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Kyriaki Hadjiafxendi and John Plunkett

'Play, Craft, Design, Feel: Engaging Students and the Public with Victorian Culture'

One of the opening pronouncements we both make to students at the start of courses on Victorian literature is that we are as interested in their experience of reading the texts as their critical response. What is it like reading a long Charles Dickens or George Eliot novel? What emotions do they create? What readerly work does sympathy or sensation do? Similarly, we often explore the growth of nineteenth-century print media through hands-on work with periodicals and serial issues, asking students what they can infer from the closely set, multiple columns of typeface used by so many journals, or the many adverts in serial fiction issues that frame and introduce the words of well-known novelists. Our students invariably respond well to such questions, yet experiential learning – learning through doing and reflecting upon that process – can open up many different parts of Victorian literature and culture. One reason is that, while experiential learning is an approach much discussed in modern pedagogy, it was a type of knowledge that the period helped to pioneer. As Dinah Birch has argued, we are the inheritors of the Victorians' wrestling with questions over the relation between feeling and knowledge, and what the aims of learning should be.[1] In our individual teaching and research, and in one joint research project, we have explored the development of experiential learning in Victorian culture, and simultaneously used it as a pathway to engage students and broader publics. This piece describes the benefits of embedding experiential learning in our work, and reflects on the scope and limits of this approach.

We have found an experiential approach valuable in providing new ways of teaching and researching nineteenth-century material and visual culture. To do so, we draw on the

physical and digital resources we have access to at our respective institutions, Bath Spa University and the University of Exeter, but as importantly, utilise the living heritage of the surrounding cities and region. Making the most of immediate locales, as, for example, the rich Regency architecture of Bath, helps to exemplify and embody important aspects of the style of the period that students are already familiar with through their everyday life in the city. Special collections held by universities can be another invaluable resource. Plunkett is fortunate in that his work on visual culture is carried out at the Bill Douglas Centre for the History of Cinema and Popular Culture, a combined research centre and public museum at the University of Exeter. The Bill Douglas Cinema Museum is an archive of over 85,000 items devoted to the long history of the moving image. The collection encompasses the development of popular visual entertainment from the nineteenth century through to classical Hollywood cinema and beyond. Items range from handbills, film programmes, merchandising, posters, jigsaws, sheet music, and a large number of optical toys and related artefacts.

Plunkett uses the collection in his research and teaching on optical toys and shows such as the peepshow, stereoscope, diorama and panorama. These were instrumental in the burgeoning visual culture of the period, yet have often fallen at edge of the disciplines of Art History, English Literature and Victorian Studies, in part because they are awkward to teach in a standard seminar format. Optical devices were often described as 'philosophical toys', devices that amused and instructed only through their usage. They can be regarded as an early form of experiential learning in that they provided a hands-on, embodied form viewing that encouraged the user to reflect on their perception of movement, three-dimensional space, time, and colour. A number of them were direct by-products of innovative

experiments on the physiology of vision in the 1820s and 1830s, challenging enlightenment conceptions of a stable, transparent, external world.

Optical devices and formats are part of the impact of modernity upon visuality and perception. As Isobel Armstrong has insightfully noted, modernity was often expressed through concerns about 'the status of the image, the nature of mediation (or bringing about of a changed state), and the problem of knowledge and perceptual certainty'. Given that the appeal and working of many nineteenth-century devices is bound up with the viewing experience, this offers an effective pathway into teaching them. Devices and printed ephemera from the Bill Douglas Cinema Museum can be incorporated into classes, allowing students to have a hands-on experience of a kaleidoscope, magic lantern or stereoscope. Seminars can analyse a handbill advertising a magic lantern lecture, for example, alongside looking at actual projected images from a magic lantern. For students, handling these devices helps to brings the period to life, while projecting a chromatrope special-effects lantern slide can still provoke collective wonderment at its intricacy and beauty. Teaching using the devices is a way of opening up broader discussions about modernity, temporality, animation and illusion. For example, exploring the zoetrope, one of the persistence-of-vision toys developed in the period, leads to an initial question – where exactly is the moving image? **[INSERT Fig 1 HERE]** And after thinking about it, the students realise that the moving-image is occurring in their heads, that it is an illusion caused by the limitations of the physiology of the human eye, and this leads us on to a bigger discussion of how the contingency of vision is linked into the unstable nature of knowledge and perception in modernity. Moreover, when asked what the short, repetitive animated sequences (which can be comedic or grotesque such as a dancing couple who have a monkey jumping through hoops below them) remind them of, the answer is invariably GIFs. This opens up another

discussion regarding not only the pleasures of repetition, but also the links between nineteenth-century visual culture and our own and the sophistication of nineteenth-century audiences.

The benefit of having students use zoetropes and other moving-image toys is that their experiences can be used to inform critical reading from figures like Jonathan Crary who has argued that the development of optical toys is part of the disciplining of subjectivity to new industrialized speeds and temporalities.[2] Yet set against Crary's assertions is students's ability to play with the moving-image toy by changing the speed of the image, making it go backward and so forth. Rather than a standardized, seamlessly smooth experience of a moving-image, what is offered is a more playful temporality that is jerky, stop-start, and of intermittent speed. Students' experience as users opens up a number of key questions about agency and visuality, suggesting the possibility of a different type of playful and interactive engagement with the new temporalities of modernity rather than that of industrialised disciplining of the senses or abstract homogenised time.

Working with critical and historical readings alongside material objects is vital to producing a nuanced set of insights; hands-on experience often needs to be placed in an interpretative frame to provoke critical reflection. For example, Plunkett explores the idea of immersive and 3D media through looking at a variety of stereoscope and stereographs, but viewing the devices is contextualised with extracts from David Brewster's *The Stereoscope: Its History, Theory, and Construction* (1856), adverts from the London Stereoscopic Company, and Oliver Wendell Home's 1859 essay on the stereoscope in *The Atlantic*. Among the insights that stem from these sessions is the fact that the stereoscope requires conscious effort for the effect to be experienced, it does not simply happen as an

inevitability. The user is never simply a passive receiver of images. While some stereoscopes and stereographs are very notable for their 3D effect, others work notably less well. Students are asked to explain why particular designs of the device might be more effective (some are enclosed, some are open, some box-like, others very portable) , and whether there are particular subject matter, compositions or colouring that produce the most pleasing effect (do architectural scenes work better than sculpture or topographical ones for example?). Similarly, a discussion of how long they looked at each image for provides a way into analysing the scope and limits of the appeal of 3D; the effect can be striking and pleasing, but – as sometimes with 3D cinema and VR glasses – what is the appeal beyond the novelty? The student's experiences also provide an effective standpoint to reflect on the grand aspirations made by Brewster, Wendell-Holmes and the London Stereoscopic Company; their predictions for the educational, utilitarian and artistic usages of the device provoke a more sceptical response when analysed in the light of the students' own experiences of using stereoscopes.

Hands-on experience (albeit with care) of nineteenth-century optical toys is a unique opportunity for students but the resources of the Bill Douglas Cinema Museum, and indeed many others, are digital as well as physical, and able to assist scholars, students and enthusiasts. Many items in its collection are digitized and some are animated as digital interactives, offering a version of an active and engaged experience such as scrolling through the *Illustrated London News* panorama of London. More generally, there are many online versions of optical toys in motion, particularly zoetropes, praxinoscopes and phanekistoscopes, as well as different moving-image magic lantern slides. Institutions like the New York Public Library have put online its collection of 40,000 stereograph views in a

way that allows you to experience them in 3D using either a basic anaglyph viewer or an animated Wiggle-GIF effect.[3]

In using digital technology to recreate the experience of nineteenth-century optical toys, it recuperates something of their curiosity and wonder. The use of contemporary technology also opens up a reflexive, yet critical, perspective on the historical continuities between early visual media and our own. The ease with which nineteenth-century optical recreations can be transferred to digital format highlights the way that contemporary media are part of the long history of visual, optical and audio technologies (the panorama format is a case in point in terms of its contemporary use for all type of virtual walk-through tours). Both 'old' and 'new' media are better understood through each other, through what Walter Benjamin would call a constellation, the establishing of a moment whereby 'what has been comes together in a flash with the now to form a constellation'.[4] Just as digital technology can encourage greater access to, and sensitivity towards, the past, the remediation of nineteenth-century optical toys can, in its turn, produce a standpoint to reflect upon the experience of contemporary media, suggesting that it is not always as novel as it sometimes claims to be.

Hadjiafxendi's interest in experiential learning stems from her research into nineteenth-century print media, handicrafts and feminine creativity; on modules on the Victorian material imagination and on literary women, work and art, she incorporates object analysis into and alongside literary analysis, drawing on the numerous recent studies of Victorian material culture.[5] In these courses, Hadjiafxendi explores domestic handicrafts as a ubiquitous feature of nineteenth-century culture and creativity, assisted by a visit to the Holburne Museum in Bath, which holds numerous examples of silhouettes, embroidery,

miniatures and watercolours. However, as Talia Schaffer has pointed out, 'we have no grammar for decoding this practise, and therefore we may well feel baffled when we try and figure out why it was so popular'.[6] In an attempt to get students to better understand the appeal of handicrafts for both makers and audiences, Hadjiafxendi uses extracts from handicraft manuals together with an invitation for groups of students to produce their own version of one of the handicrafts they have been researching. Examples produced by students include glass painting, boiled sweets, a doll's house, pressed flowers, silhouettes and scrapbooks.

This activity sheds light on both the scope of the manual and the creativity and labour required to produce the handicraft. Several features recur in student reflections upon the process of making the handicraft. They often comment on the sheer amount of time and skill they require, and that the pleasure is more in the making than in the beauty of the finished piece. There is also the realisation that handicraft manuals are often less than fulsome in their advice, often giving only limited and/or imprecise set of instructions. This paucity sometimes speaks of presumed knowledges, too commonplace to need writing down, yet equally demonstrates that the manuals still demand invention, improvisation and creativity.

Experiential learning can feed through into innovative assessment that not only asks students to draw on their embodied and subjective engagement with material culture, but to consider how they would translate it into the meaningful experiences for audiences outside higher education. Hadjiafxendi encourages students to submit handicraft projects; marks are awarded predominantly for research, and reflection on the process of making, rather than the execution of the finished version. Over the last five years, Hadjiafxendi and Plunkett have assessed students on their respective courses through a similar project,

whereby groups of students have to take their course learning and demonstrate how it could be translated and applied to a non-university environment, whether a heritage, educational, media or commercial setting. The project has to be creative and outward-facing but also academically rigorous, demonstrating their research and critical understanding. Hadajiafxendi has used it modules on 'The Victorian Spectacular' and 'Nature, Science and the Self', while Plunkett has used it on courses on Dickens and nineteenth-century visual culture. This activity draws on Kolb's well-known cycle of experiential learning, whereby students move from concrete experience to reflective observation to abstract conceptualisation and then to application. It also channels the idea of experiential learning by encouraging students to reflect on their courses and imagine themselves as using their knowledge of Victorian literature and culture in alternative settings.

To be sure, the group project is an exercise that seeks to embed employability related skills in the curriculum, encouraging research proficiency, audience engagement, teamwork and project management, and a demonstration to students of how their humanities degree might translate into 'real-life' ventures and how their critical skills will be valuable. It helps that, in a module of Dickens for example, he remains an iconic author in terms of the global reach of his writings and his continued appeal to heritage and media industries; equally, the relationship between nineteenth-century art, visual culture and technology continues to shape our own modernity and media, and the UK heritage sector is a significant economic and cultural force (the preponderance of Jane Austen in Bath being a case in point). For the Dickens course, suggestions for group projects given to students were as below, albeit groups could come up with any project provided they could demonstrate its social or commercial benefit (with minimal tweaks, the same rubric was used by

Hadajifxendi on Nature, Science and the Self and by Plunkett for nineteenth-century visual culture):

Design an Exhibition for a Museum/Gallery

The exhibition might focus upon the broad themes of Dickens's work, but, equally, might well focus upon a particular theme (time, place, the body, realism, politics, melodrama) or a particular genre or a particular novel or even character.

Design activities to introduce schoolchildren to Dickens

You should aim to get information across to the children about Dickens, but you should also formulate an activity or set of activities with which they can engage creatively. You should consider whether the session you design is aimed at primary or secondary schoolchildren and how it relates to the National Curriculum. You may wish to build an activity around a particular aspect of what the children are required to study at school.

An Adapted/Updated/Remediated version of a Dickens novel

You could design/write/produce/stage an adaptation of a Dickens novel, or remediate it into a different format (graphic novel, text message, television, stage play etc). If you want to use this approach, you will be judged on the research and critical understanding evident, as well as the way in which your adaptation is explicitly geared towards a particular market/format/demographic, and the way you get across your understanding of this.

Design and market a new product/design using the works of Dickens

Dickens has inspired a number of heritage and tourist products, from walking tours to apps to the now defunct Dickens World theme part. You should think about the audiences who would be most interested in the product, and consider any business organisation running today with which you might wish to share your campaign.

Groups consisted of 3-4 students and work was presented in a digital portfolio using established platforms such as Padlet that allowed for the creative combination of text, image, presentations, audio-visual and archival material.

Over the last five years, students at Bath Spa and Exeter have come up with a wonderful range of ideas for translating course ideas beyond the university environment. Submitted projects include an exhibition, Imagined Reality, which attempted to set out a genealogy of immersive art from nineteenth-century panoramas to contemporary VR glasses; Victorian Spooktacular: Crime and the Supernatural, a walking tour of London inspired by gothic novels of the period with different tours led by literary characters; a toy theatre version of *Villette* as a way of adapting the novel and introducing it to schools; a Horrible Histories documentary on the Victorian stage; a national Dickens Day that all junior schools (pupils aged 7-11) would participate in, complete with lesson plans for teachers and age-appropriate activity tasks for children; an updated version of the late nineteenth-century toy magic lantern with contemporary fairy stories, which was to be sold by the Victoria and Albert Museum gift shop; a Dickensian Christmas grotto in Harrods aimed at inspiring charitable giving and working with local communities; and an immersive theatrical 'Dombey Day' for schools produced by a putative 'Dickens Living Literature Company, in which pupils walked through various settings from the novels populated by actors and had

to undertake different activities based on themed topics such as the railways, globalisation and empire, and Victorian schooling.

Students have proved adept at creating innovative formats for remediating Victorian culture to contemporary audiences. For example, one group proposed a Gothic Revival gamebook app in which the reader was the hero, and had to play the role of a nineteenth-century journal author questing after information on gothic architecture:

> We welcome you heartily to the Nineteenth Century! You are a Victorian writer for a quarterly magazine, and you have just received the following letter from your Editor:

> We require you, sir, to undertake a series of interviews in order to contribute to a seminal piece on the Gothic Architecture of the modern age. All around us are buildings most beautiful in character, inspired by the Medieval ages and yet of our own time. We must bring the architecture of our age to the general public!

> We expect interviews with the greatest artistic thinkers of our age, and a discussion of those who paved the way. We also expect reviews of some of the greatest examples of construction around us. Think of the Museum of Natural History in London, sir, or at Oxford. All this must be completed, of course, by the usual deadline. Special edition or no, we have the public to serve and profits to make!

> Expecting your excellent contribution in due course,

> RICHARD PRINTMAKER,

> Editor in Chief of *The Revival*.[7]

The player-reader had to navigate their own interactive path through the questbook, completing interviews with John Ruskin, William Morris, and Augustus Pugin; they also had to deciding which gothic buildings to visit as research for the piece.

While all group projects were expected to demonstrate their research endeavours and critical understanding, the best often put forward a 'strategic presentism', linking Victorian literature and culture with their own experiences and concerns. As David Sweeney Coombs and Danielle Coriale have noted, 'Strategic presentism requires that we think of the past as something other than an object of knowledge that is sealed off, separated from the present by the onrush of sequential time.'[8] In response, Elaine Freedgood and Michael Sanders have cautioned against a too easy turn to 'relevance', arguing that the 'relevance that holds sway in the corporatized classroom is a particularly degraded form of instrumental reason, which is anathema to its critical counterpart.'[9] One way in which this mode of assessment attempts to avoid this is that it ask the students to draw out what is most 'relevant' (or perhaps even revelatory) to their experience of Victorian literature and culture without pre-judging what that might be. Interestingly, some projects fused the entrepreneurial, archival and political; thus 'It's All Proud and Dandy!' was one based on research into queer masculinity and the Dandy in the 1890s and reimagined a revival of dandyism presented as a fashion show for London Fashion Week, part of the event's promotion of the LGBTQ community. As the student group noted, 'It's all Proud and Dandy brings into focus and makes relevant for today's society the dandy figure, commonly associated today with the performance of "camp".'[10] The digital portfolio combined archival research into the origins of the Dandy using analysis of satires, cartoons and photographs of Oscar Wilde and Aubrey Beardsley. As a centrepiece, their project produced own fashion

shoot depicting themselves modelling the style of the neo-Victorian dandy they hoped to promote (complete with analysis of how it was inspired by 1890s fashion).

For those students undertaking the Dickens module at Exeter in the midst of Covid in autumn 2020, group submissions reflected the political and economic impact of the pandemic, particularly national debates about increasing food poverty, welfare provision and inequality. Groups linked Dickens to their own Covid experiences while also noting the way Dickensian tropes were being frequently deployed in political debate. Thus, in October 2020, the government appointed Children's Commissioner in the UK, Anne Longfield, bemoaned: 'To have a debate about whether we should make sure that hungry and vulnerable children have enough to eat is something that is strikingly similar to something we'd expect to see in chapters of Oliver Twist - a novel published in the 19th century.'[11] One group proposed an adaptation of *A Christmas Carol* that would take place using Zoom and be set in Covid times; Scrooge supervises Bob Crachitt virtually over Zoom 24/7; Marley and the Ghosts of Christmas Past, Present and Future all appear as unscheduled Zoom calls. Instead of being burdened down by chains and padlocks, Marley is wound round with broadband cables as his time bound to his computer screen is a symbol of his and Scrooge's alienation and lack of human connection; the Ghost of Christmas Past appears in a full uniform of medical Personal Protective Equipment to prevent Covid infection. The social distancing enforced by Covid chimes uncannily with the individualism and class separation Dickens critiqued.

Public Engagement and Victorian Literature

Student assessment is one means of embedding into courses an encouragement to think beyond the academy, but, for UK based scholars, the research funding framework has, over the last decade, has incentivised the generation of public engagement and impact (defined as a 'change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia'). Introduced by the UK government as a way of demonstrating the 'value for money' of academic research, it has become embedded in the research landscape through its inclusion in periodic national assessments and the judging of competitive grant awards by research councils, most notably the Research Assessment Exercise of 2014 and Research Excellence Framework of 2021. The amount of research monies flowing into humanities departments stems, in part, from how they been graded regarded the significance and reach of their Impact. The merits of this agenda have provoked much debate regarding the true contribution of research to the public good and how and whether this should this be measured (and these questions are beyond the scope of this essay to address).[12] It has though provided innovative opportunities for individual academics working in humanities. It has given impetus to build collaborations and undertake joint projects with external organisations and communities, to co-produce new types of engaged research, and to reflect upon how best to engage and reach new audiences.

Both of us, individually and jointly, have used our interest in Victorian culture and experiential learning to undertake community-based research projects that sought to provide an experiential link between past and present. In Plunkett's research on optical exhibitions, there are many unanswered questions because the nature of the devices means that few, if any, survive. An example of this is the travelling peepshow, which was a staple of popular entertainment during the eighteenth and nineteenth-century. It was omnipresent

at fairs, wakes, market days, races, regattas and shop shows, anywhere where a crowd gathered with a few pennies to spare. However, both popular and scholarly understandings of this format have been skewed by the salacious reputation it acquired in the first decades of the twentieth century, largely due to the advent of the mutoscope and a host of similar machines showing risqué pictures.

Many prints and paintings of the travelling peepshow survive; however, there are almost no surviving examples of the show-boxes because they were invariably toured until they were no longer viable. The accompanying tableaux were similarly recycled and re-used to depict the latest topical event. In *Our Mutual Friend* (1870), Charles Dickens describes a country fair where one of the exhibits was a worn-out peepshow that 'had originally started with the Battle of Waterloo, and had since made it every other battle of later date by altering the Duke of Wellington's nose'[13]. The prints and paintings that survive invariably focus on the colourful figure of the showman-narrator, as in a George Cruikshank engraving which acted as the frontispiece for Peter Parley's, *Sergeant Bell and His Raree Show* (1839) **[INSERT Fig 1 HERE]**. Contra understandings of the peepshow as a silent, enclosed, voyeuristic experience, the showman provided a colourful and/or informative description to accompany the changing visual tableaux. He controlled the movement of one picture to the next; the scenes moved according to the pace and detail of his oral narrative. The attraction of the peepshow was as much aural as visual. Cruickshank's depiction is also typical in that, while the central focus of the scene is on the showman and the audience's fascination with the act of viewing, the actual subject of the show is never seen.

The archival record provides a tantalising glimpse of the peepshow's appeal as live performance. It leaves many unanswered questions though. How did the oral narrative and

tableaux interact? How exactly did the showman control the pace of the show and movement between tableaux? How could the showman interact with both the audience seeing inside the peepshow box and those waiting their turn? What additional sound or musical effects might be possible to enliven the show given that prints often depict the showman with a musical instrument? What were the practical requirements in putting on the peepshow as an unscheduled pop-up outdoor performance that needed to attract a crowd? An attempt to answer these questions led to a collaborative project between Plunkett and a creative practitioner, Tony Lidington, who has a longstanding interest in the history of popular performance. The aim was to recreate a travelling peepshow, providing audiences with a performances that allow contemporary audiences to experience its wonder.

The collaboration used the process of putting together a performance as experiential learning, a hands-on way of researching and reflecting upon the creative and practical aspects of the device. Lidington's design of the show box utilised many aspects of the nineteenth-century peepshow experience, including the colourful dress of the showman and a movable cart (Cruickshank depicts the show-man as a disabled military veteran and Lidington adopted a similar persona). The first narrative created was a version of William Hogarth's series, 'The Rake's Progress', updated and retitled as 'The Banker's Progress'.[14] The most difficult question though was how to construct a show that replicated something of the novelty and wonder of the peepshow for contemporary audiences saturated in a media rich environment. The final version included a composite of Victorian and contemporary entertainment technologies, mixing shot digital footage with puppetry, projection and automata. The advantage of this approach is that it opened up a range of different effects more likely to appeal to a contemporary audience; it also embedded a

degree of methodological self-consciousness, reminding us that any attempts at recovery of historical modes of popular performance are inflected by our own positions, immersed in twenty-first century modes of life. For example, in a fascinating discussion of the touring *Crazy Cinematograph* show, which sought to reproduce an early twentieth century fairground Bioscope show on the Luxembourg fairground between 2007 and 2010, Claude Bertemes and Nicole Dahlen have argued that the 'central challenge for those responsible…has been to develop a genuine audience strategy which can neither restrict itself to historical reconstruction (where, according to Heraclitus, one cannot step twice into the same river), nor believe, in a helpless gesture, that it can rival the communicative deliria of 'mental capitalism' (Georg Franck).'[15] The audience dynamics of this Fairground Bioscope show forced a principled awareness of the difficulties of attempting to reconstruct qualitative dimensions of lived experience from earlier generations. Lidington's peepshow took a similar approach, acknowledging that a contemporary version could never truly recreate the experience of nineteenth-century audiences, and that the form had, throughout its long history, always updated itself using whatever the latest technology was.

Making the peepshow and its performance generated many insights. Firstly, it created a renewed appreciation of the virtue of simplicity; the nineteenth-century peepshow was often criticised for the very basic nature. The procession of images usually worked by being pulled up into the top of the box, like miniature theatrical flats, to reveal next tableaux behind. Given the physical travails of outdoor performance, never knowing exactly what weather or venue conditions would be, or indeed when a show might be called for, the simplicity of the working was revealed as a positive necessity rather than something to be looked down upon. Adding contemporary technology and a variety of different effects

created more potential for things to go wrong; the number of performances each day, for example, was constrained by the all too common phenomenon of limited battery life.

Another feature revealed through performance was the impact of having multiple lenses, in common with prints of nineteenth-century show-boxes. There is a commercial imperative to this in that multiple lenses increase the paying audience. Lidington's peepshow had seven viewing lenses, five at the front and two at the side, but this meant each viewer has a slightly different viewpoint on what was happening inside the box, and this needed to be taken into account in the interior design and effects created. Finally, the performance revealed a plethora of creative interactions possible between the showman, audience and events inside the box; like George Cruickshank's veteran of the Napoleonic wars retelling the Battle of Waterloo, Lidington was not only narrator of the show but also the main character shown on the filmed scenes inside the box. At one moment, Lidington uses King Lear's famous words on the heath to express the desolation of his character who, like Lear, has now lost everything:

Blow, winds, and crack your cheeks! Rage, blow!

You cataracts and hurricanes, spout

Till you have drenched our steeples, drowned the cocks! (*King Lear*, 3.2, 1-3)

As he says these words, the audience is sprayed with water, mimicking the events inside the show-box, but also providing great entertainment for those waiting for their turn. Being part of the process of devising the peepshow, which has toured widely, produced many new critical insights regarding the way that commercial, creative and practical considerations shaped its performance style.

Our respective interest in popular science and handicrafts came together in a collaborative project, which combined research with public engagement, on the popularity of natural history in the period and the way it created a participatory culture open to amateurs and enthusiasts, particularly women. Indeed, one way of understanding the appeal of popular science is that it provided a potent mixture of doing and reflection, often linked to the active exploration of local environments, with many local societies providing excursions, papers and conversazione.[16] An early exemplar of this movement was the fascination with marine biology that attracted a number of literary and scientific figures in the 1850s and 1860s. In 1858, George Henry Lewes, declared that the lovely sea anemone was 'now the ornament of countless drawing rooms, studies, and back parlours, as well as the delight of unnumbered amateurs'.[17] Lewes's own volume, *Sea-side Studies at Ilfracombe, Tenby, the Scilly Isles, and Jersey*, was part of this fashion, and was based on a long coastal tour made by Lewes and George Eliot. In beginning their excursion at Ilfracombe at North Devon, they were heading to a locale that was attracting increasing number of natural history enthusiasts, inspired by volumes on the Devon coast such as Philip Henry Gosse's *A Naturalist's Rambles on the Devonshire Coast* (1853), Charles Kingsley's *Glaucus; Or, The Wonders of the Shore* (1855), George Tugwell's *A Manual of the Sea-Anemones Commonly Found on the English Coast* (1856).

In a collaborative project with Ilfracombe Museum, 'Science at the Seaside: Victorian Pleasure Hunts' we explored why figures such as Gosse, Kingsley, Eliot and Lewes were so enthused with the rockpools and beaches of Devon. Much of the success of 'seaside science' was due to the fact that it promoted an experiential natural history, one concerned with the understanding specimens in relationship to their 'living' coastal environment. Gosse criticised the established type of natural history that he would depart from in his seashore

volumes:

> Natural History is far too much a science of dead things; a *necrology.* It is mainly
> conversant with dry skins, furred or feathered, blackened, shrivelled, and hay-
> stuffed; with objects, some admirably beautiful, some hideously ugly, impaled on
> pins, and arranged in rows in cork drawers . . . These distorted things are described;
> their scales, plates, feathers counted; their forms copied, all shrivelled and stiffened
> as they are; . . . their limbs, members, and organs measured, and the results
> recorded in thousandths of an inch; two names are criven to every one; the whole is
> enveloped in a mystic cloud of Graeco-Latino-English phraseology (often barbaric
> enough); and this is Natural History![18]

Gosse's approach, which necessarily relied on understanding animal or marine life in the
dynamic context of the eco-systems they inhabited, gave the seashore a constantly
changing physicality. The reader was his companion, evoking the romance of natural history
in multiple emotive registers through the kinaesthetic of his expeditions:

> I ask you to listen with me to the carol of the lark, and the hum of the wild bee; I ask
> you to stand with me at the edge of the precipice and mark the glories of the setting
> sun, to watch with me the mantling tide as it rolls inward, and roars among the
> hollow caves; I ask you to share with me the delightful emotions which the
> contemplation of unbounded beauty and beneficence ever calls up in the cultivated
> mind.[19]

Both Gosse and Kingsley were devout Christians, and their scientific explorations were
intended to provoke reflection on God's beauty that could be discovered in small, everyday
creatures found on every shoreline if only the reader chose to look.

'Science at the Seaside' had its own public engagement activities in that the collaboration with Ilfracombe Museum meant that we were able to put on a series of events aimed at either museum visitors or local schools. These were intended to be in the spirit of Gosse and Kingsley's living coast; through hands-on learning, we aimed to raise awareness amongst tourists and locals of the scientific and literary heritage of the area, and of Victorian literature, tourism and handicrafts. In 2014-16, we ran family activities, school writing workshops and rockpool rambles led by marine biologists. Rockpool rambles in and around Ilfracombe were able to explore locations close to those visited by Gosse in the 1850s; Gosse's beautiful and haunting illustrations of marine life were used to inspire schoolchildren to write their own response to seashore life; alternatively, there were asked to write short stories or poems about objects found on local beaches; activity workshops were inspired by nineteenth-century handicrafts.

As with the peepshow though, our project did not naively try to recreate Victorian natural history in that the contemporary seashore faces many different ecological challenges. The richness and easy availability of the marine life celebrated by Gosse and Kingsley is no more, and the wholesale taking away of specimens is obviously no longer good practise. Gosse himself, however, was no stranger to ecological concerns in that he was soon protesting that – in part due to the popularity of his own work – the coastline at fashionable watering places was being stripped of specimens by over-enthusiastic tourists:

> Since the opening of sea-science to the million, such has been the invasion of the
>
> shore by crinoline and collecting jars, that you may search all the likely and
>
> promising rocks within reach of Torquay, which a few years ago were like gardens

with full-blossomed anemones and antheas, and come home with an empty jar and

aching heart, all being now swept as clean as the palm of your hand![20]

Promoting hands-on engagement with the seashore was unsustainable to the eco-systems

from which the specimens came, and is perhaps a reminder that the Victorian's own

versions of experiential learning were often limited to the affluent (in contrast to the many

subjected to the austere Victorian schoolroom and rote learning that left no space for

critical or imaginative reflection). Our schools' workshops updated Victorian seaside science

by incorporating concerns over marine pollution, especially plastic waste, and the impact of

climate change on coastal communities.

Experiential activities can engage different groups with Victorian literature and

culture; they can benefit research, teaching and public engagement. The examples of the

peepshow and 'Science at the Seaside' emphasise that these activities are founded on

research and critical reading rather than being in any way a replacement for it, and can

indeed be an innovative method of doing research. Course feedback from students often

notes their enjoyment of the hands-on activities, and the creativity and imagination

involved in the assessments described in the piece are contrasted to the standard written

essay. And perhaps therein lies a tale, a potential link between the success of experiential

learning activities and recent scholarly interest in the history of the emotions, material

culture and bibliotherapy, all of which aspire to a more embodied, holistic and open set of

knowledges at a time when the structures and contexts of university education are tugging

towards a more instrumentalised version of its purpose.

[1] Dinah Birch, *Our Victorian Education* (Oxford: Blackwell Publishing, 2008).

[2] Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (Cambridge, MA: MIT Press, 1992).

[3] See https://stereo.nypl.org/

[4] Walter Benjamin, *The Arcades Project*, trans. Howard Eiland and Kevin McLaughlin (Cambridge, Mass.: Belknap Press, 1999), 462.

[5] See, for example, Suzanne Daly, *The Empire Inside: Indian Commodities in Victorian Domestic Novels* (Ann Arbor, MI: University of Michigan Press, 2011); Elaine Freedgood, *The Ideas in Things: Fugitive Meaning in the Victorian Novel* (Chicago: University of Chicago Press, 2006).

[6] Talia Schaffer, *Novel Craft: Victorian Domestic Handicraft and Nineteenth-Century Fiction* (Oxford: Oxford University Press, 2011), 3.

[7] See https://padlet.com/sd532/mfauensqi3ak

[8] David Sweeney Coombs and Danielle Coriale, 'Introduction', *Victorian Studies*, 59.1 (Autumn 2016), pp. 87-89, https://www.jstor.org/stable/10.2979/victorianstudies.59.1.04

[9] Elaine Freedgood and Michael Sanders. 'Response: Strategic Presentism or Partisan Knowledges?' *Victorian Studies* (2016), 59.1, 117-121. muse.jhu.edu/article/649961.

[10] See https://padlet.com/libbypotter12/sf9h30h9t7kh

[11] 'Free School Meals', *Independent*, 25 October 2020, https://www.independent.co.uk/news/uk/politics/free-school-meals-vote-mps-government-petition-childrens-commissioner-b1310767.html

[12] See Stefan Collini, *What are Universities for?* (London: Penguin, 2012), Katherine E. Smith, Justyna Bandola-Gill, Nasa Meer, Ellen Steward and Richard Watermeyer, *The Impact Agenda: Controversies, Consequences and Challenges* (Bristol: Policy Press, 2020)

[13] Charles Dickens, *Our Mutual Friend*, ed. Adrian Poole (Penguin: Harmondsworth, 1997), 673.

[14] A short film on Tony Lidington's The Raree Show is available at https://www.youtube.com/watch?v=st3l6m4mqAM&t=132s

[15] Claude Bertemes and Nicole Dahlen, 'Back to the Future: Early Cinema and Late Economy of Attention An Interim Report about *Crazy* Cinématograph' in Martin Loiperdinger (ed), *Early Cinema Today: The Art of Programming and Live Performance* (New Barnet: John Libbey, 2011), 80.

[16] Diarmuid A. Finnegan, *Natural History Societies and Civic Culture in Victorian Scotland* (London: Pickering and Chatto, 2009)

[17] George Henry Lewes, *Sea-Side Studies at Ilfracombe, Tenby, the Scilly Isles, and Jersey* (Edinburgh: William Blackwood and Sons, 1858), 114.

[18] Philip Henry Gosse, *A Naturalist's Sojourn in Jamaica* (London: Longman, Brown, Green and Longman, 1851), Preface.

[19] Philip H. Gosse, *A Naturalist's Rambles on the Devonshire Coast*, Preface.

[20] Philip H. Gosse, *Land and Sea* (London: James Nisbet, 1865), 251.