BERGSON, MOURNING AND MEMORY: THE FRAGILITY OF TIME IN KLAUS LANG'S TRAUERMUSIK

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Abstract: The music of composer Klaus Lang (b. 1971) is often overlooked in broader discussions of New Music in Europe, and is little discussed outside of his native Austria. When his music is discussed, it is usually in relation to its fragile textures and extreme quietness. However, the notion of time in its various guises also plays a key role in Lang's work, and it is the scale and structure rather than volume and timbre of his music that this article probes. This paper looks at the construction and configuration of time in Lang's music utilising the writings of Henri Bergson, and specifically the notion of duration as a mediation of time and consciousness. I suggest that Lang's work is predicated on the fragile balancing of conscious and 'clock' time, creating structures that destabilise our perception of temporality in his work.

To talk about the fragile is to engage in a negotiation of aesthetic concerns that is all too prone to its own fracture and subsequent failure. Allan Hepburn in his book *Enchanted Objects: Visual Art in Contemporary Fiction* notes the paradox in the status of fragility and its value in objects, stating that 'fragility is a physical trait in an object, yet fragility cannot be proven until tested'. It is not the proof of an object's fragility — as this renders the object broken, and therefore no longer the same object — but rather the object's apparent fragility that renders it desirable. Hepburn's fragility is not a destination or ultimate state of being, but is, rather, situated in the tension between an object's potential failure, and the desire to put that object to use. This tension belies a sense of beauty, and it is in the intertwining of beauty and danger that fragility becomes a subject worthy of close scrutiny.

Fragility in this sense is entwined with objecthood, tied up in the notion of the object: there must be an object that is prone to failure for this tension to exist. Whilst this tension is relatively easy to comprehend, it is less clear what fragility means when it is given as a quality of an abstract and impermanent phenomenon such as a sound.

Allan Hepburn, Enchanted Objects: Visual Art in Contemporary Fiction (Toronto: University of Toronto Press, 2010), p. 135.

This is not to say that the object-centred fragility described by Hepburn cannot be found in sound. Evan Johnson's *Hyphen* (2002), for crotales, demonstrates this quite clearly, asking the performer to use a mixture of mallets and hands to strike the crotales as softly as possible. The combination of dynamic and playing technique creates a performance situation in which the possibility of certain gestures not sounding – whether literally being too quiet, or being lost in the resonance of the instrument's overtones – is extremely high. This is highlighted in Johnson's performance notes for the piece where he states that

All mallet attacks should be absolutely as quiet as possible (*pppp possibile*). The performer may find that the notated tempi are impossible to meet while playing as quietly as possible; in this event, quietness should be given a higher priority than tempo.²

Johnson's insistence that the performer prioritise quietness over tempo highlights the fragile tension created between the two, and the instruction to allow tempo effectively to fail for the sake of dynamic is an invitation to allow an aspect of the piece to enter into its own destruction (as well as a challenge to the performer). Johnson also acknowledges the fragility of the performer in realising the piece, noting that *Hyphen* 'requires exertion (and some tolerance for pain!) on the performer's part if any sound is to result at all ... bodily fatigue is an integral part of the performance experience'. In this sense the piece is doubly fragile as the percussionist's hands (arguably their most precious asset) are pushed toward breaking point for the sake of a very quiet sound.

The difficulty surrounding dynamics is compounded by the use of complex rhythmic notation, including nested tuplets which lend a sense of frenzied energy to the performance that – in combination with the physical effort required using bare hands – is incongruent with the sonic result. The tensions created in *Hyphen* between the need to perform the piece and the potential for the sounds in the piece to fail suggest that fragility according to Hepburn's theory is possible in sound (Example 1).



Example 1: Excerpt from Evan Johnson's *Hyphen* © Evan Johnson

However, this reading of fragility only holds if each gesture is treated as a miniature object in and of itself. Hepburn notes that

² Evan Johnson (n.d.), Performance note for Hyphen, www.evanjohnson.info/solo-instrument-voice/.

³ Johnson (n.d.), Performance note for Hyphen.

'[c]hipped or smashed, objects prove their disposition towards fragility. In a certain way, all truly fragile objects come to grief.4 Whilst this may be read as a condemnation of all fragile objects to their eventual destruction, it can also be understood as saying that all fragile objects are by their very nature transient, and necessarily more transient than objects in general. This creates a compelling new type of fragility, though one that is problematic in itself, as one might posit as to how tension can be created in something that only exists for a matter of seconds. A fragile sound may exist as a form of micro-tension - which is to say 'this sound is very quiet, will it fail?' - but this tension is surely a simulacrum of the fragility inherent in a concrete object. The transience of a particular sound affords a new form of fragility, one that is not based not on how likely the sound is to 'fail' in the moment of its creation, but is predicated on the notion that, once the sound has finished, there is a residual tension created in a listener's ability (or lack thereof) to hold that sound in all of its complexity in our memories.

It is on this macro level that sound starts to become more intimately associated with fragility. Fragility in music can be said to have more to do with our ability to remember or recall than it does with the timbral qualities of a particular sound. However, whilst one might regard transience as sound's primary fragility type, one might consider very quiet sounds as being doubly fragile. It is the intersection of these musical qualities and the notion of memory that form the basis for much of the music written by the Austrian composer Klaus Lang. Whilst I will argue that his music is a fragile musical object, I will also make the case through an analysis of two early works by Lang – namely the viola solo der wind und das meer (1992) and the string quartet the sea of despair (1995) - that it is the fragility of memory invoked through musical repetition that renders his music doubly fragile and, as a result, doubly beautiful.

The music of composer Klaus Lang (b. 1971) has received very little academic attention outside of the German-speaking areas of Europe. Indeed, a simple search online reveals little in the way of media coverage other than the occasional press review. What these fragments do reveal, however, is that Lang's music is rarely met with indifference. Most seem to balk at the sheer sparseness, with the American music magazine Pitchfork describing Lang's album with the Austrian improviser and composer Werner Dafeldecker as a

chilling imperceptibly moving hum, occasionally merging into a tone or two almost accidentally, as if the music an instrument makes has absolutely no relation to the instrument itself ... [i]t's the sound of a pipe organ when no one's listening to it.6

This review perhaps misses the point of Lang's music, but the music nevertheless invokes a strong reaction. Other outlets such as The New York Times are less dismissive saying

Hepburn, Enchanted Objects, p. 135.

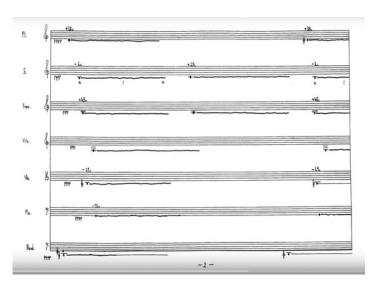
⁵ This article was written before the publication of Jennie Gottschalk's Experimental Music Since 1970 (London: Bloomsbury Academic, 2016), which discusses Lang briefly, and makes reference to the manipulation of time in his music (pp. 44-5).

⁶ Alexander Lloyd Linhardt, 'Review of Werner Dafeldecker/Klaus Lang Lichtgeschwindigkeit', Pitchfork, http://pitchfork.com/reviews/albums/2523-lichtgeschwindigkeit/.

the stunning 'ABD' structured as a triptych... begins with an eruption of saturated colour. It drops to a quieter, more tender section, eventually leaving a bright filament of tone surrounded by a husky halo...⁷

Whilst his music is regularly performed in Europe – most recently in the UK by the Arditti Quartet at the 2015 Huddersfield Contemporary Music festival – Lang is treated as a passing curiosity by musicologists writing in English. Lang is currently employed by the Kunstuniversität Graz, where he himself previously studied with Hermann Preßl, Younghi Pagh-Paan and Beat Furrer. He participates as a member of the composition faculty at festivals such as impuls, a biennial festival held in Graz, and the Internationale Ferienkurse für Neue Musik in Darmstadt. Lang also travels around Europe, latterly as part of a duo comprising harmonium and viola d'amore with Barbara Konrad, a performer who has recorded both of the pieces being discussed in this essay.

It would be easy to categorise Lang's works as fragile in the terms outlined by Hepburn, as modified through my discussion of Johnson's *Hyphen*, above. While the overall dynamic of his work is not always on the verge of inaudibility, his sound world focuses on pushing instruments to the edge of their own functioning (and *does* often do this at and through extremely low dynamics). This is not achieved violently or virtuosically as one might find in the music of, say, Brian Ferneyhough, but rather in a gentle manner, asking performers to maintain a single pitch for sustained periods, or to move very slowly over small harmonic intervals. These techniques can be seen particularly in Lang's earlier works such as *Der Weg des Prinzen* (1996) for chamber ensemble (Example 2).



Example 2: Klaus Lang *Der Weg des Prinzen*, p. 2, © Klaus Lang

The opening gestures of *Der Weg des Prinzen* are formed of held notes across the ensemble at *pppp*. The use of this dynamic in

⁷ Zachary Woolfe, 'Techtonics Festival in New York Takes Wing at a Church Setting', New York Times, 8 May 2015, www.nytimes.com/2015/05/09/arts/music/review-tectonics-festival-new-york-takes-wing-at-a-church-setting.html?_r=0.

⁸ Lang is mentioned in Paul Griffiths's Modern Music and After, third edition (Oxford: Oxford University Press, 2011), but only as a precursor to Griffiths's discussion of Beat Furrer.

combination with instrument choice appears to be designed with failure in mind. The wind instruments (flute and saxophone/clarinet), viola, female voice and bandoneon all require a huge amount of control on the part of the performer to maintain a single sustained pitch at the dynamic prescribed: even the most minute change in breath or hand pressure could cause the pitch to collapse. This difficulty is further compounded by the slight detuning of the flute, saxophone, singer, viola and unspecified instrument, making the pitches potentially more difficult to sustain. The stresses placed on the performers and their ability to sustain these pitches creates an ethereal sound world that forms part of Lang's musical signature. Though this may appear to be the music's principal feature to the casual listener, this does not seem to be Lang's primary objective. In the short biography included on his website, Lang talks about his music in terms of time:

Klaus Lang's music is not a means to convey extramusical contents, such as emotions, philosophical or religious ideas, political propaganda, advertisement etc. ... His music is no language used to communicate non-musical content. Music is seen as a free and selfstanding acoustical object. In his work he is not using sound, sound is explored and given the opportunity to unfold its inherent rich beauties. Only when sound is just sound it is perceivable as that what it really is: a temporal phenomenon - audible time. Klaus Lang sees time as the genuine material of a composer and at the same time also the fundamental content of music. In his view musical material is time perceived through sound, the object of music is the experience of time through listening. Music is time made audible.5

Although Lang's sound world is composed in no small part of fragile sonic objects of the sort described above, his focus on the notion of time implies that the transience of musical experience itself may hold the key to understanding fragility in his work. Using two works written by Lang in the earlier stages of his career, I will look at the way in which the idea of time is, in fact, the primary focus of Lang's music. While it is certainly fair to label Lang's sound world as fragile, I will argue that it is in fact in his approach to time, and more specifically the way in which he alters the perception of time passing through the use of repetition that one might find fragile tension. This is to say that it is not the musical material itself that is fragile, but rather that the effect of the music on the listener exposes the fragility of the uniform passing of time through the triggering of memories.

The French philosopher Henri Bergson defines two types of memory in his 1896 book Matter and Memory. The first is described in terms of rote learning. By going over the text again and again, one learns the text by heart. He describes this as having

all the marks of a habit. Like a habit, it is acquired by the repetition of the same effort. Like a habit, it demands first a decomposition and then a recomposition of the whole action. . . . [I]t is stored up in a mechanism which is set in motion as a whole by an initial impulse, in a closed system of automatic movement which succeed each other in the same order and together, take the same length

This kind of memory is reflexive, then, as a result of the repeated completion of a specific task, and is therefore inscribed on the mind in the same way as blinking one's eyes or breathing is. The second

⁹ Klaus Lang, Biography (English), http://klang.mur.at/?page_id=119.

Henri Bergson, Matter and Memory, trans Nancy Paul and W. Scott Palmer (London: George Allen & Unwin, 1970 [1896]). pp. 89-90.

kind of memory is freer. Whilst the repeated act of reading the text forms a habitual memory, each act of reading in itself forms a 'pure' memory which

has *none* of the marks of a habit. Its image was necessarily imprinted at once on the memory, since the other readings form, by their very definition, other recollections. . . . All that later readings can add to it will only alter its original nature. ¹¹

There is a fundamental difference between these two types of memory. The first is a processual memory whereas the second is akin to the capturing of an image in the mind's eye. However, unlike an image such as a photograph, this image alters over time both with repeated re-viewings or recollections, or by being moved to the back of the mind, an act akin to digital compression where some of the finer detail is lost in order to 'free up memory'. What is most important about the second type of memory is the perception of time in relation to it. Bergson notes that

The memory of a given reading is a representation, and only a representation; it is embraced in an intuition of the mind which I way lengthen or shorten at will; I assign to it any duration I please; there is nothing to prevent my grasping the whole of it instantaneously, as in one picture. 12

Because habitual memory is the learning of a process, its recollection is inextricably linked to the time taken to complete that action. On the other hand one is able to take in an image over any time one wishes. This might take the form of being struck by an image as a kind of flashback, which is to say, without willing that particular memory into being, or by consciously luxuriating or agonising over a particular recollection for many hours. Memory and memories, then, can alter the way in which we perceive time; we may spend hours going over moments from the distant past and lose all perception of real – or clock – time passing.

Gilles Deleuze goes further in *Bergsonism*, a study of Bergson's approach to time. He states that '[d]uration is essentially memory, consciousness and freedom. It is consciousness and freedom because it is primarily memory'¹³. For Deleuze, Bergson's memory *is* durational time to the extent that it is the combination of the past, present and future. Deleuze also highlights the Bergsonian division between time and space using the analogy of a sugar cube:

Take a lump of sugar: It has a spatial configuration. But if we approach it from that angle, all we will ever grasp are differences in degree between that sugar and any other thing. But it also has a duration, a way of being in time that is at least partially revealed in the process of its dissolving, and that shows how that sugar differs in kind not only from other things, but first and foremost from itself. This alteration, which is one with the essence or the substance of a thing, is what we grasp when we conceive of it in terms of duration. ¹⁴

Duration, then, can be understood to have a transformative effect on objects. This suggests that the passing of time, either through the subconscious manipulation of pure memories, or literally through the passing of time since the creation of that memory, can have a transformational influence upon that duration. Deleuze highlights a number of subjectivities, which is to say, ways in which memory affects the

Bergson, Matter and Memory, p. 90.

Bergson, Matter and Memory, p. 91.

¹³ Gilles Deleuze, Bergsonism, trans. Barbara Habberjam and H. Tomlinson (New York, NY: Zone, 1988 [1966]), p. 51.

¹⁴ Deleuze, Bergsonism, pp. 31-32.

perception of duration. The first, need subjectivity, is the moment of negation, that is, the moment at which the mind stops to take a look at the thing (or event) invoking a memory. Brain subjectivity is the neurological process or the space in which the brain responds physiologically. Affection subjectivity is similar to brainsubjectivity in that it is physiological, but is a pre-cognitive moment of pain – the literal sting of recognition.¹⁵ These subjectivities might be attributed to the first kind of memory, in that they are essentially forms of physiological processing. It is recollection subjectivity - described as 'the primary aspect of memory (recollection being what comes to fill the interval, being embodied or actualised in the properly cerebral interval)'16 - that is central to this discussion, however.

Recollection subjectivity, then, is a moment of distraction, a pause in which one is compelled to survey the image of a pure memory and stop paying attention to the passing of time. As our consumption of music is most often as a transient object through the medium of listening, we rely on memory to appreciate it on a level other than the purely affective. It is with this in mind that I now turn to Lang's music, and how we might understand the way in which 'music is time made audible'.17

The portrait CD Trauermusiken (1995) contains two early pieces from Lang's 'Trauermusik' series, composed between 1994 and 1997 and therefore representing music from the early stage of his career. der wind und das meer: trauermusik für bratsche solo is not listed on Lang's website, though a note on the website of the Austrian Music Information Centre¹⁸ suggests it dates from earlier than the 'official' start date of the 'Trauermusik' series, 1992; the sea of despair: trauermusik für streichquartett was written in 1995. The two tracks are very unbalanced when paired in this way, with der wind und das meer lasting only 4'52" compared to the sea of despair's 69'08". One possible reading of this pairing is that the viola solo serves as an overture for the string quartet that follows.

The theme of repetition is something that is embedded in the compositional foundations of both der wind und das meer and the sea of despair. The use of repetition is not, however, always visible on the surface of the pieces, and is often applied in such as a way that is barely perceptible to the casual listener. Indeed, with the sea of despair, repetition only really becomes apparent when the work is analysed in depth. I do not think Lang wishes the repetition to be immediately or perhaps even ever – visible/audible to the audience. Rather, I want to suggest that Lang uses complex repetition in order to trigger memories on a subconscious (or pre-conscious) level. The activation of memories then serves to give the listener a sense of the familiar, triggering a Bergsonian pure memory and inviting the listener to (su)spend time searching for the connecting link. This searching process causes the listener's perception of time passing to be altered, deferred, or, perhaps, stopped all together. A successful deployment

¹⁵ The notion of affect is not particular to Bergson and Deleuze. The notion of affect has been drawn upon frequently in recent musicology, especially in relation to the study of noise. See Steve Goodman, Sonic Wafare: Sound, Affect and the Ecology of Fear (Cambridge, MA: MIT Press, 2010) and Marie Thompson, Beyond Unwanted Sound: Noise, Affect and Aesthetic Moralism (London: Bloomsbury, 2017) for more.

Deleuze, Bergsonism, p. 53.

Lang, Biography.

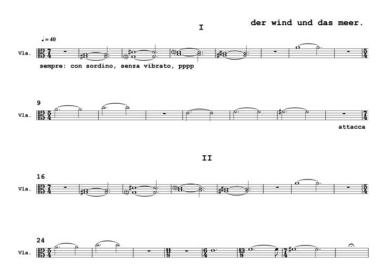
Music Austria's complete work list for Lang may be found at: http://db.musicaustria.at/ node/70026 (accessed 26 July 2016).

of this approach would maintain the feeling of familiarity without providing a 'eureka' moment of recognition. This is not the suspension of time itself, but rather the suspension of the listener's consciousness of that time passing.

The categorisation of Lang's music as a fragile object in a more traditional sense is not without its merits, but Lang's manipulation of fragility in the guise of music as time presents novel and more complex perspective on the fragile. Beauty here resides not only in the risk that the heard component of the music fails to sound, but that the music's form and pacing are at risk of destabilising the listener's perception of clock time. There is a special kind of beauty in a moment that passes without one realising, and this kind of fragility can only be the product of the beautiful, and the robust.

der wind und das meer

der wind und das meer's placement as the opening track is interesting primarily because of the implication that it is an overture for what is to follow. The piece is formed of two sections, which appear on first glance to be identical. Upon closer inspection, however, there are some small changes to the pattern of time signatures that transform the piece in a seemingly minor, but crucial way. On one level the material appears to be repeated, but whilst bars 9 to 14 are all written in ⁵/₄, bars 24–30 (the 'repeat' of bars 9–14) get gradually longer, increasing by a quaver length from bar 27 onwards (Example 3). Bergson might consider this a spatial repeat, which is to say, the music appears to be the same in terms of numbered bars, but is merely being viewed from a different angle. However, when one considers the implications for performance, the piece is transformed. The first two thirds of each section are identical, but the last three notes in



Example 3: Klaus Lang der wind und das meer, © Klaus Lang

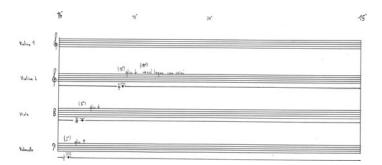
the second section are incrementally longer. The effect is that the listener is unsettled by the repeat not conforming to the (not quite) learned memory.

On the surface this is a fairly simple compositional approach: repeat the material with a slight variation to create something new. But when viewed through the lens of Lang's approach to time, this subtle

change creates something more complex; he plays the listener off against her own memories, presenting something that is almost identical, but not quite. Retuning to Deleuze's sugar cube analogy, the music on the page represents space, which is to say that the two sections look like the same material presented from different angles. When one introduces time, the piece resembles to sugar cube dissolved in water: the material is still there, but it is fundamentally different. der wind und das meer is in many ways the overture for the sea of despair, which takes an approach to time that is at once the same and necessarily far more complex.

the sea of despair

the sea of despair for string quartet is in many ways the opposite of der wind und das meer. Where the viola piece takes the form of a delicate miniature, the quartet is more than ten times as long; the recording lasting over an hour. The score for the earlier piece comprises a single page of traditionally measured notation, while the latter is made up of over 40 pages of handwritten time-space score (Example 4). Whilst the



Example 4: Excerpt from Klaus Lang's the sea of despair, © Klaus Lang

structure of der wind und das meer can be taken in at a glance, the sea of despair requires one to pore over many pages to decipher long term trends.

However, whilst the pieces at first glance appear different in scale and form, several unifying factors can be found beneath the surface of the piece. The string quartet is, in fact, an extension of der wind und das meer, and the pieces are linked through the development and extrapolation of repetition. Whilst der wind und das meer introduces the idea of transformed repetition through a single change - the stretching of duration through the manipulation of time signatures – the sea of despair utilises multiple approaches, but approaches which are nevertheless clearly extensions of those in the viola model. These approaches can be mapped onto the models of need subjectivity. Specifically, the different types of repetition can be seen as manifestations of recollection subjectivity; the notion that the brain searches for previous instances of a particular occurrence and maps them against what is currently being perceived. This process disrupts the subject's perception of time as a constant linear process. Whereas der wind und das meer is formed of two virtually identical sections, the sea of despair is made up of multiple overlapping types of repetition, which can be outlined thus:

- Structural repetition: the use of structured sounding and silent sections that appear across the piece as a whole;
- Gestural repetition: the repeated use of particular trajectories between pitches within the piece using glissandi;
- Timbral repetition: the repeated movement between col legno and crini which creates a tension between difference and repetition, masking some instances of repeated harmonic and gestural features;
- Textural repetition: the use of pizzicato in both measured and timespace material over the course of the piece.

Structural Repetition

Structurally, the piece is made up of three sounding and four silent sections. The piece starts and ends with long periods of silence, with shorter silences framing the sounding sections. This is quite similar to the structure of der wind und das meer, where the two sections are bookended with silent bars and the four sounding sections are broken up with smaller rests. In the score (see Example 3) this is very easy to see, as the whole piece is written on a single page. In the sea of despair the opening and closing silences are obvious, but due to the large number of pages - over 40 - and the use of time-space rather than measured notation, the silences between the sections are harder to locate. Figure 1 shows a gestural analysis of the sea of despair showing the structure of the piece as a whole and the shape of the glissandi gestures within main sections of the piece. According to this analysis, the structure of the piece starts to emerge, with two very similar sections formed of glissandi and a final section made up largely of chords. Moreover, it is only when looking at the piece in this way that the patterns of repetition start to emerge.

The repetition of silence does several things for the listener. First, it acts as a form of punctuation: most of the piece is formed of extended glissandi at low volume. The use of silence forces the listener from one particular mode of listening – that is, passive, and focused on minute changes such as microtonal beating – to one that forces them back into the present. This not only makes the listener aware of time passing again, but also moves their focus away from the sound itself and out into her surroundings.

Second, the use of silence reminds the listener of previous silences. This is an example of recollection subjectivity where the listener's attention is focused on locating her memory of the previous silence. The silences are not all the same length: the first silence – at the start of the piece – is two minutes, the silence in the seventeenth minute is 25 seconds, and in the thirty-second minute is only eight seconds. The silence at the end is of unspecified length and represents a new kind of silence, the third kind used in the piece. This will be discussed below, in the section on timbral repetition.

Gestural Repetition

The first two sounding sections of *the sea of despair* are constructed primarily of slow glissandi. When one looks at these gestures across the two sections, it becomes apparent that they consist of several almost identical repetitions, most strikingly in the viola, second violin and cello. Even though the overall shape of the gesture is slightly different each time, the start and end pitches, as well as the length of the gesture, are very similar if not indistinguishable. Figures 2 and 3 show five gestures that are very similar: three in the cello (shown in purple),

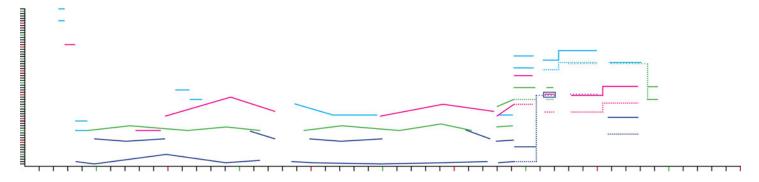


Figure 1: Gestural analysis of the sea of despair

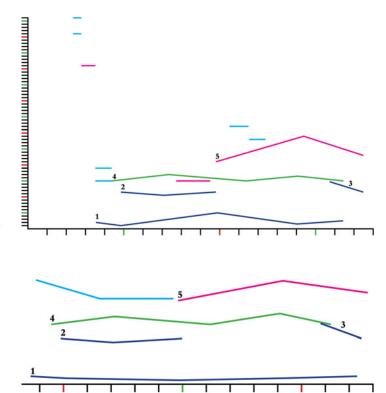


Figure 2: Gestural analysis of the sea of despair, 'section one'

Figure 3: Gestural analysis of the sea of despair, 'section two'

one in the viola (green) and one in the second violin (pink). ¹⁹ These have been broken down across Tables 1 to 5.

All of the gestures mapped here show two things: first, that the pitch contours are identical, with the exception of the first cello example, which, whilst slightly different, does still follow the same G#-B-G trajectory; second, in addition to the pitch contour, the times are almost the same, but are slightly longer in the second section. This pattern of extension links the gestural repetition here back to the repetition in *der wind und das meer*. Whilst this might suggest transformation of the same material through the manipulation of time (as in *der wind und das meer*), it could also be understood through the lens of recollection subjectivity. This is to say that when one experiences something for the second time it may appear to be shorter. ²⁰ By slightly extending the material the second time, the sense of sameness is heightened as the perception of the material as shorter is counteracted.

Within the third sounding section of the piece there are other examples of repetition, though these exist *within* the section itself rather than across the piece as a whole. The chords that build up in

The colours here refer to the images online. In the print version the cello is represented by a straight hashed line, the viola a dashed line, and the violin a solid line. Online the image is in colour and the cello is represented by a purple line, the viola a green line, and the violin a pink line.

The phenomenon of the 'return trip' effect has been the subject of debate in the behavioural sciences. See Niels van de Ven, Leon van Rijswijk and Michael Roy, 'The Return Trip Effect: Why the Return Trip Often Seems to Take Less Time', Psychonomic Bulletin & Review, 18, no. 5 (2011), pp. 827–32, doi: 10.3758/s13423-011-0150-5.

Table 1: Violoncello (1)

Gesture 1						
Time	3'33"	5'05"	9′56″	14'02"	16'27"	Total duration
Pitch	G sharp	G natural	В	G ¼ sharp	G slightly sharp	
Duration	N/A	1'32"	4'51"	4'06"	2'25"	12'54"
Gesture 2						
Time	18'37"	20'07"	24' 52"	29'11"	32'20"	Total duration
Pitch	G sharp	G ¼ sharp	В	G ¼ sharp	G sharp	
Duration		1'30"	4'45"	4'19"	3'09"	13'43"

Table 2: Violoncello (2)

Gesture 1				
Time	4'51"	7'05"	9'45"	Total duration
Pitch	F ¼ sharp	E ¼ sharp	F ¼ sharp	
Duration		2'14"	2'40"	4'54"
Gesture 2				
Time	19'53"	22'05"	24'59"	Total duration
Pitch	F ¼ sharp	E ¼ sharp	F ¼ sharp	
Duration		2'12"	2'54"	5'06"

Table 3: Violoncello (3)

Gesture 1			
Time	15'37"	16'57"	Total duration
Pitch	A slightly flat	F ¼ sharp	
Duration		1'20"	1'20"
Gesture 2			
Time	30'48"	32'31"	Total duration
Pitch	A slightly flat	F ¼ sharp	
Duration		1'43"	1'43"

Table 4: Viola (4)

Gesture 1						
Time	4'30"	7'21"	11'22"	14'05"	15'37"	Total duration
Pitch	A	В	A	B ¼ sharp	A	
Duration		2'51"	4'01"	2'43"	1'32"	11'07"
Gesture 2						
Time	19'29"	22'09"	26'10"	29'08"	30'58"	Total duration
Pitch	A	В	A	B ¼ sharp	A	
Duration		2'40"	4'01"	2'58"	1′50″	11'29"

Table 5: Second Violin (5)

Gesture 1				
Time	9'48"	14'13"	17'29"	Total duration
Pitch	D sharp	G sharp	F	
Duration		4'25"	3'16"	7'41"
Gesture 2				
Time	24'49"	29'13"	32'47"	Total duration
Pitch	D sharp	G sharp	F	
Duration		4'24"	3'34"	7'58"

the thirty-third and thirty-fourth minutes of the piece foreshadow a later movement to chords consisting of natural harmonics in the fortieth minute. These harmonics in turn link the end of the piece back to the opening and the flageolet tones in the violins in the second and third minutes.

The primary function of this gestural repetition is not, however, to provide the listener with a moment of clarity. Indeed, I believe that the point of repeated gestures stretched over extended periods is not to elicit recognition, but rather to create a sense of familiarity. The fact that there is something (almost) familiar about the sound world - a particular microtonal beating, for example - causes the brain to search for the recollection but, crucially, not achieve the moment of recognition. This sense of familiarity creates an ongoing period of recollection subjectivity, forcing the brain into a constant search for a moment of explicit recognition, and thus suspending the listener's perception of time by offering no real conclusion to that recollection pattern. The listener is stuck in a constant state of flux between being in that moment of performance, and having a feeling of familiarity, which forces them out of it. This gives the music a feeling of homogeneity, which further disrupts the sense of linear time throughout. To be sure, it is also the case that an unsympathetic listener may experience this same subtle undermining of time and memory as boredom.

Timbral Repetition

Over the course of the sea of despair there is a sense of timbral palindrome. The piece starts with silence, and then moves from flageolet tones to crini. Timbrally, the piece peaks in the thirty-third minute with a block chord before moving back through flageolet tones to silence at the close. The repeated use of harmonics in the opening and closing sounding sections again create a sense of the familiar, which is corrupted through the contrast in material, as well as the relatively extreme duration space between repetitions of timbral areas.

The most important piece of timbral repetition is the use of no timbre at all, which is to say the silence that opens and closes the piece. On one hand, the silence at the end is a mirroring of the silence at the beginning, giving the piece a sense of roundedness, a quite traditional sonic arc. However, the two silences function in very different ways. On the CD recording the closing silence is actually over 25 minutes in length. At the end of the sea of despair the instruments stop playing at 43'19". The recording then fades out completely at 43'54" leaving 25'16" of no signal at all. The score asks for an unspecified pause at the end of the piece: on the CD, a recorded silence of over 30 seconds closes the arc of the piece, but the 25 minutes of total, signal-less silence represents a new final section of the piece that exists only on the recording. As the track time is still counting up on the CD player, there is, it seems, a presumption that the listener is still invested in the listening experience.

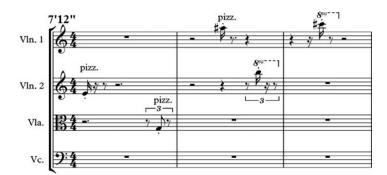
After a protracted period of being trapped in a cycle of recollection subjectivity, the final silence at the end - which is almost three quarters as long of the sounding part of the piece - gives the listener space to process the pure memories that have built up in the preceding 43 minutes. In this space, I found that I was being tricked into thinking that the piece had started again, and my mind started to fill the silence with sonic apparitions of what had previously occurred.²² This not only exposed the fragility of my own perception, but gave my imagination and memory the space to re-present remembered sounds in extended or truncated form. It also exposed further the fragility of clock time perception as my memories of the piece filled the void on the track and made the 25 minutes pass considerably faster than if I had not been imagining the piece coming back. One might imagine, too, a less involved listener finding herself, unexpectedly, listening to silence, having not quite noticed that the piece had come to an end. There is, here, a sense of drift since, in any case, even the most committed listener can hardly expect to remain utterly focused on silence - without the interruption of even her surroundings - for 25 minutes. This final silence is unexpected and unpredictable.

Textural Repetition

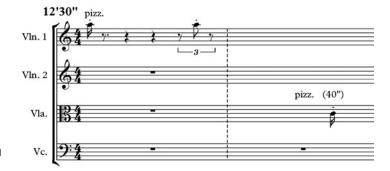
The gestural analysis and previous discussion have shown that the sea of despair can be understood to fall into three broad sounding sections. The first two make use of slow glissandi and the final section is formed principally of shifting block chords. In addition to these

Klaus Lang, Trauermusiken, Edition RZ, 1995 (RZ 4003).

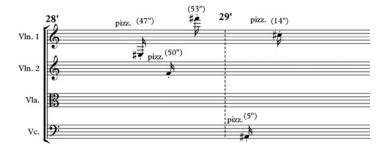
The concept of a sonic apparition might be comparable to the phenomenon of the 'afterimage', an experiment in which, after focusing on a picture for some time, the eye is tricked into thinking the image remains after it has been removed. For more see Eric Chudler, (n.d.) Afterimages [online test], https://faculty.washington.edu/chudler/after. html



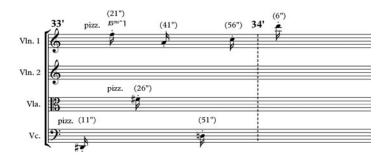
Example 5: Pizzicato gestures from *the sea of despair* showing placement within measured bars



Example 6: Pizzicato gestures from *the sea of despair* showing placement measured bars and time/space notation



Example 7: Pizzicato gestures from *the sea of despair* showing placement in time/space notation across multiple score pages (1)



Example 8: Pizzicato gestures from *the sea of despair* showing placement in time/space notation across multiple score pages (2)

macro textures, the piece is punctuated with seven pizzicato clusters, which appear throughout the first two sounding sections of piece at regular intervals. The clusters can be split into two broad groups, the first three occurring in the second, seventh, and twelfth minutes and thus occurring at the start, one third, and two thirds of the way through the first section. There is then a break of 13 minutes before four further clusters at 25, 28, 30, and 33 minutes. The second set of clusters fall in the second half of the second section as shown in Examples 5–8.

The clusters in the first section (Examples 5 and 6) exist within measured bars - the performance instructions note that the use of time signatures is indicative only and is meant to give a sense of duration, rather than denote metrical structure - and are relatively brief. The cluster in Example 6 includes a middle c in the viola that is marked with a time (12'40"). The second set of clusters are notated in time space and cover longer periods of time, being spread out in periods of between 30 seconds and one minute (Examples 7 and 8). Whilst the first set of clusters all occur within a given minute – and therefore on a single page of the score - the later clusters are spread across consecutive minutes and occupy multiple pages. Finally, while the held notes in the piece make use of a relatively small number of pitches, the pizzicato clusters make use of all twelve tones in the octave and include very little repetition, the exception being the A#-B-C# progression in clusters two and four.

Although there are similarities that can be drawn between the clusters, it is their contrast to their surroundings that is of principle interest here. The clusters appear to serve a slightly different purpose in their recurrence than the other types of repetition discussed thus far. Whilst structural and gestural repetition are employed to create a sense of sameness and familiarity, the clusters are used as a disruptive tool deployed to jolt the listener back into a conscious form of listening and re-establishing an awareness of clock time, before allowing the listener to drift back into a cycle of recollection. Repetition here functions in a very different way than it does in gesture and texture, but crucially all the forms of repetition are used to manipulate the listener's perception of time.

Both of these pieces present a situation in which the listener is confronted with repetition, but repetition of a very particular kind. This

repetition is present on a number of levels: through structure, gesture, timbre and texture. Each of these repetitions is subject to some form of change, however, and this change is most often presented as the manipulation of time with repetitions being slightly stretched.

Bergson's model of need subjectivity posits that the brain does several things when faced with repetition. First, that it recognises something as familiar, a phenomenon that exists by itself, but also on an affective level. Second, the brain then searches for the previous instance of that repetition. The effect of this process is that the mind stops engaging consciously with the passing of linear time, and instead engages in the processing of pure memories. It is in this manipulation of perception that a new level of fragility can be found operating in Lang's music. Whilst the stretching of material might be considered a transformation of sorts, it also reinforces the sense of repetition when listening in real time as pure memories compress experiences, often making them feel shorter when repeated.

One might argue that the sea of despair involves multiple manipulations of time by repeating sections: the opening section should seem longer that the second. However, by stretching these repetitions over such a long period of time, the listener is stuck in a state of limbo. The material seems familiar, but there is never a point at which the material is exactly the same and recognisable as such. This sense of familiarity is further disturbed by the use of diversions in the form of pizzicato and silences that force the listener back into the present. The mind is therefore in a constant state of buffering, and the listener's perception of time is pushed further back in the mind. The use of a long silence at the end of the piece may cause the mind to collapse in on itself all together as the listener attempts to fill the void with phantom sounds, or, as François Couture describes in his review on the website All Music, there is 'a complete silence in which your mind will play tricks on you. The music was so quiet and static that now it is gone you tend to "replace" it'. 23 The listeners spend the entire piece in conflict with their memories of what has come before, both in der wind und das meer, and in the first section of the sea of despair. The silence gives them the space to process that conflict and the result is a ghostly repetition of previously heard material: the memories manifest themselves to fill the space.

Fragility can be seen to be concerned both with sound objects and with our attempts to store those sounds as memories once they cease to exist in the real world. Whilst both *der wind und das meer* and *the sea of despair* can be categorised as fragile in the first sense, it is their manipulation of time through the lens of memory that is perhaps more interesting and pertinent to Lang's own compositional objectives. In these terms one might understand Lang's music as robust. It is memory and, by extension, our perception of time that is fragile, and it is this tension that is ultimately exposed.

²³ François Couture, 'Review of Trauermusiken', Allmusic, www.allmusic.com/album/trauermusiken-mw0001320126.