



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

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One of the opening pronouncements we both make to students at the start of courses on Victorian literature is that their experience of reading the texts is an important part of their critical response. What is it like reading a long Charles Dickens or George Eliot novel? What emotions do these books 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

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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 (Birch 2008). 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 chapter describes the benefits of embedding experiential learning in our work, and reflects on the scope and limits of this approach.

We have found such an 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, utilize the living heritage of the surrounding cities and region. Making the most of immediate locales—such 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. 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 Cinema Museum, a combined research center 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 programs, merchandising, posters, jigsaws, sheet music, and a large number of optical toys and related artifacts.

Plunkett uses the collection in his research on nineteenth-century 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 the margins 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 of viewing that

encouraged users to reflect on their perception of movement, three-dimensional space, time, and color. 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 visibility 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.” (Armstrong 2008: p. 254) 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 analyze 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 bring 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? (see Fig. 7.1).

And after thinking about it, the students realize 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 larger discussion of how the contingency of vision is linked to 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 scholars such as Jonathan Crary, who has argued that the development of optical toys is part of the disciplining of subjectivity to new industrialized



Fig. 7.1 Zoetrope c.1870. (Courtesy of Bill Douglas Cinema Museum, University of Exeter)

speeds and temporalities (Crary 1992). Yet set against Crary's assertions is students' ability to play with the zoetrope 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 playful and interactive engagement with the new temporalities of modernity, rather than that of the industrialized disciplining of the senses or abstract homogenized 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 contextualized with extracts from David Brewster's *The Stereoscope: Its History, Theory, and Construction* (1856), adverts from the London Stereoscopic Company, and Oliver Wendell Holmes's 1859 essay on the stereoscope in *The Atlantic*. Among the insights stemming 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 just a passive receiver of images. While some stereoscopes and stereographs are notable for their 3D effect, others work 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 coloring that produce the most pleasing effect (for example, whether architectural scenes work better than sculpture or topographical ones?). Similarly, a discussion of how long students looked at each image provides a way into analyzing the scope and limits of the allure of 3D; the effect can be striking and pleasing, but—as is sometimes the case with 3D cinema and VR glasses—what is the appeal beyond the novelty? The students' experiences also provide an effective standpoint to reflect on the grand aspirations made by Brewster, Holmes, and the London Stereoscopic Company; their predictions for the educational, utilitarian, and artistic uses of the device in the nineteenth century often provoke a more skeptical response when analyzed in the light of the students' own experiences of using stereoscopes today.

Hands-on experience (albeit with care) of nineteenth-century optical toys is a unique opportunity for learning. 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. Some items in its collection 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 from 1845. More generally, there are many online versions of optical toys in motion, particularly zoetropes, praxinoscopes, and phenekistoscopes, as well as various 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.¹

Using digital technology to recreate the experience of nineteenth-century optical toys 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 how 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 types 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” (Benjamin 1999: p. 462). Just as digital technology can encourage greater access to, and sensitivity toward the past, the remediation of nineteenth-century optical toys, in turn, can 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 female creativity; in modules on the Victorian material imagination and on literary women, work, and art, she incorporates object analysis into, and alongside, the critical engagement with literary sources, drawing on the numerous recent studies of Victorian material culture (see e.g., Daly 2011 and Freedgood 2006). As part of her teaching, Hadjiafxendi explores domestic handicrafts as a ubiquitous feature of nineteenth-century culture and its impact on female creativity, assisted by a visit to the Holburne Museum in Bath, which holds numerous examples of silhouettes, embroidery, miniatures, and watercolors. However, as Talia Schaffer has pointed out about gendered craft, “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” (Schaffer 2011: p. 3). 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, amongst others.

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

Experiential learning can feed into innovative assessment that asks students not only to draw on their embodied and subjective engagement with material culture, but also 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 primarily for research and for reflection on the process of making, rather than for 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 must 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 must be creative and outward-facing but also academically rigorous, demonstrating their research and critical understanding. Hadjiafxendi has used it in modules such as "The Victorian Spectacular" and "Nature, Science and the Self," while Plunkett has used it in 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 conceptualization and then to application. It also channels the idea of experiential learning by encouraging students to reflect on their courses and imagine themselves using their knowledge of Victorian literature and culture in alternative settings.

To be sure, the group project is an exercise that reflects a broader utilitarian drive to embed employability-related skills in the curriculum by encouraging research proficiency, audience engagement, teamwork, and project management. In so doing, it tries to demonstrate to students how a humanities degree, including their own, might translate into 'real-life' ventures and how their critical skills are valuable. For this particular exercise it, an author like Dickens remains an iconic figure 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 remains a significant economic and cultural force (the prevalence of Jane Austen in Bath being a case in point). For Plunkett's Dickens course, suggestions for group projects are listed below, although students could come up with any project provided they could demonstrate its social or commercial benefit. For the purpose of their teaching, both Hadjiafxendi and Plunkett adapted this rubric on varied modules on nineteenth-century literature and culture:

Design an exhibition for a museum or 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, and 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 take this approach, you will be judged on your research and critical understanding, as well as on how your adaptation is explicitly geared toward a particular market/format/demographic, and how you communicate 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 park. You should think about the audiences who would be most interested in the product, and consider any business organization operating today with which you might wish to share your campaign.

Groups consisted of three to four 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 eight years, students at Bath Spa and Exeter have come up with a wonderful range of ideas for translating course themes 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 theater version of Charlotte Brontë's *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 various activities based on themed topics such as the railways, globalization 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*).²

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 decide which gothic buildings to visit as research for the piece.

While all group projects were expected to demonstrate their research endeavors 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” (Coombs and Coriale 2016: p. 87). 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” (Freedgood and Sanders 2016: pp. 118–119). 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 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’.”³ 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 centerpiece, this project produced its fashion shoot. where the students depicted themselves modeling 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 our modules at Bath Spa and Exeter Universities in the midst of the Covid19 pandemic, group submissions reflected the political and economic impact of the pandemic, particularly national debates about increasing food poverty, inadequate welfare provision, and inequality, as well as the role that reconnecting with nature plays in counteracting the effects of social alienation and supporting our mental well being and health. For example, 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” (“Free School Meals” 2020). One group proposed an adaptation of *A Christmas Carol* that would take place using Zoom and be set in Covid times: Scrooge supervises Bob Cratchitt virtually over Zoom 24/7, and 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; 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, incentivized 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” (‘REF Impact’). Introduced by the UK government as a way of demonstrating the value for money of academic research, public engagement and impact have become embedded in the research landscape through their 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 have been graded regarding 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 be measured (questions beyond the scope of this essay; see Collini 2012 and Smith et al. 2020). However, it has provided innovative opportunities for individual academics working in the humanities. It has given impetus to building collaborations and undertaking joint projects with external organizations 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 a 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 traveling peepshow, which was a staple of popular entertainment during the eighteenth and nineteenth centuries. 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 peepshows 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 traveling 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), 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" (Dickens 1997: p. 673). The prints and paintings that survive invariably focus on the colorful figure of the showman-narrator, as in the George Cruikshank engraving used as the frontispiece for Peter Parley's *Sergeant Bell and His Raree Show* (1839; see Fig. 7.2).

Contra understandings of the peepshow as a silent, enclosed, voyeuristic experience, the showman provided a colorful and/or informative description to accompany the changing visual tableaux. He controlled the



Fig. 7.2 George Cruikshank, frontispiece, Peter Parley, *Sergeant Bell and His Raree Show* (London: Thomas Tegg, 1839). (Courtesy of Bill Douglas Cinema Museum, University of Exeter)

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 tantalizing 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 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 traveling peepshow, providing performances that allowed 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 utilized many aspects of the nineteenth-century peepshow experience including the colorful dress of the showman and a movable cart (Cruikshank depicts the showman as a disabled military veteran and Lidington adopted a similar persona). The first narrative created was a version of William Hogarth's famous series "The Rake's Progress," updated and retitled "The Banker's Progress."⁴ 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 recovering 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)” (Bertemes and Dahlen 2011: p. 80). 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 the latest technology.

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 criticized for its 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 the next tableau. Given the physical challenges of outdoor performance—never knowing exactly what the 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 increased the potential for things to go wrong; the number of daily performances, 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, as seen in prints of nineteenth-century show-boxes. There is a commercial imperative to this aspect 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 that each viewer has a slightly different perspective 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 among showman, audience, and events inside the box. Like Cruickshank’s veteran of the Napoleonic wars retelling the Battle of Waterloo, Lidington was not only the show’s narrator but also the main character shown on the filmed scenes inside the box. At one point, Lidington uses King Lear’s famous words on the heath (*King Lear* 3.2.1–3) 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!

As he utters 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 peep-show, which has toured widely, produced many new critical insights into how commercial, creative, and practical considerations shaped its performance style.

Hadjiafxendi's and Plunkett's interests in popular science and handicrafts came together in a collaborative project that combined research with public engagement and which ran from 2014–16; its focus was the popularity of natural history in the period and how it created a participatory culture open to amateurs and enthusiasts, particularly women. Indeed, one way of understanding the appeal of nineteenth-century popular science is that it provided a potent mixture of action and reflection, often linked to the active exploration of local environments, with many local societies providing excursions, papers, and *conversazione* (Finnegan 2009). 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” (Lewes 1858: p. 114). Lewes's own book, *Sea-side Studies at Ilfracombe, Tenby, the Scilly Isles, and Jersey*, was part of this fashion and was based on a long coastal tour he made with George Eliot. In beginning their excursion at Ilfracombe in North Devon, they were heading to a location that was attracting increasing numbers of natural history enthusiasts, inspired by volumes about 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), and 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 understanding specimens in relationship to their ‘living’ coastal

environment. Gosse criticized 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! (Gosse 1851: p. v)

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, with Gosse evoking the romance of natural history through the kinesthetic 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. (Gosse 1853: p. vi)

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 the 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's and Kingsley's living coast; through hands-on learning, we aimed to raise awareness among tourists and locals of the region's scientific and literary heritage as it developed hand in hand with environmental tourism and trends in household crafts. In 2014–16, we ran family activities, school writing workshops, and rock-pool rambles led by marine biologists as well as activity workshops inspired

by nineteenth-century handicrafts. Rockpool rambles in and around Ilfracombe allowed us to explore locations close to those visited by Gosse in the 1850s. Gosse's beautiful and haunting illustrations of marine life were used as prompts for schoolchildren to write their own response to seashore life; more precisely, they were asked to write short stories or poems about objects found on local beaches.

As with the peepshow, though, our project did not naively try to recreate Victorian natural history in that the contemporary seashore faces numerous ecological challenges. The richness and easy availability of the marine life celebrated by Gosse and Kingsley is no more, and the wholesale indiscriminate removal of specimens is obviously no longer good practice. 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! (Gosse 1865: p. 251)

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 Victorians' own versions of experiential learning were often limited to the affluent (in contrast to the majority subjected to the austere schoolroom and rote learning that left no space for critical or imaginative reflection). Our schools' workshops updated Victorian seaside science by incorporating concerns about 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" emphasize that these activities are founded on research and critical reading but in no way replace them, and can indeed be an innovative method of doing research. Module evaluation feedback from students often notes their enjoyment of hands-on activities and the assessments that require them to think of "real-world" applications. And perhaps therein lies a tale,

a potential link between the success of such 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 often tugging toward a more instrumentalized version of its purpose.

NOTES

1. See <https://stereo.nypl.org/>
2. See <https://padlet.com/sd532/mfauensqi3ak>
3. See <https://padlet.com/libbypotter12/sf9h30h9t7kh>
4. A short film on Tony Lidington's The Raree Show is available at <https://www.youtube.com/watch?v=st3l6m4mqAM&t=132s>

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