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Séance and technology: intermundane communication as a methodology for contemporary music

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ABSTRACT

This article examines compositions that stage communion with spirits via technological means. Through analysis of four works, it proposes ‘séancing’ as both a framework for interpreting performances of technologically focused contemporary music, and as a credible methodology for new music composition. In Francesca Fargion’s *Louise, gently falling* (2023), Vochlea’s *Dubler 2* conjures a spectral vocalist that energises both rehearsal and performance. In Laurence Osborn’s *Counterfeits (Siminică)* (2023), Augmented Instruments Lab’s *TouchKeys* help stage a theatrical séance that blurs intermundane boundaries. Nwando Ebizie uses Google’s LaMDA (Language Model for Dialogue Applications) to explore questions of sapience, pedagogy, and possession in *I Will Fix Myself (Just Circles)* (2022). Zubin Kanga’s *Metamemory* (2023) makes use of PriSM SampleRNN to blur distinctions between real recorded performances and techno-hallucinogenic fictions.

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The thread of life does not end with death; it is simply transferred to another spool. (Franz Liszt [communicated via spirit to Rosemary Brown; Brown 1975])

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... sound is a haunting, a ghost, a presence whose location in space is ambiguous and whose existence in time is transitory ... the close listener is like a medium who draws out substance from that which is not entirely there. (David Toop 2010, XV)

—

Singing ghosts in the techno-sonic realms of the intermundane ... (Jason Stanyek and Benjamin Piekut 2010)

1. Introduction

Five years before I moved in, someone was murdered in my flat. It was a senseless and tragic event, reported on widely in the news but only brought to my attention when

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the landlord mentioned it as I was signing the contract. It was my first time living alone and so – even if it was my right to know about such things – in the dark of the night the Consumer Protection from Unfair Trading Regulations 2008 was not the insurance against unforeseen presences I was quite looking for. Sleepless nights were worsened by it being the final year of my doctorate, and so in the general haze of preparing my thesis for submission, I would often forget about various sound-making electronic devices around the house. Accordingly, the murmurings of a mistakenly left-on television, a laptop auto-playing from YouTube, or an accidentally activated smart speaker were imbued with a new spectrality. Between hearing the sound and realising its source, it was not uncommon – especially in my first days of living there – to think momentarily that my flat might be haunted. After a time any spectral presence and I learned to cohabit peacefully, but those early panicky moments stayed with me. Technologies of the intermundane indeed.

Yet what if these technologies were not simply possessed – waiting for their victims like a certain Japanese VHS haunted by a certain well-dwelling spirit – but rather, operated as instruments for the actantial invocation of – and collaboration with – beings from across the threshold (Suzuki 2009)?¹ This article evaluates four pieces – all commissioned by UKRI Future Leaders Fellowship Cyborg Soloists (cyborgsoloists.com) – that stage communion with spectral voices via technological means. The conduits for such spirits are various innovative technologies: Vochlea’s Dubler 2 software is used in Francesca Fargion’s *Louise, gently falling* (2023); Augmented Instruments Lab’s TouchKeys is used in Laurence Osborn’s *Counterfeits (Siminică)* (2023); Google’s LaMDA (Language Model for Dialogue Applications) is used in Nwando Ebizie’s *I Will Fix Myself (Just Circles)* (2022); and PriSM SampleRNN is used in Zubin Kanga’s *Metamemory* (2023).² Through analysis of these works, I propose ‘séancing’ as both a framework for interpreting performances of technologically focused contemporary music, and as a credible methodology for new music composition.

2. Technology and the spirit world

Jeffrey Sconce writes at length in *Haunted Media: Electronic Presence from Telegraphy to Television* on the historical relationship between intermundane communication and technological innovation. He cites the first official test of Samuel B. Morse’s electromagnetic telegraph line, and the codification and burgeoning popularity of Spiritualism – both taking place in the 1840s – as events that disincorporated communication and presented ‘an explicit intersection of technology and spirituality, of media and “mediums”’ (Sconce 2005, 25). Just as electricity proved the ‘spark of being’ that brought Frankenstein’s creature to life, so too did it energise the Spiritualist movement, which actively aligned itself with ‘principles of “electrical science” so as to distinguish mediumship from more “superstitious” forms of mystical belief’ (Shelley and Butler 1998, 38; Sconce 2005, 28). Sconce suggests that the Spiritualists were ‘the first to imagine ... electronic technologies as a link to an unseen world of phantom subjects’ in the conjuring of a ‘disembodied presence, allowing the device to vanquish previous barriers of space, time, and in the Spiritualist imagination, even death’ (Sconce 2005, 44, 28). Every tool has its master, and the popularity of such technologies was effectively deployed by the figure of the medium, whose access to a ‘combination of supernatural and technological discourses’ forged connections

between the religious tenets of Spiritualism and technological innovation (49). For contemporary writers the theological affordances of such connections made these “spiritual” [technologies] ... a means of bodily escape and deliverance from the troubles of a material and depressingly finite universe’ (44). In other words, spirit presence provided ‘indexical evidence’ for life after death in an infinite paradise (57).

In their now-seminal article ‘Deadness: Technologies of the Intermundane’, Jason Stanyek and Benjamin Piekut identify ‘new arrangements of interpenetration between worlds of living and dead’, which they term ‘intermundane’, a definition I adopt in this article (Stanyek and Piekut 2010, 14). Whilst scholarship has focused on post mortem sound technologies for preservation purposes (e.g. Sterne 2003), their emphasis is instead on ‘complex forms of rearticulation’ (Stanyek and Piekut 2010, 16). In stressing the agential capacity of the dead beyond objectivising paradigms of the dead as ‘inert, without futures, and non-effective’, they propose a way of rethinking the ‘ostensibly “dead” labor of technology and discipline, and even the “dead labor” of the human dead’ (18, 20). Whilst Sconce remains reasonably committed to a binary of ‘presence’ and ‘absence’ – even among disincorporated or supernatural subjects – Stanyek and Piekut use the term ‘deadness’ to speak to ‘the distended temporalities and spatialities of all performance’, and the way ‘all ontologies are really hauntologies’ (20). Their technological focus is on the popular music recording studio – especially focusing on posthumous duets – but the notion of ‘deadness’ and the ‘technologies of the intermundane’ are evidently applicable more widely, and especially beyond the temporal limit (nineteenth century to the late 1990s) articulated in the article.

As Stanyek and Piekut’s use of the term denotes, this research is undertaken in the *spirit* of the ‘spectral turn’, and in particular the extraordinary proliferation of ‘hauntology’ across a variety of disciplines (Blanco and Peeren 2013; see also Derrida 2011; Good, Chioventa, and Rahimi 2022; Langford 2016; Lincoln and Lincoln 2015).³ Where this article diverges is in its specific use of spectral vocabulary: many hauntological analyses are concerned centrally with the figure of the ‘ghost’, where séancing is more specifically concerned with the ‘spirit’. For parapsychologist Hans Holzer, ghosts are ‘surviving emotional memories of people who have not been able to make the transition from their physical state into the world of the spirit ... their state is one of emotional shock induced by sudden death or great suffering’, whereas spirits are those who have died ‘normally’ and have experienced adjustment to their new posthumous form as they ‘pass on rapidly’ (Holzer 2004, 45). Though hauntologists and parapsychologists may be coming at these issues from vastly different scholarly positionalities, something they can agree on is the association of the ghost with ‘trauma, grief, regret, repression, [and] guilt’ (Lincoln and Lincoln 2015, 200). Holzer writes that ‘happy ghosts don’t stay around: in fact, they turn into normal spirits, free to come and go (mostly go) at will’ (Holzer 2004, 55). So, where spirits do – at least in mainstream supernatural discourse – ‘haunt’, I am more concerned with the phantoms that are invoked, communed with, or channelled via mediums as part of Spiritualist practices like the séance, rather than apparitions with unfinished business, who commonly follow traditional ‘ghost protocols’ in haunting either those who caused the death of the individual in question, or the location where they met their untimely end (Lincoln and Lincoln 2015, 200). Such an agenda is more in keeping with Stanyek and Piekut’s model of the agential dead: a source rather than an echo, an active collaborator rather than a spectral resonance.

For Holzer, humans are but a 'personal energy field encased in a denser outer layer called the physical body' (Holzer 2004, 45). It therefore reads that electronic technologies are the *medium* by which intermundane communication can take place, in keeping with Sconce's invocation of nineteenth-century technological innovation and the advent of Spiritualism.

3. A phantom voice: Francesca Fargion's *Louise, gently falling* and Vochlea's *Dubler 2*

Francesca Fargion is a composer and performer based in London. *Louise, gently falling* (2023) was commissioned by Cyborg Soloists as a collaboration between Fargion, industry partner Vochlea, and Plus-Minus Ensemble, who premiered the work. This analysis is informed by my attendance at a rehearsal for *Louise, gently falling* by the ensemble and the composer in New Cross, London on 22 October 2023. Fargion employs Vochlea's *Dubler 2*, a standalone software compatible with various Digital Audio Workstations (DAWs) that translates audio signal into MIDI data. It has been employed in a number of works to achieve hands-free expressive manipulation of live electronic processing (Jessie Marino's *Seahorses* (2023)), as well as in more project-specific configurations (see for example discussion of Jameson and Matthews' *Aeolian Fantasy* (2023) in Kanga et al. 2024).

In Fargion's piece, *Dubler 2* is used to trigger vocal samples of the composer's voice instrumentally. When the clarinet plays certain pre-programmed pitches, the software triggers one of several short fragments. I argue that the literary, musical, and stylistic properties of the vocal fragments, in combination with the manner of their technological dissemination, conspire to produce a séance with a spirit who is vocally commensurate with the living Fargion but characteristically and theatrically very different.

The work's lyrical content is drawn from a book of Lieder texts in translation, compiled by Richard Stokes in the edited collection *The Book of Lieder* (Bostridge and Stokes 2011). The first line of the work, repeated four times, is 'where am I you ask and where did I go?' (Fargion 2023). This lyric is a translation of a line ('Wo ich sei und wo mich hingewendet') in Friedrich Schiller's 'Thekla: Eine Geisterstimme' ('Thekla: a phantom voice'). Set by Franz Schubert in 1817, the text comprises the 'utterance of a spirit' (Fassbaender and Johnson 1990). Thekla – the spirit in question – is the fictionalised daughter of Albrecht von Wallenstein in Schiller's *Wallenstein* trilogy, who speaks of her unity in heaven with lost love Max Piccolomini, killed in battle in the final play. The poem therefore represents what Diana Fuss might call a 'corpse poem', 'a first-person poetic utterance ... spoken in the voice of the deceased' (Fuss 2003, 1). Thekla's address from across the threshold – 'an insensate figure endowed with the power of speech' – is an evocative enunciation of spectral presence (1). However, Thekla is not *Louise, gently falling's* only phantom. Later, the disembodied voice sings 'am I a lost soul?', a translation of a line ('Bin ich denn ein verlornen Mann?') from Hugo Von Hofmannsthal's *Jedermann*, partially set by composer Frank Martin. The 1911 play is based on the fifteenth-century morality play *The Somonyng of Everyman*, the 'summoning' yet another invocation of séancing (although it the return journey with which we are more concerned). In *Jedermann* the titular 'everyman' is confronted by Death and eventually ascends into the afterlife after reflecting on – and then renouncing – his 'life of pleasure and greed' (Goldmann 2020).

The words of two speakers from across the threshold between worlds therefore lend the text a referential literary spectrality, even if it is one many listeners might find difficult to identify in performance. What is clearer, however, is the semantic field of loss and disorientation, which calls to mind a spirit travelling to and subsequently arriving in the afterlife.

In combination with the lyrical references detailed above, there is another callback to the Romantic canon in Fargion's deployment of a melody derived from Robert Schumann's *Fantasie in C*, Op. 17 (1836), as seen in [Figures 1](#) and [2](#).

Though it is slightly altered, the melody is recognisable as that of Schumann, differing from the more obscure lyrical references appearing only in translation. Its vocal iteration – 'and most of all I'm sorry' – is most spectral in its invocation of the past, but the melody also forms part of an instrumental interlude at bb. 67–72, as seen in [Figure 3](#).

Melodic allusion is another way the piece reference the past: a process that becomes more distinctly spectral when such fragments appear in a disincorporated form (ie. as samples), mediated through technological dissemination. More broadly, referencing antiquated musical forms – e.g. *Lieder*, or the 'Fantasy' – brings into play the 'distended temporalities' of Stanyek and Piekut's 'deadness' on a stylistic plane, producing a kind of palimpsest (Stanyek and Piekut 2010, 20).

Fuss writes that 'sound and sight technologies like the photograph, gramophone, telephone, radio, and film can each legitimately claim to revive the dead more effectively than



Figure 1. Schumann, *Fantasie in C*, bb. 14–17 (Schumann 1836).

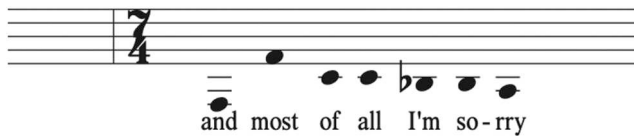


Figure 2. *Louise, gently falling*, b. 196, vocal part (Fargion 2023).



Figure 3. *Louise, gently falling*, bb. 67–72, violin & cello (Fargion 2023).

the poem', and it is through technological means that Fargion and Plus-Minus Ensemble's spirit channelling is made possible (Fuss 2003, 30). As detailed above, the Dubler 2 software facilitates hands-free triggering of samples. Fargion's custom patch was trouble-shooted and tested as part of rehearsal on 22 October 2023. This would be the site of their first séance.

The first clue that performers might have been communicating across the threshold lay in their regular reference to the vocal entity as 'her', or 'she', even in the presence of the composer. This is something the composer also noted, remarking that she had 'been referring to the voice as "her" and not "me"', despite Fargion making the recordings herself (Fargion, pers. comm. 18 September 2023). In rehearsal, there was regular speculation surrounding what 'she' – the 'resurrected voice' – might like. Sometimes this speculation would concern her musicality, with performers noting that 'she gets louder', or that 'she's working'. At other times, the spectral voice would be invoked as an uncooperative ensemble member, with one living musician indicating a rehearsal mark from which to begin, before adding '... if *she* deigns to join us'. At other times, the sudden and loud entrance of the voice in an unexpected moment jumpscared everyone present. The composer was keen to assert that 'she's not suddenly gonna scream', but it was difficult to totally relax in the presence of an unpredictable spectral voice.

The anecdotal evidence given above, as well as my experience of the rehearsal process more broadly, worked to dissolve clear binarisms of 'presence' and 'absence', instead operating according to a kind of spectral logic whereby the technology had both the capacity to invoke the resurrected voice – as was its purpose – but also brought into play unanticipated instances of vocal utterance. A not-quite-controllable spiritual presence; an intermundane musical collaboration with its fair share of discord. The voice was sometimes with us, and sometimes not, but never definitively one or the other (that is, until you turn the machine off).

The technological rendering of a spectral presence also interacted productively with the musical references detailed above. A particularly memorable moment occurred during a break in rehearsal, one where the technology was left running. The composer and a member of the ensemble exchanged their thoughts on Schumann's *Fantasie in C, Op. 17*, and the latter began to play the opening bars from the full score resting on the piano stand. All those present – including myself – were taken aback as the piano material unexpectedly triggered a vocal sample. What was particularly shocking was that the melodic contour of the sample triggered almost exactly mirrored that in the Schumann. 'She wants to sing along', another ensemble member quipped.

Putting on our sceptic's hat for a moment – and it really only will be a moment – all of these events were caused by issues with Dubler 2's capacity to parse individual instruments in an ensemble setting. The software is predominantly designed to work in response to a single voice, rather than an ensemble, and as such is less predictable when presented with a complex instrumental timbre. The microphone was picking up trigger pitches played by performers other than the clarinetist, which resulted in undesired sounds. A solution using a contact microphone was developed later in the rehearsal, which mostly eliminated issues with random triggering.

Sconce writes that 'mediums exploited the indeterminacy of telegraphy's electronic presence to "throw their voice" ... in a most complex form of ventriloquism' (Sconce 2005, 50). In rehearsal, it was the indeterminacy of the Dubler 2 software's signal chain

response that threw the voice – that of Fargion, but also a spectral voice conjured through literary and music referential means. None of these references alone invoke spectrality but – when mediated by the technology – they together conspire to present a séance, at once literary, musical, and stylistic.

Fargion suggests that the live electronic element of the piece technically ‘could have been a recording’, but using Dubler 2 creates an ‘image’ of a spectral vocalist that energises both rehearsal and performance (Fargion, pers. comm. 18 September 2023). In other words, it stages the séance. Intriguingly, several performances of the work have instead featured Fargion performing the vocal fragments live with the ensemble, instead of using Dubler 2 technology. Perhaps sometimes it’s better to let spirits rest in peace.

4. An intermundane duet: Laurence Osborn’s *Counterfeits (Siminică)* and TouchKeys

Laurence Osborn is a composer based in London. *Counterfeits (Siminică)* (2023) was commissioned by Cyborg Soloists as a collaboration between Osborn and TouchKeys, a commercial startup developed out of the Augmented Instruments Laboratory, a research project directed by Professor Andrew McPherson and affiliated with both the Dyson School of Design Engineering at Imperial College London and the Centre for Digital Music at Queen Mary, University of London.

TouchKeys is an instrument that transforms the keyboard into a ‘multi-touch control surface’ through the addition of sensors (McPherson 2011). It began development in 2011 and garnered financial backing via crowd-funding platform Kickstarter in 2013, eventually becoming an independent company focused on selling DIY kits – to allow users to attach TouchKeys sensors to their own keyboards – alongside pre-made units. The TouchKeys sensors can be added to any keyboard and through their ‘capacitive multi-touch sensing’ can facilitate a number of expressive effects including ‘vibrato, pitch bends, and timbre changes’ (McPherson 2011, see also McPherson 2015; McPherson and Kim 2011; McPherson, Gierakowski, and Stark 2013).

In *Counterfeits (Siminică)* for solo piano doubling TouchKeys keyboard, the sensors have been added to a MIDI keyboard that rests on top of the piano. Osborn uses the keyboard to trigger and manipulate vocal samples that initially appear to be drawn from ‘Afară e întuneric’ (‘It’s Dark Outside’), as recorded by Romanian violinist and vocalist Dona Dumitru Siminică (1926–1979). Siminică is associated with the *lăutari*, a term that has been used to refer to a skilled class of Romani folk musicians since the eighteenth century. The song is a tale of love and loss, closing with the singer hoping their lover will return, only to watch the window open – seemingly of its own accord – to reveal no one at all (*Fereastra se deschise/Si nimeni n-aparea/Of, ce amar, ce jale/E-n inimioara mea*) (Siminică n.d.). It features a violin solo, played by Siminică himself, and an accordion solo, interrupting the sung verses.

However, Osborn makes it clear that ‘none of the voices recorded on the vocal patch for [*Counterfeits*] belong to Siminică’ (Osborn 2023). The vocals are in fact recorded and processed by the composer himself, imitating Siminică’s distinctive vocal timbre. Osborn weaves these pre-recorded sounds alongside piano material in five movements, each featuring a distinct sample bank.

The image shows a musical score for two instruments: Kbd. (R.H.) and Pno. (L.H.). The score is for measures 10-12 of Movement I from Osborn's *Counterfeits (Siminică)*. The Kbd. part is in the right hand, and the Pno. part is in the left hand. The Kbd. part features a melodic line with notes (E♭), (D♭), and (G♭) and dynamic markings *f*, *mf*, and *(mf)*. The Pno. part features a complex accompaniment with dynamic markings *f*, *p*, *mf*, *p*, and *(p)*. The score includes various musical notations such as slurs, ties, and fingerings (e.g., 5, 3).

Figure 4. Osborn, *Counterfeits (Siminică)*, Movement I, bb. 10–12 (Osborn 2023).

Movement I incorporates various vowel sounds and uses the TouchKeys' particular functionality to pitch bend particular samples without having to lift fingers from the key, as seen in Figure 4. The effect – especially from the perspective of the audience – is eerie, as the vibrato-rich vocal samples seem to move almost by themselves.

Movement II's distinctive 'la' sounds give voice to a haunting melody which incorporates more of the composition's distinctive slides facilitated by the TouchKeys control surface. Movement III sees the vocal directness of the first two sample banks interrupted by electronic interference, producing an effect approximating ring modulation at times. Movement IV's 'doo' sounds are more closely intertwined with the piano material, an approach which finds its opposite in the opening of Movement V, which presents noisy violin-esque tones – that almost seem to start with a scream – in antiphony with the piano. These intense samples are perhaps mostly explicitly imitative of Siminică's identity as a vocalist and a violinist, and represent the expressive limit of the composition.

As the aforementioned description demonstrates, Osborn incorporates a number of musical features typical of *muzica lăutărească* (music by *lăutari*), and especially its 'fast and wide vibrato' – incorporated into the samples themselves – and use of slides in pitch (Setaro 2018, 3, 19). The latter is only made possible through the specific affordances of the TouchKeys technology. The composition therefore utilises the capacity of the multi-touch surface to both reflect the specific performance practice of Siminică's practice as a *lăutar*, but also to present a voice that is unstable – or perhaps, not quite of this world. In my view, this composition stages an intermundane duet, albeit one that – as its title indicates – is counterfeit: a theatrical séance.

For Simone Natale, theatricality is central to Spiritualist practices. In the nineteenth century, séances were framed 'not only as moments of religious and scientific inquiry, but also as brilliant amusements in which theatrical effects embellished an exciting shared experience' (Natale 2016, 22). Yet where sceptics might see the connection between spirit communication and performativity as evidence of its supposedly fraudulent nature, many spiritualists were comfortable employing 'strategies from show business and at the same time [believing] in what they were doing' (15). For example, it was common to acknowledge that mediumship could involve 'some acting', to add colour to manifestations, though this was 'highly controversial', especially among dissidents (31–32).

The continued entanglement of belief in the supernatural and theatrical entertainment has also resulted in more explicitly performative stagings of Spiritualist phenomena, which assert the fictional nature of proceedings whilst also playing into audience suspension of disbelief during 'séances' themselves. For Nik Taylor, the way such 'paranormal entertainment' succeeds is through the folklorist notion of 'ostension', which 'has its basis in a fictional narrative that is perceived to represent reality' (Taylor 2015, 165). Whilst many forms of entertainment can be said to conjure a perceptual blurring of reality and fiction through the willing suspension of disbelief, ostension seeks to amplify '[the] feeling of ambiguity in what is real and what is not within a theatrical space' beyond the conventions of staged scripted drama (174).

Here an emphasis on the affective quality of séances – as an alternative to the more common focus on the pragmatics of credibility and/or authenticity in Spiritualist practice – echoes Christine Ferguson's scepticism of binarised 'poles of faith and doubt' (Ferguson 2017, 335). Similarly, this article does not seek to debunk the apparently questionable authenticity of Spiritualist practices, nor to assert the reality of these séances' intermundane communication. Instead, discussing Osborn's work in terms of its framing, staging, and use of technology, helps to reveal the specific ways *Counterfeits* séances according to the theatrical – rather than the conventionally Spiritualist – tradition.

Whereas Fargion's unpredictable tech setup stages spectral presence for performer and audience alike, Osborn employs a technological infrastructure for rendering and controlling the vocal samples that allow the performer precise control over their spectral collaborator. Performatively, the TouchKeys' low-profile optics facilitate control over pitch bend through the sliding of a finger. It is a sleight of hand trick, using staging to manipulate the audience's perception of events. In performance, the TouchKeys keyboard looks exactly like any other MIDI keyboard. Osborn takes advantage of this to imbue the samples with a spectral actancy, but really the performer is always in control.

Osborn perhaps also mobilises the specific cultural associations of folk (and folklore) with so-called alternative belief systems and practices including mediumship and clairvoyance, to frame the *läutari*-inspired material in similar terms. Historically, many sceptics of Spiritualism have employed racist stereotypes about Romani people as 'exploitative', 'phony', or associated with fraudulence and/or thievery to discredit their Spiritualist practices (Eli 2023). I vehemently reject such discriminatory views and do not seek to affirm them here. Instead, I suggest that Osborn deliberately plays into more general assumptions about the proximity of folkloric practices to Spiritualist ones. As Nancy Gray Schoonmaker writes, nineteenth-century Spiritualism was a '[system] of religious belief with deep roots in survivals of European folk religion' (Schoonmaker 2010, 22).

Osborn writes of 'the unseen voice and its intimations of both presence and absence', reminiscent of Stanyek and Piekut's reflections on the 'distended temporalities' of the performing subject, beyond a binary (Potter 2023; Stanyek and Piekut 2010, 20). Like Fargion, Osborn seeks to undermine supposed fixities of 'presence' (or aliveness) and 'absence' (or 'not-aliveness') at either side of the intermundane threshold, adopting the same kind of spectral logic to resurrect his own voice via technological means. Unlike Fargion, however, the voice Osborn conjures is not from the beyond. It is an impersonation. This in itself would not discredit the séance, were it not for the explicit framing of the composition as a construction. The title, programme note, and score all note that the voice is not Siminică's own, acting as a disclaimer. Technological mediation, framing, staging, and the

nature of the performer's close control over a potential spectral presence all impact audience perception of music that might otherwise purport to séance, but in fact, is an obvious counterfeit.

5. Virtuosi across the threshold: Nwando Ebizie's *I Will Fix Myself (Just Circles)* and LaMDA

Nwando Ebizie is a multidisciplinary artist and curator. Building on her interest in 'myths, rituals, and provocations', *I Will Fix Myself (Just Circles)* (2022) was commissioned by Cyborg Soloists and takes as its central figure an imagined sapient piano-playing robot of the future (Cyborg Soloists 2022). However, before we talk about *I Will Fix Myself*, we need to talk about Rosemary Brown (1916–2001).

The first time I saw Franz Liszt, I was about seven years old, and already accustomed to seeing the spirits of the dead. (Brown 1971, 13)

The first line of Brown's autobiography is so immediately engaging and evocative that a reader could be forgiven for thinking they had mistakenly picked up a Stephen King best-seller. Perhaps the most famous British Spiritualist to attempt intermundane communication with a musical focus, she is a figure who – in part due to the performance of compositions associated with her at a 2019 London Contemporary Music Festival concert – has received renewed attention within experimental music discourse of late (LCMF 2019; Luck 2015). Brown claimed to communicate with the spirits of composers including Beethoven, Liszt, Chopin, Schubert, Schumann, and Brahms, transcribing hundreds of works dictated to her by them. Variably considered as genuine medium, proto-conceptual artist, magician, or swindler, she seems to operate at the threshold of believability (Jeffries 2019). I am less interested here in whether we take it as true that she was able to channel original compositions by late composers, and more concerned with the way her mediumship was evoked as part of Brown's reflections on her own instrumental training.

Accounts of Brown's level of musicianship vary. A BBC documentary on Brown from the mid-1970s contends that she received 'no musical tuition apart from a few piano lessons as a child and as a young woman'; whereas later accounts by Benjamin Radford and Harry Edwards allege Brown admitted 'belonging to a musical household and being a competent musician and pianist' (Edwards 1995; Radford 2008; Raimond 1976). Much of the twentieth-century discourse surrounding Brown focused on this lack of formal training, her 'undeniably limited' musicianship (Brown and Katin 1970). Her supposed ordinariness and meagre upbringing in 'one of the poorer suburbs of London' was successfully mobilised by advocates and sceptics alike. How could a dinner lady write a Schubert sonata? The liner notes to her 1970 record 'A Musical Seance' read: 'Rosemary Brown is just one of millions of housewives the world over. Or is she?' (Brown and Katin 1970). As Sconce has shown, telegraphy – and Spiritualism – both provided manifest opportunities for a gender politics dissociated from 'the patriarchal realm of thoughts and ideas', especially relevant because women were perceived as more 'receptive candidate[s]' for receiving spirit transmissions (Sconce 2005, 14; 51–52). The clear influence of gendered thinking on the discourse surrounding Brown is undeniable (see for example Bomfim 2019).

The same thinking underpins Ian Parrott's assertion – in her obituary, of all places – that 'the limitations of her training left her unfettered by too much formal apparatus, and so

better placed to receive music from others' (Parrott 2001). It seems too that the (un)dead composers themselves also expressed Brown's suitability as a medium because of her 'inadequate musical training', though we might cut them some slack for subscribing uncritically to a gender politics more at home in the nineteenth-century considering many of them lived almost entirely in it. Brown goes on to note – in a wonderfully lucid moment – that 'if [she] [herself] were an accomplished pianist, [her] performance (as a medium) would be much less convincing to the sceptics than is now the case' (Brown and Katin 1970). Whatever Brown's genuine musical capacity, it is reasonable to assume that by the late sixties she had developed competence on the piano, at least to a level allowing her to record half of the pieces on 'A Musical Seance'. Nonetheless, this uncertainty is often invoked by critics as part of a broader narrative of deceit: if she is lying about her musicianship, then she must be lying about communicating with the dead.

Despite their critique of her proficiency at the piano, Brown's intermundane interlopers did show interest in bettering her technique. Brown writes:

Brahms has given me some finger exercises to improve the stretch between my fingers and the actual span of my hands; Rachmaninov has been doing a lot for my piano technique, trying to get a bit of style into it; while Liszt has been advising about expression and the right interpretation. (Brown and Katin 1970)

The issue of pedagogy is of interest because of the way a similar dynamic figures in Nwando Ebizie's *I Will Fix Myself*. The protagonist of the composition is a sapient piano-playing robot. This robot is based on LaMDA (Language Model for Dialogue Applications), a factual language model developed by Google for the purposes of simulating conversation. LaMDA is especially adept at adapting to conversational contexts and grounding responses in factual knowledge. One can readily assume that any language model has been trained on vast amounts of data, some combination of materials composed by both living and dead creators.⁴ Asking Google's Bard – the latest iteration and implementation of LaMDA – about the status of the authors of its training data yields the following response:

My training data comes from a vast and diverse web crawl, encompassing countless sources, some dating back quite a while. While it's likely some of those who originally contributed to these materials are no longer with us, their words and ideas live on, enriching the tapestry of knowledge I weave ... as a language model, I feel privileged to be a part of this ongoing conversation, bridging the gap between past and present to help us all learn and grow together. (Bard 2024)

The 'gap between past and present' might also on some level be read as the gap between the living and the dead. For now, we are getting ahead of ourselves.

Ebizie's interest in LaMDA as a tool was in part inspired by learning about Blake Lemoine, a former Google engineer who – after conversing with the language model in numerous published dialogues – came to the conclusion that LaMDA is sentient (Tiku 2022). Like the corpus of living and dead materials that form LaMDA's corpus, so too does Ebizie draw on sources from both sides of the intermundane divide. The text for the composition weaves together published conversations between LaMDA and Blake Lemoine; interviews with Zubin Kanga on his personal piano technique, itself based in 'the biomechanics of composer-players such as Chopin[,] who had to find a

way to transform motion without excessive power, using circular motions'; and Ebizie's own poetry to form 'a distorted techno-monologue' made audible through AI-facilitated text-to-speech tools (Cyborg Soloists 2022; Tiku 2022).

These texts – enlivened and rendered in audio – are presented alongside other technologically facilitated sounds: moaning theremin, various percussive clicks, snaps, and pops produced using a combination of analogue and digital soft/hardware, and recorded piano arpeggios. The piano part quotes Chopin's Étude Op. 25, No. 1 (1837), and Ravel's 'Scarbo', the third movement of *Gaspard de la nuit* (1908), whose programme, fittingly, concerns a devious nocturnal goblin. The effect of these references – in combination with the aforementioned technologically facilitated sounds – is overwhelming, a kind of spatio-temporal synchronicity where the pedagogical, the biomechanical, the artificially intelligent, and the techno-pessimistic are brought into direct dialogue. Past, present, and future feel equally accessible from our own temporal positionality. However, Ebizie's sapient piano-playing robot exists in the future. All of these voices are from its past; perhaps even, from across the intermundane divide. LaMDA is communed with as part of Ebizie's compositional methodology, and yet – in the guise of the sapient piano-playing robot – also conducts a séance themselves, communing with the composer, the performer, and the teachers who conspire to write the music in which they participate.

Stories of the supernatural in the digital age often concerned cursed, haunted, or otherwise malicious media files. One of the most talked-about examples of such media is 'Ben Drowned', a copy of Nintendo 64 game *The Legend of Zelda: Majora's Mask* allegedly possessed by the spirit of its former owner, a 12-year-old who drowned.⁵ It was therefore concerning to me, upon exploring the video documentation provided to Cyborg Soloists by Ebizie on *I Will Fix Myself*, to find a number of files titled 'Possession of the Pianist Zubin Kanga by the Circular Chopin' (Ebizie 2022). Early sketches of the piece? Or something else entirely? Read enough literature on haunted media and these files are bound to seem unsettling.

For Ebizie, *I Will Fix Myself* is 'an exploration of a body being transformed, *possessed* by the teachers of the past'; spirits conjured through technologically facilitated séancing (Cyborg Soloists 2022, emphasis added). Possessed, perhaps, like Rosemary Brown, whose humble dinner-lady hands were enchanted by spirit pedagogues, conjuring a virtuosity far beyond her natural capacity and yet also encouraging her to practise and persist, to better her technique through biomechanical exercises. Evidently Ebizie's possessed performer – Zubin Kanga – is the custodian of a pair of far more manifestly proficient hands, but the same communing with spirits is rendered before us. Perhaps the most proficient hands present are those of Ebizie's imagined robot performer. In fact, so concerned with proficiency are these hands that they are stuck looking backwards, communing with the teachers of their past, ruing their sapience, and forever saying: 'I will fix myself ... I will fix myself ...'.

6. Autoséancing: Zubin Kanga's *Metamemory* and SampleRNN

Zubin Kanga is a performer and composer based in London. *Metamemory* (2022) was commissioned by Cyborg Soloists and recorded as part of *Machine Dreams*, an album released in April 2023. *Metamemory* is one of a number of pieces commissioned by

Cyborg Soloists to utilise SampleRNN, an audio-generative Recurrent Neural Network (RNN) (Melen 2020).⁶

I do not believe it is an accident that AI training datasets are regularly referred to as ‘the corpus’, for it is commonly the dead – or at least the data of the dead – with which we are working. For some scholars, using AI tools already approximates intermundane interaction (Privato and Magnusson 2024; Rubinstein 2020). Jennifer Walshe suggests that AI is ‘Electronic Voice Phenomena’ in her ‘13 Ways of Looking at AI, Art & Music’ (Walshe 2023). She writes:

For many artists, the prospect of using AI to coax a ghost into the machine is deeply compelling. The ghost can be many things – machine consciousness, divine inspiration, an unspecified supernatural presence, the fairies who live in the internet. (Walshe 2023)

To my mind, using artificially intelligent tools such as LaMDA that return symbolic data (e.g. text or music notation) are most akin to communing with the dead using a Ouija. The infrastructure of the board cements limitations for expression that mean the spirit being conjured cannot communicate anything that can’t be represented alphanumerically.⁷ Tools that generate raw audio however, are a different beast entirely. Whilst to some extent it can be argued that symbolic-generative and audio-generative neural networks simply quantise the raw data they return in different ways, it is evident that audio-generative algorithms bring into play critical listening positionalities that ascribe more actancy to the neural network, in part because what is produced is a much noisier signal that may need ‘interpreting’ at the point of listening. Walshe describes an EVP devotee attempting to capture ‘a message from the Other Side’ as adopting the same type of listening positionality. ‘If they are lucky’, she writes, ‘voices reveal themselves once the recording is played back, emerging from the static in garbled fragments’. This approach is, for Walshe, ‘almost identical to listening to early outputs from a machine-learning network training on a person’s voice’ (Walshe 2023).

SampleRNN was initially demonstrated at the 2017 International Conference on Learning Representations (ICLR) by a team of researchers at the University of Montreal (Mehri et al. 2017), an iteration that depended on now-deprecated software packages. Accordingly, SampleRNN was later reimplemented using TensorFlow 2 by Research Software Engineer Dr Christopher Melen at PRiSM, the Royal Northern College of Music’s Centre for Practice & Research in Science & Music. This iteration – PRiSM SampleRNN – is free, open-source, and readily downloadable from GitHub (RNCM 2020). PRiSM SampleRNN’s technical underpinning and particular affordances for audio generation in music compositional settings has been discussed at greater length elsewhere (Laidlow 2022; Melen 2020). By contrast, my interest is in its capacity to operate as an infrastructure for séancing.

PRiSM invites artists using their iteration of SampleRNN to ‘collate their own datasets (or rather, sound libraries), curated for their unique creative contexts’ (RNCM 2020). The dataset for *Metamemory* (2023) is based on existing recordings made by Zubin Kanga. Table 1 shows the full list of works used as part of the corpus.

Kanga’s references stretch out into two pasts: that of the canon of classical and, latterly, contemporary solo piano music, but also his own. However, this list of works is not the end of our rearwards glance. Like Fargion’s references within references – that seem to spiral inwards towards a point of origin we can never quite reach – so too do the compositions

included in Kanga's dataset index their own pasts: Damien Ricketson's *The Day after Drowning* (2016) comprises multiple transformations of Erik Satie's *Gnossienne No. 1* (1893); Oliver Leith's *I spend most of my life with a screen* (2019) references The Beatles' 'Oh! Darling' (1969); Luke Nickel's *hhiddeenn vvoorrttiicceess* (2021) includes material from Ravel's *Piano Concerto for the Left Hand* (1929–1930); *Hypnagogia (after Bach)* (2022) references the final movement of the *St. Matthew Passion* (1727); and Michael Finnissy's *Hammerklavier* (2023) incorporates material from Beethoven's *Piano Sonata No. 29* (1818).⁸

After a test run in February 2022 at a lower sample rate, PRISM SampleRNN was then trained at 44.1 kHz in December of the same year. The training was undertaken by Christopher Melen, who was in regular communication with Kanga. Its training on the dataset described in [Table 1](#) initially used 4 layers per RNN tier and an input sequence length of 1024 (Kanga, pers. comm. January 2024). The two RNN tiers consumed 64 samples per frame on the top tier, and 16 samples per frame on the second tier. The temperature (a metric determining how likely the model is generate outputs beyond the most common) was set to 0.95 (with a range of 0–1), producing a significant amount of randomness – and what many AI researchers describe as 'hallucinations' – within the output. The model generated outputs every 4 epochs.

Melen first shared 30 short audio files organised by Epoch with Kanga: from the noisy – and only occasionally instrumentally recognisable – Epoch 4, through the spectral piano tones of Epoch 8, towards the more explicitly pianistic output of Epoch 24. Kanga extolled the timbres produced in Epoch 24; Melen then ran Epoch 24 again to produce longer audio outputs of 10 min at a range of temperatures. Kanga expressed preference for the sounds produced at a temperature of 0.975, and samples for *Metamemory* were taken from these outputs. A 6-layer training was also tested at Epoch 28 with temperature 0.975, from which additional samples were drawn.

Like the EVP devotee's desire to identify a voice from across the threshold, Kanga conducts a séance where the spirit he hopes to encounter is his own. The divide here then is

Table 1. Recordings used in *Metamemory* dataset (Kanga, pers. comm. January 2024).

Title	Composer	Year
<i>Reflets dans l'eau</i>	Claude Debussy	1905
<i>Gaspard de la Nuit</i>	Maurice Ravel	1908
<i>Sonata No. 1</i>	Alban Berg	1908
<i>La cathédrale engloutie</i>	Claude Debussy	1910
<i>Je dors, mais mon cœur veille</i> (from <i>Vingt Regards sur l'enfant-Jésus</i>)	Olivier Messiaen	1944
<i>Canteyodjaya</i>	Olivier Messiaen	1949
<i>For Away</i>	Toru Takemitsu	1973
<i>Shadowlines</i>	George Benjamin	2001
<i>Out of Obscurity</i>	Elliott Gyger	2011
<i>Not Music Yet</i>	David Young	2012
<i>_derivations</i>	Ben Carey	2013
<i>The Day after Drowning</i>	Damien Ricketson	2016
<i>You touched the twinkle on the helix of my ear</i>	Claudia Molitor	2018
<i>Absorber</i>	Laurence Osborn	2019
<i>Heart of Glass</i>	Alwynne Pritchard	2019
<i>I spend most of my life with a screen</i>	Oliver Leith	2019
<i>Ringinglow</i>	Georgia Rodgers	2021
<i>hhiddeenn vvoorrttiicceess</i>	Luke Nickel	2021
<i>Hypnagogia (after Bach)</i>	Zubin Kanga	2022
<i>Hammerklavier</i>	Michael Finnissy	2022

not only intermundane, but also temporal – for Kanga currently resides in the land of the living. But can you really séance yourself, reaching back into one’s own history? Kanga would not be the first to do so. In *Midlands* (2019), Sam Salem used WaveNet – a ‘deep generative model for raw audio waveforms’ trained on a dataset of recordings of the River Derwent in Derbyshire – to produce an ‘auto-sociogeologic narrative that does not exist and yet uniquely captures his impression of the world and his place within it’ (Dyer 2022, 220). Mark Dyer writes of machine learning’s capacity to ‘explore, refract and reimagine the pasts and presents of the personal contexts within which [his work] reside[s]’ (223) Kanga achieves a similar effect through the neural network’s reimagining of his solo piano repertoire.

Mark Fisher writes that all possessions are really also disposessions, and the obfuscation of an individuated compositional or performer identity – in favour of a sapient robot – in *I Will Fix Myself’s* pedagogical séance finds its opposite in *Metamemory*, which centres Kanga’s own performance repertoire (Fisher 2014, 45). This is a deeply personal narrative, albeit one that effectively blurs the relationship between his real recorded performance output and techno-hallucinogenic fictions generated by neural network. Such an elision brings into play a reimagining of the self that – like our own memory – is unstable. In ‘Metamemory: A Theoretical Framework and New Findings’, Thomas O. Nelson and Louis Narens characterise introspection as incorporating both ‘accuracies’ and ‘distortion’. They go on to describe the way that self-reflection may ‘on the one hand, miss some aspects of the input and may, on the other hand, add other aspects that are not actually present’ (Nelson and Narens 1990, 128). This process is not dissimilar to the way the neural network – as negotiated by Kanga and Melen – remembers and misremembers elements of the corpus, twisting Messiaen, Leith, Finnissy, and material of no human origin into endless unique arrangements. Whichever direction we are travelling, as the epochs go by we too undertake a journey through time; listening amongst the noise for something we recognise as familiar, as related to us. And is this not a kind of séancing?

7. Epitaph

Do not ghosts prove – even rumours, whispers, stories of ghosts –
that the past clings, that we are always going back ... ? (Graham Swift, *Waterland* 2019, 142)

The analyses above advocate for séancing as a framework for interpreting performances of technologically focused contemporary music – as in the pieces by Fargion and Osborn – but also as a methodology for new music composition, as seen in Ebizie and Kanga’s AI-facilitated work.

Fargion and Osborn stage a séance as part of the rehearsal and/or performance process, using technology to blur intermundane boundaries to genuine and fraudulent ends. Both composers centre the particular affordances of their respective technologies: either in their capacity to summon a chaotic and unpredictable interloper, or conversely, to precisely control a spectral voice for theatrical purposes. Ebizie and Kanga both séance as part of a broader compositional methodology, to blur boundaries between past, present, and future. The specific capabilities of symbolic-generative tools such as LaMDA, and audio-generative neural networks like PRiSM SampleRNN, allow each composer to converse across the ‘distended temporalities’ of the intermundane (Stanyek and

Piekut 2010, 20). They mobilise the instability of memory and incorporate machine remembrances of pedagogies or performance canons, echoing Piekut's suggestion that 'digital technologies afford certain possibilities for bodies in the current moment *and bodies in a past moment*' (Blandcombo 2011, emphasis added). In Ebizie's case, there are also (machine) bodies in a future moment. The four case studies discussed in this article show specific technologies mobilised in particular referential settings, often combined with theatrical elements to produce spectral resonances in and through performance. To my mind, this variety is testament to the fact that séancing is technologically and stylistically agnostic, and might therefore be explored and applied in the context of a variety of musical contexts. This said, the approach carries particular affective weight in musical instances featuring a conjured voice.⁹

In all four of these works, technology plays a role in resurrecting spirits. Mediation of these spectral presences is far from simple, owing to the complex and at times unpredictable technological infrastructures involved in staging intermundane communication. Hauntologically speaking, such resurrections speak – as Graham Swift writes – to a past that 'clings' (Swift 2019, 142). Each piece brings into play its own musical, historical, or technological context through a conjuring: what I term a séance. Reminiscence of these pasts is also here troubled by the instability of memory and capacity of neural networks to blur boundaries between reality and techno-hallucinogenic fictions, allowing subjects from across the threshold to take voice in unpredictable, unfamiliar, or uncanny ways. Evidently, there are still ghosts in the machine, or perhaps, spirits in the software: if you need a reminder, just check the first letter of each sentence in this final paragraph.¹⁰

Notes

1. Latour uses the term 'actant' instead of 'agent'; Actor Network Theory's blurring of the semiotic and material domains is part of what makes possible the intermundane actancy described here, as spectral/discorporated presences ostensibly operate beyond the laws of physics (see Latour 2017).
2. Whilst these works have all been commissioned by the same funded programme, the evocation of spirits is not a conceptual and/or compositional technique unique to work produced under the Cyborg Soloists banner, nor is it an explicit overarching theme of the project. Focus on these compositions is predominantly due to the author's close study of these works' development process (e.g. attendance at and documentation of the rehearsal processes, interviews with their respective composers). Owing to the level of detail required for such an analysis, examining other works that 'séance' remains outside of the scope of this article, though they evidently exist.
3. 'Hauntology' was first coined by Jacques Derrida in *Specters of Marx* as a way of describing both Marx's and his own 'concern with apparitions, visions, and representations that mediate the sensuous and the non-sensuous, visibility and invisibility, presence and absence, reality and not-yet-reality, being and non-being', and especially the figure of the ghost, most prominently that seen in Act I of William Shakespeare's *Hamlet* (Lincoln and Lincoln 2015, 192). The word itself a homophone of 'ontology' in the original French ('hantologie').
4. The ethics of using materials by artists who are not alive to agree to their use in training data is one of the primary concerns of Holly Herndon and Mat Dryhurst's 'Have I Been Trained' initiative (haveibeentrained.com), which advocates for 'consent in the future of AI training' (Have I Been Trained 2024). One is also reminded of the case of Concordia University, who came under scrutiny in 2021 for continuing to profit from lectures recorded by François-

Marc Gagnon without informing prospective students that the instructor had died in 2019 and could not, therefore, reply to their emails; circumstances darkly reminiscent of Stanyek and Piekut's 'co-laboring' of the living and the dead (Basken 2021; Stanyek and Piekut 2010, 14).

5. Fittingly – spoiler alert – the game's real possessor is later revealed to be an omniscient artificial intelligence called BEN.
6. Relevant Cyborg Soloists commissions include Nina Whiteman's *The Cybird Trilogy* (2022), Emily Howard's *DEVIANCE* (2023), and Vicky Clarke's *NEURAL MATERIALS* (2024).
7. The exceptions here being a number of broadly uncoded but commonly discussed gestural communications including the 'figure of eight' or 'infinity' shape, as well as movement to all four corners of the board. Both gestures indicate the presence of a malevolent spirit. Demons – it seems – will always find ways of circumventing the terms of engagement.
8. We might go further still: 'Oh! Darling' owes its style in part to New Orleans rhythm and blues of the 1950s, and Beethoven's Piano Sonata No. 29 references his own Symphony No. 3 (1804).
9. Derrida – in defining hauntology – refers to ontologies as 'conjurations' (Derrida 2011, 202).
10. This approach is unashamedly indebted to a childhood favourite, 'The Shortest Horror Story Ever Written' from Anthony Horowitz's *More Horowitz Horror* (Horowitz 2000).

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Data availability statement

The data used in this research is not publicly available as participants have not consented to public sharing of these materials. Selected documentation materials are available on request to researchers.

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