

No. 1, 2021

## A History of “The Future of News”: Stereographs as Early Immersive Journalism

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### Abstract

Immersive journalism has been called “the future of news.” Virtual, augmented, and mixed reality mediums offer significant promise for an industry grappling with the challenges of the digital age. Yet, as journalism looks to a future where audiences can virtually experience the aftermath of a weather event or a war as if they were actually there, the past can offer some helpful insight into the challenges such a future might bring. Stereographs provided an immersive experience for the first generation of human beings to witness the marvel of photographic images in fixed form. As such, they may be considered the first example of what we now think of as immersive journalism. The history of stereographs can provide precedent for contemporary concerns about ethical boundaries, manipulation and representation, and business models.

<https://sjmc.txst.edu/innovative-immersive-learning/milab/milabjournal/guthrie-stereograph.html>

**Keywords:** stereograph, immersive journalism, history, future of journalism, virtual reality

### Introduction

In a recent TED Talk, New York Times reporter Nonny de la Peña declared immersive journalism to be “the future of news” (2015). Her team’s work, along with others at outlets like The Washington Post and NPR, is powerful and offers significant promise for an industry grappling with the challenges of the digital age. Yet, as journalism looks to a future where audiences can virtually experience the aftermath of a weather event or a war as if they were actually there, the past can offer some insight into the challenges such a future might bring.

### Immersive Journalism

Technological innovation inherently carries the promise of better communication and reduced labor. Early adopters fulfill their role by touting these promises with unflagging optimism. Yet, before the convergence of technologies that enabled virtual, augmented, and mixed reality mediums; the internet, television, film, and

radio all had their moment as the medium of the future (See Leonardi & Natale, 2018, p. 1-5). In fact, modern immersive platforms can find historical precedent as far back as the mid-nineteenth century. Stereographs, also known as stereo views or stereoscopic views, provided an immersive experience for the first generation to witness the marvel of photographic images in fixed form. As early as 1859, Oliver Wendell Holmes Sr. described the experience of viewing stereographs as “an appearance of reality which cheats the senses” (p. 742). (See Figure 1)

The history of immersive media could arguably extend back even further. Any well-executed dramatic play, even any story set to music, exhibits multimedia characteristics that are part and parcel of an immersive experience. Contemporary to the stereograph, traveling polyoramas promised to “engulf the senses of its viewers with fire and smoke, as well as thunderous sounds” (Borchard et al., 2013, p. 79). However, it is the addition

of technological enablement to that multimedia production that gives it the flavor of the uncanny, and more closely approximates modern immersive media. As such, the stereograph can be considered the earliest historical precedent for what we now think of as immersive journalism.



**Figure 1: Oliver Wendell Holmes Sr. photographed by reporters on his 85<sup>th</sup> birthday, March 8, 1926.**  
<https://www.loc.gov/pictures/item/2016850865/>

### Stereoscopic Photography

Stereographs emerged within a decade of the first photographic images. In the late 1830s, Frenchmen Nicéphore Niépce and Louis Daguerre collaborated to invent a photographic process that would ultimately bear the latter's name. Daguerreotypes are produced by briefly exposing a chemically treated silver or glass plate to light, followed by a succession of chemical baths that affix the resulting image permanently. Daguerre's interest in images extended from his work as a painter and as an innovator of the diorama, itself an early prototype of immersive entertainment. Samuel F. B. Morse was in France in January 1839 seeking a patent to protect his telegraph from European infringement just as the daguerreotype was being announced to the world. Morse and Daguerre exchanged the details of their respective discoveries, Morse brought daguerreotype technology back with him to New York, and the medium quickly spread across Europe, the Americas, and the world (Gillespie, 2016, p. 1-16). Simultaneous with the discovery of the daguerreotype, William Henry Fox Talbot developed a photographic process on paper that would eventually enable the mass production of images (Harris, 2018, p. 100-101).

Similarly simultaneous was Sir Charles Wheatstone's invention of the first stereoscope (Darrah, 1964, p. 3-9). The principle of stereoscopic vision is straightforward. The brain interprets three-dimensional space by

amalgamating signals from the eyes, spaced two to three inches apart on the average human head, and interpreting the slight differences in those two images into a 3D picture. Thus, if two nearly identical images taken inches apart can be viewed with a divider down the middle, a two-dimensional photograph can jump out to the viewer in startling three-dimensionality. Such an effect was achieved by using a dual lens camera, or by taking two successive exposures inches apart from a single lens camera and inverting them on a mount of glass or paper. Imagine the immersive effect of such an experience on denizens of the mid-nineteenth century for whom fixed photography still carried an almost magical quality, whose landscape had only begun to be blemished by rail lines and telegraph wires, and who had never witnessed – perhaps never conceived of – an electric light. (See Figure 2)



**Figure 2: Students view stereographs through stereoscopes in 1908.**  
<https://www.loc.gov/pictures/item/2015652302/>

Daguerreotypy, photography, and stereography evolved rapidly throughout the 1840s and 1850s, both in technological sophistication and market saturation (Guthrie, 2019, p. 136-141). In fact, by 1861 Holmes wrote of photographic ubiquity that “these miracles are being worked all around us so easily and so cheaply that most people have ceased to think of them as marvels” (p. 13). Professional photographers were employed to capture the great natural and architectural wonders of the world, and Holmes himself invented an inexpensive, handheld version of the stereoscope that bolstered the medium's popularity (Zeller, 2005, p. 21-26; Darrah, 1977, p. 1-5). However, it would be images of the American Civil War, already in motion at the time of Holmes's writing, that would produce some of the most impactful stereographs in history, and some of those most relevant to a discussion of immersive journalism.

### Ethical Boundaries

Technological innovation inevitably pushes the boundaries of journalism ethics. The technological and cultural culmination of mass market photography on the eve of the American Civil War has been explored in previous work (See Davis, 2007, p. 172-205). Suffice it to say that conditions were in place for the war to be documented in significant detail by photographers such as Mathew Brady and Alexander Gardner. Of the many conflicts captured by their cameras, none were as momentous as The Battle of Antietam. September 17, 1862 was the single bloodiest day in American history, and it also produced the first widely publicized images of dead bodies on the field of battle. Many of the images captured by Gardner, working at that time under the auspices of The Brady Gallery, were stereoscopic views and these sold widely in the coming weeks, months, and years (Frassanito, 1978, p. 27-63).

An unnamed New York Times reporter wrote of The Brady Gallery's "The Dead at Antietam" exhibition "Mr. BRADY has done something to bring home to us the terrible reality and earnestness of war. If he has not brought bodies and laid them in our dooryards and along the streets, he has done something very like it" ("Brady's Photographs," 1862). Holmes echoed this sentiment a year later, writing "Let him who wishes to know what war is look at this series of illustrations" (1863, p. 11). These images were intended to immerse the viewer in the visceral realities of armed conflict. However, as Susan Sontag noted, "the photographs Mathew Brady and his colleagues took of the horrors of the battlefield did not make people any less keen to go on with the Civil War" (Sontag, 1977, p. 12), which suggests some of the ethical dilemmas inherent in producing and selling such work.



Figure 3: "The home of a rebel sharpshooter" taken by Alexander Gardner in July 1863.

<https://www.loc.gov/pictures/item/2018672107/>

As new modes of storytelling offer new opportunities, standards of conduct must be updated. Consider the infamous example of Alexander Gardner physically moving and posing dead soldiers for stereographic images after The Battle of Gettysburg (Frassanito, 1975, p. 186-192). This practice would be

abhorrent today, but the evolution of ethical standards governing images of casualties of war must be understood within the context of the era in which this image was taken, as well as the ways it has been received by audiences in successive generations (Borchard et al., 2013, p. 70; Carlebach, 1992, p. 82-87). Gardner was working under very different cultural understandings of death, and the phenomenon of nineteenth century photography of the dead has its own unique history (Norfleet, 1993, p. 11-14). He was also producing work within certain technical, aesthetic, and economic imperatives that required the image be composed in a specific way. It is probable – even likely – that history will repeat itself as immersive technologies are applied to the most fundamental aspects of human life, including death. (See Figure 3)



Figure 4: A painted stereograph of wounded Union soldiers taken by James F. Gibson after the Battle of Antietam in September 1862.

<https://www.loc.gov/pictures/collection/civwar/item/2011646181/>

### Manipulation and Representation

The ability to edit and manipulate images can further complicate public trust in journalistic messages. Even in the medium's earliest days skilled photographers could blend images together to replace a clouded sky with a clear one, or physically color a stereographic image to make it seem more real (Darrah, 1977, p. 26-44). In some instances, images of fallen soldiers were painted to appear as if the blood and organs of the slain were spilling out of their lifeless bodies. (See Figure 4) Other images were forged wholesale. Passing an architectural image off as something it was not was common practice with travel stereographs that promised to transport the viewer to another geographic location that they would never be able to travel to in person. In the present-day, when public trust in journalism is as tenuous as it has ever been, journalists venturing into immersive platforms should understand the power and the responsibility they have to refrain from the unethical manipulation of images.



**Figure 5: A selection of stereoscopic viewers c. 1873.**  
<https://www.loc.gov/pictures/item/2017660532/>

Any journalistic platform inherently tied to technology inherently reinforces privilege. While it is true that photography had a profoundly democratic effect upon antebellum America due to its sheer ubiquity, the proliferation of mass-produced images also enabled a culture of celebrity that profoundly shapes the modern world (McCandless, 1991, p. 48). Even the most publicly accessible technology will always stratify into various versions that cater to a spectrum of customers running from the masses to the elite, a phenomenon evident in the wide variety of stereograph mounts, stereoscopic viewers, and cabinets used to store these items (Darrah, 1964, p. 10-11). (See Figure 5) While immersive journalism holds significant potential to transport its audience into the realities of war, poverty, or climate change, these stories are made exclusively for those with access to the requisite technology to experience them.



**Figure 6: Slave quarters on a plantation near Charleston, S.C. taken in 1860 by James M. Osborn and Frederick E. Durbec.**  
<https://www.loc.gov/pictures/item/2015646702/>

Economic privilege often overlaps and intersects with gender and racial discrimination. Melody Davis demonstrated how a “domestic market gave to stereoscopic history not an exclusivity of gender but a *gendered cast*,” helping to create many of the gendered stereotypes in visual media that exist today (2015, p. 5).

In examining a set of stereographs showing slave life in and around Charleston, South Carolina just before the Civil War, Matthew Fox-Amato deconstructed the practice of “Plantation Tourism.” While the chattel slavery depicted in these stereographs would soon be abolished, Fox-Amato noted that the photographers “laid the groundwork for post-1865 images that mythologized slavery as an ordered, mild, benevolent system” (2018, p. 157). Images that journalists create both reflect and reinforce the culture they depict, and the reinforcing power of immersive images will be especially pronounced because of the ways they simulate reality. (See Figure 6)

### Business Models

Business models built on new technologies will always be vulnerable at best. Mathew Brady, who helped produce some of the most memorable stereographs of the Civil War, experienced this reality firsthand. He expended the fortune he amassed during the golden age of daguerreotypy to document the war but died penniless and bitter with only the public memory of his name to show for his efforts (Guthrie, 2019, p. 148-149). His example shows what might be characterized as a lack of successful product management (Royal et al., 2020, p. 597-598). Brady assumed significant financial risk because he believed that, in addition to enduring historic value, his images would also have short term economic worth. For a number of reasons this proved not to be the case. The public was initially scintillated by “The Dead at Antietam” series, but as the war dragged on public appetite for such violent imagery declined. The war also caused the American economy to collapse on both sides of the Mason-Dixon line severely curtailing non-essential spending. In the end, Brady looked to the government to compensate him for his efforts, but in this hope he was disappointed time and again (See Foley, 1997, p. 189-207).

Economic characteristics further demonstrate the interrelatedness of all the issues at play here. Lapses in ethics can lead to expensive lawsuits and a damaged public image. Scandals further exacerbate problems of public trust and sever the ties that inspire audiences to pay for the journalism they consume. The most innovative immersive stories will only work in conjunction with the latest technology, and while those with the most disposable income are those most likely to have that technology, without reaching a critical mass of available consumers a business model is not likely to succeed. Sam Rutherford cited just such constraints as an important reason why immersive media has been slow to capture a sustainable market share (2019). Lucas Matney agreed, writing “tech companies won’t be able to skip

past augmented reality's awkward phase... and it's probably going to take a long-ass time" (2021). Perhaps immersive media may consider embracing embedded ad placement to supplement their income, as savvy stereographers began to do after the war. (See Figure 7)

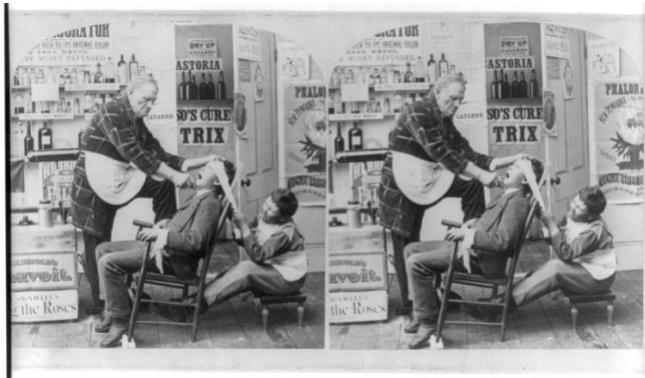


Figure 7: A clever advertisement for patent medicines c. 1872.

<https://www.loc.gov/pictures/item/2007678043/>

There is much that immersive journalism can achieve, but there are also inherent limits. The tension between telling stories that would otherwise not be told and commodifying someone else's tragedy is one that has long defined journalistic pursuits. Immersive journalism may, if anything, serve to raise these stakes. Writing for Wired Magazine, Matthew Gault suggested that Silicon Valley tech companies may view "the creation of virtual worlds as the ultimate free-market solution to a political problem. In a world of increasing wealth inequality, environmental disaster, and political instability, why not sell everyone a device that whisk them away to a virtual world..." (2021). There are few phenomena that encapsulate the collision of journalistic ethics, digital technologies, and business models as comprehensively as immersive media.

## Conclusion

Holmes boasted in the early days of stereographic imagery "Give us a few negatives of a thing worth seeing, taken from different points of view, and that is all we want of it. Pull it down or burn it up, if you please" (1859, p. 747). There is obvious hyperbole at play here, but the tendency to claim each new innovation as the future, and by implication older forms as the obsolete past, is one we should question rather than champion. It would be difficult to overstate the potential of modern immersive journalism. Still, we must be circumspect about its limitations, sober-minded of its consequences, and ethical with the ways in which we use these powerful new tools. Hopefully, the history of stereography can inform how intrepid reporters might proceed into the future of journalism while avoiding the pitfalls of the past.

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