

*Aus dem Nachlaß: Sedimentation in Mauricio Kagel's *Tactil* and *Unter Strom**

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In 1974, the Deutsche Grammophon Gesellschaft issued an LP with studio recordings of two compositions by Mauricio Kagel: the 1970 *Tactil*, with the composer playing the piano part, joined by Wilhelm Bruck and Theodor Ross on guitar; and the 1969 *Unter Strom*, for which the latter two teamed up with Christoph Caskel to operate devices of 'experimental sound production'.¹ On the record's jacket, 'Illustrations taken from the score' were reprinted.² Yet, for decades to come, the publisher's catalogues of his oeuvre mentioned these scores without specifying any information to purchase or rent them.³ When queried about this paradox with regards to *Tactil*, Kagel's answer, after a hesitant 'Ah...', was as simple as it was enigmatic: 'There's a problem'.⁴

Problems are the seeds in the soil of research. To investigate the many research questions stemming from this peculiar situation of a composer authorising and even partaking in the recording of his officially unfinished works, an artistic research project was devised at the Orpheus Instituut. Within the larger HIPEX research group, which aims at considering experimental music from an HIP perspective, the historical performance practices of both *Tactil* and *Unter Strom* have been scrutinised in order to establish new, historically informed, performances (FIGURES 2, 3), to publish the completed scores, and disseminate the research findings.⁵ This article zooms in on aspects of the archival work that was part of the project. After he departed us in 2008, the composer left behind a sizeable archive, and most of the original performers are still alive.⁶

FIGURE 1. Front cover of the DGG LP with *Tactil* and *Unter Strom*.⁷



FIGURE 2. *Tactil* (1970): still from a recording session with Luk Vaes, Seth Josel, and Tom Pauwels.⁸



FIGURE 3. *Unter Strom* (1969): still from an early version of the reconstruction, with Jona Kesteleyn, Luk Vaes, and Seth Josel.⁹



ALLOSTRATUM I: *SALUT FÜR CAUDWELL*

Another HIPEX project concerns Helmuth Lachenmann's 1977 *Salut für Caudwell* for two guitarists. In contrast to both Kagel pieces, *Salut* has long been published, many different guitar duos have been performing and recording it, and the composer is still alive to interview. In a certain sense, however, the compositional work was also not really finished. According to Lachenmann, things were 'missing' in the 1985 print edition of the work.¹⁰ Research on this peculiar issue revealed, amongst much else, that the original performers – the commissioning duo of Bruck and Ross – had never played *Salut* from the published score, with their actual performance materials deviating from it significantly. The project led to a new edition of the score,¹¹ several articles,¹² a video recording,¹³ and projected masterclasses.¹⁴ One of the articles, *Where is Salut?*, addresses the 'labyrinth of sketches, drafts, and score iterations',¹⁵ and highlights how the challenges go beyond alleged missing performative information – all despite the possibility of direct access to Lachenmann. To navigate the sources, researcher Seth Josel drew on work by Paulo de Assis,¹⁶ who had been proposing an experimental performance practice that radically departed from the traditional Work Concept and Composer-Text-Interpretation hierarchy. On a concrete level, and amongst other notions, de

Assis had introduced the concept of stratification, developed from Gilles Deleuze and Félix Guattari,¹⁷ and enumerated six¹⁸ types of strata to categorise physical musical materials:

substrata:	other pieces, treatises, period instruments, etc.
parastrata:	sketches, drafts, first editions, letters, etc.
epistrata:	new editions, catalogues of sketches and variants, technical analysis, reflexive texts, recordings, etc.
metastrata:	performances, recordings, transcriptions, expositions, etc.
interstrata:	particular singularities, part of one or other stratum
allostrata:	materials that might under certain circumstances create relations to a given piece, e.g. 'a concert situation where a piece by Schumann enters into an unexpected relation with a piece by Ligeti'. ¹⁹

While de Assis aimed at a complete Assemblage Theory for Music,²⁰ Josel envisaged the more modest goal of creating a clear picture out of the confusing layers that make up the archive of *Salut*. Still, the exercise resulted in some surprising observations, chief among which is the wealth of inconsistencies among the *Salut* strata. In fact, the effort of putting the different types of materials in an order that could help determine which corrections supersede others, proved simply unproductive. As for the 'work', Josel remains equally inconclusive: *Salut* 'appears to be situated somewhere between the scores, in the interstratum between para- and epistrata'.²¹

WHERE IS THE KAGEL ESTATE?

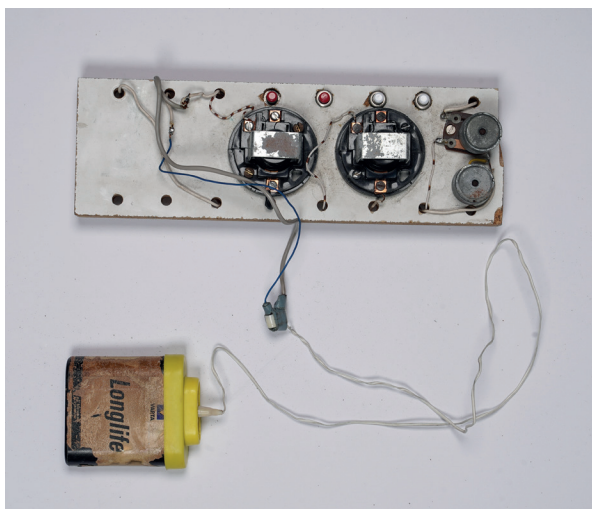
When it comes to the sources for Kagel's works, things appear to be in good shape. Already before his legal retirement age, he started sending off his physical archive to professionally housed collections.²² The effect was somewhat akin to sediments transported to a river bank where they settle, forming layers of complex aggregates. Different things went to different houses: parts of his extensive book collection can now be consulted in the Universitäts- und Landesbibliothek Bonn and in Berlin's Ibero-Amerikanischen Instituts; the bulk of what is traditionally seen to relate most directly to the creative output – scores, compositional materials, notes, concert programs, photographs, reviews, recordings, the rest of the books, and correspondence – went to the Paul Sacher Stiftung (PSS) in Basel; and instruments ended up in the nearby Musikmuseum (part of the Historisches Museum Basel, used as Depositem by PSS).²³ Some of the correspondence that relates to individual compositions is kept with the relevant manuscript materials at PSS; most of it, however, is behind lock and key until 2033. Nonetheless, in terms of what is

accessible, the collection is impressive. Especially for *Tactil* and *Unter Strom*, the well-filled folders suggest a compositional trajectory that was intentionally left open for future continuation: each piece is represented by more than one (photocopy of a) score that is to a large extent finished. For *Tactil*, 14 of a projected 18 (or more) pages are written out for at least the two guitars; in the case of *Unter Strom*, 20 pages are finished to a great extent, lacking for the most part only the finale and the transition towards it.

But not all was archived. The Musikmuseum now houses some 650 of Kagel's *instrumenta musica*,²⁴ enough to put together an exhibition²⁵ and to allow the re-staging of *Der Schall*.²⁶ Nevertheless, many instruments prescribed for his compositions have entered the realm of physical oblivion: some of the unique contraptions for *Staatstheater* have literally gone up in flames,²⁷ the originally made 'music room' for *Ludwig Van* is nowhere to be found, as are the large frameharp,²⁸ the electronically controlled blower motor for the opening sequence, and the handheld as well as battery-operated sirens that all are needed to perform *Unter Strom*.

Some of the objects for *Unter Strom* still exist in the form of descriptions of their design, e.g. in the score's explanatory list of symbols, though often without enough detail to be of much practical value. For some instruments, the score is even contradicted by other documentation: the opening of the second player's part requires '3 plastic toy sirens',²⁹ whereas published pictures show Bruck with metal whistles.³⁰ The sounding difference between plastic and metal can be significant, but more disconcerting is the fact that the compositional development requires three such instruments, while, in the recordings, Bruck can only be seen and heard playing with at most two of them. To confound matters: the most recent copy of the manuscript score available, with editorial remarks, shows a question mark at the relevant spot, indicating that the requirement for three sirens/whistles has been signalled for review, however a final decision is not evident.

A few instruments did survive yet did not get sent to Basel. After Kagel had abandoned his private rehearsal studio,³¹ its contents ended up at the Theater Am Marienplatz in Krefeld. When the time had come to organise the archival shipments, he spent several days going through everything that he had gathered for decades, deciding what should make the cut.³² Quite a few objects for *Unter Strom* were among those that were apparently discarded: the car horn assembly (broken and without the power feed and morse-code keyboard that can be seen in a published picture),³³ the coffee grinder and 'buzzer' (FIGURE 4), various accessories, and some of the amplifiers that had been used at the time. None of these may compare well to the prettier and less mundane Schwingertisch from *Tactil*, now at the Musikmuseum, but they prove valuable for reconstructing the instrumental needs of *Unter Strom*. Evidently, Kagel did not consider this potential.

FIGURE 4. The ‘buzzer’, as originally used in *Unter Strom* (1969).

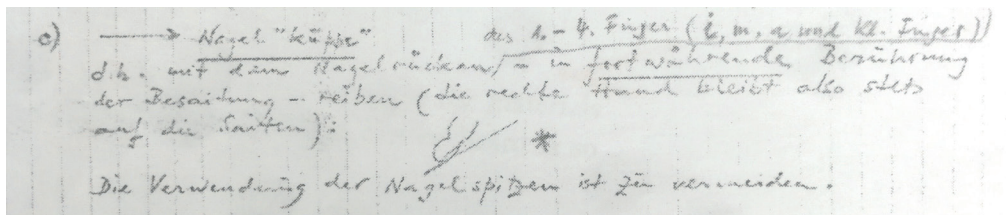
In addition to his official estate, another part of Kagel’s legacy can be found beyond his personal sphere. Over the years, some sources had already spread naturally: after a concert, musicians went home with ‘their’ parts, potentially containing valuable inscriptions made during rehearsals. And then there are the musicians’ notes, diaries, etc. It all amounts to a small but potentially crucial archive by itself. Interviews with the original performers especially have revealed swaths of information that cannot be gained from archived paper documents, or even from recorded sounds and images. But the non-physical legacy presents some serious issues: memory is not always reliable, it does not necessarily record things that may seem of interest in hindsight, and it cannot always retrieve on command. When queried, Bruck could not figure out why he seemingly had never used all three mouth sirens.

It may be futile to hope that other musicians can come to the rescue when memory fails. For *Tactil*, a special multi-faceted problem presented itself with regards to checks and balances that are often taken for granted in chamber music. Kagel had always performed the piano part, arguably the reason why it is the one that has been least worked out in the score. But the guitarists could provide no meaningful account of exactly what Kagel had done throughout his part, as they had always been seated in front of the piano, with their backs to him, and the musical material is almost exclusively prescribed to be as quiet as possible. Bruck and Ross also never rehearsed or played from the score, so there was nothing in particular to notice or check from that perspective, anyway. Some of this situation applied to Kagel as well: from his seat at the piano at the rear of the stage set-up, he wouldn’t have been able to see everything that the guitarists did, and while

playing himself, he might have very well not even heard all the nuances, played so softly on instruments that are easily covered by the sounds of the piano. This has proven to be especially thorny in the first section of *Tactil*, where the guitarists are asked to use a particular fingernail technique ('Nagelkuppe'). The score clearly indicates this to be executed with the surface of the nail, rather than with its top edge – added to the score is a drawing of a finger touching a string in the upside-down position (FIGURE 5). That surface is additionally specified to be continuously touching, and therefore muting, the string while playing. When Ross reaches that moment (visible in the 1971 WDR film of *Tactil*³⁴ from 2'35" and again from 3'06" onwards), he clearly lets the strings ring. When Bruck catches up (8'25" onwards), he is seen with a seemingly different technique altogether: not only does he let the strings vibrate, he also locks his fore- and upper arm, keeps the elbow high, and moves the whole hand-arm assembly up and down. Even when quizzed about this, neither Bruck nor Ross could reconstruct what they had done so many times, nor how they came to use a different technique than the one prescribed in the score. In such instances (cf. the three mouth sirens, above), the conclusion was always that Kagel must have thought it was fine, as he had always been there and they didn't recollect him telling them it was wrong. Whether Kagel would have noticed the different fingernail technique when watching the WDR video himself, is up for speculation: he hadn't directed it (in contrast with the previous six films of his pieces),³⁵ and the filmed post-performance debate shows a highly critical audience, so he may never have watched the video. Either way, Ross possessed a photocopy of the score with the added detail for the Nagelkuppe technique, confirming that this was indeed how the technique should be executed (FIGURE 5).

The radio recording of *Tactil*'s world premiere was not amongst the materials at PSS when I had a colleague locate it at the RAI.³⁶ What can be heard is so compositionally distant from the archived scores that it seems fair to wonder whether Kagel had ever wanted the recording to be part of his collection. According to Bruck, *Tactil* was put together in the hotel room in Bergamo where the composer

FIGURE 5. Excerpt from p. 4 of a poor photocopy of *Tactil* with unique amendments in Kagel's hand (e.g., top right line). From Theodor Ross's personal archive, presently untraced.



and the guitarists (with three suitcases) had gathered for the first performance in July of 1970.³⁷ Those suitcases contained some of the large collection of Experimental Sound Producers (ESP) that they had been playing with in Kagel's studio when developing *Acustica* (1968–1970). Regardless of what Kagel may already have had in mind to ultimately score *Tactil* for, the recording of its first performance clearly demonstrates sounds and patterns from actions and sound generators that were later found only in the score of *Acustica*, e.g. the pizzicato part for prepared violin.³⁸ On the other hand, the 'Schwingertisch' (a wooden resonator table with metal rods and strips, to be operated by the pianist, see far left in FIGURE 2) remains assigned to both *Tactil* and *Acustica*. In contrast yet again, the two very long strings, each to be attached to a string on one of the guitars and run from an elevated position (FIGURE 2) to the inside of the grand piano, where they are each attached to a low wound piano string, did not make it into *Acustica*. Though they were obviously part of its initial development phase, as pictures from that phase show a contraption that allows for a 9.5m long guitar string to be sounded over a mobile double bass pick-up, confusingly explained as 'from *Unter Strom* for three players'³⁹ (FIGURE 6). Those pictures were published in an artbook on electronic music,⁴⁰ about a month before the first performance of *Unter Strom*, which featured a frameharp with five 6m long guitar strings, each amplified through guitar pick-ups. More pictures show several devices that are stated to be for *Acustica* but appeared only in modified set-ups in the score for *Unter Strom*.⁴¹ In between submitting the photographs and the premiere of the piece, Kagel evidently changed his mind about which of these ESP should go with which piece. This may indicate a way to clarify why *Unter Strom* was not finished. With the preparations for *Acustica*, a major compositional milestone in Kagel's oeuvre to that date, time may have been too constrained to fully flesh out a lesser work. Indeed, as much as it can be appreciated on its own merits, in terms of opening up the potential of ESP in compositional and performance practice, *Unter Strom* was and is a transitional piece. That it remained unfinished afterwards, when Kagel kept it in the repertoire of his Kölner Ensemble für Neue Musik, may be because what was not worked out could be improvised convincingly enough to make it serve its function as a new Kagel piece.

The parallel chronology and intertwined instrumental settings of these three compositions compellingly suggest a shared stratum. For the research project, however, only *Tactil* benefits from this, due to the fact that *Acustica*'s notation for the Schwingertisch is eminently useable to fill in the blank in *Tactil*. Unfortunately, this is not the case for *Unter Strom*: whereas Kagel developed a completely new semi-graphic 'Modell' notation for the ESP in *Acustica*, allowing for considerable controlled freedom on the part of performers (on top of the choices of instruments and score pages), the electrically 'plugged' spin-off piece is tightly composed

as a three-part invention serving to explore the instruments through a highly determinate notation. It is easy to argue that the finale of *Unter Strom* was initially conceived as an improvisation at the large frameharp, and this is corroborated by the original performers who remember having only improvised. In any case, among the *Unter Strom* papers at PSS, we find two finales: one with a list of tools for each musician to improvise with, and one fully written out. Both, however, are incompatible with the score type of *Acustica*.

FIGURE 6. 'fahrbarer kontrabass-tonabnehmer mit lautsprecher. mobiler steg für eine gitarensseite von 9.5m. (aus unter strom für drei spieler, 1969)'. © Verlag Kalender, Oktober 1969.



ALLOSTRATUM II: DIETER SCHNEBEL'S VIEW

The acoustic experiments that Kagel had been systematically exploring in the late 1960s – the ‘fundus’, in the words of Wilhelm Bruck⁴² – provided ample materials for *Unter Strom* to be sieved out from *Acustica*, with even some material left over for *Tactil*. This wasn't the first time Kagel would revert to appropriating his own ideas.⁴³ One such instance concerned the 1986 *Aus Dem Nachlaß*, which literally means ‘from the estate’, and consists of materials taken from *Der mündliche Verrat* (1981–1983) and the *Trio in drei Sätzen* (1984–1985). Near the middle of those 1980s, Kagel had suffered from retinal detachment and feared going blind. This certainly led to worries about finishing his 1981–1985 *Sankt -Bach-Passion*,⁴⁴ and may have influenced his decision to take short-cuts towards producing new music. Already long before, in the early 1960s, Dieter Schnebel wrote of the remarkable unity that Kagel's young oeuvre had displayed since his move to Europe:

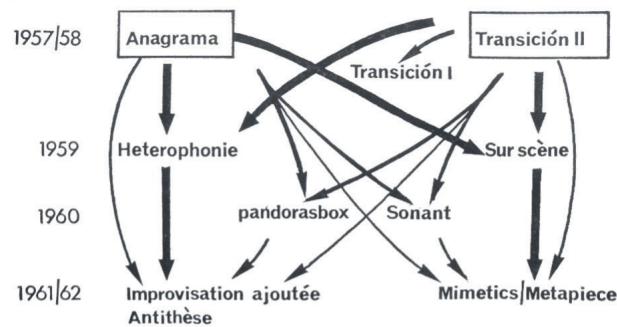
In *Anagrama* and *Sur scène*, the fully composed text is the oldest layer, over which other layers – the musical presentation of the text etc. – are placed in a deforming manner. The oldest components [...] were then cut up and combined with other parts. Kagel usually works on several pieces at the same time, even on quite contradictory ones. The problems of one composition seep into those of another, and the complexity of both increases. At the same time, transitions are formed. The affinity of the pieces that arises in this way ensures a subterranean unity of the oeuvre, without the individual works losing their specifics - these are based on the special situations of the pieces and not on those processes that occur simultaneously in several of Kagel's works. [...]⁴⁵

Remarkable in Schnebel's assessment are the multifarious references to geological processes and the accompanying forces. The observations were made in 1962, but in the actual publication in 1970, Schnebel adds that his conclusions appeared valid for later as well: the pieces increasingly become ‘stations in the compositional process’,⁴⁶ until the 1967–1968 *Montage* as the ultimate fulfilment, a composite of (bits from) other compositions from Kagel's ‘reservoir’.⁴⁷ The line can indeed be drawn further, showing *Unter Strom* as a station in a process that ended up in *Acustica*, and *Tactil* linked to both of the other two pieces by the long strings and the Schwingertisch. More interesting are the (de)formations of which Schnebel writes, i.e. the transformational forces that are at work within the shared strata (FIGURE 7).

Although he detailed his observations regarding Kagel's compositions, discussing how organ-like continuities, improvised noises, performance practices etc. made their ways from and towards successively started pieces,⁴⁸ Schnebel did not conceptually move beyond mixing the geological and biological concepts of strata and seed, respectively,⁴⁹ structuring things in what is fundamentally a binary scheme. This is what, a good decade later, Deleuze and Guattari sought to challenge,

arguing against the tendency to look at things as binary oppositions, and opposing the domination of the arborescent concept by which all can be traced back to its original impetus. Of course, it is only natural to mix metaphoric concepts, as the rhizomic-arborescent root structures of Scots pine trees suggest.⁵⁰ Similarly, in the case of Lachenmann's *Salut für Caudwell*, the stratified chronology misled Josel to feel 'as though we could peel back those layers one by one and possibly arrive at the fair copy'.⁵¹

FIGURE 7. Schnebel's diagram of ways in which Kagel's early compositions relate. The left side is for 'the more aggressive piece with a tendency towards the lower and the untamed', while the right side sees the 'more artificially cultivated with a tendency to the absurd'.⁵²



SEDIMENTARY DYNAMICS

As became clear in the case of *Salut*, and as can be found with regards to *Tactil* and *Unter Strom*, stratification is not necessarily well suited to an after the fact analysis of how musical works came into existence and evolved, let alone that it could serve to automatically reconstruct these trajectories and prove useful to posthumously continue the compositional process to an end. It is possible to establish a meaningful order among the *Tactil* materials, from the 'Vorbereitung (Bergamo)' index cards comprising pre-compositional notes to the unfinished pencil autograph in landscape format (likely the one visible on the piano's music stand in the WDR film), going on to the guitarists' cheat sheets, to the tours and recordings, and all the way up to the photocopy of the manuscript in Ross's possession, with corrections and additions. Similarly, the *Unter Strom* papers include a score on which indications for corrections are inscribed, making it equally possible to put the documents in some sort of a logical chronology. But the geological stratification theory serves to determine the chronology in a given layering only if that layering reflects the

original superposition, i.e. if it has not been tampered with by forces that cannot be identified as natural ones, such as faults and folds. Documents that have been handed to us without clear indications of their historical sequence still need to be assembled into their historical chronology, rendering the application of the geological theory futile.⁵³ Moreover, the geological dating method has been proven useful for recognising time structures in extremely slow geological developments, but it lacks explanatory power when it comes to recent music that traces mostly just a few parastrata, even when the documentation can be dated. Finally, the epistrata that are formed by the memories of surviving historical performers can be helpful, but not categorically so. All in all, considering potential corrections that were left open-ended, incomplete memories, missing instruments, etc., the completion of these unfinished pieces, possible only through a reconstruction of the historical performance practices, needs more information than what can be taken from a chronology.

Stratification is about the delineation of the layers, as much as arborescent structures are about tracing the evolution backwards to the seed. To know more detail, the concept of sedimentation offers some unexplored leeway into conceptualising what happens within strata. Deleuze and Guattari did not develop sedimentation much beyond considering it as the first articulation in a stratum,⁵⁴ even if there is further nuance to be seen, such as cross-bedding (angled layering) and layered bedding (e.g. changed grain within a stratum). But stratification basically exhibits only few kinds of external deformation (faults, folds, and joints),⁵⁵ and the chronology of the layers remains established. Furthermore, not all soil is stratified,⁵⁶ so the relation stratification-sedimentation may well be turned around in order to consider, as in nature, the formation of layers as merely one of the possible consequences of sedimentation.⁵⁷

Sedimentary rock makes for about 80 to 90% of the earth's surface,⁵⁸ and is the result of forces exerted on sedimented materials. The most common such influences are:

Weathering:	modifies exposed sedimentary rock ⁵⁹
Saltation:	reshapes particles through the turbulence of air or water ⁶⁰
Alluviation:	leaves behind traces of material exchange ⁶¹
Lithification:	the conversion from unconsolidated sediment into rock ⁶²

These four dynamics come into play after materials have first been sedimented, i.e. deposited by e.g. rivers, glaciers, and landslides. After lithification, weathering can decompose the sedimented rock, so alluviation and saltation can start anew, ending in possible stratification. More than the two-dimensional plane on which strata can display their chronology, sedimentation forces allow for differentiation

alongside the trajectory of, say, a river. It explains more easily how ESP end up in one way in *Acustica*, and in another way in *Unter Strom* or even *Tactil*.

The often quoted statement of Kagel's, that he saw composition as literally 'putting together',⁶³ can be understood in terms that are different from the ones he used. Kagel meant that non-sounding materials (e.g. camera movements, lighting) could be composed with just as well as the traditionally notated elements. But his own traditional composing method also often entailed a sectional form in which different ideas were juxtaposed, hence the importance of the 'transitions' in his thought throughout his career.⁶⁴ In *Unter Strom*, the vertical structure is that of three-part counterpoint; horizontally, however, he reverted to a mosaic sequence to help shape his multi-layered inspiration. The social commentary on industrialised consumerism, for instance, is expressed in just a few scenes (from those with sirens and alarms, through the 'comb-burn-out' scene depicting madness, to death at the frameharp) that are dispersed among those that do not allude to this – or indeed any – particular reference.⁶⁵ Rather than a particular stratum of its own, the commentary can be understood as sediment, brought to *Unter Strom* from outside of it and deposited along an interrupted trajectory.

In the film of *Tactil*, Kagel can be seen and heard operating a windmill stage prop.⁶⁶ Apparently, the contraption was standing idle in the recording studio, having been used for a radio play the day before, and Kagel couldn't refrain from incorporating it into the performance.⁶⁷ The radio house operations exposed the windmill to Kagel's creative stream; it alluviated, and the trace that it left was captured on film. In musical terms, it didn't work out – the sound was clearly added in post-production⁶⁸ – so Kagel moved on and the windmill was not carried along to be sedimented into the score.

Sometime in the 1960s, a Vox V251 Guitar-Organ crossed the ownership path of guitarist Karl-Heinz Böttner. In his hands, it left traces in several musical contexts⁶⁹ before it was incorporated into *Unter Strom*. Böttner's creative interest had already collided productively with Kagel's in the latter's *Sonant* (1960), *Der Schall* (1968), and the 1967–1968 film *Duo* (in which Böttner's organ guitar also played a role).⁷⁰ Böttner played in only a few performances of the new piece, and was replaced by Theodor Ross who did not own this rare instrument. In the score, where the Vox settings are listed, Kagel added 'vega blue with contact microphone'.⁷¹ This was the small plastic electric toy organ that Ross can be seen playing in the 1975 film. From *what* Ross plays, however, one could not deduce the potential of the 'repeat function' on the guitar-organ (FIGURE 8), which can render the 'impulse sequence by way of repeat controller (impulse frequency)'⁷² that Kagel originally requested in the score. This unique feature exploits a voltage-controlled oscillator, and it allows for a much greater frequency of impulses than a human hand can replicate by manually depressing and releasing the small plastic buttons

that represent keys on the vega blue. In fact, the range of the speed control of the Vox guitar-organ can produce a recognisable reference to Stockhausen's *Kontakte* (1958–1960), more specifically to the famous opening of section X, where a siren sound is deconstructed into its constituent rhythmic pulses. *Unter Strom* has many alarm instruments: three plastic toy sirens, one manually operated fireman siren, two portable battery-operated fireman sirens, an 'S.O.S.' buzzer, as well as five different car horns – a little stratum of its own, which may confirm the idea that Kagel had the Vox-as-a-siren in mind. From a sedimentological perspective, the instrument's impact was reduced in size (the description of its settings being its remnants), after which it disappeared – saltated – and almost dissolved. Bruck never could remember ever having heard his former teacher Böttner play the Vox in *Unter Strom*.⁷³ By chance, after a beer, he recalled *that* Böttner had such an instrument.⁷⁴

FIGURE 8. Detail of the Vox V251, showing the percussion knobs for the repeat function.



Further sedimentation of performers' practices include the fact that Ross was self-taught and accomplished in performing *Unterhaltungsmusik*, the only sustained layer of reference in *Tactil*.⁷⁵ As Bruck had enjoyed a typical classical training, Ross taught him how to play a basic tango for the finale, while Kagel let Ross determine the other type of dance music required to contrast with the tango.

Similarly, through his background in theatre music, Ross was dramaturgically more at ease than Bruck, so Ross's part in *Unter Strom* contains the more intense or elaborate drama, for instance the death scene at the very end of the piece. Such alluviation sometimes had far-reaching effects, as in the opening sequence of *Unter Strom*. Whereas Kagel prescribed short, nervous crescendi and diminuendi, Ross can be heard playing long and slow stretches in all of the recordings. Like the issue with the 'Nagelkuppe' in *Tactil*, as recounted above, this is an instance of saltation: the creative streams of the performers disturb the existing sedimented compositional thought and are themselves modified by the impact (through apparently misunderstanding the prescription), only to later be settled and even lithified into a new shape that looks out of place only when the in-stratum layers have been subjected to rigorous analysis.

FIGURE 9. Excerpt from Ross's written-out version of the music that he used to play at the end of *Tactil*. Digitally set by Luk Vaes. Original in the Mauricio Kagel Collection, Paul Sacher Foundation (Basel).

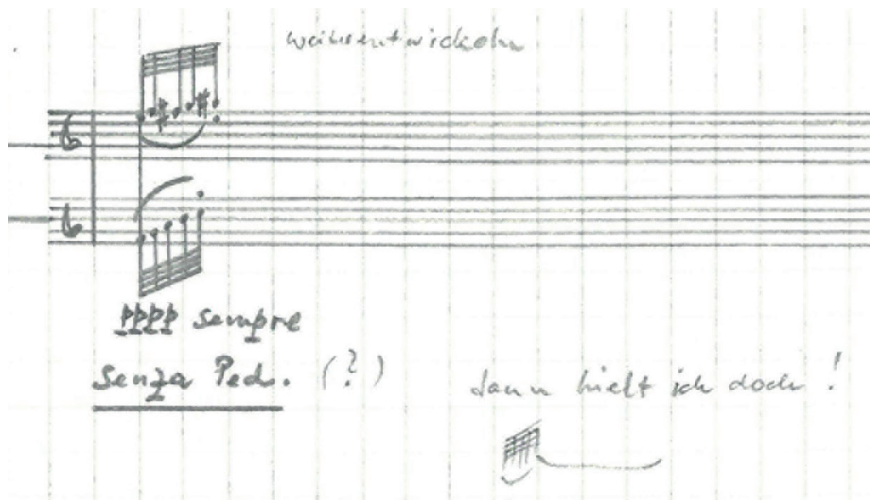
The image shows a musical score excerpt for guitar, consisting of two staves. The tempo is marked as 'ca 176'. The first staff begins with a double bar line and a '2' with an arrow above it, indicating a second ending. The second staff has a '3' with an arrow above it, indicating a triplet. Below the staves are chord diagrams and chord labels: Bb, Eb6, F7, HJ7, Bbj7, F, and Bb. The music features complex chord structures and rhythmic patterns.

The most arresting form of lithification concerns Kagel's intentions for finishing *Tactil*. One of the folders⁷⁶ at PSS contains a brown envelope, which had once been used to send something to Bruck. On it 'Tactil' is written in pencil in Bruck's hand, overwritten with the same word in red felt-tip pen in Kagel's hand. The envelope contains *Tactil* materials in the hands of Kagel, Ross and Bruck. Amongst those of Ross is a letter and a hand-made bookmark dated June 13, 1988. The materials represent detailed reconstructions of what both Bruck and Ross had played on stage when performing *Tactil* for almost two decades. Despite Ross's accompanying letter apologising for a delay, which means that Kagel's request may have been made much earlier, this apparent attempt by the composer to finish *Tactil* cannot be reliably connected with his work on *Aus dem Nachlaß*. Regardless, manuscripts by both guitarists show great effort in putting together examples of 'Griff Typen',

a careful annotated drawing of all the accessories and the stage setting, as well as written-out scores. Some of this serves to show what was played in places where the composer's score is empty (FIGURE 9), other parts demonstrate – yet again – the extent to which liberties had been taken.

In his manuscript for *Tactil*, Kagel had added 'dann hielt ich doch!',⁷⁷ pointing to what was originally conceived as a staccato ending for the 5-note legato runs in 64ths (FIGURE 10). The exclamation mark seems to be there to disguise some doubt as to whether this had actually been the case – it certainly is odd that none of the recordings demonstrate Kagel playing this part with the prescribed non-staccato ending. Nevertheless, the reminder is not in the same dimension as in the case of the other additions he made to the score: those actually correct something. Although it is not known when this particular addition was made, it is especially noteworthy in connection with the materials that Kagel had received from Bruck and Ross.

FIGURE 10. Enlarged excerpt from p. 7 of the autograph score for *Tactil*, showing the piano part for the second section 'Beguine'. The additions 'weiterentwickeln' and 'dann hielt ich doch!' (as well as the slurred notes and long tie underneath) are in a different pencil compared to what had been notated originally. From the manuscript at the Mauricio Kagel Collection, Paul Sacher Foundation (Basel).



It has already been demonstrated that, over years of concertising with a certain piece, a performer can end up with a live interpretation that is as solidly fixed as the notes on the paper.⁷⁸ After the many concerts and recordings made by Kagel and

his guitarists, aspects of the performance practice of *Tactil* had petrified, so much so that Kagel appears to have considered finishing the composition by copying what they had been performing. The weathering had taken place at an imperceptibly slow pace, induced by the habits that (de)form under the time constraining pressures of touring. Some parameters, such as the improvisationally chosen moments to change to a new section, remained open. But, bit by bit, other choices that worked to satisfaction became conveniently repeatable decisions that were imprinted onto memory, and the awareness that these were not new anymore, eroded. An issue would find a solution at some point and evolve into a mental note-to-self, to be recuperated during a next performance. What had been a work in preparation for too long, became a finished piece in the minds of the performers. The repeated performances cemented the practices into the nature of the work that became so rock-hard that the composer's original intentions were powerless to dissolve and recrystallise.

This could well have been the 'problem' that, a few years later, in 1992, Kagel indicated as the reason for which the score of *Tactil* remained unfinished after all. Perhaps he had looked at his reconstructive remarks and at the materials his co-musicians had sent him, and recognised that the musical concept was buried under a layer of lithified performance practice thus obscuring the original idea of semi-improvisatory parts that were guided through the context of tactile sensitivity towards what the other players are given to do. This original idea belonged to the stratum that also encapsulated *Acustica*, which demonstrates the creative potential in notation that expressly serves to excite different interpretations – something that must have reverberated strongly from an era that Kagel had known well enough, when virtuoso complexity and the lack of room for interpretive personality of the performer had been a major concern. The mental friction caused by these opposing options, i.e. the individual creative potential of unknown future performers vs. sedimented preferences of the composer and his contemporaries, may have felt insurmountable at a time when plenty of new commissions pressed for compositional attention. In the case of *Unter Strom*, Kagel may have felt equally stuck when needing to decide whether to leave the three mouth sirens in the score, or change them to Bruck's more feasible performance practice with just two. Another one of Kagel's aphorisms – 'music must live'⁷⁹ – can be taken as a warning against lithification.

For reasons that are wider ranging than pertaining only to archival research, the HIPEX project to complete the *Tactil* and *Unter Strom* scores has been decided in favour of the original compositional idea, i.e. leaving some openness towards untapped interpretative potential rather than reconceptualising the scores as sediments of historically confined performances by one small group of

individuals. Enough materials exist to re-engineer a notation for what was left empty, allowing both for performances à la Kagel, Bruck, Ross and Caskel, as well as for performances that make other choices while still adhering to the concepts that Kagel initially worked out.

However off the mark the HIPEX project may end up being, compared to what we could speculate Kagel might have chosen himself at any point in time during the more than 30 years after initiating the concepts for both pieces, some of the insights that were gained on the way remain nevertheless helpful for future research. The differences in alluviation and saltation between Bruck and Ross in *Tactil* (and Caskel for *Unter Strom*) can help to nuance historical performers' practices more generally, in situations beyond Kagel's repertoire. Lithification is a process that can easily go undetected in the new music scene with performers imagining that being informed by composer-authorised interpretations is a failproof way to get close to authorial intentions.⁸⁰ Finally, the notion of fragmented sedimentation, rather than fully-fledged strata, can point the performer to a practical understanding of, and approach to, matters of exposing referentiality in on-stage presentations of other Kagel pieces. This could in turn be used to argue against applying blanket concepts of Regie Theater to instrumental theatre.⁸¹

Mauricio Kagel's archive is both layered and fragmented, albeit from different perspectives. Above all, it extends well beyond the philological. Any attempt to complete the *Tactil* and *Unter Strom* scores necessarily entails the re- as well as de-construction of the historical performance and recording practices, including studying the instruments that were used and the memories and materials of all those who performed on them. From the perspective of artistic research, so much of this has been left to us, that therein lies perhaps Kagel's richest legacy.

Notes

- 1 'Experimentelle Klangerzeugung'.
- 2 Deutsche Grammophon 2530 460.
- 3 The DGG record mentions Universal Edition as the publisher of *Tactil*. An early, undated, UE catalogue for Kagel's works has both pieces listed without an UE number. Kagel switched from UE to Peters in the second half of the 1970s. Until at least 2006, the Peters catalogues list the pieces as 'in preparation': in the 2011 catalogue, they are only shown in the category of the films.
- 4 'Es gibt ein Problem'. Personal communication after a concert with *Tactil* on Friday, 21 February, 1992, at 12:30pm during the festival *Week van de Hedendaagse Muziek* [Week of Contemporary Music] at the conservatoire of Ghent, Belgium. I learned of the unfinished state of *Unter Strom* only much later, when Matthias Kassel, Werner Klüppelholz and Stefan

- Conradi drew my attention to it at a gathering commemorating Kagel's passing in Cologne on 14 December 2011.
- 5 See www.orpheusinstituut.be/en/projects/hipex. The book, video recordings, and scores are forthcoming.
 - 6 On 16 April 2022, while writing this article, Theodor Ross passed away. During the editing process of this article, Chrisoph Caskel died on 19 February 2023.
 - 7 The back cover shows texts for *Unter Strom*, all written by Kagel in 1973. All illustrations relate to *Tactil* only.
 - 8 For a video excerpt of the reconstruction, see <https://orpheusinstituut.be/en/projects/oem-consort>.
 - 9 For a video excerpt, see <https://orpheusinstituut.be/en/projects/oem-consort>.
 - 10 Seth Josel, 'Where is Salut?', *TEMPO*, 73/288, 2019, p. 26.
 - 11 Helmut Lachenmann, *Salut für Caudwell*, Music for Two Guitarists, ed. by Seth Josel, Revised New Edition 1977/2020, Wiesbaden: Breitkopf und Härtel, EB 9389.
 - 12 Seth Josel, 'Where is Salut?', *TEMPO*, 73/288, 2019, pp. 26–46 and Seth Josel, 'Form can wait. Zur Form von Lachenmanns Salut für Caudwell', *Musik & Ästhetik*, 22/85, 2018, pp. 27–44.
 - 13 With Seth Josel and Tom Pauwels, to be released.
 - 14 E.g. during the HIPEX Summer Academy at the Orpheus Instituut, July 2023.
 - 15 Josel, 'Where is Salut?', p. 26.
 - 16 See <https://orpheusinstituut.be/en/projects/musicexperiment21/>.
 - 17 See Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. by Brian Massumi, London: Athlone Press, 1987, pp. 39–74.
 - 18 Josel only lists five strata, as he related to de Assis' work before the final stage of the latter's ontological enterprise was reached. The list, here, is based on the actual published Paulo de Assis, *Logic of Experimentation. Rethinking Music Performance through Artistic Research*, Leuven University Press, 2018, pp. 65–66.
 - 19 de Assis, *Logic of Experimentation. Rethinking Music Performance through Artistic Research*, p. 66.
 - 20 See de Assis, *Logic of Experimentation*, pp. 71–106.
 - 21 Josel, 'Where is Salut?', p. 43.
 - 22 According to Matthias Kassel, curator of the 'Kagel Sammlung' at the Paul Sacher Stiftung, the first shipment to arrive at PSS was in 1996. (E-mail to author, 24 February 2022). Björn Heile, *The Music of Mauricio Kagel*, Aldershot: Ashgate, 2006, p. 103, puts Kagel's retirement in 1997.
 - 23 *Mauricio Kagel. 2Mannorchester. Essays und Dokumente*, ed. by Matthias Kassel, 2011, Basel: Schwabe Verlag, p. 44.
 - 24 Martin Kirnbauer, 'Sammlung Mauricio Kagel', in: *Historisches Museum Basel Jahresbericht 2005*, Basel: Historisches Museum, 2006, p. 93. The collection comprises not only the self-designed and -built experimental sound producers and mute stage props, but also more or less common instruments from all over the world.
 - 25 Cf. *Kind+Kagel. Mauricio Kagel und seine Kinderinstrumente. Eine Ausstellung des Historischen Museums Basel - Musikmuseum in Zusammenarbeit mit der Paul Sacher Stiftung*, January 13 to July 9 2006.
 - 26 Cf. *Der Schall. Mauricio Kagels Instrumentarium*, ed. by Michael Kunkel and Martina Papiro, Saarbrücken/Basel: Pfau-Verlag, 2009. *Der Schall* is also unpublished, and was brought back to life with some of the original performers as part of the ensemble.

- 27 Cf. Interview Theodor Ross, 29 August 2012, 38'10". Wilhelm Bruck confirms this (e-mail Werner Klüppelholz to author, 24 February 2022).
- 28 Cf. Interview Theodor Ross, 15 April 2012, 42'00".
- 29 '3 Spielzeugsirenen aus Plastic'.
- 30 See *Mauricio Kagel. Das filmische Werk I*, pp. 111 and 112.
- 31 Pictures of the studio's inside, with the countless shelved instruments, boxes, and aluminium suitcases containing experimental sound producers, can be found in *Mauricio Kagel. 2Mannorchester*, pp. 6, 26, 29, 96, and 100.
- 32 Cf. Interview Pit Terre 6 March 2022.
- 33 See *Mauricio Kagel. Das filmische Werk I*, p. 112.
- 34 *Auseinandersetzung mit der Kunst der Gegenwart. Heute: Mauricio Kagel*. Regie: Wolfgang Drescher, Westdeutschen Fernsehen, Cologne, 1971.
- 35 See *Mauricio Kagel. Das filmische Werk I*.
- 36 I am still grateful to Angela Ida de Benedictis (who was then not yet at PSS) for finding it for me in 2013. Since then, a copy of the recording has been included in the Kagel collection at PSS.
- 37 Interview with Wilhelm Bruck, 17 November 2011, part 2, 32'16".
- 38 See Mauricio Kagel, *Acustica*, für experimentelle Klangerzeuger und Lautsprecher, Vienna: Universal Edition, 1970, UE18429, p. 46.
- 39 'aus unter strom für drei spieler'.
- 40 *E.A. (E.u.E. O.u.E.) – elektronische und elektrische objekte und environments. neon objekte*. Düsseldorf: Verlag Kalender, 1969. The book was published in October of that year; *Unter Strom* was premiered on 7 November 1969.
- 41 E.g. the vase insert, the hand-held siren and two little Braun electric table fans.
- 42 Interview with Wilhelm Bruck, 18 February 2012, part 1, 35'09".
- 43 E.g. the music of *Guten Morgen!* (1971) is heard in *Abend* (1972), the piano piece *An Tasten* (1977) is based on the music in the radioplay *Soundtrack* (1975), *Vorzeitiger Schlussverkauf* (2003–2004) was made with left-over edits from Kagel's own past radio play productions.
- 44 In an email to author (25 January 2022), Werner Klüppelholz, long-time personal friend to the composer, testifies about how he used to tease Kagel with this when he visited him in the eye-clinic in Essen.
- 45 Dieter Schnebel, *Mauricio Kagel. Musik. Theater. Film*. Cologne: DuMont Buchverlag, 1970, pp. 312–313: 'In >Anagrama< und >Sur scène< ist der auskomponierte Text älteste Schicht, über die sich andere Schichten – der musikalische Vortrag des Textes etc. – verformend legen. Die ältesten Bestandteile des Orchesterstücks sind die auskomponierten Stücke für bestimmte Ensembles (>Zeitmaße<, >Pierrot< etc.), die dann zerschnitten und mit anderen Stimmen kombiniert wurden. Meist arbeitet Kagel an mehreren Stücken gleichzeitig, sogar an recht gegensätzlichen. Die Problematik der einen Komposition sickert in die einer anderen ein, und beider Komplexität nimmt zu. Zugleich bilden sich Transitionen. Die Verwandtschaft der Stücke, die so entsteht, gewährleistet eine unterirdische Einheit des Œuvre, ohne daß den einzelnen Werken ihre Spezifika abhanden kämen – diese gründen in den besonderen Situationen der Stücke und nicht in jenen Prozessen, die zugleich in mehreren Werken Kagels vorkommen. [...]'
- 46 Schnebel, *Mauricio Kagel*, p. 314. 'Stationen des Kompositorischen Prozesses'. The chapter on 'Das eine Werk' was apparently conceived by Schnebel in 1962, and a postscript was added in 1969, before the book was first published in 1970.

- 47 Schnebel, *Mauricio Kagel*, p. 223. *Montage* remains unpublished, although members of Kagel's historical pool of collaborators have performed (e.g. Wilhelm Bruck) and recorded it (e.g. vinyl LP Discos Siglo Veinte / JJ 015).
- 48 Schnebel, *Mauricio Kagel*, pp. 313–314.
- 49 Cf. Schnebel, *Mauricio Kagel*, p. 313: '>Anagrama< und >Transicion II< enthalten keimhaft die spätere Musik Kagels'.
- 50 de Assis, *Logic of Experimentation*, p. 33.
- 51 Josel, 'Where is Salut?', p. 40.
- 52 Schnebel, *Mauricio Kagel*, p. 313: 'ein mehr aggressives Stück mit Tendenz zu Unterem und Ungebändigtem', and 'mehr artifiziell kultiviertes mit Tendenz zum Absurden'.
- 53 de Assis, whose interests remained confined to historical documents that were otherwise datable, already warned of the 'unavoidable anisomorphism'. Cf. de Assis, *Logic of Experimentation*, p. 65.
- 54 Deleuze and Guattari, *A Thousand Plateaus*, 41.
- 55 John J. Renton, *The Nature of Earth: An introduction to Geology*, Virginia: The Teaching Company (Earth Science), 2006, p. 105.
- 56 E.g. deposits transported by ice or landslides, or strata destroyed by animals, recrystallization or fault lines.
- 57 <https://pubs.usgs.gov/gip/fossils/rocks-layers.html>. Recently sedimentation theories shifted thinking in different areas of study (Lindsay Bremner, 'Sedimentary Ways', in: *GeoHumanities*, 7/1, 2021, p. 25), though they remain under-researched in the arts. For instance, in the proceedings of the DARE conferences devoted to Deleuzian thinking in relation to artistic research, *The Dark Precursor*, *Machinic Assemblages*, and *Aberrant Nuptials*, ed. by Paulo De Assis and Paolo Giudici, Leuven: Leuven University Press, resp. 2017, 2019 and 2021, out of a total of 116 contributions, 3 refer to sediment(at)ion, whereas 33 make references to matters of stratification.
- 58 Bremner, 'Sedimentary Ways', p. 27.
- 59 Renton, *The Nature of Earth*, pp. 40–41 and 66–67; and Gregory J. Retallack, 'Weathering, Soils, and Paleosols', in: *Encyclopedia of sediments and sedimentary rocks*, p. 770.
- 60 Bremner, 'Sedimentary Ways', pp. 30–31.
- 61 Bremner, 'Sedimentary Ways', p. 33.
- 62 Bremner, 'Sedimentary Ways', p. 36.
- 63 See 'Abläufe, Schnittpunkte – montierte Zeit. M. K. im Gespräch mit Lothar Prox', in: *Grenzgänge, Grenzspiele. Ein Programmbuch zu den Frankfurt Festen '82*, Hrsg. Alte Oper Frankfurt, Frankfurt am Main 1982, p. 121.
- 64 Cf. Mauricio Kagel, 'Ton-Cluster, Anschläge, Übergänge', in: *Die Reihe. Band 5. Berichte-Analyse*, ed. by Herbert Eimert and Karlheinz Stockhausen, Vienna: Universal Edition, 1957, and, of course, his compositions *Transition I* and *II* (1958). In 1994, when rehearse-proofreading *Passé Composé*, he still mostly paid attention to getting the timing right in the pauses and transitions between sections. (Personal experience.)
- 65 E-mail Theodor Ross to author, 14 May 2012: 'Kamm-burn-out-Szene'. Cf. 'gesellschaftliche Aspekte, die zur Entstehung dieser Musiktheaterstücke beigetragen haben, damals schon in Gesprächen bei der Arbeit auftauchten'.
- 66 *Auseinandersetzung mit der Kunst der Gegenwart*, 17'29".
- 67 Interview with Theodor Ross, 15 April 2012, part 2, 55'18".
- 68 This can be noticed by carefully listening to how the sound enters independently from when

- Kagel operates the device.
- 69 Hans Zender's *Canto III, Der Mann von La Mancha*, 1969, calls for an organ-guitar, and Böttner can be seen to demonstrate his Vox during a new music seminar at Smolenice (https://www.youtube.com/watch?v=Rrlq_KGQJCK, 1'13"-2'46").
- 70 *Mauricio Kagel. Das filmische Werk I*, p. 68.
- 71 'vega blue mit Kontaktmikrofon'.
- 72 'Impulsfolgen mittels Repeatregler (Impulsfrequenz)'.
- 73 The concert programs, held at PSS, list four performances with Bruck and Böttner between January and June 1970.
- 74 In Ghent, after dinner at the end of a day of rehearsals on 6 May 2012.
- 75 Another major reference in *Tactil* is piano pedagogy, but this appears fragmented, and only in the first four sections.
- 76 Basel, PSS, Sammlung Mauricio Kagel, Mappe J, contains two large folders, one with the *Tactil* score, and one with the envelope.
- 77 Translatable as 'but then I did hold!'.
- 78 Daniel Leech-Wilkinson, 'Making music with Alfred Cortot: ontology, data, analysis', in: *Gemessene Interpretation - Computergestützte Aufführungsanalyse im Kreuzverhör der Disziplinen*, ed. by Heinz Loesch and Stefan Weinzierl, Mainz: Schott (Klang und Begriff 4), 2011, pp. 129-144.
- 79 'Musik muß leben', as talked about in the car on Friday, 21 February 1992, when I drove Kagel to the Ghent conservatoire concert hall in which he was going to perform *Tactil* for the last time. See Luk Vaes, 'Musik muß leben: opening the Pandora's box of Kagel's interpretations of his own works', in: *The Performer-Composer in the second half of the 20th century*, Leuven: Leuven University Press, forthcoming.
- 80 It is good to see how academia has begun to engage critically with historical performers, cf. the 2015 work of Jean-François Trubert with Wilhelm Bruck (<https://medias.ircam.fr/x8f4e12>). Yet, the Kagel legacy outside of the official deposits is still often not even considered among the 'peripheral' materials (cf. Jean-François Trubert, 'Inventing a Genre: Mauricio Kagel and Instrumental Theater', in: *Revisiting the Historiography of Postwar Avant-Garde Music*, ed. by Anne-Sylvie Barthel-Calvet and Christopher B. Murray, Abingdon: Routledge, 2022, pp. 64-82).
- 81 In an early stage of the reconstruction, some of the involved performers pushed for a transhistorical positioning of *Unter Strom*, e.g. in a prison camp, with the frame harp acting as an electrified fence, and the whole referencing WWII as well as Kagel's ancestral biography. The rest of the piece does not fit this projection.