Artistic License in Heritage Visualisation: VR Sydney Cove circa 1800

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Abstract

Heritage visualisations are works of the cultural imaginary and this paper examines the artwork *Artistic License: VR Sydney Cove ca. 1800* which foregrounds the interpretive nature of heritage visualisation. It is a re-imagining in virtual reality of *A View of Sydney Cove, New South Wales, 1804*, a contemporaneous print of Sydney Cove. Existing in the liminal space between accuracy and authenticity it is both art object and heritage visualisation. The dual nature of this work supports engagement with wider audiences, fostering and broadening debate at individual, institutional, academic and societal levels about the nature and role of heritage.

<1> Background: Heritage Visualisation

Smith describes heritage as a cultural and social process carried out at individual, group and societal levels as a way of creating, representing, and negotiating identity [1]. Heritage is something from the past that survives in the present and is considered worth preserving/remembering for future generations. It is the cultural glue that binds the future to the past in the unending now. Museum exhibitions often include heritage visualisations in the form of drawings, paintings, models, dioramas and, increasingly, digital media technologies such as 3D computer graphics, augmented reality and virtual reality (VR), to show artefacts in context and to engage the imaginations of visitors [2,3]. VR is an extremely powerful affective tool for heritage engagement. For the majority of users, VR automatically evokes a powerful, and profoundly phenomenological sense of being inside the world presented to their eyes. This sense of presence or ‘being there’, combined with the ability to navigate the world, creates an embodied experience of ‘being in the world’ [4]. Some extant heritage sites are fragile and, for their protection, are inaccessible to the public. Other have limited access for a variety of reasons such as civil unrest. VR allows differently abled users anywhere in the world to have embodied experiences of places that are restricted, expensive, physically difficult to access or geographically remote. Additionally, for places and buildings that no

longer exist, VR is the *only* way, short of building real to-scale replicas, to evoke a strong sense of physical immersion in a place for the majority of users.

Given the fragmentary and sometimes contradictory nature of the historical record our knowledge of the past is incomplete. However, if a visualisation only contains what can be completely verified, it will lack detail. So, in every heritage visualisation there is a degree of artistic licence such as choosing a hair style for a paleolithic man shown with a hand axe in an illustration next to a display case containing some hand axes. Sound is critical component of immersion [5], an inextricable feature of landscape [6] and a critical tool for place-making in virtual environments [7]. The following quote from Christian Schilling, the lead audio designer for the game Crysis (2007) makes clear the consideration that goes into crafting of the audio and its contribution to creating mood and atmosphere.

“Sneaking through nature means you hear birds, insects, animals, wind, water, materials. So everything -- the close and the distant sounds of the ambience. Firing your gun means you hear birds flapping away, and silence. Silence of course means, here, wind, water, materials, but also -- and this was the key I believe -- distant sounds (distant animals and other noises). We left the close mosquito sounds in as well, which fly in every now and then -- because we thought they don't care about gun shots).” [8]

For heritage VR period to 1878 (when Edison patented sound recording) the sound can only be an informed imagination. Sound is just one example of the artistic license that may have to be practiced when creating a heritage visualisation. Usually the archaeology is fragmentary and the archival records (if they exist) have omissions and inconsistencies and will contain cultural encodings, such as artistic tropes in pictures, that are invisible to the casual viewer. Pablo Picasso reportedly said that ‘Art is a lie that tells the truth’. The same could be said of heritage visualisation and it speaks to the struggle between accuracy and authenticity that lies at the heart of the conundrum that is heritage visualisation. Intrigued by this ontological tension, the author made a VR work that foregrounded the interpretive nature of heritage visualisation.

<2> Background: *A View of Sydney Cove, New South Wales* (1804)

Sydney Cove is now a bustling transport hub in the city of Sydney, Australia, capital of the state of New South Wales and home to over 4 million people. However, less than 250 years ago in 1788, it was the site of a penal settlement established by the British government which

was also the first European settlement in Australia. The engraving shown in Figure 1, *A View of Sydney Cove, New South Wales*, was created by F. Jukes in 1804 from a drawing by E. Dayes of a painting which has since been lost.

Figure 1: *A view of Sydney Cove, New South Wales (1804)* drawn by E. Dayes from a picture painted at the colony, engraved by F. Jukes. Aquatint, hand coloured, plate mark 43.8 x 62 cm. National Library of Australia, Object Id: 135293533, PIC Drawer: 16 #S45.

The print shows Sydney Cove in the background, with the Kings Dockyard in the midground and an Aboriginal group around a small fire in the foreground. To the right of the image there is a road along which a man is herding two cows and, on the left, there is a large vessel under sail. Individual landmarks can be made out that also appear in other images of Sydney from this period such as First Government House at the brow of the hill on the left side of the image, the jetty seen jutting into Sydney Cove near the First Government House and the square tower of St Patrick's Church on the skyline at right [9]. In June 1797 a spot of ground was marked out on the western shore of the cove for the Kings Dockyard and by 1802 about 28 men were regularly employed there [10]. The vessel under construction is the Brig Portland. It was laid down in 1797 but was not completed until 1816 [11]. The identity of the ship under sail remains a mystery. In the late 1790s and the early 1800s Sydney was a regular port of call for numerous vessels including Royal Navy ships, whalers, seal traders, convict ships, and an increasing number of trading vessels. In 1800 alone, the Merchant Networks website lists 27 vessels visiting Sydney, some of them multiple times [12]. The Royal Maritime Museum at Greenwich informed the author that the large vessel is most likely to be '*a merchant ship as the only signs of gun ports are four black patches above the pronounced tumble-home*' but, '*as stern views are not very good for determining the type of vessel*', they believe that the '*chances of identifying this as a particular vessel are nil and*

the chances of determining a type are equally impossible'. They additionally note that the Union flag is without the Cross of St Patrick, which was incorporated in 1801 [13].

The author has also been in contact with the Australian National Maritime Museum and they have advised her that the *'small vessel going towards the ship is a pinnace, the vessel behind looks like a gig but the mast should be nearer the middle of the vessel (obviously he has used artistic license here) then there is a small boat near the Hospital Wharf.'* Additionally they say that it is not possible to identify the larger vessel *'without knowing the exact date of the painting and if the artist was actually painting a particular day at the Cove (it is possible he added the vessel under artistic license)'* [11].

<3> Visual tropes

The question of 'artistic licence' lies at the heart of the conundrum that is posed by heritage visualisation. One may argue that if a visualisation is based on a contemporaneous source then it must be accurate. However, paintings of this period may contain things that have been added at the request of the purchaser, as well as other visual tropes that were common at the period. Three possible tropes have been identified in *A View of Sydney Cove, New South Wales* (1804). The first, mentioned as a possibility by the Australian National Maritime Museum, is the possibility that the painting was commissioned by a captain or ship owner. This was a common practice in the 18th and early 19th centuries [14].

The second visual trope may be the man with the cattle, which were possibly included to show that the land was bountiful. They may also have been included as a way of contrasting with the aboriginal group, to show the 'industrious European' versus the 'idle Native'. However, the cattle have distinctive humps on their shoulders revealing them to be 'cape cattle'. Cape Town in South Africa was the last stop of the long voyage by sail from England to Australia and Indian Zebu cattle were often bought there for transport to the fledgling colony. The First Fleet had bought a bull, four cows and a bull calf there and safely landed them in Sydney but all, except one cow, escaped soon afterward. The escaped cattle and their descendants were discovered years later south of the Nepean River in an area ever since known as the 'Cowpastures' [15, 16]. So, even if they are a trope, they are painted by someone familiar with the 'look' of cattle in Sydney at that time.

Finally, the Aboriginal group in the foreground is definitely a trope. It was common for Sydney paintings from this early period to include Aboriginal figures [17]. This may have

been for several different reasons. Written evidence makes it clear that Aboriginals were commonly seen in Sydney at this time. Indeed, new arrivals from Europe were often shocked by their nakedness among the more conventionally dressed (in their eyes) townsfolk. So, while they may not have been there on that particular rock on that particular day, they were certainly a part of daily life and are likely to have been included for that reason.

Alternatively, they may have been included for 'local colour'. As mentioned earlier, they may also have been included as a comparison with the cattle herder to send a visual message supporting the idea of the 'lazy native' vs the industrious European. Finally, they may have been included in a 'noble savage' context but, in this case one, would expect to see them in a bush setting.

In conclusion, while it is possible that the print is a record of a particular day in Sydney, it is quite probable that what it shows is a mixture of fact and fiction which aims to capture an authentic ambience of Sydney Cove by someone who knew it well. It was therefore an ideal subject for a proposed VR work that explores the tension between accuracy and authenticity in heritage visualisation.

<4> Design

Using the print as the starting point, the author recreated the view in 3D. She included the Aboriginal group, the man with his cattle and the ship precisely because of the questions raised by their inclusion. The experience design focussed on delivering an experience akin to that of a person at a lookout contemplating the landscape. The user is located at the position that matches the viewpoint captured in the print. They can move their head and body freely and are able to take a couple of paces in any direction. There is no start or stop point to the experience.

As discussed earlier, sound is a critical component of presence and one that, given the impossibility of contemporaneous audio recordings, required the most artistic licence. The author collaborated with sound designer Justine Angus to create a believable soundscape that would complement the visual world being presented to users. Creating a soundscape is not as simple as just adding in all the sounds that could have been there, as this quickly becomes noise, but rather of orchestrating a subset of all the possible sounds in time and place to create an ambience.

The work was created using the Unity game engine and the individual assets (models, animations, plants, sounds etc) came from a variety of sources including bespoke creations made in Autodesk Maya, assets bought in the Unity Asset Store, audio files bought from various sound libraries and specifically recorded audio. Unity allows sound emitters to be located in space, either at static points in the landscape, or attached to moving objects and it is possible to set a maximum distance that the sound will travel from the emitter, and control how the sound drops off over that distance. If the user happens to be outside of the maximum distance for a sound emitter, then they will not hear it. Alternatively, if they are within range of a sound source that is moving it will get louder as it gets closer and quieter as it moves away from them. Additionally, it will be spatially located so that, as they turn their left ear and then their right ear towards the sound, it will change accordingly.

There are three constant ambient tracks that are not spatially located and which loop constantly. The first is of cicadas thereby placing the soundscape in summer, the second is of water laps, air noise and gulls and the third is of wind buffeting grasses. There are two other sounds that play continuously but are both located in the environment. The first of these is the sound of a crackling fire with spitty gum leaves and it is located just above the fire by the Aboriginal group. The second is the sounds of rowing (the squeak of rowlocks, the splashing of water from the oars and the grunts of exertion from the oarsmen) attached to the pinance which follows a continuous looping path around Sydney Cove that brings them into and out of earshot of the user.

The cows and herder animate continuously along a looping path that brings them into view, walks them down George Street away from the user and out of view. There is a sound emitter that travels with the group, and the audio of cows lowing plays intermittently with a random delay between repeats. The sounds will only be heard if they happen to play when the group is close enough to the viewing position of the user.

There are two sound emitters located at the Kings Dockyard which play intermittently with a random delay between repeats. The first is of boatyard construction noises, made up of the sounds of hammers, chisels and saws, and the second is of a single large dog barking nearby. There is a sound emitter located further away from the user along the track leading into town that plays the sound of several dogs barking a bit further away and another sound emitter located in the high ground that plays the sound of a cockerel crowing. Again, these sounds play intermittently with a random delay between repeats.

<5> New Tropes

The author has added a couple of new tropes to *Artistic License: VR Sydney Cove circa 1800*. One is a visual trope and the other is an audio one. It is common when creating digital landscapes and environments for screen productions (film/tv/game) to add some flying birds/creatures to give scale and life to what may otherwise be seen as a painted backdrop. As can be seen in Figure 2, the artist has added a flock of cockatoos that continuously follow a looping path around the landscape, screeching intermittently and triggering the sound of beating wings as they pass overhead of the user.

Figure 2: *Artistic License: VR Sydney Cove ca. 1800*, Image ©Kit Devine

Kookaburras, like the cockatoos, are commonly seen in Sydney and so the decision to include them is perfectly plausible. However, it is also an inside joke for sound designers, particularly Australian ones, working in the film industry. In some of the Tarzan movies of the 1930s and 1940s the sound designer used recordings of kookaburras to help create the background jungle ambience because, to him, they sounded like the hooting of apes. As a result, Australian audiences of the films were confused thinking ‘Why are there kookaburras in the African jungle?’ and the author who had grown up in the West Indies watching Tarzan films was confused in turn when she first came to Australia and thought that she was hearing African apes in the Australian bush.

<6> Exhibition

Artistic License: VR Sydney Cove circa 1800 was created as part of the Australian National University Vice-Chancellor's College Visiting Artist Fellows Scheme (VCCVAFS). The author was a successful applicant in 2017 and an exhibition of the resulting works was held

from 22nd June to 13th July 2018 at the ANU School of Art and Design Gallery in Canberra. The work was delivered using a tethered HTC Vive, with the tether suspended from the centre of a three-metre square space. Next to the work was a small board with instructions and the artist's statement discussing the work. There was a chair in the middle of the space and, on the floor next to the chair, were the Vive headset and a pair of headphones. Following the instructions, users sat on the chair and put on the headset first, followed by the headphones. They were able to stand up if they wanted to and walk a pace or two in any direction. There was a chair in the virtual world that matched the position of the real chair in the gallery, so users could always orientate themselves in both the virtual and real worlds. When they had seen, and heard, enough they sat down and removed the headphones and headset and left them for the next user. The gallery started the simulation running at the opening of each day and turned it off when they shut, minimising the need for a docent.

<7> Conclusion

Artistic License: VR Sydney Cove circa 1800 is a work that provokes and broadens debate about heritage at individual, institutional, academic and societal levels. It foregrounds the assumptions that underlie heritage visualisations and it offers a novel interpretation model for museum settings that engages with different audiences and encourages debate as to the nature and uses of heritage.

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