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To cite this article: Ross Brannigan, James Nicholson & Arezou Zalipour (22 Dec 2025): A practice-led proposal for online live-streamed intermedial theatre, Media Practice and Education, DOI: [10.1080/25741136.2025.2605415](https://doi.org/10.1080/25741136.2025.2605415)

To link to this article: <https://doi.org/10.1080/25741136.2025.2605415>



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Published online: 22 Dec 2025.



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A practice-led proposal for online live-streamed intermedial theatre

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ABSTRACT

This article discusses a possible solution for creating a theatre production when participants – including the crew, cast, and audience – are physically separated. The proposed form of *online live-streamed intermedial theatre* offers a sustainable approach for conditions of physical separation (such as those imposed during the COVID-19 pandemic) as well as other remote performance scenarios. This article focuses on the conceptualisation phase of an intermedial theatre model specifically designed for online live-streamed performance. This article examines three foundations of the proposed model – acting, screen interface and production setup, and cinematography – bringing together insights developed through multiple iterations of the practice-led project *Foolish Prating Knave* and its associated experimental trials. Our proposal discusses production strategies that combine distinct elements of stage and screen. It is neither an adaptation for television nor a filmed stage play; rather, the proposed model requires an agile production process to meet the challenges of remote collaboration and production. Key to our discussion is how the liveness of theatre performance can be preserved in an online streamed environment.

ARTICLE HISTORY

Received 30 March 2025
Accepted 13 December 2025

KEYWORDS

Theatre; acting; intermedial; creative practice research; liveness; screen production

Introduction

The global pandemic and its attendant restrictions on gathering posed a significant challenge to theatres and traditional live performance. In 2020, COVID-19 lockdowns made in-person theatre productions impossible worldwide, spurring practitioners to re-evaluate what aspects of liveness and co-presence were essential to their art form. Many turned to digital platforms to reimagine theatre: for instance, Auckland Theatre Company's online adaptation of Chekhov's *The Seagull* (Kent and Bishop 2020) directed by Eleanor Bishop used the Zoom video-conferencing tool in innovative ways to approximate theatrical intimacy. Delivered in 30-minute instalments over four weeks in May 2020 during

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New Zealand's lockdown, this production was rehearsed, performed, and broadcast entirely online. The world of the play shifted from a Russian estate to the contemporary realm of Zoom calls and social media, and the actors experimented with a mix of theatrical and cinematic techniques within the Zoom environment. Zoom users typically face their webcam and rarely move away. This makes for a static image. Auckland Theatre Company's maximised the level of intimacy between audience and performer by exploring the impact a video close up can bring, Joe (2020) notes how.

[...] empty spaces, cameras pointed towards spaces without bodies becomes disarming. Gazes left unreturned, gazes averted, actors staring down the barrel of the camera. In a simple moment, Arlo Green's Konstantin moves out of frame, but his body remains visible through the reflection of a background mirror. (para. 9)

Such efforts demonstrated the creative potential of online performances. During this period, practitioners and audiences embraced online performance out of necessity, with platforms like Zoom, Facebook Live, and YouTube Live becoming makeshift venues. Karam and Naguib (2022) analyse two Zoom plays, *Pandemic Therapy* and *Corona Chicken (Part Two)*, and describe how playwrights, dramaturgs, and actors worked together to present a live theatrical experience that they believe was capable of engaging audiences and promoting social interaction. They identify constraints such as lag, interruptions, lack of crossfading, sound limitations, and the requirement for actors to operate technological elements themselves. On the positive side, Zoom's familiarity to users, interoperability with OBS and QLab, and secure encryption supported its adoption.

The turn to digital platforms during the pandemic echoes earlier explorations of mediated presence and remote performance. The history of online theatre predates the availability of online video. Bazin (1967) observed that theatrical presence enables a reciprocal relationship between actor and audience, whereas broadcast renders this reciprocity imperfect because actors cannot be influenced by viewers' responses. Lombard and Ditton (1997) defined presence as the perceptual illusion of non-mediation. Advances in online theatre emerged partly from earlier performance art experiments with video. Paik, Galloway, and Rabinowicz used video globally as a communicative medium for artistic exchange throughout the 1960s and 1970s. Paik, regarded as the founder of video art, envisioned an open medium connected through the 'electronic superhighway', believed to democratise art and communication (Hanhardt, n.d.). In 1977, Galloway and Rabinowicz established Mobile Image, an art collective using messaging technologies to challenge conventions of politics, communication, representation, identity, and power (Glahn and Levine 2024). Their Electronic Cafe project brought artists and communities into shared virtual spaces through early video-phone technology, enabling interactive collaboration and hosting performances, discussions, and tele-events.

The term 'telepresence', first used by Minsky, refers to the phenomenon in which a person can experience a sense of physical presence at a remote location when a communication system provides perceptual feedback responsive to the user's inputs (Jsselsteijn 2001). Building on this notion of mediated presence, recent initiatives have moved beyond basic videoconferencing. The Telepresence Stage project (Sermon et al. 2021) developed a platform merging remote performers into shared virtual stage sets. In the field of 'remote musical education' and 'real time distributed musical performance', low-latency technologies like LoLa (Drioli, Allocchio, and Buso 2013, 240) and MVTP (Ubik

2024) enable musicians in different locations to play together in real time with imperceptible delay, illustrating the broader ecosystem of real-time live performance that theatre can draw upon. These innovations build on a lineage of ‘telematic performances’ and experiments with ‘live performances distributed through the internet’ (Dahlqvist 2022; Masura 2020)

As theatre-making increasingly spans digital and geographical distance, practitioners confront new challenges for online, remote and distributed theatre production and performance that complicate artistic cohesion and production workflows. In response, this article presents an approach – online live-streamed intermedial theatre – for productions in which all participants are physically separated. Specifically, we identify and discuss strategies in three key areas – production design (the screen interface and setup), cinematography, and acting – that combine elements of stage and screen in a single online live-streamed performance model. We define *online live-streamed intermedial theatre* as a form of theatre production that blends digital media elements with live theatrical performance, transmitted in real time over the internet to audiences on their computer screens. This form creates a viewing experience by integrating multiple media within a live event, and it requires an agile production process capable of adapting to the shifting constraints of remote collaboration. A central question guiding our creative practice research inquiry is how the essential liveness of theatre can be preserved and experienced when performers, crew, and audience are all remote.

Since 2020, there has been a proliferation of online theatre and an emerging body of analytical studies examining Zoom-based and digitally mediated performance across the world. For example, Masura’s (2020) *Digital Theatre* examines how contemporary theatre incorporates digital technologies into live performance. In *Live Digital Theatre*, Dundjerović (2023) focuses more specifically on the pedagogical and interdisciplinary practices that emerged during pandemic-era live digital performance. Building on this scholarship, this practice-led research offers new practical insights into how intermediality can be integrated with the creative possibilities of screen production to enhance notions of liveness in online performance. By experimenting with live-streamed, intermedial production methods, this project contributes a conceptual and applied framework for developing future online performances that retain the immediacy and relational dynamics of live intermedial theatre while embracing the affordances of digital media.

Methodology

This study adopts a practice-led or creative practice research methodology (Nelson 2013; Batty and Kerrigan 2018; Batty and Zalipour 2024), undertaken through sustained engagement with the intermedial theatre project *Foolish Prating Knave* (hereafter *FPK*). *FPK* is a one-person intermedial theatre work that initially investigated how live performance and cinematography could intersect to create meaning within the space of intermediality.

The first iteration of *FPK* formed the core of Ross Brannigan’s practice-led PhD research (2019), shaped by a dual practice in professional acting and filmmaking. The project’s intermedial possibilities were extended through collaboration with James Nicholson as cinematographer, collaborating on filmed materials. Later, Arezou Zalipour joined the creative team, contributing expertise in screen production and theory and creative practice research, and articulating accumulated insights generated and synthesised from

these iterations by the team into a conceptual model for online performance. The study is grounded in the combined expertise of this team and their shared pedagogical experiences in acting, cinematography, and practical screen production at Auckland University of Technology.

Our analysis for the proposed production model concentrates particularly on the 2022 staging of *FPK* (Brannigan and Nicholson 2022) at the Australasian Association for Theatre, Drama and Performance Studies (ADSA) conference 'Travelling Together' in Auckland. In this version which is based on Shakespeare's *Hamlet*, Polonius – unaware of his own death – occupies a digital limbo and communicates with a disembodied AI that gradually appropriates his voice. Ophelia and Gertrude appear only as pre-recorded video inserts. The dramaturgical and technical demands of staging this hybrid environment prompted us to explore how an agile production process for online live-streamed intermedial theatre might be formulated.

Across several iterations of *FPK*, a series of prototype experiments examining specific elements of intermedial performance were conducted, including stage-screen interaction, performer-camera relationships, and production workflows. These experiments did not build towards a single, finalised production; rather, they provided multiple sites for testing possibilities and identifying challenges in adapting intermedial theatre to online conditions, as we discuss in this article.

Crucially, the in-depth critical reflection took place, once the full body of experimental work had been completed. The reflection involved evaluating the practical outcomes of experiment, analysing thematic and technical patterns across iterations, and contextualising these results within relevant scholarship in creative practice, cinematography, acting, and intermedial performance.

By reimagining *FPK* as an online live-streamed performance, we identify production choices and strategies that future practitioners should consider, focusing primarily on acting and key aspects of cinematography. Our practice is rooted in a form of theatre that honours psychological realism and Stanislavskian acting traditions while incorporating a multiplicity of mediated forms; accordingly, this discussion is not a comprehensive survey of all possible digital performance paradigms, but is specific to the form of intermedial theatre we pursue.

Traditional intermedial theatre is performed on a physical stage and incorporates mediated elements into the live performance. This understanding emphasises 'the performativity of media in how they are played with and played off against each other in acts of worldmaking, staging, self-referencing, and self-reflecting' (Kattenbelt and Mancewicz 2023, 380). When performing in a theatre space is not possible and screen-based production must substitute for stage embodiment, we must ask: what combination or adaptation of existing forms can satisfy the most important aspects of intermedial live theatre? Furthermore, which core elements of liveness can be preserved and performed when everyone involved – actors, crew, and audience – is remote and isolated? This article addresses these questions by presenting our strategies and process in the concept development phase.

Liveness

The task of shifting a work of intermedial theatre to an online live-streamed format forces practitioners (and researchers) to consider issues of liveness and the interplay of media

elements. The term ‘liveness’ in performance implies both the human sense of being alive and the state of being present in the current moment. It has been the subject of much discourse, including Phelan’s (1993) problematic assertion that liveness in the context of performance is, by definition, not recorded. In an interview in 2003 she clarified that a video of a performance is something ontologically separate to the performance itself. In so doing she makes the interesting point that video pursues a different aesthetic to live performance. Phelan (2003) sees live performance as having the valuable defining characteristic of the potential for both audience and performer to be transformed during the unfolding of their mutual experience. She does not see this as possible for remotely streamed events or prerecorded performances (295). This argument can be taken into consideration, with the advances in technology that allow feedback from audience interaction such as floating emoji icons in Zoom, chat and commenting.

In the context of this study, Georgi’s (2014) definition is useful. She identifies five aspects that are often associated with live performances and are frequently deemed to be defining characteristics of liveness:

- the co-presence of performers and audiences,
- the ephemerality of the live event,
- the unpredictability or risk of imperfection,
- the possibility of interaction
- and, finally, a specific quality of the representation of reality.

In a previous practice-led iteration of *FPK*, the experiment was with creating shared moments between a living, breathing actor (Brannigan) on stage and mediated characters (in projections of pre-recorded videos) seen and heard in real time by both actor and audience. In *FPK*, all characters were thus present in the *temporal* sense (the performance time was shared) and in the *spatial* sense (the stage environment integrated live and recorded elements). As Kattenbelt (2008) suggests, theatre can be viewed as a container capable of staging a variety of media. In *FPK*, even though the video characters were pre-filmed, there remained an element of risk and spontaneity in the live interaction: Brannigan, the solo live actor, could improvise in response to the projections and adjust to the timing of video cues, while the show’s media operator could also improvise timing and audio elements in organic response to the actor’s performance. This human responsiveness gave a sense of live connection even to the mediated, temporally dislocated video characters on stage and live.

Building on this premise, we therefore propose an approach to online live-streamed intermedial theatre that incorporates three of the five essential aspects of liveness – co-presence, ephemerality, and unpredictability. In this framework, we argue that although performers, crew, and audience may not share a physical space, they nonetheless inhabit a shared digital environment for the duration of the performance. In the transition to online format, *online live-streamed intermedial theatre* as we propose is a performance that is available only once, at a scheduled time and online address, by virtue of being live-streamed. In this respect, streaming live parallels the ephemerality of live theatre in a venue, distinguishing it from video on demand. By *streaming* or *streamed*, we mean video that is only available in real time, as cameras transmit the performance live through the Internet. If a performance were recorded and later posted as a

video, it would no longer qualify as ‘online live-streamed’ in our terms – it would lack the unedited risk and immediacy that come with true liveness. The prior iteration of stage work with *FPK* (2022) combined live on-stage acting with pre-recorded videos for a co-present theatre audience, and the result was that this combination successfully endowed all components with a sense of liveness. This encourages us to believe that similar methods can inform an effective online live-streamed intermedial theatre.

Auslander (2022) has proposed that a sense of community or assembly is an additional defining aspect of liveness. Bissell (2023) likewise reflects on the importance of assembly during a time of isolation. We consider that an online audience, though each member sits in their own home, can still engage in a communal experience by participating in the same live event. Theatre companies have already experimented with techniques to foster audience interaction in online settings, such as using social virtual reality platforms or live chat to engage viewers (Baía Reis and Ashmore 2022). Techniques include having a concurrent chat session where people announce their arrival and where they come from. These strategies range from maintaining a subtle shared experience to enabling extensive playful engagement by the audience. Our own practice, in its traditional theatre form, has leaned towards the former – a restrained sense of shared experience – rather than highly interactive or game-like audience involvement; we favour an online discussion in a ‘lobby’ after the play.

However, the domestic context of online spectatorship differs markedly from the focused environment of a theatre auditorium. Viewers at home must contend with a host of potential distractions – family members, phone notifications, ambient household noise, and the temptation to multitask – along with variability in their technical setup. These factors can undermine immersion and presence. Any design framework for online theatre should take into account the realities of domestic spectatorship, seeking ways to mitigate distraction and draw the audience into a collective imaginative space despite their physical separation.

Notably, there has long been an appetite for online or mediatised theatre even before the COVID era. For example, as early as 2017, a one-time live-stream of Théâtre de Complicité’s *The Encounter* attracted over 13,000 viewers in real time (with about 4,000 concurrently at peak) and, when a recording of that streamed event was made available for one week, it was viewed over 67,000 times (The Space 2017). This suggests that large audiences are willing to engage with theatrical performances online, given compelling content and circumstances.

To clarify how a stage-based intermedial production would need to adapt for online live streaming, we created a comparative overview (see Table 1 below). This chart outlines practical differences between our previous intermedial *FPK* production on a physical stage and a proposed online version with multiple actors performing from separate locations. In the sections that follow, we discuss our proposed strategies in depth, focusing specifically on two domains: acting and cinematography while also addressing production design considerations as they arise.

Actor’s perspective: acting and production design

The absence of a shared physical space fundamentally alters the normal production processes of live theatre and screen production alike, when artists must collaborate remotely,

Table 1. Key differences between an intermedial theatre production on stage and as an online live-streamed intermedial theatre.

Intermedial theatre	Proposed online live-streamed intermedial theatre
Physical stage	Computer screen
Three projection screens on the set	Pre-recorded videos appear in discrete windows on the computer screen
Projected pre-recorded videos	Streamed pre-recorded videos
Projected animated photographs	Streamed animated photographs
Pre-recorded files of voice of the AI character through theatre speakers	Streamed Pre-recorded files of voice of the AI character through computer speakers
Prerecorded videos that show text on the screen	Streamed prerecorded videos that show text on the screen
One live camera on the stage feeding projector and screen	Live cameras on each actor streaming to the viewer's screen
Behind the scenes crew includes media operator live-cueing media and lights	Behind the scenes crew includes media operator live-cueing media and switching camera, audio and video feeds
Audiences sitting in the theatre facing the stage	Audiences watching via an internet connection
Actor	Actors
The (physically-live and embodied) actor's performance is on the theatre stage with audience co-present. Actor able to look at media projections and faces in the physical space.	The actors' performance is through live cameras on each actor. The camera feeds are streamed to the show's operator and thence to online viewers. Actors unable to look at media projections and faces in the physical space. The connections must be artificially created through cinematography and the location of cameras and monitors in each actor's recording environment.
All the people involved (individual actors, crew and audience members) are in the same physical location of the theatre	All the people involved (individual actors, crew and audience members) may be in separate physical locations
Rehearsal, direction and preparation of media elements completed by creative behind the scenes team in same physical spaces	Rehearsal, direction and preparation of media elements may be completed by creative behind the scenes team in isolated physical spaces, utilising online meetings and online shared workspaces

as access to equipment and face-to-face interaction is limited, reducing the ease of spontaneous creative exchange. We propose a way of creating theatre that enables remote collaboration with a minimum of crew and tasking actors to learn more about production aspects. As Weston observes, 'if you are able to look [a fellow actor] in the eye and speak to them from your heart, you may forge an unshakable connection' (2021, 90) – but in remote or socially distanced conditions, seeing one another's full expression becomes difficult. Branch et al. (2021), in the Telepresence Stage project, found that performing in isolation with others tele-presently helped them feel connected to remote partners with a 'deep feeling of immersion and co-presence experienced by participants' (12) and their results showed that 'the platform facilitated entering into flow states and had considerable impact on feelings of excitement, joy, fun and playfulness' (17). These results are encouraging for improvisation while online.

For the 2022 *FPK* performance, Brannigan ultimately performed as a solo actor (with other characters on video screen as part of the stage). His experiences reinforced that direct physical contact and real-time visual connection are highly desirable for actors. Actors deal with the space as scripted in the play as 'given circumstances' whether these are imaginary or physical. Acting technique is often described as 'living truthfully under imaginary circumstances' (Meisner and Longwell 1987, 28), whether those circumstances are realistic or fantastical. Part of the actor's work is to engage in the 'complex interactions between performance and non-performance cinematic elements' (Baron and Carnicke 2008, 11). Performing a play's world through a Zoom window or similar interface is an unusual scenario, but actors are capable of treating even a virtual space

as the stage in their imagination. Stanislavsky suggested that on stage the actor works primarily in the space of human psychology (Senelick 2021); intriguingly, the constraints of the pandemic opened up an opportunity for online live-streamed intermedial theatre to straddle both natural locations and psychological spaces. Today's audiences are very accustomed to consuming narratives that mix live and recorded elements – consider how social media apps like TikTok enable users to insert themselves into prerecorded videos in playful ways, creating a hybrid of live reaction and recorded content. Watching film and television, audiences are used to a verisimilitude that is easily achievable cinematically. Theatre audiences are more used to accepting that the stage is a representation that requires them to engage their own imagination. Thinking of a screen space as a theatrical space requires a mental adjustment for the audience. Laptops, mobile phones and even the use of internet-connected televisions all have distinct requirements. Mobile phone screens are usually held with a 9×16 aspect ratio (portrait), computer and television screens are mostly 16×9 (landscape mode). The former would usually be a solo viewing experience whereas the latter could involve friends and family. Away from a theatre auditorium, distractions are more likely to intrude but the live streaming will provide additional focus.

Aronson (2013) notes a tension between live and mediatised scenography, but also suggests that our perception of this tension depends on prevailing aesthetics. We would argue that contemporary audiences, raised in the era of internet video, are quite capable of engaging with a performance that merges live and pre-recorded streams, provided the conventions are clear and purposeful. Indeed, Aronson describes the use of live video on stage as one of the most fascinating ways media has been incorporated into theatre (2013, 93), and numerous directors have integrated live-feed video into stage productions. For instance, Katie Mitchell's *... some trace of her* (2008), Ivo Van Hove's *Mourning Becomes Electra* (2013) and *A Little Life* (2013), Lloyd's *Sunset Boulevard* (2024), and Brannigan's own earlier work *Holding the digital mirror up to nature* (2009).

The development of *FPK* as a stage piece in a 2019 iteration (Brannigan 2019) involved iterative practice-led experiments that revealed several elements which could lend themselves to alternate delivery forms. As a stage production, 2019 *FPK* was richly intermedial: it featured extensive pre-recorded video content projected onto three semi-transparent gauze screens. Two characters (Ophelia and Gertrude) existed only in the pre-filmed projections, while the only live, flesh-and-blood character on stage was Polonius (played by Brannigan). [Figure 1](#) shows the three-screen setup, and [Figure 2](#) illustrates one of the pre-



Figure 1. Production image, illustrating the underwater shoot.

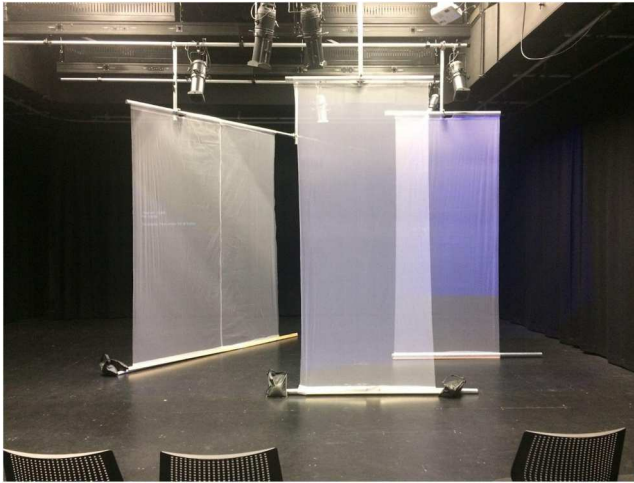


Figure 2. Three gauze screens. Experiments with positioning.

filmed sequences (Ophelia underwater, played by Holly Hudson, interacting with the camera as if looking into Gertrude's eyes off-screen). Here Hudson is interacting with the lens of cinematographer Nicholson's iPhone. **Figure 3** shows Gertrude (Kerynn Walsh) appearing on two downstage screens in the performance, reacting as though sensing a presence behind her, while the projection of Ophelia is visible on the upstage screen. In these moments, the live actor (Polonius) and the filmed characters were combined on stage such that they appeared to share a narrative space, even though one was physically present.

The only human character on stage was played by Brannigan but another major character was an artificial intelligence, whose presence was manifested through scripted (Brannigan and Henderson), pre-recorded audio and video clips. Each of these was

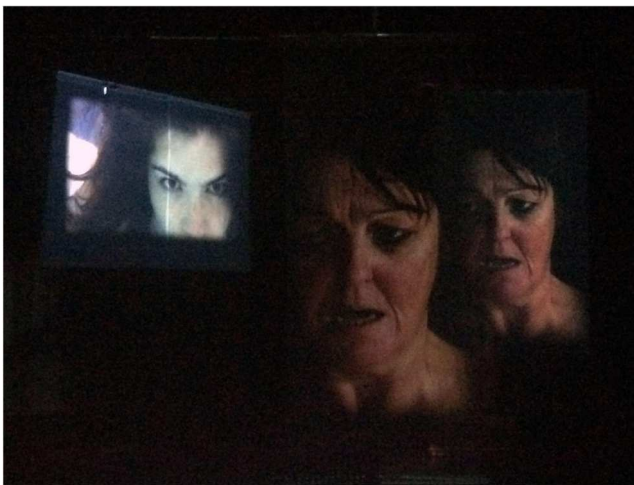


Figure 3. Performance image, illustrating how three projected images combine on stage.

cued by the operator with organic timing. There was no real AI actor. At first the AI character's interaction was represented as text projected in space (Figure 4).

Producing a professional-quality online live-streamed intermedial theatre piece would require equipping actors with new skills in media production. In an era where 'self-taping' auditions have become common, many actors have rudimentary filming skills, but a full production demands more. One could imagine delivering equipment packages to actors' homes and conducting remote training and direction (both theatrical and cinematic). An illustrative example of self-shooting under lockdown conditions was the British television mini-series *Isolation Stories* (ITV 2020), in which actors filmed themselves at home under remote direction. Actor Eddie Marsan, who participated in that project, advised fellow actors to 'think of yourself as a filmmaker, don't just think of yourself as an actor' (BFI at Home 2020). This ethos is highly relevant to online live-streamed intermedial theatre – performers must be ready to assume some technical roles.

Our prior practice-led experiment taught us about the limits of multitasking for an actor, which reinforces the importance of providing actors with appropriate technical support when working in online intermedial formats. In an earlier iteration of FPK performed at the 2016 ADSA conference (University of Southern Queensland, Toowoomba), the experiment was with having the actor operate the entire show (controlling tech cues) from on stage. The learning from that iteration was this split focus detracted from the performance's spontaneity and quality, and further underscored the necessity of allocating dedicated off-camera technical support to preserve the actor's creative focus and the work's overall artistic integrity.

A typical Zoom-like setup or video-conference call layout is not optimised for logical eye-lines for the actor or between actors. In a Zoom conference call meeting, it is almost impossible to discern whom a speaker is truly 'looking' at, since participants typically gaze at their screen rather than directly into the camera except when making deliberate eye contact with the lens. As actor Darren Boyd noted regarding filming *Isolation Stories*: 'From an acting point of view [...] I missed physically looking someone in the eyes' (Reuters 2020). We propose that each actor's home studio be equipped with



Figure 4. Brannigan, as Polonius, responds to the AI's text question.



Figure 5. Brannigan. (dir., 2014). Frame grab from *Remediation of 'O, what a rogue': Fusing stage and screen in search of empathy as a short film*, (1:36), Auckland, Aotearoa New Zealand. The actor thinks through the lines of the soliloquy as an internal monologue.

multiple monitors placed such that other characters' images appear in positions corresponding to the story's spatial logic. In a 2014 *FPK* experiment performing via Zoom, we reflected on the use of cinematic framing, angles, and eye-lines to convey different subjective experiences: interior monologue, observational point-of-view, and direct address (breaking the fourth wall) were each represented by specific camera techniques. We noticed that if an actor's own image was prominently displayed on their screen (as it typically is in Zoom's self-view), it could become a distraction and heighten self-consciousness. Therefore, a customised interface for the actor (different from what the audience sees) is preferable – ideally, the actor would not see themselves at all during the performance, only their fellow performers' video feeds in the designated positions. **Figures 5–7** show frames from this 2014 experiment, demonstrating how the actor's eyeline and framing can shift the audience's perspective from inside the character's mind (**Figure 5**) to a normal external observer viewpoint (**Figure 6**) to a direct address to the audience (**Figure 7**). These techniques from a screen production perspective can inform an online theatre performance, but they must be carefully adapted to a live context.



Figure 6. Brannigan. (dir., 2014). Frame grab from *Remediation of 'O, what a rogue': Fusing stage and screen in search of empathy as a short film*, (2:23), Auckland Aotearoa New Zealand. This is the most common cinematic address, where the audience is positioned as an external observer, witnessing the action.



Figure 7. Brannigan. (dir., 2014). Frame grab from Remediation of ‘O, what a rogue’: Fusing stage and screen in search of empathy as a short film, (3:13), Auckland, Aotearoa New Zealand. Breaking the fourth wall, the actor talks directly to the film’s audience.

In an online live-streamed performance, much of the freedom an actor has on stage – to move through a space, to use large physical gestures, and to interact with co-present performers or scenery – is constrained by the camera frame and the home studio environment. A new acting technique must develop in response to these constraints. The art of acting in closeup is familiar to actors experienced in screen acting techniques. The technique of directing the audience’s focus through subtle eyeline shifts is a cross between stage technique and film technique. Our proposed form is something of a hybrid: it demands the actor adapt certain screen-acting techniques – precision, stillness, subtle facial expression – for an online live context, yet it also grants the actor more real-time control than they would have in a film. In traditional film/TV production, actors relinquish control over many aspects of their performance’s presentation – the framing, timing of cuts, selection of takes, etc., are handled by directors, cinematographers, and editors. In theatre, by contrast, actors control timing and delivery moment-to-moment in front of the audience, and the performance unfolds uniquely each time. Online live-streamed intermedial theatre lies between these: an actor performing from home will take direction on where to look (to match the technical setup) and how to frame themselves, but still performs live with no ‘second takes’ and maintains control over pacing and nuance in real time. Alone in a remote location, the actor may have to follow the technical direction of the cinematographer and director in terms of where to look but will still have much more agency than a screen actor since the timing of responses, the nuances of inflections and facial expressions, and the levels of control of the flow of the piece are similar to a stage actor’s. Unlike working on stage, the actor would be constrained in movement and often seen in a close up framing. This will mean an increase in interiority and the level of the subtlety involved. The performance requires what we might call an *energised stillness* – movements may be limited (often confined to a close-up frame), so intensity must come through subtle shifts in voice and expression. In a close-up, a movement of just a few millimetres can read significantly on camera. Actors who frequently work on screen develop an awareness of how to play to the camera, adjusting their performance to the framing and lens. They learn how to ‘work’ the camera. This includes understanding how lighting affects their appearance and how a slight change in eye-line can communicate a different thought. Such camera-conscious skills are invaluable in this online format.

At the core of an actor's performance is the reciprocity between cast members. Acting is just as much about listening and reacting as it is about initiating an action. On stage with co-present actors, this exchange is organic: actors share the space, see and hear each other directly, and adjust their performance in response to each other's cues and body language. They can modulate focus by shifting positions, volume, or physical contact. For screen work this core can be seen as a performance that is controlled and augmented by the director and editor through the use of cinematography. The final performance seen in cinemas or smaller screens is the result of hundreds of individual filmed components known as shots. Each of these shots have multiple takes for the director and editor to select from. It is not the choice of the actor. Pre-recorded elements of intermedial theatre utilise this precision of constructed images but the live aspects do not have the luxury of multiple takes. In a live-stream scenario, we strive to reclaim as much of the immediacy of that interaction as possible, despite the actors being physically apart. Blocking, the art of moving actors around the stage, will also need to be constrained due to the use of tight framing. Filming techniques such as the long take or the walk and talk beloved of Sorkin's writing on *The West Wing*, requires a high level of choreography by the director and cinematographer. Using this technique would require a highly skilled crew at each location and is therefore beyond the scope of our proposal. This also brings into question how much editing should take place. Two characters in conversation do not need to be seen simultaneously, Zoom-like; instead, as it happens with cutting in the edit room of screen productions typically, the attention is on one character at a time.

During the 2018 iteration of *FPK*, Brannigan experimented with large, semi-transparent gauze screens. Pre-recorded video of one of the actors was projected on one of the screens. The actor performing live, in the physical space, could position himself to take advantage of screen conventions. As long as the eyeline was maintained with the pre-recorded projection and response was timed organically, the projected character held a realistic space in the live actor's consciousness. This drew on screen techniques of spatial organisation: the audience can be led to understand that two people are in the same space and are looking at each other when two shots, composed with just a single actor in each, are juxtaposed in the edit room. One actor is looking from left to right and the other, positioned on the opposite side of the screen, looking right to left. The two actors need not be on the film set on the same day for this to work. Screen audiences have come to accept this convention as long as the angle of the characters' gaze (the eyeline) and the position of their image within the frame suggests the connection (Lancaster 2019, 84). The 2018 iteration of *FPK* demonstrated that intermedial theatre can similarly construct both/and spaces – where a live actor and a recorded actor seem to occupy a reality together – by carefully combining real stage space with screen conventions (Brannigan 2019).

Reimagining *FPK* for an online live-streamed intermedial theatre, it is necessary to adapt the physical 3D space to a flat two-dimensional screen using perspective and parallax to give the impression of 3D space. One critical issue is maintaining convincing eye-lines between characters in separate locations. This challenge is precisely why a standard Zoom interface is not sufficient for this form of online theatre. In screen productions, looking straight into the lens equates with breaking the fourth wall and becomes a direct address to the audience, which is the equivalent of a stage soliloquy. The level of concentration this requires can be very tiring for viewers as a result of the 'complexity of the

interpersonal interactions due to the specific spatial dynamics taking place in video conferences' (Fauville et al. 2021, 3). In stage practice, direct address is used sparingly for effect. Therefore, our design question became: should we avoid looking directly into the camera altogether (maintaining some off-angle to preserve the fourth wall except for intentional moments of address), or should we embrace it as an inherent convention of this medium? We lean towards finding ways to avoid breaking the fourth wall, perhaps by simulating over-the-shoulder or slightly off-camera eye-lines using the multi-monitor setup, so that direct camera eye contact is only used for deliberate audience address.

To adapt *FPK* to an online live-streamed intermedial theatre piece, we must exploit the spatial and visual opportunities of the 2D screen. One technique we borrow from film/TV is the split-screen montage. Audiences are familiar with seeing multiple windows on screen to indicate different locations or simultaneous actions (famously used throughout the TV series *24* (2001–2014) to show concurrent events). Split screens can suggest connection or contrast between characters, and their layout can be changed dynamically to suit narrative focus (Fardy 2018). Inspired by this, we propose a streaming interface composed of a selection of resizable windows, integrating the conventions of cinematic continuity with the reality of a videoconference-like environment. The positioning and size of each window (video feed) can shift during the performance under the control of the show's operator, according to the dramatic needs of each moment.

Following from this we propose an interface for the streamed theatre production that uses a selection of windows utilising the concepts of split screen montage, cinematic continuity, and the conventions of streamed conferencing software. QLab can be used for this purpose in stage productions and development of a new software's capabilities encompassing live switching and providing different combinations for each actor, the audience and the operator would be needed to facilitate this. The position and size of these screens can be varied to meet the narrative needs of the performance at any given moment and these will be programmed into the operating software and cued by the show's operator. Software such as VirtualDirector, or QLab in conjunction with vMix are appropriate.

Figure 8 shows a moment from 2022 version of *FPK* as staged in the theatre: In this moment, based on *Hamlet*, Polonius listens to Gertrude composing her version of the events leading to Ophelia's drowning. He stands in the blackness of a digital limbo,



Figure 8. Screen grab from *FPK* (ADSA 2022, Brannigan & Nicholson), Polonius (Ross Brannigan), and Gertrude (Kerynn Walsh).



Figure 9. In the live stage version of FPK, complex layering conveys that Ophelia (Holly Hudson) is approaching Gertrude (Kerynn Walsh) from behind while Polonius (Ross Brannigan) has become aware of her. The audience at this point can see that Polonius is physically within a semi-transparent space trapped between the other two characters.

unable to communicate with the projection of Gertrude. In that live scene, the difference in scale was balanced in terms of attention by the brighter light on Polonius and his physical presence. The dual simultaneous projections of Gertrude appear to hover in indeterminate space but Polonius, by standing stage right and slightly upstage makes the connection between the physical and the projected through his gaze. Gertrude's gaze and position were determined through cinematography. Gertrude's eyeline is directed to the downstage right. In the theatre, Brannigan who plays Polonius is able to move around these screens. This moment was followed by an image of Ophelia underwater appearing on a third screen behind Gertrude (Figure 9), who sensed her presence, and Polonius. All three characters exist in a space where they have varying degrees of awareness of each other while they are unable to communicate across complicated boundaries of time and death (Figure 9).

A streamed version of this arrangement could look like Figure 10; it illustrates our planned streaming interface for this sequence in an online remake: Polonius (Ross Brannigan) and Gertrude (Kerynn Walsh) would appear in two live video windows, while



Figure 10. Planned streaming interface for the audience. Ophelia (Holly Hudson), Polonius (Ross Brannigan), Gertrude (Kerynn Walsh). Image: Brannigan, Nicholson.



Figure 11. Planned streaming interface for the audience of Polonius (Ross Brannigan) interacting with the Ai character in text mode. Option one, observational point of view. Image: Brannigan.

Ophelia (Holly Hudson) would appear in a third window with pre-recorded footage, initially visible only to the audience. In this setup, Gertrude's window might be shown from a more objective camera angle (since she is occupied with her task and unaware of Ophelia), whereas Ophelia's window is presented as a direct gaze into camera, which the audience understands as a ghostly direct communication with them. Gertrude eventually reacts (dismissing it as her imagination), and Polonius turns to see Ophelia's image, gradually realising what the audience already knows – that Ophelia is present as a spectral figure focusing on Gertrude. This shifting distribution of knowledge and awareness among the characters and audience is something we can orchestrate through the arrangement and properties of the windows on screen. The ability to give the audience more information than a character (through an extra window) or to manipulate who can 'see' whom is a powerful storytelling tool in the streamed format.

One practical consideration in achieving these composite frames in our experiment for the online live-streamed intermedial theatre is camera placement (Figures 11 and 12). To maintain an actor's eye-line alignment while still looking into the camera, we anticipate using a modified teleprompter screen setup. By placing a monitor or text screen in front of the camera lens (using a half-silvered mirror), an actor can look at an image (for example, the other character's face or even scripted lines) while simultaneously looking directly into the camera. We are not suggesting that actors read off a teleprompter during performance, but rather that this setup could ensure that an actor's line of sight is precisely towards the camera when needed, without losing sight of their scene partner's image. Figure 13 depicts a proposed layout for an actor's home studio: multiple monitors



Figure 12. Planned streaming interface for the audience of Polonius (Ross Brannigan) interacting with the Ai character in text mode. Option two, direct address point of view. Image: Brannigan.

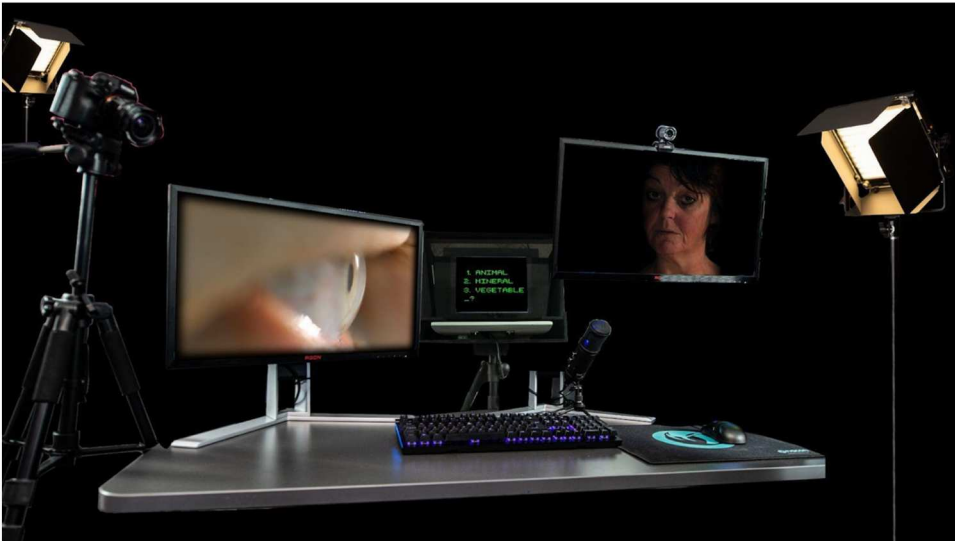


Figure 13. Proposed home studio setup for the actor. Note that there are three monitors that the show's operator can switch between to facilitate the actor's eyeline shifts.

positioned for different characters' eyelines, a main camera situated behind a teleprompter glass so that a reference image or text can be seen while looking into the lens, plus video lights and perhaps additional cameras for alternate angles. The show's operator would have the ability to switch which monitor feed the actor sees (depending on which character they are 'looking' at any given moment) and to switch the outgoing camera feed if multiple camera angles are available in the actor's space.

Cinematography and visual strategy

Considerations of shot size, camera angle, and video quality become crucial in the streaming environment. Video quality may be degraded during streaming because of the high compression applied to the stream, and using the best quality video possible is one way of minimising this degradation. One way to counteract this is to start with the highest possible quality at the source; *FPK's* pre-recorded videos in the 2022 iteration were produced with high cinematic values (good cameras, lighting, etc.), which is an advantage for adapting it to streaming. But beyond the existing content, the streaming production needs to take into consideration the image of the performers, which will be streamed live during performance.

In cinematography, camera angle is an important narrative and psychological tool. The height of the camera relative to a performer is read unconsciously by the audience as a marker of the status of the character: a high angle, looking down, diminishes a subject, while a low angle increases it. In the normal Zoom call, using the camera built into the top of a computer's screen, the user is seen in a subtly low-angle shot, with the camera below the user's head. For an online adaptation of *FPK*, this default position would not be ideal: a neutral height would be more suitable. We want to avoid the unflattering and narratively unmotivated angles of a default webcam view. Our proposal includes

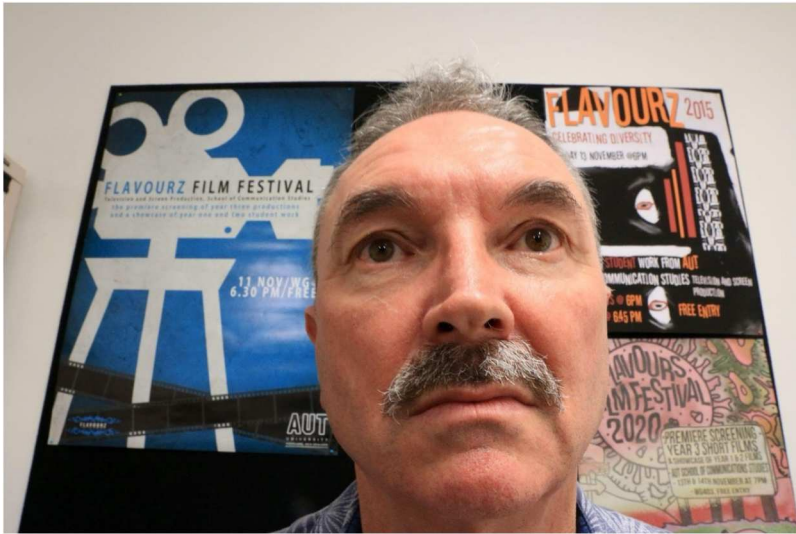


Figure 14. A laptop’s camera: low camera position, wide-angle perspective and deep focus produce an unflattering image.

the use of an additional camera that is not built into the performer’s computer, and is positioned at eye level. This would be an external camera for each performer, rather than relying on the built-in laptop camera (Figure 14).

The use of additional cameras also allows the cinematographer to choose the lens focal length. The built-in camera of a laptop uses a wide-angle lens, so that the user appears in medium close-up even though they are very close to the camera. In photographic portraiture and cinematography, wide-angle lenses are avoided for portrait shots unless there is a conscious attempt to produce an unflattering image. This is because wide-angle lenses distort the shape of objects, particularly when they are close to the camera. The lenses held to be most flattering to the subject are short telephoto lenses, which magnify and flatten the image slightly. The wide angle also takes in more background than a lens of longer focal length, and produces deep focus. By using a lens with a longer focal length, the cinematographer can produce a more realistic and flattering representation of the subject, and also control the focus of the shot more precisely. This would be useful in circumstances where the resources for providing a large backdrop or set are limited. Using a short telephoto lens would require a smaller backdrop than a wide-angle, and also allow the backdrop to be rendered out of focus, eliminating possible distractions (Figure 15).

This approach is in contrast to the approach to the Zoom theatre production *Pandemic Therapy* described by Karam and Naguib (2022), which was designed specifically for streaming delivery: the story is set in the digital space of Zoom meetings. In adapting *FPK*, the aim is to escape the familiar look of the Zoom meeting using camera height and lens selection.

The projected videos in *FPK* point to the possibilities for using video in live online performance: they are a versatile element of the production; they can be produced economically and their production is creatively stimulating. The videos in *FPK* consist of a mix of

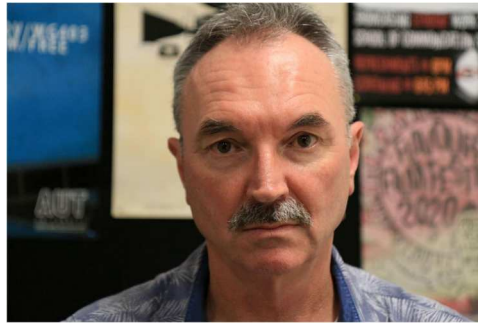


Figure 15. Short telephoto on a DSLR camera: neutral camera position, with less background in shot and shallow focus.

types. Some perform a direct narrative function. Examples include the images of Gertrude and Ophelia, which depict events that happen on and offstage during Shakespeare's *Hamlet*. Another clip represents the 'artificial intelligence' searching for an image. These clips inform the audience and advance the plot. But the play also uses a montage of more allusive images that refer to Polonius's death.

The two images below (Figures 16 and 17) are from the montage at the beginning of the play that sets the scene, but also teases the audience, withholding the time and location of the scene.

In preparing video content for the 2022 intermedial version of FPK on stage, although Nicholson and Brannigan were aiming for a high-quality, cinematic look to the video images, the production was very economical, often involving only two or three people. Most clips were recorded without sound. Several cameras were used, including phones, DSLRs and mirrorless compact cameras. These comparatively cheap cameras were able



Figure 16. Intermedial cinematography from the play FPK's opening montage. Image: Nicholson.



Figure 17. Intermedial cinematography from the play *FPK*'s opening montage. Image: Nicholson.

to deliver the required quality through the use of high-quality lenses and careful attention to lighting. Freedom from the restrictions of cinematic continuity and the demands of sound recording were major factors in making the shoots economical and creative.

The development of these video pieces for *FPK* was a co-operative and often spontaneous process. It expanded Nicholson's role from that of a cinematographer whose job is essentially technical to that of an active collaborator. At the same time, Brannigan also worked as a filmmaker during these shoots, during which the imagery evolved through collaborative experimentation. The production of the video elements of *FPK* was an essential part of the creative development of the play, rather than simply the production of a list of visual aids.

Translating this to live-streamed intermedial theatre, we see a strong potential for high-quality pre-recorded video elements to enhance the live experience. If the director and cinematographer can work closely (even remotely) to plan and capture compelling video segments, these can be woven into the live stream to provide production value and imaginative layers that exceed what a basic webcam play could offer. A key is having people with the right experience to form that partnership which turns technical execution into a creative enterprise.

Live-streamed intermedial productions, in our view, can make powerful use of high-quality video provided the team treats cinematography as an integral part of the performance. The results can be richly engaging for the audience.

Conclusion

Drawing on several iterations of *PFK*, we have proposed a model for *online live-streamed intermedial theatre* that integrates stage and screen techniques. From the actor's perspective, an adjustment is required when combining stage, screen, and streaming techniques.

We found that acting is most effective when unnecessary technical burdens are removed – hence, we advocate designing an in-home studio setup for remote performers that, for example, includes multiple monitors and cameras arranged to preserve natural eye-lines. In this article we recommended that actors would need a setup that avoids looking at their own performance. They would need to increase their skill about media creation and be able to look into the eyes of other characters. The user interface, including backgrounds and sound need to be clearly shown so that actors can incorporate it into their given circumstances.

In our proposed model, the actor's technical setup should deliberately differ from the viewer's interface. The performer should not see their own image (to avoid self-consciousness), and should have monitors positioned to represent other characters at logical angles. The primary camera should be at eye level and, if possible, aligned with a teleprompter-style display to facilitate direct lens eye-lines when needed. The close-up shot is likely to be the dominant framing in streamed theatre, so actors must master the heightened interiority and subtlety it demands. Directors should also minimise the reliance on direct-to-camera address between characters – unlike in a typical Zoom call – so that breaking the fourth wall remains a conscious artistic choice rather than a constant requirement. Another implication of this mode is the increased agency it gives actors over traditionally filmic aspects of performance. In a live stream, without an editor to shape the final output, actors effectively become co-filmmakers in real time, adjusting to camera cues and framing while still delivering a live theatrical performance.

From the cinematography perspective, our explorations showed that the limitations of a normal webcam setup can be overcome with relatively accessible technology and techniques. Using external cameras with proper lenses and neutral angles can dramatically improve the audience's experience. High-resolution, well-lit video feeds enhance the production values of the live performance and help sustain audience engagement. Moreover, achieving cinematic qualities does not necessarily require a large budget – our work on *FPK* demonstrated that creative use of consumer-grade cameras and careful lighting can produce striking results. We also found that employing multiple simultaneous windows of video (including non-diegetic or abstract imagery in addition to the main action) opens up possibilities for enhancing the mood or themes of a piece, offering visual metaphors or subtext that go beyond straightforward narration. Cinematographers will need to be in direct communication with the director, media operator and actors during rehearsal. They will construct the perception of online space for the audience and each actor and will need to coach the actors to setup cameras, monitors and lights. This will involve choosing lenses, and providing a shot list, which will become a cue sheet for the media operator. They will advise on continuity and framing. Ideally the software will have the ability to operate the cameras with respect to the size of shots.

The setup of equipment and software to drive it should include the ability to send different streams to the audience and to each actor. The interface should have live-keying and framing in windows that are able to change. Creating backgrounds in layers and above all, avoidance of lag, are priorities. All of this should be live-cued by the media operator. The remote equipment setup will need multiple cameras and monitors as well as lights and a green screen.

In summary, our practice-led proposal suggests that *live-streamed intermedial theatre* can be a sustainable and artistically vibrant form in the post-pandemic world. By adopting

new acting techniques tailored to the camera and embracing the creative potential of cinematography and digital media, theatre practitioners can create online performances that preserve the liveness and human connection of theatre while exploiting the flexibility of screen-based media. This model provides a conceptual and practical framework for developing online intermedial productions that are not merely stop-gap substitutes for stage plays, but a hybrid form with its own aesthetic and experiential strengths.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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