Precarious Networks

Anders Førisdal. Written for the *Performing Precarity* research project.

One strand of the *Performing Precarity* research project focused on sharing and interdependency, in the sense that performers can share or perform together on the same instruments or larger network(s) of instruments – or rather networked performing apparatuses. This section of the Research Catalogue presentation discusses the question of sharing in avant-garde music performance practices in relation to the idea of precarity. The section comes in two parts. The main part is the text *Three Forms of Sharing: Preliminary Notes on Relational Performance Practice*. This text addresses the question of precarity in terms of precarious situations and precarious projects before suggesting an analytic framework for discussing relational performance practice in music. Two works, *rerendered* by Simon Steen-Andersen and *b* by Simon Løffler, are discussed in close detail before the notion of relational performance practice is read along the lines of a Derridean violent opening to ethics. The other part is the video paper *Being Together*, which is a companion piece to the *Three Forms of Sharing* text. In the presentation, the video paper is presented first. *Being Together* was written for the Festival of Laurence Crane symposium in London on 19 October 2021. Reiterating a number of themes discussed in *Three Forms of Sharing*, *Being Together* relates primarily to Laurence Crane's *2-Meter Harmony: Uncertain Chorales*. As this work is given prominence there, it will not receive much attention in the *Three Forms of Sharing* text except towards the very end. The notion of sharing was however first explored in *Being Together*, and even if the video paper is intended as a stand-alone piece, the reader is advised to insert this paper before the final discussion of ethics and sharing in the *Three Forms of Sharing* text. In fact, together with *rerendered* and *b*, *2-Meter Harmony* represents one of the three different kinds of sharing alluded to in the title of the text.

Steen-Andersen's *rerendered*, Løffler's *b* and Crane's *2-Meter Harmony* formed a central part of the *Performing Precarity* project, and they were discussed in rehearsals as well as in seminars, presentations and papers. Other important relational works relevant for the *Performing Precarity* project were Mieko Shiomi's *Music for Two Players I* (1963), Bethany Younge's *Yappy Pace* (2017) and Christian Blom's *The Star Spangled Banner* (2016/2019). Documentation and discussions of these works are found on the Performing Precarity Research Catalogue presentation.

Three Forms of Sharing. Preliminary Notes on Relational Performance Practice.

Ellen Ugelvik, Tomas Laukvik Nannestad and Anders Førisdal performing *rerendered* by Simon Steen-Andersen.

Precarity

What is meant by precarity? According to the Oxford English Dictionary, precarity designates the state of 'precariousness or instability; esp. a state of persistent uncertainty or insecurity with regard to employment, income, and living standards.' Merriam Webster adds dependency on chance and the will of others to this definition. Dependency, contingency, instability, persistent uncertainty or insecurity will be central to my above description of the precariousness of musical performance. The term precarity has been a central topic in anthropology, sociology and related disciplines for a number of years, where it is used to analyse the lack of satisfaction of basic needs, discriminatory or oppressive practices, individuals or populations living in war zones or extreme poverty and so on, topics that are much more heavily laden than musical performance practice. Political scientist Raino Malnes, in the introduction to the edited volume *Prekær politikk* (*Precarious Politics*), suggests a schema for the analysis of unstable political structures which is relevant

in the present context.[1] On the one hand, he suggests the description of precarious situations, and on the other the outlining of precarious projects. This schema can be adapted for our discussion. However, though not unfamiliar in musicological or artistic discourses the appropriation of foreign conceptualisations itself poses a risk that should be handled with great care. It is the aim of the present text that such an appropriation can withstand close scrutiny. The description of precarious situations would address the general precarious traits of musical performance – the risks and pitfalls involved in musical creation, performance or communication, whether psychological, technical, aesthetic or otherwise. The outlining of precarious projects suggests however investigating the inherent precarity of musical performativity as a point of departure for artistic and creative exploration. This was the explicit case with the *Performing Precarity* project, which gathered a cluster of different sub-projects that all in some way address the question of precarity. This is also the case the works mentioned in this text, even if the precariousness might not have been explicated at the time of composition. But to the extent that these works explore the entanglement of performers and technology as performative networks, relationality, combinatoriality, and hence precarity, form the horizon towards which these works drift. Following this drift, we will see that the relational precarity found in these networks can form an interesting point of departure for decentring concepts like freedom, subjectivity, sovereignty and autonomy.

Precarious situations

Although rarely acknowledged a such and often discursively supressed, the question of precarity or precariousness is central to musical performance. In music, precariousness is typically seen as something to be overcome rather than a source of creative or expressive exploration. The development of instrumental skills, for instance, typically aims at overcoming precarity through mastery, and instrument construction has gone a long way in reducing precarity. We must nonetheless recognise that every musical instrument offers risk and precarity to an infinite degree, something which has been exploited in avant-garde music. Indeed, the avant-garde, in both its historical and contemporary versions, have actively sought to be otherwise, sought difference or formlessness to such a degree that as a performer one is often in the dark as to what to aim for when developing or learning a new work. Learning or even constructing new instruments, which may or may not work according to plan, confronting unimagined challenges, interacting with co-performers, performances spaces and ever new technological interfaces – these are but a few elements from a possibly infinite list that imply risk, uncertainty or possible failure. From another point of view, musicians' lives are often characterised by low income and/or unstable working situations. This is at least the situation for many musicians working outside secure institutional positions (which often turn out not to be secure after all and are always threatened by budget cuts and lack of political recognition). The 'suffering artist' may be an idealised myth but not so attractive as a real life experience. Indeed, one could very well

[1] Raino Malnes (2009): 'Introduksjon', in *Prekær Politikk*, edited by Raino Malnes (Oslo: Gyldendal akademisk), pp. 11–16.

speak of an 'artistic precariat' as a parallel to the so-called 'academic precariat'.[2] We could also add events outside the field of music proper that form material and political conditions for musical performance. Two of these that we could not foresee when we embarked on the *Performing Precarity* project were the Covid pandemic and the Russian invasion on Ukraine. The development and dissemination of the project was heavily influenced by these events. Of course, the challenges faced by the project are hardly worth mentioning in comparison to the suffering and political threat experienced by the Ukrainian people or the number of deaths from Covid. Nevertheless, we were affected in ways that were new for us and which forced us to rethink the project, from both a practical and conceptual point of view. At least for me, both the invasion of Ukraine and the restrictions imposed as a result of the Covid pandemic were real eye-openers when it came to consider how political, global – and even financial or environmental[3] – events affect or serve as more or less explicit frameworks for the production and dissemination of the arts. As for the works discussed in this section of our presentation, Laurence Crane's *2-Meter Harmony: Uncertain Chorales* was written as a direct response to the restrictions imposed on being together at the time of the work's commission by the Pinquins percussion trio. Thus, whether one considers the uncertainties imposed by the floating signifiers of musical structure, notation, interpretation or perception, deconstructive practices, individual psychological or financial challenges, or the overwhelming effects of large-scale events beyond one's control, musical performance is shot through with precarity.[4]

Precarious projects

Typically, pieces of art music are conceived as self-contained musical structures. The works discussed below challenge such notions however, and approaching them as precarious projects radically changes our focus. Indeed, such a strategy could itself be viewed as a precarious project, involving both theoretical and conceptual risk with a far-from-certain outcome. With this strategy, the term precarity becomes a critical term rather than a descriptive one. The precariousness of the projects to be elaborated below relate to a large extent on how performers come together to perform on a communal, shared, instrument. Together, performers, conceived (as we will see below) both as agents and material bodies,

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[2] See Alison Bain and Heather McLean (2013): 'The Artistic Precariat', in *Cambridge Journal of Regions Economy and Society*, vol 6, no. 1 (March 2013), pp. 93–111, and *The British Journal of Sociology and Education*, vol. 43, no. 4: *The Academic Precariat: Understanding Life and Labour in the Neoliberal Academy*, guest editors: Sarah Burton and Benjamin Bowman (2022).

[3] *Pace* Nancy's reflections on the global and stratified effects of local events in *After Fukushima*. Jean-Luc Nancy (2015): *After Fukushima. The Equivalence of Catastrophes*, translated by Charlotte Mandell (New York: Fordham University Press).

[4] Jennifer Torrence reflects more specifically on the Covid pandemic and the Performing Precarity project in her text 'Reflecting on Covid-19 and Performing Precarity' found in the *Performing Precarity* Research Catalogue presentation.

and instruments, conceived as dispersed articulatory nodes, form a heterogeneous network or performance apparatus[5] of negotiated relations. When speaking of a networked performance apparatus I mean a diverse ensemble of heterogeneous elements in place for making sounds or indeed for a performance of music. Such a network connects materials (instruments) and performers (bodies) and this connection results in sounds, or makes sounds or even works present; it is a presencing network. Such a minimal circumscription of the model relates to Jean-Luc Nancy's notion of struction: a minimal or primary connection before the appearance of structure, con-struction, de-struction or even de-con-struction.[6] The notion of struction seems – literally – a proper point of departure for an analysis of networked performance apparatuses. What interests me with these networks is that they offer a chance to reconsider many of the things we often take for granted regarding performance practice and the relationships between bodies and instruments, because the networks make connections explicit and expose relations as relations, that is, as constructs. And in such constructs we can intervene and analyse the relationship itself – or its economy, as Derrida might say. Thus, with a network model we find explicit problematization of the relationship between technology and the body, of performer agency, of the musical text, of the relationship between the composer, performer and listener or spectator, between performance and space and so on. Networked performing apparatuses expose and explore many of the key philosophical questions of our time – regarding performativity and semiosis; regarding our relation to technology and plasticity; regarding questions of identity and autonomy; and regarding ethics. Some of these issues will be discussed below.

Networked performance apparatuses and related performance practices can take many forms. Increasingly, performers are asked to perform together on the same instrument, as is the case in Simon Steen-Andersen's piece *rerendered* (2004) where three performers perform together on the same piano, one performer playing the keys whilst the two other performers manipulate the strings and perform inside the piano. In other works, like Simon Løffler's *b* (2012) performers act together on a communal network of elements in various ways, producing sounds together. In b, three performers perform on a network of electric guitar pedals and fluorescent lamps to create the feedback and earth hum sounds of which the work is composed. Feedback processes are also found in a number of other works that use megaphones, as in the work of Luis Antunes Pena, or different types of recording devices as, in Brian Ferneyhough's *Time and Motion Study II* (1977), Michelle Lou's *Untitled Three-Part Construction* (2014) or certain versions of James Saunders' *#[unassigned]* pieces from the early 2000s. This is certainly not an exhaustive list of such works, but is meant as an indication of the kind of performance practice we were interested in in the project. The paradigmatic performative network would be found in Karlheinz Stockhausen's *Mikrophonie I* (1964). The set-up of this work brings together two teams of three

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[5] The allusion to Michel Foucault's work is intentional.

[6] Jean-Luc Nancy (2015): 'On Struction', in Jean-Luc Nancy and Aurélien Barrau: *What's these worlds coming to?*, translated by Travis Holloway and Flor Méchain (New York: Fordham University Press), pp. 42–57.

performers around a large tam-tam, each team comprising of one performer who activates vibrations on the tam-tam, a second performer who controls a microphone for amplifying the tam-tam, and a third performer who controls the mixing desk and filters and the amplified sound. Though this is a very complex work, for our context it suffices to recognise the extent to which the performers all contribute to the resultant sound coming from the loudspeakers, and that the performers are reliant on each other for producing sounds and achieving a satisfactory result. Of course, this could be said to be common to most if not all group music-making, but in the works mentioned here this aspect is itself an irreducible aspect of the performance practice and work structure. We could call this a relational performance practice, here loosely taken to mean a performance practice based on the interaction of performers on a communal sound source.[7]

With networked performance apparatuses, conceived as precarious musical projects, one's life as a performer is in the hands of others. The actions performed by the individual only acquire meaning – or make sense (or even sound) – in relation to the actions of co-performers. I will explore this in some detail in relation to the individual works below. Suffice it to say at this point that musical practice is viewed not only as an aesthetic practice but also as a social and material one – a relational practice. Such a practice works to question traditional notions of agency, subjectivity and freedom, notions central to traditional aesthetics. A relational performance practice substitutes such notions for (ant)agonism, negotiation, collaboration and sharing. To the extent that a relational practice feeds on precarity, contingency and interdependency, it also suggests conceiving musical performance as a space for ethical and critical reflection. To summarise: precarity designates risk by interdependency and contingency and is inherently relational. How, then do we address the shared ethical space of a relational performance practice? How do we identify and assess the articulating nodes of a performative network and a relational practice? Luckily, we do not need to step outside our own field to find a suitable model for such an analysis. In the *Performing Precarity* project our reflections on instrumental networks and relational performance practice took the work of German organologist Herbert Heyde as one point of departure.

Herbert Heyde's taxonomy of musical instruments

Traditional models for understanding musical instruments and performance practice offer limited possibilities for discussions of the networked apparatuses listed above. In 1975, German organologist Herbert Heyde published a book called *Grundlagen des natürlichen Systems der Musikinstrumente*.[8] With this book, Heyde proposes to supplant the traditional Sachs/Hornbostel classification system for instruments with a new form of classification

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[7] The term is not related to the 'relational aesthetics' of conceptual music theorised by Harry Lehman, nor to Nicolas Bourriaud, but rather relates to post-structuralist ethics on the heels of thinkers like Jacques Derrida and Nancy.

[8] Herbert Heyde (1975): *Grundlagen des natürlichen Systems der Musikinstrumente* (Leipzig: VEB Deutscher Verlag für Musik Deutschland).

developed by Heyde himself. Although Heyde is a towering figure in organology, and this book forms the theoretical backdrop for important work like his catalogue of the musical instruments of the Karl Marx University in Leipzig, , *Grundlagen* has received little attention.[9] Heyde's new system brackets the social function of instruments and is concerned only with their structure. The decisive point about Heyde's system is that he takes contemporary developments in communications technology and computing as his point of departure. He describes an instrument as a chain that transmits a signal from an input to an output – input energy of some sort is transformed into vibrations and soundwaves at the other end. From this simple well-known model, he develops a subtle analytic grid for describing the structure and function of both individual instruments and their individual elements or parts. This grid describes a number of different functions performed by the various elements that make up a specific instrument. He lists a number of such functions – stimulator, mediator, distributor, converter, modulator, amplifier, resonator and so on. He also describes a number of other features that affect the energy current – that allow it to take different routes, distort it and so on. Modelling his analyses on circuit diagrams, he makes diagrams of instruments that show the route travelled by the input energy through the various elements before it is transformed into sound. In the book, Heyde gives diagrammatic illustrations of a number of instruments from simple structures like a bull roarer or a pair of cymbals to complex instruments like the Boehm flute or a grand piano.

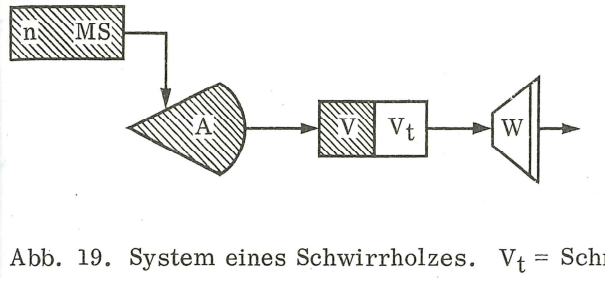


Abb. 19. System eines Schwirrholzes. V_t = Schnur

Figure 1: diagram of bull roarer from Heyde (1975).

Interestingly – not least because Heyde's area of specialisation is wind instruments from the fifteenth to the eighteenth century – Heyde discusses a number of mechanical or electronic instruments and automata like the Vaucanson mechanical duck or the phonola. It should be clear from this description that Heyde's take on instruments is entirely structuralist and materialist.

The extent to which Heyde's analytic conception of instruments resembles what we find in works by contemporaries like Helmut Lachenmann and Brian Ferneyhough is striking. I will just comment on this briefly. Around 1970, Lachenmann famously set out on his 'critique of listening', developing what he called *musique concrète instrumentale* and completely transforming traditional conceptions of instrumental practice in the process. This entailed

[9] For instance, there is no reference to the book among the essays in *Instrumental Odyssey. A Tribute to Herbert Heyde*, edited by Laurence Libin (Hillsdale: Pendragon Press, 2016).

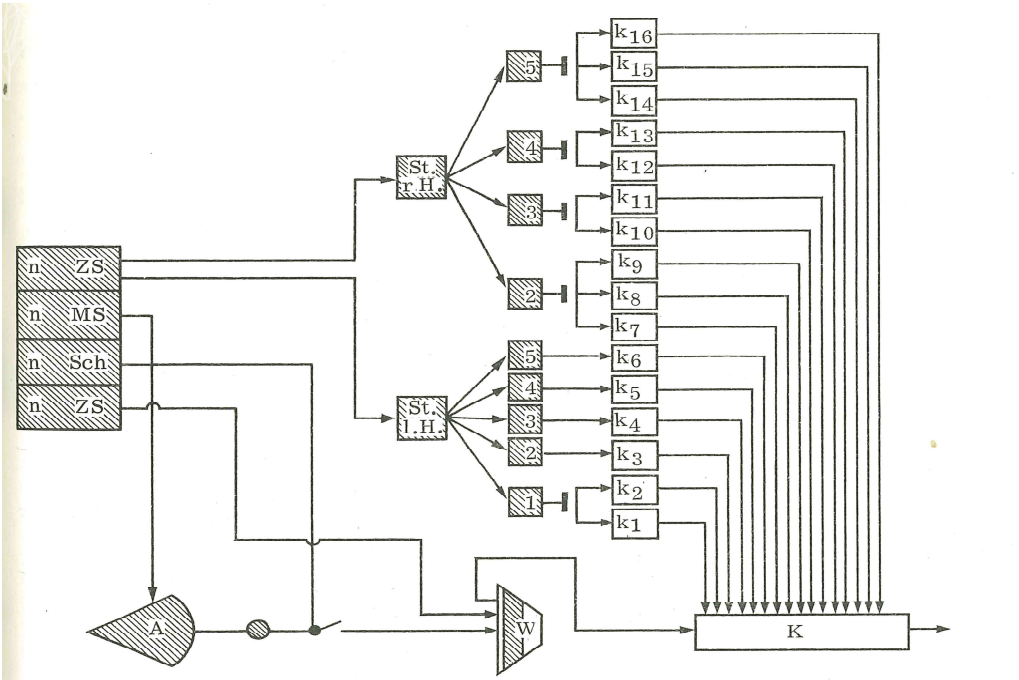


Abb. 9. System der Querflöte (Boehmflöte). Der Wandler besteht aus einem anthropomorphen Segment (Lippen) und einem technomorphen Segment (Anblasloch). r.H. = rechte Hand, l.H. = linke Hand, k = Klappe

Figure 2: diagram of Boehm flute from Heyde (1975).

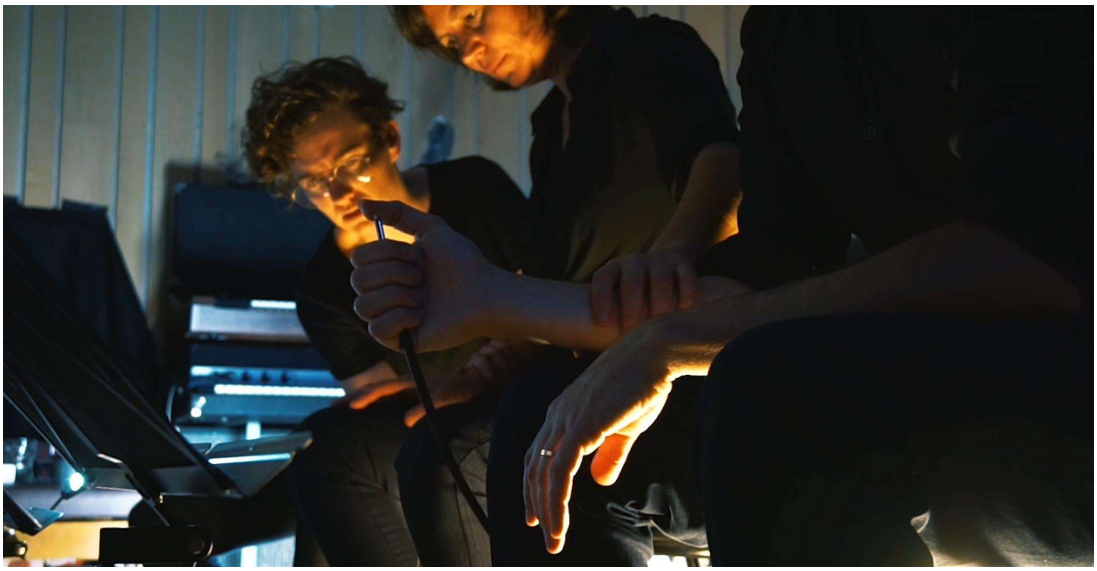
restructuring the use and function of the elements engaged in sound production on musical instruments. In the mid-seventies, in pieces like *Unity Capsule* and *Time and Motion Study II*, Brian Ferneyhough explored reconfiguring individual elements of instrumental technique as part of deconstructive compositional processes that expose the mutual interdependency and contingency of the elements involved, what I have elsewhere termed a radically idiomatic conception of instrumental practice.[10] Both Lachenmann and Ferneyhough – as well as a number of other composers – expose an analytic and disjointed approach to instrumental practice and sound production, the elements of which are configured as a network of material and corporeal elements closely related to Heyde's structuralist conception of instruments.

In my view, Heyde's model forms a very fruitful and interesting point of departure for discussing contemporary performance practice. Although avant-garde performance practice has typically been discussed from an implicitly historical position, in which new sounds and techniques are conceived as extensions of earlier practice, it seems, at least from within the field of the avant-garde itself, that this trope and related ideas (like

[10] See Anders Førisdal (2017): *Music of the Margins. Radically Idiomatic Instrumental Practice in Solo Guitar Works by Richard Barrett, Brian Ferneyhough and Klaus K. Hübler* (Oslo: Norges musikkhøgskole (PhD diss.)).

alienation) have lost much of their relevance and critical potential. The old maps no longer fit the new terrain, and we need new maps and coordinates – we need to develop new tools for understanding present-day performance practice, not least since the distinction between composition and inventing new practices becomes all the more difficult to maintain. Certainly, Lachenmann's idea that composing is to build instruments pervades contemporary musical practices. Ex-appropriating the term 'articulation' from Ernesto Laclau and Chantal Mouffe, one could say that Heyde's model suggests an analysis of the articulatory possibilities of an instrumental network or system. In Laclau and Mouffe's analysis of hegemony as dominant discursive formations, articulation designates 'any practice that establishes relations among elements such that the identity of the elements is modified as a result of the articulatory practice'.[11] Now, Heyde's model would do more than allow for an identification of the articulatory horizon and important nodal points of a given instrumental network. It can also help us identify and assess relations between performers and instruments, as well as between the performers understood as elements of the network. And since relations are precarious, as was noted above, Heyde can provide an analytic and material framework for addressing the question of precarity and relational practices.

Simon Løffler: *b*



Jennifer Torrence, Ellen Ugelvik and Anders Førisdal rehearsing *b*.

Let us now turn to the composition *b*, written in 2012 by Danish composer Simon Løffler. For me, *b* is a paradigmatic network set-up. b is scored for three performers performing on guitar effects pedals controlled by the feet, fluorescent lamps and a jack cable. We will take a detailed tour through the network of elements that make up the performing apparatus of

[11] Ernesto Laclau and Chantal Mouffe (1985): *Hegemony and Socialist Strategy. Towards a Radical Democratic Politics* (London: Verso), p. 105.

this work. The central element of the set-up is the mixer. A signal is sent from the auxiliary output of the mixer into the pedals of player 1, a whammy pedal and a distortion pedal.[12] The signal continues into player 2's pedals, another distortion pedal and then an equalizer. Player 3 also has a distortion pedal and an equalizer. The signal then returns to the mixer, into one of the channels, which splits the signal. One signal continues to the main output of the mixer and into the loudspeaker; the other one is however sent to the auxiliary input and back into the pedals, thereby creating a feedback loop that results in pitches being produced according to the combination of active pedals and their settings (see Figure 3 for a circuit diagram given in the score).

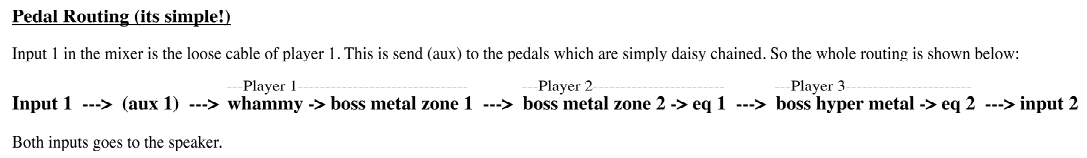


Figure 3: Simon Løffler: *b*. Circuit diagram of set-up.

A second network layer is constituted by the fluorescent lamps. Each performer controls a lamp with an on/off foot-switch. Player 1 additionally holds a loose jack cable in one hand, producing a rowdy and rhythmic earth hum. Additionally, player 1 has a second lamp touching the skin (usually on the back, beneath the clothes); this second lamp is also controlled by a foot switch. The earth current from the lamp connects with the jack cable, thereby manipulating the timbre and dynamic of the hum. The earth hum is further affected by the players. who are not only touching their individual lamps, but also each other's skin, thereby creating an active involvement in the transmission of the ground current.

There are thus two interlaced types of sound in the piece: the feedback pitch melodies and the *Klangfarbenmelodie* of the earth hum. The piece evolves through nine sections characterised by different types of sound as the result of which elements of the network are connected at a certain point. The set-up also comprises a number of sub-networks. The pedals have a number of different parameters that can be adjusted. For instance, on the Metal Zone distortion pedal suggested by the score for players 1 and 2 one can adjust distortion and output levels as well as adjust the sound with four different filters. All of these different knobs affect the pitch produced by a single pedal, and when turned on, the settings of one pedal will greatly affect the sound of another pedal. This is also the case with the various possibilities offered by the mixer employed in terms of adjusting inputs and outputs, gaining certain frequencies and so on. Each pedal needs to be set to produce different pitches by themselves as well as in combination with any number of the other pedals – one really has to tune the feedback loop properly.

One particularly striking feature of this piece is that, although the set-up gives the impression of being very mechanical and technical, the experience of performing it is really

[12] A whammy pedal is a pitch-shift device with an expression pedal which controls the resultant sound according to the settings of the pedal.

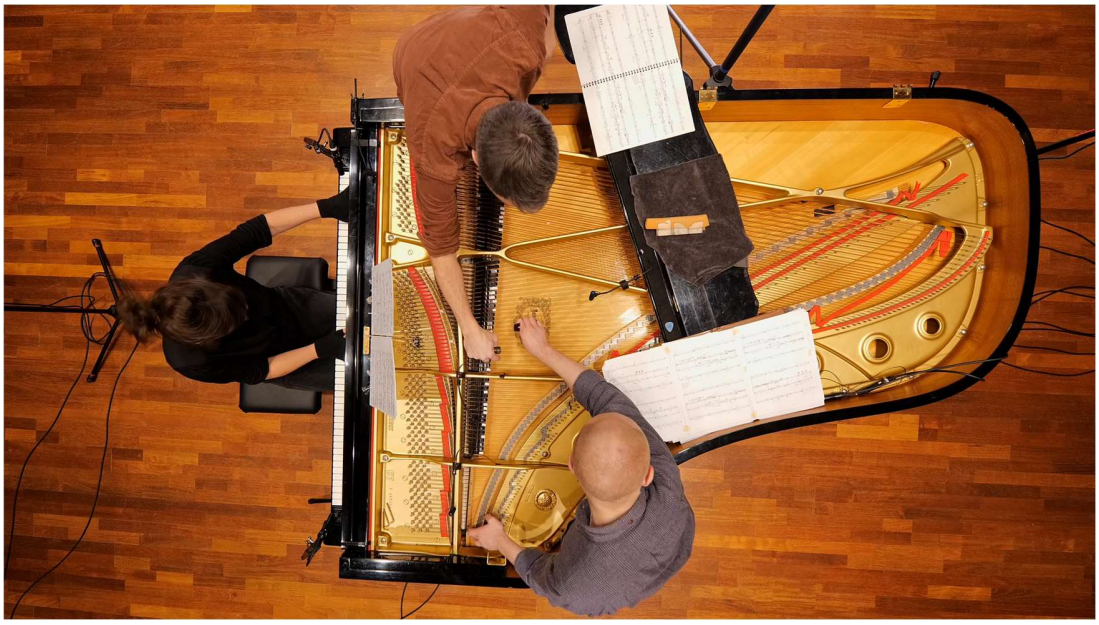
one of being engaged with the totality of the network involved. As a performer one loses control over one's own input, which consists solely of making articulations – establishing connections within the network that produce certain sounds. When the settings of the pedals are fixed, the performers have no opportunity to adjust pitch or dynamics. One thing I find very interesting with networks is that they are potentially limitless – we have to fix the borders of a given network ourselves in order to produce some kind of stable context. With b, this is not as easy as it might seem – even after a meticulous sound-check, in a performance the network never behaves quite like it did in a rehearsal. Though giving a sturdy and reliable impression, the pedals can behave in an erratic fashion responding to minute changes in the electric current of the performance space with rather extreme results with regards to pitch. Also, the pedals often – but not always – respond differently to the order in which they are turned on or off: the result of turning on two given pedals can differ according to which of the two pedals is turned on first. This means that the melodic patterns offered by the pedals in the earlier parts of the piece cannot be regarded as stable points of orientation for the performers, as there is always the threat – or chance – that they will turn out completely different. As for the earth hum network, it also behaves in an unpredictable and non-linear fashion which particularly affects the dynamic output. Thus it is very difficult to exactly circumscribe the limits of the performative network with which one engages as a performer. Precarity is built into the network system, and a performance of the work is rather a form of collaborative or shared negotiation with the network than the precise rendition of carefully sculpted musical events in time.

In this work it is also difficult to maintain traditional limits drawn between bodies and technologies. I have already noted that player 1 produces earth hum by touching the loose end of a jack cable connected to the mixer, all the while a fluorescent lamp touches the skin of the performer, thereby changing the timbre of the hum as the lamp is switched on and off. At one point of the piece (rehearsal letter G, bar 98), player 2 touches the skin of player 1, establishing a new connection in the network that affects the earth hum. Somewhat later (rehearsal letter H, bar 107), player 3 also connects to player 2, thereby expanding the network and articulatory possibilities further. The network is expanded again when players 3 and 2 touch the fixtures of the lamps (at rehearsal letters I and J, bars 117 and 129 respectively), which results in wild and volatile transformations of the earth hum signal. The final sections of the work are based on these sounds, performed in strict rhythms underscored by the clicking of the lamp switches. Excerpts from these sections can be seen in the rehearsal video from 1:08, where one can clearly see the performers touching each other.

Thus performing *b* is not only to actively engage the articulations of the network by making connections, it also means being a capacitor, or what Heyde would call a mediator. In actually transmitting earth current, the bodies involved in a performance of b is both performer and being performed, thus effectively collapsing the traditional subject/object dichotomy. The sound is an imprint of the materiality of the performer body and a one-dimensional interaction with technology, and not (only) of subjective agency in the form of 'expressivity'. For our purpose it is important to recognise that the actions of each individual performer are based on a few basic biomechanical operations and strictly limited to opening or closing connections in the network. Performing the piece is therefore not so

much an act of deliberation as of performative negotiation of sharing – sharing sounds, sharing an instrument, even sharing bodies, a shared and precarious space.

Simon Steen-Andersen: *rerendered*



Simon Steen-Andersen: *rerendered*. Piano: Ellen Ugelvik; assistant 1: Tomas Laukvik Nannestad; assistant 2: Anders Førisdal.

The work *rerendered*, composed by Simon Steen-Andersen in 2004, involves a more direct form of interaction by its performers than *b*: the performers are, in a sense, helping each other produce the sounds of which the work is constructed. It involves three performers, a piano, amplification and optional live video. A pianist performs on the keys and pedals whilst the two other performers (called 'assistants' in the score) actively manipulate elements found inside the piano, like the strings, string holders, frame and so on.[13] The work has a clear two-part form where the first is based on pitched material while the second part is based on non-pitched material. The interaction of the three performers is complex throughout, each one's function changing continuously in relation to the other others, producing together a refined flux of sound on a shared instrument. A video documentation of *rerendered* by the *Performing Precarity* group can be found on the Research Catalogue presentation.

A few example will suffice to illustrate the contingency and interrelatedness of the performance practice. A striking passage is found in bars 85–88 (see Figure 4; the passage is found at 3:40 in the video).

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[13] The set-up invokes that of Mauricio Kagel's *Transición II* (1958) for pianist, percussionist playing inside the piano and tape machines. Like *Mikrophonie I*, *Transición II* is an early example of an instrumental network.

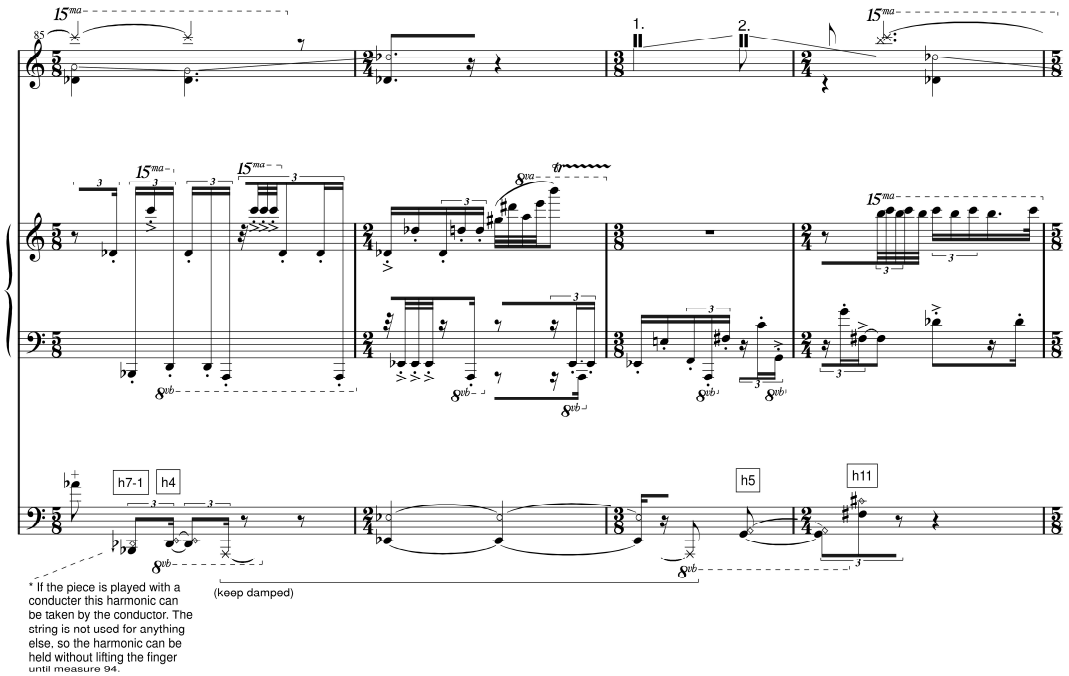

Figure 4: *rerendered*, bars 85–88

The piano part itself looks fairly typical of contemporary writing for piano, but it makes little sense on its own; we need to consider the actions of the two 'assistants' in order to understand the effect of what the pianist is doing. In bar 85, the first 'assistant' is involved in the production of two sounds. One is to dampen the high C of the piano part (notated with the x on this note), producing a percussive, un-pitched sound, the other is to produce a glissando on the D-flat. The glissando is produced by pushing a metal or glass object onto the string in question. Whereas the latter sound extends from the previous section, the former forms an impetus for further musical processes. Both of these sounds demand a delicate cooperative effort from both performers where the pressure applied by the 'assistant' on the strings involved must be negotiated in relation to the attack of the pianist – or the other way around: too harsh an attack from the pianist or too soft pressure on the slide will produce a distorted sound, whereas to little pressure or too soft an attack can give other unwanted results. Simultaneously, working on the bass register of the piano, the second assistant, after plucking the initial A-flat (the '+' sign marking this as a plucked sound), produces harmonics on the B-flat and C as well as dampens the low A. Again, the harmonics pose a challenge of negotiation between the performers, where the piano attack and the pressure applied to the string need to be keenly adjusted between the performers, not only between themselves but also in relation to the musical context. The result is that all the notes of the piano part are in fact distorted in the sense that the pitches notated on the page and played by the pianist will in fact not be appreciated by a listener. Only three of the notes result in pitches, which are quite unstable, in proximity to the initial a flat played by the second assistant: the slide tone approaches a g at the third beat of the bar before sliding towards the D-flat of the next bar. The harmonic on the B-flat string results in the seventh overtone of this pitch (roughly a quartertone low A-flat), and the harmonic on the low D

string results in the eleventh overtone, a G-quarter-sharp (not identical to the previous harmonic). The result is an unstable cluster of pitches that act as the continuation of material in the previous bar (where the A-flat is present, both as part of the slide glissando and as a normal note) against the more percussive sounds produced at either end of the piano range. In the next bar the glissando on the G-flat string finds rest on the octave. It should be noted that the glissandi are achieved by the slide being moved between the middle of the strings and the proximal position in the direction of the hammers (which varies from piano to piano). The hammer of the note strikes the string so that the section between the slide and the agraffe; however, the other end of the string, between the slide and the bridge, will also sound, the result being in fact two glissandi in opposite directions. In the lower register, the second 'assistant' produces an E-flat an octave above the key struck by the pianist. This note is also produced by a slide which a) is rather loud since the string will vibrate with the same frequency on both sides of the slide, and b) will have a rather crisp sound because of the harmonics (some nine bars later, as the pianist plays a repeated E-flat, the second 'assistant' will produce a glissando by moving the slide in the direction of the agraffe and back). As for the piano part of bar 86, a quick rising gesture results in a trill at between the two highest notes of the keyboard, a sound which is extended by the first 'assistant' as a form of '*guero*'-effect produced first by sliding across the bridge and the across the tuning pegs. This *guero* sound is taken up again with the written out trill that is gradually slowing down, the trill now being completely damped by the first 'assistant' as the whole passage from bar 85 repeats in bars 90-93.

This brief account of just one short passage presents us with an overwhelming complexity, both of musical processes and performer interaction. The *guero* effect mentioned is a central feature of the work, produced by a wide variety of means and distributed or shared among the performers. Often the performers produce together a continuous strata of sound as in the above description. According to context, the different performance techniques must be adjusted to fit within a given musical process, so performers must develop a nuanced and flexible approach to the different performance techniques. Whose sound or part dominates changes continuously, and the performers need to stay acutely aware of the other performers' actions, sounds or needs at all times.

It should be noted that the performative complexity of bars 85–88 is not a special case in this work – the same negotiation of shared actions is found throughout: this is the performance practice of this work. Even if the two 'assistants' were conceived as such by the composer and were given that designation in the description on the cover of the score, their function can hardly be said to be as mere 'assistants'. Indeed, they form an integral part of the whole performative network, producing sounds both on their own and in collaborative negotiation with the pianist. The work would be inconceivable without them. Using the term 'assistants' for those performers working inside the piano therefore seems difficult to sustain; in fact, it violates a proper understanding of how the collaborative and relational performance practice questions received performance hierarchies and fosters a sense of community and sharing. This designation also works *against* the recognition that in producing sounds together, the performers are always reliant on each other, dependent on and contingent with one another in order to establish the articulatory nodes of the network, a process based on negotiating precariousness through time.

Needless to say, *rerendered* poses many technical challenges to the performers. One particular challenge is posed by the amplification, which serves multiple purposes in the work. In performance, at least six microphones should be used, placed at the sides of the piano keyboard, at strategic places inside the piano and inside the pedal casing.[14] In the score, the composer asks for the acoustic sound of the piano to be 'extremely soft (~ppppp), but that the piano is amplified 'as much as possible (without being unpleasantly loud)'. For the pianist this means that the general attack must be adjusted to a touch where one risks not producing sound at all, something which can be both uncomfortable and stress producing. Such a touch is also difficult to maintain, both across the whole register of the keyboard and in complex or virtuosic passages. Certainly, this is a precarious element of the work. Add to this a number of techniques typical of this idiom, like passages involving lifting rather than pressing the keys, silently pressing certain keys to produce specific resonances and 'trills' with the pedals. The amplification affects the 'assistants' as well. The 'assistant's' actions often demand great precision, like finding the right node of a harmonic, placing the slide correctly or plucking the right string (and only this string!). These three techniques require careful orientation within the piano casing, which even with a number of practical aids can induce a feeling of precarity considering the speed and precision with which most of these actions are performed. Add to this that the amplification requires the performers to reduce unwanted actions and noise as much as possible as this will be picked up by the microphones. Even with careful placing of the microphones, it can be difficult to avoid touching them directly, which results in loud and unwanted noises. Additionally, the speakers need to be placed in front of the piano so as to reduce the possibility of feedback. This can result in the performers losing touch with the sound coming from the speakers and thus with a sense of agency. Certainly, the microphones, though an integral part of the set-up, can also work to produce an uncanny feeling of surveillance. This would of course be enhanced by adding the optional video cameras – ideally four cameras placed so as to highlight central aspects of the sound producing apparatus. The performers negotiate an apparatus much larger than the actual piano, with the performative feedback one experiences with one's own instrument barred or disrupted.

An additional challenge is posed by performing the work on different instruments. The construction of the casing and inside layout of a piano varies among makers and models, and this affects not only the action of the keys, mechanics and pedals, but also the barring of the frame. For the two performers dependent on establishing a stable orientation inside the piano, this can severely challenge the inside piano navigation. As the disposition of the bars in relation to the strings change, plucked or dampened strings can be difficult to find, harmonics can all of a sudden be hidden under the dampers, or one might need to perform slide glissandi in the opposite direction of what one is used to. Needless to say, this adds another level of risk and precarity to the performance practice. Indeed, the work offers nothing except persistent insecurity, according to the definition of given precarity above.

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[14] For the video documentation, we used a total of eight microphones, clearly visible in the video.

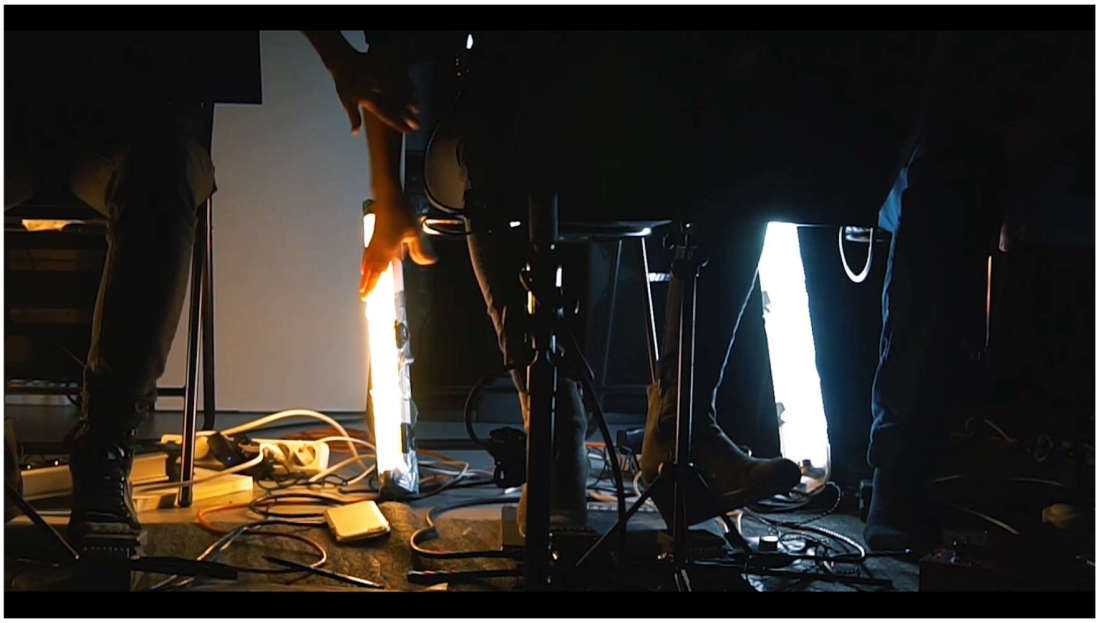
Precarity, ethics, and sharing

My discussion of *b* and *rerendered* has focused on the relationship between the performers or between performers and instruments. The discussion has highlighted how the performers interact with each other, as well as with the materiality of the instruments in what can be described as a relational performance practice. Interestingly, there is a certain form of dissociation of musical processes or structure from the production of sound in these works, where these two strata seem to operate according to different, separate but inseparable, logics. The reference to Heyde's network model of musical instruments makes it possible to extricate these two strata into separate but contingent discursive layers. Listening to *b* it is impossible to follow in detail the actions of the performers and how they affect the sound from the speakers. As outlined above, assuming the totality of a performance is also impossible for the performers since the set-up itself responds to the performance space in unpredictable ways. The implied lack of mastery of the sound makes the subsurface material articulations of the network all the more important for the performers. From this point of view, the act of touching becomes something more than simply establishing another connection, it works towards establishing a sense of cohabitation, community and care. Similarly, it is difficult for an audience to appreciate the complex interplay between the performers of *rerendered* even if the video cameras work in support of this (however, the video cameras also add one further level of mediation). We have offered the documentation of this work in the form of a video recording exactly for this reason, as this format allows the viewer to come close to the actions of the performers.[15] Taking the *guero* effect discussed above as an example once again: while this can be perceived as a form of *Klangfarbenmelodie* or relatively stable strata of sound, it is invariably produced by different means and on different materials – on the top or side of the keys, on the strings, with the pegs, at the bridge – that involve performer negotiation both in terms of musical structure and material interplay. The performers need to split their attention, focusing on the interplay within the group and with the materiality of the technology involved but also on the sounds produced at the piano and mediated through the speakers – all the while being interlaced and contingent with the other performers.

Projecting musical structure and developing a viable performance practice are thus two different things in these works. Now, the focus on challenges, risk and precarious performance practice should not overshadow that the challenges offered by these works are highly engaging, interesting and stimulating – as are the musical results. The rather technical focus on instruments as a network of relations should also not overshadow what was said above about musical practice as a relational and social practice. In a musical practice founded on negotiation, typical notions of agency, subjectivity and musicality are challenged or decentred – these are also negotiated. This suggests understanding relational performance practices in relation to ethics. However, it is the relational structure of the network itself, a differential and violent structure, which opens up a space of ethical reflection. Here, I am following Derrida, when he writes about ethics as the recognition of the other as irreducibly different, unlike, nonrecognisable: 'pure ethics, if there is any,

[15] This must not be confused with a live performance with video.

begins with the respectable dignity of the other as the absolute unlike, recognised as nonrecognisable'.[16] The recognition of difference as alterity is the opening to ethics preceding ethical reflection and decisions.



Jennifer Torrence, Ellen Ugelvik and Anders Førisdal rehearsing *b*.

Such an originary relationality cannot be restricted to a 'relational performance practice': in light of this argument, the proposed term seems to have run its course as we approach the realisation and even acknowledgment that any and every musical practice must always already be a relational practice; musical practices cannot be conceived outside of social, material and historical relationality. However, in contradistinction to musical practices that are more or less explicitly organised around historical models and trajectories or metaphysical concepts of beauty or expressive (or even ideological) givens, an explicitly relational performance practice at least suggests a larger field of practice in which singular practices are carved out as more or less explicit limitations of the infinite combinatoriality of struction – a relationality certainly pre-existing any performer or composer subject, any composition, indeed, any form of music or music-making (one thinks of Derrida's notion of arche-writing as a violent opening in *Of Grammatology*[17]), a relationality that exposes the articulatory conditions of music as both historically and materially contingent. Nonetheless the act of structuring behaviours in this way implies explicitly addressing relations beyond one's control and disjoining innumerable levels of mediations and foreign agencies. Juggling such agencies and mediations in preparing for a performance will necessarily involve

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[16] Jacques Derrida (2005): *Rogues. Two Essays on Reasons*, translated by Pascale-Anne Brault and Michael Naas (Stanford: Stanford University Press), p. 60.

[17] Jacques Derrida (1976): *Of Grammatology*, translated by Gayatri Chakravorty Spivak (Baltimore: John Hopkins University Press), p. 140.

negotiating the totality of the network involved, a totality that will always elude complete mastery. Such a negotiation amounts to making violent decisions that radically restrict the field of possibilities of the totality and to the extent that these decisions intrude on the autonomy of others they are not simply aesthetic but also ethical decisions. Certainly, a number of decisions are already given in the score itself, but we must not for this reason endow the composer subject with any preeminent ethical qualities; even if the composer of networked performance apparatuses directly structures the behaviour and cooperative efforts of others, this does not mean that the effects of this structuring are necessarily taken into account outside musical or aesthetic questions. Ethical negotiation is not enforced as a demand; it remains a dormant possibility.

The violent opening to the other is in Derrida closely connected to the question of an unconditional hospitality. In fact, he even defines ethics as hospitality and the opening to the other or alterity: '*ethics is hospitality*; ethics is so thoroughly coextensive with hospitality'.[18] Derrida distinguishes between a conditional hospitality as *invitation* and unconditional hospitality as *visitation*.[19] With an invitation we are in control of who we allow to come close to us, but for Derrida a visitation is something else completely and suggests a loss of control and an opening to an unknown and unpredictable future; a visitation can imply both a threat or a chance. This corresponds to the ethical opening to alterity. In their book *Music and Ethics*, Nanette Nielsen and Marcel Cobussen likewise see music in the light of Derrida's notion of hospitality, but fail to acknowledge the distinct distance marked by Derrida's work in relation to a Levinasian take on ethics as first philosophy.[20] The present argument however follows the radically atheist reading of Michael Hägglund, who has argued convincingly against the typical Leviasian reading of the question of ethics in Derrida.[21] As I see it, the works addressed in the present text open up to the question of an unconditional hospitality and violent opening to alterity, as against the conditional metaphysics of an ethics of the face to face encounter. A relational performance practice points in the direction of a visitation rather than an invitation, in the direction of a visitation of and respect for the absolute unlike which is the condition of possibility of an invitation. The negotiation of performers and technology, precarious at every articulatory juncture, implies such a loss of control or mastery as characterises a visitation. A visitation, then, of others as co-performers and material apparatuses, performance spaces, scores, composers, audience. Crucially, this hospitality – the opening to chance and threats – marks all performers equally since there is no given or pre-established order or hierarchy within

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[18] Jacques Derrida (2001): *On Cosmopolitanism and Forgiveness*, translated by Mark Dooley and Michael Hughes (London and New York: Routledge), p. 17.

[19] Jacques Derrida (1988): 'Hospitality, Justice and Responsibility', in *Questioning Ethics. Contemporary Debates in Philosophy*, edited by Richard Kearney and Mark Dooley (London and New York: Routledge), pp. 65–83.

[20] Nanette Nielsen and Marcel Cobussen (2012): *Music and Ethics* (Farnham: Ashgate).

[21] Michael Hägglund (2008): *Radical Atheism. Derrida and the Time of Life* (Stanford: Stanford University Press).

the groups as they are organised in the scores or in relation to the apparatus networks. Partaking in the precariousness of the networks, the performers share an unconditional hospitality for each other and the network itself. The interdependency – or precariousness – of the performers must rely on faith in one's co-performers, which is certainly notable given the risk involved, a risk which has been discussed in some detail above. Faith, because the performers of these works in a very particular sense hold the lives – or at least the musicality, agency and subjectivity – of others in their hands: any performance of these works must be based on a shared faith and trust, even if such a trust must always be open to being violated or ruinous.[22] This mutual trust implies also a dispossession of subjectivity or agency as the performers produce sounds together and are wholly reliant on each other. Such a critique of subjectivity has already been alluded to above. The networked apparatus certainly suggests a loss of sovereignty and autonomy, such notions being effectively dissolved and disseminated within and by the network structure. The subject becomes decentred, the body exposed as porous, mutable, vulnerable. This loss of self should not be feared, however; rather these notions should be seen as radical forms of closure of the ethical space we have assigned to the networked apparatuses. Likewise, the lack of mastery of the totality of the network should not be seen as a threat; it must be recognised as a condition of musical performance or music as such. Without precarity, no music. We cannot simply do away with words like lack or loss however, even if they do not make sense from the point of view of the network. It should by now be clear that one route not taken in this text – that of describing a performance practice rather than the material conditions of this practice – would have been *unethical*; following such a trajectory would have implied closure of the ethical opening by way of a normative ideal.

Three forms of sharing then: in *b*, shared currents running through cables and bodies, uniting technology and flesh in a differential totality; in *rerendered*, a participatory and shared negotiation of the materiality of piano; and in *2-Meter Harmony*, a shared space or spacing that binds the performers by a precarious. Shared sounds, shared bodies, shared spaces.

If nothing else, I hope to have shown that the notion of precarity can not only be useful in describing precarious situations, but that precarity can also assume a critical function in relation to precarious projects, performing the undoing of mastery, totality, and subjective sovereignty on behalf of contingency, relationality, sharing and the undecidable coming of the future.

[22] For a discussion of the question of faith in Derrida, see Hägglund (2008), pp. 126–127.