pitch zone, which will remain a different aspect that we need to refer to when describing a sonic surface, as pitch-based distinctions can also play a role in other haptic aspects, and in other details of the music. Finally, we need to bear in mind that although the pitch-based dissonance/consonance play can alter the grain, this can be more or less marked and not always relevant. For example, sometimes, the settings of a signal processor can be so marked as to make any simultaneous notes, consonant or dissonant, maintain a relatively unchanging grain formation within a certain pitch range. This is of course even more evident in the case of successive notes and melodic lines. In those cases, the pitches only sometimes would be able to markedly change the grain (especially with marked changes of register in the instrument, or through the action of coming and going feedback, for example). So although pitch relations and grain are fundamentally not independent, they can acquire a significant degree of independence under certain conditions and settings. In any case, we still have to distinguish between pitch and grain in our descriptions.

Rough sonic textures are not simply rough. Sometimes, listeners readily relate a rough sonic texture to an associative meaning, a stereotype, or a positive or negative response, simply on the grounds of being rough and regardless of the singular traits of its way of being rough, so that *any* rough sonic texture can be interpreted in the same or similar manner. Sometimes, listeners engage with more detailed textural differences, by closely joining with the rough sonic texture, and noticing and appreciating finer distinctions both in its material traits and in how it feels. Thus, it is for this second kind of cases that rough sonic textures are not simply rough, and therefore it would be helpful to clarify and refine our ways of discussing relevant distinctions in matters of *grain*. I am starting from the basic fact that not only rough but also many other different forms of grainy sonic textures are ubiquitous in rock recordings, hence my focus on different forms and degrees of roughness as a first domain to enquire about. However, the concept of 'grain' certainly encompasses a wider range of differences, that are also relevant to the sounds of rock recordings, which I also discuss in this section.

The drive towards a 'more rough-edged rock sound', or a cruder 'clang and grind', consistently shaped the sound of many bands. Notable ventures into pushing this aspect to unprecedented limits can be found in early and mid-1960s in bands like the Kinks (e.g. 'You really got me'), the Troggs (e.g. 'I want you'), and in the so-called American "garage rock" bands like Count Five (e.g. Psychotic Reaction), The Amboy Dukes (e.g. 'Baby please don't go') and Captain Beefheart (e.g. 'Diddy wah diddy'). The quest for roughness works as an important aesthetic criterion for rock listeners and musicians, as often emphasised, for example, by rock writer Lester Bangs, who states like 'the cruder the clang and grind the more fun and longer listened-to the album'd be',[417] and uses a proliferating semantic field that glorifies 'blasting sound'.[418]

Concerning granular grain, it usually works at the threshold of coarseness, that is at the threshold between noticeable and no noticeable beats. This is why I find suggestive to make a difference between the adjective coarse and the adjectives granular, serrated or indented. In Granular grain irregularity and change does not happen between dots but only from one moment to the next, that is after a certain stability has been exhibit. An example of granular grain, among many other possible examples, is the bass sound in Butthole Surfers's

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[417] As he writes: 'It wasn't until much later, drowning in the kitschiest of Elton John and James Taylor, that I finally came to realize that grossness was the truest criterion for rock 'n' roll, the cruder the clang and grind the more fun and longer listened-to the album'd be.' Lester Bangs, *Psychotic Reactions*, p. 10. — The word 'cruder' means both in a raw state, that is unpolished, and it is also related to coarseness. The word 'grind' is self-evident in that it implies a certain harshness or abrasiveness. The word 'clang' is reminiscent of the German word 'klang', and implies a metal sound source. Concerning his mention to 'grossness' as a central ('the truest', in his view) aesthetic criterion of rock 'n' roll, one can consider it as including a factor of haptic roughness but it is mainly directed to the connotation of value, as obvious vulgar or rude wrongdoing.

[418] Ibid.

'Something'. Bardo Pond's 'Sentence' privilege contemplation to the distinction between coarse and granular. The grain in the distortion of Link Ray's 'Rumble' is a slightly jagged grain, there is enough dot interspacing to almost allow for the distinction of irregularity. The effect of the clean pitch adds another element to the compound, turning it into a haptic variegation. An example of macro-grain can be heard in 'St Elmo's fire' by Brian Eno.

NOTES ON DISTORTION ROUGHNESS IN SINGING

In rock practices, the well-known 'sound-signal processor' called 'distortion' that is usually performed with guitar pedals, can be considered as the quintessential way of generating sonic roughness.[419] However, the use of other sound sources, especially the voice, can be equally important. Moreover, the roughness of different sources can *conjoin* each other in different ways within single pieces of music, or replicate each other historically. For example, according to historian Michael Hicks, rough guitar sounds, and rough saxophones sounds before them, were initially conceived, in part, as a way of 'mimicking' the 'vocal roar' of blues singers.[420] I share the view that the sound of a distorted guitar can still effectively work as a way of evoking the raspy tones of blues singing, and, that the relevance of this relation can also be demonstrated *retrospectively* if one listen, for instance, to how the first *long and grating* syllable 'ain't' of Blind Willie Johnson's 'It's nobody's fault but mine' (1928) can evoke not only the 'roughness' of a guitar distortion but also its 'sustain'.[421] High degrees of vocal roughness can also match and combine with the use of prominent guitar distortions within a single track, like in The Troggs' version of 'Louie Louie' (1966), The Stooges' 'T.V. Eye' (1970), Mudhoney's 'Touch me I'm sick' (1988), the chorus of Fugazi's 'Suggestion' (1989), and Nirvana's 'Tourette's' (1993), among many other possible examples of rock recordings, bringing about variegated textures. As Hicks recounts, the development of instrumental techniques for imitating 'the roar and buzz of singers', actually started with brass players in the 1920s and 1930s that 'popularized the "growl and plunger" style of playing', followed by the "boot" style of saxophone players in the 1940s and 1950s rhythm and blues. These styles not only expanded the timbral palette of their respective instruments, but also encouraged other singers to exploit vocal roughness further, as 'the techniques of each reinforced the other'. Electric guitarists started to push the volume of their amplifiers beyond their presupposed capacity, firstly in order to compensate for the low dynamic level in relation to

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[419] I am borrowing the term 'sound signal processor' from musicologist Samantha Bennett. See for example: Samantha Bennett, 'Time-Based Signal Processing and Shape in Alternative Rock Recordings', *IASMP@Journal,* 6 (2016).

[420] Michael Hicks, *Sixties Rock. Garage Psychedelic and Other Satisfactions* (Urbana and Chicago: University of Illinois Press, 1999), p. 166.

[421] The track 'Mother's children have a hard time' is another good example.

other instruments,[422] noisy venues, or the 'white noise and electrical hum' of radio signals and worn-out vinyls.[423] The resulting sound of this 'overdrive' then became a desirable effect for its own sake, and developed into different kinds of 'distortion'. As explained by Hicks: 'If overdrive was almost inevitable, some kinds of distortions were not. In many cases, accidental (and later, deliberate) damage to amplifiers enhanced the fuzzy sound'.[424] Subsequently, guitar pedals were invented to switch the 'fuzz' on and off as required, instead of damaging the equipment. Although a profusion of different distortion pedals have been fabricated since the early 1960s, there is agreement between rock guitarists that they all fall under the big "umbrella" called 'distortion' that can be subdivided into three main categories: 'overdrive', 'distortion' and 'fuzz'. Overdrive refers to the kind of distortion that has just passed the point of a "clean" sound; when it just starts to "break up" with little harmonics and tones coming out, plus compression which gives sustain. Classic electric blues such a boogie woogie patterns are a typical example of its use. Overdrive does not completely smothers the clean sound. Overdrive is also usually used as a boost over distortion. Distortion, in turn, completely smothers the clean sound of the guitar. It has many harmonics, higher sustain. The fuzz box is a sound that is 'severely "clipped" the peaks of the instrument's natural wave form.[425] According to Hicks, the earliest version of the fuzz pedal was used in The Ventures's 'The 2000 Pound Bee', in 1962 (The Maestro Fuzztone FZ-1). The roughness of distortion is different from the roughness of fuzz in that one is more ragged, uneven and untidy, the second is more homogeneous like static, entirely electric, etc. Within irregular grain, we can also sometimes notice a special kind of distortion that is sticky, grips and deforms, in a sort of sticky friction on top of the irregular grain. The band Bardo Pond frequently uses this kind of sound.

Distortion and degrees of roughness in general can have an effect on the blending or separation of sounds in the mix. Moore points at the distinction between 'tight and loose edges', 'in thinking about how the space is occupied'.[426] The 'separation' or 'blending' of different 'timbral strands' is also put forward by Moore as an 'overriding aim' of record

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[422] 'During the early years of rock 'n' roll, vocal and saxophonal distortion complicated the sonorous edge of the music — an edge reinforced by the sizzle of the ride cymbals, snare drums, and, occasionally, maracas.' Hicks, *Sixties Rock,* p. 166.

[423] Ibid*,* p. 166-7.

[424] Ibid*,* p. 168.

[425] Ibid*,* p. 171. I have also found the explanation provided by guitarist Marty Schwartz in a video, quite useful as a basic overview of the differences between distortion, overdrive and fuzz, where he emphasises that they are all 'under the same umbrella' of 'distortion': Marty Schwartz, 'Overdrive, Distortion, Fuzz: What's the Difference? Marty Music Gear Thursday', *Youtube* (2017) <https://www.youtube.com/> [Accessed 4 March 2019]

[426] Allan F. Moore, *Song Means: Analysing and Interpreting Recorded Popular Song* (Surrey: Ashgate Publishing Limited, 2012), p. 35-6.

producers, put 'in the service of the whole experience'.[427] The descriptions of the apropos examples show a correspondence between 'rough' sounds and 'loose' edges, which tend to privilege the blending, on the one hand; and a correspondence between 'smooth' sounds and 'tight' edges, that allow for the sounds 'to stand out'.

[427] Moore, *Song Means,* p. 43-4.

1.2. Edge

The haptic aspect of a sonic formation that can be distinguished as its *edge* can involve a number of different issues. Depending on the case, some of them will be relevant and others will not. It predominantly refers to the degree and form of sharpness or smoothness. It can also be involved in the degree of separation or blending with other elements (as grain also can, see 1.1.). It can also consist in the form and function of different kinds of contours, including melodic contours or patterns of relief made of protuberances and hollows.

The sense of *sonic sharpness* belongs to the realm of *high-pitched* sounds. A sound can be perceived within the range of high-pitched sounds even when it is 'nominally unpitched',[428] in which case it does not have a precise pitch but an approximate 'pitch-zone' (e.g. the triple model: treble, middle, bass; or other ways of distinguishing pitch zones or registers, which pertinence can be established in relation to individual cases). In turn, when the sound do have a precise pitch, it can be identified as a 'note' in a scalar or harmonic system.[429]

The concept of 'sharpness' I address here, refers both to a 'piercing' sound, which implies that the sound has a 'sharp edge' that can feel 'sharply penetrating', and to a sound that is markedly 'distinct' or clearly 'defined'. In an attempt to develop *edge* as *a sonic haptic category,* I explore the first meaning, which nonetheless cannot go without the second, so I still keep both meanings in play. And I distinguish them as two different sub-categories within edge: *piercing edges* and *sharp edges*. Leaving *smooth edges* as a third category.

SOME EXAMPLES

For example, the track 'Head' by The Jesus and Mary Chain (*Barbed Wire Kisses,* 1988) congregates something of a rich panoply of piercing edges. 'Needle in the hay' by Elliott Smith (*Elliott Smith*, 1995) has a marked relief of sharp edges, especially in the voice, and the words' phonemes and their marked pronunciation (e.g. 'markssssss') are determinant in this sense. They are the kind of sharp 'plosives' and 'sibilances' that can be studied, following musicologist Samantha Bennett, from the angle of timbral features of 'anti production'

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[428] See Moore, *Song Means,* p. 20.

[429] The degree of precision with which a pitch may correspond to a note in a particular model can vary. As discussed in Middleton, listeners fit sounds to 'a culturally acquire scalar model' 'even when they are pitch-mobile or slightly divergent from recognised pitch steps' (this is called *abstraction notale*). Thus, even when the same model is widespread (widely shared by many), there can be a 'dialectical interplay between 'abstracted notes' and other forms of 'segmentation': 'How for instance would *abstraction notale* apply to the pitch sequences of a rhythm and blues or country and western slide guitar solo?'. Richard Middleton, *Studying Popular Music* (Milton Keynes: Open University Press, 1990), p. 178 and 245 (footnote 8).

techniques.[430] These edges create a striking contrast with the breathy chorus, the muffled low-pitched guitar lines, and the flat field of fine-grained ambient tape-like noise. The sharpness of the voice prevails in all the mixes of this album in comparison with the rest of Smith's discography. It is also perhaps a relatively salient feature in the first album as well (*Roman Candle*, 1994), though less marked than in *Elliott Smith.* The guitar, although comparatively, muffled, seems to be threatening to make a sharp metallic noise any time. It is not the melodic line of the voice that is high-pitched here but only its sharp edges. The contrast between verse and chorus, makes the line 'needle in the hay', feel smooth like a balm. I sometimes interpret this as a sense of having a momentary detached perspective of a very traumatic event, like realising a truth, which the words suggest is a lost cause, but being out of control can be a tranquillising event, even though it is sad (breathy voice, sighs). Since the soft sighs and muffled sounds are also textured, it is possible to enter the track as a whole haptic relief of sharp protuberances and textured cavities. I appreciate many of Elliott Smith's recordings as having a notorious power to endow listening with a haptic function, particularly this homonymous album.

A sound that I think can work as an example of a salient smooth edge in the middle of rough sounds, is the clean and distinct guitar lick in Bardo Pond's 'Back Porch' (e.g. 0'05" and 0'11", one slightly foregrounded the other further back, generating a sort of shallow depth).

Another example of markedly sharp edges is the sound of the guitar in Violent Femmes's 'Promise' (*Violent Femmes,* 1983). Pitch and edge, as the equivalents of pigment and layout texture work well here as the rich chordal texture is produced by the strummed pitches and the surface relief of the sharp edges can be easily distinguished as another aspect of the same texture. I do not pretend to be exhaustive with the examples of this category, just a brief illustration for the purpose of defining it. It is important to recall here that a smooth grain and a smooth edge are categories that overlap, and that the haptic element I identify as 'cuts', crucially involve issues of edge.

In my undergraduate music training, based on the music theory of the so-called Western classical music tradition, the usual exercise of trying to identify a chord in the piano by listening to it, with all its notes played at a fairly uniform loudness, we were encouraged to strategically notice how much easier it was to distinguish the lowest and the highest pitches, than the rest of them, the highest being certainly the easiest, while the lowest could tell you more that the highest about the chord's identity in this musical context. In other words, whether sharp or smooth, high-pitched sounds have a tendency to protrude, and because they are thinner than low-pitched sounds, they work as edges. There is indeed a sense in which

[430] Bennett studies them in her PhD thesis, and one of the examples is the line 'it's not my problem' in Blur's 'Song 2'. Samantha Bennett, 'Examining the emergence and subsequent proliferation of anti-production amongst the popular music producing elite' (University of Surrey, 2010).

pitches can operate in a continuum from thick to thin, not only from low to high, as I discuss in next section.[431] At an extreme, a sharp sound can be uncomfortable, painful or even hurtful, if it goes beyond certain thresholds, which may vary from listener to listener, however I do not deal directly with these thresholds, and will only explore sonic sharpness in a plainly safe zone.

[431] According to musicologist Daniel Leech-Wilkinson, 'the linguistic terms (high, low, thick, thin) appear to have been adopted by languages because they have pre-linguistic origins', for example, Farsi uses thick and thin, Dutch uses high and low. Daniel Leech-Wilkinson, 'Musical Shape and Feeling', in *Music and Shape*, ed. by Daniel Leech-Wilkinson and Helen Prior (New York: Oxford University Press, 2017), p. 360. In Spanish and French, for example, pitch is said to be sharp (piercing, related to thin), and grave (serious, severe) — perhaps related to the sound of a voice in a low mood. I think these are not necessarily metaphorical descriptors but just descriptors, and I share the view that none of these is ultimately generalisable.

1.3. Consistency

A sufficiently large sonic surface (i.e. a sound with a sufficiently long duration), can reveal not only a grain but also a consistency. The haptic aspect of sonic materials that I propose to address as *consistency,* involves *density* and *elasticity.* I am subsuming these two aspects under the term 'consistency' because they both refer to attributes of the mass, volume or fullness of the sound, rather than to the more superficial surface-attributes of edge and grain. We must bear in mind that although all these distinctions can work as useful variables, they are ultimately abstractions that are never found working on their own.

1.3.1. Density

In this section I define the concept of sonic haptic density. I distinguish it from a spatial density, as the way the sounds occupy space, and/or as having the function of providing cues to identify/represent a kind of place or space. One of the issues that musicologists discuss when addressing the ways the sounds create sonic spaces and sonic textures in a rock recording, is *density*. For example, Lelio Camilleri refers to 'the sense of saturation or emptiness' a listener can experience[432]; Samantha Bennett refers to the relation between 'reverb' and 'textural depth and density' in rock recordings;[433] and Allan Moore suggests that 'in many styles it is important to fill out the sound-box', and the ways of filling out the sound-box 'can vary greatly'. Moore provides a 'model' for the 'conceptualisation of varieties of density and, thus, the presence of textural holes and masks, blocks and points of sound'. He distinguishes three kinds of sonic density illustrated by three examples of 'a high density of sound': one is 'as if the entire foreground of the soundbox is opaque' (e.g. 'She loves you'' by The Beatles), the second 'as if the front of the soundbox is covered with muslin' (e.g. The Verve's 'A northern soul'), and the third 'as if many small areas covered at different depths within the soundbox' (Fleetwood Mac's 'Little lies').[434] Differences of density can help us not only to observe the formation of some sonic elements such as holes, blocks, masses, thin lines, thick currents, and so on, but also to observe how the sounds can achieve, as in Moore's examples, 'a sense of wide openness'; a sense of a sound 'smothering' the mix; a sense of a 'dense texture' 'made up of highly differentiated, harsh sounds, which in appearing in different places across the stereo spectrum tend toward disorientation', and so on;[435] or a sense of 'textural depth' such as in the effect of 'cavernous spaces' discussed by Bennett.

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[432] Lelio Camilleri, 2010. "Shaping sounds, shaping spaces." *Popular Music* 29 (2), p. 202.

[433] See for example, Bennett, 'Time-Based Signal Processing'.

[434] Moore, *Song Means,* p. 44.

[435] Ibid, p. 42-43.

The haptic aspect I propose to call *density* covers these issues when they concern the description of an appointed *sonic material*. My emphasis on the material, turns the attention away from spatial density and towards haptic density. For example, for the case of 'cavernous spaces' the concept of haptic density can allow us to focus more on how the hollowness feel, rather than on how it resembles the reverb of a real cavern and its possible connotations. Overall, I am proposing to reserve the concept of spatial density to cover both, the sense of how the sounds are located and distributed within an "empty" space, as well as the sense of size and kind of place the sounds evoke, via recognisable cues that allow its identification/ representation (e.g. outdoors, indoors, a cathedral, a room, a cavern, a street, a park). Thus, with the concept of haptic density I aim to focus on our gradual and close range haptic sensitivity to the material consistency of the sonic masses.

This is a turn that has already been implemented in the last decade by Bennett, in her studies about the effects of reverb and other time-based signal processors. As Bennett accounts:

> One of the key findings from our research was that applications of time-based effects processors not only impact recordings in terms of spatial characteristics, but more significantly, in terms of texture and a song's overall shape.[436]

Here, I start from a view of the recording as a material entity in formation, which is not a predetermined empty space that the materials occupy, fill out, and where elements are placed. Once again, Ingold's reflections on 'dwelling' and 'being alive' can help us to appreciate this distinction, which applies to anything in material reality. He also discusses a distinction between *elements being placed* on the ground or in the sky, like 'furniture', and elements in formation, which are part of the ground and the sky, and made of ground and sky material. For example, he simply explains that 'to observe the clouds is not to view the furniture of the sky, but to catch a fleeting glimpse of a sky-in-formation, never the same from one moment to another'; and that 'the hill is not an object on the earth's surface but a formation of that surface, which can only appear as an object through its artificial excision from the landscape of which it is an integral part'. Thus, what the 'comings and goings' of the 'open world' generate is 'formations, swellings, growths, protuberances and occurrences, but not objects'.[437] This difference of focus and emphasis can also apply to rock recordings. We can observe a recording-in-formation has being made of its materials-in-formation, rather than being occupied or filled by them. If we do so, we will see that there is no space, no elements and no zones and expanses, other than the ones formed by the sonic materials themselves. So I focus on density as an aspect of the sonic materials rather than density as the way they occupy space. From this angle, a new material spreading out does not occupy and empty

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[436] Bennett, 'Time-Based Signal Processing', p. 5.

[437] Tim Ingold, *Being Alive: Essays on Movement, Knowledge and Description* (Taylor & Francis Ltd - M.U.A, 2011), p. 117.

space, but changes the previous material density. The distinction may seem subtle, as some issues may seem to overlap whether they are approached from one angle or the other, but it is nonetheless fundamental, and has major implications. For example, when the sense of size results from the contemplation of the density of the materials in haptic listening, the size of elements can vary greatly from one sound to another, more than if they were considered from the point of view of the sense of space they create and the ways the occupy and fill out the mix. In short, the sense of immensity, and the sense of infinitesimal details can be more intense. For example, the experience of closely noticing the multitude of minute sounds that a sonic material is made of — an abundance that exceeds a full grasp and only allows for 'fleeting glimpses' and the sensations that come with them —, is a privilege position to contemplate how it can bring with it the sense of the material growing and spreading, not to fill out a predetermined expanse, but to generate a formation with its own sense of magnitude, with its own sense of density, its own sense of depth, and so on.

Yet, this does not mean that the appearance of a recording as a space filled out in different ways is not a relevant issue in many cases and interpretations, but it is not the way density is experienced haptically. A focus on the sense of space, is radically different from a focus on the sense of material formations (including their texture, density and haptic complexions and haptic traits of any kind). Their pertinence or emphasis will depend on the interpretation in question. Moreover, these two senses of density, namely the spatial and the material, can interact within a track in the form of passages from one to the other. Material elements-in-formation can still be located in different places. However, from this angle, these locations can be better understood as zones of the material continuity, rather than precise locations in a homogeneous space (as I discuss in more detail in I.2.).

MATERIAL OR HAPTIC DENSITY

In order to discuss relevant differences of material density as a haptic category, I consider different forms of density, and the way density is involved in the formation of different elements. I distinguish between *spread* and *compact* sonic elements or formations, and between different degrees of *penetrability/impenetrability*. Dense sonic elements can be spread or compact, and a spread one can form either a *large surface* or an immersive material.

Density has a curious rhythm. It can reveal — perhaps more clearly than other aspects —, movements of contraction and expansion happening simultaneously at different scale-levels. On the one hand, a sound that contracts into a compact element can be also expanding into a compact thickness, or it can be its compact thinness that can give it a sense of expansion or diffusion, depending on the case. On the other hand, the density of a sound that spreads around can also be experienced as a contraction of a multitude of fine details, as they

accumulate. The element that I discuss as 'swellings' can provide a very clear view of this phenomenon.

The density of a *compact* element may be simply considered as *thick* or *thin,* and more nuanced details will have to resort to other haptic aspects. For example, the isolated guitar line at the beginning of the Breeders's 'Saints' (*Last Splash,* 1993) is a thick compact flow with a granulated texture, and the variations of that melody, variations that are partly based on different degrees of penetrability/impenetrability, acquire different functions throughout the song. The glockenspiel notes and lines in the Velvet Underground's 'Stephanie Says' (*Peel slowly and see* (1995) or *VU* (1985)[438] — originally recorded in 1968), are thin compact elements, but impenetrable enough, and an edge that is distinct and prominent enough, to cut through the mix.

Pitch variations can be directly involved in the sense of density and size. As explained by composer Robert Erickson, low pitches 'tend to spread in all directions', for example. Beyond the spatial nature of the concepts of high and low, which I think could be related to the different cavities where different pitches resonate in our bodies, here I am mainly using them conventionally, just to indicate the sound I am talking about, and I use other terms to address its haptic attributes. In a certain sense, I am suggesting that the spatialisation of the zones where the vibration of different pitches is experienced can have senses of spatial orientation and location in a sense that differs from their representations in homogeneous space, but I am leaving this question for future research as it goes beyond the scope of this thesis. I share Erickson's view that we can experience variations in density and size with pitch variation. From the point of view of haptic listening, higher pitches can be felt as more compact and smaller than lower pitches. According to Erickson, 'a figure that could express the attribute of volume (extensity, bigness) would have to be somewhat different from plane figures of staff notation.' The representation of a pyramid that Erickson offers to illustrate the effect of the pitch variable in these senses, seems to me a good schematic and practical reminder of the 'attribute of volume' that sounds can have according to variations of pitch. It 'gives a sense of the voluminous lower pitches and their characteristic spread-out sound, and it expresses the compactness of the higher pitches'.[439]

The different kinds of spread and compact sounds, with their different degrees and forms of density, can all be more or less *impenetrable* or *penetrable*, as when masking sounds or allowing the distinction of other sounds *through* the sonic formation or *within* the immersive material. Thus, in order to describe the effect of 'masks' for example, I feel more inclined to

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[438] Differences between the 1995 and the 1985 editions are notorious. The edges of the *Peel slowly and see* (1995) are sharper. However, either/or work as an example for a thin compact surface.

[439] Robert Erickson, *Sound Structure in Music* (Berkeley and Los Angeles, California: University of California Press, 1975), p. 154.

use the concept of 'impenetrability' rather than the concept of 'opacity', because it can refer to any material and any sensory domain, whereas the concepts of transparency and opacity, refer to the visual domain. I am borrowing the concept of 'impenetrability' from Deleuze's logic of sensation.

As I mentioned above, the *spread* sonic formations I focus on, are the ones that result from the contemplation of an abundance of micro sounds in the material. The complexity lies in the fact that there is a double movement of contraction and expansion, as also introduced above. As the material gets denser, in its superabundance, it expands and spreads, forming what can be experienced as a large or larger formation. Sometimes, micro sounds are so small and thin that they create an airy or hazy textural density, that can bring with it a sense of depth and even void, where the sense of contraction is therefore less marked. In other occasions, the abundance of micro sounds in a material does not spread but only contracts into a compact element, which can in turn be thick or thin, and expand and contract in other ways. Thus these distinctions are complex, and they can take place at different scale-levels. They involve the 'rhythm of the material' as discussed in I.2., which can only be approached on a case-to-case basis. However, the broad distinctions I propose to consider here can help us to indicate some important factors, and some general types of formations. For the case of spread formations, I distinguish between the ones that operate as *large surfaces*, which may sometimes operate as *fields* (II.2.1. and II.2.2.), and the ones that operate as *immersive materials.* Thus, a spread element may bring with it a sense of vastness in these two different ways, that can become these two different elements.

An *immersive material* is, for example, the material of which it is made can be hazy, airy, dusty or void, like in the sense of 'emptiness' mentioned by Camilleri, or the sense of 'textural depth' suggested by Bennett. Or, it can be very saturated as Camilleri also indicates in opposition to that emptiness, or as in Moore's sense of 'smothering' the mix and/or the listener, or as in Bennett's sense of the 'submergence of instrumentation'.[440] The descriptors heavy and light may also help us to address the density of an immersive material, especially when we want to emphasise one possible effect of the immersion on us, as some possible forces rendered sonorous in a sensation. Although an immersive material will tend to be present a higher degree of penetrability to afford that immersive experience, there are certain cases when it will retain its status of *immersive material* while achieving a high degree of impenetrability. The track 'Dreams burn down' by Ride (*Nowhere,* 1990) is a good example of this. The intervals between verses burst into a very dense and explosive mass of distortion, that gets very variegated, turbulent, abrasive and chaotic and nearly completely impenetrable, while still sustaining the immersive experience. Thus, it is a heavy, suffocating atmosphere. The voice disappears as if swallowed by it. I said nearly impenetrable because we can still feel the

[440] Bennett, 'Time-Based Signal Processing', p. 10.

bass and drums, but they can actually be listened to as part of the blasting mass, articulating what's left of its groove.

The sonic surfaces of rock recordings may also exhibit another relevant form of density, that is a *linear density.* It takes place at the level of a linear 'rhythmic progression'. Changes of density can be the effect of an increase in its so-called rhythmic subdivisions, which is also close related to the sense of macro-grain. However, I am not suggesting that linear density and macro-grain overlap as haptic formations: density and grain remain different haptic aspects. Moreover, the same series of beats that are very close to each other, can also be considered in terms of speed as a *rapid* series, as it standardly is in music. Hence, our aesthetic studies can certainly benefit from noticing that it *also* has a density and a grain. Density can also change as the effect of an increase in long notes, (which can also be felt as a slower speed or as spreading flat surfaces). I have pointed at the way a sonic surface can spread forming a larger element according to the abundance in micro sounds, while at the same time it contracts into a higher density. In a linear way, there is also a sense of contraction into a higher density in the accumulation of sounds one after the other, and there can also be a sense of expansion or a leaning towards infinity that may result from that abundance of details. I discuss issues of linear density with the example of Van Morrison's 'Madame George' in III.3.

NOTES ON FRAMES

In the same way that observing the places of elements within a predetermined space is different from observing the movements of the materials contracting and expanding, getting thinner or thicker, or protruding and subsiding, for example, in the case of linear density, observing the material sense of density that increases as the rhythm gains in speed is different from observing it filling or emptying the metric/harmonic frame. However, we can work in an analysis (and also in experience) by means of passages between the comparative level of frames and framing, to the non-comparative level of material changes felt haptically.

Frames can be explicit or implicit. For the case of the space of a recording, the implicit frame can be determined by a series of physical and technological constraints for crafting the recording's space (e.g. laterality of the stereo, dynamic level, pitch spatial resonance, EQ, reverb, etc.). This makes it practical to think that there is a predetermined empty space, predetermined by all these devices and their *possibilities,* within which the sounds are placed, and which the sounds fill. A very useful model for studying this space, is the one Ruth Dockwray, Patricia Smith and Allan Moore have developed, a they provided important historical perspectives with it, about tendencies to use particular arrangements in the history of recorded song.[441] In an individual recording, the arrangement of these parameters is

[441] See for example, Allan F Moore, Patricia Smith and Ruth Dockwray, 'A Hermeneutics of Spatialization for Recorded Song', *Twentieth-century music,* 6 (2011), 83-114; and Moore, *Song Means*.

usually stable enough to be taken as an explicit frame, and changes can be related to it. Yet, in haptic listening the locations of sounds in space have to be complemented with the ways the materials contract or expand, and with the haptic traits and effects the movements through the stereo space create, as I explain in I.4. with the examples of Spiritualized's 'If I were with her now' and David Bowie's 'Little Wonder'.

Explicit frames of metre are also well-known. For the *linear density* of words delivery they can work in the sense explained by musicologist Dai Griffiths, with the notion of 'verbal space', which attends to the ways words occupy the space created by tonal music phrasing. A formal skeleton sets the space against – or in conformity with – the words seem to find their individual arranging. According to Griffiths it is 'a key point at which music and words trade off each other's *rhythm'*, especially in combination with rhymes and alliterations, for example.[442] Thus, it involves what I call linear density because it focuses on how the words are positioned on a timeline, and its metric distributions, independently of other aspects of sound.

NOTES ON REVERB - MATERIAL VERSUS SPACE

Reverb possesses an inherent aesthetic paradox: it is by filling the space with a certain kind of sound that it can sometimes make it feel hollow and spacious. It does both at the same time. This means that reverb has a texture that can be felt haptically. Therefore, here by 'texture' I mean a combination of grain and consistency. In this thesis I focus on the texture of reverb as an attribute of the material more than an attribute of the space. I explore the kind of haptic elements it can create, more than the interpretations that focus on questions of *where* the sound-source is located, that is in what kind of place or space, and what environments and places can the sounds be representing. I am not suggesting that one interpretation is more important than the other, only that they are different from each other, that they can both be addressed in their own right, independently, and that they can be complementary.

Peter Doyle and other music historians and musicologists have carried out detailed examinations of the use of 'reverb' and 'echo' to 'fabricate space' in pre-1960s popular music recordings, including the production experiments of Sun Records and Abbey Road studios. For example, the interpretations Doyle addresses are described as follows:

> generally speaking, the earlier we are in the history of sound recording, the more denotative the uses of spatial effects tend to be, making the task of interpretation relatively more straightforward. By the late 1940s, however, a much wider range of possible meanings was available to record makers and listeners, and many of these

[442] Dai Griffiths, 'From Lyric to Anti-Lyric: Analyzing the Words in Pop Song', in *Analyzing Popular Music*, ed. by Allan F. Moore (Cambridge: Cambridge University Press, 2003), p. 48.

> are at odds with others (such as the use of reverb and echo to locate a voice at a marked physical distance from the imagined "center stage" and also to suggest the inner voice or conscience of the singer).[443]

As I mentioned above, the aesthetic turn from questions of space to questions of texture I am focusing on here, was markedly established by musicologist Samantha Bennett, and considered vital for addressing the effects of reverb and other signal processors, in the work of certain rock bands. The studies provide an account of the use of time-based signal processors to generate continuous or iterative sustain, and to shape density and diffusion, among other effects. One of Bennett's examples is the first two minutes of The Jesus & Mary Chain's 'Just like honey' (*Psychocandy,* 1985), where:

> the opening drums are treated with a plate setting featuring a lengthy decay time of more than 1.5 seconds. It is possible to ascertain this as the reverberant tails from the kick and snare/tambourine pattern do not fully decay until the next hit. This suggests that the damper on the EMT Plate was set towards its maximum distance. Undoubtedly, this situates the musicians in an enormous, cavernous space […]. However, the effect is so prominent that the instruments and melodic lines are heard *beneath* it, as opposed to above or in front of it. This has significant implications for the track's texture: [...] the track's empty and hollow opening shape is steadily filled; […] more reverb adds more depth and the stationary, mono position of the instruments and reverb only add to the track's textural density, no attempt has been made to situate or separate instruments away from each other in order to clarify or highlight them.[444]

Bennett encourages the listener to appreciate the density that reverbs can create, as *textural density* and *textural depth*, to bring the resulting textural and haptic features of the sonic materials to the fore, instead of thinking of it as a way of covering mistakes or creating 'room ambience',[445] or other representations of spaces, places and environments. We can also appreciate the effect of *linear increase in density* when it also involves reverb, in the move from a quarter note to a eighth note arpeggio generating 'further layers of reverb' (0'56"), as well as in the superposition of sounds, such as 'a second snare' or the series of 'overdubbed guitars' with different reverbs, into bigger beat compounds and other sonic formations. There is an interesting sense of multidimensional and multidirectional growth, of voluminous sonic

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[443] Peter Doyle, *Echo and Reverb: Fabricating space in popular music recordings 1900-1960*. (Middletown CT Wesleyan University Press: 2005), p. 14.

[444] Bennett, 'Time-Based Signal Processing', p. 10.

[445] 'Ambience' has been defined by Albin Zak as the sense of space and ways of filling the space: 'Multiple echoes produced by sounds reflecting randomly off surfaces in an enclosed space accumulate to form an aural image known as ambience reverb'. Albin J. Zak, *The poetics of rock. Cutting tracks, Making Records*. (Berkeley: University of California Press, 2001), p. 6-7.

materials growing in size, thickness, abundance of details, and so on. It all adds to the textural density, according to Bennett, which I like to contemplate as having a sensuous complexity in the intricate details of its haptic complexion. The cavernous space can be filled or emptied, but when it is emptied or empty, it maintains a sensuous textural complexity.

When discussing the effects of reverb in rock recordings, Bennett also points at the close relation between 'density' and 'diffusion'. The concept of 'diffusion' that refers to the 'density of reflections in early reflections and reverberant tail',[446] also suggests the sense of spreading, expanding and growing I am pointing at here. It also does so in relation to a high density and abundance of what I call multiple small-scale, minute or micro sounds (in both linear and non-linear aggregates simultaneously), which are what Bennett refers to as 'multiple sound reflections' ('the built-up of…' suggests that there is also a simultaneity of non-linear and linear aggregates working together). So whether it is a control of density by means of diffusion or a control of diffusion by means of density, the important point is that there is a close relation between both, and one can be the effect of an appreciation of the other in different ways in different cases.

1.3.2. Elasticity

There is a wide range of words that we could use to refer to the gradual and non-rigid change of shape of a sonic formation, or any material formation. For example, we could speak of elasticity, flexibility, fluidity, plasticity, ductility or malleability, among many others. There are also many ways in which the stretches and compressions of an elastic deformation can take place, which can consist in a gradual variation in any of the music dimensions. However, I think it is notably a way in which pitch-based variations acquire a haptic function and reveal a haptic facet.

In music contexts, passages of chromaticism or rubato are common ways of experimenting with the possible elasticity of the sonic materials. One is pitch-based, the other is based on durations. Chromaticism works in the context of diatonic scales, whether in the most common modes, other modes, pentatonic scales or any other kinds of scales. The basic principle I am pointing at is that passages where the melodic movement consists in successive semitones can be effectively felt as an elastic gradual deformation. To be sure, any melodic contour can be experienced haptically as continuous variation. Given the continuity of materials in general, our haptic sensitivity can follow gradually, bit by bit, *any* kind of change, from the most abrupt leaps, to the most continuous pitch fluctuation. However, the *elastic* movement that can be attributed to the material is continuous and gradual, never abrupt. So, it is in passages or sounds where the fluctuation gets more gradual that elasticity is revealed as a

[446] Bennett, 'Time-Based Signal Processing', p. 18.

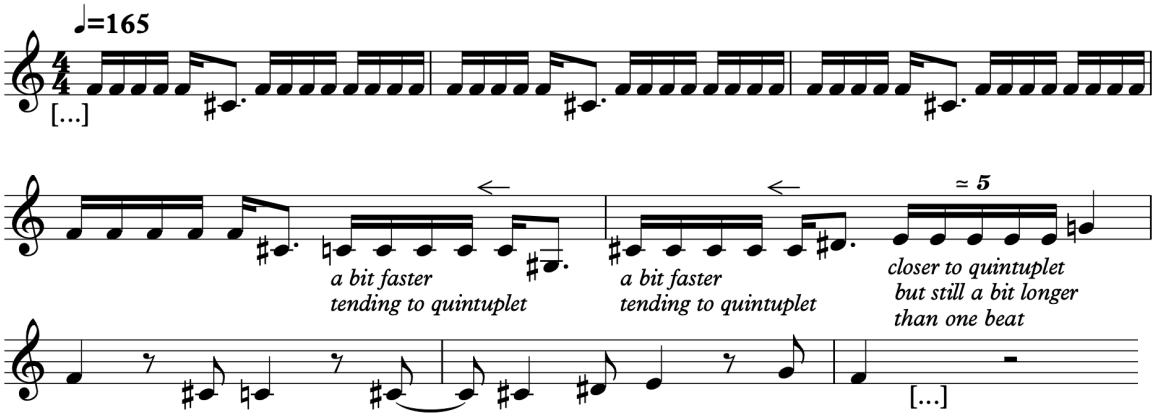
property of the material in question (and perhaps the performer's movements and the listening flesh by contiguity). In the chorus of The Troggs's 'Anyway that you want me' (single, 1966), for example, the chromatic way the cello line responds to the vocals is very suggestive of the sense of malleability and adaptation to the lover's desires that the singer is committing to in the lyrics. The thickness proper to the cello gives density to the chromatic line, which is also isolated by the fact that it comes in as a response, which gives it prominence. Thus, all these traits bring to the fore the material deformation, so that the meaning can effectively come across in a sensation.

Of course, within the pitch-based dimension, there are also many forms pitch variations that are continuous, and that reveal sonic elasticity, as well as different techniques to perform them, such as guitar bends, guitar slides, different forms of glissandi in different instruments, or any of the gradual pitch fluctuations made with the voice, synthesisers or signal processors such as wah pedals. I have subsumed under 'glides' the variety of haptic elements that can be related to these techniques. We can also appreciate sonic elasticity at a smaller scale level, that is at the level of a micro pitch fluctuation. This is strikingly the case in the sounds of Mark Sandman's bass lines, for example, from the band Morphine. The elasticity is achieved not only by the fretless instrument, but also by a constant intervention of subtle bends, subtle glissandi, subtle changes in the ways of pressing or hitting the strings, that can generate all sorts of subtle pitch fluctuations. For example, all these subtle variations are evident at the beginning of 'Good' (*Good,* 1992), and go along with subtle variations in the rhythmic figures and shifting from slurring to plucking, and also variations at a larger scale-level such as long glissandi for longer pitch leaps. We could call it a whole elastic approach to the instrumental performance techniques, which can be actually heard in any track and goes along with the blowing pitch fluctuations of the saxophone. He also resorts to modifications of the instruments themselves, restricting the number of strings on the bass, which can work as a kind of focus on the micro-details. Moreover, the elasticity is brought to the fore by the persisting use of a 'baritone' register in all the instrumental layers of the recordings. They do not display a variety of sounds in terms of registers, but the variety takes place within that register, and elasticity is not the only haptic aspect that is subject to experimentation in that way, but a notorious one.

The simple play of speeding up or slowing down the pace, that is of lengthening or shortening durations, can also be haptically felt as a sonic formation in the process of shrinking or stretching. I have noticed that when this variation happens subtly in a short passage, it can be very intense, as perhaps instinctively our attention seems to zoom in, in order to follow what is going on, and to be effectively contracted in consciousness as a material change, and not only as a change of speed. This observation coincides with Deleuze's and Ingold's descriptions of haptic sensitivity as a modality that is defined by its access to small-scale details. However, we can also experience those stretches and compressions in larger sections, the main point

being that they have to be gradual. A suggestive example of how the sense of elasticity can be achieved by a subtle change of speed in a short moment of time can be heard in Artic Monkeys's 'Brianstorm' (*Favourite Worst Nightmare*, 2007). The whole track is basically 165 bpm throughout, but there is a moment in the passage from intro to riff that brings about an intense sense of elasticity, where the rhythmic figure tends to a quintuplet (see figure below).

Figure 1: Lead guitar passage of 'Brianstorm' by Artic Monkeys.



2. Elements

2.1. Flat fields and other long sounds

DEFINITION

From the point of view of haptic listening, the power of the *long duration* of a relatively uniform or monotonous sound, lies in that it sustains the exposure to its constant haptic traits. The long exposure reveals with a privileged clarity the small-scale texture or haptic complexion of the sound, which can be contracted in our consciousness as a large and relatively unchanging sonic surface. As discussed in the introduction, the texture of a sonic surface, even of a monotonous sound, is seldom homogeneous, and there is a close relation between the possibility of contemplating a multitude of small-scale textural details and the senses of vastness and infinity that sound may have. Thus, a long duration can form a *flat field*, that can be opposed to the relatively more active, shifting or intricate movements and mutations of other sonic formations in a track. For example, flat fields can be opposed to the deformation of sonic materials, lead melodies, figures, details of the words and their vocal delivery, zones of scrambling and percussive rhythms. The opposition can impart a sense of vitality, movement, haptic complexity and intensity to the other formations and to the formation of new elements, that is to the 'forms in formation' (I.2.). A flat field can be juxtaposed to the other elements either successively or simultaneously. Its role as an operative trait of sensation can be more effective both if there are at least some moments when it appears on its own, isolated; and if it can be experienced as adjacent to the other elements, rather than as their background. As I have previously mentioned, different tracks have different ways of attaining sensation and working with these principles, so there is no single formula that can explain what makes an element operative in this sense. However, when studying sensation, one can always observe at least some of the principles I have gathered in this thesis, which are summarised in Part III.

I am using the word 'flat' to suggest the uniformity and monotony of the field, but this does not mean that it is completely homogeneous, or that there is no movement involved at all. On the contrary, a flat field can have a complex haptic complexion or texture, and it can be full of intricate micro details and subtle shifts. As I argue in previous sections, feeling a relatively unchanging texture always involves movement. Hence my insistence on the word 'relatively' in my definition.

I am reserving the concept of 'field' to elements which large size is primarily based on the long duration of the sound, together with its haptic complexion. The latter must be, in some way, complex enough to attain the sense of vastness. Whether the multitude of micro sounds

of its textural density and grain produces a field with a high degree of impenetrability or a field with a textural depth (e.g. airy fields), the micro details of the grain and density must be notorious and sensuous in order to achieve the adjacency on the same plane in relation to the other elements. While dynamic level can also play a role in the effect of 'size' or 'growth' in different ways in different cases, it is not a defining feature of the element I propose to observe here. The rationale I apply here coincides with the one that Schaeffer uses for his typology, where there is also an explicit relation between the long/short duration of a sound, and its size. He simply makes macro sounds correspond with long duration and micro sound correspond with short duration.[447] The longer the duration, the larger the sonic surface. From the point of view of haptic listening, this is not a spatialisation. It is a sustained exposure to something that is already a material surface. It is a flowing surface, so it is not given at once, but constantly emerging, gradually appearing and spreading. Therefore, the longer it lasts the larger it gets in how it is contracted in our consciousness. Yet, not any long note or sustained uniform sound is *an operative flat field* in a sensation. This consideration, of course, goes for any of the elements and aspects I present as categories.

Here, I am considering this element strictly from the point of view of its potential role as an operative trait of sensation, and its potential power to endow listening with a haptic function. I am borrowing the notion of 'flat field' from Deleuze's logic of sensation. The opposition between the flat fields and the zones where convoluted movements take place, is an important feature in Bacon's paintings, where 'the chronochromatism of the body is opposed to the monochromatism of the flat fields'.[448] Here, the opposition of 'chrono' versus 'mono' with regard to colour, which can also be applied to sound, refers to that opposition between an active and intricate shape-shifting sense of movement, where a lot of marked changes happen in a reduced period of time, versus a more subtle and steady sense of movement. Here, we can think of the 'body' or the 'Figure' as the equivalent to those sonic formations that are more active and elaborated, in opposition to flat sonic fields. This relation of opposition is not simply a contrast. As explained by Deleuze, the two elements, 'do not remain indifferent to one another, but instead draw life from one another'.[449] The flat field is a vivid element in its own right, for although it is relatively uniform, there is still a lot going on in the fine details of its uniform haptic complexion. The movement of other sonic formations can be made more notorious and possibly more intense when they are adjacent to a flat field which haptic traits are already captivating and intense, as the haptic function of listening skirts both the flat and the rocky, the uniform and the deforming, the steady and the frenetic. *Crucially, when the same haptic function is applied to contrasting formations on the same plane, it makes their respective*

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[447] Pierre Schaeffer, *Treatise on Musical Objects*, p. 346.

[448] Deleuze, *Francis Bacon. The logic of sensation*, p. 35.

[449] He continues for the case of Bacon's paintings, pointing at the sense of adjacency on a single plane: 'It often seems that the flat fields of color curl around the Figure, together constituting *a shallow depth*'. Ibid, p. xii

haptic traits more sensuous and intense in the passages from one extreme to the other. Moreover, there can be a series of possible interplays between the opposed elements. For example, the moving formation can expand in order to rejoin the flat field, to the point where it can even merge with it.[450] Or it can emerge from it, detach from it, or cut through it. Finally, the flat field isolates the 'Figure', so that there can be no representation of a context or place where things happen, and no story added to the work.

I have indicated that a flat field is a vivid element in its own right, and the fact that other music practices, have treated flat fields autonomously, somewhat proves the point. The album *4 Rooms* (2006) by sound artist Jacob Kierkegaard is a notable example, also referenced by Cox.[451] The intricate haptic complexion of those abiding sonic fields, are full of subtle shifts, like little gusts, or curves in the sonic material through its journey. It is also full of different kinds of throbbing changes of pressure, without loosing a continuous sustain. The sustained exposure can gradually reveal more minute details. Although some sonic details do appear to be more remote than others, it would be inappropriate to call them layers. Instead, they are different zones of a continuous and extensive material flow. They are different momentary sonic formations that can be experienced as the action of forces, like all sorts of reverberating forces of the spaces the they are travelling in. They can take the listener to mental places of apparent spaciousness, that can shift, during the track or from one track to another, to a dense material impenetrability pressing against the mind.[452]

When discussing 'grain', I pointed at the threshold between grain and macro-grain. The latter can overlap with small-scale repetitions or rapid repetitions, like the tremolos, springs or rolls to which I refer next as *wavering fields.* Thus, there is also a threshold between flat fields and wavering fields. Thus, we will be talking about flat fields only insofar as the grain is not too interspaced, so as to become a succession of discrete short sounds.

EXAMPLES

The use of iterative sustainment to form fields is more common in rock tracks than the use of continuous sustainment. Flat fields usually work in subtle ways. Yet, here is an example of a marked one. The four-minutes track 'The She' by the Breeders (*Title TK*, 2002) juxtaposes flat

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[450] Deleuze thinks of these processes in terms of rhythms of contraction and expansion. Deleuze, *Francis Bacon. The logic of sensation*, p. 32.

[451] Christoph Cox, *Sonic Flux: Sound, Art, and Metaphysics*. ProQuest Ebook Central edn (Chicago: University of Chicago Press, 2018), p. 129.

[452] I have indicated in previous sections that for haptic sensitivity, the listening mind, ear, membrane, flesh and nerve, or whatever denotation is more appropriate in a given occasion, is, in line with Deleuze's logic a provisional and temporary organ that is determine as the force exerted on it lasts, and acquires a haptic function, so that is the site of sensation and being intensely affected by the encountered materials.

fields to deforming elements and other moving formations in a very clear and precise way. We can observe two sustained sounds with very different haptic complexions, that can be said to form two operative flat fields. So, I will briefly refer to them and their operations.

At the beginning, we are exposed for eight seconds solely to a thin and vast shimmering sonic blanket, on the left side, made of a multitude of soft high-pitched micro sounds. It is a very complex, unrecognisable sound, which source could be imagined as a sort of large quivering tinfoil from another world. It works as a flat field in the track, so, for practical purposes, I will refer to it as the thin shimmering field. Then, on the right, a long thick coarse-grained (verging on granulated) synthesised keyboard note enters as a second flat field, which will form the main flat field. This note momentarily stops and then re-enters with the three-notes bass riff that stands in the middle. In its first isolated appearance it is not long enough to form a field. However, that difference that consists in introducing it first without the bass and then as a compound with the bass with a drone-like function is a relevant part of its process of forming a flat field.

A third sustained sound is added, the long snare-roll, which rapid succession of strokes create a granulated surface with a brush-like feel, but which will not work as a field. On the one hand, it has the stereotypical function of generating suspense, as a sort of leaning towards what will comes next. (This is certainly a stereotypical function of snare rolls, not only in rock tracks, but in wider contexts, while a sustained feedback note before the entry of a new section, is another frequent way of using a *sustained sound* for that effect in rock tracks.) On the other hand, this sustained sound joins the fields, as a momentary third field, and then it detaches from them when the snare starts doing separate quavers (rubato at the beginning). At the same time, at the end of the roll, another layer is added to the keyboard, entering with a descending scale (in a slightly modified aeolian or locrian), in triplets. The active movement of the compound of quavers in the drums and triplets in the descending scale contrastingly irrupts in the middle of all those sustained sounds. The scale ends up merging with the main flat field, as the shimmering field disappears. The main flat field fully establishes itself as such in the next three bars (I am counting each loop of the bass riff as one bar). Its tone has slightly changed in the process of merging with the last note of the scale: before it had more low-pitch harmonics and now it has more medium register harmonics, but the note remains the same. That note is the pitch centre and thus the field also works as a drone when played together with melodies. Drones can form flat fields.

Another layer of the keyboard then appears as detaching itself from the field, this time not with a scale but a very irregular, jagged and involved, distorted and even chaotic, ascending line (0'28"). It is as if the very precise stepwise motion in triplets of the previous keyboard line, would have been radically scrambled, and we are left with nothing of a scale or melody but its rising contour. The notes move very rapidly and irregularly, some of them even running

into each other, and the grain is rough and even jagged. Although it has an indeterminable pitch structure, it makes apparent that the movement is gradual (as close to a glide), which sustains a sense of deformation. The flat field and the regularity of the other instruments isolate this zone of scrambling, bringing the deformation and its convoluted haptic details to the fore.

Next, the rising figure becomes the keyboard riff (that will accompany the chorus next time), preserving the markedly jagged grain and its juxtaposition to the droning field. All the instruments are separated from each other in the mix, so it is possible to listen closely to the small-scale haptic details of all the sonic materials, and to experience them as adjacent to one another, rather than in a background/foreground disposition. The repetitive three-notes melody of the keyboard riff always closes the gesture in a note that tends to merge with the flat field but not completely. At the end of this section, that ending note subtly leaves the mix, and the main flat field stands in isolation again, this time for a longer duration of a bit more than three bars (0'50").

The main flat field disappears when the voice enters, and the thin shimmering field reappears to accompany the voice. It is at a lower volume, thinner, more ethereal, and in the same left side. Here, this uncanny sound reasserts its role as a flat field, placing the assertive voice in a sort of magic stage, where its presence takes over as the drums and bass change to become a prolongation of the voice's gestures, and then start to rebuild previous patterns from there.

The operations of both fields are so effective that when they disappear, in absence of a long note, the remaining silence also works as a flat field (e.g. 1'11", or for the "ping-pong" guitar solo from 1'55"). Over the word 'here' (1'16") of the last line of the first verse 'you move so slow, you're not even here', the main flat field reappears at the same time as all the other instrument drop from the mix (just for that word). This time, the main field is left completely on its own. For six seconds, it is all there is to contemplate. Its surface attributes makes a more intense impression, and we have privileged access to its own intensive material reality. It is still in its right position, which recalls its permanent function, and this complete isolation makes it even more clear that its material surface is as important as its accompanying function. It is an intense operative flat field. A sustained contemplation can allow the listener to notice a a strange and playful little detail: an extremely quiet piano-like sound playing quavers, hidden in the field. It is actually a sample of the arrangement added in the second appearance of the chorus, where it starts fading in before the downbeat, as if it would be coming from that far hidden place within the flat field (2'30") — this detail is a subtle but powerful contribution to the sinister atmosphere this track creates. If we think about the "ghostly piano" that this sound can stereotypically connote, that meaning is boosted by that hiding/appearing play, of an alien instrument that has not been really part of the ensemble. When the drum-kit enters the mix over the isolated field, its rhythm, its haptic details, cool

pattern and marked hits, are also boosted, as it has the power to cut through the field, and can momentarily become the field's edges and articulation, while the field presses back as the flat stage of all the movement.

I have emphasised how the field brings to the fore the sense of deformation and the irregular rough haptic traits of the ascending line. The second time this line appears (1'24"), it is just after the moment when the flat field was in complete isolation only joined by the drums at the end. Now, it is more straightforwardly an element that can be described as a glide (I address 'glides' later on), a rocky glide. It culminates not only in the keyboard riff, but also in the addition of a new formation on the left, which joins the rough facet of the chorus mix. This new element, which timbre is similar to the synthesised keyboard, is more jagged, more irregular, more prominent and rougher. It is somehow half-way between sustainment and melody, as it is also based on long durations but of two notes, that follow the melodies in a sort of even more simplified (creepy?) way, as the bass is now performing more notes in a more conventional "jolly dance" way. It also stands at the limit between continuous and discontinuous sustainment, as it shaky movements protrude and recede in a complex haptic relief. It stands out as a strange convoluted sonic formation, a 'Figure' that emerges from its haptic traits in a sensation. It is as central in the chorus as the voices. What also allows me to say this is that the voices only say 'dear traveller' once every four bars, while the rest of the time this new formation is a predominant layer, and also in the second time of the chorus the voices stop singing and this 'Figure' is left on its own to finish the chorus. Is that the 'dear traveller' or the creature that the 'dear traveller' should fear? What also allows me to speak about 'Figure' or 'creature' for this sound, is the fact that there is a breath (the sound of someone catching their breath) in the second time of the chorus (2'40", 2'51", 3'00"). We could then imagine that the sound source involves someone blowing some kind of material or instrument, with some signal processor that makes it sound like a distorted synthesiser, but which irregularity goes beyond what we normally can hear in synthesised sounds. Is it perhaps a manifestation of the frightening force of a hidden personality of the driver? Or is it the frightened state of the traveller? When I relate the sounds of the track to the lyrics, I interpret this song as suggesting the sinister suspense of some kind of cold revenge. The driver is in control; the traveller is lost, and at the driver's mercy. For example, the irony of the words and vocal delivery of the lines 'Sorrow blowing though the veins / I'm over Houston / You're over the night we met, over the night we met', by means of the discordance in the use of the word 'over' for two completely different meanings, is making apparent the driver's discontent and the motivation for revenge. I think this is a case of a track which meaning and sinister atmosphere is intensified because it is not represented but inferred from the sensation and poetic content. Finally, it is important to mention that this track markedly plays around with the metric positions of the onsets and ends in many occasions, not only of the long notes but also of the other instruments. Down-beats are frequently avoided. Concerning the flat fields, their sometimes unexpected moments of starting or dropping can make us

more sensitive to the presence/absence of their haptic traits. The track certainly presents many other details that can be analysed from the point of view of haptic listening, and how it can be better interpreted through the logic of sensation. However, here the aim was simply to make an introduction to the formation of flat fields and to some of their possible operations, within the logic of sensation.

A simple example of a subtle flat field is the prolongation of the last note in the keyboard (probably a General Electric chord organ), at the end of Elliott Smith's 'Coming Up Roses' (Elliott Smith, 1995). It forms a flat field, which uniformity is opposed to all the movement that just took place during the whole track. The note is not simply an end, for its stubborn prolongation goes beyond that function, and this is how it becomes a flat field. Besides, the instrument is isolated, which gives clarity to the sonic material, and the unexpected short reiteration of the note, seems to make fun of that stubborn prolongation, by reinstating it, interrupting the silence that was supposed to come after the last note, and thus reasserting the presence of the field for a brief moment.

Long notes that are sustained for the whole piece of music, or for whole sections of it, are usually called drones. They are conventionally 'a sustained droning sound' that accompanies a melody played by the same instrument or another, usually 'tuned to the keynote of the melodies and also to its 5th'.[453] Bagpipes, for example, traditionally use one or more drones.

When they are opposed to the other sonic formations they can certainly form flat fields. However, they do not always do so. Sometimes, in certain practices, drones are marked by variety and constitute haptic variegations which can no longer work as fields in the sense I am developing here. These haptic variegations are also no longer monotonous, but plenty of pitch fluctuations. For example, most of the tracks of doom metal band Sun O))) are based on drone material of this kind. They can be composed of one, two or several layers, appearing and dropping from the mix. Some of those layers are monotonous, uniform and long enough form flat fields (or the traditional drone function), in opposition to other drones that gradually or sometimes abruptly deform, and that can basically exhibit all the haptic aspects and elements I present in this thesis, and more. They are still called drones because they are sustained sounds and their variations are constantly coming back to prolonged pitch centres, in a play that remain within the territory of drone material, expanding possibilities from there. A variegated drone, usually tend to join with flat drones and then detach from them, in a play that can certainly bring about passages to the intensive domain of sonic materials. Thus, there can be an infinite variety of ways in which the relatively more uniform droning sounds, the relatively more variegated, and all the gradations in between, can work together in these tracks.

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[453] Anthony C. Baines, 'Drone (i)', in *Grove Music Online* (2001).

As Cox illustrates:

> Drones have been central to the world's musics for millennia, intoned by the Highland bagpipes, the indigenous Australian didgeridoo, the European hurdy-gurdy, the Indian tambura, and the drone strings of the banjo, sitar, and sarod. Indian classical.[454]

In the sphere of rock music, both feedback and synthesisers are a usual means for creating sustainment, both in drones and other kinds of long notes. The electric guitar feedback (or bass guitar feedback) that can be heard in rock recordings is, in part, a 'timbre', which means that it is a sound with certain 'qualities', or 'invariants' in the ecological explanation, that specify its source. Thus, a listener can identify or recognise it as the characteristic sound of an acoustic process: it is the kind of sound that emerges as some of the sound waves coming from the amplifier are captured by the guitar pickup, pass through the amplifier again, and then return to the pickup, repeatedly, forming the feedback loop through which the sound is sustained. It has been used as a music performance technique in rock practices since the 1960s. It can have different effects and generate different kinds of haptic formations.

Concerning other long sounds that do not work as flat fields, I shall briefly discuss feedback lines that do not have a central structural function in a track but are part of the arrangement. Sometimes, their effect can be a sense of sustained propulsion or impetus, which I generally call, echoing Deleuze, vectorial movement. For example, in the King Gizzard and the Lizard Wizard's 'Head on / Pill' (*Float along - fill your lungs*, 2014) one of the electric guitars does some thick granular sustained sounds (e.g. 5'33") which thickness is so contracted and which pitch-tone and dynamics' slight deformations so vectorial, so pushing forward, with no phase of decay in their sonic journey, that they feel like a long impulse, a long impulsive sound. If we recall Schaeffer's terminology, which refers only to short sounds as 'impulsive' this seems to me something to think about in a typology for sounds based on haptic traits: are impulsive sounds only short? When this characteristic is so marked, as it seems to me in this track, I think it also evidences that very important aspect of the feedback principle. For feedback is actually made of a series of attacks, an accumulation of attacks, that are so close to each other that it ends up being heard as a long attack, that never loses the impulse proper to an attack. In this form of feedback, the initial impulse or impetus of the sound's attack does not decay throughout its duration but it is sustained as such, bringing a powerful sense of propulsion and haptic contraction in its rhythm.

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[454] Cox, *Sonic Flux,* p. 126.

2.2. Wavering fields and other wavering formations

DEFINITION

A regular iterative sustainment can form a wavering field. First of all, in order to form *a haptic field,* the sound needs to fulfil the requirements described above that concern the 'field' part of 'flat fields', namely, it needs to be long enough; detailed and spread enough; as well as uniform and monotonous enough so that it can be opposed to other relatively more active and shape-shifting sonic formations. The difference between flat and wavering fields basically lies in the continuity or discontinuity of their surfaces, which are certainly not featureless in other aspects. A wavering field is a constant successive repetition of the same sound with a number of specific functions, possibilities and requirements. It can act as a field because there is still a certain stillness, regularity, stability, uniformity, in the sustained exposure to constant haptic traits. As a field it has the potential of operating as an element of a diagram by adjacency on a single plane to other sonic formations.

There can be countless ways of creating them, with countless musical instruments and other sound-sources, such as shakers, tambourines, manual or electronic tremolos, other signal-processors, synthesisers, samples, etc. There can be metric and non-metric wavering fields, according to the ways the fall together or apart with the groove of the rest of the instruments. Crocodiles's 'I want to kill' (*Summer of Hate,* 2009) is an example of a metric use of a wavering field, made with a tremolo in the guitar that also works as the explicit underlying pulse. An example of a non-metric wavering field….
Beyond this distinction the relevant question in this thesis is what renders it an operative field in a diagram of sensation.

They can touch the listening mind and make the listening membrane quiver, in different ways. I am using the word 'wavering' in lack of a better term, as sometimes these fields that are based on more percussive than oscillating sounds. In any case, since a percussive sound still involves a way of flowing, I am using the word wavering to point at that the way of flowing is regular, repetitive, intermittent, back and forth, to and fro, appearing and disappearing, and so on. From the point of view of haptic listening, it is important to describe how the way of stroking feels, sometimes beating, tapping or drilling, sometimes sweeping with a brush-like feel, sometimes oscillating (pitch-gliding up and down) like ripples in the water, etc.

The repetitions of the same instance must be close enough to each other so that it can form a consistent surface. This is how this element overlaps in some respects with macro-grain and linear density, but nonetheless I am distinguishing this as a relevant haptic element, because it can work as a field, which I am envisaging as another effective operative trait, in relation to

the power of the ground to produce ground-figures adjacency in haptic listening. Yet, I did not have the time to develop here.

For example, the opening section of Suicide's 'Cheree', exhibits a wavering field of sounds sweeping back and forth. Synthesised sounds or pedal effects are very good at providing the necessary stability and regularity. They are brush-like or sweep-like strokes of sound. I am relying on the analogy of a brush because it expresses the small-scale multiplicity of grain and the fact that it has momentum, on top of the grain, so it feels like brushing or sweeping your mind. In this sense it has a directional momentum that follows the direction of time in only one direction. Suicide's homonymous album (*Suicide*, 1977) is full of them in other tracks as well.

I am borrowing the concept of 'iterative sustainment' from composer Pierre Schaeffer's typology,[455] in order to subsume under one broad category the enormous variety of ways in which relatively small-scale repetitions can become haptic elements. Thus, what falls in this category are tremolos, rolls, springs, alternations of two pitches, alternations of two different dynamic levels, among others. Here I only address these five, but there can be others. We can distinguish between two sub-categories: the ones that are just discontinuous sustainment (i.e. the first three examples), and the ones that involve alternations (the second two examples).

We can observe that this category may overlap with the concept of macro-grain I address as an aspect in the previous section, so it will depend on the interpretation in question if a particular small-scale repetitive sound is to be considered as either/or. However, I have made another category because, on the one hand, we could say, in more general terms, that the macro-grain here goes a bit more macro, and on the other hand, we need it to distinguish some relevant elements made of iterative sustainment that are ubiquitous in rock recordings, such as the ones I address here.

[455] Schaeffer, *Treatise on Musical Objects*.

2.3 Cuts, Protuberances and Hollows

DEFINITION

There are many ways in which we can haptically feel sonic cuts in rock recordings. In general, we could begin by saying that a change in a sonic material may or may not bring about a cut. There are two main factors in the process of making sense of the change as a cut: a) the change brings about a new sound, and b) its defining sense is that of the verb: *to cut.* These are the two main features that can allow us to sense it as a haptic element. We could add that the change that produces it is usually abrupt, and that the cut is usually sharp, but these are not a defining features and there can be many exceptions. The cut in itself as an element is only the event, the verb. However, it has an edge which is already the first new sound that the change brings about, and it is accompanied by other adjacent new sounds, new surfaces, that can be protuberances or hollows.

There is an essential problem that all cuts share, which has been put forward by Ingold in his enthralling anthropological article 'Transformations of the Line: Traces, Threads and Surfaces', where he reminds us how cuts "create surface". To suggest this, he draws on artist Wassily Kandinsky's notation that "a particular capacity of line [is] its capacity to *create* surface".[456] He refers to Kandinsky's example of a spade cutting soil, or an archeological section, where a 'new, vertical surface' is created on the process. In his essay *Point and Line to Plane* (1926), Kandinsky eminently explored a series of different ways in which lines can create planes, and liminal relations between planes and lines, among other aesthetic issues. He is writing about painting, yet there are observations that clearly apply to other art forms and other materials.

As Kandinsky writes, 'a special characteristic of the line' is 'its power to create a plane', 'in the same manner that a shovel creates a plane with the incision-like lines it cuts into the earth',[457] which I think is the insight Ingold is alluding to. Thus, Kandinsky is directly positing that this characteristic of the line and the cut, i.e. the cutting line, does not only apply to painting. A cut is a line, and a cut is not the only way in which a line can create a plane, according to Kandinsky. Another two possible ways he refers to, for example, are when a line thickens, or in the case of a multitude of lines placed one by the other.

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[456] Tim Ingold, 'Transformations of the Line: Traces, Threads and Surfaces', *Textile,* 8 (2010), 10-35 [Ingold's emphasis]. He is referring to Kandinsky's essay *Point and Line to Plane* (1926),

[457] Wassily Kandinsky, *Point and Line to Plane*, trans. by Howard Dearstyne and Hilla Rebay (New York: Solomon R. Guggenheim Foundation, 1947) Digitalised by the Internet Archive with funding from Solomon R. Guggenheim < https://archive.org/>, p. 61.

Moreover, he indicates that a clear limit between line and plane is impossible,[458] in the same way I am drawing attention to the fact that there is no sound without an elementary surface. Sounds are flows, and a flow is partly a line for it has a continuity (whether it is continuous, interrupted, intermittent) and a pitch trajectory or melodic contour (i.e. rising, falling or flat and all possible combinations). A sonic flow also has a thickness, always, even in its thinner expression, so it is also partly a plane or surface. This is why I argue that there is no sound without texture, but also, and to be more specific, there is no sound without grain, consistency and edges. Sounds can contract and expand, for example, which involves the variation of their consistency. In doing so, they simultaneously unfold a form of grain and edge. So, Kandinsky's consideration also applies to sound: A clear limit between a line and a plane (surface or field) in a sonic flow is also impossible. A sonic flow can be a line that cuts, it can perform and become a cut, whether it is a cut on a sonic surface, of the surface, or on/of the flow.

At its limit, the cut is just a line with an edge,. The fact that it has an edge already marks the impossibility of establishing a clear limit between the line and the plane, even in a cut. The sonic cut can create surface at least in the same three ways, Kandinsky illustrates, it can thicken itself, it can be a compound of a multitude of cuts, it can create adjacent surfaces which are inseparable from it (e.g. like the new vertical surface created by the incision-like lines cut into the earth).

A sonic flow can be more or less thick, and sometimes the thickness becomes irrelevant, and we treat them as lines. In other words, the plane is not always relevant. Therefore, we must distinguish an interruption that acquire the function of a cut, from one that is simply a halt. The cut is the haptic element and always create surface; the halt is not necessarily a haptic element in this sense. By the same token, the interruption of a sound by a another sound, may or may not work as a cut. All in all, the concept of 'cut' is an extremely amphibious and amoebic concept, though we can still explore a series of types of sonic haptic formations that can be argued to create cuts, that can be very different from one another, and that can work as operative traits of sensation.

I began this exploration by considering the most simple and clear example of a formation that works as a cut, in order to initially provide something of an unproblematic general type. This was followed by the prompt realisation that these things are much more complex, especially if they are working as operative traits of sensation. Overall, it is the riveting problems they present on a case to case basis what interests me the most, but I still find it absolutely practical and constructive to distinguish between types in an ancillary way, for they can be especially helpful if the problems are complex. Thus, I have been working on distinguishing between types of cuts, according to some shared problems, and on establishing a new type if a substantially different problem appears. So far, I have found it useful to distinguish between

[458] Kandinsky, *Point and Line to Plane*, p. 91.

four types: (1) *The cut ending a track*, which can become a powerful material trait of expression when it is very marked as in the end Fugazi's 'Suggestion', as I show in the example below; (2) *Interruptions and intervals* (incl. with protuberance, with no protuberance, the full stop: from stop to cut), which I present with examples below, also oriented to studying sensation; (3) *The slice or fissure*, which is a cut *on* the surface that does not change the underlying surface. In other words a shallow cut. This is the case of the delivery of the word 'slice' in Bauhaus's 'Slice of life', for example. This is more generally speaking how sounds can cut through the mix, as it is usually commented; (4) *The chopper,* as I propose to call it, which is akin to what the blades of an helicopter would do to the mix, as it were. An example I have been listening to in this way is 'Break' by Fugazi. These are types that have so far caught my attention in the context of this thesis. I present the cases (1) and (2) with examples oriented to the study of operative traits of sensation at the end of the section.

While Ingold says that some cuts do not create surface but divide material, I would argue that at least for the case of sound: *every cut create surface,* even when they divide material. This is the reason I am distinguishing a cut from a halt. The example he uses is that of 'cutting a sheet of material rather than the ground itself'. Yet, regardless of how thin it might be, doesn't the sheet that has been cut still have a new edge, that is a new surface? And what about the space between them? The way I propose to work with sonic cuts as haptic sonic formations is by considering that a) the edge could indeed be considered as a micro surface, an edgy surface; and b) while of course we do not consider empty space to be a surface, there is never such a thing as empty space, especially in the world of sounds. From the point of view of Ingold's example of the fabric, the space that the cut creates would be sensed in most cases as empty space with no surface or consistency. Yet, for the case of sound the second question becomes highly relevant. When listening to a rock recording even when sonic materials are divided by interruptions and intervals between them we can hear the ambience sound of the recording which has a texture and a consistency. And in the case of a cut that ends the recording we are still left with the sonic landscape of the place we are in — as John Cage famously pointed at, with no need to make any cut in his work *4'33"* (1952)—, which also has haptic and expressive features.

Pinhas puts forward some important reflections with regard to silence in *Les Larmes de Nietzsche* (2001), that are relevant to haptic listening and cuts. The events of cutting, breaking, fracturing, opening, or the lack of them, play a decisive role in the distinctions he is pointing at in what silence can do: it can 'finish the piece', 'break the rhythm', 'suspend the time of the performance', 'fracture the singular Time of the artwork', 'open a supplementary dimension, outside coordinates', for example.[459] He is contemplating from the point of view of 'time' some of the intensive variables I am considering here from the point of view of haptic listening, where rhythm (and with it duration and time) is intrinsic to the movement of the

[459] Pinhas, *Les Larmes de Nietzsche*, p. 114 [My translation].

materials, as I extensively explain in I.4. I think Pinhas's idea that silence can 'open a supplementary dimension, outside coordinates', is directly related to opening our receptivity to the haptic dimension of sound. Our habits embedded in our languages and thoughts tend to separate and oppose continuity from cut or interruption, and sound from silence, dismissing the fact that they are all material events in a larger and also more detailed and 'micrological', and more heterogeneous and continuous, material flow.[460] This is certainly consistent with the idea of 'interruption' developed by Deleuze and Guattari, as the condition of continuity, which Buchanan highlights: 'Identifying specific flows in relation to assemblages is a critical but neglected aspect of Deleuze and Guattari's project; and we need to start by asking how and under what conditions does a flow become ideal, continuous and inexhaustible. The answer, paradoxically is that a flow becomes ideal precisely at the moment that it is interrupted'. And he is referring to this particular quote from *Anti-Oedipus* (1972): 'Far from being the opposite of continuity, the break or interruption conditions this continuity. It presupposes or defines what it cuts into, as an ideal continuity'.[461]

Sonic cuts do not only create new surfaces but these can actually protrude or recede in hollows. Some of the new surfaces are inseparable from the cut itself, the event as a sonic haptic formation, just like the surface of the geological cut that Ingold and Kandinsky are thinking about. Other surfaces that a cut creates can be distinguished from it and considered as adjacent to it and a result of it. So, from the point of view of haptic listening, I think we can draw attention to three kinds of surfaces that cuts can create: *edgy surfaces, protuberances and hollows,* separately or in combination.

A variegated compound of these haptic elements can be considered as the rhythmic formation of a sonic haptic relief, together with the presence of other haptic traits. Dynamic level and the degree of separation from the other elements of the mix, can play a determinant role in its formation. A sonic haptic relief is crucially different from the sense of background and foreground in the way we listen to the position of the elements of the mix. By contrast, there is a continuity between all the elements, *an adjacency on a single plane,* which replaces the foreground/background order for the relief. I believe that certain tracks encourage this different way of listening to differences in dynamic level and blending/separation. Sounds that protrude and sounds that subside and make cavities within the mix, can form a flowing relief, and one can follow the rhythm of the energetic materiality.

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[460] Ian Buchanan, 'Deleuze and Guattari's Differential Method', in *YouTube* (presented at the Social Ontologies After Deleuze, Filosofický ústav AV ČR, Department of Contemporary Continental Philosophy, Institute of Philosophy, Czech Academy of Sciences, 2022) <https://www.youtube.com/> [Accessed 5 January 2024]

[461] Gilles Deleuze and Félix Guattari, *Anti-Oedipus. Capitalism and Schizophrenia,* trans. by Robert Hurley, Mark Seem and Helen R. Lane (New York: Penguin Books, 2009), p. 36.

EXAMPLES

1. A cut ending a track

Let's start with the most simple type of cut, yet not necessarily less intense, which is a cut ending a track. Fugazi's 'Suggestion' ends with a very sharp one, which perfectly works as part of the diagram I discuss in I.1.5. The fact that it does not allow the word 'Guilty!' to completely finish, makes its cutting power plain. This kind of cut will usually connect in some way with the next track of the album, and artists do leave sometimes some space to isolate it. This is not the case of this track, which I think it is because the isolation was not necessary for achieving the sensation, since the shout that it cuts is really sudden and contrasts with the quiet long C-section. Otherwise, if we were listening just to this track, what we are left with is a big hollow that covers the whole room or environment we are actually in, which can also feel adjacent to the track and part of the relief, and even more so after such an abrupt cut.

2. Interruptions and intervals

With no protuberance

The Chills's 'Rain' is marked by long interruptions of the whole band that form an intrinsic part of the riff. Every time the ensemble abruptly stops, it clearly *cuts* the riff. It can be felt as a cut not only because it is an unexpected move at the beginning of a track, and not only because the second part of the call-response formula carries on to complete the whole bar, but, to begin with, mainly because of the gesture in the performance that marks the attacks, so that they are not simply stopping but performing and producing the cut as an element in itself. The cut creates a dusty new surface by means of the high degree of reverb of the mix, that gets exposed by the abrupt cutting-attacks the musicians perform in their instruments. Thus, the cut firstly creates the attack edge and this dense adjacent surface. Yet, the reverb sound does not last long and is immediately followed by silence, a silent interval or a hollow, that lasts longer, and then the ensemble comes back. Thus, in this sense the dense short surface works as the edge of the big hollow. We could say that the whole riff has interruptions with hollows that last nearly two beats, and as it repeats, it creates a riff which is felt not only a having a series of stops and interruptions, but, haptically, as a marked relief made of a series of sonic "escarpments" (i.e. the reverb edge) and "canyons" (i.e. the silence). Pinhas also writes something about silence that seems to me to strikingly resonate with this track: 'A silence where all sounds coexist is a being-together-at-the-same-time'.[462] What makes this reflection resonate with the silences of 'Rain', is that the moment of the riff when everybody from the band meet, is even more in the silence than in the moment when they all simultaneously stop playing and cut the riff. The moment of the cut itself is supple, not only in the sense that it creates the reverb surface, but especially in the sense that there are some

[462] Pinhas, *Les Larmes de Nietzsche*, p. 122. [My translation].

little asynchronies every time. Some of them create the texture of the cut, as an irregular edge at the micro but still perceptible level. Others consist in more marked little asynchronies at a larger scale-level, made by a short extension of the drum-kit here, a subtle irruption of a bending bass there, little details played differently at different moments, which give the edge and the hollow some more texture, and then, the real element where there is absolute synchronicity is the silence itself, with its own very subtle and more homogeneous texture. To sum up, one can follow haptically how the cut creates three different new surfaces, which never cease to create new haptic variegations at different scale-levels: the sound of the attack, which does not protrude but can still be felt as a gesture, a micro-edge or limit, and an element in itself; the dusty new surface that works as the "escarpment" of the relief, i.e. the wall of the depression; then the depression itself, the hollow or "canyon", where all sounds meet in one silent sound.

With protuberance

A.R. Kane's 'Baby Milk Snatcher' (*Up Home!,* 1988)[463] begins with a tumult of thin electronic sounds with an irregular grain made of minuscule gliding high-pitched sounds, as if a signal of melodies or voices would have gone completely wrong into extreme interference. It is joined by two currents of feedback: one is sharp and high-pitched, the other thick in a medium register. The latter gradually takes over the whole mix, getting louder and louder until it is suddenly and abruptly interrupted by a loud and haptically rich double-hit of a percussive sound that functions like a kick drum. This double-hit is an element that markedly protrudes, and the tension built by the rising volume and thickening of the feedback line makes the cut not only very intense but necessary, otherwise the sound could have begun to get uncomfortable, and the complex and sensuous material double-protuberance that the cut creates, contrasts with the previous tumult and increasing pressure, and invites haptic listening. The second surface that the cut creates is the long trail of reverb that it leaves behind, and quiet isolated hi-hat pulsations, that enter at the same time as the trail. The overall sense is that of a big hollow of debris, that allows us to witness the series of quiet hi-hats as a minimal germ or seed, in incipient germination. The moment of sonic debris in 0'22-0'24'' works as a return of the hollow but richly textured space, in a shorter but clearer way. Interestingly enough, in the second version of this track from the same year (*69,* 1988) that double-strike element (first beat just before and second falling on the downbeat), is used inversely to enter a part instead of cutting it. In one case it is a protuberance that cuts, in the other it is a protuberance that begins a section. Here the protuberance works as something that overwhelms your listening membrane, instead of having a more soothing effect as the previous one, but only to become a portal to the riff and groove, which dissipates as the section takes its course.

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[463] It is also included in the compilation *Complete Singles Collection* (2012). This alternative single version is very different from the studio version that is included in *69* (1988).

From full stop to cut-abyss

'Happiness is a warm gun' by The Beatles (*The Beatles,* 1968),[464] has a bridge towards the end (2'15") that functions as a pause. The change of harmony and texture (i.e. all instruments making long notes) can be related to the bridge function. The instruments gradually drop from the mix and ends with a short but full interruption (2'20") that John Lennon uses to catch his breath and prepare for the high note. The sound of the inhalation is clearly brought forth by coinciding exactly with the full stop of the rest of the instruments. That body presence is thus isolated and brought to the fore, but there is more to it: a "ghosty" double of the high note precedes it, and provides the silence with a certain depth. It is like an echo that strangely comes first, and thus feels like a haunted moment. It creates that characteristic continuity that echoes can create, and that makes us feel the spaciousness one is residing, in a continuous sense in which there is no void space between oneself and the distant object from where the echo is bouncing. This reminds me of the two opposite ways of understanding depth: a void space between me and an object at a distance, or this sense of spaciousness. Like the cavernous space I have discussed in 'II.1.3.1. Density'. This track's full stop is such a short moment, but it has the effect of a strangely ample hollowness, a purely sonic abyss, in a second.

[464] I am referring to the remastered 2009 version.

2.4. Glides

DEFINITION

Glides are *pitch-based* haptic (de)formations produced by any kind of *gradual* pitch change. From the point of view of the power of certain rock sounds to endow listening with a haptic function, glides can be effective elements of a track's diagram because they markedly, and sometimes extremely, bring to the fore the supple and molecular materiality of sound (see introduction to Part II). One can only really feel the gliding movement as a deformation, by joining with it gradually and closely, that is by following it haptically. This suggests that they have a strong potential of participating in passages to zones of intensity. As with any other of the constructive types of haptic formations, this is a potential that cannot be taken for granted but can only be assessed on a case to case basis.

To begin with, it is necessary to keep in mind Deleuze's argument that I deploy throughout my whole thesis, that the process of 'recognising' and the process of haptically joining with in a 'becoming with the world' *do not occur simultaneously,* they are different exercises of the senses. The senses are not occupied with recognising in an intensity, so there can only be passages from one to the other. As I explain in I.1.4, drawing on Deleuze's reflection on 'intensity' and the 'new' in *Difference and Repetition* (which is informed by Nietzsche's thought), in the process of recognising the object: e.g. «this is a glide», one may recognise not only the object but also the values attached to it. One could therefore tend to think that to join with the continuous variation of its bending movement or its way of bending, is a value attached to the object, a value that is also being recognised like the object. Yet, at the level of intensity and the creation of a *new* formation as a sensation in an artwork, joining with the continuous variation is the opposite of recognition. Therefore, when I *give value* to this process/encounter of joining with the continuous variation at the level of intensity in haptic listening, I am not recognising this value as a value attached to an object of recognition.

Amongst the multiple possible forms of glides that we can find in rock recordings (and in music in general), we can begin by distinguishing two main types: (1) with a noticeable series of notes, or (2) totally smooth, which I shall refer to as Type 1 and Type 2, respectively. In Type 1, the pitch fluctuation passes *gradually* through a series of audible semitones or tones — i.e. chromatically or diatonically —, *rapidly and smoothly enough* to be heard as having the necessary continuity of the gliding effect. This is for example the case of the rapid sliding of the fingertips over the keys of a piano: it glides but one can still hear the notes passed through. In Type 2, the pitch fluctuation passes through *an infinite number of pitches*, and is therefore intrinsically endowed with that necessary continuity, in the form of an absolute smoothness, like in the case of guitar bends, the slide guitar, or the pitch-bend wheel of a synthesiser. These types correspond to the distinction that established music theory makes

between two kinds of glissandi. As defined in the entry 'glissando' of the *Oxford Concise Dictionary of Music,* the first kind passes through 'a series of adjacent notes' (e.g. harp, xylophone, keyboard); and in the second kind, 'the pitches passed through, instead of representing the fixed tones and semitones of a scale, are infinite in number' (e.g. bowed instruments, trombone, slide guitar, guitar bends).[465] Usually the word 'portamento' in classical and popular contexts is reserved for cases of the second type, when one cannot hear any notes in-between but just a totally smooth pitch fluctuation.

As a constructive type of haptic formation and for the sphere of rock practices, I have opted for the term 'glide' instead of 'glissando', for two basic reasons: First, for the sake of clarity, because it could be some confusion about whether a portamento is a type of glissando, or they are mutually exclusive and we should reserve glissando for Type 1 and portamento for Type 2. Secondly, because 'glides' is a broader notion with the potential of encompassing a larger variety of possible sound-sources capable of producing them. We can think for example of the various guitar performance techniques, the countless possibilities of synthesised modulation, or of the tabla, in particular of the hand technique that modulates the sound of its bass drum, producing noticeable Type 2 glides.

Distinguishing between Type 1 and Type 2 can become very useful when considering a range of rock and blues guitar performance techniques that produce glides. 'Glissando' is just one among many, usually reserved for a way of sliding the finger over the string into another note that results in Type 1, as the semitones of the fretboard can be heard. 'Portamento' is usually reserved for the cases when the same technique is performed faster and the notes in-between become practically unnoticeable. In the case of the 'slide guitar', what slides over the string(s) is not the finger but the glass or metal cylindric device aka 'slide', and it is fundamentally a Type 2. It can be historically traced back to the 'Hawaiian guitar', the 'bottleneck guitar', and the diddley-bow, for example.[466] The slide is also commonly used to produce 'vibrato', which is basically and haptic element made of a series of short glides moving back and forth, smoothly, rapidly, regularly and in a relatively reduced pitch-range. Vibratos can be therefore classed within wavering sounds (see II.2.2). Another means of producing Type 2 glides is the 'vibrato bar'. For instance, guitarist Kevin Shields from My Bloody Valentine is famously considered to have introduced the so-called 'glide guitar' technique — a name probably derived from the title of their EP *Glider* (1990) — that consists in moving the vibrato bar while strumming, producing a rich mass that mixes the gliding effect with the grain and density proper to

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[465] Michael Kennedy and Joyce Kennedy, 'Glissando', in *Oxford Concise Dictionary of Music* (Oxford University Press, 2007), p. 297.

[466] See for example, Tim Wise, 'Bottleneck guitar' in *Bloomsbury Encyclopedia of Popular Music of the World: Performance and Production,* ed. by John Shepherd, David Horn, Dave Laing Paul Oliver and Peter Wicke (2003); and Tim Wise, 'Hawaiian guitar', in *Bloomsbury Encyclopedia of Popular Music of the World: Performance and Production,* ed. by John Shepherd, David Horn, Dave Laing Paul Oliver and Peter Wicke (2003). — *Continuum Encyclopedia of Popular Music of the World is another name for the Bloomsbury Encyclopedia of Popular Music of the World.*

strumming and distortion. Two other examples of Type 2 guitar glides that come to my mind are the relatively rare act of moving the tuning pegs, and the well-known 'guitar bend' on which I expand in the example below. The so-called 'sweeps', 'sweep-picking' or 'rake technique' among guitarists are another kind of Type 1 glide, that simply consists in playing a very fast arpeggio in one quick stroke of the pluck through the different strings. Electric guitarists in rock contexts tend to use the word "gliss" in a way that encompasses most of these techniques. Finally, the depending on the note that is stressed the possible forms of glide also multiply.

The voice has the potential of doing any of the two main types of glides. In Western classical music contexts, the singing technique called 'portamento', or '*portamento della voce*' from which the term derived, refers to the totally smooth connection between notes (i.e. Type 2), as reported by the *Grove Music Online*.[467] The Italian verb *portare* means 'to carry', but different music treatises also used other names to call this technique, related to other verbs such as 'to drag' or 'to search for the note' (*'cercar della nota'*). Some accounts of the 19th century adopted positions against doing it in the "wrong" places or "overdoing" it, and in the 20th century it began to be described in derogative terms, and its use declined — although the alternative of a 'so-called "pure" style of singing […] has no basis in vocal practice of 17th, 18th and 19th centuries'. Perhaps it is partly in direct connection to it falling in disuse in the classical context that in the 20th century it often became associated with the popular style of singing called "crooning". This style refers to the use of the microphone in a way that allowed for singing to become closer to speaking, as singers started to exploit the idea that 'the shapes of the vowels and syllables [could] be retained from speech, rather than distorted in an effort to project',[468] and that subtler vocal inflections of all kind, such as micro-chromaticisms and micro-glides (around intervals that get closer to a quarter of a tone than to a semitone, for example), as well as other sounds like sighs, moans, laughs, slurps and so on, could become audible and expressive components of singing.[469] Notwithstanding the above, in the context of recorded popular song, the use of glides in singing can be ascribed not only to 'crooning' and the technological creation/development of the microphone, but also, as with any other instrument, to the transfer of gliding sounds from traditional musics from different cultures from all over the world, or from one instrument to another.

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[467] Ellen T. Harris, 'Portamento', in *Grove Music Online* (2001); David D. Boyden and Robin Stowell, 'Glissando' in *Grove Music Online* (2001). Both words are used directly in English. 'Portamento' comes from Italian, which root means 'to carry', and 'glissando' comes from an Italian adoption and transformation of the French verb '*glisser',* that means 'to slide'.

[468] John Potter, 'Crooning', in *Bloomsbury Encyclopedia of Popular Music of the World: Performance and Production,* ed. by John Shepherd , David Horn , Dave Laing , Paul Oliver and Peter Wicke (2003).

[469] A full range of singing techniques relevant to recorded popular song is provided by Moore, and classed in terms of 'four positional aspects': *'register',* '*cavity'* (including the sound of breathing, hisses, slurps, laughing, moaning, and so on), '*heard attitude to the rhythm',* and *'heard attitude to pitch'. Song Means,* p. 102.

In many cases, the ways instruments seem to imitate the sounds of other instruments or other practices, can be more precisely understood with the aid of Deleuze and Guattari's notion of 'zones of proximity' (and 'zones of intensity') proper to 'becomings', which I have discussed in the introduction to Part II, and is relevant to the following example.

EXAMPLE

This example contemplates a brief reflection on guitar bends in general, and in an individual case study, both oriented to show some principles of how a glide can become an operative trait of sensation.

A guitar bend is a Type 2 glide. As with any other glide, we can immediately distinguish between two ways of listening to it: one thing is to recognise "this is a bend" and to think "it's cool",[470] and another very different thing is to *join with* the continuous variation of its bending movement (i.e. its way of bending[471]). Thus, one can identify a guitar bend through its recognisable cues, such as (1) its *timbre*, which, in this case, it is the characteristic *quality* of both the *instrument* and the *performance technique* of bending the string without interrupting the pressure of the finger against the fretboard; (2) its characteristic *gradual pitch variation* (with an infinite number of intermediary pitches); (3) the characteristic *short interval* that it covers (usually no more than one tone and a half, i.e. a minor third).[472] For example, as demonstrated by Gibson in his ecological approach to perception, the perceiver can detect the element that the sound specifies directly through this kind of cues or 'invariants', so that neither an awareness of what cues the perceptual system is using is needed, nor a detailed examination, nor an active mental construction. In this perceptual process the element specified is not a singular element but a 'category'. In other words, from this point of view, it is not *this* bend but *a* bend with particular characteristics.

When appreciating a particular instance, one may be inclined to actively examine it in great detail. However, the level of detail does not guarantee going beyond the level of grasping recognisable qualities that specify categories and sub-categories. For example, in the case of

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[470] As Deleuze reminds us: 'What is recognised is not only an object but also the values attached to an object […]'. I share his view that there is a 'disturbing complacency' in the act of taking these 'established values' as the 'practical finality of recognition'. Deleuze, *Difference and Repetition,* p. 179. In other words, the bend can be cool not as an established value of, for example, mastering technical resources, embellishing notes, and so on, but one could ask a different series of questions: What does it do? How does the deformation feel? What kind of sonic formation does it make appear from the sensation?

[471] Here I am also alluding to an important distinction between 'beings' and 'ways of being', largely discussed in Deleuze, *The Logic of Sense*.

[472] I am grateful to professional electric guitarist Andrés Martínez for this discussion, and for suggesting the unusual far-reaching bends of Toto's guitarist Steve Lukather, to illustrate the upper limits of *around* one tone and a half of the interval of this performance technique.

the bend of the guitar riff of Love & Rockets' 'Kundalini Express' (*Express*, 1986), one can identify many of the bend's *specifics* such as: its "return" movement (away from the first pitch and back towards it); its pitch interval, which covers a semitone (approx.); its metric position in the third beat of the 4-beats-bar; its duration of a whole beat; the note that bends in the melody (the second e♭, and the second b♭, see Fig. 1); the rough and thick timbre of the guitar distortion, and so on. Regardless of how complex or detailed this exercise can get, the senses are still only occupied with grasping the traits that can be considered 'identical' to what they *already know*. This is why this exercise of the senses is called 'recognition', which can be the basis for many other important experiential and learning processes, but not for intensities, becomings, singularities and sensation. At the level where one can experience the intensity of each bend in the verse of 'Kundalini Express', first of all, the senses become occupied, instead, with *joining with* the 'continuous variation' of the bending motion, and what *can* happen if one feels it and follows it in this way is something entirely different.

The bends in this track can have a powerful effect as operative traits of sensation. Demonstrating this requires a different kind of analysis. In melodic terms, the guitar bends operate as *deformers* not only of the guitar sound, but also of the vocal line as they detach from each other and break the previous parallelism. This means that the compound guitar-voice is largely constructed on the basis of a parallel motion which the bends tend to break deforming the whole compound and thereby also the voice.

In order to explain this process we first need to briefly unpack the notion of 'parallelism'. The word 'parallelism' is used in music terminology to refer to the superposition of different instrumental layers playing the same melody or melodic contour, whether they are playing it in unison, or at different intervals apart, such as an octave, a third or a fifth apart. In general terms, the word 'parallelism', comes from the established music terminology and refers to this parallel motion of two or more layers.[473] Yet, there can be very different ways of analysing it according to different aesthetic criteria of different contexts, periods, styles and so on. We can just briefly mention that, it has been valued in some contexts, like in country, blues and rock styles, for example, and that Western academic music traditions have tended to largely restrict it, to very specific ways of doing it, where for example the parallel motion at an interval of a fifth or a fourth was considered wrong, and a hindrance to the overriding aim of privileging the independence of the different melodic lines.

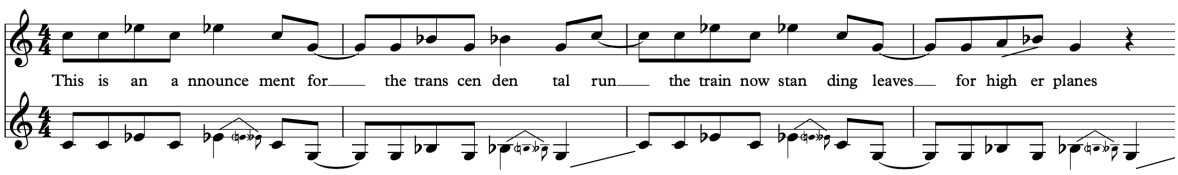
A melody is a single line formed by a succession of pitches, so all the derivatives, i.e. 'melodic movement', 'melodic line', 'melodic contour', refer to pitched-based sonic flows and formations at the level of this single line. I am borrowing the notion of 'melodic contour' from Moore's methodology, where it is basically used to pay attention to the movement of the sequence of

[473] See for example, Entry 'Parallel motion', in *Grove Music Online* (2001).

notes, rather than to the exact sequence of notes.[474] Thus, the contour concerns the different changing or unchanging directions that the journey of a melody takes, both by itself, and by observing some tendencies of these movements in relation to the explicit harmonic structures. My focus here is on the particular case when the melodic contours of two layers are moving in parallel, and the listener follows and feels them haptically. Thus, in my approach to it in rock recordings, 'parallelism' largely invites the listener to following the relation between layers and see what happens.

In 'Kundalini Express'. the vocal line is actually made of two alternate panned singers, which connect on the same plane by being adjacent to the same guitar line. The first singer makes the parallel movement, notably inflecting the sound in the consonant /n/; the second singer detaches his voice from the bend by remaining in the pitches of the alternation between two notes. The syllable that goes with each bend in the second singer also lasts the whole beat, but the voice does not deform in itself like the bend, although it does most of the times a subtle pitch and dynamic inflection, much subtler than the bend. Since the two elements, namely the guitar riff and the voice, were already adjacent components of a single entity operating on the same plane, they could already be grasped as extensions of each other. Thus, each time the guitar bend appears, an effect of elongation of the voice can effectively take place, and the voice becomes a bigger entity as an assemblage voice-guitar. The parallel counterpoint momentarily blurs in more inexact relations but the effect is another form of clarity or precision (in the sense of 'clarity' I take from Deleuze and Guattari in the introduction to Part II). The effect of the intricacies that emerge as a result of the the guitar and voice moving away from each other brings a constant element of chaos at the same time as it produces a thickening of the sonic compound. This effect is double: they fuse as they move away or differentiate in subtle but heterogeneous ways, saturating the material and bringing about this elongated voice an new intensive-expressive formation emerging from a very localised chaos.

Figure 2: Voices and guitar riff passage of the first verse of 'Kundalini Express' / Love & Rockets



[474] Moore, *Song Means,* p. 91-7.

2.5. Springs

DEFINITION

The instrument that quintessentially produces the haptic element I propose to refer to as 'springs' is the spring reverb. Yet, it can certainly be produced by other means. When produced by a spring reverb, it is the sound that it does when mechanically put in motion by a hit, as when one hits the amplifier and it sounds without the strings of the guitar being struck. It is the direct sound of the spring object itself that reveals an elasticity and rhythm that are a property of its material, i.e. metal, and its specific shape. Its specific way of bouncing back and forth, gradually faster as it fades away by inertia, as well as its metallic timbre and haptic features, is what defines this specific kind of iterative sustainment. As a haptic formation it brings forth the grainy micro-vibrations of its metallic sound as well as its energetic bouncing oscillation, that deforms in at least three different gradually changing dimensions (i.e. speed, volume, and the contraction-expansion movement in the journey of each oscillation). Thus, I am remarking that it can be clarifying to distinguish 'springs' as haptic elements from the 'reverb' function of a spring reverb. This means that 'springs' are not referring to the aspect of sound that specifies the kind of space where the sound is being emitted, which is usually what a reverb effect is credited for doing. Neither are they referring to the textural density component produced by it (see II.1.3.1. for this space-texture distinction) but to the way a spring reverb becomes a sort of wavering sonic haptic element, that has gone beyond its ambience, atmospheric, textural immersive consistency function, characteristic of a reverb function. A spring is not exactly like a tremolo, not only because it goes gradually faster in its inertia, but also because it has a bouncing effect, and therefore a markedly deforming movement that produces this effect, in each of its attacks. In other words, at the micro-level of the sonic journey there is an elasticity proper to the movement of a spring (i.e. an elasticity added to the movement of contraction-expansion possessed by any sound), which tremolos don't have. Concerning iterative sounds, the effects that are usually associated to their movement are oscillating, texturising, echoing and delaying effects, for example. In turn, an emphasis on the effect of bouncing or springing back and forth, is less common, but not less relevant.

EXAMPLE

Amongst the exuberant multiplicity of sonic haptic traits of the 16-minutes track 'Head on / Pill' by the King Gizzard and the Lizard Wizard (*Float along - fill your lungs*, 2014), several of them render sonorous not only springing, but also blasting and propulsive forces, which work together in a complex aggregate. Springs are used in many moments of the track (listen for example to 0'53"; 2'20"; 2'33"; 3'04" … — 3'13" contrast iterative line). Whether it is possible or not to tell if it is made by reverb tanks or hitting the amp is beyond the point here, as the

operative traits I will address do not work as neutralisers of readings based on recognition-unrecognisable sources. Having said that, it seems to me that they use both and perhaps a variety of other sources in different instances, and here it is enough to have this general notion of the sources, which can all be considered derivatives of the iterative sound that the spring reverb can produce.

The springs are a core kernel of the operative traits of sensation in this track. In connection with other sounds that seem to echo this way of swinging in their own different and peculiar ways, they make of the whole track a multiplicity of springing flows, in a big haptic springing aggregate. The springing traits are shared by different elements, and establish zones of proximity, sometimes also becoming extensions of each other. The fact that other sounds can do their own version of this kind of movement is sometimes not surprising, as in the case of the electric guitar and the sitar, if we consider that their strings are also made of metal, and move back and forth, or are sometimes repeated in tremolos. In this sense, when the guitar sound and the sitar sound spring with the spring reverb in an aggregate, they are actually bringing to the fore their own haptic traits and intensive molecular domain. This is why they can seamlessly become a part of haptic springing aggregates.

The chorus section of the song is based on another kind of iterative sustainment which can be identified as the melodic alternation of two pitches, both in the voice and the guitar in a parallel motion (see definition in II.2.4) that sometimes becomes very blended (especially when listening through speakers). Thus, this voice-guitar compound is a central element in the rhythmic connection of all the springing flows. Through its radically minimal and persistent alternation of two notes, it embodies the bouncing effect at the centre of the track, and all the springs work in adjacency with it, whether simultaneously or in the long sections with no chorus. The very uplifting effect of this complex aggregate, is composed of a material variegation of bouncing vibrations at many different scale levels, with many different traits, coming back and forth from chaos to springs. These material operative traits thus become inseparable from the expressive-energetic power of the track, which is multiplied by the elements of chaos, the rhythmic adjacency and the constant saturation.

We can credit a great deal of experimentation for this complexity. For example, we know that the spring movement characteristically accelerates as it dissipates and die. However, in ‘Head on / Pill’ there are moments when the end of the dissipation is amplified and then blended with another springing sound that prolongs it, creating a larger textural zone, and a larger element. This happens for example in 5’50”, where, in addition, the shout ‘whoa’ is juxtaposed to it, and embodies the continuation of the last bouncing sound of the sequence which thereby suddenly and saliently protrudes. Another complex haptic springing aggregate is thus formed, and becomes another element of the big complex haptic springing aggregate that constitutes the whole track (apart from the introduction), and this process repeats in many

different ways in a big bouncing uplifting heterogeneous saturation that effectively and clearly comes across as sensation.

2.6. Swellings

DEFINITION

The sonic haptic 'element' that I propose to call a 'swelling' is *the enlargement of a determined sonic unit or part of a track, as a result of an accumulation of sonic material.* Although it involves an increase in density, it more specific than that, for the determined unit has to swell, that is *to deform,* as a result of it. The sense of accumulation, is indeed an increase in density, but its more subtle specificity lies in the fact that an accumulation needs to happen somewhere, within an area or volume. This is not an empty space that is filled out in different ways, but it is an area or body with no more room, so that when things start accumulating it grows or swells. Thus, it is thus possible to appreciate the way it affects and alters different structural levels.

In the following notes, I gather a series of conditions that determine this kind of sonic haptic formation, with a view to make use of it in our aesthetic studies and discussions about the sounds of rock recordings. The aim is to be able to identify and describe 'swellings' and their effects. In three concepts, those necessary conditions are: 'accumulation', 'haptic variation', 'growth' and 'consistency'. They are all *interdependent* and equally important. 'Consistency' refers to how the voluminous entity holds together, as its changes hold together as *changes of one and the same element.* It refers to both that despite nested units it is a single element, and that the way of holding together touches on the way the haptic attributes and their changes feel when holding together, and therefore may intersect with 'haptic variation'. In short, a 'swelling' is a 'haptic element' that is *formed by an accumulation of sound or sounds*, and can happen in many different ways. There also chiefly has to be a sense of expansion, enlargement, or growth, and it involves the continuous variation or gradual change that defines the non-rigid motion proper to deformation and haptic sensitivity.[475] Therefore, it is an element that can be haptically felt growing larger; it is not any kind of growth but *a haptic growth*. This also means that it is not simply a part of a piece of music that becomes larger by becoming longer, louder or denser, although changes in those dimensions are likely to be found in a swelling formation.

The meaning of the word 'accumulation' includes a '*gradual* gathering'.[476] In the sense I explore here, it is not only the gradual addition or multiplication of separate things, but a continuous change, so that those things are actually part of an indivisible aggregate, and can be experienced as one and the same growing deforming mass. In other words, the haptic

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[475] I am borrowing this notion of 'non-rigid motion' from Gibson's ecological approach to perception, where it is also used to think about deformation and our sensitivity to deformation in haptic perception, as expounded in the introduction of this thesis. James J Gibson., *The Senses Considered as Perceptual Systems* (London: George Allen & Urwin Ltd., 1966), p. 106.

[476] 'Accumulation', in *Oxford Dictionary of English* (Apple Inc., 2005-2017). [My emphasis]

function of the senses follows the indivisible continuity of this gradual form of growing, whether we encounter abrupt or gradual changes. Hence, we should not confuse these two meanings of the word 'gradual': one is 'bit by bit' in a continuous way, the other is 'bit by bit' in a discontinuous way. This is the difference between swelling and mere gathering, respectively, in an accumulation. So the question again would be: How do we pass from one way of sensing to the other? What makes an accumulation of discrete things a haptic growth? What are the details that we can argue to be at work in the process of endowing listening with this haptic function? As with any other of the haptic details I am studying in the present investigation, there can be synonyms of the words I am implementing here, that can also be argued to work. In the case of 'swellings', after ruminating on different possibilities with the assistance of the *Oxford Dictionary*, my main argument for this choice is based on the meanings of both the noun 'swelling' and the verb 'to swell',[477] which include the senses of enlargement, growth and expansion, and the sense of 'accumulation of fluid', along with the senses of multiplication, intensity and being filled, sometimes to the point of overflowing. As I have pointed out before, sound is a *fluid material,* so here the 'fluid' is 'sound', and therefore the word 'swelling' for sound can be reasonably taken in a literal way — although the case of sound is not explicit in the dictionary.[478] These senses are all relevant to the main focus of this thesis, for 'swellings' could be studied as byproducts of haptic listening, and they could be related to operations by which sensation is attained. One can also encounter this element as a 'swelling expanse' or a 'swelling aggregate', when it spreads out into a *haptic variegation* without losing the *unitary consistency*. Such sonic aggregates that swell at different scale levels, or in different forms and parts, can also be pertinently referred to as 'swellings', insofar as the purpose of addressing *the way a sonic unit deforms and becomes larger by an accumulation of sonic fluid material* remains. Besides, it could be argued that the sense of 'accumulation' is particularly clear when the new entity present nested units, and the challenge to remain a consistent mass is more pressing. In this section, I present some different ways in which swellings can be formed, and I examine a swelling formation in a case study, that can be considered an operative trait of sensation.

First, it is well-known that *repetitions* can be interpreted in different ways (as also discussed in other sections of this thesis). For example, they are sometimes interpreted as an increase in amount; sometimes as 'repetition of the same' (or redundancy from the point of view of information theory); sometimes as providing the necessary lack of variety that can work as an

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[477] The definitions of 'swelling' are: 'an abnormal enlargement of a part of the body, typically as a result of an accumulation of fluid'; and 'a natural rounded protuberance'. Thus, in the sense I use here the abnormal/natural dichotomy is not relevant. What I am interested in is the special kind of 'enlargement' or 'protuberance' that takes place as an 'accumulation of fluid'. 'Swelling', in Oxford Dictionary of English (Apple Inc., 2005-2017). See also the definitions of the verb 'to swell'. Some of the relevant synonyms are: 'expand'; 'grow larger', 'grow', 'enlarge', 'fill out', 'accumulate', 'multiply'; 'be filled', 'overflow'; 'grow loud', 'intensify'. 'Swell', in *Oxford Dictionary of English* (Apple Inc., 2005-2017).

[478] Interestingly enough 'to swell' is used in the same dictionary for sound that becomes louder or leaks out of a venue.

unchanging ground or bedrock against which other things change (whether in a extrinsic comparative way or as an operative field); sometimes as a device that can be absorbed into complex syntactic relations (e.g. as studied by Middleton); sometimes as a trance-inducing device, where the focus shifts away from the sonic entity to the listener's responses. *Repetitions* can also be experienced haptically as an increase in density, or as forming the grain of sound, especially if the repeated instances are close enough to each other. This understanding, which is the one I bring into play here, has been less often addressed. Repetitions can make a sonic entity become denser and rougher, expand or grow, and also become more variegated as they grow or thicken. This view has a theoretical foundation. As defined by Deleuze, repetitions are unexchangeable 'singularities'. For example, echoes or reflections, 'do not belong to the domain of resemblance or equivalence'; 'If exchange is the criterion of generality, theft and gift are those of repetition'.[479] In a recording, the echoes produced by signal processors can be encountered as 'repetitions', in the sense promoted by Deleuze. They can be felt as the spasmodic, gradual and more or less diversifying enlargement of reality itself. They can form swellings; their growth can be felt in its continuous variation, all along its textural intricacies, and they can swell the mind with sound.

Pitch fluctuations to lower pitches, as I mention in the section on 'density', can also make a sound become thicker and swell. An increase in density of a sonic unit can also be the effect of sound *going louder,* and of *the simultaneous (or parallel — see definition in II.2.4) superpositions of different timbres*. However, at the basis of the sense of 'accumulation', is a *turbulent distribution* of the sounds that form the swelling. This may involve *irregular pulsations in the superpositions* of either minimally phased sounds, or sounds that are phased at longer intervals. To a certain extent, it could be said that an increase in density of a sound can always be felt as an accumulation of sound, but this does not mean that any such way of becoming thicker can form a 'swelling'. For this notion to be relevant we need to always combine the sense of accumulation with both the sense of growth of a determined element and the formation of a new element.. We have to determine the modal distinction between the attributes and variations of a sonic 'aspect' and the formation of a sonic 'element' that can form a 'swelling'. The unity, consistency and form of variation that is necessary to consider an increase in density as the formation of a new element only applies to certain cases. In other words, it is not always relevant and pertinent to refer to an accumulation of sound as a new element, as it does not always take place as such in an experience. This can be appreciated in the discussion of examples that I present in what follows, as the best way of determining the pertinence and suggestiveness of the concept is *on a case to case basis*.

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[479] Gilles Deleuze, *Difference and Repetition,* trans. by Paul Patton (London: Bloomsbury Academic, 2014). p. 1

EXAMPLE

The track 'Kuntz' by Butthole Surfers brings forth a clear example. It is a recorded Thai song, sampled almost in its entirety (only the last verse-chorus section has been left out) and intervened with signal processors and some frisky editing with the superimposition of segments extracted from the original, reminiscent of the cutting and splicing techniques of early creative experimentation with tape recordings. No other instruments are played by the band, so the performance and the creative act exclusively consist in these studio interventions, and, of course, in pointing at this track, bringing it to the attention of the listener by including it in their 1987 album *Locust Abortion Technician.* I also interpret this inclusion as providing the space, the opportunity, to admire the original music, as it has been the case in my experience. As explained by rock writer Ben Graham:

> 'Kuntz' is one of the most controversial entries in the band's canon. The Butthole Surfers basically sampled an entire song, uncredited — 'Klua Duang', a Thai country (Luk Thung) track written by Kong Katkamngae and performed by Phloen Phromdaen — and tampered with it in order to highlight what sounds like a very rude word in the chorus. The actual word is 'Khan' which translates "itch".[480]

Thus, in a very straightforward manner, the track works around the suggestion that the Thai word 'khan' of the original track, can be heard as the English vulgar slang word 'cunt', as also suggested by the blending of the two spellings in the title. Accordingly, when listening to the Butthole Surfers track, I feel inclined to take the word that is repeated in the chorus as the made-up word 'kunt', derived from the title, which has a special status, as it can always be heard as either 'cunt' or 'khan', or as in the process of becoming one or the other.

Now, if we do not only ask this piece of music *what* is highlighted, but we also address the question of *how* it is highlighted, it seems to me that there can be less straightforward affairs to explore. Amongst other possible affairs, one that I find particularly thought-provoking is the problem of how to give an account of the sonic haptic effects that can be related to the studio interventions. I have three questions around this problem:
1. To find appropriate criteria to determine different parts, events and elements, on the basis of haptic sensitivity, and the suggestive concepts to name them,

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[480] The fact that it was uncredited may be regarded as controversial from a certain point of view. However, as also mentioned in this interview, the facts that Butthole Surfers didn't engage in legal actions when the electronic band Orbital used a sample of one of their tracks (i.e. 'Sweat Loaf' in Orbital's 'Satan'), and that uncredited sampling and referencing other works are prevalent components of their music, can give us an idea of their position towards copyright and authorship matters. I interpret Paul Leary's comment on the Orbital's hit: 'We should've hit them up for some money', as an ironic comment, that is, not seriously regretting not having done so, but pointing at the fact that it would have been possible if they would have followed the common practices of the music industry. Paul Leary, 'The Day of the Locust: Paul Leary of the Butthole Surfers Interviewed', ed. by Ben Graham *TheQuietus* (2017) <https://thequietus.com/> [Accessed 3 September 2022].

2. A more specific question: how can a sense of 'continuous variation' be achieved with superimposed and separated segments. How does it work?
3. The fact that these interventions can be interpreted as both left to chance and carefully crafted, establishes a more complex relation between these two interpreted modes of agency, that is more complex than usual when the predominance of one over the other is marked.

The sonic entity that swells and becomes a swelling is the chorus. To be sure, it is both the word 'kunt' and the chorus, one nested in the other. Most of the studio interventions concentrate on the word 'kunt' that repeats in delayed loops in the chorus, and make them both swell in various different ways. Their combination results in four consistent swelling formations in the track. The fact that most of the changes concentrate on one word and one section, and the blatant significance of this in the interpretation of meaning, is the basic reason to consider this multifaceted increase in the texture's density as the formation of a *new* 'element', i.e. a different 'swelling' each time, and not only as changes of 'aspect'. In addition, the swelling chorus spreads into the other sections, and some of these sections, in a somehow contagious manner, undergo studio interventions as well, that also increases their textural density. One could take the latter as new swellings themselves, because they have a different composition and their own way of swelling, and chiefly because the word 'kunt' of the chorus has completely disappear in most of their duration. However, even though one can listen to them as new swelling formations, they remain subsidiary swellings, and their sense of being the overflow of previous and principal swellings, prevails.

Coming back to the repetition of the word: what makes it a haptic growth and not simply an insistence. It has a series of features. For example, the way it always appears in lower pitches reveals I more noticeable grain and makes it spread out. There is a tendency of new surges to appear in lower pitches and then making that change gradual.

Amongst the studio interventions, it is possible to distinguish the superimposition of excerpts, echo, looping and phasing, changes in pitch and duration (as a consequence of changes in speed), and changes in dynamic level. The chorus begins with a linear repetition of five instances of the word 'kunt' at a regular pace (we can think of them as quavers that go with the percussive sounds). After the fifth instance, a hissing sound is interrupted by a superimposition of the same line, followed by another superimposition of separate instances of the word at a higher volume. One can register more or less consciously that each of these layers carries on with repetitions of the word, in quavers or at a slower pace, and of the hissing sound and the rest of the accompanying instruments. Thus, the mix get busier and busier, muddier and muddier, and, in this first swelling formation, the sense of accumulation achieves a certain climax when the sound 'ku-kunt' is produced by two layers that are phased very close to each other at a similar volume, so different layers become one layer. A possible effect of this is that, from then on, the ear is somehow capable of maintaining this listening

mode, which blends the sounds together into the same plane and can feel them as one big and expanding intricate swelling. The sense of expansion is finally boosted by the change in speed of separate instances, that lowers the pitch and that enlarges the word both in duration and thickness. These swellings are marked by variety. Not only the variegated debris is involved in this, and the pitch changes, the different rhythms of durations in which each repetition appears, but also the added 'z' in the word of the title is performed markedly. It seems to be taken from the original version, a hissing sound (vocal?) interposed between the words.

As it sometimes occurs in the field of aesthetics, two opposite forces can work together and give way to an exploration of a limit. When a craft is *too controlled,* the sonic materials and gestures are all restrained within the rigidity of a 'form' that can be easily reproduced and recognised. Thus the sonic details of the work can resemble something else, or stand for something else as a sign in processes of signification, they can orient our experience and interpretation towards the work is only the messenger the means for something else, and they can readily work as clichés, . When it is *too uncontrolled,* everything is botched. The work becomes a complete 'catastrophe' from which nothing can emerge. There is nothing to listen to, no material formations and forces, nothing to join with, no differences, no work. So although studio manipulations are usually a very controlled process, In this track there is a lot left to chance. For example, the repetitions, while fading, they expose some loops of messy 'debris' from the previous interventions, which form rich textures and the infinitesimal details of the materials are brought to the fore. It would be important to explore the connection between the haptic details, the dynamics between control and chance and the sense of humour and provocative incorrectness, that mixes stupidity and vulgarity with grace, which I expect to do in a future occasion.

2.7. Blasts

DEFINITION

Blasts are explosive elements. Here, the granular material expands in all directions, in a centripetal way. They are ubiquitous in rock recordings, and may be found in a variety of haptic complexions and magnitudes. As an operative trait of sensation they can be especially effective because they evidently bring an element of chaos to the mix with their convoluted textures. Moreover, they have the potential of becoming operative traits by different means, such as sustaining movements of mass deformation, constituting a disruptively harsh effect, or on the contrary, a sensuous force, overtaking the mix, and intervening orderly structures with their magnitude and chaos, and their capacity of bursting in and spreading all over. Yet, they have to be rendered operative and that can only be studied on a case to case basis. Just like any other dense and grainy masses of sound, they can 'problematise appearances',[481] to borrow Buchanan's expression. For example, they can first appear as an homogeneous mass of noise, and then if one joins with it more closely, a rich and complex texture might reveal itself, in the sense I raise both in the 'Introduction' (in the sub-section about the 'passage to the limit'), drawing on Lester Bangs's reflection on 'noise', and in my study of flat fields. Particularly for blasts, they may appear to some listener as simply providing the function of a loud and massive explosive effect, that can trigger certain responses and allow for certain forms of interaction, but for which finer details do not really matter, as long as that function is fulfilled. In this section, I only provide the basic attributes that make them a consistent haptic element, in order to access these notes in future studies, and in the hope that these notes can also spark the reader's interest in exploring their complexity.

Unlike other dense and grainy masses of sound, they are not simply masses but they explode and expand in all directions. Chiefly, their centripetal movement can only result from having *a markedly contracted core*, which is also the moment of detonation. This is quintessentially what the kick drum affords, in rock practices when played simultaneously with cymbals. It can also be what the snare affords in combination with cymbals. The haptic consistency of the cymbals is what provide the expanding-spreading mass. When this is produced as an operative trait of sensation, it becomes a machine that is certainly more than its interrelated parts, that is it becomes the opposite of a 'mechanist' 'construction *partes extra partes',* that Guattari emphatically distinguishes from the diagrammatic machine.[482] Of course, we could also think of many other examples, a loud distorted power chord with a marked attack, an explosive shout, a single snare with reverb, which exhibits both the strong percussive core and the propagation, and so on. In a certain sense, the envelop of most sounds constitutes a

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[481] Buchanan, *Assemblage Theory and Method,* p. 26.

[482] Félix Guattari, *Chaosmosis. An Ethico-Aesthetic Paradigm*, trans. by Paul Bains and Julian Pefanis (Bloomington: Indiana University Press, 1995), p. 33.

sort of blast in their evolution from a contracted beginning, and then spreading and dissipating. But they are not. Blasts have to be markedly explosive to enter this haptic category. If we consider the cymbals that are not the hi-hat, such as the crash, the splash, the china and the ride, their role in the drum kit pattern is usually that of a momentary stress, rather than that of keeping the beat or the groove, or that of having more of a bedrock "structural" function, so to speak, within the pattern. Yet, a momentary stress is still not directly explosive.

EXAMPLE

Pixies's 'Bone machine' (*Surfer Rosa*, 1988) begins with a plain, notorious, and I would argue intensive blast, that sets out a powerful diagrammatic machine, the title being just a curious coincidence in my work. The chances are that they are not referring to Deleuze and Guattari's concept, but their concept is not a philosophically and existentially obscure concept either, if, for example, we consider, with Guattari, 'the problematic of technology as depending on machines, and not the inverse',[483] which basically means that machines can be found operating in all sorts of things, so the concept is itself different from the mechanist approach, and therefore it could be something this title track can be argued to be suggesting.

I think that the diagrammatic power of this initial blast lies not only in its rich and elaborated material complexion, which is enhanced by its isolation (in the sense that it never repeated), but also in the complex drum-kit pattern it sets out (a complexity that certainly does not lie in its technical difficulty). First, it explosively spreads all over in the duration of the cymbal(s) which then merges with the hi-hat. Second, what it sets out is a pattern that itself forms a jagged haptic relief, each of its components being neat, rich and strong in their energetic materiality and intensive variables, to borrow Deleuze and Guattari's notions. Third, another blast occurs in 0'04'' and then in 0'08'', also in isolation for a number of reasons: it is a kick drum played on its own, yet it is a different kick drum, a sonic compound remarkably elaborated; it fulfils that function producing a momentary accent, usually reserved to cymbals, and it explodes, but in a different way. Although the blast is much more contained and restricted than the first, it can be strongly felt, mainly through its bursting loudness and rich complex material. It explodes in the low register, and expands the low register, reaching deep down and producing a massive sonic escarpment in the haptic relief of the flow. (Like dynamiting a hole in a mine). A drum-kit pattern does not usually exhibits different kick sounds, let alone a blasting one, and never goes lower than the limit that the only available kick drum sound has established. The variations in register that create a haptic relief usually happen by going higher in the pitch spectrum, for example in the different strengths that the cymbals are hit or in the addition of other higher-pitched percussions. Yet, a comparison to

[483] Ibid.

the norm is not the central issue at stake here, for I think it is the very sensuous strength and complex texture of this element in adjacency to the rest of the beats, what, in their own right, create a completely new and intensive sonic formation in a sensation, a jagged haptic relief for which we should credit the collaboration between drummer David Lovering and producer Steve Albini which names, for this track's listeners, designate an intensity.

2.8. Broken tones

DEFINITION

A broken tone is made of a juxtaposition of two or more complementary sounds that work as the intricate material details of a new formation, that constitute a markedly broken texture or relief. It can come across as different states of the same material, as different small-scale formations of the same material, as an irregular edge, or as incrustations of another material within the material. The juxtaposition can be simultaneous or successive, or both. The most simple example is a very quintessential technique in the guitar where the bass note (usually a pedal note) is played just before a higher string given the sense of one beat, hence a broken beat, and if we include the textural haptic qualities of the different notes, then also a broken tones. An example of this can be listened to in Nick Drake's 'Horn' (*Pink Moon,* 1972). A very extreme, and perhaps arguable, example is the new formation I feel at the beginning of Crocodiles's 'Soft Skull' (*Summer of hate,* 2009), a broken tone made of voice and guitar together, which I think follows the same principle that 'Horn', but in a more intricate way. The voice is preceded and followed by the guitar tone which is already broken with a very complex texture and ending in a spring (see . One of the key aspects when is that they have to be juxtaposed in a short duration, for them to be felt as the same material in a different state. Another example is the juxtaposition of the voice of a noisy signal that sound more like a damaged device than a music effect (some of it is simultaneous, some lingers just after the voice) with the words 'what's wrong with me', in Deerhunter's 'Carrion' (*Fading Frontier*, 2014). In A.R. Kane's 'Baby Milk Snatcher', the aggregate of the word 'slow' in the chorus when displaced along with the percussion forms broken tones when felt haptically as adjacent on the same plane. The effect is doubled when another voice is added and the first voice displaced.

A broken tone is a complex sound compound, an intricate haptic aggregate, made of different elements in a duration that is short enough to make them stand as a zone that concentrates a variety of sounds, forming an intricate sonic material with an intricate texture and relief. For example, they can be marked by a displacement in their melodic contour or rhythmic patterns, that is felt less as a displacement than intricate relief, or as explained by Deleuze: 'when the contour is displaced, the movement consists less of this displacement than the amoeba-like exploration that the Figure is engaged with inside the contour'.[484] It can also be a timbre made of different micro-timbres, when these differences are clear and long enough to be heard as a broken 'tone colour'. Here the metaphor of 'tone-colour' for timbre seems more suggestive, in my view, than the it is used for other purposes. I am borrowing the concept from Deleuze: flesh, for example, is painted with broken tones in Bacon, especially in the zones of deformation, cuts and other intricacies.

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[484] Deleuze, *Francis Bacon. The logic of sensation*, p. 31.

PARALLELISM, CONTOUR DISPLACEMENT AND BROKEN TONES

In making one's way into a haptic variegation, the appreciation of the dynamics between parallelism (see definition in II.2.4), contour displacement and the emergence of broken tones is a prevailing principle. For example, in 'Mary-Christ' by Sonic Youth (*Goo*, 1990), while the timbres of voice and guitar are obviously very different, the contour of the riff and vocal melody unites them, and the play of more or less slight or marked deviations between them makes a texture full of broken tones. Voice and guitar tend to influence each other too, in their articulation and haptic traits, so that one cannot assume one as the lead and the other as the accompaniment, so they work in adjacency on the same plane. The sonic compound that guitar and voice can generate is brought to an extreme in the sound of Kim Gordon's interventions where the juxtaposition of the squawking voice and the untamed distorted electric guitar feedback, work as broken tones at a smaller scale-level as they feel completely blended on the same sound. The voice is soaked in distortion, so that it has an irregular grain and the material of the sound seems to be that of a guitar.

The parallel movement of the riff and the voice in this track is a clear example of the dynamic effects of parallelism, when it can form haptic traits of sensation. The contour of the guitar riff is simply based on $\hat{1}$-$\hat{4}$-$\hat{5}$ in a 4-beat metre, with $\hat{4}$ and $\hat{5}$ appearing in the last two beats, while the first two beats are based on $\hat{1}$. Two guitars are playing the riff, so there is already parallel movement with more or less marked differences in the grain and the adherence to the recurrent pitches. Yet, when the pitches deviate from the contour they have explicitly stated, they only do so very slightly. The singing moves in parallel with them as well, both in melodic contour and the marked downbeats. Most of the time it is the voice that deviates from the melodic contour, every time in a different way. Yet, in certain moments like with the line 'skating light on ice', for example, guitar and voice deviate together, as the guitar joins the voice in its rising glide and extends it for a bit longer with a contorting wrinkled end. The voice maintains a characteristic way of singing that is neither in tune nor out of tune, but privileging a different tune that is born from the expressive way of saying the words, as if commenting things with friends in the street (in line with the lyrics), and from the absolutely internalised riff as the body or the flesh of that who speaks, that has this excited bouncy and lively state in its bodily cycles. They do not represent this body, they feel like it because the effect is contagious and comes across in a sensation as one follows the materials. It is never the case of one instrument being the accompaniment of the other. The repetitive riff in the guitars is always inventing small twirls (made of two notes slightly different to the contour) or remaining on the first note. With all those deviations from the explicit contours that the riff and voice set themselves, they form marked broken tones in the last two beats of the bar, and the roll in the drums add to their haptic intricacy. So here, the parallelism does not only form an aggregate that becomes a denser bigger entity, but it also forms haptic broken tones that

bring to the fore the complexity of the details of the material compound at a small-scale level. This in combination with the eventful lyrics, which is another form of density, the bouncy rising movement of the melody, and the call and response play with another voice that intervenes. All multiplies the meaning of being actively involved in the comings and goings of the city, and of the interactions with people that one meets in small groups.

1. The neutralisation of recognisable traits: haptic details beyond timbre in Nick Drake's 'Know'

This study addresses the difference between haptic details that operate as cues for the recognition of timbre, and discussions around timbre, and haptic details that go beyond this function. It particularly focuses on the marked rough grainy sound of the string rubbing against the fret that Nick Drake creatively moulds as a material trait of expression in a diagram. The study passes from a timbre analysis, to a consideration of how the haptic traits of the track get involved in another kind of operations, such as passages from layer to contour; from intertwining to surface and haptic variegation; and changes of scale. Thus, it demonstrates the value of treating the haptic dimension of sound in its own right, beyond its function as a provider of recognisable traits; and the power of haptic operative traits to neutralise readings based on recognition.

INTRODUCTION

Nick Drake's music is surely not unique in combining aspects of acoustic-guitar-based singer-songwriter practices with rock practices. Think for example of the music of Elliott Smith, Neil Young, Syd Barrett or Bob Dylan, amongst many others. Although Drake's music most evidently stands in the former stylistic category, principally on the basis of instrumentation and singing, which in Drake's case includes the expression of troubled emotions but in an overall serene atmosphere and elegant delivery,[485] I think it is also possible to consider some of his pieces of music from a rock angle. Chiefly, this can be the case for the ones that present riff-like structures and ample experimentation with different dimensions of sound, at the level of the song, the composition, the performance and the recording, especially the experimentation with thresholds of 'noise'. Besides, it is not unusual to hear comments about the relevance of Drake's music for rock artists and listeners. Here, I approach 'Know' (*Pink Moon*, 1972) as a rock track, and I study the sound/noise of the guitar string rubbing against the fret as a *haptic diagram*. I refer to this element of the track as the 'grating sound'. Since this track can only be taken as a marginal case in the context of rock practices, its 'friction' in terms of style, according to Moore's understanding, can only be considered in relation to

[485] See Moore's notion of 'delivery' in Allan F. Moore, *Song means: Analysing and interpreting recorded popular song* (Surrey: Ashgate Publishing Limited, 2012), p. 91-118.

some shared implicit norms that it may have with the 'rock' style, which are evidently not many. Accordingly, I focus on the experimentation with the grating sound, and its relations with the riff-like melodic line and the voice. However, at another level, I think this sound chiefly requires an examination of how it breaks away with other kinds of givens that are not exclusive of rock practices. In relation to the whole album, buzzing or other sounds that are not the pure tone of the string of the guitar are very rare, yet in this track it has a constant and very prominent presence. I think it is misleading to refer to these sounds as noises when a listener starts engaging with their sonic details and variations. However, their determination as either/or involves frequent passages from one understanding to the other, in different moments of an experience or an analysis. A study of the fine manoeuvres and experimentation through which the grating sound is moulded here by Nick Drake, can show a way of exploring the aesthetics of this kind of sounds in other tracks by other artists. In Elliott Smith's guitars, for example, it is possible to encounter a variegated catalogue of them. Finally, this track seems to open up an opportune field to illustrate the difference between a discussion about timbre that stays in timbre, and one that goes beyond timbre. Nonetheless, I am not suggesting that an approach based on haptic listening can be the only way of discussing *sound beyond timbre,* but here I focus on how *haptic variations* can demand it.

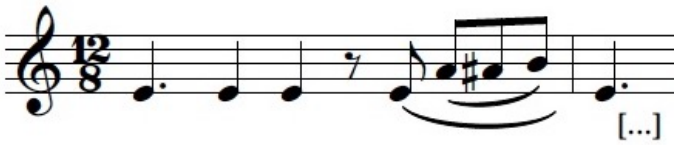
TIMBRE ANALYSIS

As far as timbre is concerned, the grating sound of the guitar *specifies* the rubbing of the string against the fret, and its variations can specify the body movements of the performer, like changes in the strength of the strokes, ways of stroking, and their gestural marks. Moreover, following these variations in more detail reveals that Drake is also moulding the intensity and ways of rubbing with the other hand, by carefully regulating the pressure of the finger against the string and fret — an interpretation that will probably make more sense to readers familiar with guitar playing. All these timbral details relate to performance techniques and actual sound sources. As regards meaningful associations, the prominent and persistent grind, together with the *seemingly* unsophisticated guitar line and overall simplicity of the song, can be taken as representing something of a shabby appearance, also in relation to the 'I don't care' attitude of one of the four lines of the lyrics. This sense, along with the, at first glance, bleak texture, can also be related to the "not being noticed" kind of situation as a possible interpretation of the lines 'you know that I see you / you know I'm not there'. The rising dynamic level of the guitar and of the rubbing noises throughout the track, also carries an emotional weight.

However, when one starts engaging with finer distinctions than the ones allowing the recognition and identification of these nested timbres, and of what they can represent, it is necessary to address directly the effects of those finer distinctions, which go beyond issues of timbre and need to be discussed as variations of sound, as I illustrate in what follows. To be

sure, some more details and modifications of timbre can still be specified when exploring these variations, and they may complement the interpretations, but they are not the overriding concern, or focus of attention, once the finer distinctions are noticed and addressed. It is also important to remember that the specification of further micro-timbres for each of the distinctions made, is most likely beside the point, and would divert us from addressing directly and clearly the other effects. These involve other important processes that take place when listening, where the apparent unsophistication I have suggested above is also called into question. In that sense, 'Know' seems to me a remarkable case of a track that sharply challenges the assumptions it seems to encourage us to make — I am echoing this important aesthetic criterion emphasised by Moore, which also constitutes a central matter throughout the present thesis. In relation to my own experiences of listening to this track, I could not content with staying at the level of the interpretation I put forward in the previous paragraph, even though I started this analysis with the question of how to analyse this track's timbre. This very attempt took me elsewhere, beyond timbre. Thus, in cases like this, I think it is imperative to undertake further explorations to complete the interpretation. Reducing sounds to timbral issues amounts to turning a deaf ear to other important matters, and to a further aesthetic complexity that a recording may be demanding to elucidate.

Figure 1: Guitar melodic line. 'Know' / Nick Drake



FINER DISTINCTIONS: HAPTIC VARIATIONS OF THE GRATING SOUND

The guitar presents a riff-like structure consisting of a short melodic line that repeats, and the grating sound of the string/fret noise, which presence throughout the track is far from a collateral trait. This sound is also nowhere near a homogeneous trait, or a noise, and important aspects of this track's aesthetics can be missed if one treat it as a general quality that discloses the same each time it sounds. On the contrary, its grind is like a portal to haptic listening.[486] It can be first distinguished, quite discretely, as an extra sonic layer in the guitar with its own attack and rhythm, accompanying both the guitar melodic line and the voice.

[486] And also to true repetition (i.e. not of the same but of difference in itself), drawing on Deleuze's philosophical account on 'repetition'. Gilles Deleuze, *Difference and Repetition,* trans. by Paul Patton (London: Bloomsbury Academic, 2014).

The guitar melodic line, consists of four repeated Î followed by a chromatic 4̂-4̂#-5̂, in E Mixolydian as completed with the voice's notes. In its pattern of durations, the longer notes coincide with the repeated pitch or melodic rest, and the shorter notes with the melodic movement (see Fig. 3). The durations gradually shrink throughout the riff, from dotted crotchet to crotchet to quavers. The last Î is prolonged over the chromaticism, yet it also has the overlapping function of being the shortest Î in the gradual shrinking before the melodic change. The durations of some notes, mainly of the second and third, subtly vary throughout the track.

The grating sound first appears only in certain moments of the riff. It is actually absent in the first note for some of the first bars, and it gradually expands territory to the whole riff, also gradually becoming more prominent and rougher as the track goes on. At its roughest parts it completely neutralises the pitch of the notes. Although at the beginning, its roughness, that is the interspacing of its serrated edge, is subtler than later on, it already reveals variations. Note, for example, the micro-ricochet effect, as it seems to move gradually to an fro the edge of maximum roughness, akin, in a sense, to the sound of the eroding junctions of a wooden rocking chair. Here, I am not suggesting that the sound is representing the creak or movement of such objects by means of resemblance, but I am only bringing the analogy into play to simply indicate the sound and the sonic movement I am referring to, in order to emphasise the sheer activity of noticing and feeling this sonic deformation each time. Thus, we can already follow variations of this sound in at least four different levels: (1) the rasping effect of its roughness; (2) the counterpoint it makes with the melodic line of the guitar; (3) the recurring micro-ricochet effect to and fro its edge of maximum loudness and roughness; and (4) the gradual movement of contraction and release, that augments and softens degrees of roughness. Overall, the three components, the guitar melodic line (with a pattern of durations), the guitar grating sound, and the voice have an equally important presence in the mix. So, the next step is to understand more closely the variations of the grating sound in relation to the other two elements.

Relations with the other elements: from layer to contour, from intertwining or counterpoint to surface and haptic variegation

By joining with all these variations, one can enter the track in a certain *way*, in which the haptic mode of listening is encouraged, established, and pervades the relations between all the elements of the track. To begin with, by following the grating sound's haptic variations, one can also tune in with even finer distinctions and start hearing a little buzz in the notes where the grating sound seemed absent. This creates a sense of a variegated textured surface

continuity all over the guitar sound. By entering the track with a humming 'mmm', which is slightly coarse, and goes gradually coarser in some moments, the voice adds another variation to the textured surface, and can be felt as contiguous or adjacent to the other elements, thus bringing everything to *the same plane.* In this way, the track seems to avoid a foreground/ background order in the voice/guitar relation. The relation to the voice of the first, second and forth verses that only sings 'mmm' is particularly striking in this sense, as the 'mmm' spreads out like a flat field — in a fairly uncommon functional upheaval for the sphere of the recorded song —, so the rubbing sound is at the same time contrasting with it as a highly contracted element, and adjacent to it, that is without loosing their belonging to the same plane. Noticing the way the duration of the 'mmm' is prolonged in the last line towards the end of the track (unlike the last line in the other verses), is also striking in relation to the sense of adjacency, for it feels as if the singer were trying to linger over the resonance produced between strings and voice, as if wanting to maintain the contact for longer. This also made me think of the fact that the track is composed of four verses, and Drake sings the sound 'mmm' in three of them (i.e. 75% of the sung words are 'mmm').

It is a crucial *passage,* the one that takes place when one can suddenly stop listening to our grating sound as a separate extra layer, and start realising this relation of continuity or contiguity to the other elements, which without blending and still remaining very distinct sounds, form together a variegated surface that one can haptically follow. When this happens, in relation to the voice, the rubbing 'layer' can be more precisely understood and felt, instead, as a spasmodic 'contour' of the voice, a contour of considerable breadth and prominence, that works as *the common limit* of the humming voice and the buzzing guitar. In other words, when all the three layers are present, it works as *a double faced contour,* which can be felt both as the haptic edge of the voice, in a form of sonic aggregate, and as the haptic edge of the guitar, in a way that is more evident as they belong to the same instrument, though still forming another sonic aggregate composed of different sounds. However, it does not establish the same form of edge with the guitar melodic line as it does with the voice. On the one side, it follows the guitar attacks closely as a minutely delayed trail, and in the chromatic $\hat{4}$-$\hat{4}\sharp$-$\hat{5}$ it gets not only rougher but also sharper, and extends all over the three-notes figure. On the other side, it establishes with the voice a far less regular or predictable counterpoint. Still, it can consistently be felt and function as a contracted and jagged edge of the voice throughout the whole track in varied ways. For example, the beginning of the words and the chromatic $\hat{4}$-$\hat{4}\sharp$-$\hat{5}$ are usually intercalary, so that the roughest moments of the guitar coincide either with the middle of the long syllables or with the intervals with no voice. There are moments where the grating sound of the chromatic $\hat{4}$-$\hat{4}\sharp$-$\hat{5}$ gets closer and immediately follows the beginning of the words, almost clashing (in contrast with the previous alternation), but instead of clashing, it actually shapes the haptic surface of the compound in a way that is akin to the minutely delayed rough edge of the guitar attacks. This happens in 1'23" and in 1'39" when it follow the words 'don't' and 'not', respectively, thus giving these negative words more prominence.

The humming voice keeps changing its position in the verbal space of the song, which also contributes to the unpredictability of these variations. Of course, in the moments of no voice the grinding sound stops being a common contour and regains its markedness, and its role as a rasping protruding edge of the guitar. Overall, the grating contour goes contracting/releasing, roughening/smoothing, protruding/recoiling, thus contributing to much of the sense of rhythm, textural movement and heterogeneity of the track, especially in the flat moments of the melodic contours, and the flat fields that the humming generates. Furthermore, it is also the edge of the silence, after the third note of the guitar, each time. The passage from 'separate layer' to 'common contour' or 'common edge' works as such precisely because of the markedness of the rubbing sound, that first allows us to perceive it as a separate layer, and then to listen to the ways it connects with the adjacent sounds on the same plane, maintaining its difference, and therefore becoming this thick, irregular, multifunctional and rasping contour.

Relations with the other elements: change of scale

When engaging haptically with all these differences, the passage to 'words' in the verse, prepared by the crescendo, produces a major, breathtaking change of scale in the sound world. It effectively works as 'the emergence of another world'.[487] The sudden change to a predominance of vowels seems to radically enlarge the space. It does not increase distances between the elements but it brings a sense of vastness, bigger sizes and a grander scale. Several factors are involved. In terms of timbre, the vowels make the reverb more noticeable, a change that is also emphasised by a solid position, support and resonance in the vocal technique, and an increase in volume. The guitar has also become louder, both at the level of the melodic line and of the rubbing contour, which has also become thicker and rougher. This double increase in volume has a double effect: the contrast between the voice and the guitar is sharper, and at the same time the contiguity of the elements on the one plane remains. The voice does not seem to come from, or go, somewhere else, neither to take a foregrounded position. It has not lost the slightly coarse texture, which still connects with the coarseness of the guitar. The rubbing sound becomes more markedly a common contour *between* the other elements, which is also reinforced by the voice fixing its position in the verbal space. The somehow paradoxical persistence of this contiguity of the elements on the same plane despite their higher contrast, is a key factor in the intensity of the enlarging effect of the reverb and change of timbre and loudness in the voice. The voice overtakes a large expanding area without eclipsing the guitar. The effect can be described as a blanket or a sky, at the same time as it contracts in a consistent density. Noticing a reverb in a listening experience usually carries with it the sense of a larger and more empty space, but a reverb always has a texture

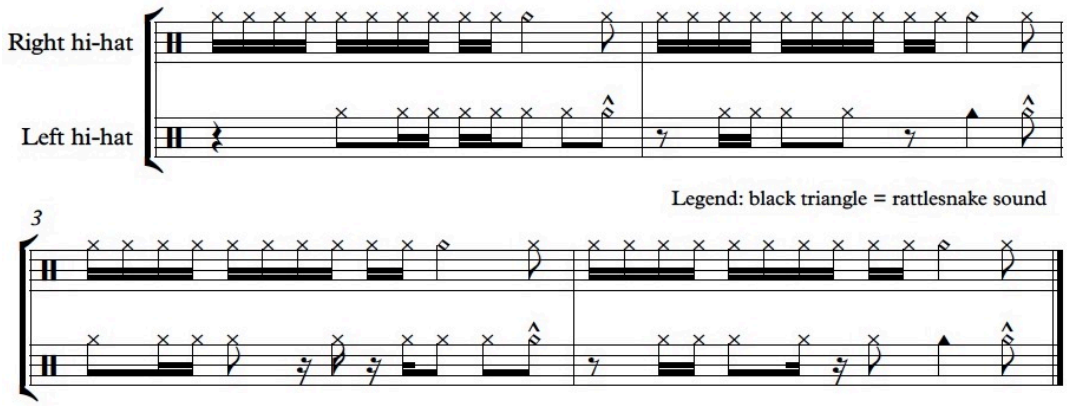
[487] In the sense explained by Deleuze in 'the logic of sensation'. Gilles Deleuze, *Francis Bacon. The Logic of Sensation,* trans. by Daniel W. Smith (London: Bloomsbury, 2017), p. 70.

as well, and the sense of space it generates is never completely empty, so its texture spreads or substantially unfolds as an extension of the haptic characteristics of the timbre it belongs to. This is how the change from the humming 'mmm' to the open vowels in the singing, along with the louder guitar, can be felt as an overall change of scale. Expanding and dense, reconnecting with the rubbing contour at another scale level where everything is larger and far-reaching, but also coming closer to the listener, huge and prominent, all at the same time, pretty much like an intense blue sky (Again, I do not mean representing one, or a phenomenological cross-modal perception with vision). In the middle of this clarity and vastness, the sudden percussive stroke in the middle of the word 'care' at 1′24″ is striking, sharp, and "alliterates" in connection to the phonetics (i.e. the /k/) and meaning of the lyrics. (As we can see, there is certainly a lot going on haptically in just one second of the track, as it is just before the word 'care', that the word 'don't' was made a haptic compound, by being immediately trailed by the chromatic figure, and its rasping sound as a common edge). The percussive stroke in the guitar repeats a couple of times afterwards. It is a nested timbre produced when the string that does not only rubs against the fret but also strikes the fretboard. The little break it produces also emphasises the function of this second note in the middle of the sequence of the first three notes of the riff, which functions like a joint in relation to the adjacent notes, articulating the movement of another ricochet effect at another scale, and it can be felt like the contracting limit of a diastole-systole-diastole rhythmic sequence. Throughout the tracks, the jagged edge of the contour continuously intensifies, as well as its action upon the nervous system, which conveys a sense of tension that I would not necessarily interpret as expressing an emotion, but directly producing a sensation. I don't think this is all there is to say about this short but intense 2′26″ track, but I have found in the workings of this haptic diagram, and in the sonic details related to sensation, a more satisfactory basis for possible interpretations, than, for example, looking for representative traits or a sense of narrative. I have presented these details as a demonstration that the rubbing sound cannot be reduced to a timbral trait, and its sense or meaning cannot be reduced to possible associations with other extra-sonorous things. I think its sense unfolds when one feels and follows its different forms of rhythm, in itself and in its function as a common contour, thickening the other elements with a rhythmic haptic edge. Thus, in this track, this sound has a determinant function in the passages from a presumed simplicity to its haptic complexity.

2. The neutralisation of anaphonical readings: 'Snakeskin' / Deerhunter

This brief study concentrates on the operations by which a rock track is capable of neutralising anaphonical readings. The case study exhibits a double way of doing this, since the drum-kit incorporates a field recording, which is an evident path to avoid representation, but most importantly it does so within an intricate double hi-hat (see Figure 2), which haptic complexion plays with possible anaphonical readings around the theme of 'snakes', but only to neutralise them through its purely sonic events. The operative traits of sensation of this track bring to the fore the sonic materiality through elaborate haptic details that construct a sonic formation that stops working as an anaphone and can come across as working directly as a purely sonic "snakeskin".

Figure 2: Sketch of the two hi-hats in 'Snakeskin' by Deerhunter (*Fading Frontier*, 2015)



An 'anaphone' is a sonic representation of another sound, or any thing or event of the world. As defined by musicologist Philip Tagg: 'Some instrumental sounds act anaphonically [...] in that they resemble sound, touch or movement that exist outside musical discourse'.[488] So, the exercise in the listening experience simply consists in grasping those resembling traits. Broadly speaking, rock tracks have two possible ways of neutralising anaphonical readings. One is the use of a field recording of the sound, the other is by achieving a sensation. The first way is most obviously not an anaphone, for a field recording does not resemble a sound, but it

[488] Philip Tagg, *Music's Meanings: A Modern Musicology for Non-Musos* (New York & Huddersfield: The Mass Media Music Scholars' Press, 2012), p. 308.

is itself the sound, which just happens to be recorded. It is capable of neutralising a sonic anaphonical reading when it specifies its sound source, so that one can recognise the category it specifies. In 'Snakeskin' by Deerhunter (*Fading Frontier,* 2015), there is one sound, which can be taken as part of the hi-hat layer, that seems to be a field recording of a real rattlesnake sound, instead of an imitation of one. To be sure, I am taking it as a field recording, after listening online to many samples of rattlesnake sounds in a comparative way, although ultimately I cannot absolutely guarantee I am right in taking it as such. However, it obviously works as a reference to 'snakes', that is as a sort of metonym or indicator of a snake presence in the listener's imagination, fulfilling the kind of function that an anaphone usually does. If we consider that the use of instrumental sounds such as tambourines, rattles, other percussions, synthesisers or guitar effects, to resemble rattlesnake sounds are not rare anaphones in rock recordings, the field recording in this track effectively generates stylistic friction which contributes to the effect of neutralising anaphonical readings instead of being just a field recording. This track also uses those other sounds

The second way is more complex and involves achieving 'a resemblance through nonresembling means', according to Deleuze's 'logic of sensation', whereas an anaphone only resembles something by means of 'resembling means'. Deerhunter's 'Snakeskin' exhibits both ways. It also exhibits a number of those other sounds that seem more common anaphones of snakes in rock recordings, but they are integrated into a complex haptic variegation, where there function of being indexical or anaphonical is secondary to their function as cogs in the haptic variegation that achieves a sonic snakeskin through non-resembling means. The music formation made by the two hi-hats sketched in the figure above is the central operative element. Thus one can study how the effect of 'a sonic snakeskin' is achieved 'sensually' through operative traits that are centred on the hi-hat layer, and can create this 'resemblance through nonresembling means'. The rattlesnake sound among many other elements in the hi-hat rhythm, adds to the haptic variegation.

The open hi-hats suggest three different anaphones that work as the basic givens that the track provisionally present in order to neutralise them by means of the sensuous complexity of its haptic traits in the haptic variegation. There is a tactile/kinaesthetic anaphone of the slither movement; a trajectory anaphone made by the interrupted zig-zag; and sonic anaphone that correspond to the hissing sound.

'Many snakes […] move in a serpentine way. The snake pushes at the points where its body bends, and that propels it sideways. But if two opposite coils push at the same time, the sideways forces cancel each other out, and the snake is propelled forward. […] From the marks the [snake] leaves in the sand, it is clear that it is only pushing at the points where its

body bends.'[489] Those marks have the shape of an interrupted zig-zag. The two open hi-hats panned right and left respectively, seem to emulate those marks in a sequence, (which is different from their simultaneity in the real movement) (a kind of simplified serpentine way), and the timbre conveys the slither, that is the kind of contact with the ground it involves, which not only pushes but also slides.

The double hi-hat operative traits can be synthesised as the following. The closed hi-hats are small-scale protuberances that work as the scales of the sonic snakeskin via non-resembling means. The hi-hats are panned on the left and right and they basically have the same or very similar timbre. The closed hi-hat semiquavers on the right are somehow more distinct, and the ones on the right occupy a common space in the soundbox with the rest of the drums, which makes it harder to distinguish its exact rhythmic figures but they are still noticeable. Thus they effectively can be felt haptically on the same plane, while revealing plenty of small-scale details. The open hi-hats neutralise the anaphonical representation of a snake moving, by rendering sonorous a feel of contact, a purely sonic slither, and bringing to the fore their surface texture and a sense of relief. One is more prominent than the other. The intervention of the rattle snake becomes like a zoom in to smaller micro details. The added shaker can have a similar effect, though less marked, and adds variety. At the end of each of the first two verses, with the lines 'with a snake-like walk' and 'geographic black', there is a rattle sound plus hi-hat kind of synthesis, that makes those lines particularly intense. The order of the sequence is also a factor, the rattle sound is superposed to the softer open hi-hat and then the louder hi-hat follows so the sequence feels like a gradual passage.

The track is so detailed that the functions of the zig-zag and slither movements, along with the hissing sounds, as inextricable components of the haptic variegation is brought to the fore in this track, and with it the intensive level of the sonic materials. The sense of an intricate haptic surface that works as a purely sonic snakeskin goes beyond the practical representations.

[489] David Attenborough, 'How snakes move & 'run' - Serpent - BBC Animals' *Youtube* (2009) <https://www.youtube.com/> [Accessed 6 March 2020]

3. Vortical movement, turbulence and overflow: 'Madame George' / Van Morrison

This study explores how the sounds of Van Morrison's 'Madame George' create 'vortical movement', 'turbulence' and 'overflow' that can be followed and felt haptically. It illustrates some observations that Bangs wrote about this track and this artist around these movements. It comes back to some relevant insights by Deleuze and Guattari that explain the characteristics of turbulence and vortical movement, and their close relation in a mutual determination; as well their emphasis on the exploratory nature of following the materials as the means to encounter them in these states. The analysis centres on Van Morrison's vocal performance, in relation to a variety of music dimensions. It considers the creation of a movement that 'can rise up at any point' from the point of view of the different points at which the voice enters the mix in each line. It looks into how the words are compressed or spread, and how they spill over certain limits in both ways; it shows some ways in which the vocal lines come across twirls and vortexes; and the deformation of syllables and phonemes in a haptic saturation inseparable from their meaning. It addresses the process by which all these traits become operative in the neutralisation of narrative cues, as the act of leaving becomes constantly delayed, prolonged, trapped or paralysed in/through these convoluted movements, and how 'the love' is intensified and even a 'vision' (as suggested by Bangs) is revealed through all these processes. It addresses how the whole diagram achieves a passage to the intensive level of sensation, and what is expressed in its fluid forces.

INTRODUCTION

In some very suggestive lines, rock critic Lester Bangs called the track 'Madame George', among other things, 'the whirlpool' of Van Morrison's 1968 album *Astral Weeks.*[490] To put it briefly, in this piece of writing I present an aesthetic study of the sonic details that substantiate this characterisation. I argue that they need to be considered within a logic of 'sensation'. I specifically consider the elements that sustain the senses of 'vortical movement', 'turbulence' and 'overflow' in the rhythm, and I study the ways they work as sonic traits of sensation. It is possible to infer from Bangs's article that he is explicitly anchoring the idea of a 'whirlpool' to at least three main aspects of the music that involve haptic listening: one is the 'twirling' effect of certain repetitions; another is the far-reaching ways of 'compressing and spreading' sonic details, and, a third one, not explicitly expressed in the following passage,

[490] 'Madame George' is the album's whirlpool'. Lester Bangs, 'Astral Weeks', in *Psychotic Reactions & Carburetor Dung*, ed. by Greil Marcus (London: Serpent's Tail, 2014), p. 25.

which is the effect of turbulence, as a vortical movement that raises at any point and a movement that does not go anywhere, as Van Morrison does in his singing (and certainly the accompaniment instruments in their unpredictable comings and goings). As put forward in the following passages:

> […] he sings the word "dry" and then "your eye" twenty times in a twirling melodic arc so beautiful it steals your own breath, and then this occurs: "And the love that loves the love that loves the love that loves the love that loves to love the love that loves".

> Van Morrison is interested, obsessed with how much musical or verbal information he can compress into a small space, and, almost conversely, how far he can spread one note, word, sound or picture. To capture one moment, be it a caress or a twitch.[491]

Here, I return to these ideas in order to expand on their aesthetic meaning, by figuring out the aspects of the music's 'form', or of its 'form in formation', to use Maldiney's more precise concept,[492] that can be directly related to the effects suggested by Bangs. Furthermore, I examine how these effects work together with other effects in the formation of the 'whirlpool' aggregate, and I chiefly address how all these effects are made not only possible but also *intense*. Although the second excerpt refers not only to 'Madame George' but more comprehensively, to the album and, perhaps, to Van Morrison's idiolect, I think that these movements of contraction/expansion assume a special intensity in 'Madame George', in relation to the senses I explore here, and in conformity with Bangs's judgement. Therefore, I also make some brief comparative comments with reference to other tracks, when relevant. However, this study is not meant to be a comparative study, and I mainly focus on aspects and processes that can be directly encountered when listening to 'Madame George'.

The notions of 'vortical movement', 'turbulence' and 'overflow' that I propose to study here, refer to fluid forms of movement that are habitually reserved for air or water, or any gaseous or liquid states of any material entity. But sound also flows, and it is also a material entity. We can listen to this material flow. We can sensorily and bodily experience it, and we can join

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[491] The specific moment Bangs is referring to in the first passage takes place beyond halfway of the track, from 6′57″, and this is the second time the whirling 'the love that loves to love…' occurs, out of three varied instances. Bangs, 'Astral Weeks', p. 22.

[492] Every time I use the aesthetic notion of 'form' I imply 'form in formation' in the sense put forward by Maldiney, which I explain in detail in I.4. Therefore, I do not use the concept of 'form' as it is used in established music theory, so I directly refer to 'formal' issues such as the division and organisation of sections, metric structures and ways of framing in a piece of music, in a specific way, as required.

with and notice different forms of fluid movement, when listening to the sonic rhythms of a piece of music. Therefore, I do not see any reason not to think of these senses directly from our sensory awareness of sounds and their rhythms, instead of as representations or cross-domain mappings of the movements of other, non-sonorous, entities.[493] Moreover, both the flow and the material of sound are seldom homogeneous. The concept of 'whirlpool' (i.e. any kind of 'whirlpool' formation) comprises the notions of 'vortical movement', 'turbulence' and 'overflow', which work in different and complementary ways. They are all based on a fundamental 'turbulence'. In other words, none of these movements is uniform or uniformly distributed.[494] Consequently, the form, the order and the intricacies of the overflows, the swells, the gyratory movements of the vortices, their rising and falling, and so on, are always irregular, full of upheavals and accidents. They are all 'distributed by turbulence', which is the common ground of the forces that produce 'a vortical movement that can rise up at any point', to borrow Deleuze and Guattari's rationale.[495] Concerning the principles by which these movements operate, although we can find plenty of correspondences between the ones that can be followed in sounds and the ones that can be followed in other materials, and granted that these correspondences are what justifies the use of the same notions — at least according to the definitions I have taken from the Encyclopaedia Britannica, which I specify later on —, these notions and principles still need to be thought in their own right, both for sounds and individual cases. Here again, abiding by the programme that unites this collection of studies, I seek to show that the sonic forms related to these effects are not sonic forms related to something they are supposed to represent,[496] and that they cannot be explained by measures, categories, outlines and translations into a 'homogeneous and striated space'. We need to consider primarily the fluid, continuously varying, heterogeneous and infinitesimal

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[493] I discuss this point at length in other sections of this thesis (e.g. Introduction and Section I).

[494] In order to think about these notions and the differences between these movements, it has also been helpful to read Edgar Allan Poe's story 'A descent into the maelstrom'. I am grateful to musicologist Claire Bannister for this recommendation. About this irregularity or heterogeneity, for example he writes: 'Round and round we swept — not with any uniform movement — but in dizzying swings and jerks, that sent us sometimes only a few yards, sometimes nearly the complete circuit of the whirl.' Edgar Allan Poe, 'A Descent into the Maelström', in *The Portable Edgar Allan Poe* (New York: Penguin Books, 2006), p. 33-4. Although Poe is describing fictional events, his descriptions are based on some relevant principles of real whirlpools, and on intense sensations related to being in their presence, and displays a notably rich and precise vocabulary for them.

[495] I am drawing on Deleuze and Guattari's account of the 'nomad' 'hydraulic model': it is a model that 'consists in being distributed by turbulence across a smooth space, in producing a movement that holds space and simultaneously affects all of its points, instead of being held by space in a local movement from one specified point to another.' Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*. *Capitalism and Schizophrenia,* trans. by Brian Massumi (London: Continuum, 2008), p. 401. I also discuss this matter in my chapter on rhythm (I.4).

[496] I am echoing Deleuze's rationale: the form related to a sensation is not the form related to an object it is supposed to represent. Deleuze, *Francis Bacon. The Logic of Sensation,* p. 28.

aspects that exceed these forms of reproduction.[497] As proposed by Deleuze and Guattari, a method of study that consists in 'reproducing' is opposed to a method that consists in 'following', as I also insisted on in the introduction to Part II:

> One is obliged to follow when one is in search of the "singularities" of a matter, or rather of a material, and not out to discover a form; when one escapes the force of gravity to enter a field of celerity; when one ceases to contemplate the course of a laminar flow in a determinate direction, to be carried away by a vortical flow; when one engages in a continuous variation of variables, instead of extracting constants from them, etc.

According to these writers, it is a question of grounding the exploratory model on these 'properties of contact'. This seems to me the most pertinent approach to address the intensity of the effects I explore here. To be sure, the 'space' that one *follows* in these ways, is 'always translatable, and necessarily translated' into another space 'endowed with a sufficient number of dimensions', but it does not need to be submitted to a model grounded in the translation. In other words, as explained by Deleuze and Guattari, it needs to return to its own model, it needs to reconquer 'the properties of contact that prevent it from remaining homogeneous and striated'.[498]

Bearing in mind these crucial methodological insights and system of priorities, I propose to first draw attention to one of the characteristics of vortical movement, with the question: what it does and what it means in 'Madame George' that the movement 'can rise up at any point', as described by Deleuze and Guattari. The track sets a simple chord sequence of three chords, G-C-D, or G ionian I-IV-V, in a proportion 2-1-1 with an explicit regular beat. This structure is maintained throughout the whole track, basically made explicit, in more or less distinct ways in different sections, by the guitar (strumming quavers in what can be taken as a 2/4 time signature), with a the constant accompaniment of a double bass, and other instruments that participate in more transitory and supplementary ways. The voice is the central and foremost part of the instrumentation. The chord sequence sets the 'verbal space' that the voice will occupy, in a way that is overall consistent with Dai Griffiths's approach the 'relative density'.[499] (see It is characterised by a notorious variability of the start points

[497] A full discussion on how two opposite approaches to flows, either include or eliminate these aspects from their understanding and models, namely a 'nomad' or 'minor science' and a 'State science', respectively, can be found in Deleuze and Guattari, *A Thousand Plateaus,* p. 398-413. Here I bring into play many of the insights of that discussion.

[498] Ibid, p. 410-11.

[499] Dai Griffiths, 'From Lyric to Anti-Lyric: Analyzing the Words in Pop Song', in *Analyzing Popular Music*, ed. by Allan F. Moore (Cambridge: Cambridge University Press, 2003), p. 45.

within the space between within the C and the D; the entries of the verses concentrated within D, especially towards the end, and of other lines concentrated within the last two quavers of C; and the tendency to thickening the voice at the beginnings and weaken it at the ends of each line (not in all of them). This works as a sort of spasmodic convulsions that seem to propel each round of the movement. Figures 3a and 3b presents a sketch of the entries' variability, in constant syncopations by anticipation or delay.

Figure 3a: Starts of voice lines in relation to explicit guitar beat and chords in ‘Madame George’ / Van Morrison (5 first verses)

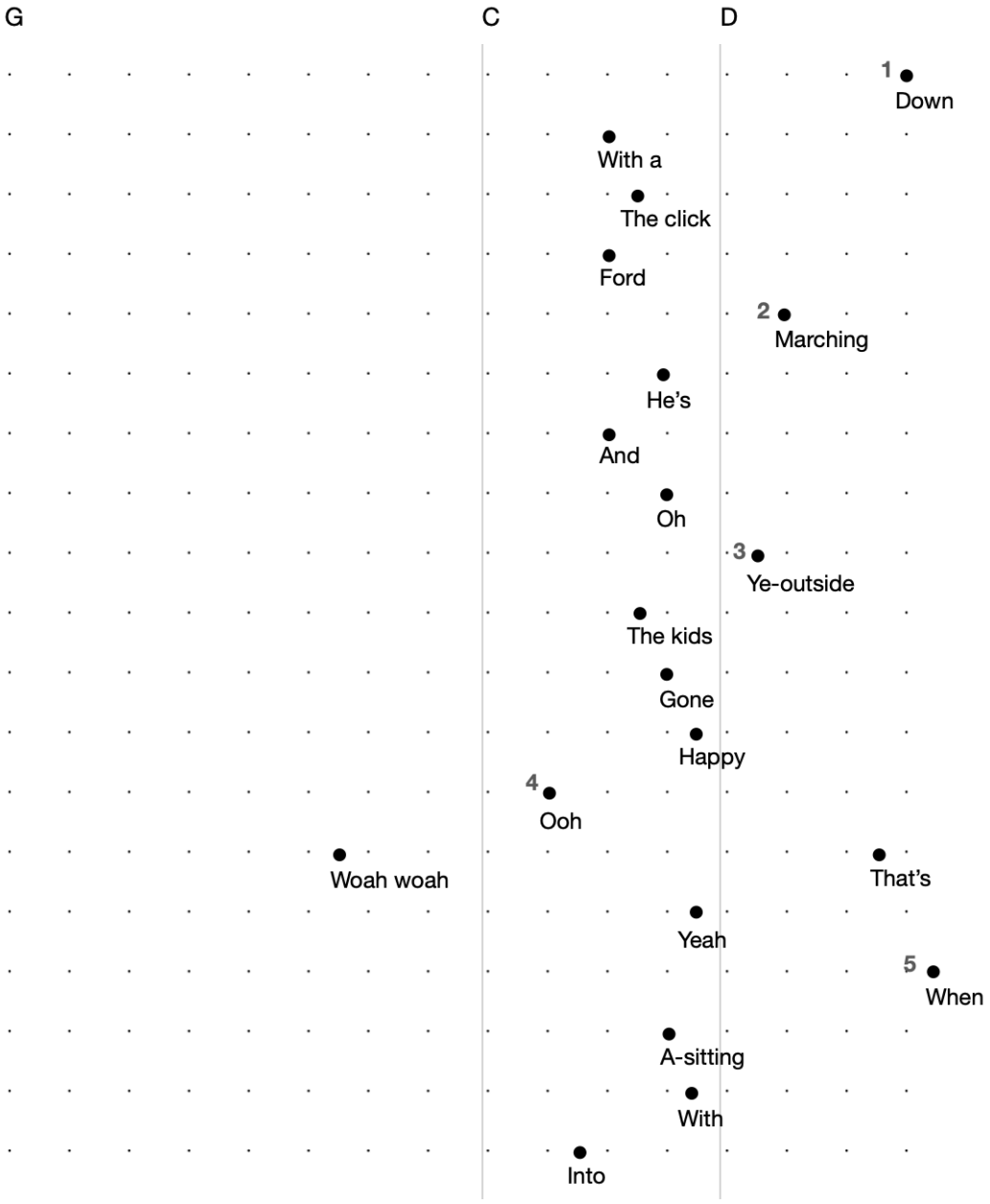
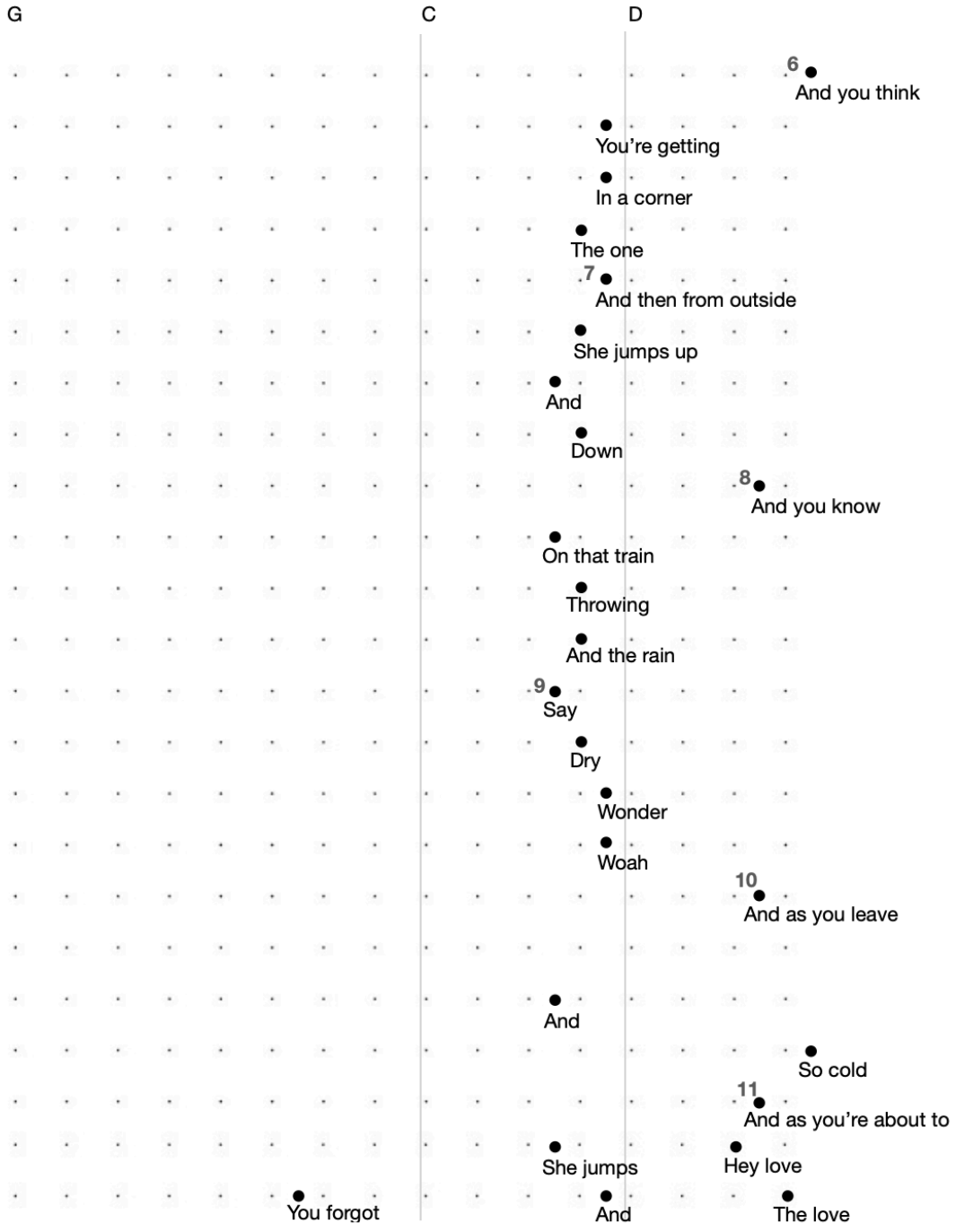


Figure 3b: Starts of voice lines in relation to explicit guitar beat and chords in ‘Madame George’ / Van Morrison (verses 6 to 11).



Van Morrison creatively plays with most simple forms of 'spreading' one word or clause — and thereby spreading a concept, playing with its meaning or even inventing new meanings —, which is either by *repeating* it persistently, or by *prolonging* its syllables, phonemes, or any of its sounds or interposed silences. As also emphasised by Bangs, it is from these basic operations that Morrison develops 'a whole set of verbal tics' in his singing.[500] Examples of these repetitions in *Astral Weeks* are the twenty-times repetition of 'your eye' (6′57″), and the fourteen-times repetition of 'love' (including the variations 'loves' and 'gloves') in 'Madame George'; the twelve-times repetition of 'way up on' in 'Cyprus Avenue' (5′30″); the thirteen-times repetition of 'my' in 'Sweet thing' (2′36″); or the recursive lines with variations in the long coda of 'Astral Weeks' (e.g. 'in another world', 'in another time', 'in another land', 'in another place'), which never reach more than five instances in a row, to name a few. They can all be argued to play an important aesthetic role in their respective tracks, to which I refer later on. In 'Madame George', I focus on the vortical movement of these abundant repetitions. From there on, I explore other moments in which the track forms itself into a sonic vortex, and I go further to demonstrate how the whole rhythm is based on 'vortical movement', 'turbulence' and 'overflow'. Concerning the prolongation of certain sounds, this track exhibits a variety of them, so for example, I would, also preliminary, call attention to the first sound or phoneme of 'soldier boy' (i.e. the /s/); the first and last sounds of 'and immediately', in a thickening and coarsening contraction of the voice; and the addition of a syllable to the also outstretched and contracting 'ye-outside' at the beginning of the third verse (see lyrics distribution in Appendix 2). I think it is also worth mentioning, in order to illustrate the variety of subterfuges to prolong, the moment, also highlighted by Bangs, of the 'one by one' in the third verse of 'Cyprus Avenue', which is prolonged by means of a sudden break in the second 'one'. Through a review of these repetitions and prolongations we can start to have a preliminary idea of what this 'whole set of verbal tics' may consist of, and of the relevance of 'spreading' words and moments in Morrison's singing. Nonetheless, the simple exercise of pointing at them is certainly not enough for the purposes of this study.

However, I think it is relevant to have begun by noticing that 'Madame George' reaches the largest number of repetitions in the album, as also did Bangs, because there is something very important about taking all these 'verbal tics' to an extreme, for it is only in their passage to a limit, in the Deleuzo-Guattarian sense, and as suggested by Bangs 'to extremes that from anybody else would seem ridiculous', that they are able to bring about the kind of 'vision' that

[500] Bangs, 'Astral Weeks', p. 22.

can only reveal itself by 'trying as unobtrusively as possible to nudge it along',[501] in the continuous unfolding of these sonic forms in the experience, and, I would add, whether from the point of view of performing or listening, or both. This reveals a striking consistency between Deleuze and Guattari's and Bangs's thinking. This 'nudging along' is also one of the defining features, one of the conditions, of the way of listening I call 'haptic listening', which is also based on Deleuze's 'logic of sense' and its emphasis on 'skirting the surface' of the encountered materials,[502] on feeling the surface's intricacies, 'to register every bump or hollow, every crease or fold', as emphasised by Ingold, who also relies on this philosophical line,[503] or as synthesised by Grosz: 'Sensation, like the plane of composition itself, is an incorporeal threshold of emergence, an unpredictable and uncontainable overspilling of forces that exist hitherto only beyond and before the plane of composition, on its other side, that of chaos'.[504] Thus, the senses revealed or realised in a music experience, in the approach I develop in this thesis, depend on *a sustained contact* with the sounds, that involves joining with the intricacies of their 'form in formation', at the same time as the sonic formations themselves can be said to be composed as propitious ways of making emerge and sustaining these senses. The kind of 'vision' Bangs is suggesting consists in confronting an overwhelming truth. He considers the songs of *Astral Weeks* as being about people 'paralyzed by the enormity of what in one moment of vision they can comprehend', which is 'both infinitely beautiful and terminally horrifying', because, in sum, it is in the same moment that one is experiencing the beauty of 'life, in its fullest' that one can get a 'vertiginous glimpse' of the 'unlimited human ability' to hurt or being hurt, 'according to whim'.[505] My contention here is that the power of this interpretation, its experiential status of a revelation, lies in the fact that it is the aftermath of a sensation in haptic listening. It is inferred from the experience in which the sensation emerges, so that the music is first experienced and made sensed of as an intensity in the sensation, and then these meanings are inferred from the sensation, as I illustrate in the next parts of this study. Moreover, there can certainly be strong emotions related to this interpretation, but here again, in this aesthetic appreciation, the condition of

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[501] 'He repeats certain phrases to extremes that from anybody else would seem ridiculous, because he's waiting for a vision to unfold, trying as unobtrusively as possible to nudge it along.' Bangs, 'Astral Weeks', p. 22.

[502] Gilles Deleuze, *The Logic of Sense,* trans. by Constantin V. Boundas, Mark Lester and Charles J. Stivale (London: Bloomsbury Academic, 2015), p. 10.

[503] Tim Ingold, 'Surface Visions', *Theory, Culture & Society,* 34 (2017), p. 101.

[504] Elizabeth Grosz, *Chaos, Territory, Art. Deleuze and the Framing of the Earth* (Chichester: Columbia University Press, 2008), p. 77.

[505] Bangs, 'Astral Weeks', p. 24. '*Astral Weeks*, insofar as it can be pinned down, is a record about people stunned by life, completely overwhelmed, stalled in their skins, their ages and selves, paralyzed by the enormity of what in one moment of vision they can comprehend.' '… the miracle of life, with its inevitable concomitant, a vertiginous glimpse of the capacity to be hurt, and the capacity to inflict that hurt.'

emergence of these emotions would be of a special kind, as we should distinguish between an emotion that emerges from the sensation, and a sensation that emerges from an emotion. In the kind of 'vision' described by Bangs, it is the sensation that comes first, as the effect of the form in formation, in the flow of repetitions and other sonic intricacies that pass to the limit. Bangs's rationale is remarkably consistent with one of the problems that interests Bacon and Deleuze, which is the problem of distinguishing, in artworks, between the cases where an emotion is inferred from a 'sensation', and thus possibly *multiplied,* as I comment on in part I. and the cases when it is inferred from the *recognition* of pre-experienced relations of any kind, which can be expressed or communicated by means of verbal, preverbal or paralinguistic signs, for example, or brought about by the representation of a situation, a narrative, a conduct, and so on. In the second cases, if there are sensations involved, these are only secondary impressions that emerge from the emotional responses that has been triggered, or they are only recognisable feels, 'guaranteed to affect in particular sad or joyful ways', to borrow Grosz's explanation. In the first cases, the sensation is the primary sense, and the emotion derives from it, and not the other way round, and not from a representation. In the second cases, the emotional response does not arise from the sustained experience I have been referring to. This is not an easy distinction to make, as emphasised by Bacon and Deleuze. One of the crucial factors to bear in mind — which I include in the method I develop in this thesis with the aid of Deleuze's 'logic of sensation' —, is that the first case requires a 'neutralisation of givens', whereas the second case requires the use of 'givens' in their direct and elementary state. A music practice and a piece of music always come with 'givens' (e.g. figurative, narrative, representative, expressive, stylistic, structural, symbolic, recognisable sources, etc.), which are already known and therefore identifiable meanings and categories. Therefore, here I also explore how this process of 'neutralisation' takes place in 'Madame George'.

To sum up, the components of this aesthetic study will be presented as follows. In the first part, I expand on the two moments of superabundant repetitions in 'Madame George', in order to appreciate in each of them, how the music forms itself into a sonic vortex, and from there I will explore other forms of vortical movement in the track. In the second part, I consider a component that has to do with syncopation by anticipation and delay in the singing, against the explicit beat of the acoustic guitar, and from there I study the sense of 'turbulence' and the formation of sudden 'swells' or 'boils'. In the third place, I consider the sense of 'overflow' in the rhythm of the voice, also against the beat, and also against the frames that the vocal lines progressively build. The 'overflow' can be appreciated almost continuously throughout the track but achieves a remarkable violence in certain passages. After observing this element I come back to the previous point about the positions of the starts of the voice in relation to the beat, and the ways they also partake in the rhythmic

'overflow'. In the third place, I study how the neutralisation of givens operate. Finally, I consider the ways these elements constitute the operative traits of sensation.

TWIRLS AND VORTEXES

According to the Encyclopaedia Britannica: 'Most kinds of fluid flows are turbulent';[506] 'at certain stages of turbulent flow, rotating currents with central updrafts are formed'; a 'whirlpool' is 'a large-scale eddy', a 'rotary current' 'produced by the interaction of rising and falling tides';[507] the fluid material 'swings and eddies while its overall bulk moves along a specific direction'; and the opposite of 'turbulent flow', 'in which the fluid undergoes irregular fluctuations', is 'laminar flow, in which the fluid moves in smooth paths or layers'. The encyclopaedia is referring to gases or liquids such as smoke, blood, oil, lava, or atmosphere and ocean currents. By bringing these definitions into play, I am seeking to gather here the concepts that refer to certain forms or senses of movement, or rhythms, that these fluids can share with sounds. In the way I study the sense of 'vortical movement' here, I consider the following components: (1) 'rotary' or 'gyratory' movement; (2) irregular fluctuations such as 'twirls' or whirls'; (3) irregular fluctuations such as 'swells', 'contractions' or 'protuberances'; (4) irregular distribution; (5) interaction of rising and falling (6) overflow. They are all based on 'turbulence'. In general terms, a vortex moves round, in spiral, so the specific direction along which the overall bulk of material moves is a clearly gyratory. Nonetheless, it also undergoes 'irregular fluctuations' such as small twirls or swells within or around the vortex, or other bigger changes which could break or dissolve the vortex. Let's first examine the gyratory motion and its irregular twirls in the passage of the whirling '… love that loves to love the love …'. Above all, the multiple repetition of the word 'love' is not simply a way of 'spreading' the concept or sound as suggested at the beginning. Its form of movement is much more complex. It certainly lingers, but in relation to the pace, it is also a compression, and it generates in the flow of the singing a sense of staying in one point and revolving around it. So, while the concept is spread, the other details, both the purely sonic details and also the semantic ones, form the 'twirling' aspect of the movement. The repetition of the word 'love' is interspersed each time by 'the' and 'that' and then also by 'to', so it is not simply intertwined but the changes in the connector makes the movement irregular, or subtly change direction, while still coming back to the 'love' root. It also switches from noun to verb by the added /s/, and then to the infinitive tense, by the added 'to'. So the movement is not only a growth by repetition, but it returns, and the twirling is more unstable than simple returning in a cyclical

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[506] Entry 'Turbulent Flow', *Encyclopaedia Britannica* <https://www.britannica.com> [accessed 23 May 2022]

[507] Entry 'Whirlpool', *Encyclopaedia Britannica* <https://www.britannica.com> [accessed 23 May 2022]

way; it is more heterogeneous. This line occurs three times in the track with variations. The first occurs at 5′10″ and goes:

> 'And the love that loves the love that loves the love that loves the love that loves to love the love that loves to love the love the gloves';

The second occurs at 7′18″ and goes:

> 'And the love that loves the love that loves the love that loves to love the love that loves the love to love the love that loves to love';

And the third occurs at 8′34″ and goes:

> 'Ah the love that loves to love that loves to love the love that loves to love the love that loves to love'.

One can see that Bangs is referring to the second instance (just after the long repetition of 'your eye'), and also that he is not interested in rendering a strict transcription of it, but he seems to be presenting a rendition drawn from his memory, which is still close and presents the essential features (he has simply added one 'the love that loves' repetition, which actually happens in the first instance, and what follows is just incomplete). Here, I have transcribed them from the recording for analytical purposes, in order to dwell on their aesthetics in more detail, as they are loaded of the issues that I am proposing to discuss. In each of these lines, the 'twirling' effect is, to a great extent, brought about by the little verbal modifications within the repetitions, along with subtle melodic and rhythmic fluctuations. The concept of 'love' is also spread or stretched by means of these repetitions, in relation to what Bangs expresses in the second passage. Moreover, this sustained repetition produces a series of further effects. It *isolates* the word 'love'. It renders it *strange,* in a way akin to the effect one discovers when one is a child by repeating a known word until it becomes meaningless, and reveals itself as an amusing combination of *unheard* sounds.[508] The variations form a number of different momentary phrases, such as 'the love that loves', 'to love the love', 'that loves to love', that combine with each other, in passages from smaller to larger units and vice versa, which make

[508] There can be many examples of this kind of experiments that children do, that are relevant for aesthetics, as notably argued by Paul Virilio in his essay 'The aesthetics of disappearance' (1980): 'Child-society frequently utilises turnings, spinning around, disequilibrium. It looks for sensations of vertigo and disorder as sources of pleasure'; 'The basis of the game is the separation of the two extreme poles, the *seen* and the *unseen';* 'creating this inexplicable exaltation where "each believes he is finding his real nature in a truth which he would be the only one to know". Paul Virilio, 'The Aesthetics of Disappearance', in *The Paul Virilio Reader*, ed. by Steve Redhead (New York: Columbia University Press, 2004), p. 60, 61 and 66.

the whole thing *grow,* in ways that are not the sum of its parts.[509] In all of the instances, Morrison seems to enter into a trance, through a constant emphasis on the syllable 'lo' and the rapid pace of the words, which are thereby 'compressed into a small space', and towards the end slightly decompress. However, each of the instances has a different way of flowing, and a certain gestural attitude of enunciation in relation to the moment within the track. In the first instance, the sounds are the thickest, the rhythm never gets too loose, so it affords a sense of direction, a way of resolving the syncopation that comes back to the beat, a sense of assertiveness. In the second instance, the voice seems to enter a bit late, so at the beginning it seems to be in a little rush in order to catch up with the beat, and then it becomes looser than the first instance, more open ended. In the third one, the syllable 'lo' is prolonged even more, and the fluctuation of pitch is more notorious in each of them, so the effect is a more loose and melodic, dissolving, fade out. We can appreciate other twirling movements made by twirling melodic fluctuations in the flute and viola (panned) emerging and disappearing.

There is a series of vortexes to which this tracks somehow seems to arrive and fall into. One notable example is the sequence of lines: 'oooh that's when you fall / whoa whoa whoa whoa whoa whoa, that's when you fall / yeah that's when you fall'. The first entry is anticipated in comparison with what has been the tendency, and then the entry of 'whoa whoa whoa' is unprecedented in being anticipated as far as to occupy the G chord. All the entries are more separated from each other than usual the action gets more sudden and unexpected as traces of turbulence. Another vortex happens also in the closure of a section in verse 9 (see figure 3b), which this time acquires the gyratory loop slightly and gradually delayed in time from one line to the next.

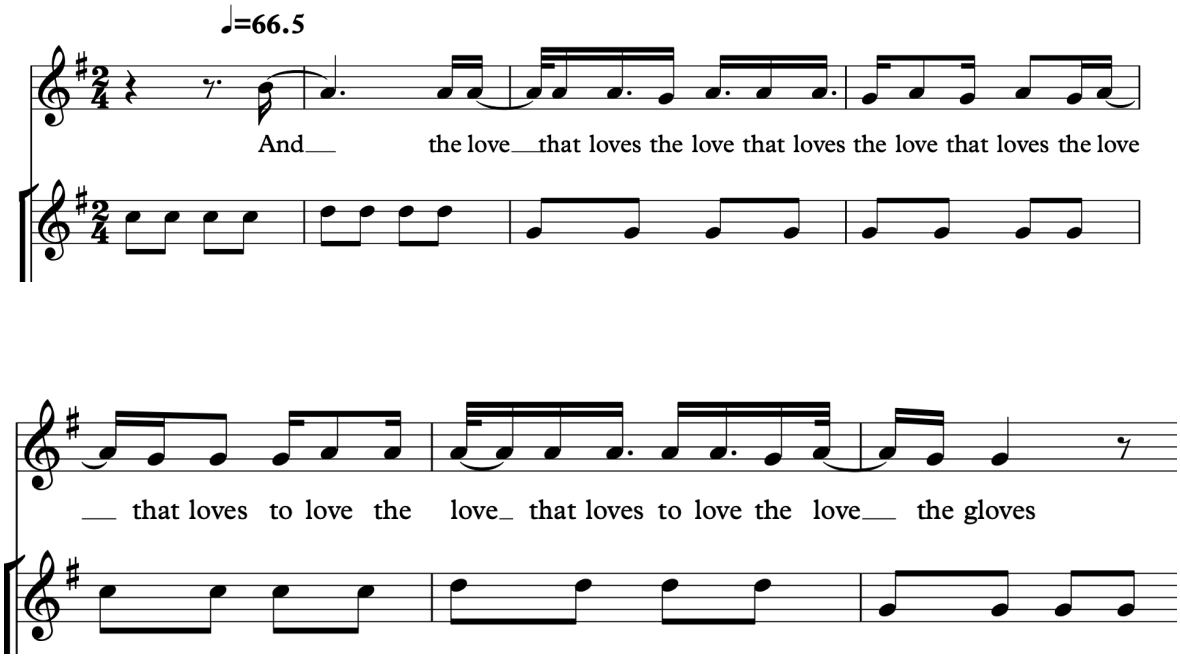
OVERFLOW

It is possible to illustrate Bangs's reflection on the capacity of compressing and spreading verbal information in two passages, that I have sketched in Figure 4 and Figure 5. In the line that repeats the word 'love', in the instance that occurs at 5'10", the durations in the rhythm start contracted, then *gradually* expand, and contract again towards the end of the line. This is a feature that is not possible to represent in the score, so, as customary, the figure I provide (Figure 4) should only be taken a an outline, a broad simplification, of that fluctuation. Moreover, the density of the voice in the initial word 'and' acts as the most contracted state of this line and this process. At another scale-level, an overall sense of compression is sustained

[509] This is an aesthetic problem that has been discussed, for example, by Beardsley in terms of what he calls 'regional qualities' and by Maldiney in his account on 'rhythm'. Monroe C. Beardsley, *Aesthetics: Problem in the Philosophy of Criticism* (New York: Harcourt, Brace & World, Inc., 1958). Henri Maldiney, 'L'esthetique des rythmes (1967)', in *Regard Parole Espace*, ed. by J. P. Charcosset, H. Maldiney & Bernard Rordorf (Lausanne: Editions l'Age d'Homme, 1973 & 1994), pp. 147-72.

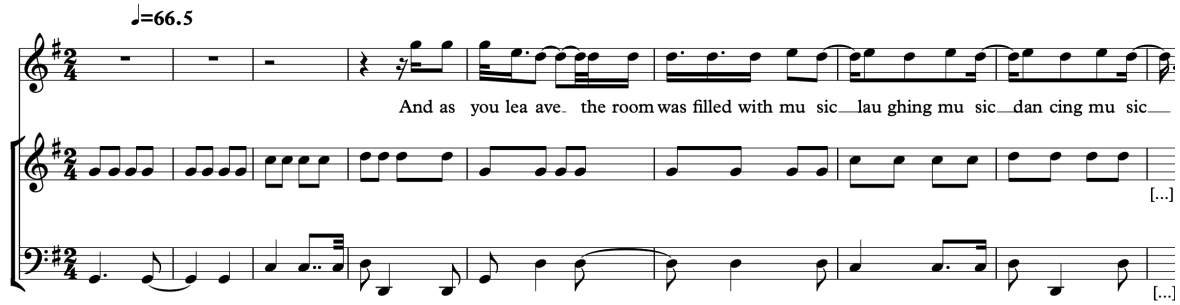
all along the line, by the faster pace of these words. The line also exceeds the three-chords loop, starting before the first chord of and ending passed the return of the first chord, in the second beat. Thus, we could say that the sense of 'overflow' is here both diachronic and synchronic, for the excess takes place both in the duration of the line; and in the abundance of words that are squeezed in. Now, it is the clause 'the love that loves' what provides the gyratory form to the movement.

Figure 4: Outline of voice and guitar in a passage of 'Madame George' by Van Morrison



In the case of Figure 5, it the ways of prolonging words in a way marked again by turbulence and vortical movement in the slightly out of phase with the beat syncopations, work together with the lyrics, as sound filling space to the point of overflowing, which evidence is in the increasingly unpredictable entries, stresses, random prolongations, and random additions of statements, in the following line: 'and all the little boys come around / walking away from it all / so cold'.

Figure 5: Outline of voice, guitar and bass in a passage of ‘Madame George’ by Van Morrison



NEUTRALISATION

According to the lyrics, ‘Madame George’ is overall a song about an experience of leaving, however, the narrative cues that refer to it, only commence in the seventh verse, and the moment of leaving is constantly delayed, prolonged or paralysed, in consecutive verses starting ‘And you know you gotta go’, ‘And as you leave’, ‘And as you're about to leave’, and in the long coda, loaded with repetitions of ‘say goodbye’, ‘get on the train’, and so on. The first six verses are about the places, scenes and people that the protagonist is leaving, which also invade the eighth and ninth verses, while the eighth verse is the only verse fully dedicated to the act of leaving. The two lines ‘dry your eye’ is probably the only explicit reference to an emotion in the lyrics, along with the line. And the along with the moments when the voice attain convulsion-like timbres, especially in the higher pitches of the first line (which , in a sort of cyclical ongoing crescendo throughout the verses. The narration is neutralised as a kind of reading by the retention, holding a moment, making it grow, expand in its own place, and the centrality of what is happening in every moment. It exceeds any sense of narrative, within a narrative: lyrics and music confabulating. This can be associated to Bangs’s idea of ‘people paralysed’ with the ‘vision’.

4. Sonic tides, waves, currents and whirls: Harmony and the fluid forces in Pixies's 'Ana'

The central role that harmony can play in the sonic operative traits of sensation can be explored in the track 'Ana' by Pixies. Here, I study what makes harmonic change operate as the kernel of movement and rhythm, in movements of mass deformation that can render fluid forces sonorous in sensuous, complex and provocative ways that drag you in.

The exuberant sequence of triads of Pixies's 'Ana' (*Bossanova,* 1990) is intricate enough to spark a music analyst's curiosity. Its complexity is not related to having a lot of different notes and complex relations between them; it is not about the amount of pitch-related information for it is not a complex sequence in that sense. It is also not complex in its performance. It makes use of so-called characteristic 'fretboard gestures', and exhibits, for example in the guitar strumming, some typical chords, namely triads played with at least the upper and lower octaves. Yet, I should mention that the gestural aspects of the performance of this sequence, in the strumming and the other instruments, are complex in the ways they contribute to the construction of Black Francis persona and the idiolect of the band. Finally, the description of the relations between chords that can be done with the 'modal system', is not difficult to justify.[510] The intricacy of this harmonic sequence involves *a kind of disruption* that is *partly* based on its ways of conforming or not to certain norms or tendencies, but which has *mainly* to do with its power of neutralising our habitual pattern-seeking activity in the way of listening to harmony in rock tracks. The latter privileges *the movement of the sonic materials* (see I.4.), as a movement of deformation that can be felt by following the continuous variation of the changes from one chord to the next, and during each chord, and the different kind of new sonic formations that can be grasped in this way. This is where the sensuous consequence of this disruption lies.

Concerning the norms that, as argued by Moore, 'popular harmony' has established 'in its own right', this harmonic sequence falls within the 'strophic and open-ended forms which constitute rock',[511] but it is neither a 'goal oriented structure' nor a 'loop' (or 'open ended

[510] I make use of Moore's adaptation of the modal system as I explain below.

[511] Allan F. Moore, 'The So-Called 'Flattened Seventh' in Rock', *Popular Music,* 14 (1995), 185-201.

repetitive pattern'),[512] at least not straightforwardly, as it presents some of the features of both these classes but in a different way. For example, as I explain in the analysis, it presents some components that repeat but just do not happen to repeat successively as loops do. The series of chords that actually repeats successively, cannot be heard as a repetition because it is not articulated as a group or unit. Finally, some passages that present some traits of a cadential function, are radically intervened. Cadential functions are characteristic components of 'period' or 'goal-oriented structures. Here, the ways they are intervened could be experienced partially as a disruption of expectations, for there are some modifications to the ways a cadential formula is usually played, so that a listener could be expecting them to be played with certain notes, and thus encounters different notes. However, from the point of view of the sensation that I argue this track achieves, it is not the unfulfilled expectation per se that is meaningful or powerful, but the movement of the sonic materials, so that this possible play of expectations, if relevant, would only be so in a subsidiary way, if it participates in bringing the latter to the fore. Overall, the cadential aspects can be chiefly argued to bring a sense of direction and momentum to the material movements, rather than primarily fulfilling narrative functions or playing with expectations.

As we follow the sequence, it starts revealing small groups and directional movements, nested within larger groups. The small groups chiefly return in a non-successive temporal way, popping up at some point throughout the sequence, as I show in the analysis. None of the different formal sections repeats successively. Only the whole repeats successively, that is only after all the different sections have been presented one after the other. What is also curious about it, is the repetition of some of these sections a semitone higher and then back down to the original version (or not), as well as some interventions at the level of the hypermetre, among other features, which effects and relevance in relation to the sensation this track attains I address in what follows. Now, since the whole repeats, and therefore the small-units and formal sections appear in the same position within the sequence the second and third times, the track reaffirms its nature as a strophic and open-ended structure, and the pattern seeking function could be restored if we wish to grasp it in that way, but, above all, a new form takes place, for which what is left of the pattern-seeking function is only subsidiary.

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[512] A full account of this distinction can be found in Moore's methodology. Open-ended structures are, for example, 'loops', 'drones', and any kind of 'iterative' harmonic patterns, which are what musicologist Richard Middleton called 'open-ended repetitive gestures'. They are 'open-ended' because 'there is no external restriction on how many times the pattern can repeat'. They have a tendency to the 'expression of stasis, because the open-endedness of the repetition means there is no change in the situation, no point to aim for, and thus no possibility of resolution of a situation', and in this sense they are the opposite of tension/resolution-, climax- or goal-oriented forms. Moore, *Song Means,* p. 77. However, that 'stasis' can be plenty of movement of another kind. I am including the 'period structure' within the 'goal-oriented' structures because as explained by Moore, they 'carry meaning less by what they consist of harmonically, than by way of how they end'. Moore, *Song Means,* p. 85. The 'period structures' of popular song do not necessarily respond to the goal-oriented laws of the tonal system, which is actually only one possible harmonic context within the various possibilities of the modal system, as also explained by Moore. In other words, different modes can have different ways of producing goal-oriented structures, if they do.

In this study, the interpretation I attempt to develop revolves around the problem of describing the sonic traits that can be credited for a *sense of being carried along by fluid forces, in different ways, with and by the sounds, in a listening experience.* Here I focus on the fluid forces that this track renders sonorous, and on the question of *how this is achieved.* I argue that the track's harmony is a central instrument in the orchestration of these forces. The range of ways one can feel this sense of being carried along by fluid forces in this track is varied: at times tumultuous, at times calm; at times in the sense of floating along over masses, at times in the sense of being pushed forward by vectorial or directional flows, for example. The sounds can be felt variously contracting, tossing, splashing, coming to stillness, veering, returning, whirling, rising and falling, and so on, both in local or extensive changes. The harmony can be analysed from the point of view of how it helps to shape the sonic haptic traits of these different movements. Sound is by nature a fluid material entity, so any sound could be experienced as rendering fluid forces sonorous, if one listens closely enough, but this is not always appealing, meaningful and intense. My specific contention here is that in 'Ana' this occurs in a clear and durable *sensation*, which implies a set of operations capable of generating an effective tension between the field of recognition and the field of intensity, and intensifying its meanings in relation to a sensuous (non-sensational) approach to the theme of the sea.

The sensation in this example is sustained all the way through, intensely and in peculiar, non-representational and asignifying ways in relation to the theme of the sea. In another attempt to demonstrate the relevance of Deleuze's 'logic of sensation' for the study of rock recordings, the operations at work in this example are: (1) non-successive repetitions, changes of direction, order, grouping and pitch centricity, which continuously avoid the formation of straightforward patterns, *neutralising our habitual pattern-seeking perceptual function with regard to harmonic flow;* (2) the *isolation* of the harmonic changes by keeping the other domains relatively unchanging, (3) the sense of *mass movement* based on the aggregates that are formed by the parallel (see definition in II.2.4) and synchronised movements of most of the instruments; (4) a *deformation* via harmonic root movements. These principles interrelate. For example, the parallel movement of (3) confers thickness and predominance on the sense of deformation, in each passage from one harmony (or chord) to the next one. The neutralisation of (1) brings to the fore the continuous variation of the sonic materials and with them new formations, and together with the isolation of (2), the sense of deformation and new formations created by the harmonic flow is also brought to the fore. An analytical study of 'Ana' can expose how these three principles work together to make at least six fluid formations come across via sensation.

I am explicitly using words that refer to movements of the sea to name these six sonic formations: *tidal change, three kinds of waves, currents and whirls.* Two direct references to the sea in the lyrics, namely 'return to sea' and 'ride a wave', allow me to infer the feel of tides, waves, currents and whirls from the sensation, that is akin to being dragged by the different

movements and changing currents of the water. The reliance on these explicit verbal references is important evidence of the fact that this meaning is not based on anaphones, resembling traits or any kind of representational system based on the decomposition and recomposition of the movements of the sea, where the organisation of the details would be representing the form and feel of those movements. The principles of a logic of sensation at work, bring the fluid nature of the sonic materials to the fore, in formations that are purely sonic and can just be said to share certain rhythmic characteristics with water formations. In this study, I point at features that sound and water share rather than at a representation of the way water sounds, or feels, or looks like. In line with Deleuze's logic, here the sensation is not inferred from a sonic representation of the movements of the sea, but it is the other way round: it is the movements of the sea that are inferred from the sensation, in relation to the lyrics. The sensation is itself made of fluid sonic movements. Consequently, one needs to primarily figure out the techniques that work together in attaining the sensation. The words and voice deliver a sensuous characterisation of being in or by the sea (on a sunny day, and with a lover). By feeling these sonic movements, by joining with the sounds haptically, this meaning is intensified, or, drawing on Deleuze's famous formula, it is multiplied because it is inferred from the sensation (and not the other way round, as I discuss in previous sections). There are many intricate details involved in this problem, so I do not claim the ones I present here to be exhaustive. I just claim them to be detailed enough to demonstrate that this kind of interpretation is a valid approach.

The domain of harmony may seem the furthest away from the possibility of haptic listening, because it has been most widely discussed from the point of view of patterns and relations between discrete pitches, which is a point of view that is based on the perception of cues and necessarily overlooks the continuous variation of sound. Conversely, harmonic sequences that are capable of neutralising the pattern-seeking function, are a powerful way of carrying the sense of listening to its limit, as it joins with the movements of the sonic materials, making new forms appear.

4.1. Pattern-seeking activity versus following the continuous variation

Scientific approaches to auditory perception suggest that 'the brain continually seeks out patterns' and possesses a 'remarkable sensitivity to patterns'.[513] However, this does not entail that all our experiences are governed by a pattern-seeking mental activity, or that there are no other relevant ways of making sense of the formations that sounds make. Beyond the grasping of patterns, we can consider the material that the pattern is made of, and the

[513] As expressed by auditory cognitive neuroscientist Maria Chait in her talk in the conference 'Sound Talking'. Maria Chait, ''The Auditory System as the Brain's Early Warning System'', in Sound and Talking. An interdisciplinary workshop on 'language describing sound / sound emulating language', ed. by Brecht De Man & Melissa Dickson (London Science Museum: University College London, 2017).

elements intervening the pattern, details which are grasped in ways that are not governed by a pattern-seeking activity. While patterns can be highly relevant, we cannot infer from this observation that, when we are listening to music, our mind *exclusively* seeks out patterns. Haptic listening, or our sensitivity to sonic deformation, is a way of listening that is not based on pattern perception, but primarily on the movements and formations of the sonic material in continuous variation. There are aesthetic questions that cannot be answered by examining the presence of patterns, especially the question of the form related to the sensation. As suggested by Moore: 'Disinterring the different patterns, while important for comparative analytical work, must be put alongside how they actually appear in practice'.[514] A primary consideration of 'how they actually appear in practice' is important not only because of rampant hybridisation in popular musics, but also because of the fundamentally different possible approaches to the interpretation of meaning.

The relevance of the distinction between focusing on grasping the sequence as a pattern, or focusing on the way it unfolds throughout each chord and in the passages from one chord to the other, and the formations that result from that, is not only pertinent for the present purposes but far-reaching. Depending on the track, grasping patterns or following the continuous variation may acquire different levels of priority. Yet, one cannot focus on the two of them at the same time, for the kind of sonic form one is engaging with is different in each case. The kind of form that results from patterns is different from the kind of form that results from the continuous variation of the materials. However, they do inform each other, and they are complementary to each other in the form of passages. While primarily engaged with one type of formation, one can take momentary glances to the other, in a way that is akin to shifting intermittently our attention from the soil to the horizon when walking or running. An analysis would ideally consider both. Yet different interpretations demand clarity around which way of listening one is addressing *primarily*. In haptic listening, patterns and nested patterns come into play only as spinoffs, rather than as the primary form one is engaging with when listening. Conversely, the haptic dimension of harmony can influence the formation and understanding of a pattern and its effects.

For a clear and durable sensation to take place, a new formation has to emerge from the very act by which the pattern-seeking function is neutralised. As explained in previous sections, the same aspect of the logic of sensation applies here: the formation of patterns and the pattern-seeking activity do not disappear completely, they need to be somehow preserved for their neutralisation to happen, for them to be able to be intervened, dismantled, scrambled, and so on, in order to bring the continuous variation of the materials to the fore, and with them, the haptic function of listening that grasps new orders, new rhythms and new formations. Such is the case of 'Ana' and the complexity of its harmonic sequence, especially because its general structure falls within the 'strophic and open-ended forms which constitute rock', and comprises sequences of 'equally-spaced chords' that can be grasped as

[514] Moore, *Song Means,* p. 89.

patterns. However, it does not exhibits what Moore describes as 'the most common arrangements' of 'open-ended repetitive gestures' of equally-spaced chords, neither would it be accurate to class it and understand it as a 'period structure'. A different form of 'strophic and open-ended forms' is formed in this sequence as I observe in the analysis, after I briefly introduce the descriptive model I will be using to refer to the details of harmony.

4.2. Describing the harmonic sequence and some notes on the modal system

The harmonic sequence can be outlined as the following sequence in B♭ harmonic minor, divided in 4 sections (see also figures 6.a. and 6.b.):

♭V' - i / i - VII' - III' - VI - VII' - i - VII' - III' - VI - VII' - III' / ♮VII / iii̊ - ♮VII - VII' - i - ♭V' - i

This representation does not say anything in itself about how the harmony works, whether in relation to the effects I address in this study or to other possible effects. It is merely a way of naming and organising the 'concatenations' of notes of the track, in order to identify the harmonies of a sequence, for reference in an analysis. It specifies the mode (B♭ harmonic minor), the scale degree of the harmonic root (Roman numbers and accidentals) and the triadic quality (lower/upper case and punctuation marks). It marks the separation between the main formal sections (/). I am using Moore's adaptation of the modal system for the description of harmonies in rock/pop/soul practices,[515] where the harmonic minor, which corresponds to an 'aeolian with semitonically sharpened seventh degree', can be taken as one possible extra mode.[516] Although these two modes (the aeolian and the harmonic minor) can be said to be closely related, that seventh degree can operate as a marked difference. Crucially, the characteristics of any mode should be observed on a case to case basis, for even what can be identified as the same mode can present marked differences from one piece of music to another. I use the modal system as a descriptive framework, mainly because both *modal scales* and *sequences of chords* are ubiquitous in rock practices, and I share Moore's view that: 'The patterns that result from sequences of chords are […] best described by referring the roots of the harmonies to a *harmonic modal system'*.[517] However, as also emphasised by Moore, when observing the triadic quality of each chord, modifications of the mode are very common. This

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[515] See Moore, *Song means,* p. 69-89.

[516] Allan Moore, 'Patterns of Harmony', *Popular Music,* 11 (1992), p. 76.

[517] In Moore's explanation: 'The labels *lydian, ionian, mixolydian, dorian, aeolian, phrygian and locrian* will normally allow the roots of all harmonies within a pattern to be identified (this system thus subsumes the major/minor system as ionian equates to major, while an aeolian/ionian mix equates to minor.' 'The labels themselves come from jazz theory and, further back, from nineteenth-century misunderstandings of the practices of Renaissance musicians. They are, however, enough for our purposes as they are.' This is also the case for the purposes of my thesis. 'Many musicians are familiar with and use these labels.' Moore, *Song means,* p. 71.

system can also include pentatonic and other scales, and it equally allows for the description of modifications of the modal scales in melodic contours and root movements.

Figure 6.a: Harmonic sequences by section with chords identities presented as *functions* in 'Ana' by Pixies.

- Intro*: ♭V' - i
- A-Section: i - VII' - III' - VI - VII' - i - VII' - III' - VI - VII' - III'
- Bridge: ♮VII
- B-Section**: iii˚ - ♮VII - VII' - i - ♭V' - i

* The function ♭V' could also be expressed as ♮IV', a tritone distance from the tonic.

** The last two chords repeat the gesture of the Intro, so they also work as Intro for the next verse, see Fig. 6.b.

Figure 6.b: Harmonic sequences by section with chords identities presented with *pitch nomenclature* in 'Ana' by Pixies.

Intro 1: F♭ - b♭

Verse 1 *(instrumental):*

- A-Section 1*: b♭ - A - D♭ - G♭ - A - b♭ - A - D♭ - G♭ - A - D♭
- Bridge 1: A♭
- B-Section 1: d♭ - A♭ - A - b♭

Intro 2: F♭ - b♭

Verse 2 *(with voice):*

- A-Section 2 *(a semitone higher)*: b - A# - D - G - A# - b - A# - D - G - A# - D
- Bridge 2 *(a semitone higher)*: A
- B-section 2 *(= B-Section 1)*: d♭ - A♭ - (B-)A - b♭

Intro 3: F♭ - b♭

Verse 3 *(with voice):*

- A-Section 3 *(= A-Section 1)*: b♭ - A - D♭ - G♭ - A - b♭ - A - D♭ - G♭ - A - D♭
- Bridge 3 *(= Bridge 1)*: A♭
- B-section 3 *(a semitone higher)*: d - A - A# - b

Intro 4 *(a semitone higher)*: F - b

Harmonic systems, like any systematised music dimension, should be regarded as 'descriptive' rather than 'prescriptive', as explained by Moore, especially in regard to rock practices, considering the immense variety of styles, principles and sonic formations, as well as the non-comparative singularities, that one can encounter and interpret from them. As Moore explains: 'the mode is a *post hoc* description and cannot take priority over the decisions that musicians actually make'.[518] I consider Moore's version of this system as versatile enough to allow for the description of the harmonic peculiarities of individual rock tracks and practices. It allows an analyst to demonstrate the importance of thinking about harmony unescorted by the principles and criteria of 'Western tonality', which in 2023 I think it is still an important point to insist.[519] Moreover, it also allows for thinking about harmony through the lens of 'Western tonality' *when relevant*, since the major and minor scales are subsumed within it. As Moore demonstrates, it can help us to observe the norms that 'popular harmony' establishes 'in its own right', because 'it is the singleness of a methodology that is important, for without it there can be no comparison'.[520] Furthermore, as I would like to demonstrate here, we need to go a step further when studying sensation, and our analyses need to combine both comparative and non-comparative ways of thinking, if we want to address passages from the level of recognition to the level of intensity. I think that the modal system can also help us to think about the role of harmony in the movement of sonic materials in non-comparative ways, as it allows us to class and graphically refer to the pitch structure of: scales, chords or larger concatenations, root movement, voice-leading and contrapuntal relations that are played in a piece of music, by means of both altered and unaltered modes, without having to interpret these structures as deviations, conformities, substitutions or modifications vis-à-vis *any* pre-established principles and formulae.

4.3. Analysis

NEUTRALISATION

The principle of comparison operates in the identification of recurring patterns and general principles across an extensive repertoire, and in the relations we make at the level of the structural organisation of discrete units within an individual track. Concerning *harmonic patterns,* we can distinguish between different exercises such as the identification of recurrent, idiosyncratic or standardised patterns (e.g. the ionian I - vi - IV - V, 'often known as the '"doo-wop" progression', 'the aeolian progression that moves i - VII - VI - V' (or v)' aka the

[518] Moore, *Song means,* p. 73.

[519] Allan Moore, 'Patterns of Harmony', *Popular Music,* 11 (1992), 76.

[520] Moore, *Song means,* p. 70-71.

'flamenco progression');[521] the identification and understanding of *general principles* that can be said to operate in many tracks (e.g. Moore's distinction between 'open-ended' and 'goal-oriented' structures); and the comparison of these tendencies and principles with what is happening in an individual track, that is, whether the track is conforming to them, or rubbing against them, as in Moore's notion of 'friction'. Comparisons can also be made between harmonic gestures within a track, which implies taking these gestures as recognisable components or units, and making structural (syntactical or other) relations between them based on different criteria and methods. However, as discussed theoretically in the first part of this thesis, when observed through the principle of comparison, repetition is interpreted as equivalence, and repetition with variation as similarity. This view is inadequate if we want to observe how repetition works in movements of deformation, and if we want to study what makes a rock track come across in a sensation. For the case of 'Ana', it is only by accessing the intensive dimension of sound where repetitions are grounded on a *continuous variation* (and not on repetition of the *same* or the *similar*), that we can experience the material deformations that render fluid forces sonorous. Following Deleuze's rationale, we can observe and work with the practical illusion of equivalence and similarity that repetition brings without mistaking that illusion for repetition (see notes on 'repetition' in Part I.2.). When exploring the repetition of harmonic sequences or the repeated units within them, we must distinguish between 'pattern' and 'rhythm'.[522] A harmonic pattern would be therefore based on comparisons and defined by pitch-based isomorphic recurrence, whereas a harmonic rhythm would be based, not on comparisons, following bit by bit the continuous variation, chiefly based on a variable curve, that reveals how repetition gains and grows, and how new formations can arise from the movement of sonic materials.

The path to an alternative to a pattern-seeking activity when listening to harmonic elements, is not simply a matter of putting sounds together in ways that deny the existence of patterns. In line with the logic of sensation, we can observe that 'Ana' patterns are intervened in different ways, which can produce the passage from a pattern-seeking function to the sensation. Some of these interventions work at the level of hypermetre. The harmony of Section-A is articulated very straightforwardly with the metre in a relation of one chord per bar (see figure 6.c.). The sequence of chords avoids successive repetitions. There is a successive repetition of five equally spaced chords: i - VII' - III' - VI - VII' but the second time is not really a repetition of the first since it does not work in the same way in relation to the verbal lines. For example, the second time (in 'return to sea' e.g. 0'58"), chord i is not again the first chord of the succession but the second, which changes its metric-structural role in the pattern. In other words, this sequence of five chords is not a consistent 'element' in the track. If we identify groups in accordance with the verbal lines we get two nested groups of two

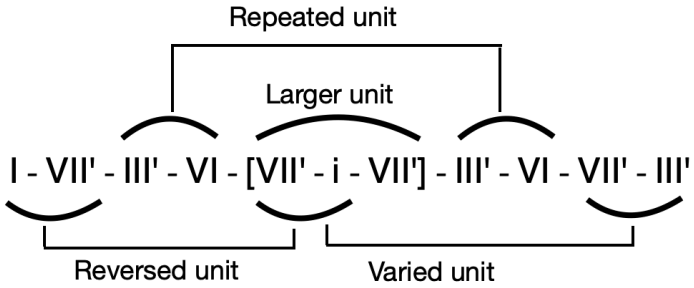
[521] Moore, *Song means,* p. 77-78.

[522] The distinction that Deleuze makes is between 'cadence' and 'rhythm' which I have changed for the broader concept of 'pattern' but they are basically on the same side in this rationale.

chords: i - VII', III' - VI, then one group of three chords: VII' - i - VII', and then two other groups of two chords: III' - VI - VII' - III'. Here we have only a non-successive repetition of the group III' - VI. The beginning i - VII' is reversed in the three chords group.

We can also try to point at the series of four equally spaced chords VII' - III' - VI - VII' that is repeated in Section-A, but it is preceded with i, another i is inserted in the middle, and it ends with III'. Again, this cannot be felt as a repetition of a pattern in relation to the lead melodic line, but it does tell us more about the structure. A series of eleven chords, grouped 2+2+3+2+2, shows a symmetry, that is enhanced by the fact that i is at the beginning and in the middle and III' at the end. The bridge chord acts as the dominant of III' in a cadential form, to arrive back to the same third degree root but a different triadic quality (this time minor, at 0'33") as Section-B begins. This feels like a momentary change of pitch centricity, which connects with the fact that d♭, the root of the III' and iii-, was already a predominant note in the lead melody of Section-A, so this centricity on d♭ was already operative, and produces a strong sense of adjacency between sections. Thus, this momentary change of pitch centricity in the harmony and lead melody doesn't necessarily achieve tonal 'ambiguity', as it is usually interpreted in musicology, but more of a tonal coexistence. I also feel it as having an effect in neutralising the pattern-seeking way of listening, for the secondary pitch-centre enriches the complexity of the pattern. Moreover, there is again no repetition in section-B, so, at the level of the track, its harmonic sequence is only repeated in a non-successive way.

Figure 6c: Repetitions in the chord sequence in Pixies's 'Ana'



In the A-sections *the lead melodic lines* have a key role in determining the structure of the sequence in ways that seem to work against pattern recognition. These lines feel more like a sort of repercussion or trail of the harmonic movement, rather than its source in a melody-accompaniment order. This can be ascribed to the fact that each line starts in the middle of the bar, metrically established by the other instruments, the movement produced by *the chord changes* comes first and the melody is its sequel. The forces that propel this movement primarily manifest in the harmony, in the passages from one chord to the other, hence that

tendency to hear this in minimum groupings of 2 or 3 chords, where the 3 chords effectively works like a swelling in the middle (as I note later on).

Importantly, this sequence is intervened at the level of hypermetre, with the 3-chords group in the middle, with the distinct chromatic a-b♭-a root movement. It does not only produces a tangible sense of deformation in the track, as I explain later, but it also *breaks* the metre, adding a different fluid movement that is somehow inserted, that produces a marked sense of growth and change. There is a metric pace of either 4 or 2 equally spaced chords metre, that this 3 equally spaced chords group dismantles.

The absence of successive repetitions and the insertion of this hypermetric extension, which can be felt haptically as a swelling, creates a sensation of momentarily loosing track, orienting our attention to the passage from one chord to the next, and this is how the nested units of the sequence are formed. From here we can sense the movement of the sonic materials, and contemplate the new formations that results from following it.

ISOLATION AND THE SONIC MASS

After a tumultuous short introduction, the track enters a regular groove that extends throughout the first section (i.e. section-A). The track exhibits five 'functional layers' in conformity with standard rock practices: drums, bass, rhythm guitar, lead guitar, and voice.[523] The strategy of isolation here consists in avoiding too many variations in the other domains by making the first three instruments stick to the main rhythmic figures (or patterns of durations), and go *strictly along with the chords.* This not only brings the harmonic sequence with its more varied root movements and changes to the fore (see figure 6.d.), but also, in a reciprocal manner, the three layers form a consistent aggregate and therefore each change of chord comes with a sense of change in a sonic mass. Thus, the harmonic sequence is both isolated and thickened.

The dynamic level, instrumentation, organisation of textural layers, metre and patterns of durations, are largely stable and regular, while the airy multilayered voice maintains a calm and steady delivery attitude. However, these aspects still bring a sense of movement in their own right. There is a strong sense of movement and groove in the so-called rhythm sections and their ways of boosting and completing each other. The drum-kit is prominent and both the rhythmic guitar strumming and the bass exhibit active bodily gestures in their performances that enhance the groove, which, although calm, we could say is already rippled. The voice's complexity is in its texture (double-layered, airy and penetrable but with a thicker grainy edge), as well as in the ecstatic attitude of the delivery with moments when it slightly deviates in tuning. It has a double function of an immersive airy textured plain field (see II.1.3) and at the same time, vocal delivery that seems to ride the movement of the harmony

[523] I am using Moore's notion of 'functional layers'. Moore, *Song means,* p. 19-28.

and the rhythmic section, rather than leading it, as mentioned above. The bass, by following the root harmonies of the guitar chords, and connecting the largest leap with a chromatic passage, works with the drums in defining down and up beats and parts of the strumming of the rhythmic guitar, forming a sonic mass, that holds together most of the verse and remains regular, thus isolating the harmonic changes it is subjected to. The main rhythmic pattern that organises the metre is based on a figure of a dotted crotchet and a quaver, cut by the normative upbeat stress of rock practices, from the snare and a subtle percussive attack on the guitar. Altogether these elements form a straightforward groove. In the normative sense, these are the details where we would usually feel most of the rhythm in a rock track. However, I would like to demonstrate how, in this track, this groove becomes subsidiary to the harmonic rhythm. Following the logic of new fluid formations, these rhythmic figures and gestures can be listened to as the ripples of the mass movement of the harmonic rhythm.

There is a sense of motion in the other domains that form the groove. Most of the action takes place in the passage from one chord to another, while the rest is practically unchanging, and the relation between *adjacent* chords acquires a notorious power of determining the movement of the whole. The isolation of the harmonic changes strategically collaborate with this, but it is not solely because most of the changes occur in the harmony that it achieves a sense of rhythm. It is crucially because of the kinds of changes and the ways the sequence and its repetitions are shaped. This is where the interrelation of the principles of neutralisation, deformation, the sonic mass and isolation, is paramount.

DEFORMATION AND THE NEW FORMATIONS

Forces are rendered sonorous in a consistently fluid haptic variegation, comprising of a variety of movements of the sonic materials. I have identified and examined six of them, which in relation to certain fluid traits they shared with the movements of the sea in a non-representational way, I have named: wave 1, wave 2, wave 3, whirls, currents and tides (see figure 6.d.).

Wave 1

The repetitions within the sequence of the couple [III' - VI] two times, with same melodic contour and different lyrics (see figure), and of the passage [VII' - III'] three times, have a rhythmic effect: they can be felt as sonic waves that return. Effectively enough, the largest leap from III' down to VI is filled by the bass to keep continuity in the mass, in a downward melodic contour that also the voice does. One moment of the sequence is marked by a group of three chords instead of two. This is the moment of the chromatic up and down movement [VII' - i - VII'], and it is particularly effective in breaking with both a pattern-seeking way of listening

and a goal oriented way of listening in a longer period structure. In this passage, the 'leading-note' function is reversed, the melodic movement returns to the leading note as if that were the stable note. This shows how 'some aspects of tonal thinking' can find their way into rock music,[524] as explained by Moore, for which the modal system also allows, since the major and minor scales are subsumed within it. In this interpretation of the role of harmony in 'Ana', they find their way only to be neutralised, as the chromatic up and down movement neutralises the sense of tension-resolution-tension; we do not have to think or feel in terms of tension-resolution to grasp the effect of a mass of sound that deforms and comes back to its previous form. Comparing this sequence with 'Aeolian progressions' as studied by musicologist Nicole Biamonte, reveals that, apart from the shared tendency to use of the $\hat{6}$, and $\hat{7}$ degrees, and the VI - VII - I combination, there is not much of the characteristics of 'Aeolian progressions' that applies to this case study. One should not assume that all of 'Ana's harmonic patterns can be understood as 'cadences', but only the ones that seem to acquire an evident cadential function, like ♭V' - I and ♮VII - VII' - I - ♭V' - I. Even then, the feel of fluid forces is different from an understanding in terms of cadences (as a form of tonal/modal grammar). I do not take these passages as substitutions, expansions, modifications of an implicit tonal or Ionian S-D-T (e.g. IV - V - I).[525] Although we find the track in a harmonic minor mode, it should not be assumed to behave under the principles of tonal voice-leading and harmonic relations of conventional tonality.

[524] For example, notable studies of this perspective have been developed by musicologists Nicole Biamonte and Brad Osborn. Nicole Biamonte, 'Triadic Modal Pentatonic Patterns in Rock Music', *Music Theory Spectrum,* 32 (2010), 95-110. Brad Osborn, 'Rock Harmony Reconsidered: Tonal, Modal and Contrapuntal Voice-Leading Systems in Radiohead', *Music Analysis,* 36 (2017), 59-93.

[525] Nicole Biamonte, 'Triadic Modal Pentatonic Patterns in Rock Music', p. 101.

Figure 6.d: Description and location of fluid formations in ‘Ana’ by Pixies.

Movements/Fluid formations	Description	Location in the track
Wave 1: the breaking and splash wave	a tumultuous motion followed by a splash	Every Intro. ♭V’ - i Cymbal contributes to the fine grainy texture of the splash while guitar dissipates. Aggregate.
Waves 2: steady waves	mass movement at a regular pace: allows time for two moments: 1 “floating” over each chord, passage from one chord to another	Every A-section: Rhythmic guitar + bass + drums aggregate Each individual chord, each passage from one chord to another, and two-notes groupings.
Wave 3: the swelling wave	the semitonically rising and falling harmony in a small-scale	The passage VII’ - i - VII' in every A-Section
Currents	vectorial or directional motion	Every B-section - marked with regular quavers and rougher strumming in the rhythmic guitar The propulsion starts with the word ‘ride’.
Whirls	intricate swirling melodic lines - not possible to pick up every note, too fast (subdivision)	made by the lead guitar in counterpoint with the entry of the voice whirling movements from 0'57" to 1’03" (2 marked and very intricate whirls)
Tides	the semitonically rising and falling harmony in a large-scale	Rises in Verse 2 (sudden and directly semitonically) - with the entry of the voice, the whole verse is transported a semitone higher. Falls in Verse 3 (prepared by B-section 2) Rises in B-section 3 + Intro 3 (=End) - (indirectly semitonically)

<u>Currents</u>

The B-section also changes speed, by playing all the beats of the subdivision of the pulse, and at some point harmonically changes to a one-way direction, which we can call vectorial or directional movement. Thus, it gains a sense of momentum and a more compact impenetrable density, which are diagrammatically inseparable from the sentence ‘ride a wave’. Interestingly enough, only in the second verse, the B-section includes an elaborated break in this momentum, that can be felt as a momentary detachment from the sonic wave (like a

fortuitous jump), which is not reproduced in the third verse. In every B-section, the momentum goes for 4 chords until the sonic wave breaks in the new instance of the intro, which rhythm concentrates contraction and speed in the breaking, followed by an expansion, in the spreading and dissolution of the wave "on the shore".

Tides

The tracks has three verses (one instrumental and two with voice) based on the same harmonic sequence, that changes its modal root by a semitone up and then down. Thus, the first verse is in b ♭, the second verse is in b, and the third verse comes back to b ♭. This chromatic movement echoes, at a larger scale, the nested group of three chords in the verse, that is also marked by a to and fro chromatic root movement, that becomes diagrammatically inseparable from the sentence 'return to sea, bye'. Thus, if the latter can be felt as *a sonic wave* that goes up and down, the former would correspond to *a sonic tide* that goes up and down in a longer duration of tension. Both these chromatic movements indeed have a key role in the neutralisation of the pattern-seeking function of listening: As we have seen, within the chord sequence, the new three-chords group breaks with the two-chords grouping tendency, through a movement of deformation; and here, within the song form, the alternation b ♭-b-b ♭-b, is also broken by the new formation that results from the three-verses group, also through a movement of deformation. The last section is a repetition of the 'intro' formation that goes a semitone higher to remain and end there, in an open-end way. This seems to intensify the ephemerality of wave formations, through the ephemerality of the up and down macro-chromaticism that forms the sonic tide. Yet, in every change of section, the chromatic movement can be felt as if one were witnessing in real time a change of tide, in the sensation, since the chromatic change of the harmonic root of the mode of course entails the chromatic change of all the sounds in the section, so that a different "sonority" we should say, and thereby the sense that the whole mass has moved up or down, and has expanded or contracted.

In the sequence of eleven equally spaced chords that I take as the A-section of the verse, in the first four chords, the intervallic movement goes down a semitone, then up two tones, then down three tones and a half, then up a tone and a half, returning to the second chord (i.e. A or A#). This movement can be argue to already rub against expectations of the pattern-seeking function, as well as to produce undulatory motion of mass deformation. Then, the passage of 3 chords move up and down chromatically, the sequence swells with the change 2-chords group to this 3-chords indissoluble formation felt like a mass deformation by means of the chromaticism. We are no longer following a pattern, and playing with expectations, but we got definitely dragged adrift.

Sometimes, the rhythmic guitar seems to propel the change of chord by filling the preceding beat. Thus it joins in with the second snare upbeat that makes the sonic amalgamation that precedes the change, thicker and stronger (i.e. louder). As we have seen, the lead melodic line also joins the mass in a movement that most of the times ends the line joining in parallel with the root movement.

Whirls

In the second verse, the lead guitar is separated from voice in swirling movements. The distinctness of the lead guitar timbre, and of its rhythmic-melodic variations, establishes a contrast with the other layers (i.e. a more striking contrast than the contrast between them), and this effectively isolate these lines, bringing to the fore their shapes, and more precisely the ways they are being shaped or deformed by *forces* acting upon them. Thus, it is striking to listen to the very sophisticated whirling variations of Joey Santiago's guitar in the second A-section, as the result of these forces, in particular the two marked eddy-like formations, shaped through turbulence, from 0'57" to 1'03". This time, the voice is in charge of delivering the lead melody, and the guitar departs from this function in whirls. And in the last presentation of A-section, things seem to have become calmer (there will be no jump in the ride) and Joey Santiago's guitar returns to the lead melody and join the voice in parallel movement.

CONCLUSIONS OF THE STUDY

Summing up, the parallel movement between the bass guitar and rhythm guitar, brings to the fore *the intervallic relations* between the root notes of the chords in each change of chord. At one level, it is the back and forth movement produced by these relations that can produce a wave-like sensation, but the expressive-intensive-material realism of the sensation lies in the fact that there is not only one kind of wave: the materials are constantly changing shape and making all sort of movements at different scale levels, here movements of return, there pulling just a bit further like the change of tide. All these operations are non-resembling means that produce an intensity that an exploration in terms of anaphones would not be able to give an account for.

Hence, this track markedly privileges harmony as the epicentre of expressive materialisation of these forces. The harmonic formations and changes operate as the central kernel of movement and rhythm, complex and sensuous movements of mass deformation, strong currents and edge or contour deformation in whirls. The ecstasy of this sea dweller, fully immersed in its charms, is expressed through fluid forces that drag you in. This is the

difference between abstract art and representational art, on the one side, and art that achieves *sensation* on the other, which clearly demands a Logic of Sensation for rock practices. In the second case, there are new formations, that have a clear order and a clear movement, but which we can no longer call patterns; there are new formations, or 'Figures' and effects, which achieve full clarity in their resemblance to things, but which consist in 'a resemblance with non-resembling means' and therefore *create* Figures and effects that are purely sonic. These are the new sonic formations that many rock bands *create.* They are new formations *in* the movement of the sonic materials, that have emerged from the sensation and endowed listening with a haptic function.

Conclusions

The new sonic formation that comes across intensely in a sensation in a rock recording is not a representation. Neither is it an object of recognition, a form of signification, or a form of organisation. It is not valued for the way it is organised or structured in itself, for consisting in a complicated or simple pattern, for its appeal to move the body or to sit back in contemplation, for coming across as either a virtuosic or accident-prone performance, for using new technologies or new techniques that produce unprecedented sounds, for triggering certain psychophysical responses, for activating cross-domain mappings, or for affording emotions, identities, narratives, representations, memories, or any experience. It has a clarity, details, a complexity, a power, and it is capable of expressing meaning, but it does not conform to any of those interpretive processes. Therefore, the question of how we make sense of it and what needs to happen for it to appear, what *constructive principles and operations* are involved in its emergence, is what I have centred my investigation on.

My central thesis is that a rock recording can be 'a being of sensation' in the Deleuzo-Guattarian sense.[526] The work I presented here demonstrates that rock recordings can be encountered, studied and reflected on as such. Therefore, it shows how to study the sonic operative traits of sensation (i.e. the 'diagrams') of rock recordings (with examples in I.1.3, I.1.5, I.1.7, Part II and Part III), and explains the importance of doing so (particularly in I.2). It is grounded on a thorough study of Deleuze and Guattari's concepts of 'intensity', the 'haptic', 'sensation' and 'becoming', and how they are closely related to one another in their constructivist work in the fields of philosophy and aesthetics. By combining this corpus (which includes both their individual and their collaborative work, as well as other complementary literature) with my own aesthetic studies, I have gained the understanding that, when listening to a rock recording, the new sonic formation that comes across as/in a sensation is what I have proposed to condense as an inseparable *expressive-intensive-material* entity, which is followed and sensed *haptically,* and which ontological domain is what Deleuze and Guattari refer to as 'a reality specific to becoming' (I.1.5). This understanding thus encapsulates what I propose to call *haptic listening,* and my endeavours have been directed to bringing in this perspective to the aesthetic study of music, elucidating its implications for music analysis, and dealing with the need to address the haptic dimension of sound. What is born from the operative traits of sensation is not only a new material formation but also the 'haptic function' that senses it. This is a non-predetermined function. It isa function of the BwO that is only determined in its process of emergence by the singular traits of the artwork, as we learn from Deleuze's Logic of Sensation. Therefore, I focused my enquiry on the principles and operations involved in the power of rock recordings of endowing listening with this haptic function, attaining the sensation, and bringing about new sonic formations.

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[526] Gilles Deleuze and Felix Guattari, *What Is Philosophy?* trans. Hugh Tomlinson and Graham Burchell (New York: Columbia University Press, 1994), p. 164.

One of my main conclusions is that this power eminently lies in a process of 'saturation'. Just like the edge, the consistency and the grain of a shout are inseparable from what is expressed in it, any sonic event can be saturated in this way. It is a process that involves in different ways the saturation of every detail, every movement, every aspect and element, every word and gesture, in order to put everything that a moment includes, and 'to eliminate all that is resemblance and analogy', as Deleuze and Guattari dwell on drawing on Virginia Woolf's reflections.[527] Chiefly, the materials are brought to the fore by operative traits that, as I have demonstrated, work as *deformers, generators of heterogeneities and chaos*, *generators of continuity and adjacency of a single plane, isolators* and *neutralisers.* The materials are deformed, and their intricacies, continuities and chaotic elements are produced, by the forces they are rendering sonorous. These operative traits intervene the stratified traits that can work as narrative, representative, identifiable and recognisable traits, and neutralise these functions, producing processes of destratification that make intensity circulate. Thus, one can encounter what is expressed in these forces, which is inseparable from the materials, in a sensation. In other words, the new sonic formation that emerges from this 'chaos-germ' is made of sonic materials, their intrinsic movements and their 'material traits of expression', inseparably. One can find countless different ways in which things are saturated in this sense, which, for example, may involve the intercalation and superposition of elements; the use of markedly distinct elements that rhythmically work in adjacency on a single plane; the production of larger and more complex sonic compounds; changes of scale and the continuity between different scale-levels; accumulations, repetitions, and the insistent and excessive presences of sounds, sonic bodies and words. The constructive categories I have assembled reflect all these and other processes, which, as I expound in Part II, are all related to what Deleuze and Guattari consider 'a question of elaborating an increasingly rich and consistent material, the better to tap increasingly intense forces', specifying that: 'What makes a material increasingly rich is the same as what holds heterogeneities together without their ceasing to be heterogeneous'.[528] This is something that can be clearly observed in rock recordings as I address in all my examples, and it always involves attending to the 'ontological resistance' of the materials, to borrow Cox's expression (I.1.5).

This sense of saturation is related to the fact that the haptic function born of the diagram joins with the sound at what Deleuze and Guattari call their 'molecular' level. Therefore, I have focused my aesthetic studies on the distinctions and passages between 'molar' (i.e. organised and formed) and 'molecular' (i.e. un/disorganised or in the process of dis/organising) aggregates, which I have explored in Part II, explicating how this difference works in the sounds of rock recordings. Molecular traits concern the intrinsic movement of the materials. Thus, Part II works jointly with the thorough reflection I have presented in I.4 about the

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[527] Deleuze, Gilles, and Félix Guattari, *A Thousand Plateaus*. *Capitalism and Schizophrenia,* trans. by Brian Massumi (London: Continuum, 2008), p. 309.

[528] Ibid, p. 362-3.

fundamental continuity, suppleness and heterogeneity of the movement of the sonic materials, with the aid of Bergson's observations and their implications for our understanding of the the senses of movement and rhythm in music. The other relevant principles about the molecular put forward by Deleuze and Guattari that I have integrated in my approach can be summarised as follows: The molecular level is the level where content and expression are no longer distinguishable and are united in a matter-function. It is the level of movements of destratification that free continuums of intensities (I.1.5.). It is the level of 'zones of proximity', which Deleuze and Guattari also call 'zones of intensity', where traits are no longer traits of resemblance or identity, but traits that things directly share with each other (Part II). These are traits of becoming. Hence, it is this level of molecular flows and molecular components that makes it possible 'to become with the world', instead of just experiencing the world and interacting with it.

I have explored and shown how the elaboration of increasingly rich, heterogeneous, complex, chaotic and supple sonic materials in rock recordings, held together without ceasing to be heterogeneous, can be directly invested in the production of operative traits of sensation and new sonic formations. The molecular details that haptic listening joins with are difficult to address. Thus, in order to be able to perform these studies I have proposed in Part II a constructive typology of sonic haptic formations for addressing differences based on the grounds of haptic sensitivity, that can help us in this task, and that are specifically oriented to the sonic haptic traits that can be found at work in rock recordings as operative traits of sensation. Electric guitarist Richard Pinhas, who was also interested in this molecular level of sound and Deleuze's philosophy (as I refer to in Part II), has also pointed at the need of developing a typology to address these issues. As he wrote in 2001: 'We would need a current typology and a current physiology of the world of sounds, of their intensive quantities (intensities and forces) and of their qualities-powers (affects). Quanta of power and qualities-powers. This typology remains to be done'.[529] I think that the constructive typology I have elaborated here, for the haptic dimension of sound in rock recordings, can be considered a contribution to this project. Of course, the list of haptic traits of rock sounds I have presented does not cover all possible molecular components of rock recordings or sound in general. The sphere of rock practices is also much larger than what my examples have covered, but the types and tools I have proposed can be applied to other works and styles. The meaning that the word 'current' specifically has in my work, concerns the field of rock practices as a multiplicity that can be historically situated between the 1950s to the present day, but that sometimes reaches the outer skirts of what is usually referred to as rock styles, for example in my studies of tracks by singer songwriters such as Nick Drake and Van Morrison (which pertinence to be included within rock I justify in III.1), or my brief reference to sound artist Jacob Kierkegaard's sonic fields, which from the point of view of haptic listening shares

[529] Richard Pinhas, *Les Larmes de Nietzsche* (Paris: Flammarion, 2001), p. 114, <https://archive.org/> [Accessed 23 May 2024] [My translation].

common ground with the works based on purely drone material by the doom metal band Sun O))) (e.g. *Pyroclasts,* 2019; *Void,* 2000), for example. The tracks I used in this thesis are all intensive milestones in my own journey as a dedicated rock listener, but they are certainly not the only ones, and not necessarily the most important. I have distilled this concept of 'intensive milestones' from a combination of all these years of studying Deleuze and Guattari's work, thinking about its relevance to rock, and reading the work of Bangs and other rock literature. I have taken the word 'milestones' from Bangs, and added the word 'intensive' to it, in the Deleuzo-Guattarian sense, as its most eminent criterion.

The work I have carried out is a constructive response to both a compulsion and a discontent. On the one hand, I feel compelled to address and discuss meaningful and intense listening encounters, and the power of rock recordings to create them. I also feel compelled to try harder when I realise that my verbal account is not really saying what I was trying to say, when I am not really speaking about what has really happened, and when my explanation is not really elucidating a process that can be found at work in the sounds of the artwork. Thus, I generally feel compelled to be able to say something about the process that makes the sounds intense and meaningful, and to address the difficulties that comes with this endeavour, especially in the case of *intense encounters* and their striking complexity.

Concerning the concept of 'intensity' that I have borrowed from Deleuze and Guattari and implemented for listening encounters, it refers to the cases when the intensity of the intense encounter is the intensity of the sounds, inseparably, which is what happens when the sounds comes across in a sensation. This is exactly what distinguishes an *encounter* from an *experience.* The former is both a *limit* and a *contact* where the sensation and its 'intensive reality' take place, it is continuously and simultaneously sounding and felt, and it is the site of 'becoming with the world'. The latter is what happens to a subject that has an intense experience on the basis of their synthetic unity as a subject — I have extensively discussed this important philosophical distinction in I.1. and I.2. In the case of an intense experience, the sounds have certain qualities that have either triggered or afforded the experience, but these qualities are a mediation: they are not in themselves the intensity of the sounds that can only be sensed immediately in the encounter. In other words, when we speak about the intensity of an experience and the intensity of the sounds we are not speaking about one and the same surface of sense. My aesthetic reflections and analyses have helped me to clarify this. The process through which a piece of music attains a sensation, is a process that frees continuums of intensity that belong to both the sounds and the sensation. At the level of their intensive reality, sounds and sensation are one and the same thing. The sonic flows related to the sensation are neither triggering nor affording a perceiving subject the experience of a sensation, but are encountered already as the sensation. This involves a passage to the limit of sensitivity, or the absolute threshold of perception (I.1.3). The sense of listening is carried to its own limit where it is no longer occupied in recognising or grasping the kind of cues that

can be recognised in the future. This is the passage from the level of recognition to the level of intensity, and from perception to sensation, which is what I have been carefully attending to in my philosophical and aesthetic studies. Therefore, I have developed the concept of *haptic listening*, not as a perceptual system that can trigger or afford experiences, but as a way of listening that is brought about by, and belongs to, intense encounters, and the arguments I have presented here demonstrate the importance of developing this avenue of exploration.

Following Deleuze and Guattari, I use the concepts of 'perception' and 'sensation' as radically different and mutually exclusive exercises of the senses. One can pass from one to the other, and they are complementary in our experiences, but they are still fundamentally different. Accordingly, I use the word 'perception' to refer to the point of view of empirical sensibility that grasps intensity already mediated by the cues that constitute objects of recognition and representations (see 'Introduction', I.1.2 and I.1.3). Since descriptions that are given only on the basis of qualities, or any kind of recognisable cues, are insufficient to address 'intensity' in our aesthetic reflections, I have worked on ways of equipping ourselves with the appropriate understandings and constructive means to do so. The ways certain rock recordings achieve 'intensity' and 'sensation', happen as passages from the level of perception, recognition and representation to the level of intensity and sensation. Thus, the problem required philosophical studies, which concerned a great deal of my research.

Concerning meaning, sometimes, a piece of music enters a process that conflates meaning and intensity in a particular way. I have also based my investigation on the fact that interpreting meaning does not necessarily involves intensity. Moreover, as a meaning gets clearer it does not necessarily becomes more intense. Likewise, a meaning that gets more ambiguous, does not necessarily becomes more intense either. Yet, we can observe with Deleuze that when a meaning is inferred from the intensity of a sensation, it is multiplied, because when a representation, a recognition or a narrative is neutralised by the operative traits of sensation, the meaning is multiplied, as I have illustrated in my examples.[530]

Like any other dedicated listener, I have developed a close connection to the music and sounds I engage with. I have been carefully exploring questions around contemplating, feeling, producing and inhabiting sounds, that constantly confirm my position that the ways we perform our listening and aesthetic practices matter greatly and vitally (I.2). These questions are evidently relevant to a wider range of things. Sounds and rock practices occupy a very special but far from exclusive place in my life, both collectively and individually. So, although in this thesis I have focused on the field of rock sounds, I also continuously explore these questions with regard to many other sounds and many other things. As a result, some of my findings concern specifically the sounds of rock recordings, while others concern more

[530] Gilles Deleuze, *Francis Bacon. The Logic of Sensation,* trans. by Daniel W. Smith (London: Bloomsbury, 2017), p. 29.

comprehensive aesthetic and philosophical problems, and reveal certain continuums with no clear-cut boundaries between different fields, such as the problem of 'standardisation' discussed in I.2, the problem of 'sensibility at its limit' expounded in I.1.2, and the principles of Deleuze's Logic of Sensation that, as I have argued throughout the presentation, apply not only to painting but also to rock recordings, and probably to other aesthetic fields.

My PhD thesis can be considered as having set solid grounds for the purpose of elucidating operative traits of sensation in rock recordings. It provides some constructive tools and principles for carrying out aesthetic studies of these diagrams in the individual works one can become interested in exploring. These contents illustrate some principles that can be found at work, and sometimes they also show the necessary trial and error to develop skills in this direction. When reflecting about the philosophical distinctions I never lost from target the issues I wanted to address about my encounters with individual pieces of music, and the series of subject-matters that I have been engaging with in dialogue with musicologists and the musicological literature about the aesthetics of rock recordings. At this stage of my musicological, philosophical and aesthetic journey, I feel confident that the problems I have addressed are very important, that I have studied, developed and presented them in a rigorous way, and that I have gained an expertise in them. In particular, I feel confident that the distinctions I have brought into play and the constructive typology I have elaborated are useful, and that they can constitute an enormous contribution to education, music analysis, music practices and aesthetic studies in general. I see each of my examples, not only as demonstrating how to perform these studies, but also as having planted seeds that can grow into larger studies and aesthetic reflections about the repertoire I have addressed, in the form of essays. I have based my research on the resonances between introspection, intense listening encounters, music analysis and reading the relevant literature from different disciplines. One of my main objectives has been to lead my investigation in an authentic way, attending to my own needs and questions as a sound dweller, rock listener, rock writer, rock artist, rock scholar and scholar in music, aesthetics and philosophy. Therefore, I focused on the task of making notes to myself that I will be able to rely on in my ongoing explorations, reflections and writing, and after discussing these contents with other academics and rock listeners throughout my PhD, I confidently expect these notes to be useful and clear enough for anyone interested in these aesthetic matters and activities to also rely on.

I started this research project with the purpose of developing further the available tools for the analysis of rock recordings, by focusing on the underdeveloped music domains of 'texture' and 'timbre', because they seemed to contain the haptic sonic traits I was interested in. So, regarding the angle of the discontent that motivated this investigation, I found that these domains were not only underdeveloped, but that the haptic traits I set out the task of following, were not fully covered by these dimensions, or by any other music dimension. Therefore, I realised it was necessary to address the haptic dimension of sound in its own

right, and decided to do it. Moreover, the second problem I found is that most approaches to the study of any music dimension are generally oriented to interpretations of the kind *«this is this, this is that; this represents this, this represents that…»,* including narratives; to interpretations strictly based on the question of how a piece of music has afforded an experience; and to interpretations of structural features exclusively based on *extrinsic relations* between recognisable traits, or between sounds and structures of reference in a play of expectations. This led me to combine the initial plan of developing the sonic haptic dimension with addressing the also underdeveloped problem of 'sensation', which is a different kind of interpretation.

With the aid of Deleuze and Guattari's philosophy and 'proto-aesthetic paradigm' (see 'Introduction'), I have been then able to develop a more rigorous understanding of this radical difference. 'Sensation' is not of the order of the 'perception' of 'recognisable traits' that afford 'specification', 'representation', structural organisations or frameworks, such as patterns or interwoven layers, and that afford certain experiences (including the perceptual feel of sounds) on the basis of these processes. On the contrary, it is precisely by breaking with or neutralising these forms of interpretation that works of art operate when they achieve a sensation. Therefore, following Deleuze and Guattari, I focused on how the problem involves *passages* from one level to another, namely, from perception, recognition, representation and organisation to the expressive-intensive-material reality of sensation.

This angle allowed me to consider the question of 'texture' not only as a domain based on relations between strands, but also as a domain based on contact, thus sharing a common area with the haptic domain. As I argue throughout the thesis, every single sound already has a texture. Yet, I realised that texture does not cover the haptic domain fully, which confirmed the necessity of developing further a vocabulary and a constructive typology for the sonic differences made on the grounds of haptic sensitivity in their own right. I also realised in my journey that haptic traits are usually confined to the function of the identification of sound-sources, which concerns the domain of timbre and its axis that plays with differences that go from the most recognisable to the most unrecognisable. In turn, the arguments I presented here lead to an understanding that, while they are indeed important cues for the recognition of a timbre, a discussion about haptic traits does not necessarily correspond, and is not necessarily restricted, to a discussion about timbre. Haptic traits do not only fulfil that function, and is not only tied to the recognisable/unrecognisable axis, but they are in fact a much larger field of exploration. Moreover, haptic traits are usually referred to in vague ways in the relevant musicological literature, and they lack rigorous aesthetic study of the way they sound, and of the way they operate otherwise. Therefore I have developed some constructive categories that can help us to appreciate and think about these differences more rigourously.

As any other aesthetic practice, rock is an always-changing practice, both historically and in the lifespan of a listener, so the defining features of the types of haptic formations one can find in rock recordings can be developed further according to the demands of both each individual case and the profusion of stylistic tendencies within the field of rock, as well as according to the demands of one's progress in one's own skills. My examples are not meant to be representative of this profusion of styles, but just to illustrate a comprehensive and precise compendium of types of haptic formations and some of the principles through which they can become operative traits of sensation. By 'precise', I mean that one of my central endeavours has been to include as many types as possible while carefully avoiding redundancies, by making each type refer to specific details that no other type could cover. Thus, for example, when I draw attention to the overlapping between macro-grain and linear density, I specify that it is only as a matter of scale and not of kind, for any rapid series of sounds can be haptically felt as having both density and grain, as well as any other of the haptic aspects. So, in particular, the list of 'aspects' is exhaustive enough to show that any sound exhibits in one way or another all of them. Elements, in turn, are different in this sense, for they are more specific formations, and not every sound possesses the relevant features of all the different elements. However, like the aspects, they also constitute a non-redundant list, and as elements they constitute a varied and compendious list for the sphere of rock.

The categories I have listed are also constructive enough to show new differences in each occasion. As I have explained in the ontological considerations, they are not a priori principles, in the Kantian way: in other words, *they are not the condition* that allows us to think about these sonic formations, but they are a map, in constant construction, that can *help* us to experiment with them, to think, speak and write about them, and to consider finer distinctions. I have been replacing, eliminating, conflating, separating and finding new categories throughout this investigation. This process of refinement is far from accomplished but is has reached the level where the typology is practical and comprehensive enough to be used. I have been able to effectively and satisfactorily make use of it in different occasions, and I have not found the need of carrying on changing them. One of the conclusions I have drawn from this process is that it is extremely helpful to think about haptic traits in terms of aspects and elements, with their variations and the aggregates they can form, and to think about them in conjunction with Deleuze and Guattari's 'problem of strata', which has been emphasised and usefully discussed by Buchanan (I.1.5 and Part II). To sum up, I can now maintain that the three haptic aspects (i.e. grain, edge and consistency, incl. density and elasticity); and the nine haptic elements (i.e. flat fields and other long sounds; wavering fields and other wavering sounds; cuts, protuberances and hollows; glides; springs; swellings; blasts; and broken tones) I have gathered here, after much scrutiny, cover a comprehensive variety of types of haptic formations, and work as useful analytical tools. The vocabulary I implemented is not completely new. It comprises resonances of words and expressions that are ubiquitous in rock criticism, musicology and music theory, as well as in Deleuze and Guattari's work. These

categories are not meant to establish a new system, or to replace any existing system. They are actually not a system but a constructive map or typology, and they can work in complementarity with any other music categories.

In my ongoing studies and listening practice, I have realised that the only way of really caring about the things one loves (which I ultimately believe to be an imperative in life), consists in a practice of welcoming the difficulty and addressing the challenges to thought that complex things demand. Conversely, when we push those challenges aside every time they present themselves to us, and we content instead with ready-made descriptions and expressions every time we want to communicate a thought, an experience, an encounter and an appreciation of an artwork, things tend to become flaccid and dull, as if nothing really new and enlivening could happen and be thought of. Therefore, with this work I am deliberately encouraging a practice of guarding oneself from the numbing and limiting effects of our *habits of the senses* and our *habits of thought*. Embracing complexity is not pointless. It can be directly related to a practice of caring; and it can be directly related to the possibility of change, the new, becoming-other and vitality. As I develop in I.2 with the aid of the philosophical corpus I work with, what I propose to call *a practice of caring* involves a constant revaluation of values, which in turn involve paying attention to new details, new events, and not pushing aside the intensities and singularities that really make us think. It also involves considering our relation to alterity, as an open, sensitive, always-changing form of receptivity, always capable of regenerating polarities, as Deleuze explains, which, for the case of encountering sounds, the notion of the listening membrane can help us to think about (I.2). I love rock recordings. I do not only dwell in their sound-worlds, but I also care about them. Rock recordings are complex things. Probably not to the bystander that only hears a complete botch of loud sounds, or that simply expects them to have a certain number of features that can fulfil certain uses, like moving the body in a gig, for example. In other words, they are probably not complex from the point of view of the one that produces them and listens to them as "artistic commodities", as Grosz puts it, which generate 'pre-experienced sensations, sensations known in advance, guaranteed to affect in particular sad and joyful ways'.[531] Therefore, to be more precise, they *can* be complex things. I think their complexity, and thereby their power, mainly lies in the ways they are capable of breaking with the interpretations that can only be based on recognisable traits. The series of philosophical and aesthetic positions I have studied and brought into play in the present investigation, following the lead of my own concerns, coincide in this point.

Thus, I overall share the view that on the one hand, sonic materials offer an 'ontological resistance', which always exceed the details or cues that allow recognition, specification, representation, organised systems, preconceived ideas, signification, and so on. I think this

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[531] Elizabeth Grosz, *Chaos, Territory, Art. Deleuze and the Framing of the Earth* (Chichester: Columbia University Press, 2008). p. 4.

resistance is related to Bergson's observations about the continuity and heterogeneity of movement and matter, and on the view of reality as having 'change' as its ground (I.1.5 and in I.4). As explained by Buchanan, Deleuze and Guattari's ontology, including their view on material reality, consists in passages from the 'plane of organisation' ('strata', formed matter and imprisoned intensities) to the unorganised 'plane of immanence' (the plane of movements of destratification that free continuums of intensity) in both directions. These two planes coexists and are 'inseparable', for they are 'each other's limit and each other's condition of possibility'.[532] It is from this position that I consider 'recognisable traits' as 'strata', belonging to the plane of organisation but always having the potential of getting involved in processes destratification, even of their own destratification. As explained by Deleuze and Guattari, strata are ultimately also the result of a primary destratification, and retain some of it, because the ground of this view is difference in itself, movement and change (I.1.5). This explains why I have kept the word 'trait' in play even for recognisable things. In Deleuze and Guattari's philosophy the word 'trait' is usually reserved for intensive traits of becoming on the plane of immanence, and agents of destratification. So, although my use of the traits for recognisable things may seem odd, it is justified when one considers them as 'strata' and experiments with them.

To briefly recapitulate, Deleuze and Guattari have an ontological commitment, which consists, on the one hand, in considering the plane of immanence as being 'everywhere, always primary and always immanent', even though the two planes are 'each other's condition of possibility', as Buchanan helps us to see; and on the other hand, in privileging the use of the word 'real' for becoming, intensity, and the plane of immanence. This must be consider in light of the five points I have summarised in I.1.5, which work in complementarity with all the other sections of my thesis: (1) there is no univocal ontological foundation; (2) there are passages back and forth between the plane of organisation (strata) and the plane of immanence (intensities, molecular flows, heterogeneities and saturation), which are fundamental to the ontology of sensation; (3) notwithstanding the above, the plane of immanence is always primary, and strata retain an intensive reality but they are perceived as qualitative or qualified (and their related interpretive processes), on the basis of their slow speed of destratification, and of a mediating perception; (4) when Deleuze and Guattari speak about 'the more real' or 'the same level of the real', they are referring to 'a reality specific to becoming'; (5) in line with Deleuze and Guattari, my approach emphasises the fact that 'expression' is the third necessary and equally important component of this ontology, and treats it as inseparable from intensity and the materials in a diagram and on the plane of immanence.

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[532] Ian Buchanan, *Assemblage Theory and Method. An Introduction and Guide*, 1st Edition (Bloomsbury Publishing, 2020) <https://www.perlego.com/> [accessed 22 September 2024], p. 52

Since my commitment is with maintaining at the centre of my enquiry the most *intense,* sensuous, complex, meaningful and invigorating aspects of rock recordings, and, of course, of the practice of listening to them, Deleuze and Guattari's work has helped me to address this, because their concept of 'intensity' comprises all these aspects, among others. It has helped me to understand how 'intensities' are intrinsically linked to the 'singular' and the 'new' (I.1.4), and to the power of rock recordings to change us, which I consider as the process of *becoming with them* (I.2). In works of art, this process is eminently connected to the 'intensive reality' of the 'sensation'. Thus, my work required addressing the ontological question of what reality is at issue in a reality specific to becoming. Therefore, my commitment is also an ontological commitment that coincides with that of Deleuze and Guattari, and which all the different sections of Part I deal with in complementary ways, in order to make it explicit. Deleuze and Guattari's ontology of sensation and its expressive-intensive-material reality, directly concern my own ontological, ethical and aesthetic commitment.

The ways of rethinking music notions I present here can establish new and useful ways of thinking about music that can help us to overcome the difficulties we may encounter in our aesthetic reflections, and to expand and revitalise the very practice of listening to music. Finer distinctions can anchor reflections at many different and sometimes interconnected interpretative levels, which can go from matters of composition such as instrumentation, signal processing, performance, recording and listening techniques and technologies, different kinds of formal organisations, issues of style, the degree of control or chance, and so on; to matters concerning the sensuality of our listening encounters, such as the sensuous complexity of sonic textures, sounds' ways of flowing and vibrating; the unfolding of a wider variety of details through close listening; the many difficulties we encounter when trying to describe haptic differences and to explain how they feel, how they make oneself feel, how they resonate with the lyrics and the title; the difficulties of becoming aware of processes that conceal certain dimensions of experience and of our encounters with things; the possibilities and limitations of the reduction of sonic haptic traits to recognisable traits; the problems of a descriptive language that shifts our attention to other sensory domains, and so on. This research has tackled all these issues and thereby can have a significant impact in music education and criticism.

AESTHETICS VERSUS EMPIRICAL EVIDENCE

I have explained in I.1.3, that empirical evidence from embodied cognition and ecological perception is relevant to the processes that involve perception, recognition and representation. I share the view that they constitute reliable basis to understand how these processes take place, and that this understanding can be beneficial in the interpretation of our experiences, and in many forms of interaction with music, including for example learning

processes, emotional responses, interpreting narratives, an appeal to dance, some technological developments, and so on. In other words, they can work as reliable basis for many kinds of interpretations and many forms of interaction. However, from the point of view of the break with phenomenology that the logic of sensation entails, these approaches are fundamentally different from the aesthetic approach to sensation I develop here, which asserts that the aesthetic discipline should have a place of its own.

I have argued that we can distinguish in our listening experiences between a) the intensity of a triggered response, b) the intensity of an experience afforded by something, and c), the intensity of the encounter. The intensity of the triggered response and the intensity of the afforded experience cannot be attributed to the sounds, but to the way the response/ experience feels. In other words, in any kind of embodied response/experience, the intensity is attributed to the way the body/subject feels and not to the way the sounds feel. Therefore, this intensity is different from 'intensity' in the Deleuzo-Guattarian sense, when we are speaking about the sonic materials at the level of *their* intensity. This intensity circulates in the BwO of the listener, but it is not an experienced intensity but an encountered intensity. It is *at the limit* of the experiencing subject or the perceiver, which is the limit proper to becoming with the world instead of interacting and connecting with the world — this difference is addressed in detail in I.2. For example, it could be the case that, when listening to music, *the way the body feels* in a triggered response, or in an afforded experience, becomes an encountered intensity in the Deleuzo-Guattarian sense, reaching the plane of immanence at the limit of oneself. But even though the sounds have participated in its creation, this intensity is not the intensity of the encounter with the sounds: it is the intensity of the encounter with one's own body. In turn, in a sensation, the way the body feels and the way the sounds feel become one and the same thing, and the intensity can be attributed to both simultaneously, as the intensive sonic flows not only circulate in the BwO but also determine it (and determine provisional and temporary functions in it that last while the sensation last).

I have insisted on the necessity of looking at the passage from one level to another, and it is in this sense that the complementarity between ecological perception and aesthetics works in the study of the operative traits of sensation in artworks. I have shown that Deleuze and Guattari's insights around their concept of 'strata' and processes of 'destratification' can work as the condition of this complementarity. On the one hand, drawing on Deleuze's logic of sensation, we must keep in mind that, since the process by which the sensation is attained always involves a passage from recognition to intensity, there are still objects of recognition that are preserved in the artwork. As Deleuze usually emphasises, the operative traits must remain localised in order to be operative; they have to act upon something, otherwise the

piece would become pure chaos. This is related to his insistence on the difference between a 'chaos' and a 'chaos-germ'.[533]

The listener also has a responsibility or agency in the process. There is a conduct involved in the possibility of the artwork coming across as sensation, which is active and exploratory, among other things: the listener has 'to *follow what is going on,* tracing the multiple traits of becoming, wherever they lead',[534] as also emphasised by Ingold, whose work is expressly informed by Deleuze and Guattari's philosophy. I have considered Deleuze and Guattari's insistence on this activity of 'following' in the introduction to Part II, and in the case study II.3, for example. As I have indicated in many parts of the 'Ontological Considerations', Deleuze and Guattari explain that intensities can only circulate through the BwO, and as Buchanan makes clear: 'The body without organs is not inert, it is an active agency of the mind and — I dare to say — of the soul'.[535] The exploratory form of agency is also paramount in the ecological approach to perception, which, as emphasised by Costall, has 'replaced the stimulus-response formula still so fundamental to mainstream psychology with an ecology of an embodied agency' (see I.1.3).[536] However, the exploratory agency of the organism is different in kind from the exploratory agency of the body without organs: one can reach relative thresholds of perception, the other, absolute thresholds of perception, one will remain on the plane of organisation and extrinsic relations, the other will be able to pass to the plane of immanence,[537] as I also expand on in I.1.3.

I have compared the aesthetic approach to sensation I develop in my thesis with recent empirical, ecological and phenomenological accounts on perception, affect, agency and consciousness. Although my thesis has benefited from integrating some of these insights in a complementary way, this comparative work ultimately led me to focus more on the philosophical literature for this investigation, primarily that of Deleuze and Guattari, because

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[533] See for example Deleuze, *Francis Bacon. The Logic of Sensation,* p. 71; this point is also emphasised in his 1981 lecture on painting: Gilles Deleuze, 'Sur la Peinture. Cours Vincennes - St Denis. Cours du 28/04/1981', WebDeleuze, 2020, <https://www.webdeleuze.com/textes/385> [accessed 1 September 2024]. This point is also related to Deleuze and Guattari emphasis on the passages between the 'smooth' and the 'striated' in *A Thousand Plateaus* and their discussion on strata, and this 'chaos-germ' is certainly a central insight in Guattari's *Chaosmosis*: see for example Félix Guattari, *Chaosmosis. An Ethico-Aesthetic Paradigm*, trans. by Paul Bains and Julian Pefanis (Bloomington: Indiana University Press, 1995). p. 59.

[534] Tim Ingold, *Being Alive: Essays on Movement, Knowledge and Description* (Taylor & Francis Ltd - M.U.A, 2011)., p. 14. [emphasis in the original]. — this is one of epigraphs I have chosen to introduce the thesis.

[535] Buchanan, *Assemblage Theory and Method* p. 69

[536] Alan Costall, 'Bringing the body back to life: James Gibson Ecology of Agency' in *Body, Language and Mind. Volume I: Embodiment.* ed. by Tom Ziemke, Jordan Zlatev, and Roslyn M. Frank (Berlin, New York: De Gruyter Mouton, 2007), p. 55.

[537] Deleuze and Guattari, *A Thousand Plateaus,* p. 309-11.

my aesthetic approach and these other approaches do not have the same purposes, priorities and ontological consistency. However, these distinctions and possible complementarities can certainly be explored further from an aesthetic angle. It is mainly around the subject of a 'haptic' sensitivity that my investigation has established constructive dialogues with other disciplines, mainly with ecological perception and Gibson's insights on the 'haptic system' and the perception of material textures, substances and mediums, and with Ingold's anthropological work on haptic surfaces, material textures, threads, lines, cuts, as so on. Deleuze himself mentions in many occasions the relevance to the logic of sensation of some phenomenological advancement in the study of sensation, but only to take them further, beyond phenomenology, to a properly aesthetic realm. The general point is that these dialogues can be mutually beneficial, and propel further development within any discipline. Specifically for my approach to haptic listening, I have entertained these constructive dialogues on the basis that the aesthetic logic of sensation involves the preservation of some givens based on perception, recognition and representation (inseparably), but only in order to neutralise them. As Deleuze writes, sensation involves 'the inevitable preservation of a practical figuration at the very moment when the Figure asserts its intention to break away from the figurative'.[538] My thesis suggests that this formulation can apply to any of the processes that involve perception, including recognition and representation. I have posited, in line with Deleuze, that the relation between these givens and the sensation/new formation, is a relation of passage form one level to another, that entails a change in the exercise of the senses. It can apply to a relation between any kind of perceived form, and 'the form related to the sensation', and thereby to any kind of representation and recognition that takes place as this practical stage in a 'diagram'. I have brought into the discussion some insights from empirical studies, by virtue of this partial and subsidiary relevance, and on the basis of Buchanan's emphasis on 'the problem of strata' in his reading of Deleuze and Guattari's philosophy. A larger review of more recent progress on embodied cognition and ecological perception had to be left out of the margins of my investigation, in order to prioritise the development of an aesthetic/philosophical/ethical approach to the concept of 'haptic listening', which was already in itself an enormous undertaking. Yet, the principles of ecological perception I have included and worked with, on the basis of a rigorous study, not only of Gibson's books, but also of the musicological work that also utilises them (mainly by Moore and Clarke), have already achieved in my approach an optimal complementarity between the aesthetic discipline and the ecological discipline, and have been satisfactorily implemented, implicitly or explicitly, in all my analyses.

In general, I believe in the importance of projects of transdisciplinarity and interdisciplinarity, both in the cases when the disciplines in question have a common philosophical/ontological ground, but also in the cases when they do not; even in the cases when they have radically opposed foundations, one can still develop constructive discussions and problematisations.

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[538] Deleuze, *Francis Bacon. The Logic of Sensation,* p. 29.

Different disciplines can propel further development in each another, without having to replace one another. The aesthetic/philosophical/ethical work I focus on has a potential of collaboration with other disciplines, such as history, anthropology, cultural studies, and empirical approaches to consciousness, perception and affection.

Some final thoughts about movement, rhythm and scale-levels

An important conclusion I draw from my investigation is that haptic listening, in a sensation, takes the micro to macro relations not as a dialectic but as *a continuum.* There is indeed a haptic memory or contraction, not only for small scale details, but also for larger haptic formations that emerge from the gradual close-range sense. For example, before deciding to study the track 'Ana' by Pixies, I was listening to it one day in the street with headphones and an intense sense of listening to its sounds as sonic waves and tides came over me. This happened as I started feeling and following a movement of deformation at different scale-levels in connection with the up and down (or to and fro) chromatic movement of the harmony (III.4). First, I felt it within the harmonic sequence (in the VII' - i - VII'), but then I also felt it in the changes of section, when the whole sequence is taken a semitone higher or lower. This produced a marked change of scale, as if the chromatic movement was no longer the movement of a wave but of a change of tide at a macro-level. Yet, it also produced a continuity between these scale-levels: there were all deformations of the same material at different scale-levels. Thus, my organ of listening completely changed to one that was closely following all these movements in a complex continuous ocean-like soundscape full of waves, whirls, currents and tides, in an obvious relation to the lyrics, but in an intense continuity, where these movements were not establishing dialectical relations with each other but different micro and macro details as intrinsic differences of a material continuum at its 'molecular' level, in a longer duration of tension, to borrow Bergson's concept. This sense of contraction of all levels in a continuum was particularly marked in the vertiginous sense of immensity that the change of scale/change of tide/change of section produced.

In general, I have been noticing throughout my research that being immersed in the study of haptic formations in rock recordings has activated a sort of longer term haptic memory. As I experience it, when the haptic formations I have studied come back to me in a memory, they retain something of their haptic and their operative traits in a very clear way. They are different from the shapes and music parts I would remember from experiences involving other ways of listening. This makes me hypothetically think that the haptic traits have been extracted from the destratified sensation, and have been (re)stratified into patterns and forms that one can remember but that *retain the imprint of haptic listening.* This happens with any kind of patterns and forms, whether it is with melodic contours, harmonic sequences, the different sections of a song form with their different textures, the total song form, or any macro formation, as well as with any outline or any sonic cue at any scale-level. In a certain

sense, I think that what was immanent to the intense encounter in haptic listening can make a mark in the way we understand, remember, represent to ourselves and reproduce patterns, sequences, contours and any formation thereon. Also in relation to instrumental performance and composition, I have been noticing that one can create a haptic guitar riff for example, then playing it and varying it without it losing its haptic nature, without it completely breaking the haptic continuum between micro and macro details. In an analysis based on haptic listening, it is indeed necessary to determine the scale-level, and the combination of scale-levels one is referring to, but this can be done without breaking the continuity between them. Therefore, emergence and composition cannot be truly separated, or at least their separation is not relevant from the point of view of haptic listening.

A LISTENING ATTITUDE

Studying sensation constantly requires taking up the challenge of going beyond our habits, beyond comparative relations between things, and beyond the interplay between reality and our expectations of it. A sensation is always new. So both, encountering the sensation that artworks attain and thinking about it, requires a conduct that Maldiney eloquently called a 'capacity of indeterminate expectation'. This is a capacity of opening our receptivity to alterity, that is to the encountered events, effects and singularities of the artwork, so that we can expect things without expecting something in particular.[539] Thus, one needs to be able to connect with whatever happens, and take it in. It is a matter of *noticing* the sound details at work in the sensation, and figuring out, *each time*, what is going on, how to address them, and follow them in further detail and exactness.

I care about rock recordings in general, including all of their potentialities for varied forms of interaction, but the practice of caring I have managed to delineate as a result of this investigation is very specific. It is about the cases wherein questions of meaning, experience and subjectivity are dependent on questions of intensity and sensation, and not the inverse (I.2). Therefore it is *not only* about a listening practice centred on listening, instead of listening practices where one in primarily engaged in another activity for which the music is *used*, but it is also about a listening practice centred on haptic listening in a sensation, where the haptic modality is a temporary function born of the diagram of a rock recording.

Broadly speaking, sounds can come across in different ways, that involve different ways of listening in connection with different interpretive processes. Overall, these differences can be

[539] Maldiney defines this concept of 'indeterminate expectation' as 'the capacity of opening oneself to the event', regardless of how perplexing or self-evident it is, so one can experience the 'reconfiguration of the possibles that it demands of us'. Françoise Dastur, 'Henri Maldiney. Les structures temporelles et spatiales dans l'existence et la psychose', *Lumière et vie,* 299 (2013), p. 45-46. [My translation].

thought of as *different kinds of interpretations*.[540] It is possible to notice the different kinds of interpretations that take place in our *listening experiences,* as well as in our reflections and discourses about them and about the pieces of music we listen to. They involve different *attitudes, habits, principles, criteria, understandings, sensitivities and functions of the senses,* that listeners may or may not be inclined to become aware of. Taking these determinations for granted, without considering their nature, what motivates them, their possibilities and limitations, the possibility of changing them, and so on, goes in hand with a tendency to apply only a few habitual sensory and intellectual frameworks to everything we encounter, in every occasion. Thus, one can easily go through life experiencing things, out of habit, through fixed and constraining principles, understandings, criteria, functions of the senses, and so on, and simply overlooking, dismissing or rejecting whatever falls outside this scheme. This practice brings stability and effortlessness, but completely ignores, and fails to engage with, the provocations that works of art impel. As consistently remarked by the group of philosophers and thinkers I brought into play in this thesis, this has many negative consequences. Even in the cases when the insight we gain from it is well-founded, it tends to be reductionist, and thereby obvious and dull. As a matter of fact, and is worth repeating, everything can become dull through this practice, including our experiences, the things we encounter, reality and life. In other cases, the reliance on habitual frameworks can be directly misleading, when hastily and carelessly applied to other entities, in ill-suited ways. It prevent us from addressing the problems posed by the complexities, heterogeneities and singularities of the encountered entities on a case to case basis. Finally, it results in that tendency to overlook, dismiss or reject whatever exceeds their grid, and it shapes following experiences in ways that can be easily perpetuated. Thus, it becomes a hindrance to other possibilities embedded in the sounds. Overall, I think that the first adverse move, the first mistake so to speak, is the reluctance to notice and understand the different kinds of interpretations that take place in our listening experiences, and the second mistake is the reluctance to embrace complexity. This practice can partly explain the widespread disengagement from being challenged by works of art, as well as the secondary role that artistic practices usually have in our mainstream ways of living, and the ways works of art are usually turned into commodities. In turn, it is only by being *curiously, sensitively and critically* inclined to become aware of these differences, and to reflect on them, that we can start moving in the opposite direction.

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[540] Here, I am using the word 'interpretation' in its broadest sense. As indicated, for example, by critic Susan Sontag, this 'broadest sense' is: 'the sense in which Nietzsche (rightly) says, "There is no facts, only interpretations."' This is what Sontag must clarify in her essay 'Against interpretation': 'Of course, I don't mean interpretation in the broadest sense, the sense in which Nietzsche (rightly) says, "There is no facts, only interpretations." By interpretation, I mean here a conscious act of the mind which illustrates a certain code, certain "rules" of interpretation.' This other sense that Sontag is against, with regards to art, seems closer to the code proper to signification and symbolism as widely treated in semiotics, or the code of abstract art. Susan Sontag, *Against Interpretation and Other Essays* (London: Penguin Classics, 2009), p. 5.

The curious part of this attitude, does not only involve interest and attention, but it is chiefly a welcoming attitude and receptivity, which, as I mentioned above consists in *opening oneself to the event.*[541] It partly involves being affected by it without expecting to be affected in a particular way. It involves being able to notice and integrate the changing effects that things can have on us. The critical part of it, in turn, is a resistant attitude. It is suspicious, evaluative and rebellious. It is first a refusal to take for granted *the factors* that determine the event, which consequently results in an attempt to notice them, feel them, understand them and potentially question them and *freely* change them.[542] Thus, it does not only consists in becoming aware of the kind of interpretive framework one is applying, and has conditioned the experience, but also in considering whether or not it is appropriate to the complexities and singularities of the encountered entity. Sometimes, following the details of the encountered entity changes the way of experiencing and interpreting it. The critical attitude thus can lead to breaking away from a kind of interpretation, according to the demands of what one is following with curiosity. It can also lead to freely engage with new possibilities that are immanent to the encounter, and therefore cannot be predetermined. Sometimes, it is the work of art itself that has this power to break with some habits of the senses and habits of thought through the *neutralisation of readings*, as I explore in this investigation. Sometimes it is the work itself that makes us adopt a different logic to study it. In short, I think it is essential to gain a preliminary clarity about the kind of effects that we want to enquire about, before going into the analytical phase of figuring out how the piece of music achieves its effects. In other words, I think these initial attitudes must be applied at both levels, that is to the question of the kind of interpretation one is addressing, and to the question of discussing the ways the sonic details operate.

The constraining and controlling effects that habits have on us, prove the critical attitude to be as important as the curious. Their combination can help us to *freely* discover possible avenues of exploration, take the challenges that works of art entail, develop thought-provoking practices, and gain clearer and deeper understandings of the things and events we engage with, love, value and care about. Moreover, and especially relevant for the present purposes, it can help us to embrace and deal with the *sensuous and expressive complexity* of works of art, in ways that can expand our sensitivities, work as provocations, intensify our

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[541] I have taken this way of explaining this attitude from philosopher Henri Maldiney's existentialist approach to our capacity of integrating the transformation or change, at the same time of oneself and of the world, that an *event* consists in. It is 'the capacity of opening oneself to the event and to experience this reconfiguration of the possibles that it demands of us', as explained in Dastur, 'Henri Maldiney. Les Structures Temporelles et Spatiales dans l'Existence et la Psychose'. [My translation].

[542] I share the view that there can be 'free will' in our behaviour, and I endorse Bergson's arguments in this arena. For a helpful presentation of this debate see: Joel Dolbeault, 'Bergson's Theory of Free Will', *Journal of French and Francophone Philosophy,* XXVIII (2020), 94-115.

encounters with them, and thereby intensify life.[543] Therefore, in this investigation I have found in the far-reaching philosophical distinction between 'intensity' and 'recognition', a key problem to think about when shedding light on the different ways sounds come across in our listening experiences. And all of them, except sensation, are grounded on the *principle of comparison,* and the collaboration of the senses and faculties on a 'common sense'.

EXPERIENCE VERSUS ENCOUNTER AND THE LISTENING MEMBRANE

There is a radical philosophical difference between the expressions 'listening experience' and 'listening encounter', which reflects the difference between phenomenology and ontology, respectively. I began my project by using the terms almost interchangeably, not really stopping to think if one or the other was more appropriate for the idea I was elaborating, and I ended up using them for different things, and using more often the latter in accordance with the aesthetic approach I am implementing here. Listening to a piece of music, can sometimes be a listening experience, which depends on a consciousness, which itself depends on the subject. As Husserl put it, 'every experience is itself experienced and to that extent it is also intended. *This* being intended is consciousness of the experience'.[544] So, the concept of 'experience' is itself strictly phenomenological, since it depends on the subject of the experience. As explained by Deleuze, a consciousness requires a synthesis of unification, and there's no synthesis of unification without a subject (or an I, a self, a person, an individual, etc.) — as I bring up in I.1.2 and I.2. So, what I am experiencing is how the sonic entity (i.e. the piece of music) is experienced in/by *my* consciousness, and not how it is in itself, as the external world, as an alterity that one can really contemplate and become with. Of course, there would not be listening without a listener, but something has to be encountered that is not already within me. At some limit we do encounter alterity, not as something that only produces an experience within me. In other words, listening to a piece of music can be a listening encounter as such: we can encounter the sounds somehow at the limit of the experiencing body/self, on the plane of immanence. As the intensive sonic materials populate your body, and circulate and resonate within you, you might witness how the inside becomes itself sonic, establishing an inextricable continuity with the outside; how the membrane, for a moment, is no longer experienced as the limit of what there is or what we are, but as all there is, life itself and a world in itself, a life of sound of which you are part of, a sonic world of becoming, sensation and sense. A becoming-other without ceasing to be oneself. You might be able to notice that for a moment you were really in the midst of things. Thus, you might

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[543] A rigorous account on the importance of this intensifying power is developed in Elizabeth Grosz, *Chaos, Territory, Art. Deleuze and the Framing of the Earth* (Chichester: Columbia University Press, 2008). I am grateful to my supervisor Leah Kardos for introducing me to Grosz's work.

[544] Quoted in Varela, Francisco, 'Present-Time Consciousness', in *The View from within. First-Person Approaches to the Study of Consciousness*, ed. by Francisco Varela and Jonathan Shear (Exeter: Imprint Academic, 1999), p. 126.

witness how inside and outside are not only connected but become inseparable; how it becomes impossible to clearly determine where the outside ends and the inside begins, as the membrane's surface continuously deforms and reforms itself throughout the listening encounter. Any aspect of your previous interiority you may be bringing with you has the potential of entering the vital genesis proper to the membrane, at the limit of oneself. This way, to borrow both Deleuze's and Bangs's words, you might get a clear view of the 'immanence' of listening to a record as 'life itself'.

Appendices

Appendix 1: 'The Real Deal' - transcription of interview — 23'40"

When the interviewer asked: 'You, Kim, have very strong ideas about how you want your music to sound like…?', the reply from Kim and Kelley Deal went as follows:
Kim: 'Yeah! I think that when I hear sounds…, but … not visually.'
Kelley: 'Let me answer that question for Kim […], for instance last night, if there had been a DJ in that club last night, and if a bad song had come on, you'd be looking around for Kim, where is she?, she is outside, she's left the building! She cannot stay where there is bad music, she can't do it, it's like taking a screwdriver and putting it in her ear and twisting it. She can't take it.'
Kim: 'Or it's like something tapping you, tap tap tap tap tap [moving the finger repeatedly towards the ear], just like what the fuck [looking around], it's those sss, just ew! [i.e. onomatopoeia of disgust], beep beep beep beep, ew! [shaking and flinching at the thought of the sounds]'
Kelley: 'She doesn't have the gene that says oh! you know I'm gonna turn that off right now.'
Kim: 'Well, yeah, but it depends, most bad stuff, cause usually it is just bad music all the time, all day long, it's, you know, bee-beepeeting-tee-ting-tee-ting…, you know, and I can zone out most. There are certain thing I cannot zone out, for instance 'Dirty white boy' from Foreigner, I have to actually physically leave the room. I get embarrassed for me… […]. Some stuff is so bad, but is not offensive enough, that I actually pick it apart in my head to figure out, "I wonder what it is that really is irritating me right now? Is it the bass guitar slap… or is it that kick drum sound, or is it the snare drum sound… If I take the snare drum out and the kick, the bass part isn't that bad if they actually didn't use that slap sound on the keyboard. That might be a pretty cool groove except from that anyone there has any feel whatsoever and it all comes from machines… so I could do that forever […]. Is that a weird thing to do?'

[The reasons why we consider different pieces of music to be good and bad, that is the criteria of value judgements, is something that, of course, vary between individuals, practices, styles, and so on. However, the point that I would like to highlight with this reflection about Kim's experience, is that I do not believe she is the only one to feel that unwanted sounds can affect in such a strong way]

Appendix 2: Transcription of lyrics of Madame George / Van Morrison (*Astral Weeks,* 1968)

Down on Cyprus Avenue
With a childlike vision leaping into view
Clicking, clacking of the high-heeled shoe
Ford and Fitzroy, Madame George

Marching with the soldier boy behind
He's much older now with hat on drinking wine
And that smell of sweet perfume comes drifting through
Oh, the cool night air like Shalimar

ye-outside they're making all the stops
The kids out in the street collecting bottle-tops
Gone for cigarettes and matches in the shops
Happy taken Madame George
Oooah, that's when you fall
Whoawhoawhoawhoawhoawhoa, that's when you fall
Yeah, that's when you fall

When you fall into a trance
A-Sitting on a sofa playing games of chance
With your folded arms and history books you glance
into the eyes of Madame George

And you think you found the bag

You're getting weaker and your knees begin to sag
In the corner playing dominoes in drag
The one and only Madame George

And then from outside the frosty window raps
She jumps up and says, Lord, have mercy I think but it is the cops
And immediately drops everything she gots
Down into the street below

And you know you gotta go
On that train from Dublin up to Sandy Row
Throwing pennies at the bridges down below
And the rain, hail, sleet, and snow
Say goodbye to Madame George
Dry your eye for Madame George
Wonder why for Madame George
Whoa

And as you leave, the room is filled with music
Laughing, music, dancing, music all around the room
And all the little boys come around, walking away from it all, so cold

And as you're about to leave
She jumps up and says, hey love, you forgot your glove
And the love that loves the love that loves the love that loves the love that loves to love the love that loves to love the love the gloves
Say goodbye to Madame George
Dry your eye for Madame George
Wonder why for Madame George
Dry your eyes for Madame George

Say goodbye in the wind and the rain on the back street
In the backstreet, in the backstreet

Say goodbye to Madame George
In the backstreet, in the backstreet, in the backstreet
yeeeehwww
Down home, down home in the back street
Gotta go, say goodbye, goodbye, goodbye
Dry your eye, your eye, your eye, your eye, your eye
r eye r eye r eye ry ry ry ry (20 times)
Say goodbye to Madame George
And the loves that loves the love that loves the love that loves to love the love that loves the love to love the love that loves to love
Say goodbye, goodbye, goodbye, goodbye
oo oo ooooo …
mmmmm …
Say goodbye, goodbye, goodbye, goodbye, goodbye, goodbye, eeeh, to Madame George
Dry your eye for Madame George
Wonder why for Madame George
Ah the love that loves to love that loves to love the love that loves to love the love that loves to love
Say goodbye, goodbye
Get on the train
Get on the train, the train, the train, the train, the train, darling
This is the train, this is the train
This is the train
Whoa, say goodbye, goodbye, goodbye, goodbye, goodbye, goodbye, goodbye, goodbye, goodbyyyee..
Get on the train, get on the train

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