Detail Photo n-Cha(n)t © Don Lee

Computer Voices / Speaking Machines, 2001

Courtesy of the Walter Phillips Gallery, Banff Centre for the Arts, Canada
Chapter 1
Auditory Distress: Interventions of Sound

The sense of hearing cannot be closed off at will. There are no earlids. When we go to sleep, our perception of sound is the last door to close and it is also the first to open when we awaken. These facts have prompted McLuhan to write: ‘Terror is the normal state of any oral society for in it everything affects everything all the time.’ The ear’s only protection is an elaborate psychological mechanism for filtering out undesirable sound in order to concentrate on what is desirable. The eye points outward; the ear draws inward. It soaks up information. Wagner said: ‘To the eye appeals the outer man, the inner to the ear.’ (Schafer 1977: 11)

My aim in this chapter is to conceptualise auditory distress as a particular, defining aspect of listening that opens up new perspectives for the discussion of many of our auditory experiences in the theatre. I have chosen the above epigraph from soundscape-analyst R. Murray Schafer, because it resonates with the arguments and objects that I will outline in this chapter. Following Schafer’s line of argument, I want to develop the concept of auditory distress as an effect of an inevitable and constitutive intervention of sound on our perception.

In this chapter, I focus on our mechanisms for coping with auditory distress as part of our daily, aural competences in general, and, in particular, on our engagement with sound and music in the theatre. As I will explain, music theatre specifically highlights something very essential to listening in our aural encounters with the world, namely that sound is always distressing, and that therefore, the ear needs to be selective. In order to make this claim, I first conceptualise auditory distress as a fundamental aspect of our experiences of sound in general, which has both a physiological and psychological explanation. For the purpose of my study, I am interested in the latter.

I will then examine the concept of auditory distress through an interactive installation, n-Cha(n)t (2001) by David Rokeby. This installation particularly demonstrates some primary consequences for the ways we cope with auditory distress in terms of address and response. By means of this case study, I argue that auditory distress is the product of an undesired excess of auditory stimuli, which urges the listener to take position as a subject in relation to three factors:

- the listening environment;
- the cultural discourse shared by the members of a certain acoustic community;
- the individual aural competences of the listener.

As I will explain, these aspects are individually related to the way we respond to auditory distress. However, they must also interact with each other in different combinations. Drawing on the notion of the ‘modern auditory self’
(Connor 1997) in psychoanalysis and phenomenology, I then show how a sense of self or auditory ‘I’ is effected by the address of sound in relation to the sounding environment as a result of an envelope of sound. As a response to this ‘sonorous envelope’, the listener feels a need to confirm one’s auditory ‘I’ by way of positioning her or himself through aural competences.

Subsequently, I focus on Ruhe (2007), a music theatre performance by Josse de Pauw at the Antwerp-based Muziektheater Transparant (Belgium). Through this performance, I illustrate how the responses in listening are even more likely to be in the sensory deprived contexts of the theatre, because the excess of intensities is marked by a lack of meaning. The context of deprivation then complements and intensifies the urge of the listener to respond. As a result of this lack of meaning, the listening subject can be said to be in a perpetual crisis of signification that compels the listener to respond. However, hearing and listening are imbued with a fundamental insufficiency that needs to be complemented by signification and discourse in such a way that it makes the auditory experience meaningful.

Through both case studies in this chapter I demonstrate the need for our coping mechanisms in response to auditory distress. I then present how our aural competences are vital for the responses in listening to make our auditory experiences meaningful in discursive ways. The music theatre performances I discuss in the course of this study reveal aspects and implications of these discursive responses.

1. Enter the Ear: Auditory Distress

In the above epigraph, Schafer claims through Marshall McLuhan that a society ruled by orality and, therefore by sound, is characterised by a certain level of ‘terror’. Despite the heaviness of such a phrasing and its political resonances for our contemporary context, I want to argue along with this claim as it supports my thesis that sound is always distressing because of its intervening nature. In its physical and acoustic occurrence, sound is always intervening since it essentially exists as compressed energy due to pressure changes of air molecules and resilience of surface bodies that mediate that energy. The intervening nature of sound is also necessary in order to be perceived. Distress is thus inherent to every auditory perception.

Schafer’s claim about the terror of sound in listening is based on the common argument that the ears have no lids like the eyes. Each auditory perception is therefore based on the ear’s indisposed receptivity. Paul Rodaway (1994) and Hillel Schwartz (2003) have taken Schafer’s argument further on phenomenological grounds. Schwartz, for instance, confirms Schafer’s claim by specifying that the ear is

unreflectively accumulative, and naively open to even the most harmful of loud, high, or concussive sounds. […] [T]he ear lacks the most rudimentary of
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defences: it has no equivalent to the eyelids that protect vision; the lips and tongue that protect taste; the nasal hairs and sneezes that protect smell; and the general mobility that protects touch and proprioception (2003: 487).

The openness of the ear to the accumulation of all sound, I argue, turns the interventions of sound into auditory distress. As such, auditory distress forms the basis of every hearing or listening experience.

Certainly, I could have phrased the ‘intervention’ of sound more neutrally in terms of a sensory stimulus, a stimulation of both ear and body, as most experiences of sound in music theatre are rather harmonious and pleasurable. However, the term ‘distress’ highlights a fundamental aspect of the address and the reactions of the listener to the objects I discuss and, as I will demonstrate, of every auditory perception in general. The term then suggests a necessity of the listener to respond due to an excess of intensities that poses a threat to us.

McLuhan’s earlier reference to ‘terror’ effects communication on a rather intersubjective level between producers and perceivers of sound, where “everything affects everything all the time”. This idea applies to the modern soundscapes that affect us on a daily basis. Schafer defines the notion of the ‘soundscape’ in resemblance to a landscape as a sonic environment. It could also sometimes refer more abstractly to musical compositions when considered as environment (Schafer 1977: 274-5). The soundscape notion makes us aware that we are always surrounded by sound, in our daily encounters, and likewise in the theatre or the concert hall. This implies that the ear is perpetually vulnerable to interventions of sound that could have a disturbing effect.

Schafer suggests above that we try to filter out any disturbance that is ‘undesirable’ in order to concentrate on the sounds that are desirable. He thereby places the ear in a relationship of desire towards what is (to be) heard.

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18 In French, the soundscape translates as ‘paysage sonore’, a sonorous landscape. Rodaway (1994) speaks of an auditory geography, thereby highlighting our engagement with the environment. According to Rodaway, the auditory geography “relates specifically to the sensuous experience of sounds in the environment and the acoustic properties of that environment through the employment of the auditory perceptual system. The ear forms the main sense organ in this perceptual system but […] geographical experience is multisensual and ecological, that is[,] we can ‘hear’ with more than our ears and the context, or environment itself, plays a key role in what or how we hear” (Rodaway 1994: 84).

19 Schafer’s notion of the soundscape forms the basis of the study of Soundscape analysis and Acoustic Ecology, which he initiated in the late 1960s at Simon Fraser University (Vancouver) in connection with his World Soundscape Project. His study is, however, infused with the idealistic idea – based on psycho-acoustic data – that disturbing sounds with damaging effects should be traced in order to remedy them. My investigation does not subscribe to such an ideological project, but rather takes Schafer’s ideas a step further to discuss the intervening and distressing nature of all sounds as a general aspect of our auditory experiences, which also has implications for the listener in the theatre.
The Frequency of Imagination

The imperative of listening to desirable sounds even has erotic implications for Schafer:

The ear is also an erotic orifice. Listening to beautiful sounds, for instance the sounds of music, is like the tongue of a lover in your ear. Of its own nature then, the ear demands that insouciant and distracting sounds would be stopped in order that it may concentrate on those which truly matter (Schafer 1977: 11-12).

In Schafer’s view, desirable sounds are thus the ones that ‘matter’ to us. A consequence of the ‘orifice’ of the ear being unprotected from the outside, however, is that sound always intervenes and disturbs. Following Schafer’s logic, we do not want these interventions at all times. Therefore, unnecessary, distracting sounds that produce excess are to be avoided. As a result we have, over time, elaborated some psychological – I would like to include ‘cognitive’ – strategies to filter out the unwanted stimuli. This filtering out of distracting sounds should be understood as a result of the auditory distress that is caused by the inevitable interventions of sound. By implication, this filtering out as a primary response to auditory distress is inherent to every hearing or listening experience.

In opposition to this idea of filtering by way of protection, I want to pose Robin Maconie’s (1990) assertion in The Concept of Music that, due to its never-ending receptivity, the human ear is not a ‘well-tempered’ receiver in the ways it is affected:

So the ear is not strictly like an ideal microphone (although there are microphones in production which behave in a similar way). It is a biased instrument, but the bias is useful and also practical: it makes communication easier and, by burying the ear-drum down a narrow and self-damping tube of human tissue, helps protect a sensitive mechanism from ever-present dangers of acoustic overload (37).

Unlike a microphone, the ear is a biased instrument that favours or prioritises certain sounds subjectively. Complementary to Schafer’s idea of a psychological mechanism that would protect us internally, Maconie argues for a physically induced bias that is necessary and practical to make auditory perception and communication possible. Maconie, moreover, points out that the need for protection is constituted by a latent ‘danger’ of acoustic overload in the ‘sensitive mechanism’ of the ear.

This threat of excess in listening supports my thesis of auditory distress, as initially argued through Schafer. When considering the connection between Schafer and Maconie, I conclude that there is both a physical bias in the structure of the ear and a psychological (or cognitive) mechanism in the way we channel and block the intervening sounds that necessarily cause auditory distress. Both are interrelated in our defence mechanisms to auditory distress and account for the ear’s selectivity. As a common denominator, both Schafer
and Maconie stress the interiority of the ear as a sensitive mechanism that impels protection. In this context, Schafer draws a difference with an assumed exteriority of the eye in the way the ear processes the perceived intensities as information: “It soaks up information”. In other words, the ear is immersed and permeated by the acoustic information that the sound conveys. Maconie suggests then that the ear needs to be biased in order to be a useful ‘instrument’ for communication. This instrumentalisation of the ear suggests an issue of control over the ephemeral and heterogeneous intensities it registers.

Schafer’s soundscape studies generally make use of the physiological argument that the indisposed receptivity of our ears and the ‘terror’ of intervening sounds imply a threat of damage or loss of hearing. As Schafer points out, medical science has determined standards of hearing thresholds between frequencies of 20 and 20,000 Hz, and continuous exposure to high noise levels of over 85 decibels can cause damage to the ear. 20 Especially when we are experiencing physical pain, and a mild headache suffices, we become acutely aware of the distressing nature of our receptivity. There are also circumstances where the exposure to loud sounds can lead to physical or psychological damage. 21 Beyond the danger of long-term exposure, there is also a cumulative effect when the exposure is merely incidental. The accumulative susceptibility of the ear, as earlier stated by Schwartz, means that intense sounds can damage the delicate hair cilia of the inner ear, making them unresponsive to future sensations. Since hearing loss is only subtle, we continue to ‘enjoy’ auditory distress, while inevitably and permanently losing acuity at various frequencies. The bias of the ear, as Maconie describes it, can then be understood in terms of the physical arrangement of the inner ear with the basilar membrane’s surface structure, which functions as a funnel

20 To brush up on psycho-acoustical terminology: the unit of Herz (Hz.) is one cycle (of a sound wave) per second and expresses the pitch (frequency) of a sound. An ability to hear frequencies of 18 kHz or lower is seldom achieved and can drop dramatically with age and noise exposure (Truax 1984: 14; Schafer 1977: 183). Loudness of sound (volume, amplitude) is generally expressed in decibels (dB) and is achieved according to the energy put into the sound source. The decibel scale is logarithmic in order to reduce it to a difference of 120, which is the threshold of acute pain. Fletcher and Munson at the Bell Telephone Laboratories in the US introduced most of these insights. They devised the model of critical bands that became most important to psychoacoustics, i.e. the study of auditory perception. Central to the latter study is the concept of ‘masking’, subduing of damaging or ‘annoying’ intensities of sound.

21 Douglas Kahn argues for the physical danger and limit to a notion of panaurality, embracing all sounds such as is experimented with by many composers in both pop and more serious musical work after John Cage: "Loudness brought awareness to bodies in a new way, but this did not prevent them from being suppressed. Nor could protection from injury be assumed, as the onset of deafness among a number of musicians who revelled in loudness during the 1960s has demonstrated. Loudness is ultimately governed by injury, and in this way, the body refuses to indiscriminately allow all sound" (Kahn 2001: 233).
mediating and filtering the 'audible' frequencies and intensities before they are processed cognitively (Truax 1984: 4).

However, in as much as this physiological explanation complements our understanding of how occurrences of sound urge for a physical, often automatic response by the ear, my study focuses on the psychological, or rather cognitive argument. Certainly, both physical and cognitive mechanisms are interrelated in just a split second. However, in order to understand auditory distress as a basic mode of auditory perception, I propose to detach this notion from the neuro-physical explanation of ear damage or psychosomatic pain as singular and extreme. Rather, the psychological defence mechanism explains how we try to make the auditory distress into a ‘meaningful’ auditory experience by defining what is necessary and what is not.

In order to make the connection between our coping mechanism and signification, Barry Truax (1984) has introduced the notion of ‘acoustic communication’ as his contribution to Schafer’s explanation of the psychological mechanism from an information and communication theory perspective. With this notion, Truax stresses that the ear searches for information in order to enable acoustic communication. The main assumption in soundscape-related research is, therefore, that sound is a carrier of acoustic information. Truax nuances Schafer’s assertion that the ear generally soaks up information, when he states that listening involves a more conscious processing of sound to the extent that it becomes “usable and potentially meaningful to the brain” (Truax 1984: 9). Michael Forrester (2000) provides a similar idea by stating that sound is “potentially confusing, degraded or redundant information made available to the ears” (35). Truax’s approach to

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22 Our ears have some safety devices in our physical constitution against the damage that auditory distress could cause. Internally the ear is protected against enduring loud sounds by the automatic response of the stapes muscle (or stapedius), which is responsible for the contact between the stirrup bone and the middle ear. Additionally, as Sir James Jeans formulated in 1937, the oval membrane of the cochlea “serves as a safety device acting rather like the slipping clutch of a motor-car, which may save the oval membrane from injury, if the ear-drum is set too violently into sudden motion” (Jeans 1968: 245). These defence mechanisms are triggered by automatic responses in the structure of the middle and inner ear, but they only partially and temporally filter out the most harmful resonances.

23 My understanding of auditory distress opposes Walter Ong’s claim that sound can “register interiority without violating it” (1982: 71). Indeed, violation is too strong a term to conceptualise auditory distress as a basic condition of our auditory perception. However, with this notion I want to respond to the idea of ‘untouched’ interiority by arguing that sound leaves cognitive traces, which make us respond by channelling the ‘harmful’ or unwanted resonances.

24 Barry Truax’s (1984) notion and theory of ‘acoustic communication’ implies that listening is a way of understanding and communicating through sound in a dynamic, interlocking relationship with the listening subject and her or his environment. Truax therefore positions auditory analysis in communication studies, which do not rule out cognitive concepts, but his focus is primarily on the paths of information exchange through sound. He regards listening as the ‘primary interface’ between the individual and the environment (Truax 1984: xii).
what is ‘meaningful’ in listening is, however, very specific and relates to finding acoustic information about the function and effects of the soundscape within a given environment. Yet my study uses a different notion of meaning in relation to sound and listening, which is an implication of the responses by the coping mechanisms that both Schafer and Truax have developed, but which does not include specific information that can be used as analysable data as such. I will return to my notion of meaning in chapter two. It suffices to say here, that Truax’s contribution confirms the idea that sound creates excess in listening, and that through psychological and cognitive mechanisms we try to cope with this excess.

I tentatively conclude that the more that sound confuses the listener with redundant, unwanted and distracting intensities, the more the listener feels the need to filter and channel the sounds in terms of what is desired or ‘meaningful’ to her or him. I find support for this argument in Maconie’s rather throwaway remark: “There is no legislating for sensory distress: all sensory input is distressing, and we are engaged in a constant effort of keeping unwanted intensities of information at bay” (Maconie 1990: 23). Thus, the notion of ‘distress’ does not mean that the intervening intensities have to directly cause damage to the ear; nor is the concept directly intended in a psychological meaning as a symptom or a cause of a psychophysical pain. Rather, the concept of sensory distress explains a basic need to channel the unwanted intensities as excess in a productive, meaningful way.

Consequently, I demonstrate in my study that theatre highlights this process of gathering, channelling and filtering acoustic information as a means of response that depends on a specific relationship of authority in sound and the agency of the listener who imparts a sense of control. As I intend to show, this relationship is inherent to the particular constellations of address and response in listening. As a basis for this address-response system, I regard auditory distress as most fundamental as a catalyst of the psychological and cognitive coping mechanisms in the listener to relate to one’s auditory experiences. Auditory distress in the theatre can make us aware of the intensities of sound and the need to respond in order to regain control over the auditory interventions.

So far, I have conceptualised auditory distress in most general terms. As a first correlation with music theatre, Schafer refers to an idea by Wagner about listening, though through a problematic opposition between eye and ear epitomising outward and inward positions, as I quoted earlier: “To the eye appeals the outer man, the inner to the ear” (qtd. in Schafer 1977: 11). Indeed, I will demonstrate how the auditory distress incites introspection in the listener, marking an inward position towards embodied experiences and imaginative associations. However, assuming a fundamental opposition between the ear and the eye based on physical characteristics in terms of a boundary between inside and outside is not enough. Furthermore, it is rather
inaccurate in order to establish a well-founded theory of auditory experience in the theatre, which is so dependent on correspondences between the two. Moreover, we should be cautious of any claims of interiority in terms of the Romantic idea of the ‘soul’ as far as they would ignore a historical understanding of such oppositions. Instead, Wagner’s claim should then be understood in the historical context of the emancipation of the ear and not as a physical or phenomenological truth.  

I am tempted to further contest the ear’s acclaimed interiority by arguing that the cognitive defence mechanism spatially extends and thereby externalises the act of listening. 26 I will address music theatre’s differentiation today from the traditional conceptualisation of theatre acoustics on this matter at the end of this chapter, as this affects the sense of control in the listener’s coping mechanisms through such externalisation of the listening attention. What is important here is that the interiority of the listener as subject is at stake under the ‘terror’ or ‘threat’ of auditory distress. I thereby ask myself: How does the psychological defence mechanism, as mentioned by Schafer, function in tempering auditory distress? Which mechanisms or strategies are available? How can they be helpful in the discussion of listening in music theatre? Are there specific strategies for the theatre? Finally, what are the roles and the uses of our competences in these strategies?  

I will elaborate on these questions through David Rokeby’s interactive installation n-Cha(n)t (2001). 27 This installation helps me to show how auditory distress comes about and bears implications on the ‘desirability’ of sounds in our hearing experiences. Through the installation, I demonstrate some primary strategies of coping with auditory distress. I then discuss the implications of the mechanism that n-Cha(n)t shows for the constitution of a listening subject in relation to a lack of control and competence. For the purpose of listening in music theatre, I subsequently discuss the music theatre performance Ruhe (2007) by Josse De Pauw for Muziektheater Transparant, in order to demonstrate more preliminary issues of the specific strategies in listening that n-Cha(n)t does not raise. I thereby show how the relation

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25 Theodor Adorno (1952) makes a similar opposition between eye and ear when discussing Wagner’s ‘emancipation’ of the ear in relation to the differing histories and developments of the senses: “The eye is always the organ of effort, work, concentration; it apprehends something specific in an unambiguous way. The ear, in contrast, is unconcentrated and passive. Unlike the eye, it does not have to be opened” (Adorno 88-9). Such simplifications would make even Adorno’s epistemological ears curl when taken out of context. His claims should be read in the context of a Marxist criticism on the production of meaning in Wagner’s music drama.  

26 Schafer regards hearing as a way of “touching at a distance” (1977: 11). The psychological defence mechanism that he conceptualises could therefore be seen as a kind of touching the environment, similar to bats gathering spatial information through ‘echo location’: a way of receiving acoustic information about the environment through reverberation from a distance.  

27 David Rokeby’s n-Cha(n)t (2001) was commissioned by the Banff Centre for the Arts and won the Prix Ars Electronica Golden Nica for Interactive Art 2002. I visited the installation at the DEAP04 Festival 2004 in Rotterdam.
between auditory distress and the responses of the listener through her or his competences hold the key for understanding some of the experiences of sound and music – and how the listener makes meaning of them – on the contemporary music theatre stage.

2. *n-Cha(n)t*: Enchanting or Endangering the Ear?

Most contrary to what the title of David Rokeby’s interactive installation *n-Cha(n)t* perhaps suggests, it is not in the nature of sound in the first place to enchant or to pleasurably sooth the senses. Rather, sound has the power and authority to interfere and intervene in the human receptive system, which is the catalyst for the interactivity in this installation.

The installation consists of an indefinite (*n*) number of computer systems, set up randomly in the exhibition space and equipped with a microphone, a loudspeaker and a TV monitor. The monitors each display a human ear with an index finger that either cups or closes the ear to show when it is susceptible to sound. Initially, the systems capture and repeat the resonances that reach into their microphones, based on voice recognition, free-association and language recognition. A feedback system is thus created through the process of channelling the reproduced sound back as input into the other systems, and so on. When all systems appropriate and reproduce the same sound through their respective microphones and loudspeakers, a level of unison is established in the feedback loop, which sounds similar to humming or ‘chanting’. This sound has the mesmerising effect of a ritual or a trance. However, within the network each receptive system is equipped with its own speech-recognition and word-association technology analysing the resonances that are captured from its immediate environment, the visitors of the installation space, and its fellow systems. By speaking into one of the microphones, the visitor can distract and isolate one of the systems. This, in turn, disrupts the coherence, since the system begins reproducing the intervention of sound.

In this way, the chant is continuously threatened by new interventions. Every acoustic stimulus is marked by its disturbing effect on the temporary equilibrium that all systems seem to desire. In so doing, the installation gives a perspective to understand McLuhan’s rather problematic statement as cited earlier by Schafer: “Terror is the normal state of any oral society for in it everything affects everything all the time.” Whether or not Rokeby intended that the computer entities represent human beings or social groups in some sort

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28 The installation is a further elaboration of Rokeby’s project ‘The Giver of Names’, which stands for an intelligent entity with a reasonable amount of ‘subjectivity’ and linguistic capacities. As the artist claims, the title and concept of *n-Cha(n)t* was inspired by Rokeby’s desire to create a community of computers as ‘Givers of Names’ that would speak together, *chatting* and *chattering* as if indulging in a language game, or as if *chanting* in a secluded religious space.
of intersubjective relation with one another, this interactive installation demonstrates two implications of the ‘terrorising’ nature of auditory distress. Firstly, the installation reproduces the workings of auditory distress as indispensable for perception: just like the human ear, the computer system is susceptible and vulnerable to ‘unwanted’ resonances. Therefore it needs to be biased in capturing and processing the resonances that are relevant and eligible enough to pass them on to the other systems and create a new harmony or consensus. The status of that coherence is placed again under the constant pressure of another auditory intervention. Secondly, the installation displays how a community formed by the sounds that surround it is in a perpetual state of crisis. The continuous association and reproduction of sound in search of coherence demonstrates how an acoustic community can be formed as an instrument or a way to cope with the auditory distress.

I will now develop both implications of auditory distress through the installation by focusing on the ear as a vulnerable but necessarily ‘biased instrument’. I shift Maconie’s phrase, however, by applying it to the psychological explanation of the listener’s responses to auditory distress, since the ultimate object is signification. First, I discuss how auditory distress and the ear’s bias are in an interdependent relation with signification processes and the conception of a listening subject. Second, I examine the implications of auditory distress on the experience of an acoustic community through an enveloping soundscape: a sonorous envelope. I thereby develop the approach of soundscape-analysis further against a computational and stimulus-response model, which this installation exemplifies. I will specifically explore the significance of the listening environment, the cultural discourse within an acoustic community and our private aural competences in our responses to the auditory distress that is caused by the envelope of sound.

2.1. Cupping the Ears: Channelling Auditory Interventions

As one can see in *n-Cha(n)t* (see figure), the monitors in the installation reproduce the workings of our human auditory system by showing an ear. When one of the computer systems captures a sound through its microphone, it first cups the ear to focus, then presses the ear with one or two fingers to show that it is ‘thinking’. In this state of mind it processes the sound signals in an attempt to recognise speech and reproduce it as text on the screen and as sound through a loudspeaker. When the system reaches a point of saturation through the accumulation of sounds that come either from a visitor speaking in the microphone or the sounds of the other systems, it covers the ear with a hand on the monitor. All of the neighbouring systems, in turn, will try to appropriate the new input, and with no further interventions the coherence can be restored.

The images of cupping and covering the ears epitomise the human auditory system, its receptivity and defencelessness. They validate the claim
that the ear is, in a sense, always in a state of ‘forced’ or indisposed susceptibility to sounds. The installation shows, however, that pain levels do not have to be reached or transgressed in order to feel the urge to cover the ears. The gesture of closing the ear when the system reaches saturation suggests that a disturbance is caused by an overload of acoustic information or what simply cannot be processed cognitively at the time. In this very simple gesture, the installation shows how this accumulation of sounds causes distress to the system. Similarly, in our perception, when sound disturbs our ability to process cognitively the received stimuli, the overload is generally experienced as noise.\(^2\) In the human ear, however, there are many more factors that can make a sound into noise as it is based on a rather personal, subjective judgment.

However, the subjective sense of sound as ‘noise’ is not of direct interest to my investigation of auditory distress in the experience of all types of sound, which I consciously detach from neuro-physical considerations. In Rokeby’s installation, noise and permanent hearing loss are, likewise, not at stake. Though it simplifies the representation of the human auditory system from what appears outside, the installation highlights the mechanism of coping with the overload of information. It shows that the excess of stimuli, which urges a response from the listener to keep the unwanted intensities at bay, causes auditory distress. Robin Maconie points out two ways of avoiding unnecessary stimuli that I propose to compare to this installation:

> We are born listeners, and remain ‘switched-on’ listeners for the whole of our lives unless released prematurely form the clamour of a noisy world by the onset of deafness or by voluntarily retreating to a quieter and more contemplative environment. As long-suffering listeners, we learn willy-nilly to control what we hear, not so much by excluding the possibility of unwanted sounds (the only tactic available in the formative years of infancy being to fall asleep, which makes people who fall asleep at concerts seem rather sympathetic all of a sudden) – as by manipulating the auditory environment. That manipulation of the auditory field is expressed in two main strategies: (1) physical movement which changes the intensity and positional relationships of events in the perceptual field, and (2) vocalization or other sound production (including music) which introduces a controllable and dominating element into an otherwise uncontrolled auditory environment (Maconie 1990: 24).

Whereas the visitor of the installation who has the freedom to move away from a sound source of unwanted intensity could well perform the first strategy, it is usually not possible for the listener in a theatre audience. The second strategy is demonstrated by the computer systems in \textit{n-Cha(n)jt} by reproducing the sounds collectively to the extent of their ability to recognise and reconstruct

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\(^2\) Roland Barthes articulates in this context a position close to my understanding of auditory distress when he states: “Irregular noise disturbs our ‘aural comfort’” (Barthes 1991: 248).
them as speech. When sounding together as ‘unisono’, the systems in the feedback loop dominate and control the space in which the visitors are marked as the uncontrollable element, disturbing the chant.

Rokeby’s installation, moreover, draws our attention to the necessity of acoustic and auditory interventions in order to enable communication with the visitors and among the systems themselves. This installation thereby demonstrates the idea in Soundscape studies that sound needs to intervene in order to be picked up from the background hubbub, to surpass a threshold of hearing and attract attention. Acoustically, sound is dependent on the acoustic space and the air molecules to resonate and mediate. The environment determines which sounds will stand out. Truax expresses this idea in his notion of the ‘acoustic horizon’:

The presence of a steady level of sound reduces what we may call the ‘acoustic horizon’ of an environment, that is, the farthest distance from which sound may be heard. The steady sound masks low level sounds, thereby producing a reduced sense of space. In the most extreme case, each individual is surrounded in a cocoon of sound with no aural contact with others. There is also an accompanying reduction in the variety of sounds that will be heard, because only a few of the stronger ones will rise above the ambient level (Truax 1984: 23)

Truax stresses the aspect of ‘masking’ in the acoustic horizon. This idea applies also to the soundscape in n-Cha(n)t since the sounds in the feedback reduce the acoustic horizon for both the visitors and the receptive computer systems. The masking through steady sounds in the constant loop can therefore be understood as a strategy to cancel out unwanted intensities of sound that would cause distress. The disruptions, however, are also constitutive for the chant as the sounds are repeated until another sound intervenes and disturbs the loop. Hence, the installation confirms that auditory distress is necessary in order to be perceived and enable communication. Sounds that catch the listener’s attention are always pitched against their respective acoustic horizons, which already mask certain intensities of sound in the listening environment. The listener, in turn, relates to the acoustic environment by dealing with the auditory distress, by moving away or by filtering and processing the overload of intensities, shutting out the excess to make it bearable, enjoyable and most likely ‘meaningful’.30

30 In neuro-cognitive science, the place in our brains where we filter out and define which stimuli are necessary/wanted as information is located in the limbic system: “The limbic system gives salience to events so that we either ignore them as mundane and unimportant, or take notice and act. It is also the place where value, purpose, and desire are evaluated, a process referred to as assigning negative or positive ‘valence’” (Cytowic 1993: 168). The intersections with studies of cognition could also open up new perspectives for the study of listening in the theatre. The cognitive aspect of my study, however, is limited to what I can describe from the cultural experience of the objects that I select as case studies.
The acoustic horizon of an environment is constitutive for the perception of a certain soundscape. Both notions suggest an inherent sound-space relationship: we are always in soundscapes through which we relate to our surroundings. Underlying this idea is that sound has a propensity to fill, form and fix a space, which always creates a certain level of sound in the background. To this acoustic horizon in the background, every sound is tuned. This argument brings us to two related notions, which I will now discuss. First, the acoustic horizon has social implications for the inhabitants of a certain soundscape that assign meaning to the sounds. Schafer defines this as an ‘acoustic community’. Second, the environmental aspect of sound surrounding the listener relates back to the earliest childhood sound experiences of the ‘sonorous envelope’. Both have implications for the constitution of the listener as subject.

2.2. Enter the Listening Subject:
Acoustic Community and Sonorous Envelope

Rokeby’s installation highlights that sound is necessarily intervening in order to surpass and be picked up from an acoustic horizon. It also demonstrates how sound can be used tactically as a way to protect and filter out unwanted or excessive intensities. In n-Cha(n)t, the computer systems create a network of individual agents that connect through the soundscape of the chant. This soundscape, in turn, creates an auditory environment that stabilises the latent auditory distress veiled by the temporary unison. Steven Connor has formulated a similar argument in his article “Ears Have Walls: On Hearing Art” (2005) about sound in installation art: “Sound is here erected as a barrier against the disordering, extinguishing incursions of sound itself” (53). This statement seems to apply well to n-Cha(n)t as the installation presents us with the protective properties of sound against its own disordering incursions. But what are the implications now for the listener in this interplay between auditory distress and the mechanisms against it? I want to argue here that the listening environment and the ‘community’ of listeners that occupies it play a significant role in this, both acoustically and socially.

Soundscape studies have highlighted the correlations between the listener and a particular sound environment in what is called an ecological approach. Schafer’s ‘Acoustic Ecology’ regards the soundscape as primarily significant for the community that inhabits it: the acoustic community. Through the relations and positions within the soundscape, the individual listener is always part of such a community. Schafer therefore defines the acoustic community

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31 Connor’s article, published in FOAIRM 4 (2005), was originally given as a lecture in the series Bodily Knowledge: Challenging Ocularcentrivity at the Tate Modern, 21 February 2003.
as an ideal social entity along acoustic lines. He observes that the acoustic community stands in relation to a spatial definition of a certain community with regard to its soundscapes, which is evidenced, for instance, by noise abatement by-laws and changing acoustic values in our (post-)modern environments (Schafer 1977: 215-6).

Rokeby’s installation shows how the soundscape creates a sonorous and auditory environment, which serves as a sound habitat for the sound-makers that produce and exist within that environment. The soundscape binds them together as members of a community. However, the sounds that the computer systems reproduce also mutually enable them to exert power and control over the environment. In this way, the acoustic community ascribes to or imposes certain values on its soundscapes. The constant sound of unison chanting could be experienced by the visitor as a protective wall that is restored after each disruption of new acoustic information, just as humming or any other sound routine can shelter and physically enclose people. The soundscape thereby mutually defines the acoustic community.

Schafer and Truax’s respective approaches offer a framework for considering how the soundscape functions in a specific cultural context for a specific acoustic community. More precisely, Truax’s communicational model aims to show “how sound, in all its forms and functions, defines the relationship of the individual, the community, and ultimately a culture, to the environment and those within it” (Truax 1984: 3). His model stresses the influence of the cultural network to which the individual listener relates and metaphorically ‘tunes’ into by being a member of a certain community. What Truax illustrates using this model is that sound and the auditory environment are both part of the socio-cultural matrix (the discourse), which mutually influences the listener in her or his responses.

I argue that the responses by the listener to auditory distress are always subjective but are embedded within the socio-cultural network that she or he inhabits: it is a response of a culturally contingent and historically specific listener. Rokeby’s installation demonstrates how the distress caused by the overload of information and auditory intensities compels the computer system to respond. Through its soundscape, the installation shows how each individual perceptive and responsive system attempts to regain control in response to the caused disturbances. Correspondingly, the visitor responds by listening to the caused soundscapes. I want to argue here that these responses in order to control the auditory distress render the listener as subject: a listening subject.34

33 In chapter four, I will provide an extreme example of the enclosing propensity of sound in terms of ‘audio autism’. This characteristic draws us more inward to our bodies and ourselves.  
34 My study concerns the act of listening in music and audio theatre, and as such with a main focus on the listener as subject. The ‘listening subject’ is therefore a function of my analysis of the case studies to the extent that it embodies certain modes, habits, competences and
Auditory Distress: Interventions of Sound

Steven Connor helps me to define and conceptualise the listening subject. In his chapter “The Modern Auditory I” (1997), he defines a ‘modern auditory self’ in phenomenological terms of embodiment and subjectivity in relation to the sounding world:

The auditory self is an attentive rather than an investigatory self, which takes part in the world rather than taking aim at it. For this reason, the auditory self has been an important part of phenomenology’s attempt to redescribe subjectivity in terms of its embodiedness: ‘My “self”,’ declares Don Ihde, the most enthusiastic of audiophile philosophers, ‘is a correlate of the World, and its way of being-in that World is a way filled with voice and language. Moreover, this being in the midst of Word [sic!] is such that it permeates the most hidden recesses of my self.’ (Ihde qtd. in Connor 1997: 219).

Connor describes the modern auditory self in terms of being attentive, constantly on the alert. He thereby suggests that the sense of ‘self’ does not intervene in ‘the world’ as such but takes part in it: not from a distance but within it. The world is to be understood here primarily in terms of sound, as a sounding world. The sense of self is then an embodied effect of our relation to the world as it enters us through sound. In this way, world and self constitute each other. Don Ihde’s above-cited phenomenological perspective brings to mind the assertion by Walter Ong (1971) that the world of sound places us in the ‘midst of things’. We inhabit sound as it happens to us, but the sound necessarily is just as much in us for it to be audible (Connor 2005: 53).

The ‘threat’ of sound, as discussed earlier, is made particularly compelling by sound’s tendency to expand and surround us. As such, sound has the capacity to penetrate and permeate us. Because of this characteristic, it has been compared by different scholars to a gas or an odour (see Chion 1994: 79; Connor 2005: 48). Seen this way, the necessity of sound to spatially intervene

conventions in listening in relation to signification processes and cultural discourse. The listener is then defined as an ideal ‘reader’ through listening at the centre of the analysis, where listening attitudes can be traced. In a theatre context, it is quite obvious to speak of a spectator, whereas the community of spectators is commonly referred to in aural terms as ‘audience’. However, I will address the individual audience member most often as listener when referring to the actual person and as listening subject when I need to address a certain discursive position by the listener as an effect of meaning-making in response to auditory distress. I thereby do not wish to overgeneralise subjective meanings and ignore any claims on cultural relativism, as the listener (in the singular) always makes meaningful experiences in relation to a cultural discourse and private past experiences.

35 Walter Ong (1982) contrasts the immersive implications and the multi-perspectivity of aural space to the detaching, dissociating, delineating, isolating and individuating aspects of vision (which would support a distinction between object and subject). Such a contrast is based on assumptions that claim the rigidity of the image. However, as Merleau-Ponty has criticized extensively in his work, these so-called trusms about the detaching are deplorably naive, not to say the least incorrect, and should rather be understood in a context of emancipation of sound studies from visual tropes on ideological grounds.
in order to be perceived, as described by Truax, can imply that the listener feels invaded by the sound as it creates auditory distress. This, in turn, can effect her or his sense of ‘self’. The listening or auditory self is affected by the way the listener positions oneself.

Connor, moreover, adopts Don Ihde’s phenomenological approach to the embodiment of subjectivity. Connor emphasises that the feeling of being permeated by sound correlates with our sense of being in the midst of the world. Although Ihde focuses on the primacy of sound in our relationship with the world, the sounds that permeate a sense of self, according to Ihde, are foremost construed by language, by words.66 This explains the apparent slippage between a Heideggerian being in the World and being in the midst of ‘Word’. Behind this slippage resides the rather problematic contention that language constitutes the subject from an early age. This contention has been formulated and studied in psychological studies, psycho-analysis, cognitive linguistics and phenomenology, among others, through a notion of sonorous envelope, which designates the early sound experiences of an infant being primarily surrounded by the motherly voice. These early experiences of an envelope of the voice sound – combining sound with language – are seen as constitutive for our sense of subjectivity.

The sonorous envelope has its origin in these early personal sound experiences, which give rise to associations and feelings of pleasure against auditory distress and excess. The ‘envelope’ means that auditory perception is wrapped up in affective and emotional response (Forrester 2000: 40).67 Didier Anzieu has indicated the psychoanalytical importance of the sonorous envelope, which he describes as a bath of sounds that surrounds us from infancy and that stabilises the infant-subject from early on. He has expressed this idea in his concept of the skin-ego, which was first presented in 1974. The concept is a further elaboration of Freud’s throwaway statement in The Ego and the Id (1923) that the ego could be seen as the mental projection of the surface of the body. It suggests that the ego can contain the psychic apparatus in a similar way that the skin contains the body. This skin-ego is developed in the first months of infancy, when the skin of the baby is still relatively open and vulnerable. The skin-ego is formed by the envelope of sound as container,

66 The idea of ‘being in the midst of Word’ is, for instance, reflected in William S. Burroughs’ (1914-1997) tape recordings in which the author rebels against the constant interior monologues in our thoughts (or the ‘subvocalisations’ when we read) and the idea that language is the body’s ‘other half’ as reflected in and resounding around the self (see N. Katherine Hayles 1997). According to Burroughs, the virus-like qualities of language need to be broken up in order for the subject to ‘desubjectivise’.

67 Michel Chion speaks in this respect of ‘wrap-around superfield’ and ‘acoustic aquarium’ in modern cinema (1994: 131). This surround-sound materialises the sonorous envelope in most popular and technically advanced ways. We are most familiar with the opening screen stating “The audience is listening” while being bathed in loud, vociferous and multidirectional sound effects framing and branding the act of listening under the DolbyTM label.
to which the baby does not yet differentiate in the imagination. Anzieu locates the development in a sonorous or acoustic ‘mirror-stage’, much earlier than the visual mirror stage that Jacques Lacan described. By referring to this early mirror stage in terms of a sound, Connor refers to the concept of the skin-ego as an imaginary envelope to explain the constitution of an auditory ‘I’:

This imaginary envelope is the auditory equivalent of Lacan’s mirror-stage, in that it gives the child a unity from the outside; it can be seen, therefore, as a ‘sound-mirror or […] audio-phonic skin’. Without the satisfactory experience of the sonorous envelope, the child may fail to develop a coherent sense of self; there will be rents or flaws in the ego, leaving it vulnerable to inward collapse in depression, or invasion from outside, leading to the formation of an over-protective artificial skin in certain forms of autism (Connor 1997: 214).

Connor suggests that the skin-ego functions as a ‘sound-mirror’ and artificial skin – an ‘acoustic-phonetic skin’ – with which the subject can recognise itself in relation to the interventions of sound from outside. He thereby regards Anzieu’s concept as a defence mechanism that constitutes and reflects the modern auditory subject at an early stage. The skin-ego functions then as a protective shield in relation to the outside (sounding) world.

However, through the early sonorous envelope bathing in the motherly voice, the child does not only feel protected and contained by feeling at one with the outside world, she or he also steps into the discourse of language constituting her or him as a separate subject. The envelope of sound, as Connor formulated above, constitutes a sense of being in the midst of Word, instead of ‘World’. Language plays an important role in separating the subject from the surrounding world. According to Anzieu, the skin-ego therefore has a significant function “in the psychic apparatus of the acquisition of the capacity for signifying and symbolizing” (Anzieu, qtd. & trans. Schwarz 1997: 38).

David Schwarz explains Anzieu’s hypothesis of a sonorous mirror in relation to the Lacanian mirror-stage: “The acoustic-mirror stage is the precursor of the visual mirror stage, in which the child ‘recognises’ itself in the mirror and face of the mother. The acoustic- and visual mirror stages are part of what Lacan calls the Imaginary Order; it is the division of the child’s experience into binary oppositions […]” (Schwarz 1997: 16). The sound-mirror would permeate the child with the symbolic discourse and binary relations earlier than through recognition of the body as visually separate from the mother in the mirror.

Forrester remarks that though there is no immediate evidence connecting sound deprivation in early infancy with later psychopathology, our primary ‘sensation environment’ is tactile and auditory before it becomes visual: “We feel and ‘sound’ our way into the world before we perceive that world visually” (Forrester 2000: 41). The concept of an ‘audio-phonic skin’ addresses further the haptic qualities of sound (in terms of a ‘haptic space’). ‘Haptics’, as related to the sense of touch, is central to haptonomy: the study of the affects for their therapeutic value of restoring the relation of the human subject with her or his environment through stimulation of the senses and body movement. I will return to Anzieu’s concept of the ‘skin-ego’ and the so-called ‘acoustic mirror’ in relation to auditory imagination and my notion of ‘audio-autism’ in chapter four.
The Frequency of Imagination

20). Through language and voice, we constitute our auditory ‘selves’ at an early age.

In his psychoanalytically inspired book *Listening Subjects* (1997), David Schwarz connects the notion of the sonorous envelope to the issue of communication for the purpose of music. He identifies that the double sense of protection and separation emerges because the child hears the illusion of producing the sounds by the mother in one’s own body (Schwarz 1997: 20). Schwarz explains this undifferentiated state: “The voice of the mother produces at once the model for communication with and separation from the external world” (21). His remarks on the sonorous envelope can be understood in relation to the argument that auditory distress is necessary for perception and communication, even when the sounds are experienced as pleasurable. Here, the sonorous envelope could be said to create an excess which both gives rise to experiences of coherence and separation in relation to the sounding world.

The sonorous envelope therefore marks two opposing qualitative dimensions of sound in general from an evolutionary point of view. Forrester describes these dimensions as “one nurturing, supportive and indicative of comfort, care and safety the other dissonant, disruptive and likely to provoke anxiety” (2000: 33). Both are dimensions of the sonorous envelope that constitute the listening subject in relation to the world’s soundscapes. In relation to this sound-mirror, the disruptive aspect of sound can be regarded as most fundamental to our auditory experiences as it helps to differentiate our auditory selves. In this sense, auditory distress is not only limited to the loud disruptive noises that indexically and culturally presuppose danger in our modern soundscapes. Although nurturing sounds (like the mother’s voice, baby-talk, but also sounds of blood-flow, relaxation ambient music, etc.) tend to have immersive, sleep-inducing and embodying properties, they also always impinge on the listener’s sense of self. In this sense, Maconie remarks that the reflex of falling asleep during a concert for instance can also be understood as an infant solution to auditory (and sensory) distress.40

Examining Anzieu’s psycho-analytic approach through the different perspectives from Connor, Forrester, Schwarz and Maconie helps me to explain why the sonorous envelope of the looping chant in *n-Cha(n)t* can strike a pleasurable chord in often unconscious ways. The protective gesture of masking sound by sound in the never-ending soundscape of *n-Cha(n)t*, can be understood in terms of a sonorous envelope that reminds us of the acoustic

40 Connor also connects immersion to Anzieu’s concept of the sonorous envelope as we have all experienced in maternity and infancy: “Didier Anzieu find[s] an analogue for this immersion in what he calls the ‘sonorous envelope’, or bath of sounds, to which all of us are subject(ed), first of all as foetus(es), in which sound and tactile sensation are powerfully intermingled, and then the experiences of the young child [sic!], in which the sensation of being held and embraced continues to cooperate with the lulling and lalling, all the gentle hubbub, with which the child is surrounded” (2005: 51).
mirror stage. In order to make the connection between the psychoanalytical argument and the experience of this specific sound envelope in the soundscape of the installation – or any piece of music for that matter – I want to add Guy Rosolato’s perspective on the matter.

Rosolato (1974) has suggested that the acoustic mirror is the first model of auditory pleasure and that music would nurture nostalgia for this model as “a sonorous womb, a murmuring house” (qtd. in Schwarz 1997: 8). Rosolato suggests that the sonorous envelope in music reminds us of the desire of an imaginary unity of the body to compensate for the split in our auditory self. In so doing, he highlights the aspect of separation, which we want to overcome through the sonorous envelope. Rokeby’s installation could give rise to a similar idea. Our associations with early experiences of the sonorous envelope turn the individual computer systems into separate auditory entities. The looping chant surrounding the visitor could then be understood as simulating a ‘murmuring house’ which the computer systems as well as the human visitors both temporarily constitute and inhabit. Seen this way, n-Cha(n)t could make us aware of how the sonorous envelope marks our temporary ‘cohabitation’ as audience in the space of listening. Moreover, the feedback between sound producer and receptive systems creates a sense of acoustic community that marks a distance with the visitor as both an observing and intervening outsider. In this sense, the installation makes apparent the position of the human listener who eavesdrops, but also takes part in the sound world thus created. The acoustic community then seems not only to function as an instrument to mask and gain control over unwanted intensities of sound, but it also helps to find one’s identity in relation to the community and the larger socio-cultural matrix.

Soundscape studies confirm the connection between a sense of self (identity) and acoustic community. Along these lines, Truax comments on the modern soundscape: “the soundscape is not an alien force but a reflection of ourselves” (1984: 106). The sonorous envelope and the soundscape share that they both constitute and reflect us as listening subjects or ‘auditory selves’. The listening subject is the effect of our ways of making sense of the world as we sound out our presence through our knowledge, ingrained memories and

41 Guy Rosolato (1974) originally states: “On peut avancer qu’elle est le premier modèle d’un plaisir auditif et que la musique trouve ses racines et sa nostalgie dans une atmosphère originelle – à nommer comme matrice sonore, maison bruissante”. Kaja Silverman translates Rosolato’s phrase in her book The Acoustic Mirror: “One could argue that it is the first model of auditory pleasure and that music finds its roots and its nostalgia in [this] original atmosphere which might be called a sonorous womb, a murmuring house” (Rosolato, trans. in Schwarz 1997: 8; qtd. in Silverman 1988: 84-5). Anzieu’s notions of the ‘imaginary’ bubble of sound, a Lacanian ‘acoustic mirror’ as materialised in an ‘audio-phonic’ or ‘acoustic-phonetic’ skin, or Rosolato’s idea of a ‘sonorous womb’, a ‘murmuring house’, are all metaphors to explain the particular connection between our auditory selves and the soundscapes which we inhabit in relation to our early experiences of separation through sound.
The Frequency of Imagination

assumptions. In this context, Truax points out the significance of feedback in the relation of self and our surrounding world in both listening and sound production:

Therefore, what the listener/soundmaker hears is a simultaneous image of self and environment. Unlike the passive quality of ‘being seen,’ the listener must make an active gesture to ‘be heard.’ The feedback of acoustic information is necessary for orientation, and in the most general sense, the awareness of self in relation to others (Truax 1984: 20).

Truax claims here that the listener is not so much idle or passive in taking part in the world, but that she or he makes an active effort. Sound making then correlates with listening in an equally active response to the sound environment. The feedback loop of the chant in *n-Cha(n)t* demonstrates a similar implication: the sound systems perpetually adjust themselves through sound production in relation to the intervening sounds and the auditory environment of the chant. In this situation of being listened to and reproducing the interventions of sound, the installation can function as a sound-mirror for the human visitors whose sounds could make them aware of their position in relation to the acoustic community, the other visitors, and by implication the outside, sounding world.

Connor’s notion of the modern auditory subject contributes to the arguments of soundscape analysis that acoustic information does not only help us to relate to the sounds in meaningful ways through the qualities and relations of the objects (like texture, density, resistance, porosity, absorptiveness, and so on) (Connor 2005: 52). Our modern soundscapes also place us in a physical and cultural environment that enters us through the enveloping sounds. The sonorous envelope then makes us aware that sound has expansive and voluminous characteristics. It not only gives us acoustic information about our position or distance towards the sound sources, but also anchors us spatially and determines our relationship to our physical position and to others in our immediate environment. The way we relate to this environment and to others is constituted and influenced by the cultural discourse in which we perceive. Connor’s approach thus opens up a perspective for understanding the conceptual node of the listener as subject, the sounding world and the cultural discourse that is shared by a community.

In the following section, I will elaborate on how the listener’s personal competences or aural literacy are of crucial importance in the establishment of a listening subject as anchored in a specific cultural discourse. I will argue further that the listening subject presupposes a discursive position in relation to sound and its sonorous envelope in terms of address and response. Discourse and discursivity in listening then constitute a way for the listener to respond to auditory distress. However, as I will show, this response depends heavily on the listener’s competences in relation to a cultural discourse.
2.3. Exit the Listening Subject: Positioning through Aural Competence

Connor suggests that the modern listening subject is mostly attentive, though receptive in taking part in the urbanite and industrial soundscape of the everyday. Rokeby’s *n-Cha(n)t* pairs the recipient to an active agent that intervenes through sound in a feedback loop. The installation suggests that the receptive systems are equipped with certain competences that help them to position themselves towards the auditory events. It demonstrates another aspect of our human auditory system: the response towards auditory distress necessitates aural competences. I define aural competences as the cognitive means and mechanisms that enable us to adequately respond to auditory distress in constructive, efficient and most often meaningful ways (which also includes a broad notion of ‘literacy’ in our ability to understand and create meaningful experiences). The aspect of effectiveness of our responses implies that such competences can be developed and improved over time.

Soundscape studies are generally based on the assumption that contemporary aural competences are generally undeveloped or lacking. To remedy this, Schafer has devised *ear-cleaning exercises*. This does not ignore the fact that we already possess a certain level of aural competency and literacy, which we have developed out of necessity. Being constantly ‘switched-on’ as listeners, we are used to our volatile, urbanite spaces that are acoustically impermanent and permeable under continuously changing environmental conditions, and that face the occasional and sudden danger of becoming undesirable interferences. As a consequence, we have learned to filter out and select what we want or need to hear in relation to our modern acoustic horizons as a necessary survival mechanism. However, as I will now show through *n-Cha(n)t*, this is not always a flawless process. I want to argue that despite an assumed lack of aural literacy as claimed by Schafer and Truax, creating meaningful experiences or searching for significance through listening is part of our defence mechanisms against auditory distress and it imbues us with certain competences. Through auditory distress we feel addressed and incited to search for signification. I argue here that creating meaningful auditory experiences helps us to regain control over the distress.

In my view, listening is embedded in discourse through its inclinations to make meaningful auditory experiences. Neither Schafer nor Truax, however,

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42 Auditory or aural competences (apart from ‘musicological’ literacy) should not be conflated with being an ‘audiophile’ or an ‘audite’ person, preferring listening above looking, though they can reinforce each other. The difference lies in the adaptability and trainability of our competences. Schafer and Truax have devised ‘ear-cleaning’ exercises to train, what they call, ‘sonological’ competences. Others, like Michelle Comstock and Mary E. Hocks (2003), have referred to ‘sonic literacy’ as an embodied knowledge in composition studies. My understanding of competence, however, involves exclusively the listener’s capability to respond effectively in listening, and therefore relate to sound or music. I will return to the issue of competence at the end of this chapter.
offer a sufficient definition of the cultural discourse in which the soundscape is implanted. Though their theories are also based on the discursive propensities within the listening act, their focus is rather on acoustic information of the actual sounding environment that surrounds us. Therefore, I propose to look at the study of discourse of language. In her book *The Subject of Semiotics* (1983), Kaja Silverman gives a useful definition of discourse, in which she distinguishes two levels. On the one hand, discourse covers all semiotic practices and epistemological attitudes that enable us to communicate and think (the ‘functional aspect’, according to Bleeker 2002: 30). On the other hand, discourse also contains all the assumptions that impose how we make sense of the world (the ‘regulative aspect’). According to Silverman, “signification cannot be isolated from the human subject who uses it and is defined by means of it, or from the cultural system which generates it” (1983: 3). This cultural system generates the discourse in which the human subject is embedded for all its assumptions and attitudes with which it makes meaning of the world. In this way, the subject cannot be detached from the discourse. Silverman bases her study of discourse, among others, on the linguistical-communicational model of Emile Benveniste in his book *Problems in General Linguistics* (1971). I also regard this model as crucial to conceptualising the particular address of sound that urges the listener to make the auditory experience meaningful.

In Benveniste’s model, discourse is a ‘signifying transaction’ between two persons in a linguistic sense: a speaker or referent who addresses the other, namely the addressee or referee. On those terms, the signifying transaction determines a relation of an ‘I’ towards a ‘you’. According to Benveniste, the pronouns ‘I’ and ‘you’ stand for ideal images of referents and referees. However, as the French philosopher Louis Althusser has explained, the discourse is not necessarily an exchange among actual people. It is rather an exchange between cultural agents that transmit ideological information (Silverman 1983: 48). These agents, expressed in the relation of an ‘I’ as opposed to a ‘you’, can then be understood as ‘subjects’ as a result of this relation in the signifying transaction. Through signification, the subject defines her or himself as being addressed by the other (as addressee). Silverman concludes from Benveniste’s model that the subject only exists in relational terms as constituted through the discourse. She therefore defines subjectivity as a ‘set of relationships’ (1983: 52).

For Silverman, the signifying transaction, moreover, takes place in language. She poses language at the centre of the subject’s establishment in

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43 I am greatly indebted to Maaike Bleeker’s understanding of Benveniste’s communicational model that she discussed in relation to her notion of the ‘subject of vision’ in her dissertation, *Visuality in the Theatre: The Locus of Looking* (2008). My argument fully agrees with her approach and contributes along similar lines to an understanding of a proper ‘subject of audition’ or ‘listening subject’ as complementary to Bleeker’s notion.
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signification. Based on the psychoanalytical aphorism of Lacan that the unconscious is structured like a language, Silverman asserts that language constitutes the subject in a relation of interdependency. She claims that language and subject are correlated through discourse: “language can only be activated through discourse, within which the subject figures centrally” (1983: 72). Language, however, does not need to suggest verbal content. Benveniste’s model focuses rather on the positions of the referent and referee that are constituted by the discourse and that make any meaning in that relation possible. This approach conceptualizes ‘meaning’ as a position that materializes the subject as the addressee of an address. This opens up a new perspective for an understanding of the address of sound towards the listener and her or his subjectivity. Language is not the prerequisite for the formation of a listening subject in the act of listening. Verbalisation is, likewise, not necessary in order to interpret sound but, due to our compelling relation to it in our thoughts, language plays a large part in the functional and regulative aspects of discourse. 44

Following this line of argument, sound necessarily intervenes in the listener – thereby causing auditory distress – which makes her or him feel addressed as auditory ‘I’. In this way, sound affects a sense of self in listening that is reflected in the way the listener relates to the sound and positions one’s self. This communicative model is also demonstrated through the feedback system between sound producer and perceptive system in n-Cha(n)t. In the installation, the visitor’s intervention and its reproduction by the computer systems constitute a relation of an intervening I and a receptive you that becomes in turn an I in the feedback system for the other perceptive systems (you). The I-referent is then the sound-making agent that copies the sound it registers. The receptive agents that constitute and attempt to restore the acoustic community constitute the you referees.

Benveniste, in addition, suggests a third category, which is indispensable for his communicative model to be sufficiently flexible: the category of the ‘spoken subject’, the subject who is constituted through identification with the subject of speech. By analogy, in the context of auditory experiences in which the object is not speech but sound, we can identify a subject of audition as a category of a subject that feels addressed by the sound(s). For matters of clarity, I will further address this subject in my study as listening subject. The listening subject is constituted through the address of the sounds that catch the listener’s attention and that make her or him identify one’s position with the subject position that is implied. This subject is produced through the discourse that makes any signification in the act of relating through listening possible. This category of the listening subject also highlights that the subject is

44 In chapter three, I will show how language plays a role in narrativisation without the necessity of verbalising meanings ascribed to sound or music by the listener.
foremost a discursive position that is embedded in the ways we relate to and make sense of our surrounding world.

By reading Connor’s notion of the ‘auditory self’ through Silverman’s subject notion, I conclude: an ‘auditory self’ comes about in complying with or positioning oneself towards the cultural discourse in which the listening act takes place and which necessarily involves interventions of signification by the listener. As I have already introduced through Schafer’s and Truax’s arguments, signification in the act of listening involves interplay of the listener with both the environment and the acoustic community to which she or he relates. Correspondingly, Silverman reminds us that we also need to take into consideration the cultural discourse in which the listener is embedded. Depending on the degree of compliance to the values, habits and regimes of listening that belong to a cultural discourse, the listener can find gratification in ‘grasping’ sound with and within this matrix.

As it comes to meaning, sound, in its physical manifestation, is nothing more than vibrations, meaningless resonances. The listener, however, attributes meaning to sound in relation to a cultural discourse and context in which the act of listening takes place. Through its feedback system, Rokeby’s installation n-Cha(n)t illustrates how signification comes about in relational terms between the human visitors, the computer systems and the environment of the installation space. The computer systems try to copy the sounds picked up through the microphones as faithfully as possible by means of speech-recognition protocols. As such, the systems reproduce the human urge to ‘grasp’ the perceived stimuli in terms of information that is significant with regard to meaningful categories defined by language. The speech-recognition software overdetermines this urge by comparing all the acoustic information with its linguistic ‘knowledge’ of speech. As a result, the acoustic interruptions are immediately filtered through linguistic parameters to reproduce them in loops of syllables. However, as the loops are initiated by various interventions of sound, their internal meaning is rather idiosyncratic and becomes redundant. It is the human visitor who attributes meaning to the sounds when judging the outcome.

In order to attribute meaning to the feedback loop, the human visitor of n-Cha(n)t needs to feel addressed by the sounds to do so. After the visitor has created an unbalance in the feedback system by producing a sound in the microphone, she or he could first feel observed as a sound producing ‘I’. She or he may then gain a sense of being a ‘third’ subject in-between the computer systems when they close off from outside sounds and turn to themselves to restore the unison in reproducing the registered sound. As a third party, the visitor could then relate to the systems through comparison of the sounds that are reproduced. Though the interrelation is manifested by a reproduction of sound, the communication some interesting flaws. First, the installation highlights only those words that are recognised by the speech recognition
software on the screen. In so doing, the system often fails to recognise the exact words according to the English speech patterns and grammar it has been programmed for. This demonstrates a dynamic relationship between the perceptive system and processes of signification that are entangled with language. Second, the produced ‘errors’ call into question how we subjectively and individually attribute meaning to what we hear, which does not have to be governed by language. The comparison between sound and meaning is realised by the visitor who judges the results. The reproduction of the sounds could then be judged in terms of the linguistic categories of human speech, though the listener might as well listen to the soundscape for its musical and aesthetic properties. Some may judge the failures to be linguistically wrong, while others may regard the feedback loop as entrancing.

The errors in the reproduction of sound make us aware that language drowns the individual listeners into a discourse that is selective in the processes of filtering and attributing meaning to the auditory stimuli. In this context, the installation’s soundscape could be seen in relation to the early auditory exposures of language in the sonorous envelope at an early age. Similarly, the chant functions as a sonorous envelope that facilitates communication between the systems and creates a sense of coherence, whereas every sound intervention demarcates the systems as separate entities. The feedback system then represents a nostalgic gesture to restore the sonorous envelope and drown out the separating act of language. However, the visitors also interact with this sonorous envelope by introducing a cultural discourse through their judgments.

The judgements turn the visitors into ear-witnesses of the acoustic community that is established by the chant, while at the same time allowing them to take part in it through both interventions of sound production and auditory reception. In so doing, they assert their role and position as listening subjects. In this context, Benveniste’s model could shed light on how the visitors position themselves in the feedback system, shifting from intervening to a sense of being intervened by sound. In this reciprocal system, the soundscape gives rise to a feeling of ‘self’ as a way of positioning oneself in relation to the subject position that is implied by this mechanism. As the errors point out, the interrelations between computer systems and human visitors are embedded in a discourse through processes of signification. The discursive network defines the listening subject in terms of the relations that are continuously changing. As such, sound highlights the ever-changing nature of the interrelations and the effects they bear on the listener in her or his sense of self as listening subject.

Conversely, the so-called mistakes of the system are productive in demarcating the limits of the system’s ‘literacy’ as virtual intelligence. Through its limitations, it offers us a model for our own aural competences. These competences define how we deal with the constant changes in our
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position and relation to the sounds in terms of signification. The linguistic errors in the installation’s feedback system could then draw our attention to the fact that not only a shared cultural discourse and an immediate context define our processes of signification. It is our aural competences that enable us foremost to position ourselves in a particular way towards what we hear.

Schafer has drawn attention to ‘sonological’ competences in this respect. He describes sonological competence as a type of literacy of the listener to relate to and understand the surrounding world in terms of how she or he can express auditory experiences:

Sonological competence unites impression with cognition and makes it possible to formulate and express sonic perceptions. It is possible that just as sonological competence varies from individual to individual, it may also vary from culture to culture, or at least may be developed differently in different cultures (Schafer 1977: 274).

Schafer acknowledges that sonological competences are not only defined subjectively and can be trained, but that they are also culturally contingent. Schafer’s acknowledgment supports my argument that the cultural discourse plays a significant role in the acquisition of our competences in listening and describing our auditory perceptions. The concept of sonological competence therefore has a certain limit to the extent that we can actively develop our listening skills and attitudes individually through exercises.

Though initially defined as different from ‘musicological’ competences, Paul Rodaway (1994) argues for a shared value of Schafer’s ear training exercises in intensifying auditory perception:

It is commonly recognised that ear training enhances the normal hearing person’s hearing discernment or accuracy, as in music training (e.g. Schafer 1967) and that recognising a sound (as in language) heightens auditory experience. The incomprehensibility of a foreign tongue reminds us of this (97).[45]

Schafer prefers the term ‘sonological’ to detach the listening experience from any aesthetic or structuralist judgment that would stem from a notion of ‘music’. (Consider, for instance, the old opposition between absolute and relative hearing, which in my opinion is rather a matter of speed in recognising the tones either in relation to a direct tonal environment or to one’s memory). Schafer formulates an alternative to the term ‘musicological’ with its claims in musicostructure and musical listening as competence, such as Nicholas Cook (1990) has defined: “If by ‘musical listening’ we mean listening to music for purposes of direct aesthetic gratification, then we can use the term ‘musicological listening’ to refer to any type of listening to music whose purpose is the establishment of facts or the formulation of theories” (152). Structural listening is most dominant in musicological literacy for the purpose of formulating theories. Sonological competence defies such approach with its main focus on sounds in relation to their environment, but with an acute ear for acoustic parameters. The latter finds its inspiration in the musique concrète with Schaeffer’s Traité des objets musicaux (1966). In contrast, Theodor Adorno has written numerous critical essays on structural listening as opposed to ‘atomistic listening’ induced by popular music, i.e. a type of listening to music in

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Rodaway’s analogy of listening to a foreign language implies that, when we are excluded from the meanings and the fine linguistic nuances, our search for recognisable and familiar sounds increases. Recognition of a sound heightens our experience of that sound. Likewise, ear training enhances our ability to recognise sounds and place them in relation to a certain acoustic horizon, environment and cultural discourse. Conversely, the discourse has a regulative function in our aural competences that constantly adapts and develops, according to the different situations we relate to, such as when we are confronted with a foreign tongue.

Rodaway further nuances Schafer’s conviction of the necessity of ear-cleaning exercises in arguing that we also use technological extensions to compensate for the insufficiency of our competences: “We compensate for our less acute hearing not only by training our ears – or ‘ear cleaning’ […] but also by technological ingenuity and, in particular, various kinds of amplifier and other auditory tools” (Rodaway 1994: 92-3). The use of such technological apparatuses that assist our ears is, however, also embedded in cultural discourse and often necessitates additional auditory skills and regimes of perception.

Rokeby’s interactive installation provides evidence for how the reliance on technological means (microphones, computer processors, amplifiers, loudspeakers) creates a highly focused listening environment for both computer system and human visitor. In this ‘augmented’ environment, the lack of flexibility in the system creates an awareness for the errors, which questions both the competences and technological extensions in the installation to compensate for this deficiency. The limitation of the installation therefore confirms that competences are of crucial importance as a means to cope with sound by way of recognition.

Up to this point in my argument, Rokeby’s installation has helped me to discuss different aspects of auditory distress: its necessity in our perception and its role in coping, filtering and processing unwanted or excessive intensities. The installation demonstrates how our coping mechanisms to deal with auditory distress stand in relation to the particular listening environment with a certain acoustic horizon, the cultural discourse as reflected in an acoustic community, and the individual aural competences. I have also shown how the acoustic horizon, the acoustic community and the sonorous envelope can function as mechanisms themselves to mask certain intensities of sound and regain control over the auditory distress. However, n-Cha(n)t also presents limitations to the discussion of the coping mechanisms. The bits and pieces with a rather distracted attention (see for a comprehensive overview of Adorno’s work on music, *Essays on Music*, ed. by Leppert 2002; and in particular about atomistic listening, the essay “Little Heresy”, 1965). For Adorno structural listening is the highest form of music appreciation. In this respect, musicological competence differs crucially from ‘sonological’ competence, which would only partially give importance to structural matters.
installation highlights most specifically the implications of such mechanisms in relation to sound (re)production and language recognition in terms of speech. As such, it shows that recognition of sounds in linguistic terms is highly selective, and that speech is primarily sound before it is recognised as language. The system, moreover, lacks sensitivity for speech-acts and cultural discourse as the interventions of sound are merely electroacoustically reproduced for the purpose of stabilising the system. As a model for the human auditory system, the installation also fails in adaptability, which is so vital to the aural competences to effectively respond to auditory distress.

In what follows, I propose another case study that helps me to develop additional implications of the mechanisms that spectators can use in response to auditory distress in the theatre. I will discuss the music theatre performance *Ruhe* (2007) by Josse De Pauw for Muziektheater Transparant.46 I have already explained that an excess of intensities causes auditory distress, thereby intervening in the human auditory system. Like in *n-Cha(n)t*, the excess in listening in *Ruhe* is channelled through a sonorous envelope and a certain community constituted by sound. Through the performance, I will conceptualise how both aspects require a certain sense of authority in sound, causing new levels of auditory distress. Consequently, I will discuss further implications for the listener’s responses and agency in listening.

### 3. *Ruhe*: Exposures to Excess and Lack in Listening

So far, I have discussed how auditory distress is a general aspect of listening as a result of the necessary intervention of sound and its excess in intensities to our continuously susceptible ears. Now, I will consider the implications of auditory distress as specifically reflected in the music theatre performance *Ruhe*. Earlier in this chapter, I stated, based on Maconie’s argument, that taking part in sound production or distancing oneself from a sound source, including its direct physical and social environment, are two ways of coping with auditory distress. However, these responses are most often not very well accepted in our modern theatres. As Connor also remarked, symptomatically for the modern auditory self is that the listener takes *part in* rather than takes *aim at* the auditory world. In most cases, as Soundscape studies have suggested, the listener responds through internal, cognitive mechanisms in

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46 *Ruhe* premiered at the Kunstenaal, des Arts in Brussels 2007, after which it toured through Belgium and the Netherlands. Its premiere in the Netherlands was at the Zeeland Nazomer Festival 2007 in the Van Riessen Houthallen in Goes. I attended the performance at the Stadsschouwburg Amsterdam on 26 January 2008. Josse De Pauw has developed a type of text-based music theatre, often as narrative concerts, with LOD and Het Net, among which, *Die Siel van die Mier* (2003-4) and *Liefde/Zijn Handen* (2007-8). As an actor, he was also recently involved in music theatre productions such as *Dédé le Taxi* (2006-7) for Theater Antigone, La Compagnie du Tire-Laine and De Veenfabriek, and Babar/Le Fils des Étoiles (2008-9) for Muziektheater Transparant.
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listening with which she or he positions one’s auditory self. The listening subject then emerges as rather an effect of this positioning. As a result, the listener creates meaningful auditory experiences.

Through Ruhe, I will examine why the listener in the theatre feels urged to turn auditory distress into a meaningful experience. First, I elaborate on how the excess in listening through the sonorous envelope is particularly constitutive for auditory experiences in music theatre that call upon our competences to respond. Then, I will observe how, complementary to this excess in listening, our aural competences in the theatre are related to a crisis of signification that is reinforced through a lack of visual and other sensory stimuli (visual and sensory deprivation). This helps me to explain how signification is enhanced by this fundamental lack or insufficiency in listening. Ultimately, this mechanism shows the specific role of the theatre context in highlighting auditory distress and the soundless responses of the listener in relation to one’s aural competences.

3.1. Authority of the Sonorous Envelope

Josse De Pauw’s Ruhe contains monologues based on the novel De SS-ers (1967) from the Dutch authors Armando (pseudonym for Herman Dirk van Dodeweerd) and Hans Sleutelaar. The novel was written based on interviews with Dutch ex-SS-officers who volunteered in Nazi-Germany during World War II. It caused quite a stir in post-War literary criticism in the Netherlands.
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towards the end of the 1960s. In the interviews, former SS volunteers talk freely about their motivations as to why they collaborated with the German army and the National Socialist Movement, the Dutch ‘NSB’. Their motivations, though historicised in the ideology of National Socialism, however, sometimes sound very topical and plausible today.

In De Pauw’s performance, two actors perform a selection of these testimonies as monologues. The monologues are paired to a selection of songs by Franz Schubert performed a capella by a male choir, the Collegium Vocale of Ghent (Belgium), consisting of twelve singers. The songs have the contrasting effect of pleasurably soothing the senses through harmony in the perverted context of the politically laden monologues. At the end, a newly composed piece by Annelies van Parys is performed, which disrupts the original tonality of Schubert’s “Wie schön bist du, freundliche Stille, himmlische Ruh” (how beautiful you are, friendly stillness, heavenly silence), to which the title of the performance also refers. Ruhe demonstrates that the sense of unison is all the same based on auditory distress, marked by the contrastive interventions of words in the monologues and dissonances in van Parys’s piece.

An important aspect of the listening experience in Ruhe is the spatial arrangement of the staging. The audience shares the same space as the singers and the actors. Upon entering the performance space at the beginning, the singers have already begun singing a Schubert song in charming harmony. When walking through the corridor leading to the performance space, the audience can already hear the songs in the distance. Each audience member picks one of the wooden chairs that are positioned in a circle. The singers are scattered among the audience and stand upright on their own chairs in the same circle. Their perspective above the seated audience gives them a sense of authority, while the proximity of their sounding bodies creates an intimate feeling of being in the middle of the musical performance as in a chamber concert. This creates an unusual listening situation in the theatre, which at first sight does not favour any ideal point of listening. One can choose to sit closer to a bass-singer or to any of the other higher-pitched voices. However, once the listener is seated, any temptation to change places is resisted, as this could disturb the listening experience of the fellow audience members. Despite the free seating, the performance is still based on an ideal listening situation.

47 The authors are said to have voiced and portrayed the SS-volunteers too humanly, which was criticised by some critics as being hidden Nazi-propaganda.
49 Any noise, like snoring, for instance, could catch the attention of the neighbouring listeners and break the cohesion of the musical experience. The same holds for walking away or vocalising in Maccon’s strategies of response to auditory distress. This reminds us of John Cage’s well-known composition 4’33” which made the audience members aware of the social context of the listening situation by using ‘silence’ or rather, its phenomenal inexistence, as the
The singers are evenly divided within the circle of chairs, which gives the listeners the intimate feeling of being enclosed in sound. The beguiling harmony of the Schubert songs heightens the effect of a sound ‘blanket’, literally covering and captivating the listeners in a sonorous envelope. Though creating auditory comfort and pleasure, the sonorous envelope also creates excess, which could result in a new kind of auditory distress as a result of an intemperance of sensory stimuli and text. 

Besides the appeal of the harmony in the songs, the lyrics in the German language occasionally catch and distract our attention away from the stillness (the ‘Ruhe’) that is conveyed through the harmony. As such, this distraction shows that musical harmony also creates auditory distress as there is always the looming anxiety that the concord could be broken up at any time. The combination of lyrics and music in a song is therefore always in a vulnerable equilibrium and can produce excess in listening. The envelope of sound constitutes this excess. As the controlled spatial arrangement highlights, sound engulfs the listener from different sides. Though experienced as pleasurable, this sonorous envelope can make the listener aware of the excess of intensities that affect her or him in the most forceful of ways. This excess and the listener’s awareness of it, as I will explain, have cultural, social and political implications.

Earlier in relation to n-Cha(n)t, I introduced Connor’s argument, in line with Don Ihde, that the auditory self is a correlate of the world, permeated by sounds and words. The sonorous envelope is likewise a correlate of our surrounding modern environments, which often overwhelms us with an excess of sounds, texts and images. Schubert’s romantic and pleasant-sounding songs in Ruhe then work rather as a counterpoint to this excess. In this context, Schafer has introduced his rather idealistic notion of the ‘soniferous garden’. He refers to the gardens in French Baroque that had water fountains with mechanisms producing sounds. This cultural-historical concept of the garden has a harmonious appeal to the senses: “A true garden is a feast for all the senses” (Schafer 1977: 246). Ruhe seems to aim at such a soniferous garden in the theatre through Schubert’s songs. The harmony between the singing voices creates a sense of an acoustically controlled space in contrast to the turbulent modern world.

Moreover, similar to n-Cha(n)t, the sonorous envelope of the songs in Ruhe draws our attention to the social functions of sound, bringing listeners together in an acoustic community. The male choir forms an acoustic community here. The performance shares similarities with n-Cha(n)t in showing how the channelling of stimuli plays a significant role in the essential component of the performance. Every cough, sigh or movement in the audience was marked by an enduring silence of a man sitting in front of a piano, opening and closing the lid, counting the measures and changing the pages of the score.

As the interactive installation n-Cha(n)t demonstrates, sound is a residue to vocally produced language or words causing excess that cannot be processed by the ears in its entirety.
establishment of a consensus shared by a community; here materialised in the harmony of singing together. In so doing, the sonorous envelope is used as a defence mechanism to minimise the intervening effects of unwanted intensities causing auditory distress. In Ruhe, the listener is made aware of the exclusionary nature of such a community, defining and occupying the listening space. Steven Connor (2005) formulates this controlling power in terms most similar to my notion of auditory distress:

But sound is not all pleasurable permeation or erotic meeting of membranes. Sound, as Aristotle puts it, is the result of a pathos. All sound is an attempt to occupy space, to make oneself heard at the cost of others. Sound has power (56).

The enveloping sound of the Schubert songs in Ruhe demonstrates this overpowering claim of sound on space and, in so doing, on the space of the listener. This shows how the ideas of harmony and ‘stillness’ can be sensed as authoritarian and related to the supremacy, which the idea of ‘desired’ sound brings to bear on the listener.

The coherence the singers created through the harmony of the music thus evokes a power relation imposed on the listeners. The performance demonstrates how exclusionary and ‘totalitarian’ it is to be part of a choir. In this Nazi context, the sonorous envelope is therefore impregnated with an ideological statement. None of the singers can risk singing a false note or having a soar throat. Likewise, the harmony excludes any dissonant intervention. At the end of the performance, the coherence is broken by a new composition by Annelies van Parys, which deconstructs certain motives from Schubert, sliding into dissonances. For this final composition, the singers have left their chairs and relocated themselves further away from the audience in a more traditional choir formation with music stands and scores. The music performance then becomes a more conventional ‘concert’, which asks for a different type of attention.

Consequently, the harmonious Schubert songs and the dissonant composition by van Parys show two contrasting aspects of the sonorous envelope. On the one hand, the sonorous envelope is a powerful instrument to restrain auditory distress. On the other hand, the envelope causes, yet again, auditory distress as a result of its excess of certain intensities in listening. Through the immersive qualities of the envelope, we experience that sound has an authority to which we feel compelled to subject our auditory selves. Whether it is the chant of reproduced linguistic sonorities in n-Cha(n)t or the Schubert songs in Ruhe, the envelope of sounds forces a state of responsiveness upon us, which affects our sense of self. In the sound-mirror stage, we learn to comply with the envelopes of sound from an early age, which results in certain habits, attitudes and competences that assist us as strategies to intervene and channel the excess through listening. So the sonorous envelope – with its inherent mechanism of separation between the
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sounds and the addressee in the acoustic mirror stage – is itself based on an excess of intensities to which we automatically respond in order to keep the momentum.

Yet Ruhe demonstrates that auditory distress can equally be caused by the experience of the sonorous envelope. The envelope invokes first and foremost a “feel good” sensation, which is, however, turned into introspection when the music is interrupted by words and later by the dissonances in van Parys’s composition. In the Schubert songs, the lyrics are not as significant for their content as much as for the sound of the German language in relation to the Nazi context. Subsequently, the testimonies of the former SS-members intervene in the harmonious state of listening to the songs. The verbal interventions make us aware of the precarious coherence on which this harmony is based, which is broken down further in van Parys’s composition. Ruhe thereby attaches a critical dimension to the sonorous envelope as ideologically constructed in relation to the cultural discourse – and cultural memory – that is called upon and shared by the listeners.

As a result of this awareness of the auditory distress caused by words and dissonances, the sonorous envelope is exposed as a representation, which we only recognise as such when the coherence is broken. According to Schwarz (1997), the envelope of music can be seen as a representation of the pre-oedipal acoustic mirror. It brings pleasure but it cannot be accessed directly as an event, as it is always a representation of an experience, produced retrospectively (Schwarz 1997: 8). Ruhe makes us aware of the sonorous envelope as a representation, thereby holding a mirror to our own personal associations. Despite the enchanting experience, we can recognise the sonorous envelope as a representation, first and foremost through the spatial positioning of the singers.

By repositioning the singers to the background, the change of perspective makes us aware that the listening experience depends on how we read and relate to the representations in music. This affects how we construe meaningful experiences through listening. The urge to make the auditory

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51 The actor literally interrupts the music by coughing and repeating ‘ja ja ja ja’ leading into the monologue.
52 Schwarz uses the word ‘fantasy’ to denote the sonorous envelope as thing and as space: “Both listening thing and listening space are always retrospective fantasies since we have direct access to neither events that structured our developing subjectivity nor historical contexts as immanent experiences of reality. These experiences and contexts have left traces, however, in how we listen to music” (Schwarz 1997: 4). Schwarz shows through his notion of sonorous envelope as fantasy thing and listening space how symbolic representations of the acoustic mirror in music are significant for the way they have shaped our responses. Among the representations, he regards the echo structures in music: “More specifically, there are many aspects of music that suggest an acoustic mirror: question/answer structures, statement/counterstatement, unison melodies, melodies doubled at the octave, inversion, imitation, theme and variation, echo effects in 1950s rock, etc.” (21-2).
distress meaningful is caused by the interventions of the words. The dissonances in van Parys’s vocal music extend the growing auditory distress in the listener that is constituted by the excess of meaning in the combination of music and words.\textsuperscript{53} In relation to the context of the monologues based on the testimonies of the SS-witnesses, the dissonances could then represent our anxiety with regard to ideological content. The music could anachronistically evoke the idea of ‘entarte Musik’ (degenerate music), which in the ideological context of National Socialism and Nazi propaganda could play upon a cultural memory of the ban on unacceptable music.\textsuperscript{54} This shows how, in our responses to a sense of ‘excess’ in listening, meaning of music and cultural discourse are interconnected.

In contrast to the excess in listening, \textit{Ruhe} has one more defining feature that accounts for our urge to make sense of auditory distress: a lack of sensory stimuli and semiotic content. In the following paragraphs, I discuss the notion of lack in terms of \textit{sensory and visual deprivation}. I argue that deprivation has a reinforcing effect upon our meaning-making processes of sound and music in the theatre.

3.2. Intensifying Excess: Visual Deprivation and the Auditory Gaze

Josse De Pauw’s \textit{Ruhe} creates a context of \textit{visual deprivation} by minimising the visual stimuli, which puts extra emphasis on sound and the listening act. If the excess in listening finds its equivalent in the bodily experience of a totally deaf person who does not hear but is acutely aware of sound as vibration, visual deprivation has its extreme correlate in a totally blind experience: the blind individual’s auditory faculties tend to be more acute or more dominant in perception.

Theatre always creates a deprived context as it needs an impoverished environment – an ‘empty space’ (Brook 1968) – for creating a situation of control and signification. Like blindness, deprivation in the theatre urges the spectator to sharpen her or his auditory sense and listen in a more focused environment. Richard Wagner realised this principle by darkening the auditorium in the Bayreuth Festspielhaus for the first time in 1876. The darkened listening environment aimed at supporting the immersion of the spectator into the drama on the stage. However, the Wagnerian gesture of ‘blinding’ the listener only \textit{approximates} the experience of the blind, to which

\textsuperscript{53} This verifies how meaning of music is very dependent on discourse and context as a result of an otherwise lack of direct meaning. I will develop this idea of lack later in this chapter.

\textsuperscript{54} Especially under the supervision of Heiner Goebbels as Minister of Propaganda, music was heavily controlled by the Nazi’s in the Third Reich, which led to the idea and the Munich exposition of ‘Entartete Kunst’ (1937) as part of the Nazi propaganda. At this exhibition, examples of ‘degenerate’ art and music were on display. In 1938, a musical equivalent, the exhibition ‘Entartete Musik’, opened in 1938 in Düsseldorf at the first \textit{Reichsmusiktage} (Music Days of the Reich).
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seeing people will never really have access. Besides, there are many degrees and types of blindness (like being born-blind and accidentally becoming blind), which would make a similarity with temporary visual deprivation in the theatre only superficially fitting.55 What matters here is that the comparison demonstrates how visual deprivation reinforces the effects of auditory distress caused by excess. Jacques Lusseyran draws an interesting parallel in And There Was Light (1963) between deprivation and excess in the experience of an accidentally blinded person:

Blindness works like dope, a fact we have to reckon with. I don’t believe there is a blind man alive who has not felt the danger of intoxication. Like drugs, blindness heightens certain sensations, giving sudden and often disturbing sharpness to the senses of hearing and touch. But, most of all, like a drug, it develops inner as against outer experience, and sometimes to excess […] (Lusseyran, qtd. in McLuhan 2004: 68).

The lack of visual and semiotic content enhances the excess in listening, causing an intensification that, in line with Lusseyran, can be compared to a feeling of ecstasy. As Ruhe shows, sharpening the auditory sense in the theatre through visual deprivation can likewise have such an ‘intoxicating’ effect. In the affective responses to the excess of intensities in the sonorous envelope, the listener is at first ‘deaf’ for its authoritarian power, becoming enchanted by the perfect harmony.56

As Ruhe demonstrates, for deprivation to occur, the listening space does not need to be darkened completely. The context of deprivation comes about by dimming the lights and lightening the performance space with only a few light bulbs hanging from the theatre grid above. The light bulbs are completely dimmed only near the end when the video work of David Claerbout, entitled Raurlo, Bocurloscheweg 1910 is projected onto one of the walls. The sudden darkening relocates the observer’s attention to the projection, which shows an idyllic, undisturbed Dutch landscape, motionless like a postcard or a tableau vivant. The picture shows a mill and a big tree in the shadows of late afternoon. The composition by Annelies van Parys is performed in a low voice (quasi sotto voce). Gradually, while becoming accustomed to the light of the screen in the darkness, one becomes aware that the tree in the postcard is actually moving in the wind. The eye catches this

55 Although darkness is part of our modern theatres, many experiments with blindfolding the spectator have been performed to create new, embodied experiences that disrupt the traditional theatre and theatricality. Cilia Erens and Justin Bennet, for instance, in Blind Date in Shanghai (Rotterdam, 2001) have created an alternative theatre form with minimally edited soundscapes in the Netherlands to approximate the experience of the blind. The ‘blindness’, however, is only temporary for the duration of the performance and surpasses the differences between the experience of a person who is born blind and one who became blind at a later stage of life.

56 To discuss this feeling of intoxicating pleasure or ecstasy in listening, I will later introduce the notion of ‘aural bliss’ based on Barthes’s jouissance (see chapter four).
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miniscule change, when sounding dissonances disturb the stillness of the rustic landscape. The darkening of the space intensifies here the eye and the ear, urging correspondences between them.

The visual deprivation in the theatre shares much with the experience of the blind in that it creates a context that intensifies not only our auditory perception, but also our sense of space through sound. Based on the observations of psychologist James J. Gibson, Rodaway (1994) describes how the perspective of the totally blind can teach us some fundamental aspects of auditory perception:

In particular, the blind find their auditory capacity strongly influenced by the context of hearing and thus remind us of the important role of the environment in structuring auditory information (see Gibson 1968). The blind remind us of the sheer richness of auditory experience and the extent to which the environment itself structures the sounds reaching our ears (Rodaway 1994: 96-7).

The blind experience draws our attention to the influence of the environment on the act of listening. Apart from the acoustic information that the environment conveys, visual deprivation certifies the cognitive influence of how the environment structures our reading of the sounds through context. In this way, the darkening of the space in Ruhe creates an environment in which the final piece of music disperses the observer’s attention between foreground and background, between gazing and hearing.

This deprived context in Ruhe, moreover, leaves much to the imagination. The gradual movement of the leaves in the tree and the uncanny dissonances in the song make the attentive observer aware that nothing is what it seems at surface level. Visual deprivation enhances here the correspondences between visual image and sound. In literature, these correspondences between different senses have generally been discussed through the concept of synaesthesia. Richard E. Cytowic’s neuro-cognitive approach to synaesthesia, for instance, also includes the role of visual deprivation:

Normally, only some of the sensory input that constantly bombards the brain is relevant. Most of it is filtered out. Experience with sensory deprivation […] shows that removing all sensory input leads to psychotic thinking, perceptual distortions, and hallucinations. […] But the rule of thumb is that a brain deprived of external input will start projecting an external reality of its own, readily perceiving things that are ‘not really there’ (Cytowic 1993: 133).

57 In particular, ‘acousmatic’ listening contributes to this effect, which I will introduce in chapter two. I will also return to this issue in chapter four when I specifically discuss how visual deprivation can stimulate auditory imagination.
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Cytowic notes that sensory deprivation could cause perceptual distortion and psychosis, which confirms that deprivation brings along certain levels of distress. My study is, however, not aimed at the psychophysical effects of deprivation. Yet what Cytowic’s ‘rule of thumb’ does confirm, is that visual deprivation leads to an enhancement of auditory perception, and of our attention to the immediate environment. When the perceiver can only partially relate to an external context, she or he could respond to this lack of visual stimuli by filling in the gaps and projecting an external reality through the imagination. The “things that are not really there” should then be understood as imaginative gap filling in order to compensate for the context of visual deprivation.

In Ruhe, the visual deprivation plays with our perception of the projection. One could pose the question: is that tree really moving in the postcard? Or is it a figment of my imagination? The visual deprivation calls for a heightened perception of sound, which feels the need to be complemented by visual input. This implication of visual deprivation is supported by the notion of the auditory gaze, which Jean-Paul Sartre rather accidentally describes in L’être et le Néant (1943, trans. Being and Nothingness in 1956). This notion exemplifies how the intervention of sound in the ear borders on sense of spectatorship and voyeurism to the eye. Sartre describes how a sudden auditory intervention can disturb a visual experience by marking the other’s presence and gaze. In a passage of Being and Nothingness, Sartre recounts how a man peeps through a keyhole, which completely absorbs him in his

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56 I want to make one annotation to Cytowic’s claims on the effects of deprivation in its most extreme forms. In addition to visual deprivation, it is also conceivable to consider auditory deprivation. John Cage’s oft-cited anecdote of his visit to the anechoic chamber at Harvard University in 1951 (a sound-proofed laboratory room without any reverberation) has offered us a corrective view. According to the anecdote, Cage heard, despite the total deprivation, a tone of high frequency, which he recognises as his nervous system, and a low tone produced by his blood circulation. This observation made Cage conclude that silence is inexistent in life. The anecdote, however, also shows that auditory deprivation does not immediately have to lead to ‘psychosis’ in case of a temporary exposure: rather, it heightens awareness for an embodied experience of intensities.

59 Neuroscientists have identified the cortex, the limbic system and the somatosensory nervous system as containers of in-grained strategies to make a model or representation of the world as a basis of comparison to external events (Finkel 1992: 404). When we are deprived of these external events, we produce or project a reality of our own according to such a model.


61 Different to looking, the word ‘gazing’ expresses more strongly a two-way relationship with the object of looking, as David Schwarz (1997) points out: “The gaze […] is an overdetermined look; it often bears an uncanny sense of looking and being looked at; subject/object relations are confused; the gaze often suggests judgment or being exposed to the whim of a threatening superego. The gaze is more than just ‘staring’; the gaze is the representation of a transposed look onto an object that ‘objectively’ cannot look” (Schwarz 1997: 64).
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investigating gaze towards what is unfolding behind the door. Suddenly, the man hears footsteps in the hall behind him. The resounding though invisible footsteps are threatening to the voyeur’s gaze, as Dennis Hollier (2004) comments:

The gaze of the other, as Lacan praised Sartre for emphasizing, has entered the voyeur’s field of non-vision: it is an (offscreen) acoustic gaze, one experienced not visually, but acoustically, through the surprise of hearing another presence, of feeling him there acoustically, through one’s ears (164).

The concept of the acoustic or auditory gaze helps me to understand that sound as intervention in a context of deprivation can cause awareness for the auditory distress that is inherent to every sound. In the theatre, sound can equally intervene and ‘disturb’ a visual experience in being essentially ‘invisible’ and ‘a-topical’ (placeless), while urging for correspondences to what is seen.

Ruhe demonstrates this intervening propensity not only by placing the singers around and within the audience, but also through the sounds that puncture the image in the video art of David Claerbout. While the eyes are drawn to the slight changes in the leaves of the tree, a sudden dissonance disturbs the tonal scale of Schubert’s musical motives and makes us regard the ‘still life’ in a slightly different way. Similar to the auditory gaze, we suddenly become aware of the presence of the singers, as if the music is eavesdropping on us. This feeling of being listened to influences the auditory experience.

David Schwarz makes a further distinction in how we relate to and position ourselves towards music in terms of listening look and listening gaze:

There are no given acoustic equivalents to the eye/gaze structure, so I call the acoustic equivalent of eye the listening look and the listening equivalent of the gaze the listening gaze. The listening look is produced by the ear of the listener that maintains the binary distinction between the listener’s subjective position and a music’s object position. […] The listening gaze, on the other hand, is the music listening to us. How can music listen to us if we are silent listeners? By pinning us down (Schwarz 1997: 97).

Schwarz’s listening gaze is similar to Sartre’s auditory gaze. The listening look suggests a more passive relationship between the listener and the music in

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62 Denis Hollier (2004) remarks that the body of the voyeur is reduced to what Jean Starobinski has called un oeil vivant, a living eye (164). Hollier, moreover, points to another occasion in Sartre’s Being and Nothingness where the observer feels caught by “a rustling of branches, or the sound of a footstep followed by silence” (Sartre 1956: 346, qtd. in Hollier: note 5). Additionally, the punctured gaze established by the auditory intervention could perhaps be compared to Paul Claudel’s l’oeil écoute (which was the title of a book on Dutch paintings), conveying listening with one’s eyes.
terms of a subject-object relation. The concept of the auditory or listening gaze, on the contrary, stresses the authority of sound. When sound catches us unaware, we become distressed by the auditory intervention. As a result, it pins us down in space. Similar to this idea, and with the very first epigraph to my study, I referred to Artaud’s analogy of the theatrical experience in terms of a visit to the surgeon or the dentist. We can now understand how this implies that sound, due to its intervening nature, can make us aware of our presence, position and response. This idea forms the conceptual basis for my investigation in the following chapters.

4. Responding to Auditory Distress in the Space of Music Theatre

The case studies of n-Cha(n)t and Ruhe lay bare how auditory distress caused by the intervention of sound exerts a sense of authority in addressing the listener. I have discussed how this address incites an urge in the listener to respond and position her or himself discursively towards the interventions of sound as listening subject in order to regain control. Theatre in this sense subjects the listener to a certain structure, which is contextually, environmentally and discursively established. This structure channels the interventions and exposures of sound, and thereby influences the listener’s responses. The notions of the acoustic horizon and the acoustic community, to which the act of listening is pitched, illustrate how both the physical environment and discourse take part in structuring what we hear. This structuring is also implied in the idea of ‘acoustic design’ in the theatre as a way to control the auditory distress.

Robin Maconie (1990) indicates the aspect of control in relation to the auditory environment. In contexts such as the theatre, the acoustic environment is kept under control as a basic rule of acoustics and sound design:

First find an enclosure in order to minimize the possibility of uncontrolled air currents and the incursion of unwanted sound, then add temperature and humidity controls, and you have the makings of a useful auditorium (Maconie 1990: 83).

Maconie mentions temperature as an additional factor that needs to be controlled, since sound energy becomes heat when it is absorbed. Controlling the acoustics and all its related factors for sound production, however, does not mean that the effects within the auditory environment on the listener are controllable. Rather, sound as it is perceived is uncontrollable by its

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63 I choose here the term ‘acoustic design’ above the more widely accepted term ‘sound design’ in the theatre, as the latter might suggest a control and modification of the soundscape by a sound designer through technological means. With the notion of acoustic design, taken from Schafer (1977), I aim rather to address the acoustic properties of the total listening environment.
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The controlled environment mutually defines the interventional disposition of sound. The traditional design of our theatres and opera buildings entails acoustically controlled spaces that are arranged in such a way as to keep out the disuniting outside conditions of modernity in favour of ‘ideal’ listening conditions according to varying subjective definitions (see Bellman 1983: 393). This idea is supported by Susan Buck-Morrs (1992), who historically connects the acoustic model that prioritises the filtering out of the ‘soniferous’ environment outside the auditorium to the Bayreuth Festspielhaus (1876) in Germany, envisioned and realised in the idea of Gesamtkunstwerk by Richard Wagner. Following Adorno’s arguments on this subject, Buck-Morrs argues that the spatial structure had to assist a superimposed unity of the senses against “the alienation and fragmentation, the loneliness and the sensual impoverishment of modern existence” (Buck-Morrs 1992: 26). In this sense, this spatial model of the Gesamtkunstwerk was devised, so to speak, to ‘anaesthetise’ the social aches of a specific perception of the modern listening subject.

Although in Ruhe the spatial positioning of singers and audience breaks with the traditional model of our theatre and opera spaces, it aims at an intensification of the same effects that Buck-Morrs addresses. The harmony, coherence and intimacy of the songs exclude modern feelings of fragmentation and solitude. The excess in the auditory experience of the sonorous envelope revokes a sense of impoverished ‘auditory self’ with a feeling of community: a perilous ‘we’ feeling in the historical context of Nazi ideology.

Despite the structuring that the theatre context and environment subjects onto the auditory interventions, Ruhe exhibits the necessity for the listener to respond to the authoritative power of the sonorous envelope. As I introduced in relation to n-Cha(n)t, the listener owns certain auditory competences (listening habits) in relation to an idiosyncratic past and the cultural discourse (with certain dominant regimes of perception) in which the listener is born into. The subjectivity of the listener is therefore embedded in the discourse that determines the listener’s responses to deal with the auditory distress.

The necessity of aural competences in these responses directs the pathway for my investigation in the next chapters. I will elaborate on how aural competences help the listener to respond to auditory distress in the theatre. The main vehicle of these responses is attention balancing on a scale between states of passivity (unconscious, automatic responses in hearing) and activity.

64 There have been many countertendencies in theatre history that advocate different notions of the listening privileges of the audience in the theatre space, like the many experiments with site-specific theatre and performance art. Ruhe materialises in a sense one of Artaud’s well-known claims inspired by the Balinese theatre that the spectator should be surrounded by the spectacle instead of the other way around. But the performance does not aim directly at irritating the spectator through this acoustically realised surround-sound. I return to this issue in chapter four.
(conscious listening). In this way, the listener’s responses towards sound’s authoritative inclinations in auditory distress is determined by the ways the sound catches her or his attention, and equally, how she or he deals with the exposures to sound as a result of the listening attention. In the next chapter, I will show how this listening attention in itself is steered by the regulative mechanisms and structures of the theatre.

In his work on sound in the cinema, Michel Chion (1994) stresses that there are aspects to sound that cannot be controlled through conscious attention:

But listening, for its art, explores, in a field of audition that is given or even imposed on the ear; this aural field is much less limited or confined, its contours uncertain and changing. […] There is always something about sound that overwhelms and surprises us no matter what – especially when we refuse to lend it our conscious attention; and thus sound interferes with our perception, affects it. Surely, our conscious perception can valiantly work at submitting everything to its control, but, in the present cultural state of things, sound more than image has the ability to saturate and short-circuit our perception (33).

Here, Chion argues for more agency in the sound than Schafer or Truax would allow. Soundscape studies presume that listening can be consciously controlled through conscious attention, as listening always implies an active involvement in a state of ‘readiness’, a global scope or a narrow focus on a particular source (Truax 1984: 16). However, Chion counter-argues that sound has the power to overwhelm and saturate our auditory perception that escapes our alert listening attention. Chion thereby argues against an overemphasis of control in our listening competences. The same holds for some of our aural experiences in music theatre. Due to sound’s omnidirectionality, and its physical and compelling nature (such as its suasions as sonorous envelope), the listener cannot control all aspects of sound (Chion 1994: 33). Auditory distress materialises this fundamental uncontrollability of sound. Sound therefore sustains leaky borders – to follow up on Connor’s terminology – between an active listening subject that aims at and a receptive subject that takes part in the auditory environment, as a result of the listener’s responses to the auditory distress.

In music theatre, we find ourselves in a perpetual responsiveness to the power of sound that can intervene, disturb and short-circuit our perception. To that end, our interpreting abilities give balance and stability to our ‘auditory selves’ as a response to the distress. Sound’s saturating suasions towards excess in listening, however, make aural competences as an embodied, ingrained practice of knowledge all the more compulsory. David Rokeby’s n-Cha(n)t balances precisely on the above mentioned borders in a movement of reciprocity, as it makes the sound-producing human trespasser aware of the power of the interventions of sound that are a threat to the stability of the
system. The responses of the monitoring ears then offer us a model of perception in which we can recognise our own filtering capacities of our waking consciousness and attention. The installation, moreover, draws our attention to the exclusive nature of an acoustic community that exercises as a filter to temporarily secure a desired consensus. Josse De Pauw’s music theatre performance *Ruhe*, conversely, shows how an acoustic community formed in singing can impose a harmony that would eliminate any dissonant sound. The interventions of text, however, put this discriminating nature of the acoustic community in a different perspective, thereby causing another type of distress in the listener.

Both case studies demonstrate how aural competences influence how we deal with aesthetic objects such as an installation or a music theatre performance. They also show that theatre can fulfil a critical function towards our listening competences by making us aware of the correlation with our personal horizons of interpretation and comprehension of the surrounding world, as well as of the discriminating nature with which we channel and filter our experiences. Although Soundscape studies focus mainly on our modern environments outside the theatre, one can hardly sustain to keep them separate. As I intend to show in the following chapters, the listening act in the theatre is, likewise, embedded within a larger discursive context that defines the listener as both a member and an observer of an acoustic community. In this study, I therefore propose to examine the aural competences that assist the listener in steering attention inside her or his perception of a performance, but not without the connection with an outside to the listening regimes in (post-)modern auditory environments, discourse and aurality.

Moving between manifestations of sound’s authority and the listener’s subjectivity in my case studies, I discuss the capacity or rather at times, the lack of ability, to respond discursively to the sounds that attract our attention. Among these potential responses, I discuss respectively the modes of listening attention (chapter two), narrativisation (chapter three), and auditory imagination (chapter four). Ultimately, these responses suggest competences that are anchored in aurality, which opens up possibilities in the epilogue to this study to discuss music theatre’s role today in either complying with or contesting our auditory regimes of perception. In doing so, the auditory spaces in music theatre I describe confront us with a site of contestation for questioning our perception, discourses and aurality, by showing the mechanisms of our interpretative acts in listening to the sounds and music within post-modern theatre.

In the next chapter, I develop the specific implications of navigating attention for the auditory experiences in contemporary music theatre. I argue that ‘managing’ listening attention is, apart from the listening environment, for a great deal determined by the specific construct and structure of the performance. The performance namely offers a structure of address that
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activates and steers the attention in terms of predisposed, discursive positions that the listener can ‘take up’ in her or his responses to auditory distress. For the purpose of analysing listening attention in relation to these positions, I further develop the argument of Soundscape studies of how the attention determines our *modes of listening* as a first set of responses to sound and music in the theatre.