Materialisation of fixed media music

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Chapter 2

2.1. Understanding the concert situation through atmosphere

> Music doesn't fix itself like poetry does, but precisely this means that it has all the more open and varied ways of helping human beings to appreciate their lot: to be exposed in space and time, and able to be involved. (Schmitz 2020, 68)

This chapter revisits the concert situation of fixed media electroacoustic music through the concept of *atmosphere*. This term, originating in meteorology, has been used colloquially and metaphorically since the eighteenth century (Böhme 2019, 259). Subsequently it gradually entered into philosophy, and has become an important concept in some recent philosophical discourses and aesthetics (Schmitz 2016; Böhme 2017; Griffero et al. 2019; Riedel et al. 2020). I propose that this concept provides a fertile ground for understanding (and appreciating the importance of) the concert situation of fixed media electroacoustic music as a collective, situational, holistic and ephemeral experience – 'the experience of the presence of humans, objects, and environments' (Böhme 2017, 17). I will draw mainly on the work of German philosopher Gernot Böhme as one of the most prominent philosophers whose work centres on the subject and implications of atmosphere. Böhme's work is a further development of the ideas of pioneers in the field such as Hermann Schmitz, and presents atmosphere as the point of departure for a new aesthetic (2017, 13). Böhme and Schmitz specifically discuss music in their writings, and chart its relationship to atmosphere. Böhme indeed considers music as 'the fundamental atmospheric art' (2017, 127). I will argue that the idiosyncratic features specifically of *electroacoustic* music bring it even closer to the aesthetics of atmosphere, namely its use of space and the acousmatic situation. According to this understanding, the ultimate goal of a performer of fixed media music can be considered as *creating an atmosphere* in which the music can be fully materialised or actualised, and thus experienced. Atmospheric thinking resonates with my own aesthetic approach to composition and art in general, where the emotive, sensuous and immediate encounter with an artwork plays a more crucial role in its perception than, for example, a more analytical response which reduces reflection on the artwork to that which can be encapsulated in language. As Böhme aptly notes, '[t]he centrality of judgement in aesthetics and its orientation towards communication has led to a dominance of language' (2017, 15). Such an approach to aesthetics (which involves interpretation) might skip over and subvert a sensuous experience of the art work, and this is what the new aesthetics attempts to address by introducing atmospheric thinking. As Susan Sontag already explained in 1966, interpretation – which attempts to reduce the art work to its content – 'takes the sensory experience of the work of art for granted, and proceeds from there. This cannot be taken for granted, now' (1966, 104). While giving a comprehensive account of the concept of atmosphere is beyond the scope of this research project, I will nevertheless discuss some of the ideas of atmospheric thinking, and their connection and significance to the public presentation of fixed media music.

2.2. What is atmosphere?

> There is an energy in a concert hall or opera house that everyone breathes in. (Wigglesworth 2018, 194)

My first encounter with the concept of atmosphere was a revelation. I felt that I could finally understand the particular sensations that I was (am) experiencing in the moment of a concert. These sensations involve what might be described as a pervasive weight of the presence in the air of a unifying affective force, which valorises each concert situation as a unique and ephemeral happening (something different from individual listening in the studio, for instance), an experience of shared emotive power that connects the audience. Atmosphere by nature is something vague and nebulous, and hence difficult to define. According to Böhme:

> Atmospheres are indeterminate above all as regards their ontological status. We are not sure whether we should attribute them to the objects or environments from which they proceed or to the subjects who experience them. We are also unsure where they are. They seem to fill the space with a certain tone or feeling like a haze. (1993, 114)

For Böhme, atmosphere is neither a subjective and psychological phenomenon, nor a completely objective quality of things and the environment. In-betweenness, therefore, is a prominent characteristic of atmospheres, and this, according to Böhme, gives rise to a new aesthetic that 'is concerned with the relationship between environmental qualities and human states. This *And*, this in-between, through which environmental qualities and human states are related, is atmosphere' (2017, 14). Such an intermediary status might foster a sense of vagueness and indeterminacy, but at the same time it enables us to consider phenomena outside the duality of subject/object, and in the context of their environment.

Atmospheres can be sensed in various situations and constellations, for instance, when entering a new and unfamiliar place, when observing clouds forming an ever-changing mass in the sky, when noticing the movements of colourful leaves in a canal, or when experiencing the quietness of an alley in the evening, the smells in the air, the presence of a group of people, the silence of an empty concert hall, and last but not least, when hearing sounds, specifically when listening to music. I have always been sensitive to these atmospheres without having had a precise formulation to describe them. Nevertheless, it is still quite difficult to talk about atmospheres and to describe their 'character'. We can often find a few explanatory words, but then find it difficult to proceed further. Böhme, in enumerating the available vocabulary to talk about atmospheres, states on the contrary that 'we obviously have a rich vocabulary at our disposal to characterize atmospheres, that is, as serene, melancholy, depressing, uplifting, imposing, inviting, and erotic' (2017, 14). For example, 'one speaks of the serene atmosphere of a spring morning or the ominous atmosphere of a stormy sky […] the delightful atmosphere of a valley or the homely atmosphere of a garden' (2017, 13). I would argue, on the other hand, that atmospheres are perhaps not so much to be talked about, or described, but rather to be *experienced*. As the ethnomusicologist Andrew McGraw explains, '[a]tmospheric thinking speculates on how it is we can be "in" a particular mood prior to or independent of any linguistic, reflective self-attribution of an emotion' (2016, 136). The philosopher Tonino Griffero also explains the shortcoming of language in talking about atmospheres:

> The relative ineffability of atmospheres only depends on the fact that one has to be "in" them to really feel and understand them, and no list of linguistic characteristics can ever be exhaustive for them. (2019, 23)

Ineffability is thus considered by Griffero as a characteristic of atmosphere, and it could also be regarded as a characteristic of music. According to the media researcher Matthew Reason, '[t]o acknowledge the ineffable is to acknowledge not only that some things escape language, but also that some things are outside of language. These are not so much experiences that we have, but experiences that have us' (2017, 84). Atmospheres also 'have' us, in this sense, and this atmospheric 'grippedness' (Schmitz 2020, 65) is also beyond language – which is why I have used the audiovisual medium to attempt to demonstrate and 'explain' them, and their importance in presenting fixed media music in public.

A related notion is that of *ambiance* (or *ambience*), which has a long history in French research, specifically in the field of architecture (Thibaud 2015, 39). According to the architect Michael Tawa:

> Ambiance is the distinctive assemblage of conditions that characterize a setting—that is, a circumambient milieu or circumstance, together with the affective, dynamic or mobile radiance, or the palpable aura that flows from that assemblage. (2022, 85)

Another is the concept of *Stimmung* or *mood* (which will be discussed below) in German philosophy. Whereas ambiance is often associated with the environment and place, *Stimmung* connects to a personal state of mind. To distinguish them, Bille et al. ask:

> Is one then to understand the difference between terms such as "Stimmung", "mood", "atmosphere" and for instance "ambience" by the level of subjective involvement – moods being primarily oriented toward the subjective, ambience towards the objective, with atmospheres in the in-between? (Bille, Bjerregaard, and Sørensen 2015, 32)

Tawa expresses this distinction in a similar way: '[a]tmosphere is produced between the ambiance of a setting and the mood of a human being who encounters it' (2022, 117). An important motivation for my use of the concept of atmosphere, rather than these ideas, is that it explicitly encompasses both the (objective) setting and the subjective experience of that setting.

2.2.1 Bodily presence

Atmosphere is experienced through the bodily (co-)presence in the here and now. According to Böhme:[17]

> Atmosphere is the shared reality of the perceiver and the perceived. It is the reality of the perceived as the sphere of its presence and the reality of the perceiver insofar as he or she, in sensing the atmosphere, is bodily present in a particular way. (2017, 23)

Similarly, Griffero notes that:

[17] Similarly, for Hermann Schmitz, the space of bodily felt presence is where atmospheres are experienced. (2019, 65)

> "atmosphere" usually means a feeling (relaxed, oppressive, gloomy, etc.) that is not private and internal, but poured out into the perceiver's pericorporeal (lived, pre-dimensional) space, and "tinges" their situation to the point that it felt-bodily influences their attitude, behaviour and (even) thought. (2019, 24)[18]

As discussed in the previous chapter, bodily presence is also the condition for fully experiencing (spatial) fixed media music. The musicologist Friedlind Riedel expands on Schmitz's ideas, proposes the following working definition which also brings in the *multiplicity* of bodies as an important factor:

> "atmosphere" or an "atmospheric situation" describes a "feeling" that fundamentally exceeds an individual body or conscious subject, and instead pertains primarily to the overall situation in which a multiplicity of bodies cohere. (2020, 4)

This definition resonates with the concert situation, in which a multiplicity of bodies (the audience) creates a collective consciousness, and thus a common experience in a specific time and space. Riedel continues that 'to conceive of music and sound as atmosphere in this way would mean no longer to consider musical affect in relation to personalised ears and individualised bodies, but to ask about the "cultural techniques" by which music and sound are (made) environmental and through which they modulate spaces, collectives, situations and relations' (2020, 4). Of course, common experience does not mean that all individuals will have the same experience, as Riedel clarifies:

> With the notion of atmosphere, it hence becomes possible to account for the experienced homogeneity of a (social) situation without confusing it with the actual emotional state of each and every person present or with the social unity of a community. (2020, 17)

Bodily collectiveness (as discussed in Chapter 1) is an integral aspect of presenting music in general and electroacoustic music in particular. This is what essentially distinguishes studio listening from a concert situation. It is often the case that physical presence in the venue is the optimal way to experience an electroacoustic piece, because of the specific arrangements and technical configurations required by most spatial/multichannel pieces. This aspect of listening will also have been incorporated into the composer's thinking and intentions during the composition process. Therefore, it can be argued that a fixed media piece, in fact, exists only in the here and now of the concert situation, in the context of a collective experience – in an atmosphere, which is shaped not merely by the music but also by many other elements such as the space, lighting, the audience and so on. While the sound files of which the piece consists can be viewed on a computer screen, this view cannot be deciphered into potential sound by the viewer (as a score, for example, can), so the only way the music can become 'readable' is through the ears of a listener, not in a vacuum but in an atmosphere shaped by the circumstances of each event.

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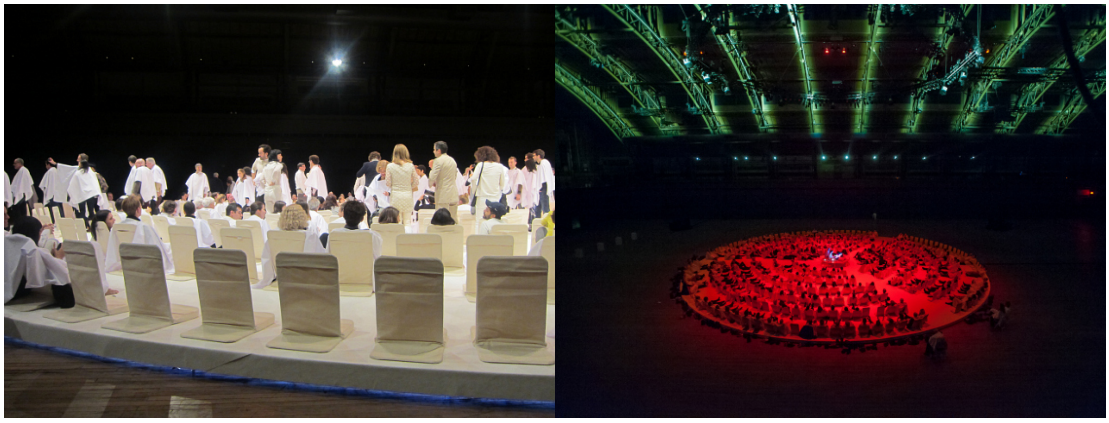
[18] Griffero draws on Merleau-Ponty to explain *predimensional* lived space (the same as atmosphere space): 'besides the physical and geometrical distance which stands between myself and all things, a "lived" distance binds me to things which count and exist for me, and links them to each other. This distance measures the "scope" of my life at every moment' (Merleau-Ponty 2005, 333 in Griffero 2014, 37).

Fixed media pieces often have a beginning, middle and end. In other words, the temporal unfolding of the composition is a crucial aspect of experiencing the music, as opposed to, for instance, sound installations, where the audience can often walk in and out at will, and shape their own experience of the work. Fixed seating is often preferred in fixed media concerts, since it aids focused listening. Moreover, in practical terms, walking around in a concert venue might cause noise and distraction to other audience members, disturbing their concentration and experience. Of course the audience's 'noises' as well as the act of walking in the venue can be integrated in the piece as a compositional choice. There have been numerous approaches to creating a comfortable bodily situation for the audience, specifically for concerts with longer durations, for instance having the audience lying down, or using cushions instead of chairs. For the New York premiere (2013) of Stockhausen's *Oktophonie* (1991) at Park Avenue Armory, the visual artist Rirkrit Tiravanijathe designed an audience situation which was between sitting and lying down. In fact, he created a distinct atmosphere for experiencing *Oktophonie* through set designing and lighting.[19]



Oktophonie at Park Avenue Armory, New York, photography by Allison Meier and Stephanie Berger

2.3. Music, space, atmosphere

The application of the term atmosphere in describing concerts and performances is indeed familiar to musicians and music lovers, who use this term, despite its indeterminate and ineffable nature, to signify a certain quality in a performance or in a piece of music, not referring to a singular element, such as the composition or the performance itself, but rather to the quality that emerges from the *totality* of the situation. For Schmitz, 'acoustic and, in particular, musical forms are among the carriers of atmospheres of feeling' (2020, 66). Riedel elaborates on how Schmitz's 'acoustemological' approach was developed in the light of the prevalence of the notion of space in music since the twentieth century: '[i]t is the "acoustic space" as known to and by early-twentieth-century sound scholarship, that Schmitz elevates as the "primary model" for his notion of atmospheres' (2020, 21). Music and sound have always been integral in atmospheric thinking. As previously mentioned, the German term *Stimmung*, whose literal meaning is the tuning of a musical instrument (*stimmen*, to tune), also refers to mood and feeling. '*Stimmung* also described the state of the instrument after it has been tuned' (Welsh 2012,269). Similarly, Böhme describes atmosphere as *tuned* space (2017, 156, my emphasis). As the philosopher Gerhard Thonhauser (2022) explains in his article 'Beyond Mood and Atmosphere', the roots of the concept of atmosphere are clearly discernible in that of *Stimmung*. For instance, Martin

[19] It is also worth mentioning the peculiar example of Michel Redolfi's underwater concerts (1981 to present), where the audience experience the music while floating in water. The loudspeakers project the sounds underwater, which also affects the manner in which the sounds are propagated and perceived (Roads 2015, 251).

Heidegger, in *Being and Time* (1927), developed the concept of *Stimmung* as an ontological concept: '*Stimmung* attunes being-in-the-world as a whole' (Thonhauser 2022, 1261). Heidegger also highlights the relational and *in-betweenness* (neither quite subjective nor objective) of the character of *Stimmung,* forming another clear connection with atmosphere. Indeed, the distinction between atmosphere and *Stimmung* is not always clear. According to Riedel, Schmitz uses the two terms interchangeably (2020, 7). Moreover, Riedel discusses an essay by Sebastian Klotz in which the use of the term *Stimmung* is traced through the writings of nineteenth-century music scholars, leading to the conclusion that '*Stimmung* referred to precisely those musical dimensions that could not be pinned down or named. Furthermore, it accounted for the contingency and situationality of musical listening' (2020, 8). [20] Stockhausen, discussing his 1968 vocal piece *Stimmung,* explains that the term 'means "tuning," but it really should be translated with many other words because Stimmung incorporates the meanings of the tuning of a piano, the tuning of the voice, the tuning of a group of people, the tuning of the soul. This is all in the German word. Also, when you say: We're in a good Stimmung, you mean a good psychological tuning, being well tuned together' (Cott 1973, 162). All of these possible meanings are in fact also encompassed by atmosphere and its close connection to music, which leads Böhme to conclude that atmospheric thinking is a fundamental paradigm shift in understanding musical experience. He explains that '[b]y contrast with the helpless theories of association, or theories deploying phantasy as an intermediate element, the aesthetics of atmospheres can provide the simple answer that music as such is the modification of bodily felt space' (2017, 127). Similarly, McGraw in his article 'Atmosphere as a Concept for Ethnomusicology' describes atmosphere in relation to music and its spatiality: '[A]tmosphere refers to a shared sense of affective intensity and is described as occupying an immersive, resonant, and spherical spatiality, much like sound itself' (2016, 131).

The central point in all discussions of atmosphere has been *space*, which is yet another connecting point to music in general and electroacoustic music in particular. According to Böhme, 'one might call [atmospheres] quasi-objective feelings that are indeterminately diffused in space' (2017, 125). Similarly, Bille et al. assert that atmosphere 'must be understood as a spatial experience of being attuned in and by a material world' (2015, 36). As such, experiencing atmosphere through the space connects to the fact, discussed in Chapter 1, that (spatial) fixed media music can only be experienced through space. Böhme refers to recent developments in new music, which have resulted in a change of perspective from the traditional consideration of music as a temporal art towards a spatial art. He explains that:

> The fact that music fills spaces and that space, via resonance and reverberation, represents an essential element of its effect, has always been known. Newly discovered were the spatial shapes, that is, form figures and ensembles in space, of the individual tone, the ensemble of tones, and also the succession of tones (or, better, the succession of sounds). These had never before been an issue for music. (2017, 126)

Here, in describing these 'newly discovered … spatial shapes' as a feature of modern music in general and electronic music in particular, Böhme is talking about what is known as sound spatialisation (see Chapter 3), the manner in which sounds can be situated or moved in the space, or, in other words, foregrounding space and spatial arrangements of sounds as a compositional element. For him this 'spatial turn' is what brings music further towards the

[20] Musik Als Artikulation Von Stimmungen: Positionen Vom 19. Jahrhundert Bis in Die Gegenwart.

aesthetics of atmosphere. He explains that '[t]he tendency of music towards spatial art, particularly, has brought it into the realm of an aesthetics of atmospheres' (2017, 127). Similarly, Schmitz emphasises spatiality in music and its connection to atmosphere:

> Music is a temporal art because it takes duration and transience, the two factors responsible for temporality's fate, and integrates and moulds them into unique forms that are presented for listening. It is equally a spatial art, which develops dynamically in the intensive expanse of surface-less sonic space, pouring atmospheres of feeling into it and presenting them, but only as hints, so that listeners can be stirred up (angeregt) or involved by the atmospheres presented without being able to identify them distinctly, just as with the atmospheres of moonlight or a landscape in a storm. (2020, 68)

Spatiality has been a significant aspect of electroacoustic music since its origins (see Chapter 1).[21] Thanks to technological developments in sound reproduction systems, it became possible to integrate space as a musical parameter more than ever before.[22] Böhme acknowledges the affordances of electroacoustic music (specifically spatial sound) in creating 'acoustic formation of spaces' – which he refers to it in the context of sound installations, but which is similarly applicable to fixed media electroacoustic music.

> This genre [sound installation or spatial sound] is explicitly concerned with the spatial movement of tones and the spatial form of sounds, or vice versa; at stake is the acoustic formation of spaces. This development in music was certainly first made possible by the significant twentieth-century advances in electroacoustics. (2017, 136)

Electroacoustic music in particular provides the possibility to mould and shape sounds in space by utilising loudspeakers for projecting the musical material in various manners. Surrounding the audience with loudspeakers, hanging loudspeakers from the ceiling, pointing them upwards, downwards, placing them at different distances, and so on, make it possible to articulate the music in various fashions. All this happens, of course, in relation to the shape and the size of each venue and its acoustical characteristics. As a result, Böhme concludes that this 'exploration of acoustic space has given rise to a new understanding of hearing: as bodily presence in space (2017, 136). As discussed in Chapter 1 and earlier in this chapter, listening to (spatial) fixed media music indeed demands bodily involvement, just as in experiencing atmosphere.

2.4. The atmospheric power of acousmatic situation

One of the characteristics of fixed media music which distinguishes its presentation from that of music performed by instrumentalists and/or singers is the *acousmatic situation*, where the causes of the sounds are occluded, and the sound production activity is not visible during its presentation. The question might arise as to what the consequences of such elimination of the visual aspects of music making might have on the atmospheric qualities of the concert situation of fixed media music. An answer might be traced in the nineteenth-century endeavour to

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[21] To mention some prominent early examples: Karlheinz Stockhausen's *Gesang der Jünglinge* (1955) and *Kontakte* (1960), Edgard Varese's *Poème électronique* (1958) and Iannis Xenakis' *Bohor* (1962).

[22] Check *Space-form and the acousmatic image* by Denis Smalley.

achieve a transcendental experience of music, as explained by Brian Kane in his book *Sound Unseen*:

> Transcendence depends on separation, on the articulation of differences in kind. With its strict separation of the eye and the ear, an especially potent form of this phantasmagoria employs the acousmatic situation to occlude the mechanism of musical production for the sake of musical transcendence. The more the body is hidden, the less the eye sees, and the more grandiose are the claims about music's power. (2014, 108)

Kane discusses here the *concert reform* (*Konzertreform*) movement of the nineteenth century, which attempted to eradicate the visual aspect of music making (2014, 103-8). The underlying idea was that watching the movements and gestures of musicians performing on the stage would distract from and disturb the pure perception of the music and, consequently, prevent a 'transcendental' experience of it. (2014,103) According to Kane, transcendence should be understood as 'the positing of any sphere – whether it be religious, secular, philosophical, ethical, aesthetic, or otherwise – that exists outside the bounds of the mundane world, and that is manifested in this world only at special or singular moments' (2014, 108). This definition resonates strongly with that of atmosphere in Böhme's sense, and I suggest that there is another way of interpreting the concert reform idea: concealing the mundane origins of music, or occluding the audience's view of music-making activities, could also be considered as an attempt to reduce focused vision and thus indeed create an atmosphere in which music could be experienced more profoundly. Various techniques were deployed by the concert reform movement in order to achieve such an acousmatic situation: for instance covering the stage with large curtains, or hiding the musicians in an orchestra pit. These techniques also had a desired acoustical effect on the orchestral sounds, namely diffusing the sound and creating a more omni-directional sound field, avoiding any directionality (visual and sonic), as Cathy van Eck points out in her book *Between Air and Electricity* (2017,10). Richard Wagner's practice at Bayreuth, placing the orchestra pit beneath the stage rather than in front of it as in conventional opera houses, exemplifies such an approach taken to its full potential. Kane quotes a statement from Wagner, who explains that 'when freed of the visual aspects of its mechanical production, "[music] came to the ear in a compact and ethereal sort of unity"' (2014, 102). According to the theater studies scholar Erika Fischer-Lichte:

> Richard Wagner immersed the audience in complete darkness during the 1876 Festival at Bayreuth. These measures aimed at interrupting the feedback loop. Visible and audible – i.e. potentially distracting – audience reactions were to be channeled into "interior" responses that would be sensed intuitively by others but remained without outward expression. (2008, 39)

Kane gives multiple accounts of such situations within concert reform practices, where music-making activities were hidden from sight. These descriptions might be considered as portraying an atmospheric situation in Böhme's sense. Or, conversely, such practice could be seen as 'an attempt to aesthetically shape the listening public, and in turn the social body, by creating the conditions for performances that could properly channel music's transcendent content' (Kane 2014, 103) – in other words, creating an atmosphere through which to experience the music. For instance, in a text from 1826, an anonymous writer describes such a concert situation where musicians are invisible, while even referring to the term atmosphere:

> Imagine a hall in which, first of all, the orchestra with its people and instruments is hidden from the audience's view by a light curtain, this would put a whole crowd of destructive demons in chains, not to mention how much more *atmospheric* music becomes when it resounds unseen. (Kane 2014, 111, my emphasis)

In another account, Wilhelm Mauke, a composer and music critic, describes a concert in a text from 1899:

> The auditorium, whose seats are arranged in the shape of an amphitheater, affords only enough light to permit the audience to read the text of the lieder....[The singer's] voice touches our hearts by being heard through a sea-green web of liana plants. An aroma of Heliotrope passes through the hall when sensuous sultry love songs are sung. Serious lieder are heard with incense that comes from rows of columns that are embraced by the holy groves or cypress. The hymns of summer night rock one to sleep in the midst of large umbellated buds, violet-colored clouds, stars that glitter gently—everything is in mystical darkness. Passionate cries of erotic songs speak to the imagination and to intimate emotions of the audience, which is thrilled with perplexity and pain. (Quoted in Kane 2014, 104)

This is a genuine atmospheric situation described in a poetic way, which demonstrates how various elements participate together in creating such an experience. Unlike Kane, who foregrounds the separation and isolation of the (sonic and visual) senses, the concert described above outlines a multi-sensorial phenomenon which evokes an atmospheric situation. As McGraw confirms, '[a]tmosphere is not experienced as an object or through any single sensory modality. It is registered through a synesthetic envelopment of the felt-body' (2016, 134). In the examples mentioned above, while the mechanism of musical production is made invisible, meticulous attention is given to various (non-musical) sensory elements, which elevate the experience of being in the space, rather than creating a single sensory (sonic) experience. According to these accounts, specific attention was given to the design and the arrangement of the concert hall, the abstract (or pictorial) decorative patterns on the curtains, or the use of real plants, as well as deliberate and subtle lighting, and even the inclusion of scents (from the plants) – hence, a true multi-sensorial experience.

In the field of architecture, Juhani Pallasmaa suggests that 'the biased preferencing of focused visual form is the major reason for the weak atmospheric quality and feeling of interiority in much of modern and contemporary architecture' (2019, 124). According to him, the dominance of vision reduces atmospheric qualities.[23] He asserts that '[t]he condition of omni-directional and immersive hearing created a world of belonging and participation, whereas [focused] vision

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[23] Pallasmaa also explains that the hierarchy of our senses in the past was quite different from that found in modern times, which is dominated by vision. He quotes the historian Lucien Febvre who stated that '[t]he sixteenth century did not see first; it heard and smelled, it sniffed the air and caught sounds' (Pallasmaa 2019, 123). Böhme (2019) names 'olfactory ingredients' as one of the atmosphere generators, and highlights the differences between the vision and the olfactory, explaining that, '[t]he source of the smell may be at a distance, but the smell itself is immediately smelt right here. This experience is quite different from seeing' (Böhme 2019, 262). This aspect of the olfactory is then closer to the mode of listening. Of course smells are always present in concert situations, such as the smell of audience and the venue. 'Olfactory ingredients' can be also intentionally be added in order to shape the atmosphere. Stockhausen's *Düfte-Zeichen* (2003) represents an attempt to delineate the structure of a composition using different scents which are released into the performance space by the performers. However, the way that these scents diffuse slowly and mix together through the air of the space indicates that it is not possible to achieve much variety and subtlety using such techniques within the relatively large volume of a concert or theatre space and with the distances across which the scents need to diffuse.

promotes outsideness, separation, control and solitude' (2019, 123). I suggest therefore an alternative perspective on the concert reform strategies: hiding the sound production activities of the musicians was actually an attempt to reduce focused vision, instead creating and shaping an atmospheric situation. This feature can be further emphasised in the context of presenting fixed media music, where the sound production activities are not even taking place in the same space or time as the audience. The fixed media concert situation - in the absence of focused vision on the one hand, and the omnipresence of music through the space on the other – can thus evoke a more multi-sensorial experience, and hence a more atmospheric situation. Electroacoustic technology has not only replaced the curtain and orchestra pit of the concert reform tradition, but has also revolutionised the composing practice itself, as I have shown in Chapter 1. Nevertheless, aesthetically shaping the concert situation is perhaps something we can still learn from the concert reform movement, for example by designing the concert situation more deliberately, requiring in turn an awareness of the effect and influence of the various elements which might participate in such an experience, for instance lighting, as will be discussed below.

2.5. Lighting in fixed media music presentation

Talking about lighting in the context of acousmatic music might perhaps appear paradoxical. It might be true that a lack of light puts the sense of vision to rest while listening, and prevents any visual distraction. Nevertheless, listening in absolute darkness is not a prerequisite for an 'appropriate' experience of such music. In practice, lighting does play a (subtle) role in fixed media music concert situations; it prompts a sense of presence in the here and now, and, more specifically, engenders an atmosphere, while not necessarily attempting to focus the audience's attention in one particular place or direction. Böhme explains how lighting affects our perception of the world:

> Light as atmosphere endows the things and scenes or environments that appear in a particular light with an emotive character. We feel concerned and moved, we are tuned in a particular way by a particular lighting. (2017, 156)

In her book *Space and Light,* Katherine Sorrell confirms Böhme's opinion by stating that 'light creates atmosphere, highlights and sculpts areas, and opens up spaces, influencing not just how you look at them but also how you feel about them' (2005, 58). Exactly the same could of course be said about the way sound is projected in fixed media music. Böhme considers sound and light in particular as non-objective generators of atmosphere (2017, 92). He states that sound and light 'modulate bodily felt space by creating tightness or expansiveness, orientation, and enclosing or excluding atmospheres' (ibid). According to Böhme, by utilising modern technology in lighting and sound, set designing is not limited to the stage, and it is 'possible for the art of the stage set to leave the stage itself and spill over into the auditorium. The spaces generated by light and sound are no longer something perceived at a distance, but something within which one is enclosed' (2013, 5).

Typically, in a concert hall, lighting is often intended to illuminate the stage where the music making activities take place – hence aiding focused vision, and separating the stage from the audience area. In fixed media music concerts, in the absence of musicians on the stage, and with a sometimes unorthodox arrangement of the audience in the venue, lighting may take a different shape. Various strategies have been practiced within the tradition of presenting fixed

media music in terms of lighting (or lack of it), such as blindfolding the audience as in Francisco López's performances (which of course results in absolute darkness), Karlheinz Stockhausen's approach of projecting a moon high up on the wall of a dark concert hall, or presenting colourful illuminations of loudspeakers as in the case of the GRM's Acousmonium.

2.5.1. The phenomenon of light

Phenomenologically speaking, brightness is the primary character of light according to Böhme, and 'the first effect of light as brightness is to unfurl space' (2017, 148). As a result, it creates 'experiential' space of 'distances and intervals' from the subject. Such a space 'surrounds one as a leeway for free movement' (2017, 149). This is what Böhme calls *cleared space* (*gelichteter Raum*): 'a space in which I am present, and I experience my presence in space in a particular way through brightness' (2017, 150). An illuminated concert venue can be a good example of such a cleared space. Böhme elaborates on our perception of such a cleared space, stating that:

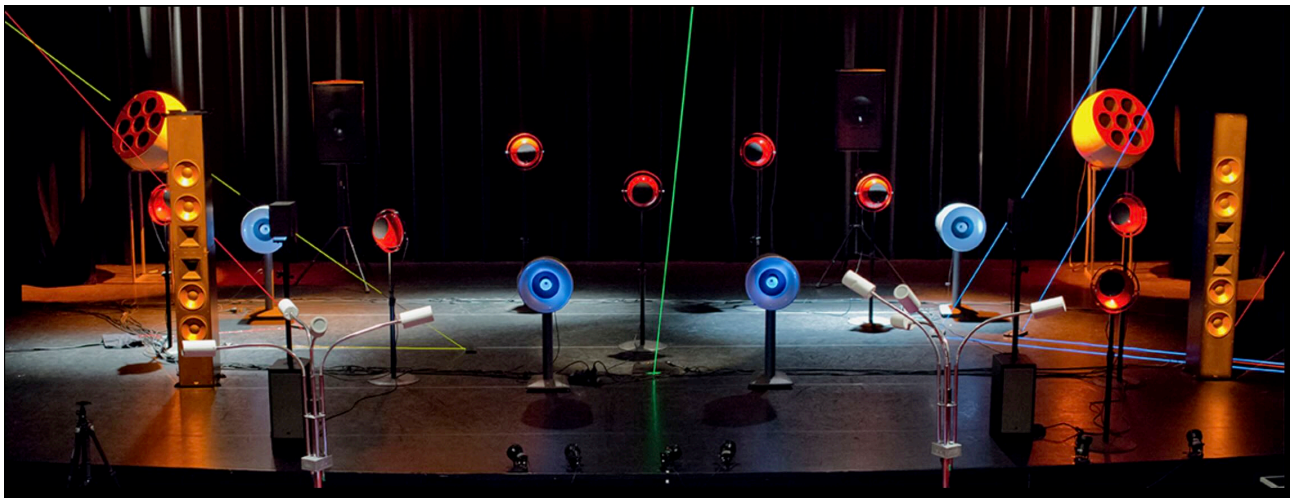
> It is characteristic of space created by light that the possibility of moving within it not only includes that of *de facto* but also of potential movement, that is, of mere eye movement: one can let one's eyes wander within the cleared space […] This possibility of wandering with our eyes in the depth of space may indeed be decisive for our very feeling of being in a space. (2017, 149)

This wandering with the eyes is also a very familiar activity in fixed media music concerts (and is clearly observable in the audiovisual part of this dissertation). Simon Emmerson, in *Living Electronic Music*, confesses that he wishes 'to see clearly the loudspeakers as sound sources as well as the environment in which they are set' (2007, 168). I also find myself often wandering through the space with my eyes during the concert, as if it helps me to better experience the music, and to be in the space. To this, I add the importance of free movement of the head, or more precisely the *ears*, which plays a crucial role in our ability to localise sounds in the space. This is particularly important in the context of spatial music where head movements aid a better perception of the spatial cues (as discussed in Chapter 1). Therefore, the cleared space and the perception of spatiality in music overlap in the experience of the concert situation of fixed media music. Light sources 'unfurl' space through brightness. There is, however, another way that light interacts with space, and this is the phenomenon that Böhme calls 'light in space', of which the 'starry sky' is a prototype (2017, 151). Here, instead of unfurling the space by brightness, light sources like stars structure the space, give it direction and break the infinity of the darkness. 'They take away the pressing aspects of dark space or the indeterminacy in which once can get lost' (Böhme 2017, 152). This type of lighting is also relevant in fixed media music concerts (such as in ZKM's *Kubus*, which will be discussed later). Besides 'space created by light' and 'lights in space', a third phenomenon of lighting, according to Böhme, is 'light on things'. To give an example, in the context of fixed media music presentation, we can consider the Acousmonium's approach in illuminating the loudspeaker orchestra (see below).

The fixed media concert situation is often associated with darkness, which supposedly favours acousmatic listening. Presenting fixed media music without any lighting is a common practice. In reality, however, it is never pitch black in concert venues, partly because the exit lights must always be visible for safety reasons, but also because the performer needs a small amount of light to see their surroundings during the performance. Moreover, some light is also emitted by the equipment in use, such as computer screens, lights on the mixing desk and so on. Therefore,

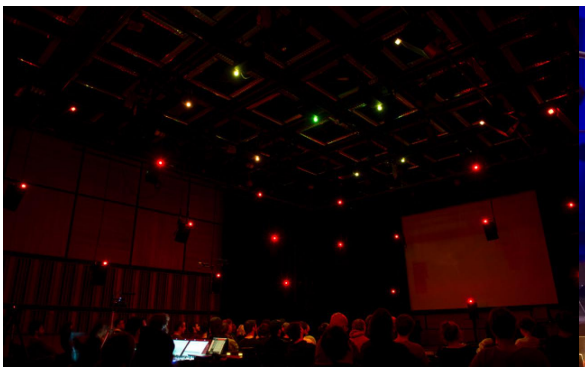
creating absolute darkness in a concert hall requires taking specific measures. Francisco López, for example, addresses this by having the audience (voluntarily) blindfolded for absolute eradication of the sense of vision. He mentions two reasons for this strategy: to avoid distracting them by his activities during the performance, and to ritualise the concert experience. In the GRM's Acousmonium presentations, on the other hand, loudspeakers receive extra attention by the use of lighting. A distinctive arrangement of colourful loudspeakers in various shapes and positioning creates the typical look of an Acousmonium concert. One can even argue that such an arrangement of loudspeakers on stage is as much concerned with creating a visual spectacle as with sound diffusion – perhaps as an attempt to fill in the empty stage and to compensate for the absence of musicians? After all, the Acousmonium and similar setups are often described as 'loudspeaker orchestras'. It is perhaps ironic that one of the oldest organisations involved in developing and promoting *acousmatic* music pays such attention to a strong visual representation – proudly shining spotlights on the loudspeakers as the superstars of the show. In BEAST (Chapter 1), however, while colourful and 'atmospheric lighting' is used, (Harrison 2013, n.p.), illuminating the loudspeakers as sound sources is avoided. As Jonty Harrison explains, by avoiding shining light on the loudspeakers, the designers of BEAST wished to foreground the idea of a 'sound image' which is not tied to the physical presence of the loudspeakers.

> Note that we do not light the individual loudspeakers, as this draws attention to them; what we are aiming for is that the loudspeakers also "disappear" as the sound image is sculpted in the space as an organic entity. (Harrison 2013, n.p.)



Acousmonium, Paris, photography Didier Allard

A more subtle approach is deployed at ZKM's dome-shaped loudspeaker setup, known as *Klangdom*. Each loudspeaker in this 40-channel sound system is equipped with a small LED light. These lights are individually programmable in terms of brightness and colour. Such an arrangement offers an abundance of possibilities in order to create various *lightscapes* (Bille 2007, 265). These lights create the *starry sky* effect as 'light in space'. At the same time, they accentuate the location of the sound sources and their arrangement in relation to the space.



Klangdom at the ZKM, Karlsruhe, photography Tanja Meissner

BEAST in the Elgar Concert Hall, Birmingham

It is worth mentioning the peculiar example of John Cage's last work, *One*[11] (1992), where he 'composes' with light, even if this is not directly connected to the lighting of fixed media concerts. This is essentially a feature-length 'film' in black-and-white which consists entirely of lights and shadows, and according to Richard H. Brown, it is conceived as 'an experience of the effect of light in space' (2019, 176). The piece is created using his accustomed compositional strategies of chance operations, this time applied to light rather than sound. *One*[11] is accompanied by a recording of his orchestral piece *103* (1991), which is experienced 'acousmatically': the orchestra remains unseen. The slowly changing areas of light which appear on the screen are not illuminating particular objects, nor the shape of an architectural space, thus discouraging any kind of focused visual attention on the part of the viewer. Instead they exist in counterpoint to the shifting sonorities produced by the invisible orchestra. This work is thus an example of lighting being used in a purely atmospheric manner, its gradual evolution and indistinct outlines being perhaps comparable with my own use of moving images of clouds in the audiovisual part of this dissertation.

2.5.2. Dim lighting

Brian Kane quotes an anonymous writer from 1826 on this subject:

> Would not the dim light, full of foreboding, compose the souls of those who entered, purifying away the dross of everyday life and setting them into that mood which alone is appropriate for the enjoyment of art? (2014, 111)

In my own artistic presentations, I prefer dim lighting to absolute darkness. Apart from practical reasons such as logistical convenience and avoiding *scotophobia* (for those who might suffer from it), dim lighting engenders atmospheric qualities with its in-between character – also known as 'half-light' which compares to Böhme's reference to atmosphere as a 'half-thing'. In this regard, he states that '[p]erhaps, twilight is even more atmospheric than the night, as it is a peculiar medium of indeterminacy' (1998, 31). Dim lighting has two characteristics which promote an atmospheric quality. On the one hand, it unfurls and 'clears' the space, giving an awareness of one's surroundings and a feeling of presence and belonging in a space. On the other hand, because of its lower intensity, it reduces focused vision and the degree of attention given to a specific point or thing in the space. As discussed above, focused vision creates distance and outsideness, while, in my experience, dim lighting promotes a sense of community when fellow audience members are (dimly) illuminated and peripherally visible. As discussed in the first chapter, with the lack of a focused point of attention like a stage, the audience in a fixed media music concert situation is more attentive towards their own (and the other audience

members') bodily presence, especially when sitting in a circular arrangement where observing each other's presence is easier. This more unfocused or diffused awareness of the others in the space promotes a sense of collectively shared experience of the music. Mikkel Bille and Tim Flohr Sørensen in their article 'An Anthropology Of Luminosity' explain that 'subdued' lighting (created mainly by candles) induces a sense of 'social inclusion', related to the concept of *Hygge* (2007, 276).[24] They explain that:

> The materiality of light has the ability to alter human experiences of space, and to define sensations of intimacy and exclusion. This network between the light, the person or thing shapes the atmosphere, whereby material and social relationships are created or manifested. (2007, 274)

After my research on atmosphere and the role of lighting, I decided to try designing the lighting for my performances more deliberately. For a concert in October 2022, I took the opportunity to experiment with the lighting. Fortunately, in the Conservatoriumzaal of the Royal Conservatoire in The Hague, the possibilities in terms of lighting are extensive. Thanks to the motorised LED fixtures, it is possible to utilise various beam angles, colours and patterns, not only to project onto the stage but also over the whole space; this makes it possible to realise a sophisticated light design with the help of a light technician (see the audiovisual dissertation). Unlike in most acousmatic situations, the hall was dimly lit (in warm orange) so that the audience was able to see their surroundings easily. Patterns in blue which resembled light shining through leaves were projected onto the upper part of the hall. The warm light on the audience was motivated by inducing a sense of *Hygge* (see footnote 24) in utilising candles (also with warm temperature). Blue was chosen to create a contrast while the patterns added texture to the otherwise flat surfaces, with the effect of transforming the rectilinear architecture of the space into an environment which reflects and enhances the complex and irregular textures of the music. After the concert, many audience members commented on this lighting, how it had a strong effect on their perception of the space and enhanced their experience of the music, indicating that this is an area worth exploring further, which I intend to do in future performances.

Lighting can thus not only play a role in experiencing the space and in tuning our presence in a particular way, but can also function to draw attention to the agency of the performer in fixed media music. For instance, casting a spotlight on the person behind the mixer (often in the middle of the audience) markedly assigns performative agency to that person, and creates the expectation of a performative situation on the part of the audience. Conversely, deciding to *not* illuminate the person behind the mixer changes the audience's perspective on the presentation and the agency of the performer. Lighting in the concert situation of fixed media music may have another important and practical function, namely to mark the different moments of the concert, for instance to indicate the beginning and end of pieces, the interval/intermission and the end of the concert, which is especially helpful in the absence of musicians entering and leaving the stage. I would like to make clear that when discussing lighting, I am not talking about audiovisual works such as Iannis Xenakis' *Polytopes,* where the lighting *is* part of the work and is 'composed' alongside it, often with great precision; I refer here to lighting as a constituent of the atmosphere through which the (acousmatic) piece is experienced. Lighting in fixed media music

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[24] According to Bille and Sørensen, *Hygge* 'generally implies a preoccupation with creating an informal, intimate and relaxed ambience with sweets, wine, comfortable seating, pleasant conversation and – in terms of our argument – subdued lighting, preferably, although not exclusively, using candlelight' (2007, 275).

concerts is a delicate task. It should not draw as much attention to the visual as might be the case in an explicitly audiovisual work, but rather be experienced (if at all) as encouraging the audience's dedication to listening. This interconnection between acousmatic listening and lighting is an issue requiring further investigations and experimentation.

2.6. Composing atmospheres

> [A]tmosphere itself is not a thing; it is rather a floating in-between, something between things and the perceiving subjects. The making of atmospheres is therefore confined to setting the conditions in which the atmosphere appears. We refer to these conditions as generators. (Böhme 2013, 4)

Here, Böhme discusses the possibility of *producing* atmospheres, underlining that they are 'emanating from and produced by things, people and their constellations' (2017, 23). An atmosphere may therefore be produced and shaped by preparing the setting and conditions for it to emerge. Sound, light, shapes, smell etc., as I have shown, are among the 'atmosphere generators' which may be integrated into the presentation of fixed media music. François Bayle (1982) discusses the importance of 'staging' fixed media music presentations, a practice which according to him was not given enough attention to in early electroacoustic concerts:

> A theater, an empty stage, unflattering lighting, a few loudspeakers placed sadly in the corners, an accumulation of heterogeneous technical equipment, this is the caricature of an acousmatic concert on a small budget, thrown together hastily the day of the concert. (in Roads 2015, 250)

The development of the Acousmonium by Bayle, beginning in 1974, was therefore an attempt to *stage* the presentation of such music. The choice of venue is also an important decision in creating the atmosphere of a concert: a traditional concert hall, a small theatre, a church, an abandoned factory or an open air location – each of them induces a different atmosphere. Apart from lighting and architecture, sound is of course the principal constituent of the atmosphere in fixed media music concerts. 'Non-musical' or ambient sounds are often absent in such a setting, because concert halls nowadays are sonically well-isolated from (inside and outside) noises. Except for audience noise, the listening experience therefore takes place in a background of (relative) silence.[25] However, I have had multiple experiences in non-concert hall locations where ambient sounds can be an element in shaping the atmosphere. For instance, in one of the Azimuth concerts in the Nutshuis, a monument in the city centre of The Hague, the sounds of the city were constantly present during the concert, specifically in the quiet moments. This resulted in a peculiar effect: 'cross fading' between the musical world in loud and intense moments and the sonic reality of the city during the quieter moments. This affected the audience's awareness and focus in a way that was not necessarily detrimental to their musical experience, particularly bearing in mind John Cage's attempts to erase the distinction between musical and extra-musical sounds.

[25] Heloisa Amaral (2022) in her dissertation 'Mediating from Within' explores the connection between attention and silence in the context of classical concerts, and discusses the possibility of integrating sounds which are 'extraneous to the composition'. She suggest that the co-presence of these non-musical sounds can in turn influence our focus and musical experience, and give rise to a productive mode of engaging with the artwork.

Composing fixed media music often takes place in a studio, an environment quite different from that of the concert venue not only in terms of scale, acoustics and equipment, but also in its atmospheric qualities. The generators of atmosphere discussed above are often absent in the studio. For me, imagining the concert situation functions as a canvas on which musical ideas are put together and develop. Therefore, the composition process begins from its end point, namely its (imagined) presentation, just as a composer of instrumental music might begin from considering the instruments and the players who will perform the eventual composition. This signifies the importance of atmosphere in the act of composing. Imagining the atmosphere in which the piece will sound (or better, will be experienced) – in other words, the (imagined) here and now of the concert situation – guides the composition process, while the atmosphere in which the music is composed (in this case, a studio) plays little or no role in influencing the result.[26] Advance knowledge of the concert location affects the eventual piece in multiple ways. Familiarity with the structure and acoustics of the venue can have a direct effect on the choice of musical material, and the manner of structuring and developing it. A large and reverberant concert hall evokes a different mood compared to a small and cosy venue. This affects not only the audience but also the composer. Again, just as an instrumental composition will change its character somewhat when performed by different people (while at the same time retaining an important part of its identity), a fixed media piece retains its identity in different spaces while reshaping itself (or being reshaped by the process of *actualisation*) to adapt to them.

Atmosphere production can also have a manipulative and negative aspect. For instance, it can serve political propaganda, or have a persuasive effect in marketing and advertising by placing products in the context of a desirable lifestyle, leading to the 'transformation of capitalism into an aesthetic economy' (Böhme 2017, 5). Even so, the consideration of atmosphere as a concept, with its vagueness and ineffability, can open up new perspectives with regard to understanding and working with concert situations, since - like fixed media music in itself - the aesthetics of atmosphere foregrounds spatiality and presence, and emphasises the importance of the experience of an event in a particular time and space, as in the here and now of a concert. These new perspectives suggest the ontological status of a composition as an actualisation which takes place in the context of an atmosphere, rather than being a concrete musical object.

[26] In a parallel example, in the process of architectural design, Pallasmaa explains that 'atmospheric qualities arise unconsciously in an embodied, haptic and emotional manner in the designer's imagination rather than through conscious retinal intentions or cerebral processing. […] the imagined image is felt through the body and it approaches the experience of the real physical thing. […] This vague embodied feeling guides the design as much as any intellectual or visual aesthetic aspirations' (2019, 127).