FROM VIRTUAL PEACE WITH VIRTUAL REALITY: EXPLORING THE CONTESTED NARRATIVES OF SPACES AND PLACES IN NORTHERN IRELAND

Sammy Taggart, Stephen Roulston, Clare McAuley

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Abstract

  While Northern Ireland (NI) is often viewed as a post-conflict society and hailed on the international stage as a success story for conflict resolution, it is fair to say that this is not the full story as in the near quarter of a century since the paramilitary ceasefires and the signing of the Good Friday Agreement, a narrative of division remains where everyday life continues to be 'shaped by division along ethno-religious lines' (Blaylock, Hughes, Wolfer, and Donnelly 2018, 634).

  Consequently, though generally regarded as being in a stage of conflict transformation and post-conflict reconstruction, NI remains deeply divided. Challenges remain in the 'betwixt and between' (Turner 1967) liminality that has been initiated by 'peace'. Moreover, many spaces and places in Northern Ireland remain contested, perceived to be 'no go areas' for 'the other' community and often divided into liminal spaces (Cunningham and Gregory 2014). Paradoxically open to international visitors 'fascinated by the possibility of 'reading the city' through mural paintings' (Kappler and McKane 2019, 1). This concept of liminality, further extended into literature around space and place in societies emerging from conflict (Murphy and McDowell 2019), is explored using Virtual Reality (VR) and reported within this paper.

  Mirroring this virtual, 'neither here nor there', liminal characterisation of a community slowly emerging from conflict, this paper examines the use of VR as a pedagogical tool to share and explore narratives of contested spaces and places. Reporting on impact within teacher education, we examine the capacity for liminal, perspective-taking affordances of VR as a pedagogical tool, outlining how narratives of Northern Ireland's contested 'no go areas' might be interpreted and contribute to progressing a real and lasting peace.

KEYWORDS: *virtual reality, Initial Teacher Education, Northern Ireland, contested space, Bloody Sunday*

Introduction

  Northern Ireland's (NI) conflict is often characterised to be rooted in ethno-sectarian division, largely resulting from 'opposed nationalisms' (Boal 2002, 688) between the two main communities – the Catholic community and the Protestant community. The promotion of social cohesion and integration between the two communities has underpinned many government policies in 'peace' time (Knox 2011) for example, the

2005 A Shared Future strategy promoted "sharing over separation", the 2013 Together Building a United Future strategy committed to building a "united and shared society" while the most recent offering, New Decade New Approach, looks to building" a shared and integrated society"(2020). Yet, in spite of this persistent policy focus, social cohesion remains elusive as NI society continues to be shaped by division including residential and educational segregation (Shirlow and Murtagh 2006) and an increased number of 'peace walls' (Jarman 2008). Clearly, irrespective of the passage of time, NI is struggling to live up to the accolade of a post-conflict society with significant challenges remaining in the liminal, threshold state that has been crafted in a fragile 'peace' (Jarman 2016). Ongoing community divisions affect the movements of people in Northern Ireland making it difficult for them to gain a fuller understanding of other communities. This paper describes an approach which offers such experience, which otherwise might be perceived as unsafe, using virtual reality.

Liminal spaces in NI

  Throughout the 'Troubles', space and geography were often used as territorial 'markers' for communities. Societal divisions endure, with some geographical spaces remaining 'no-go areas' for 'the other' community who can view them as 'physical embodiments of fear, threat and conflict' (Selim 2015, 17), frequently as a result of 'competing and contested geographic claims of territory' (Dempsey 2020, 7). Catholics and Protestants are often reluctant to enter 'the other' groups' areas to meet, form friendship groups or to socialise and, as a consequence, interaction is often minimal (Roulston et al. 2017).

  Education in NI is divided 'along denominational lines' (Loader and Hughes 2017, 117–118) – widely referred to as 'Protestant' schools and 'Catholic' schools. This structural division mirrors wider societal separation which persists beyond compulsory schooling into some third-level Initial Teacher Education (ITE) programmes in NI (Gardner 2016). Moreover, in a segregated society, travelling to school in some areas can engender risk. Young people can worry '...about real or perceived threat of violence triggered by school uniforms providing visual clues to ethno-sectarian affiliation' (Roulston and Young 2013, 249). In short, school uniforms can distinguish and can allow others to make judgements of the ethno-sectarian affiliation of the wearer. This is likely to have had an impact on what out-of-school visits could be pursued with school groups in and around NI's contested, liminal spaces.

  A sense of 'inbetweenness' or liminality is not unfamiliar to communities in Northern Ireland. For example, attempts to create shared living spaces are challenging and policy in this area may even be counterproductive (Herrault and Murtagh 2019). Indeed, apart from in the centres of cities, it may not be possible to address the structural implacability of segregation (Komorova and O'Dowd 2016). Some have concerns that liminality, as a transition between conflict and peace, may become a permanent state. For instance, Murphy and McDowell, writing about Derry/Londonderry and Bilbao, note

communities with an '…understanding that underlying currents hold them in liminal space'(2019, 2511).

The concept of liminality has further resonance in the status of Preservice Teachers (PSTs) as they transition during Initial Teacher Education (ITE).'On the threshold of "teacherdom"' (McNamara et al. 2002, 864) they occupy a liminal state; as they are 'no longer just students nor are they fully teachers' (Head 1992, 94), remaining 'betwixt and between'. Exploring the concept of liminality through the lens of developing professional identity foregrounds the 'inbetweeness' of identity for PSTs. There are further concerns that teachers in NI are 'culturally-encapsulated' (Milliken et al. 2020) within their own communities. It is thus important that ITE programmes create safe spaces for PSTs to reflect how their experiences of living in a divided society have shaped their identity alongside developing the pedagogical tools to address division and difference. Many classrooms, however, continue to be sites of avoidance (Donnelly and Burns 2017) rather than spaces for critical engagement as teachers avoid teaching local conflict-related issues (Hanna 2019).

Virtual reality as a safe 'way in'
There is an accumulating body of evidence which suggests that virtual reality (VR) can provide that experiential learning and consequently help to develop empathy (Shin 2018; Walker and Wiedenbenner 2019). As VR can simulate a physical presence in real or imagined environments (Kerrebrock et al. 2017), through VR, the digital mimicry of sight, sound, and space, in addition to digital images and physical sensory presence, can act as a mediating in-between-space (Moujan 2011). VR has been termed the 'ultimate empathy machine' with the capacity to connect people; making them more compassionate, connected and empathetic (Milk 2015). Whilst some benefits attributed to VR might be ascribed to a 'novelty effect' (Lee and Wong 2014), much research positions VR tools as empathy gadgets (Jauhar 2017), empathy engines (Hiltner 2016) or more broadly as an empathy-enhancing technology (De la Peña et al. 2010; Oh et al. 2016). Hassan (2020) critically cites attempts to use VR to stimulate empathy with demonstrators in a political rally. Much of the criticism of empathetic affordances, however, is crystallised by Yang (n.d.), 'If you won't believe someone's pain unless they wrap an expensive 360 video around you, then perhaps you don't actually care about their pain'.

Despite criticism of the potential empathetic affordances of VR, it might, at least, support perspective-taking (De la Peña et al. 2010; Herrera et al. 2018) and reduce prejudice towards other groups (Ahn et al. 2013). It is in these latter capacities exploring the potential of VR as a pedagogical tool in conflict transformation, around which this study is situated. By creating a Situated Experiential Educational Environment (SEEE) (Schott and Marshall 2018), developers can use the richness of the VR learning tool as a safe 'way in' to explore contentious and sensitive contested spaces and events in

the past. VR can be used to '...let its users feel they are in and a part of the computer-generated virtual scenarios' (Ip et al. 2018, 3 and 'feel as if they are sharing the same physical space [...and...] influence how they think and behave' (Bailey and Bailenson 2017, 109–110).

Method

  This exploratory study, situated in the contested space associated with Bloody Sunday[1], involved twenty-one self-selecting PSTs completing a one-year post-primary Postgraduate Certificate in Education (PGCE) from a range of curriculum areas. The majority of participants represented History, Religious Education and Local and Global Citizenship – areas, where attending to difference and local conflict-related issues are prevalent. A mixed method approach (Creswell 2009) was employed to explore the opportunities and challenges associated with the use of VR in the context of contested space in NI.

  A Virtual Reality SEEE was created around the contested sites[2] of the Bloody Sunday event in Derry[3]. The timeline of the events of Bloody Sunday as established by the Saville Inquiry (Saville et al. 2010) was used to inform the scene sequences. PST participants (*n*=21) completed a pre-experience, biographical and attitudinal survey before exploring the SEEE (Taggart et al. 2019). Participants viewed the SEEE using low cost VR head-mounted displays (HMD) and personal mobile phones (Figures 1 and 2). Interaction with the resources took participants approximately twenty minutes and comprised six 360-degree scenes with digital overlays including archive media-reports, narration, ambient audio recordings, maps and images. Participants completed a post-experience survey and participated in a focus group immediately after engaging with the SEEE. The results presented and discussed within this short paper include participants' attitudes towards the contested space from the pre and post surveys.

Participants

  The majority (57.1 percent) of participants identified as female, 42.9 percent as male. Most participants (61.9 percent) were within the 18–24 age category, while 28.6 percent

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1. The Bloody Sunday event and associated geographical spaces were selected given its significance as a seminal event in recent NI history from a list of comparable historical sites/events identified for study by the local Curriculum, Examinations and Assessment Board (CCEA) History Specification for 14–16 year olds.

2. Almost fifty years on, these areas, abutting the ancient walled settlement of Derry/Londonderry, now the commercial core of the city, are largely Catholic in terms of residents and businesses and would contain few, if any residents, who would identify as Protestant.

3 . The history and name of the city, including the site of Bloody Sunday, reflect the tensions between the two communities in Northern Ireland. The city was originally known as Derry which is still the name preferred by nationalists. The city was renamed Londonderry in recognition of the role played by the City of London in the settlement of Protestants from Scotland and England in the area in the 17th Century. Londonderry remains the official name of the city, despite numerous unsuccessful attempts to revert the name back to Derry.

Figure 1 PSTs exploring SEEE using Head-Mounted Displays (HMD) and personal mobile devices.

were between 25–34 and the remainder (9.5 percent) over 35 years of age. 42.9 percent participants considered the area they grew up in to be mainly Catholic, 38.1 percent mainly Protestant and 19 percent, mixed. When asked how they would describe the school they attended for the majority of their schooling, 61.9 percent said predominately Catholic, 33.3 percent said predominantly Protestant and 4.8 percent as half Protestant and half Catholic. Reflecting the complex issue of identity across NI, the majority (47.6 percent) chose to describe themselves as Irish, 33.3 percent as Northern Irish, 14.3 percent British and 4.8 percent European.

Figure 2 Two 2D images displayed simultaneously within the HMD appear to the user as a single 360 degree immersive image with overlays.

Findings

PSTs were asked how comfortable they would be in visiting the sites associated with Bloody Sunday, both as an individual and also as a teacher with a group of school pupils, wearing school uniforms from a range of school types in NI.

Pre-experience comfort levels in visiting this contested space

Prior to the VR experience, PSTs within this study overwhelmingly reported feeling 'comfortable' or 'very comfortable' about personally visiting locations historically linked with the activities on Bloody Sunday. Over three quarters (76.2 percent) of participants had personally visited the location(s) prior to engaging in the SEEE activity. Many, however, displayed a marked reticence to visit this contested space in a professional capacity as shown in Figure 3.

PSTs' comfort levels visiting Bloody Sunday locations personally or with groups in school uniform from various school types following VR SEEE.

	Very Comfortable	Fairly Comfortable	Neither Comfortable nor Uncomfortable	A bit Uncomfortable	Very Uncomfortable	I don't know
...visiting this area?	57.14	38.10	0.00	0.00	4.76	0.00
...bringing a group of pupils from a mostly protestant school in school uniform	19.05	33.33	0.00	42.86	4.76	0.00
...bringing a group of pupils from a mostly catholic school in school uniform	42.86	52.38	4.76	0.00	0.00	0.00
...bringing a group of pupils from an integrated school in school uniform	33.33	47.62	4.76	14.29	0.00	0.00
...bringing a group of pupils as part of a shared education event in school uniforms	33.33	42.86	9.52	14.29	0.00	0.00

Created with Datawrapper

Figure 3 PSTs' comfort levels visiting Bloody Sunday locations personally or with groups in school

Low levels of comfort are most pronounced when bringing a group of pupils from 'a mostly Protestant school' in their school uniform. Even those PSTs who identified as Catholic, lived within the city and who know the area well, reported being very uncomfortable in bringing pupils to this space wearing school uniforms. The perceived proxy of ethno-sectarian affiliations presented by pupils in school uniform (Roulston and Young 2013) is clearly contributing to PSTs' comfort levels in their considerations of educational visits to contested spaces. In this case, the majority (71.43 percent) of PSTs reported some degree of discomfort; feeling a bit uncomfortable (42.86 percent) or very uncomfortable (28.10 percent) at such a prospect. Generally, PSTs would feel most comfortable bringing pupils from a Catholic school to this area with only 4.76 percent feeling a bit uncomfortable. Bringing pupils from Integrated schools[4] and Shared Education[5] activities generates broadly comparable levels of comfort in PSTs, lower than that from segregated schools. Table 1 depicts variation in comfort levels based on where participants themselves grew up.

It shows that PSTs who grew up in a mixed area are least comfortable bringing groups of pupils from a Protestant school in uniform to the area. Interestingly, PSTs who themselves live in Catholic areas are less comfortable than their Protestant counterparts

4. Integrated schools bring children and staff from Catholic and Protestant traditions, as well as those of other beliefs, cultures and communities together in one school.

5. Shared Education is a funded school collaboration project involving Protestant, Catholic and Integrated schools working together.

when considering bringing any group other than from a Catholic school to this predominantly Catholic area. Those PSTs, however, who grew up in mainly Protestant areas reported concerns about a lack of preparedness on the part of their pupils and, for example, that inappropriate comments might be made by pupils in their school group that may cause offence or initiate violence.

Table 1 PSTs' comfort levels, grouped by location where they grew up, about visiting Bloody Sunday locations personally or with groups in school uniform from various school types. . (1- Very uncomfortable to 5- Very comfortable)

Would you describe the area you grew up in as…		…visiting this area?	…bringing a group of pupils from a mostly protestant school in school uniform	…bringing a group of pupils from a mostly catholic school in school uniform	…bringing a group of pupils from an integrated school in school uniform	…bringing a group of pupils as part of a shared education event in school uniforms
Mainly Catholic	Mean	4.6	2.4	4.3	3.7	3.7
	SD	0.7	1.2	0.5	1.1	1.1
Mainly Protestant	Mean	3.7	2.7	4.1	4.5	4.5
	SD	1.1	1.7	0.6	0.5	0.5
Mixed	Mean	3.7	1.5	3.5	2.5	2.5
	SD	0.5	0.6	1.0	1.3	1.3
Total	Mean	4.1	2.4	4.1	3.8	3.8
	SD	0.9	1.4	0.7	1.2	1.2

Moreover, open responses from participants highlight concerns that can be categorised around three interconnecting themes associated with visiting this contested space either personally or as a teacher with identifiable school groups. These were:

1. A perceived lack of readiness of the local community and/or pupils;
2. PSTs' and pupils' perception of the locality; and
3. concern for pupil wellbeing.

  PSTs proffered a lack of readiness on the part of pupils or the local community as rationale for their reticence to visit this contested space. One participant, who lived in a predominately Protestant area and attended a largely Protestant school for most of his education, cited his concerns about a perceived level of general ignorance stating: 'the lack of understanding, knowledge, mindset or acceptance that some people still have' as a reason to support his discomfort in visiting the area personally or professionally – perhaps a victim of 'cultural encapsulation' (Milliken et al. 2020).

  Another key emerging theme was that of perceptions held by PSTs regarding members

of the local, predominantly Catholic, community. One student, a resident of the city who had attended a Catholic school there, expressed concerns about visiting the area.

'The people who live in this area would be seen as strongly republican. I would be worried about the students' safety and also the strong possibility of people shouting sectarian abuse at them which even I have heard people do within these areas'. Another participant (Protestant) reported concerns of 'conflict with extremists inhabiting the area'. Another PST hinted that his discomfort stemmed from a broader societal dogma citing:

'…negative, past-driven stereotypes and stigmas attached to a Protestant/Unionist/ Loyalist person(s) visiting a predominantly Catholic/Nationalist/Republican area alongside present issues associated with ongoing "troubles" related criminal activity that are still taking place today'.

The most prevalent theme was that of fear for pupils' physical and emotional wellbeing reflecting Selim's (2015) assertions of the threat and fear embodied in such contested space. One PST reported that she: '…would be concerned about the pupils feeling uncomfortable or targeted given the nature of the area.'

Another linked pupil readiness and concerns for wellbeing, cautioning of 'possible trouble due to a stupid comment from a pupil', suggesting that the readiness of the visiting group might also be a factor in perceived wellbeing.

Post-experience responses

Immediately following immersion within the SEEE, the PSTs completed a post-experience survey. Figure 4 shows PSTs' levels of comfort in visiting this part of Derry/ Londonderry after the immersive experience. For all school-type scenarios, when comparing Figure 4 to Figure 3, the percentage of PSTs indicating that they would be very comfortable to visit or bring a group of students to this location increased.

An increased 19.05 percent of the sample reported they would be 'very comfortable' to visit the area personally or bring a group of pupils from a mostly Catholic school in their uniforms. Whilst less pronounced, comfort levels also increased for bringing pupils from Integrated schools (14.29 percent), mostly Protestant schools (9.52 percent) and through a Shared Education event (4.75 percent). The percentage of PSTs who reported that they would be 'very uncomfortable' bringing a group of pupils from a mostly Protestant school decreased by 23.81 percent.

Nearly half of participants agree (47.6 percent) that they understood more about the context of Bloody Sunday following this brief immersive experience which is consistent with findings from other research (Herrera et al. 2018; Ahn et al. 2013). A further 28.6

percent strongly agreed that their understanding has increased, while 9.6 percent disagreed or strongly disagreed. Approximately three-quarters of participants agreed (71.4 percent) or strongly agreed (4.8 percent) that they wanted to learn more about Bloody Sunday following this experience, with similar percentages indicating that they agree (57.1 percent) or strongly agree (23.8 percent) that they are more likely to want to visit the sites referenced within the experience in person.

PSTs' comfort levels visiting Bloody Sunday locations personally or with groups in school

	Very Comfortable	Fairly Comfortable	Neither Comfortable nor Uncomfortable	A bit Uncomfortable	Very Uncomfortable	I don't know
…visiting this area?	38.10	42.86	9.52	9.52	0.00	0.00
…bringing a group of pupils from a mostly protestant school in school uniform	9.52	19.05	0.00	42.86	28.57	0.00
…bringing a group of pupils from a mostly catholic school in school uniform	23.81	66.67	4.76	4.76	0.00	0.00
…bringing a group of pupils from an integrated school in school uniform	19.05	57.14	9.52	14.29	0.00	0.00
…bringing a group of pupils as part of a shared education event in school uniforms	28.57	42.86	9.52	14.29	4.76	0.00

Created with Datawrapper

Figure 4 PSTs' comfort levels visiting Bloody Sunday locations personally or with groups in school uniform from various school types following VR SEEE.

Participants reported a demythologisation of the contested space within this study. One PST reported 'You realise that the area as of today is not a scary place to bring students to'. A candid reflection points to the normalising affordances of VR.

'Despite the conflicted past of this area, it appears like a 'normal' city. Although there are remnants of past conflict, today I would feel safe in this area. I may still be slightly apprehensive about bringing a Protestant group in their uniforms'.

Normalisation, in the context of NI, was: '… (and still is) aimed at introducing degrees of normality to Northern Ireland through the removal of military structures and the re-integration of society' (Switzer and McDowell 2009, 341). Used as a tool to eradicate 'spaces of fear' (Shirlow 2003), PSTs, within this study, extend the applicability and benefits of this concept to include VR as a normalising tool.

Considerable research (see Ip et al. 2018; Bailey and Bailenson 2017) would suggest an emotional engagement effect associated with VR, and PSTs reported similar. When asked if the VR experience made them feel sad, 42.9 percent agreed and 14.3 percent strongly agreed. Similarly, 23.8 percent of respondents reported feeling angry by what they had experienced within the SEEE. The dominant emotive response reported was that of compassion where 14.3 percent strongly agree and 69 percent of participants

agreed that they felt compassion for the subjects portrayed within the VR experience. The value of the perspective-taking affordances of VR is perhaps most powerfully framed by one participant who reflected that 'coming from a nationalist background it made me think how others might feel going into the area and their apprehensions' which accords with the findings of De la Peña et al. (2010).

Limitations

  This study used a small sample of PSTs in a single Higher Education Institution in NI, limiting reliability in the extrapolation of some of the findings through statistical analysis. It is also recognised that the findings are based on a single, brief VR experience; limited to a single event in NI's history which, whilst it encapsulates much of which is at the core of NI's contested past, could be perceived to be more aligned to a single community's historical narrative. As such, further study and exploration of a broader range of contested spaces is considered advantageous.

Conclusions

  Findings from this study show that 'the legacies of the conflict impact upon people's (im) mobility' (Kappler and McKane 2019, 5). This extends to PSTs and, if left unchallenged, to the opportunities afforded to their pupils. Barriers to entering into liminal contested spaces endure, engineered by the 'Troubles'; galvanised by nearly a half century of division; and accessible only now, to some degree, through peace. For PSTs, these barriers include a perceived lack of community and/or pupil readiness, their own or pupil perceptions of the locality and, concern for pupil wellbeing.

  ICT and digital technologies can generate spatial experiences that are real enough to be pedagogically important (Fenwick et al. 2011). The data presented above attest to the potential for brief, immersive VR experiences to be sufficiently affective as to generate emotive responses and ameliorate some degree of concerns across an ethno-sectarian divide in Northern Ireland.

  Whilst this exploratory study was modest in scale, there is evidence that it had an impact on making 'real' the space where such an iconic event took place. The 'reality' for some participants, from both the Protestant and Catholic communities, was an emotional experience but there was also the feeling, predominantly amongst those who grew up in Protestant areas, that it countered the mythologised narratives and perceptions associated with this 'locus of memory' (Hebbert 2005); serving to make the extraordinary, ordinary - in fact, 'normal', and in turn, helping participants to counter the partisan versions of the past.

  The possibilities for development of VR applications are considerable, with potential to be powerfully transformative. In the Northern Ireland context, there are possibilities in having communities virtually explore each other's spaces, helping to demystify

them and establish them as 'safe'. This could encourage real movement and in-spirit community conversations, helping to address any permanence in liminality. While its use might be clearest in post- conflict situations, it is not restricted to those. More widely, a post-COVID-19 world may limit travel for groups for some time, and international travel for school groups may be even more restricted. This technology could allow educators to immerse learners in segregated southern states of the USA or to explore the partitioning of the island of Ireland and the establishment of two parliaments in 1921/22 as part of the Decade of Centenaries. Socially, VR's capacity to provide a safe 'way in'; raise awareness; enhance understanding; develop empathy; and share and challenge narratives of political and community memory that have become embedded in liminal 'spaces of fear', is worthy of further inquiry.

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