

## Immersive Audio Storytelling: An Exploration of the Potential of Spatial (Multi-channel) Audio to Represent Stephen Lawrence's Story

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### Abstract

[re]locate is a responsive, multi-channel audio installation revisiting the tragic events surrounding the racist murder of Stephen Lawrence by a gang of white youths in 1993. Derived from earlier AHRC-funded creative practice research, the art installation exploits the immersive properties of spatial (multi-channel) audio to offer an audio reconstruction of events, based on transcripts of witness statements from the Stephen Lawrence Public Inquiry, published as the Macpherson Report in 1999. The exposition aims to provide an overview of the theoretical underpinnings and methodological framework for the original research, which involved developing a prototype immersive audio story environment based on the 'violence hub' narrative format, from which the installation was created. Given that the prototype was purpose-designed to unlock the potential of Stephen Lawrence's story to engage audiences with the complex issue of racism, the exposition concludes with reflections on an analysis of qualitative audience feedback gathered following encounters with the immersive audio story, highlighting the significance of the artwork for spatial audio design and narrative storytelling.

The binaural mix available for listening through headphones re-presents one version of the story from the original multi-channel audio installation.

**Soundcloud link:** [https://soundcloud.com/user-270327698/relocate-binaural?si=28a2cdf4c3714c01b24bc8f7c6b0ad9e&utm\\_source=clipboard&utm\\_medium=text&utm\\_campaign=social\\_sharing%20](https://soundcloud.com/user-270327698/relocate-binaural?si=28a2cdf4c3714c01b24bc8f7c6b0ad9e&utm_source=clipboard&utm_medium=text&utm_campaign=social_sharing%20)

### Research Statement

Advances in immersive audio technology have offered creative practitioners the opportunity to experiment with spatial audio formats and techniques to find new ways to interact with audiences and create work that expands the boundaries of storytelling.

Typically, this has involved providing experiences favouring visual media through virtual reality and 360-degree video, where the design and rendering of audio is subordinated to the needs of the image and visual storytelling (McArthur et al, 2017). Exceptionally, a wave of experimentation in the field of immersive audio journalism, following the breakthrough podcast *Serial* in 2014, has coincided with an explosion in listenership for the podcasting medium; for example, the American investigative journalism podcast *S-Town*, released in 2017, attracted ten million listeners in just four days, smashing the record set by *Serial* (Dowling and Miller, 2019). Although there has been a resurgence in the use of immersive audio formats in radio and podcasting (Dowling and Miller, 2019; McHugh, 2014; Wincott et al., 2021), nonetheless little attention has been given to the factors that promote audience engagement with audio-only stories because of the predominance of visual media.

This exposition explores the capacity of spatial (multi-channel) audio to represent Stephen Lawrence's story and engage audiences with the issue of contemporary racism through an encounter with the artwork [re]locate [1]. It sets out to provide a brief overview of the artwork and its origins before considering the creative strategies employed in designing the immersive audio story environment (or soundscape). Building on a rich body of previous work concerned with dramatising real life [2], it seeks to illustrate the role that immersive audio storytelling can play in offering unique insights into this complex social issue. In the wake of the murder of George Floyd and the growth of the Black Lives Matter movement globally, there is increased global awareness of the structural roots of racism (Mohdin, 2020). With the government-initiated report from the Commission for Racial and Ethnic Disparities (CRED, 2021) denying the existence of institutional racism, despite a recent study by Runnymede Trust highlighting continuing racial inequalities in the UK (Byrne et al, 2020), revisiting the Stephen Lawrence case is more urgent [3].

### **The Installation and its Exhibition**

[re]locate is a responsive, multi-channel audio installation that runs on a continuous loop of approx. 18 minutes. Figure 1 shows the entrance to the exhibition at the Otter Gallery. Two other elements of the artwork, shown in Figure 2 and 3, are encountered by the audience at the entrance to the installation before they experience the soundscape. The installation space itself is an almost pitch dark, rectangular room approx. 5m x 8m in

dimensions. The 6.1 multi-channel sound system (six speakers and a subwoofer) is concealed behind a black muslin screen just inside the perimeter of the space (Figure 4). On entering the darkened space, audience members are transported to a busy street (imagined) where they experience an audio reconstruction (through dialogue and action) of the tragic events surrounding the murder of Stephen Lawrence by a gang of white youths, which took place near a bus stop on Well Hall Road, southeast London, in 1993. The artwork places the audience in the role of ‘witness as bystander’ and compels them to construct their own mental images of events.



Figure 1: Entrance to the exhibition at Otter Gallery, University of Chichester, © Tahera Aziz, 2015.



Figure 2: Photograph of Well Hall Road sign (mounted to the left of the entrance to the installation), © Tahera Aziz, 2003.

*'never to take the tedious task of  
waiting at the bus stop for granted'*

*What Stephen Lawrence Has Taught Us by Benjamin Zephaniah*

Figure 3: Vinyl text displayed on the wall (mounted to the right of the entrance to the installation), © Tahera Aziz, 2015.

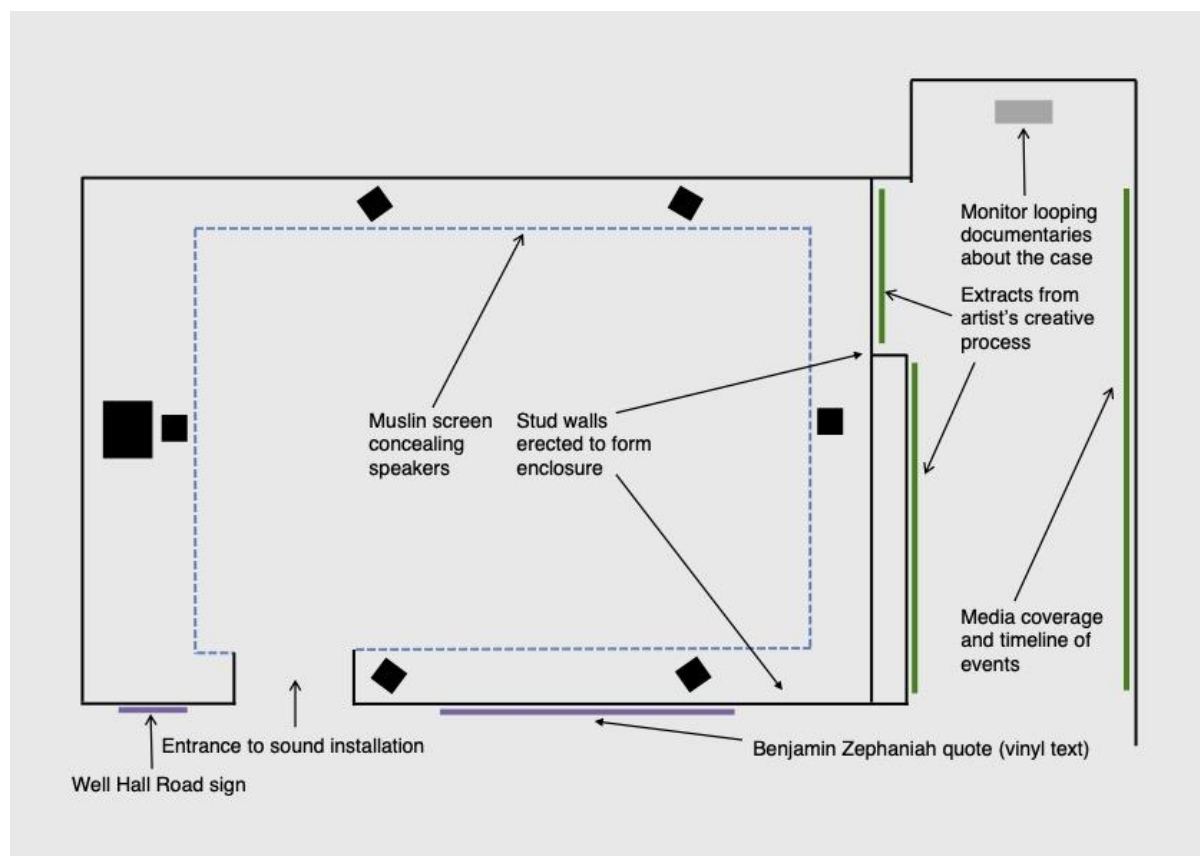


Figure 4: Exhibition plan showing the installation space with speakers hidden behind muslin screen, © Tahera Aziz, 2015.

In its original form, sensor technology capable of operating in low-light conditions was used to enable audience members to trigger alternative storylines of events documented to have taken place at around the same time. While the audio mix available is not in the original form or format intended for the audience to experience (i.e., it is devoid of responsiveness and alternative storylines, and only offers one version of the events), this is a first attempt at re-presenting the multi-channel work for binaural listening with headphones.

### From Critical Reflective Practice to Creative Practice Research

[re]locate is the culmination of a substantial body of work undertaken over several years, involving an iterative process in which audience feedback was gathered at each stage. Initially, this was rooted in a critical reflective practice linked to artistic experimentation

(mostly with audio-visual media), but subsequently transitioned into a piece of creative practice research funded by the AHRC through the Practice-led and Applied route [4]. The original research project sought to discover how sound, storytelling and computer-mediated interaction could be creatively combined to deepen audience engagement with the complex issue of racism by revisiting Stephen Lawrence's story and the media and socio-political debates associated with the case.

A methodological approach of developmental and applied research was employed with a focus on designing a prototype for an immersive audio story environment (the installation), based on the conceptual framework of the 'violence hub' narrative model (Murray, 1997), to offer the audience a multi-perspectival reconstruction of events [5]. This necessitated developing the story substance and structure, derived primarily from transcripts of witness accounts relating to Stephen's murder as documented in the Stephen Lawrence Inquiry Report (Macpherson, 1999); experimenting with simultaneous multi-channel audio recording and spatial compositional techniques to capture the dialogue and ambient (street) sounds; using sensor technology and real-time processing software to introduce responsiveness into the story environment, and to shift audience 'point of view' on events whilst maintaining narrative coherence and flow; in-depth, semi-structured interviews to obtain feedback from an invited audience to evaluate the prototype [6].

### **Designing Audience Experience through Spatial (Multi-channel) Audio**

A detailed reading of relevant sections of the Macpherson report revealed that there were three eyewitnesses at the bus stop when Stephen Lawrence and his friend Dwayne Brooks were attacked. The fact that the witnesses boarded a bus shortly after the assault set in train a series of questions: e.g., Why did they get on the bus after witnessing this violent attack? Was it because they thought Stephen Lawrence was okay after he managed to get up and run up the road? The questions, of which there were numerous, formed the basis for further inquiry and, importantly, for developing the story substance and storylines. Thus, the act of witnessing became central to retelling Stephen Lawrence's story and a creative mechanism for addressing both the individual and institutional racism permeating the case.

The decision to work solely in audio arose from a creative interest in its expressive potential for experiential storytelling given its inherent immersive, multi-sensory and event-oriented qualities. Having devised the dialogue with actors, their voices were captured as they performed the action using simultaneous multi-channel recording techniques, retaining the spatial relationship between characters within each scene. Field recordings, captured on location at the bus stop on Well Hall Road at night, were used to create the ambient or environmental sounds of the street with the ebb and flow of the traffic. The ability of spatial (multi-channel) audio to produce an expanded audio field (or sound space) to envelop the listener in a 360-degree horizontal plane was exploited to induce a sense of immersion and give the impression of being physically located on the street.

Given the uniquely sonic or acousmatic nature of the story environment [7], consideration was given to the concept of ‘point of audition’ or listening in both a spatial and subjective sense [8] (Chion, 1994). While ‘point of view’ is an established literary and cinematic device for determining the perspective from which a narrative is presented to the audience, Chion (1994) points to the ambiguity of this concept in relation to sound, preferring the term ‘zone of audition’. The benefit of using spatial multi-channel audio to reconstruct events was that it allowed sound sources (e.g., dialogue, body sounds, etc.) to be spatially distributed within the soundscape with greater precision, making it easier for the listener to distinguish characters from the ambient sounds enveloping the scene (Wincott et al., 2021). This promoted the framing of audience experience as ‘witness as bystander’, aiding perspective-taking. Figure 5 shows the final speaker configuration, and indicates the direction of flow of the traffic and movement of the characters (victims and perpetrators) in the moments before the attack scene.

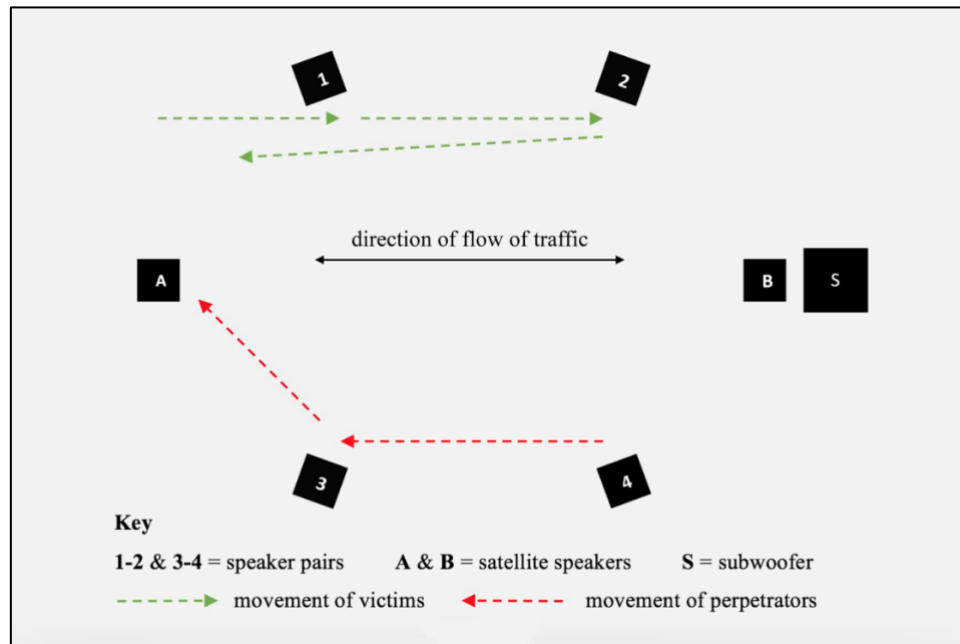


Figure 5: Multi-channel configuration showing the movement of sound in the attack scene, © Tahera Aziz, 2019.

### Audience Feedback on Encounters with Stephen Lawrence's Story

Analysis of the qualitative feedback gathered following encounters with the installation [9] indicated that the audience was deeply engrossed in the story and that the experience was powerful: 'Realistic...drew us in, kept it interesting, emotional, reactive as the story developed' (Participant 54). Participants alluded to the novelty of the experience, and they commented on how the soundscape triggered their imagination and provoked vivid mental images:

Despite being only through sound, I enjoyed it as I could really visualise it in my head. I did feel as if it was a clever idea as it would have happened at night, but also because they placed the sound so carefully. (Participant 23)

Participants expressed a genuine sense of shock at the realisation that the attack was wholly motivated by racism; however, this was couched mostly in terms of feelings of concern about the ill treatment of black people: 'I found it quite emotional as he got murdered only because he was black' (Participant 97). There was a strong sense of injustice, which was heartfelt, and some participants reported a desire to help or intervene in events.



Participants seemed to form an emotional bond with the victims, displaying sympathy for them and the situations they faced as well as empathising with them: ‘I felt concerned for Stephen and Duwayne. I also felt angry towards the police officers and paramedics who didn’t help as much as they could’ (Participant 63). The empathy-enhancing potential of this mode of storytelling has been put down to the capacity of the technology to induce a sense of immersion and to produce the feeling of being ‘present’ in the simulated story world (Cummings et al., 2021). The sense of presence or of ‘being there’, as if witnessing events first hand, was a striking feature in the feedback, as this example illustrates: ‘Considering we were standing in such a dark empty room, I physically felt like I was at the side of the road watching it all’ (Participant 38). The immersive effect generated by the spatial (multi-channel) audio configuration, based on the notion of the ‘violence hub’, appeared to be key in creating the subjective feeling of being a witness to events.

## Conclusion

Thematic analysis of the qualitative feedback offered rich insights into the thoughts, feelings, and emotions of the audience, and revealed the capacity of the soundscape to create a powerful embodied experience in which the act of witnessing and perspective-taking was central to engaging with Stephen Lawrence’s story [10]. The proposition is that the uniqueness of the immersive audio story environment lies in the conceptual framework of the ‘violence hub’ that was adopted to develop the prototype, and the installation. This, combined with the simultaneous multi-channel recording and spatial audio compositional techniques employed, offered a creative strategy for placing the audience at the heart of Stephen Lawrence’s story in the role of ‘witness as bystander’. This novel approach to immersive audio design enhanced audience engagement with the story, and encouraged them to reflect on the issue of racism raised by the case.

Driven by an interest in the potential of immersive storytelling to effect social change, the priority going forward is to exploit the power of the audio story to stimulate dialogue about contemporary racism with secondary school students and their teachers, with the artwork acting as a catalyst to promote anti-racist practices within their schools and communities. This will involve gaining an understanding of how audience experience of the binaural version of the story differs from that of the multi-channel configuration, as well as

considering the possibility of wider dissemination of the artwork as an online immersive audio experience.

[1] [re]locate is a responsive, multi-channel audio installation revisiting the Stephen Lawrence case, derived from AHRC funded creative practice research and produced with funding from the Arts Council of England. [re]locate has been toured nationally to six venues in the UK, including 198 Gallery (London), New Art Exchange (Nottingham), and East Street Arts (Leeds).

[2] Of particular interest is creative work produced over the past few decades, ranging from the verbatim plays of Tricycle Theatre (e.g., *The Colour of Justice*, 1997) and the ‘re-enactment’ work of artists Jeremy Deller (e.g., *The Battle of Orgreave*, 2001) and Rod Dickinson (e.g., *The Waco Re-enactment*, 2004), to non-fiction audio narratives such as those produced by Serial Productions (e.g., *Serial*, 2014; *S-Town*, 2017) and the audio theatre of Darkfield (e.g., *Fiction*, 2015), including the Darkfield Radio app that delivers immersive audio experiences at home (e.g., *Knot: A Trilogy*, 2021).

[3] The Stephen Lawrence case marked a turning point in British race relations and the policing of black and ethnic minority communities. The official public inquiry concluded that institutional racism had a major part to play in the flawed police investigation and the lack of resolution of the case (Macpherson, 1999).

[4] The original AHRC funded creative practice research project was entitled ‘Sound, Narrative, and Interactivity: Towards a Recontextualisation of the Stephen Lawrence Case’.

[5] For Janet Murray, the ‘violence hub’ is where a violent incident is placed ‘at the cent[re] of a web of narratives that explore it from multiple points of view’ (Murray 1997: 136).

[6] More detail about the research process can be found in the DIGICOM conference proceedings (Aziz, 2019).

[7] Coined by Schaefer, acousmatic refers to sound that is heard without seeing its originating source (Chion, 1994).

[8] With reference to ‘point of audition’, Chion (1994) describes ‘spatial’ as the place from which the audience member hears the story ‘action’; ‘subjective’ refers to which character, at any given moment in the story, is hearing what the audience member hears.

[9] Written qualitative feedback was gathered from over 100 secondary school students from schools in the Chichester area when [re]locate was exhibited at the Otter Gallery, University of Chichester, in 2015.

[10] A full exposition of findings from the thematic analysis of audience responses is available in *Convergence: The International Journal of Research into New Media Technologies* (Aziz, 2023).

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