

Hacking the Museum: *Mandela27* – A Democratic DIY Pop-Up Installation

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Abstract

In *Mandela27* the museum was ‘hacked’ to create a democratic Do-it-Yourself (DIY) pop-up exhibition, inspired by the story of Nelson Mandela’s incarceration. The installation tells the story of the journey from apartheid to democracy and reconciliation in South Africa through a 360 video, archival photographs, a digital game and an interactive timeline – all displayed from within a symbolic reconstruction of Mandela’s cell in Robben Island Prison.

The project succeeded in involving a range of diverse audiences, including visitors from under-represented social groups, through its design as a low-cost, pop-up physical/digital installation. It was the design of *Mandela27* that allowed it to be made available and freely accessible online across Europe and South Africa, where it has been displayed in multiple ways by local communities. Since 2015, the installation has been exhibited at over 50 venues to over 184,000 people and is still touring in 2023.

Keywords: Hacking, Museum, Pop-Up, Democratic, Mandela

Introduction

As the ferryboat chugged into the harbour on Robben Island the light was fading and the wind whipped round the large stone walls built by the prisoners many years ago. Only a handful of residents disembarked along with our project team, whilst a small queue of day visitors waited to board the boat back to Cape Town. Nelson Mandela, who was a lawyer, freedom fighter, leader of the African National Congress and finally President of South Africa, spent most of his twenty-seven years of incarceration as a political prisoner at Robben Island Prison, after being convicted of sabotage whilst fighting the oppressive apartheid regime.¹ Driving through the bleak and by now mostly darkened landscape of the island, we gained the smallest of insights into what life must have been like in 1964 when Mandela arrived here.

2013 Diary entry from Jacqueline Cawston’s stay on Robben Island with the project team.

The short epigraph above sets the scene for this article, which focuses on the international *Mandela27* project: a pop-up, hybrid (i.e. physical and digital) exhibition, inspired by the story of Nelson Mandela’s time at Robben Island Prison. Based on the dimensions of Mandela’s prison cell, our project team² created a symbolically-charged, mobile installation (Figure 1), incorporating digital media, a video game, a slideshow from the UWC-Robben Island Mayibuye Archives in South Africa,³ and a set of posters designed by young South African students,

telling the story of the country's journey from apartheid to reconciliation.



Figure 1: *Mandala27 at Brussels City Hall for the International Day for the Elimination of Racial Discrimination, 2014. Photo TCS for Mandela27*

What we found was that this small, simple exhibition made an impact, precisely because it was designed to be portable, partially through the use of digital elements, which made it easier to engage with and take out to a diverse audience.

Curators have been seeking ways to connect under-represented social groups with culture and heritage for decades (Hooper-Greenhill 2004, 2006; Genoways 2006; Paris 2006; Parry 2007). In particular, Simon's seminal work *The Participatory Museum* (2010) galvanized the debate on participation and co-curation in the museum sector, whilst scholars such as Giaccardi (2012), Drotner and Schröder (2014) and Kidd (2014) have highlighted the importance of heritage digitalization to enhance audience participation.

Yet, despite the concerted efforts of curators and museum staff, the uncomfortable truth remains that museums are the least diverse of all the arts venues in England.⁴ In the UK, overall, 44 per cent of museum audiences are over the age of 55,⁵ and, although families and school groups make up a large proportion of museum audiences, they are most likely to come from affluent households.⁶ Against this background, recent reports on immersive museum experiences and the museums of the future have called for inclusiveness and increased participation through the democratization of the museum.⁷ The moral imperative for equal and diverse visitor engagement gained further momentum in 2020 with the emergence of the Black Lives Matter campaign,⁸ which challenged western heritage sites often curated through the lens of colonialist ideologies. *Mandela27*, like many other recent museums and exhibitions, aimed to shine a light on difficult heritage and thereby increase the scope and diversity of audience participation. It was thus aligned with the current critical consensus that '[t]he museum of the future will see a shift in emphasis and power from being "for the people" to being "of the people"'.⁹

The design of *Mandela27* – specifically, the opportunity for audiences to 'hack' (or to remake and remodel) the elements of the exhibition according to their individual situations –

increased further the engagement of diverse social groups with the installation. In its current popular meaning, the term ‘hacking’ denotes a political strategy or a form of politically-motivated disruption carried out by activists, such as Anonymous, WikiLeaks and the Occupy movement, to mention but a few (Costanza-Chock 2012; Coleman 2014; Hintz 2018). Although the project team has incorporated aspects of this definition into the conceptual design of *Mandela27* – by, for example, including references to the political unrest of the apartheid period and the influence of culture upon regime change – they were inspired primarily by the original meaning of ‘hacking’ coined by the Tech Model Railroad Club (TMRC), a student organization founded in 1946 at the Massachusetts Institute of Technology. In this earlier context, ‘hacking’ was used to describe the actions taken by the members of TMRC to remake elements of model railways quickly and economically:

The essence of a ‘hack’ is that it is done quickly and is usually inelegant. It accomplishes the desired goal without changing the design of the system it is embedded in. Despite often being at odds with the design of the larger system, a hack is generally quite clever and effective (Levy 1984: 14).

In addition to ‘hacking’, *Mandela27* relied on digitalization as another design strategy to boost audience participation and diversity. The emergence of digital technology in what we now consider to be ‘the postdigital museum’ (Parry 2010; Berry 2014) has increased the scope and range of participation in museums and heritage institutions (Smith and Iversen 2014). According to Parry (2013), museums have entered a new ‘postdigital’ phase of digital-technology integration, in which the technology is so pervasive that ‘the digital’ can no longer be seen as a separate domain; even the term ‘interactive’ has become somewhat outdated. Following the operational principles of the postdigital museum, organizations such as Museum Next¹⁰ and the Museums Association¹¹ regularly disseminate innovations in digital heritage. When immersive technology – such as 360 video, augmented and virtual reality – became available and affordable, we saw a new dawn in the portability of virtual heritage. Museums are now able to widen their reach through digital exhibitions and digital artefacts, as recorded by John Bonazzo,¹² Bekele et al. (2018), Holloway-Attaway and Rouse (2018), Charlotte Coates,¹³ and Jenny Kidd and Eva Nieto McAvoy.¹⁴

Despite the aforementioned wealth of literature on participatory – including travelling – exhibitions, there has been little research to date into the specific methods and benefits of low-cost, pop-up exhibitions where the audience is given permission to decide how the exhibition should be designed – a gap this article aims to address.

We begin with a description of the Creative Europe *Mandela27* project, providing details of the installation and the thematic inspiration for the project, namely, the informal learning that took place at Robben Island Prison during Mandela’s incarceration. We then critically analyze the *Mandela27* project in the context of experimental exhibition spaces, applying the concept of Vygotskian ‘more knowledgeable other’ (Vygotsky 1997), translated here as a ‘digital’ other. We follow up with a discussion about the democratization of the museum through informal learning and offer insights into increasing the reach of difficult heritage through digital, flexible, and low-cost installations.

The Project and the Study: An Overview of *Mandela27* as an Installation and Action Research Inquiry

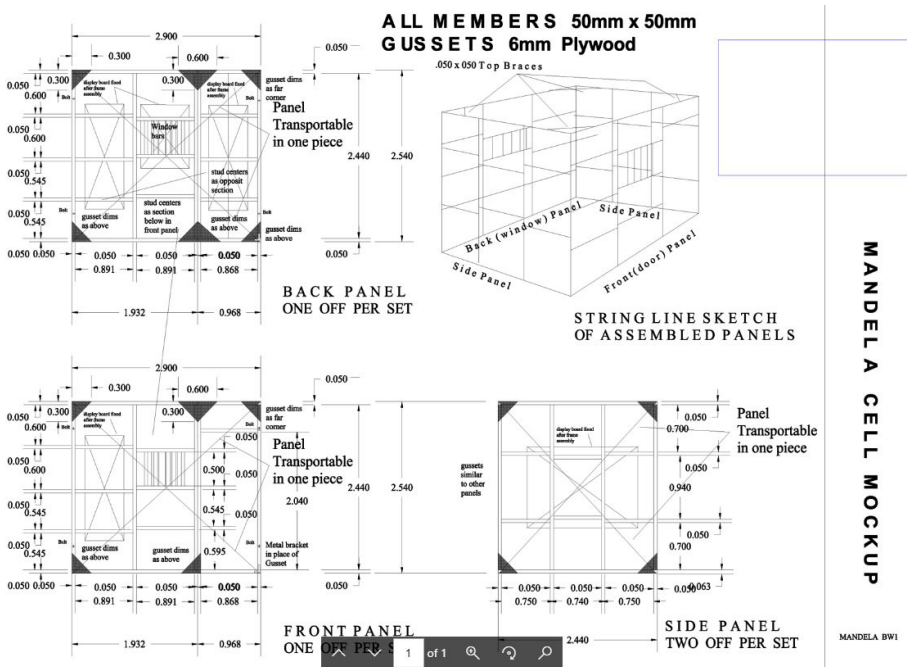
The project, entitled ‘*Mandela27* – a cultural experience across the European Union and South Africa’,¹⁵ was focused on the history of Nelson Mandela and the globally recognized Robben Island Museum,¹⁶ where Mandela was incarcerated for most of his 27 years of imprisonment (1963-1990). The project was a collaboration between EU and South African partners, led by Coventry University and funded by the EU Creative Europe Fund. Complying with the remit of the Fund, *Mandela27* aimed to engage diverse audiences and communities across Europe and South Africa in the history of apartheid and the success of political struggles towards democracy in the South African context and beyond.

The central focus of the *Mandela27* project was a physical pop-up display of Mandela’s cell, which – although not an exact replica – recreated the dimensions of the original on

Robben Island as a rough-and-ready wood and metal version, containing the few items allowed by the prison authorities when Mandela arrived: a blanket, a stool, eating utensils, a plate and a bucket.

As the project team wanted to create a format that resonated with younger generations in particular, the inclusion of digital elements was essential. Hence, we designed the physical installation to function as a ‘hook’ upon which to ‘hang’ these digital components or assets, showing cultural stories and works, as well as the history of political struggle across Europe and South Africa during the years that Mandela was incarcerated. Specifically, the digital elements included: a 360 video; video-recorded interviews with a political prisoner and a prison guard; a crowd-sourced timeline; a digital game about life at Robben Island Prison; photographs and videos sourced from the Cape Town Mayibuye archives, with particular reference to apartheid and the struggle for freedom; as well as instructions on how to build your own *Mandela27* pop-up cell. These instructions (Figure 2), as with all the other digital elements, were available through an open-source website, and anyone could download and recreate the structure for themselves.

Figure 2: *DIY Cell Instructions 2014. Designed by David Powell, Elderberry*



Also available online were demonstrations and suggestions as to how the installation could be built and remodelled. Even though the installation was designed to be as inexpensive as possible, the materials proved unaffordable for some communities and, therefore, we encouraged them simply to place the display in the corner of a room, or to mark the dimensions of the space on the floor. Issues around the lack of internet connectivity were resolved by condensing the digital infrastructure to a pen drive that only needed a single computer and screen. Although in most versions of the installation the digital elements were incorporated into the physical cell, in some versions they were mounted outside the cell (Figure 3) or projected onto a nearby wall.



Figure 3 *Mandela27* at The Herbert Art Gallery and Museum, Coventry 2014. Photo Jacqueline Cawston

To narrate the history of apartheid and the role culture played in promoting democratic change, nine illustrative posters were designed by South African students. The posters and the project notes, which offered guidance for teachers, cross-referenced the political unrest in South Africa with European events, such as the rise of Solidarity in Poland and the fall of the Berlin Wall, which also led to increased equality and democracy. As reported back to the team by teachers who engaged with the installations, the teacher notes were considered to be one of the project's most important assets to facilitate learning.

Some debate ensued within the team as to the language of the posters and teacher notes, but it was decided that we would provide posters in IsiXhosa, Afrikaans and English. The decision led to the serendipitous use of these posters as language learning tools in addition to their historical and cultural pedagogic value. Subsequently, they were also translated into Swedish, Danish, Italian, French and Slovenian by

teachers using the exhibition for their students, as *Mandela27* travelled from the corrugated-iron community buildings in South African townships to the architect-designed libraries in Scandinavia.

Audiences across these different contexts were encouraged to 'hack' our plans and create their own installation spaces by selecting objects, both physical and digital, from the available project resources; this was made possible by the availability of both the physical and digital elements of *Mandela27* and the project team's decision not to impose strict curatorial instructions. The result was a unique 'hackability' of the installation which allowed its adaptation to new contexts and locations. Sometimes segments were transported by truck and exhibited between one and four weeks. Sometimes it was replicated by communities from the online drawings and instructions; even single installation elements were downloaded and recreated.

In still other cases, the exhibition posters were mounted in a room and the cell was marked out on the floor with chalk or sticky tape.

The overwhelmingly positive response to *Mandela27* in South Africa prompted the Robben Island Public Heritage Department to find ways of continuing the project, which subsequently morphed into *Beyond Mandela27* – a mobile exhibition with a more robust version of the travelling cell (Figure 4). The aim was to ensure that the mobile cell reached young people, especially those from impoverished rural areas without the means to visit Robben Island Museum. Between 2017 and 2019, the *Beyond Mandela27* concept was integrated into Robben Island Museum's Outreach Programme, which visited all nine South African provinces, including community centres and schools, prior to the outbreak of the COVID-19 pandemic.



Figure 4 *Beyond Mandela27* Mobile Cell. Photo Nomatshayina Mfeketho

An Action Research Inquiry into Creating the Pop-Up DIY Heritage Installation *Mandela27*

The *Mandela27* EU project had a very practical aim and objectives: it was never intended to be a pure research project. However, during the project implementation, we were curious to understand the existing gap in knowledge regarding the creation of an engaging, pop-up and low-cost DIY heritage installation, and the issues thereof.

We considered the scholarly and public discussion around DIY exhibitions in the

community and how they promote informal learning by encouraging debate, particularly in the context of difficult subjects. We wanted to know if providing guidance and open-source digital resources for the audiences to create their own installation can make the content more accessible, affordable and more meaningful to them. Consequently, the ethos of *Mandela27* contrasted sharply with the 'don't touch' message sometimes given by museums, as well as with the demands of exhibition designers that the artistic integrity of their work be respected, often to the detriment of the viewer's engagement and interpretation. The installation we produced, along with its associated educational materials, was designed to be touched, changed, interpreted and adapted.

In designing *Mandela27*, we adopted a constructivist approach (Dewey 1933), whereby meaning is created through interaction with real-world phenomena, as well as through observation and empirical human experiences (Gray 2013). This was done with the view to understanding the impact of the specific format of the exhibition we chose and, ultimately, to increasing the reach and engagement of local communities with *Mandela27*. Relying on action research as 'a social practice, a practice changing practice' (Kemmis et al. 2013: 2), we collected mainly informal and anecdotal evidence, such as visitor figures from the venues that displayed the installation and audience feedback from the live touring, as well as information from the project reports submitted to the EU funder.

The global dissemination of the project – the DIY installation toured across the UK, Sweden, Belgium (Figure 5), Denmark, Italy, and South Africa – ensured that Mandela's cell was re-created in a wide variety of venues, from Brussels City Hall and the Mandela Museum to libraries in Sweden and sports halls in South Africa.

Looking at the Mandela installation made me realize how small it was (the cell), how did Mandela stay there for all those years and come out as a great leader? It has really made me think about what was going on, the slide show is very emotional.

Visitor to the pop-up installation, BELvue Museum, Brussels 2014.¹⁷



Figure 5 *Mandela27* at the BELvue Museum, Brussels 2014. Photo Jacqueline Cawston

By the end of the project, the installation had toured across six countries stopping at over 50 venues, with 28 of those venues in South Africa, including townships and schools where communities would not have the opportunity to visit city institutions. As reported by one of the visiting teachers:

Many learners were experiencing the Mandela cell for the first time. They did not have a picture of how life was for a black person under the apartheid regime. It helped young people in my school to develop various skills and motivated them to be good citizens who are ready to protect and respect democracy.

Life Orientation Educator, Isilimela Comprehensive School, Langa, Cape Town, 2014.¹⁸

Based on the extended life of the project (still touring in 2023), the number of venues and visitors, and the feedback received, we established that providing open-source guidance and resources for the audience to create its own installation makes the heritage content more accessible and affordable. Although longitudinal research into the attitudinal change of visitors was not possible, the video and anecdotal evidence from teachers and community leaders suggested that experiencing the DIY exhibition in the community encouraged discourse and debate.

Impact was evidenced in the development of further projects; for example, the *Lanchester Interactive Archive* is a micro museum in Coventry University Library where we created an outreach programme built on the *Mandela27* pop-up experience.¹⁹ A further example is the EU interactive heritage project *Grandma's Story*,²⁰ which was also inspired by *Mandela27*.

In the remaining sections of the article, we will discuss the conceptual vision behind the project and what its implementation says about this type of exhibition. Taking our influences from theories of informal learning (Rogoff *et al.* 2016) and the Vygotskian sociocultural model (Ayman & Nolley 1992), we discuss how digital assets in the exhibition can perform the role of the 'more knowledgeable other' by dispensing informal learning and involving the community, especially with difficult subjects such as apartheid and inequality.

Informal Education inspired by the Political Prisoners at Robben Island

At present, the Robben Island Museum hosts an educational facility, where the project team briefly stayed and where they were made graphically aware of Mandela's experience through conversations with the ex-political prisoners who now act as guides and educators. Interviews with one former prisoner and a white prison guard, which were recorded for the project,²¹ provided vital context to the situation during Mandela's time. The team was particularly influenced by the stories about informal education that took place during Mandela's incarceration at Robben Island, which further shaped the focus on informal pedagogy in the project design.

The pop-up installation of Mandela's cell was designed to show how sparse and intolerable life was on Robben Island at the time of Mandela's arrival, when even books, newspapers and writing material were forbidden (Mandela 1994). In 1965, Mandela and many other political prisoners were assigned to hard labour in the barren, sun-baked lime quarry on the island.²² Initially, they were told that this work would last six months; in fact, it lasted thirteen years. The guards were all white men, many of whom were ill-educated and felt threatened by some of the political prisoners who held university degrees. It was those prisoners who organized themselves to educate fellow inmates as well as they could, verbally and through smuggled notes, within the strict boundaries set for them.

The lime quarry was an area of Robben Island where the prisoners were set to work breaking rocks and moving stones under the supervision of prison guards, some of whom delivered brutal beatings to those deemed to be talking or not delivering enough effort. And yet, this site became a place of learning and intellectual debate, as the prisoners discussed politics and taught each other side-by-side whilst working there. As Mandela wrote in his autobiography *Long Walk to Freedom*:

In the struggle, Robben Island was known as "the University". This was not only

because of what we learned from books, or because prisoners studied English, Afrikaans, art, geography and mathematics, or because so many of our men like Billy Nair, Ahmed Kathrada, Mike Dingake and Eddie Daniels earned multiple degrees. Robben Island was known as “the University” because of what we learned from each other (Mandela 1994: 76).

The social and connected peer-to-peer learning echoes the theories of educational psychologist Lev Vygotsky, who believed that access to culture was a large factor in cognitive development, and that social elements were crucial to the learning process. Vygotsky focused on the connections between people and the sociocultural context in which they act and interact through shared experiences (Vygotsky 1997). He referred specifically to knowledge and learning being transferred by the ‘more knowledgeable other’ (MKO), which represents someone who has a better understanding or a higher ability level than the learner, with respect to a particular task, process or concept. This would normally be a teacher but, in the case of the political prisoners on Robben Island, the MKO was a fellow inmate.



Figure 6 Mandela27 at The SA National Library in Pretoria, South Africa 2015. Photo Werner Ravyse

The *Mandela27* installation took inspiration from this communal process and the project team designed its digital platform, and the learning made available through this platform, alongside a peer-to-peer knowledge transfer. In a sense, the digital platform itself became the MKO, which was further established amongst the communities adopting a version of the pop-up installation.

Digital Informal Learning in Action at Mandela27

As part of our project, we developed several digital assets as described before (Figure 7). The *Mandela27* digital game, ‘the Dark Voyage’, is designed in the style of a dark graphic novel and follows the journey of a political prisoner incarcerated at Robben Island. The scenes reflect the overall narrative of the installation, which moves from hardship in prison to democracy in South Africa. The active and engaging animations attracted visiting students’ attention, which helped achieve the project aim to draw in audiences from under-represented social groups.



Figure 7 Digital platform created by TCS as part of the Mandela27 project 2014. Screenshot Jacqueline Cawston

When the installation started touring in 2014, bandwidth and access to individual digital devices were limited, especially in less affluent communities. To overcome this challenge, most venues presented the *Mandela27* game as a video. This enabled visitors to view the game without the need to possess a smart mobile phone or tablet. We also found that playing the digital game slowed visitors' movement and caused bottlenecks, until we converted it into a video. Having designed the DIY installation to work without the benefit of institutional space, we recommend that the flow of visitors for such exhibitions should be planned in advance.

When creating *Mandela27*, the project team drew inspiration from literature that discusses immersive experiences and spaces (or places) for visitor interaction, such as Smith and Iversen (2014) and Greffe *et al.* (2017), which present the changing emphasis of debate on museum visitors' engagement

over the last decade. Similarly, we relied on Connolly *et al.* (2012), Merchant *et al.* (2014) and Arnab (2020) for evidence of digital games' positive impact on student learning through increased motivation and engagement. Compared with the examples discussed in these studies, *Mandela27* had the distinct feature of being a pop-up installation co-designed by the community through a unique combination of physical and online elements.

Recent advances in digital technology have enabled people to engage with history through narratives preserved in archives at many locations. Of course, there are still limitations: internet access must be available; the content should not be behind a paywall; access should be provided for visually impaired people; and the visitor must have the digital skills needed to engage with the content. Still, despite these limitations, digital literacy is widespread and growing exponentially, with people rapidly changing the way they consume digital media content.²³

The ever-growing digitization of mobile access, on-demand viewing, and social media have already changed the concept of visiting (usually once) an exhibition or museum. This plethora of digital media viewing choices provides more creative opportunities for culture and for the artist, curator or teacher than ever before.²⁴ Larger museums such as the Natural History Museum in London,²⁵ the Louvre in Paris²⁶ and the 360 exhibition at the Renwick Gallery of the Smithsonian American Art Museum in Washington, DC,²⁷ have made significant efforts to bring their exhibits to life through dynamic exhibitions and games, including augmented and virtual reality. Similarly, Google Arts & Culture²⁸ has been collaborating with cultural institutions for several years to place their exhibits online for a global audience. Interactive digital heritage displays are known to have the potential to stimulate creativity and imagination in the user (Ciolfi and Bannon 2007; Bearman and Geber 2008; Herlitz and Westin 2018), as well as the potential to open up new avenues for engagement.

Difficult Museum Heritage

Museums about difficult heritage are not new: Auschwitz-Birkenau, the largest of the Nazi concentration camps, opened as a museum in 1947 as a memorial to the Holocaust victims. In South Africa, District Six Museum opened in 1994, telling the story of the destruction of the area under apartheid, and Robben Island Prison opened as a museum in 1997. These sites of relatively recent dark heritage give victims a voice and can serve as memorials and places of education.

Museum spaces and exhibitions, we believe, are meant to induce thoughtful enquiry and sometimes, possibly, empathy and outrage. One of our concerns as a project team was how to address a traumatic past, sometimes referred to within the context of museum learning as a 'difficult exhibition' (Bonnell and Simon 2007). In our work, we faced dilemmas about engaging visitors in discussions on cultural identity and memory, similar to those faced by curators of more recent museums, such as the Apartheid Museum in South Africa (Rankin and Schmidt 2009), the Immigration Museum in Australia (Witcomb 2013) and the National Historical Museum of Chile (Villar and Canessa 2018).

With our project, we wanted to engage people in how the history of political change affected cultural relations. Of course, any recent political struggle can be a touchstone for the anger and high emotions of a nation. Apartheid is a particularly sensitive and emotive subject to discuss with communities in South Africa, which was reflected in the physical and digital objects of the installation. In Europe, the political regime of apartheid was more of a distant issue, but there was common ground to be explored in the project, specifically around the discourse of racism and suppression of freedom – topics which are common to all countries and nationalities. Mandela, with his reputation for non-violent protest combined with his success in establishing democracy and freedom in South Africa after 27 years of imprisonment, was the ideal figure to form a bridge between the two regions of Europe and South Africa.



Figure 8 Mandela27 Mobile Cell donated by the Cape Town Department of Home Affairs to Robben Island Museum 2017. Photo Nomatshayina Mfeketho

During our project discussions with high-school students of the 'born free' generation (young people born after 1994, when a democratic system was installed in South Africa), it became clear that the historical events narrated through *Mandela27* weighed heavily upon them:

Seeing the actual cell where Tata Mandela was put in for so many years, makes me realize the hardship our grandparents and parents went through. I feel angry, but at the same time humble and thankful to them for what they had to go through in order for us to be where we are today.

Student at St Joseph's Marist College, Cape Town, South Africa 2014.²⁹

This example illustrates how the visitors of *Mandela27* received active knowledge of the oppression under apartheid, capable of transforming them through what Felman and Laub (1992) describe as 'a crisis of witnessing'. In a similar way to Felman and Laub, whose teaching about the Holocaust transformed their students, teachers used the resources of *Mandela27*

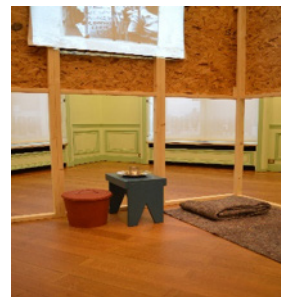


Figure 9 Mandela27 inside BELvue Museum 2015. Photo David Powell

to educate students about citizenship, languages and history in the context of apartheid, inequality and prejudice.

The use of the Mandela replica cell gave our learners first-hand experience of what it was like for a black person under apartheid. I could see my learners experiencing the pain that was felt by the people under the apartheid regime. Some of them [were] even crying.

Life Orientation Educator, St Joseph's Marist College, South Africa 2014.³⁰

In libraries in Sweden, the cell, the posters and the teacher notes were used to explain racial prejudice against immigrants, creating active knowledge and a crisis of witnessing. The installation was used in schools in South Africa (Figure 8) and in Europe, even for very young children, to create debate around the difficult subject of apartheid and racial inequality.

We used *Mandela27* to explain apartheid very simply; the children were outraged when I said that some of them could sit on the chairs, but others had to sit on the floor; they were upset and some of them shouted 'Miss that's NOT FAIR!!'

School Teacher of 6/7-year-olds, Birmingham, UK, 2014.³¹

We aimed to provoke a reaction from our visitors to *Mandela27*, taking inspiration from Diana Popescu's reflection on the design of the Holocaust Exhibition at the Imperial War Museum: 'Design can promote an experience of unsettlement which appeals to both cognition and emotion. It facilitates learning and is crucial in articulating the factuality of the Holocaust' (Popescu 2020: 238). We, too, wanted to instil in the audience of *Mandela27* a feeling of 'empathetic unsettledness' (Rankin and Schmidt 2009), which visitors reported was achieved through the poignant messages given by the plurality of media. Many said that looking through the bars of the model cell (Figure 9) gave them a true sense of the compact sparseness and bleakness of the actual cell on Robben Island.

Pop-up Heritage

As mentioned above, *Mandela27* popped up in schools, galleries, sports halls, town halls and even in a correctional facility. This small, disruptive, hacked museum installation facilitated learning outside of the typical institution and engaged diverse communities. The 2020 report commissioned by UK Research and Innovation (UKRI), *Mindsets for Museums of the Future*, calls for more installations like *Mandela27*.

Museums of the future will appear in unexpected places, inserting themselves in local environments to creatively disrupt the everyday and invite new forms of interaction. Drawing on the buzz of pop-up retail and hospitality experiences, travelling museums have an opportunity to educate, inspire and facilitate learning outside of the typical institutional setting.³²

Henri Lefebvre argues in his work *The Production of Space* that societal space is 'a tool for thought and for action' (Lefebvre 1991: 26). Similarly, the political-philosopher Chantal Mouffe makes the case for spaces that provoke debate in her work *Agonistics: Thinking the World Politically*. In it, Mouffe states that 'museums and art institutions can contribute to subverting the ideological framework of consumer society', thereby becoming 'agonistic public spaces' (Mouffe 2013: 100).

Pop-up museums can provide such agonistic spaces. In 2019, Rob Sharp commented on a new wave of museums 'giving power back to the people by co-producing content with communities and focusing on uniting people around causes rather than places'.³³ The Museum of Ordinary People, the Climate Museum UK, the Museum of Transology, Queerseum, and the Museum of Homelessness, to name a few, are similar to *Mandela27* in uniting communities around a particular message or story. Often these organizations have lacked a physical home, preferring to take portable and flexible exhibitions out to the community.

The merit of pop-up centres in giving 'place or space' value³⁴ was further defined by

Mandela27. We argue that communities' involvement in making their own versions of the cell, by deciding which assets to use and how to use them, could be described as participation at another level, and that this type of benign hacking of the installation can be seen as an example of museum democratization. However, it has to be acknowledged that the practice of hacking by the audience can come into conflict with curatorial control. We gave people the freedom to choose the design of the display and, with the installation instructions and digital assets online, there may have been instances where the installation was used outside of the original concept of the project. The project team has no knowledge of whether or not such instances occurred, but the possibility thereof is part and parcel of museum democratization. As Kidd and Cardiff observe:



Figure 10 A cardboard version of the Mandela27 pop-up installation at The Manenberg Community Library, South Africa 2015. Photo Nomatshayina Mfeketho

There is a general agreement that it is interesting to hear multiple voices or opinions or contributions to the broader understanding of the collection but there is a whole range of opinions from, "It needs to be right up there

next to what the curators think" to "No it needs to be entirely separate, we don't come to Tate for opinions, we come for expertise" (Kidd and Cardiff 2017: 50).

In the *Mandela27* low-cost installation, the project team wanted to reflect a feeling of audiences coming together and being free to choose how the exhibition should be displayed; yet, as we found during the project, democratization has its own challenges. At times, the agency of the audience clashed with some of the project team's pre-conceived notions of curation; in one such case, in a township in South Africa, Mandela's cell was built as an almost exact replica of the original in Robben Island Prison, rather than our perceived interpretation of the cell as a 'rough and ready' physical metaphor.

As a radical installation, *Mandela27* created such democratic spaces designed to enable otherwise marginalized social groups to engage with its historical, political and digital content and form through their own traditional and disruptive media curation. The installation was never intended to be a slick replica of the cell, but an embodied democratization of the story of culture affecting political change in order to provoke debate and discussion.

Accessible and Affordable or a Fast-Food Experience: The Critical Debate on Pop-Up Exhibitions

In most other cases, low-cost local resources, such as wood, metal, polystyrene and cardboard, were used by communities to hack *Mandela27* (Figure 10). As a project team, we turned down offers from organizations to exhibit the installation in contexts where very expensive construction materials and promotional campaigns were requested. Apart from the fact that we had a very small budget, this went against our philosophy of being affordable and available to all communities.

Mandela27 epitomized the strengths that Deborah Mulhearn identifies as typical of DIY exhibitions: 'pop-ups provide museums with fresh opportunities to reach new audiences in interesting and unusual spaces'.³⁵ She writes about a variety of pop-up museums: pop-ups in unexpected places, such as pubs, libraries, supermarkets, foodbanks and empty high street shops. Some of these were part of a museum's outreach programme or were used to gain feedback for new or re-invented museums. An example of the latter is The Box museum in Plymouth, where the museum staff held a pop-up exhibition on the partly empty fifth floor of a House of Fraser store to gauge opinions about a new museum due to open in 2020.³⁶ Pop-ups can display only a limited amount of content, but they can engage communities and encourage further reflection and investigation into history. They can offer greater opportunities

for co-curation outside of the constraints and traditions of archives, museums and galleries. As Manuel Charr comments, '[c]rucially, the pop-up concept is something that the younger audiences feel they can engage in. In some cases, they feel like they "own" the concept – that it is theirs and theirs alone'.³⁷

Certain types of pop-up museums, such as some obviously commercialized Instagram experiences, have been criticized as temporal social-media playgrounds with little knowledge exchange on offer. After visiting the Museum of Pizza, the Museum of Ice Cream Pint Shop and the Color Factory in the summer of 2018, Amanda Hess of the New York Times wrote: 'The most that these spaces can offer is the facsimile of traditional pleasures. They take nature and art and knowledge seeking, flatten them into sight gags and stick them to every stray surface'.³⁸ Similarly, back in 2013, Silvia Giordano challenged the value of pop-ups as permanent institutions: 'The marketing ideology that controls our society, weary of consumption, has put the emphasis on the entertainment goal of exhibitions, especially if they are extraordinary and produce surprise and admiration between the audience' (Giordano 2013: 466).

Pop-up museums have been criticized for leaving out important content, but they can be an engaging temporal experience for under-represented social groups: those who cannot travel to traditional institutions; those with mobility issues; as well as younger audiences. What both Hess and Charr agree on is the appeal of the pop-up Instagram museums to younger visitors and, especially, the elusive 16-to-24-year-old group, of which only 10 per cent visit museums in Britain.³⁹ Given that the largest demographic of museum visitors in Britain (41 per cent) is over the age of 55,⁴⁰ Pop-up Instagram appeal is something to consider or recommend for museums wishing to attract younger audiences or to raise much-needed income.

Although the *Mandela27* pop-up included a digital game, its aim was not to entertain as much as to inform and engage. However, if we were to re-construct the *Mandela27* installation, we would be mindful of including Instagram opportunities in the design. Manuel Charr says that:

Although the idea of a pop-up museum may seem like it is the equivalent of a fast-food experience when a gourmet meal is on offer, the fact is that some people need to try a sample before they will commit to a fine dining experience.⁴¹

Pop-up museums offer different but equally valid experiences and opportunities, compared with their traditional counterparts. What marks out *Mandela27* as unusual is that we allowed the community to display the exhibition and the assets in whatever way suited their experience and budget. We encouraged community pop-ups, but *Mandela27* was also exhibited in several museums in Europe and South Africa. Our experience has recognized the potential of digital technology to resolve the limitations of traditional museum spaces, and to provide new or to enhance existing opportunities for exhibition and learning. Rather than ignore traditional museums, galleries and institutions, we should put them to good use and actively turn parts of them into DIY cultural spaces. What enabled *Mandela27*'s success was exactly this pop-up DIY nature of the installation and the flexible spaces that were created around both the physical and digital educational learning materials the project provided. This allowed the installation to exist as a cultural space of debate, both within and outside the institution.

Conclusion

The testimony of the political prisoners at Robben Island showed us that formal education is only a part of what learning can be, and that acquiring knowledge and skills from peers, following Vygotsky's MKO model, is evidence that learning can be tailored to the individual needs of a community. As we saw in the *Mandela27* project, the learning process changed as a result of the specific context: in schools, teacher notes and posters proved essential elements of the installation, whilst in museum and community settings, the physical cell, as the central object of the installation, turned out to be the main focus for reflection. Within the remote local communities, it was often the digital information provided through videos and serious games that served as the MKO. The installation was taken outside the museum institution to what we call 'democratic DIY cultural spaces', spaces designed by the people to provoke debate, grounded in the community, on the difficult subject of apartheid and racial inequality.

Mandela27 was regularly hacked in the original sense of the term, being 'inelegant' and 'quite clever and effective'. Over fifty venues across Europe and South Africa used the

installation, each creating a version different from the rest. It is arguably the biggest achievement of the project that those changes and transformations of the assets enabled communities to engage with an installation that they would not otherwise have the means or resources to visit. Bringing the museum to diverse communities does present many challenges to museum professionals in terms of curation and display, compared to traditional exhibitions in museums; however, it can be a cost-effective and innovative way of engaging and promoting culture.

Engaging visitors/learners was essential to our project and we discovered that what resonates with one community may not necessarily be as important to another. Hacking can be done, with permission, and with the involvement of audiences in the interpretation and re-articulation of historical narratives. Although most of the development activity took place during the funded EU project which ended in 2016, between 2017 and 2019, the *Beyond Mandela27* concept was integrated into Robben Island Museum's Outreach Programme, which visited all nine provinces of South Africa. The installation has travelled to seven countries and has received over 184,000 visitors to date and is still touring and in demand. It was exhibited in Slovenia in 2020, before the COVID-19 pandemic brought the museum world to a halt, and it is still used for teacher training. Reflecting on one of the most enriching and rewarding projects we have ever worked on, and for the reasons we have outlined here, we suggest that future cultural archive projects consider adding democratic, low-cost DIY pop-up installations to their exhibition plans.

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Notes

1. Nelson Mandela Foundation, 'Trials and Prisons Chronology', 2021. <https://www.nelsonmandela.org/content/page/trials-and-prison-chronology>, accessed 14 January 2021.
2. The project team for the EU Project '*Mandela27* – a cultural experience across the European Union and South Africa' was a collaboration: Dr Jacqueline Cawston of Coventry University, UK (Principal Investigator and Project Lead); Dr Alex Woolner of Coventry University, UK (Project Manager); David Powell of Elderberry, Sweden (production of teaching materials, design of the pop-up cell and background research); Nomatshayina Mfeketho and Thandeka Teyise of Robben Island Museum, South Africa (content provider, research into South African heritage); Werner Ravyse, Martin Booth, J. T. Terblanche, Diane Lee and Twonge Kanchenche of North West University, Vaal Triangle, South Africa (serious game and graphic design and research into South African heritage); and Kim Vilein of TCS, Belgium (dissemination).
3. UWC-Robben Island Museum Mayibuye Archives, situated at the University of the Western Cape, South Africa, consists of unique multimedia collections depicting multiple facets of resistance of the freedom struggle that was waged against apartheid from within and outside the borders of South Africa. The Archive is funded by the Department of Arts and Culture.
4. Arts Council England, 'Equality, Diversity and the Creative Case: A Data Report', 2019. https://www.artscouncil.org.uk/sites/default/files/download-file/ACE_DiversityReport_Final_03032020_0.pdf, accessed 1 June 2020.
5. The Audience Agency, 'Museums Audience Report', 2018. https://www.culturehive.co.uk/wp-content/uploads/2018/11/museum_report_nov_2018_web.pdf, accessed 3 September 2020.
6. Sally Whitaker, 'Hurdles to the Participation of Children, Families and Young People in Museums: A Literature Review', Kids in Museums 2016. <https://kidsinmuseums.org.uk/wp-content/uploads/2018/12/Hurdles-to-Participation.pdf>, accessed 1 March 2020.

7. Jenny Kidd and Eva Nieto McAvoy, 'Immersive Experiences in Museums, Galleries and Heritage Sites: A Review of Research Findings and Issues', Creative Industries Policy & Evidence Centre 2019. <https://cdn2.assets-servd.host/creative-pec/production/assets/publications/PEC-Discussion-Paper-Immersive-experiences-Cardiff-University-November-2019.pdf>, accessed 11 December 2020.
8. Black Lives Matter, 2022. <https://blacklivesmatter.com/>, accessed 1 February 2022.
9. The Liminal Space, 'Mindsets for Museums of the Future', 2020. <http://museumofthefuture.the-liminal-space.com/>, accessed 10 December 2020.
10. Museum Next, 2022. <https://www.museumnext.com>, accessed 1 February 2022.
11. Museums Association, 2020. <https://www.museumsassociation.org>, accessed 1 February 2022.
12. John Bonazzo, 'You Can Explore a Viking Camp in Virtual Reality at This British Museum', The Observer 19 May 2017. <https://observer.com/2017/05/virtual-reality-vikings-british-museum>, accessed 11 April 2019.
13. Charlotte Coates, 'How Museums Are Using Virtual Reality', Museum Next 2019. <https://www.museumnext.com/2019/01/how-museums-are-using-virtual-reality/>, accessed 11 April 2019.
14. Kidd and Nieto McAvoy, 'Immersive Experiences in Museums, Galleries and Heritage Sites'.
15. *Mandela27* – a cultural experience across the European Union and South Africa was funded by Creative Europe, which is the European Commission's framework programme for supporting the cultural and audio-visual sectors (https://ec.europa.eu/programmes/creative-europe/node_en): Programme Culture 2007-2013, Strand 1.3.5 Cooperation projects with Third Countries.
16. Robben Island Museum (RIM) in Cape Town was established by the Department of Arts and Culture in 1997. It is a public entity responsible for managing, maintaining, presenting, developing and marketing Robben Island as a national estate and World Heritage Site.
17. Visitor to BELvue Museum, Brussels, field notes, 2014.
18. Life Orientation Educator, interview by Nomatshayina Mfeketho, digital recording, 10 March 2014, Isilimela Comprehensive School, Langa, Cape Town.
19. Lanchester Interactive Archive, n.d. <http://www.lanchesterinteractive.org/>, accessed 1 February 2022.
20. *Grandma's Story*, n.d. <https://grandmas-story.eu/>, accessed 1 February 2022.
21. *Mandela27*, 2015. www.mandela27.com, accessed 1 February 2022.
22. Robben Island was a place of migration, imprisonment and even slavery from as far back as 1498 (Deacon 1996). Some scholars claim that the rich history of the Island, including that of other political prisoners incarcerated alongside Mandela, such as Robert Sobukwe, the leader of the Pan African Congress, have been overshadowed by 'the principal narrative, what has been described as the "Mandelization" of Robben Island's landscape of memory' (Nzewi 2016: 111). However, there is little doubt that Mandela and the struggle for democracy is the overarching canon that the island is renowned for today throughout the world.
23. Coates, 'How Museums Are Using Virtual Reality'; Kidd and Eva Nieto McAvoy, 'Immersive

- Experiences in Museums, Galleries and Heritage Sites'; Liminal Space, 'Mindsets for Museums of the Future'.
24. F. Manjoo, 'How the Internet Is Saving Culture, Not Killing It', *The New York Times* 2017. <https://www.nytimes.com/2017/03/15/technology/how-the-internet-is-saving-culture-not-killing-it.html>, accessed 7 July 2018.
 25. Natural History Museum, 'Natural History Museum Launches 3D Virtual Tour Technology', 2020. <https://www.nhm.ac.uk/press-office/press-releases/natural-history-museum-launches-3d-virtual-tour-technology/natural-history-museum-launches-3d-virtual-tour-technology.html>, accessed 3 January 2021
 26. Louvre, 'Leonardo Da Vinci, The Virtual Reality Experience', 2019. <https://www.louvre.fr/en/leonardo-da-vinci-0/realite-virtuelle>, accessed 28 January 2021.
 27. Smithsonian AAM, 'WONDER 360: Experience the Renwick Gallery Exhibition in Virtual Reality', 2020. <https://americanart.si.edu/wonder360>, accessed 3 January 2021.
 28. Google, 'Google Arts & Culture', 2020. <https://artsandculture.google.com/>, accessed 22 February 2021.
 29. Student, interview by Nomatshayina Mfeketho and Thandeka Teyise, digital recording, 3 March 2014, St Joseph's Marist College, Cape Town, South Africa.
 30. Life Orientation Educator, interview by Nomatshayina Mfeketho, digital recording, 3 March 2014, St Joseph's Marist College, Cape Town, South Africa.
 31. Primary School Teacher, telephone interview by Jacqueline Cawston, 22 July 2014, Dudley.
 32. Liminal Space, 'Mindsets for Museums of the Future'.
 33. Rob Sharp, 'A Life Not So Ordinary', *Museums Association* 1 July 2019. <https://www.museumsassociation.org/museums-journal/features/2019/07/01072019-a-life-not-so-ordinary/>, accessed 3 March 2022.
 34. Kate Measures, 'My Primary School is at the Museum: Action Research Project', *Kings College London* 2016. <https://www.kcl.ac.uk/cultural/resources/reports/mpstm-final-report.pdf>, accessed 6 June 2019.
 35. Deborah Mulhearn, 'Popping Up Near You', *Museums Association* 2020. <https://www.museumsassociation.org/museums-journal/features/2020/02/01022020-popping-up-near-you/>, accessed 25 November 2021.
 36. Mulhearn, 'Popping Up Near You'.
 37. Manuel Charr, 'What We can Learn from Pop-Up Museums? Best Practice and Ideas from Instagram Friendly Experiences', *Museum Next* 2021. <https://www.museumnext.com/article/what-we-can-learn-from-pop-up-museums-best-practice-and-ideas-from-instagram-friendly-experiences/>, accessed 24 July 2021.
 38. Amanda Hess, 'The Existential Void of the Pop-Up "Experience"', *The New York Times* 26 September 2018. <https://www.nytimes.com/2018/09/26/arts/color-factory-museum-of-ice-cream-rose-mansion-29rooms-candytopia.html>, accessed 4 February 2022.
 39. Audience Agency, 'Museums Audience Report'.
 40. Audience Agency, 'Museums Audience Report'.
 41. Charr, 'What We can Learn from Pop-Up Museums?'.

References

- Arnab, S. (2020) *Game Science in Hybrid Learning Spaces*, New York: Routledge.
- Ayman-Nolley, S. (1992) 'Vygotsky's Perspective on the Development of Imagination and Creativity', *Creativity Research Journal*, 5 (1) 77-85.
- Bearman, D. and Geber, K. (2008) 'Transforming Cultural Heritage Institutions through New Media', *Museum Management and Curatorship*, 23 (4) 385-99.
- Bekele, M.K., Pierdicca, R., Frontoni, E., Malinverni, E.S. and Gain, J. (2018) 'A Survey of Augmented, Virtual, and Mixed Reality for Cultural Heritage', *Journal on Computing and Cultural Heritage*, 11 (2) 1-36.
- Berry, D.M. (2014) 'Post-Digital Humanities: Computation and Cultural Critique in the Arts and Humanities', *Educause*, 49 (3) 22-6.
- Bonnell, J. and Simon, R.I. (2007) "'Difficult" Exhibitions and Intimate Encounters', *Museum and Society*, 5 (2) 65-85.
- Ciolfi, L. and Bannon, L.J. (2007) 'Designing Hybrid Places: Merging Interaction Design, Ubiquitous Technologies and Geographies of the Museum Space', *CoDesign*, 3 (3) 159-80.
- Coleman, G. (2014) *Hacker, Hoaxer, Whistleblower, Spy: The Many Faces of Anonymous*, London: Verso Books.
- Connolly, T.M., Boyle, E.A., MacArthur, E., Hainey, T. and Boyle, J.M. (2012) 'A Systematic Literature Review of Empirical Evidence on Computer Games and Serious Games', *Computers & Education*, 59 (2) 661-86.
- Costanza-Chock, S. (2012) 'Mic Check! Media Cultures and the Occupy Movement', *Social Movement Studies*, 11 (3-4) 375-85.
- Deacon, H. (1996) *The Island: A History of Robben Island, 1488-1990*, Cape Town: David Philip Publishers Ltd.
- Dewey, J. (1933) *How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process*, London: Heath.
- Drotner, K. and Schrøder, K.C. (2014) *Museum Communication and Social Media: The Connected Museum*, Abingdon: Routledge.
- Felman, S. and Laub, D. (1992) *Testimony: Crises of Witnessing in Literature, Psychoanalysis and History*, New York: Routledge.
- Genoways, H.H. (2006) *Museum Philosophy for the Twenty-First Century*, Oxford: Rowman Altamira.
- Giaccardi, E. (2012) *Heritage and Social Media: Understanding Heritage in a Participatory Culture*, Abingdon: Routledge.
- Giordano, S. (2013) 'Pop-Up Museums: Challenging the Notion of the Museum as a Permanent Institution', *Predella Journal of Visual Arts*, 33 461-9.
- Gray, D.E. (2013) *Doing Research in the Real World*, London: SAGE.
- Greffe, X., Krebs, A. and Pflieger, S. (2017) 'The Future of the Museum in the Twenty-First

Century: Recent Clues from France', *Museum Management and Curatorship*, 32 (4) 319-34.

- Herlitz, A. and Westin, J. (2018) 'Assembling Arosenius – Staging a Digital Archive', *Museum Management and Curatorship*, 33 (5) 447-66.
- Hintz, A. (2018) 'Policy Activism: Advocating, Protesting and Hacking Media Regulation', in Graham Meikle (ed) *The Routledge Companion to Media and Activism*, 319-26, London: Routledge.
- Holloway-Attaway, L. and Rouse, R. (2018) 'Designing Postdigital Curators: Establishing an Interdisciplinary Games and Mixed Reality Cultural Heritage Network', in Marinos Ioannides, João Martins, Roko Žarnić and Veranika Lim (eds) *Advances in Digital Cultural Heritage*, 162-73, Cham: Springer International Publishing.
- Hooper-Greenhill, E. (2004) 'Museums and the Interpretation of Visual Culture', *Journal of Aesthetics and Art Criticism*, 62 (3) 306-7.
- (2006) 'The Power of Museum Pedagogy', in Hugh H. Genoways (ed) *Museum Philosophy for the Twenty-first Century*, 235-45, Oxford: AltaMira Press.
- Kemmis, S., McTaggart, R. and Nixon, R. (2013) *The Action Research Planner: Doing Critical Participatory Action Research*, Singapore: Springer Science & Business Media.
- Kidd, J. (2014) *Museums in the New Mediascape: Transmedia, Participation, Ethics*, Abingdon: Routledge.
- Kidd, J. and Cardiff, R. (2017) "'A Space of Negotiation": Visitor Generated Content and Ethics at Tate', *Museum and Society* 15 (1) 43-55.
- Lefebvre, H. (1991) *The Production of Space*, 1st edition, trans. by D.M. Nicholson-Smith, Oxford: Blackwell Publishing.
- Levy, S. (1984) *Hackers, Heroes of the Computer Revolution*, Garden City, NY: Anchor Press/Doubleday.
- Mandela, N. (1994) *Long Walk to Freedom*, London: Little, Brown and Company.
- Merchant, Z., Goetz, E.T., Cifuentes, L., Keeney-Kennicutt, W. and Davis, T.J. (2014) 'Effectiveness of Virtual Reality-Based Instruction on Students' Learning Outcomes in K-12 and Higher Education: A Meta-Analysis', *Computers & Education*, 70 29-40.
- Mouffe, C. (2013) *Agonistics: Thinking the World Politically*, London: Verso Books.
- Nzewi, U.S.C. (2016) 'Migration Histories, the Past, and the Politics of Memory at Robben Island Museum', in Amy Levin (ed) *Global Mobilities: Refugees, Exiles and Immigrants in Museums and Archives*, 106-21, Abingdon: Routledge.
- Paris, S.G. (2006) 'How Can Museums Attract Visitors in the Twenty-first Century', in Hugh H. Genoways (ed) *Museum Philosophy for the Twenty-first Century*, 255-67, Oxford: AltaMira Press.
- Parry, R. (2007) *Recoding the Museum: Digital Heritage and the Technologies of Change*, Abingdon: Routledge.
- (2010) *Museums in a Digital Age*, Abingdon: Routledge.
- (2013) 'The End of the Beginning: Normativity in the Postdigital Museum', *Museum*

- Worlds*, 1 (1) 24-39.
- Popescu, D. (2020) 'The Potency of Design in Holocaust Exhibitions: A Case Study of The Imperial War Museum's Holocaust Exhibition (2000)', *Museum and Society*, 18 218-42.
- Rankin, E. and Schmidt, L. (2009) 'The Apartheid Museum: Performing a Spatial Dialectics', *Journal of Visual Culture*, 8 (1) 76-102.
- Rogoff, B., Callanan, M., Gutiérrez, K.D. and Erickson, F. (2016) 'The Organization of Informal Learning', *Review of Research in Education*, 40 (1) 356-401.
- Simon, N. (2010) *The Participatory Museum*, Santa Cruz, CA: Museum 2.0.
- Smith, R.C. and Iversen, O.S. (2014) 'Participatory Heritage Innovation: Designing Dialogic Sites of Engagement', *Digital Creativity*, 25 (3) 255-68.
- Villar, J.G. and Canessa, F. (2018) 'Adapting Past Identity: Inclusive Pride at the National Historical Museum of Chile', *Museum Management and Curatorship*, 33 (3) 261-78.
- Vygotsky, L.S. (1997) *The Collected Works of L.S. Vygotsky: Problems of the Theory and History of Psychology*, Boston: Springer Science & Business Media.
- Witcomb, A. (2013) 'Understanding the Role of Affect in Producing a Critical Pedagogy for History Museums', *Museum Management and Curatorship*, 28 (3) 255-71.