



Historic Sites and Universal Design: Lessons from the Tenement Museum

by Miriam Bader

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When visitors are comfortable and not distracted by their tired feet and inability to see or hear, they are more inclined to engage and participate.

Historic landmarks and accessibility are often diametrically opposed: the best way to preserve places is often to limit public access and structural changes to a site. To serve their missions, museums and historic sites must balance the dual goals of preservation and access. Achieving this balance is something that the Lower East Side Tenement Museum (fig. 1) has long grappled with in its effort to preserve 97 Orchard Street, a 150-year-old tenement building on New York City's Lower East Side—while also accommodating more than 200,000 annual visitors.

Located in what was, at the turn of the 20th century, one of the most crowded neighborhoods in the world, 97 Orchard Street presents a variety of accessibility challenges. The narrow, five-story building is a classic Lower East Side tenement, built to house an influx of newcomers. Between 1863 and 1935, when new building code regulations condemned the building as a residence, it housed an estimated 7,000 working-class immigrants. Each of its 20 apartments is three rooms and approximately 325 square feet (30.19m²). These small spaces, together with the building's old infrastructure, create a setting that can feel inhospitable and is physically inaccessible to many.

Since its founding in 1988, the Lower East Side Tenement Museum has restored seven apartments to represent different historical moments and to interpret the lives of families who once lived and worked there. Unlike many traditional museums, which encourage a self-guided experience that relies on wall text and labels or audio guides, the Tenement Museum only offers a guided experience. This enables us to



Fig. 1. Façade of 97 Orchard Street. Shop Life is located in the basement level of the building. Photo by Keiko Niwa

both keep our spaces and visitors safe and to offer a unique educational experience. Every day, skilled educators guide small groups of visitors through the building's exhibitions in themed tours that elevate the story of the families that lived inside to inspire connections to immigration, past and present.

Over the years, we created a series of accommodations to meet the needs of our visitors better. We created an Access Advisory Board, a volunteer group that advises us on how to make the museum more accessible. We placed several folding chairs in each apartment. We created

large-print versions of primary source materials to aid visitors who are visually impaired, including census records, inspection reports, and transcripts of oral histories used on tours. We also provided more handling objects for visitors to touch. A slate board tells the story of Rosa Gumpertz and the homework she worked on in 1873, while a heavy iron communicates her mother's work as a dressmaker. Most importantly, we created accessibility training for educators to help them to incorporate the primary sources and handling objects into their tours, and to use descriptive language—to help paint vivid pictures, especially for those who are blind or have low vision—within their narratives.

As time went on, it became apparent that these modifications were beneficial to everyone, not just the visitors who requested them. When visitors are comfortable and not distracted by their tired feet and inability to see or hear, they are more inclined to engage and participate. This understanding led to a shift in our approach to accessibility. In 2010, we moved from a model based on creating “accommodations” to the tour experience to one in which we embraced the principles of Universal Design, with the goal of meeting the needs of all visitors—whatever their level of ability—without special adaptation. While we will never be able to make our historic building fully accessible to those who cannot climb stairs, plans to create a tour on the basement level of the building created an opportunity to design our most universally designed visitor experience.

A New Approach: *Shop Life*

Our newest exhibition, *Shop Life*, which



Fig. 2. Reconstructed 1870s saloon with period artifacts and reproduction furnishing and fixtures. Photo by Kieko Niwa

opened in 2012, demonstrates this shift, and incorporates years of lessons gleaned from the museum's experiments with making a historic site accessible to all visitors.

Shop Life traces the history that unfolded in the basement level of 97 Orchard Street. Unlike the upper floors of the building, which were condemned in 1935, the basement was in constant use as a commercial space from 1863 until 1988, when the museum was founded. This contrast caused the basement to be treated differently from the rest of the building. It served as the museum's administrative offices from 1988 to 1994 and was later repurposed as classrooms until the construction on *Shop Life* began in 2011.

Construction transformed the basement into an immersive experience spanning 150 years of commercial life. The tour is divided into three sections. The first part visits a recreated interior of a 19th-century lager beer saloon (fig. 2). The second part takes visitors to what we call a “ruin” space, where they can see how the layers of wallpaper, paint, and paneling tell the stories of the more than 30 stores that have, at various times, existed within the space. The final part of the tour consists of a technology interactive that gives visitors the opportunity to investigate the stories of three specific stores that once operated in the basement: a 1900s butcher shop, a 1930s auction house, and a 1970s underwear store. Together, these elements

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provide the framework for visitors to reflect on the role of storekeeping and family business and, more broadly, on the role that commerce and the American dream have played in the past and in communities today. While the first part of *Shop Life* follows the typical Tenement Museum teaching style and settings of an immersive restored setting, the third part incorporates something new—using technology to enhance visitor engagement and accessibility.

Creating a Blueprint for a Universal Design Approach

In *Shop Life*, a variety of high-tech and low-tech components combine to create our most inclusive experience. While many of the strategies we developed for it had already been implemented on other tours, this was the first time that we consciously built them into the design phase. These strategies include:

- adopting an iterative process;
- considering physical access—and comfort—from every angle;
- designing content to be flexible and responsive to visitors;
- providing multiple ways for visitors to engage with the space, the content, and the tour;
- and experimenting with new technology.

Collectively, these strategies reinforce the belief that designing for everyone results in a richer experience for all visitors—not just people typically classified as having disabilities.

Adopting an iterative process.

Shop Life was guided by an iterative approach. This commitment to continual refinement began with the development of the exhibition and continues today. From the early stages of planning, the museum involved a group of educators, scholars, our Access Advisory Board, and the public in a process that included extensive formative and summative evaluation. We held monthly meetings with our educators to develop content, storylines, and themes that would be flexible and provide multiple entry points into the tour. This group still gathers semiannually to brainstorm ideas and best practices together. Similarly, a team of humanities scholars contributed ideas, taught educator sessions, and wrote essays providing context to the material explored on the tour, such as German immigration patterns over time, 19th-century saloon culture, and immigrant entrepreneurship in New York City today. Visitors also played a crucial role. A total of 356 random visitors participated in user tests and focus groups and answered questionnaires. Special emphasis was given to the technology component, which was a new approach for the museum. Ongoing feedback shapes *Shop Life* and staff is expected to experiment with changes to better meet the needs of visitors.

Considering physical access and comfort.

We designed the exhibit's physical space with visitors in mind. Our goal was to create an environment that was both immersive *and* comfortable. First, we made the space physically accessible to visitors who use wheelchairs or walkers. *Shop Life* is now the only tour for 97 Orchard Street that does not require

the ability to climb stairs and stand for extended periods of time. Because the space is located in the basement of the building, visitors can enter via the rear yard, where we installed a wheelchair lift. In addition, since the exhibition required modifications to the existing floor plan, we were able to establish adequate wheelchair clearance in hallways and rooms. We also designed seating as an integral part of the exhibition's furnishing. Unlike other Tenement Museum tours—where only a limited number of folding chairs are available—*Shop Life* seamlessly blends seating into the space. Including seating into the furnishing plan also enables visitors to bring the saloon to life by peopling the space, which would have been bustling in the 1870s.

We also built elements into the space that would enhance the experience for people who are hard of hearing or have low vision. During construction, we installed induction loops, a sound system in which a loop of wire produces an electromagnetic signal received directly by hearing aids. These ensured that visitors with hearing issues could access audio content. We also captioned all video content. Similarly, for those with low vision, we installed dimmers in the lighting elements and used large-print type for all printed materials.

Designing content to be flexible and responsive to visitors. Like the physical construction of the exhibition, content was designed to meet the varied needs of visitors. Our approach of educator-led tours builds the principles of Universal Design inherently into the format for sharing content. *Shop Life* does not have

a set tour script. Educators who lead the tour are empowered to adjust the content to meet the cognitive abilities and interests of the visitors on a particular tour. “I will tell you what we know. Then I’ll invite you to help me with what we don’t know.” This invitation to contribute to the tour is often given at the beginning of the tour and highlights the flexible nature surrounding the content. While every tour visits the same spaces, the tour changes in relation to the visitors. By creating opportunities for visitor participation throughout the tour, educators continually assess the abilities of visitors and then adjust the content they share based on the particular visitors that are present (fig. 3).

Providing multiple ways for visitors to engage with the space, the content, and the tour. *Shop Life* was purposely designed to include an array of options and tools to provide as many points



Fig. 3. A group in the “ruin” area. Our educators are trained to use primary sources to engage visitors in the material. Photo by Miriam Bader

Our approach of educator-led tours builds the principles of Universal Design inherently into the format for sharing content.



Fig. 4. The interactive counter enables visitors to select information through text, audio, and visual formats. Photo by Liz Clayman

of entry as possible. Storytelling, role-playing activities, technology, handling objects, and visual aids all provide unique opportunities to engage the same information using different formats and senses. In order to support different types of learners, opportunities for free-choice exploration of the space and content were built into the tour. Educators also employ a variety of strategies to engage visitors and to spark interaction that underscore the tour's themes. Visitors might become historians helping to interrogate primary source documents, actors taking on the role of former saloon regulars, or contributors sharing their personal connections to the topics discussed.

Experimenting. In *Shop Life*, we wanted to respond to two challenges frequently faced by historic landmarks: how to tell the story of multiple time periods in one space and how to allow visitors to explore content on their own—and to do so with Universal Design in mind. One of the most frequent comments we hear from visitors is that they would like to be able to access more information than we can physically display. While it is not possible to put everything on view, the museum wanted to experiment with making

more research available. The museum also sought to tell the story of multiple time periods in one room. This is a great challenge for historic sites because when a space is restored to a particular era, by default the history that came before and after is erased. We found a solution to our quandary in the form of technology—an interactive counter created by New York-based Potion Design Studio (fig. 4).

The interactive counter—the third component of *Shop Life*—uses technology to project interactive media on a retrofitted 1890s sales counter that has fifteen stations, each of which utilize computers, RFID readers, projectors, audio players, smart boards, and depth-sensing cameras. The educator introduces visitors to the interactive and prompts them to choose from a selection of artifacts that relate to three different stores that occupied the space in different decades. When a visitor brings his/her selection to the counter, s/he is prompted to pick up a phone and explore the story of the object through a series of primary sources, written prompts, and audiovisual media that appear. Visitors select how much information they access based on their interests. They can dig deep into a

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subject and access a lot of information or just look at an image. The choice is theirs.

Guided by our approach of Universal Design, we captioned all content, added the ability to adjust the volume, and provided multiple ways to engage in the story. We also identified limitations for visitors who are blind or low vision, have limited range of mobility in their arm, or who are unwilling or uncomfortable engaging with the interactive media. While the interactive excels at providing visitors with access to extensive information about shops from multiple eras, it presented challenges to these audiences. Ultimately, the museum decided that the benefits the interactive provides outweighed the barriers it presented, and adaptations were created during the design phase to ensure that the needs of all our visitors could still be met.

Further experimentation led to the creation of a talking tactile book, which is the alternative for the interactive counter. Both options are available to all visitors; they are presented on every tour, and visitors select their preference for exploration. Visitors using the book have access to the same audio clips and images as the interactive counter. Furthermore, the book connects to a

special talking pen, which responds to a visitor's movement on the graphics and reads aloud description of the content. While the museum did not have the funding to translate the book into multiple languages, the possibility was built into the design of the book for future implementation and will enable us to support non-native speakers of English.

The Work Continues

Together, our various strategies—from adopting an iterative process to experimenting with new technology—have enabled us to provide a much richer and much more universally accessible tour in a landmark building. There is always more that can be done to improve the experience for everyone. For example, we are currently researching ways to incorporate more sensory elements into *Shop Life*, including the smells and the music of a German beer saloon. The olfactory elements have proved quite troublesome, and several attempts have failed. Each failure, though, teaches us something new. These lessons will be applied to future exhibits, which will ultimately help the museum and other historic sites to respond to the challenge of making our sites welcoming and relevant to all our visitors. 