

The Sonic Record: Interpretation, Aesthetics, and Labor History

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ABSTRACT

This article reflects on the theory and process of *The Measure of Work: Sounds of Labor in Lowell*, an interdisciplinary project that uses sound as an interpretive lens to explore labor history at Lowell National Historical Park. Drawing on sound studies, literary theory, and principles of dialogic interpretation, this project asked two interrelated questions: How might an emphasis on sound change the way we interpret labor history? and, How could the creation of a sound-centric museum experience open up new interpretive pathways? In partnership with the local arts and culture non-profit Mosaic Lowell, the park enlisted six composers to create original music that incorporated the sounds of work from different periods of Lowell's long history. Workshops with community members, archival research, and field recordings informed compositions, which represent a wide breadth of musical styles. The resulting installation intervenes in the Boott Cotton Mills Museum's current exhibits by juxtaposing established stories of progress, productivity, and decline with soundscapes that illuminate changing conceptions of work over time. The article shows how aesthetic forms have the capacity to both expand and destabilize dominant historical narratives.

INTRODUCTION

When the looms are running at the Boott Cotton Mills Museum in Lowell, Massachusetts, you can hear them before you even enter the building. On the first floor, an expansive room is lined with dozens of 1920s-era Draper Model E power looms, painted a bright green with cherry red bobbin batteries that look like flowers blooming at the side of each machine. While most of the looms are static, the National Park Service (NPS) has kept a handful of them in operation and park rangers provide frequent demonstrations of the looms at work. Before the demonstration begins, visitors are offered foam earplugs; when the looms are put into motion, the sound of the room shifts from a quiet hum of the circular leather belts to a cacophonous rhythmic banging. Even with just a few machines running, the noise makes it nearly impossible to talk to anyone nearby. The sound will stick with you long after you've forgotten facts about weave patterns or the difference between warp and weft. The experience is a profound glimpse into the working conditions of the female factory operatives known as "mill girls" whose migration from farm to factory work ushered in the American Industrial Revolution.¹

feature vignettes that show the agricultural landscapes that predated Lowell,² the connections between the textile industry and enslaved labor, as well as displays explaining the bale-to-bolt process that made Lowell particularly innovative. Later sections of the exhibit cover Lowell's deindustrialization in the early 20th century and its shift from manufacturing to heritage tourism. The narrative follows a rise-fall-redemption arc, which situates industrialization and NPS preservation as heroic bookends.

Aside from a few more recent installations scattered in different sections, the exhibits are more than 30 years

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It is precisely the story of American industrialization that Lowell National Historical Park (NHP) was designated to tell. The exhibits at the Boott Cotton Mills Museum

old. The Mellon Humanities fellowship project for Lowell NHP, *The Measure of Work: Sounds of Labor in Lowell*, sought to refresh the aging exhibits at the Boott

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Museum. I was interested in finding a new approach to the narrative of industrialization, one that did more than just change or add to the cast of characters featured in the museum. Moreover, I wanted to create an interpretive experience that transcended language as a way to counter the text-heavy exhibits. I proposed an exhibit installation that would use music and sound to explore and expand the history of labor in Lowell. The installation would build on the sonic experience of the weave room and sit in conversation (at times in tension) with the existing exhibit narratives. In partnership with the local arts and culture non-profit, Mosaic Lowell, the park enlisted six composers to create original music that incorporated the sounds of work from different periods of Lowell's long history. The project combined music, archival research, and community engagement to create an installation within the exhibits, which not only gives new life to the stories represented there but demonstrates how aesthetic forms can both expand and destabilize dominant historical narratives.

THEORETICAL FRAMES

A Literary Approach to Historical Narrative

My initial approach to this project drew on my training as a literary scholar, paying particular attention to the ways literature and history operate as narratives. While we tend to think of literature and history as categorically distinct from each other today, for late-18th- and early-19th-century writers, the differences were not quite as clear. Charles Brockden Brown, for instance, saw romance writing as the more sophisticated and truthful account of the past because it filled in the gaps between empirical facts.³ Writers of romantic histories could surmise the motivations of historical actors and connect the past to the present.

Interestingly, Brown's theory of the romance sounds a lot like Wilhelm von Humboldt's 1821 description of the "historian's task," which he sees as "undeniably related" to that of the poet.⁴ "For if the historian ... can only reveal the truth of an event by presentation, by filling in and connecting the disjointed fragments of direct observation," Humboldt writes, "he can do so, like the poet, only through his imagination."⁵ In Humboldt's view, like Brown's, a historian's job is to relate the truth of the past, but since the "manifestations of an event are scattered, disjointed, isolated," the historian must fill in the rest "by intuition, inference, and guesswork."⁶ Brown and Humboldt approach the concept of history from different angles but both end up with the sense that, at its core, historical narratives are always at least partially a work of fiction.

Over the course of the 19th century, the discipline of history increasingly differentiated itself from literature as it sought to be associated with the objectivity of the sciences, which meant obfuscating or otherwise not drawing attention to the more "imaginative" aspects of a historical narrative.⁷ The emerging commitment to realism in the world of literary fiction put similar pressures on the novel in the sense that it meant the author was bound to what was empirically probable, but because the genre was an invented version of the real world, it gave the author a certain latitude to experiment with narrative form.

Some novelists self-consciously mimicked history, which in part served to lay bare the obfuscations of narrators of history. J. Hillis Miller points to a key example of this in the novel *Middlemarch* by George Eliot.⁸ About a third of the way through the book, Eliot's famously intrusive narrator interrupts the sentence to ask this question: "but why always Dorothea? Was her point of view the only possible one...?"⁹ The question has a kind of metafictional irony. By *pretending* to be controlled by the text, Eliot throws into relief just how much she *is* in control. She prompts readers to consider the narrator, and by extension the author, as a person constructing every aspect of the text. And perhaps in another ironic twist, pointing to the fictionality of the novel simultaneously highlights the dilemma of a historian—choosing which story to tell, deciding which character is the protagonist, which characters are background, etc. Whereas Eliot's narrator stylistically assumes the role of a historian, accounting for the lives of the characters who inhabit the fictional town of Middlemarch, the historian in the real world, accounting for real, historical actors, must make the very choice the narrator laments. Why choose this perspective, among the many possible perspectives available? Drawing attention to the constructedness of a fictional world that appears identical to the real world, as the realist text does, simultaneously highlights the efforts of the historian to obscure the constructedness of the historical narrative. This dilemma extends to museum exhibits and interpretive programs, which aim to offer an authentic interaction with the past that everyone tacitly acknowledges is highly curated, often containing replicas of objects or spaces reconstructed and arranged like a theater set.

Equally relevant to this project was a theory of the novel that has served as the largely unacknowledged basis for dialogic interpretation. In the National Park Service, interpreters are trained in the practice of centering the audience in the facilitation of interpretive programs through dialogue and collaborative learning. In dialogic

interpretation, the diverse experiences of the audience are used to co-create meaning. Often, this practice of audience-centered interpretation¹⁰ emphasizes interpersonal exchange between visitors and rangers as the core methodology.

NPS resources for dialogic interpretation cite the work of Mikhail Bakhtin.¹¹ Bakhtin's work, notably, is not historiographical but literary; he was primarily concerned with establishing a formalist theory of the novel. Familiarity with Bakhtinian concepts of dialogism makes clear the limitations of its use in public interpretation—foremost among them, the idea that “dialogic” means speech between people. Bakhtinian dialogism is actually much more expansive. He sees the novel as a unique stylistic space made up of “a system of languages that mutually and ideologically interanimate each other.”¹²

Attending multiple machines, a weaver needed to be able to tell when one of her looms had malfunctioned or stopped, so she had to develop a listening skill finely tuned to the mechanical sounds of the looms.

Novelistic discourse, as he describes it, transforms all language and forms of expression that appear within the novel's pages into an object, with which the author is in a dialogic relationship. Rather than speaking through a literary medium, the author of a novel represents language, “argues with it, agrees with it (although with conditions), interrogates it, eavesdrops on it, but also ridicules it, parodically exaggerates it and so forth.”¹³ When readers then pick up the text, they dialogically interact with the voice of the author as well as the voices represented in the text. The result is a multivalent interchange between author, text, and reader. We can see how this dynamic maps onto the curated space of a museum or interpretive program, where interpreters and exhibit designers serve the role of the author; the objects and artifacts, the text; and visitors, the readers.

The Place of Sound in a World of Documentary Evidence

Research for this project also brought me to the field of sound studies. Kate Lacey's 2013 book, *Listening Publics: The Politics and Experience of Listening in the Media Age*, provided a theoretical basis for focusing on sound to tell this history and to challenge the existing narrative framework. In her analysis of the act of listening and its relationship to the public sphere, Lacey pushes

back against a hierarchy of the senses that categorizes listening as a passive act that requires no critical skill, particularly in comparison with speech or the skills associated with literacy like reading and writing. She argues that the values associated with modern society make “the proliferation of voices and opportunities for expression” the key indicator of progress, to the neglect of “the proliferation or quality of opportunities to listen.”¹⁴

At Lowell, so many of the indicators of progress reflect that value. The urban environment gave the mill girls access to books and education; the *Lowell Offering*, where mill girls published their own writing, was and is hailed as an example of the accomplishments these women could achieve only because of the industrial work that brought them out of the farms. Moreover, most of the interpretation related to the working conditions in the mills centers on the *loss* of hearing—indeed, mill workers typically lost some or all of their hearing as a result of working among the noisy machines—but fail to acknowledge how crucial skilled listening was for industrial weavers to do their jobs. Attending multiple machines, a weaver needed to be able to tell when one of her looms had malfunctioned or stopped, so she had to develop a listening skill finely tuned to the mechanical sounds of the looms. This ability, however, doesn't seem to carry the same weight as the visual acuity needed for spotting broken threads or tying a weaver's knot.

Lacey's work speaks to approaches to interpretation that resonate with Bakhtin's dialogism in the novel. Summarizing Marshall McLuhan's work in communications studies, Lacey notes that “visual space breaks up into categories and groups; acoustic space is a ‘resonant sphere’ with no centre and no margins.”¹⁵ The expansive capacity of listening experiences is reiterated later when she points out the emphasis on “a visual logic and a dyadic exchange” in modern communicative frameworks, “rather than in terms of an embodied and pluralistic encounter.”¹⁶ This understanding of acoustic space and the multidirectional potential of the act of listening opens new possibilities for rethinking historical narratives and the modes with which we interpret them.

Richard Rath demonstrates this more directly in his book *How Early America Sounded*. His sonic history of early American life is animated by the premise that sound is just as important as objects and documents in historical work. He notes that epistemologies of colonialism mapped literacy onto concepts of civilization, relegating oral cultures to a primitive past.¹⁷ Such colonial conceptual

frameworks have fed the assumption that sound is ahistorical, that the ephemeral nature of sound makes it inaccessible to historians. Sharply critiquing the belief among historians that “[any] part of the audible world outside that which is reducible to print and writing gets missed,” Rath points out that natural sounds “sound more or less the same now ... the problem of sound being evanescent is moot.”¹⁸ Even human-made sounds like those of bells or other instruments persist across time periods. “What has shifted,” he notes, “is how they are heard.”¹⁹ In step with Lacey, Rath laments that “the seventeenth-century sensorium” has been “muffled by time, documentation, and the literate, highly visual mindsets of scholars.”²⁰ Both Rath and Lacey show us that privileging visual culture and documentation to the neglect of sound pushes us into habits of thinking that can severely limit our understanding of the past.

PROJECT DESCRIPTION

Reframing Labor History through Sound

Taking cues from Rath and Lacey, this project asked two interrelated questions: How might an emphasis on sound change the way we interpret labor history? and, How could the creation of a sound-centric museum experience open up new interpretive pathways?

The Measure of Work: Sounds of Labor in Lowell set out to add a critical, dialogic layer to the established narrative presented in the Boott Mills exhibits. While the exhibits offer opportunities to learn about the struggles of the workers and their efforts to resist exploitation, the shape of the narrative holds on to entrenched ideas about the Industrial Revolution as the inevitable fulfillment of American innovation and progress. Even as they work to provide a balanced history, the reliance on object displays, text panels, and archival documents meant the information tended toward productivity statistics, wages, hours, and workforce numbers, which leaves little room to consider the impact of industrialization on the nature and perception of work. Sound became the means through which we could break out of that conceptual framework.

Approaching labor history through sound and music did indeed reveal the way industrialization has shaped the very definition of work and, by extension, what counts as labor history. As I was developing the parameters of the project with the park staff, I had several discussions about potential problems with the intention to focus the soundscape on “work.” One possible complication they noted was that the terms *labor* and *work* typically signify unions, strikes, wages, and the like. Would a project on the sounds of labor necessarily exclude the Indigenous

people of this area or force their story into categories governed by a Western worldview? Could the framing of the project create barriers that would inhibit collaboration with Indigenous artists or consultation with the Mashpee Wampanoag?²¹ The inclusion of forms of labor that might be experienced as spiritual acts or activities that may not conform to a modern sensibility of what counts as work seemed an insurmountable conflict with the aims of the project. Of course, the project was meant to recover precisely these kinds of entanglements *in order to* make legible the extent to which industrialization had so profoundly reshaped work as categorically separate from the rest of our daily lives—so much so that it was difficult to see labor that is conceived as a spiritual act as a legitimate representation of work. These conversations were interesting opportunities to acknowledge our own responsibility to recognize the epistemological limitations we were trying to break free from.

We partnered with Mosaic Lowell, the arts and culture organization supported by the Greater Lowell Community Foundation, to commission six original musical compositions that incorporate sounds of work through Lowell’s long history. We identified six roughly defined eras, trying to strike a balance between marking points in time where significant changes would have altered the soundscape and maintaining an awareness of overlap within and across eras. We characterized the eras as Indigenous Homeland, Agriculture, Early Industry, Industrial Lowell, Globalization & Diversification, and Preservation & Technology. In conversation with local musicians and music experts, we crafted a call for composers that received nearly a hundred submissions from twelve states and six countries. From this pool of incredibly talented artists, we worked with a selection committee to choose a diverse cohort of composers who represented a variety of backgrounds, musical styles, and connections to Lowell.

An important aspect of this project was to create opportunities for community engagement and co-creation. To that end, I worked with the park’s Interpretation & Education and Cultural Resources divisions to develop a series of workshops meant to provide context for the different historical eras and to give participants a chance to talk with the composers at the early stage of their creative process. The workshops included ranger-led tours, sound-centric activities, and facilitated conversations between the composers and participants to generate ideas for sound samples and possible themes. After the workshops, we shared discussion notes and other historical resources with the composers. These discussions made a material impact on the finished work. One composer noted that

“the idea to structure the piece around the changing perception of time through this period came directly from the first workshop.”

Following the workshops, composers were given roughly five months to create their original scores. During this time, I helped provide historical resources and coordinated research visits to the park’s collections as well as the Center for Lowell History. I looked for sources that could provide clues as to what might have been part of the soundscape in a given period of time. Maps were especially helpful in determining the layout of farms and identifying the types of mills that were operating nearby in early periods and the establishment of railroads and highways in later years. Henry David Thoreau’s account of his trip on the Concord and Merrimack rivers provides rich details on the varieties of wildlife that lived in the area in the early 19th century.²² I also worked with our partner, the Lowell Telemedia Center, to record sound samples around Lowell as well as other historic sites like Old Sturbridge Village, Saugus Iron Works National Historic Site, Plimoth Grist Mill, and the Rhode Island Computer Museum. We were fortunate to have our musical director, Marshunda Smith, who worked with the composers on developing the musical concepts. While the composers worked mostly independently of each other, we hosted virtual check-ins and created a space for the group to hear and comment on early drafts of the works-in-progress. In the meantime, the park incorporated aspects of the project into their programming. One of their activities for the annual Kids Week event included a hands-on sound exploration table, where kids and adults could listen to some of the sound samples and recreate them with the tools and objects on display.

THE COMPOSITIONS

The resulting compositions play off of each other in interesting ways; sounds overlap or sound similar (a waterwheel and a train, for instance) and the musical styles take us through an illuminating arc.

Nathan Young’s “Resonant Bodies,” which represents the Indigenous Homeland era of the project, is the only piece that relies solely on musical instruments—a French horn, double bass, cello and violin. Young writes his piece in drone style, which features sustained notes and slow-moving tonal shifts. Each note is held for about a minute long and the instruments move fluidly from one note to the next. They are not perfectly in sync, and you can hear the musicians’ efforts to sustain these tones against the limitations of bow length and breath. The apparent simplicity of the piece brings the audience into a space of careful, subtle listening, which reveals the complex

textures within the tones both individually and in relation to each other. In his composer statement, Young explains that “Resonant Bodies” is meant to represent qualities of Indigenous labor that exist outside of the standard metrics, labor that is “felt across generations” and “lives in the act of caretaking, in ceremony, in relation to land.”²³

Listen to excerpt from “Resident Bodies”

“Time and the Seasons” by Manar Hashmi, representing Agriculture, contracts the narrative frame—not labor echoing through generations, but a year-long journey through New England agricultural life. Hashmi saturates her piece with sound: a crackling fire; a spatula scraping a cast-iron pan; footsteps through grass, snow, gravel; a broom swishing across the floor; the rustle of hay; rain, thunder, birdsong. The instruments—clarinet, flute, French horn, double bass, and viola—represent changes in the landscape as we move through the seasons. Hashmi explains that the clarinet’s “tendrillike motives . . . indicate the growth of plants,” for example, as the “earthy tones of violas and double bass ground the piece in the rich agricultural soil”

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of the area.²⁴ Her piece reminds us of the ways labor in this place, known at the time as East Chelmsford, was tied to the cycles of nature and the routines of domestic space. Her approach to time reflects the European worldview that came to settle these lands, which delineated property according to individual ownership and saw generational labor as cyclical but individually distinct.

Listen to excerpt from “Time and the Seasons”

With Alison Plante’s “Warp and Shift,” representing Early Industry, we explore the first steps toward industrialization, when a few small mills dotted the river and canals. Plante wrote her piece around a shifting perception of time that came with mechanization, “from lived to measured, from cyclical to linear, from solar to mechanical.”²⁵ It opens with a rush of water and creaking gears as a waterwheel, the source of power for these mills, lurches into motion. While the waterwheel settles



Gathering sound samples for the project: an exhibits specialist for Lowell National Historical Park records the churning waterwheel at Saugus Iron Works National Historic Site. PAUL KENWORTHY

into a regular rhythm, a voice sings a tune resembling slowed down fragments of “Chester,” a Revolutionary song by William Billings, while two violins play sharp, hammered notes at irregular intervals and a cello hums beneath. Over the course of the piece, this interplay between precisely measured sound and irregular rhythms coalesces into phrases that follow a slow, but stringent, almost militaristic beat. As it comes to a close, the sounds we hear throughout—the waterwheel, blacksmithing, canal digging, wool carding—gather speed and volume and resolve in the sound of a steam engine, which signals Lowell’s full realization as an industrial city.

Listen to excerpt from “Warp and Shift”

Steven Arahamian’s piece, “Industrial Lowell,” representing the era of that name, captures the part of Lowell history that is most familiar to park visitors and community members: the heyday of the textile industry. In developing this piece, we discussed the potential to represent the boardinghouse keepers, who performed domestic labor on an industrial scale but tend to get overlooked in favor of the more novel story of the mill girls. Ultimately, Arahamian decided the constraints of the piece didn’t allow room to include them, ironically repeating the standard historical narrative. Arahamian bookends the piece with bells, which governed the factory schedule during the week and called the operatives to church on their day off. The music follows an unrelenting fast-paced tempo; unsurprisingly, we hear the sounds of the looms at different intervals, but Arahamian rounds this out with sounds of other machinery, the turbine, switches, the spinning governor, “reflecting the constant operation of loud machines in the mills.”²⁶ Floating above the machines are “pitched percussion instruments” which play in “symmetrical patterns to reflect the many weave patterns for the looms” while woodwind instruments—flute, oboe, clarinet, and bassoon—represent the voices of the factory workers interacting over the noise.²⁷ The effect is frenetic and hurried, broken only with the somber organ tones at the close.

Listen to excerpt from “Industrial Lowell”

Following the best-documented period of Lowell history is one largely overlooked, except to mark the departure of the original textile corporations that had dominated the city. Most accounts of this time in the first half of the 20th century highlight the stillness of an emptied-out mill building or the images of rubble left behind from demolished buildings. But Michelle Tucker’s “What It Really Means to Start Over” (representing Globalization

& Diversification) recognizes that the city didn’t stop functioning; it had to reinvent itself. She also joins that economic story with the story of immigration so central to Lowell’s cultural identity today. “Lowell’s immigrants brought the sounds of starting over,” she explains, “the excitement and novelty of building a new life in a new city juxtaposed by the anxieties and fears of poverty, instability, and racial hurdles.”²⁸ Tucker uses minimal sound, just the bells of St. Anne’s Episcopal Church, which hearkens back to Lowell’s industrial origins. Once a signal of the corporations’ demands for church attendance, the bells take on the weight of the past as it pushes into and puts pressure on the future. A jazz meditation captures the precarity of this moment, where everyone had to be ready to pivot in order to keep going.

Listen to excerpt from “What It Really Means to Start Over”

Christopher Player had the unique challenge of composing a piece that represented the labor of the present day (the Preservation & Technology era); his response is “The Lowell Loom.” Since the work of NPS at the Boott Mills is to interpret the history of the work that had been done in the past, many of the sounds could feasibly be the same—the looms, footsteps on the historic staircase, the turbine—but the work of historic interpretation is never simply a repetition of the past. And, of course, the building has new sounds specific to the work of the park, elevator dings, the voices of children on a field trip, the clicks on a computer keyboard. With his engineer brother, Player built an electronic device, which he calls the Lowell Loom Sequencer, that “converted textile instructions into timed pulses that could be experienced as electronic drum rhythms and which trigger microsampled city sounds.”²⁹ Player asked a park ranger, Emily Donovan, to play her saxophone in the cavernous space of a defunct turbine and combined it with “the brush-like sound of idling friction from [the] belts” that powered the looms.³⁰ The instrumentation uses low tones—bass flute, bass clarinet, French horn, tenor saxophone, double bass—which reflect “the historically-weighted collection of unique voices in Lowell with their own emerging futures.”³¹ As a result of Player’s inventiveness, “The Lowell Loom” feels multilayered, modern, and pan-historical.

Listen to excerpt from “The Lowell Loom”

MAKING SOUND ACCESSIBLE

The complete set of compositions was introduced to the public through a silent disco event, where visitors listened to the music simultaneously on their own sets of headphones. The experience included a panel

discussion with the composers, live art and dance, and a sound activity table facilitated by the Lowell rangers. The final phase of the project is to incorporate the compositions into the regular visitor experience.³² The park is designing exhibit panels to be placed throughout the Boott Cotton Mills Museum, which will link to the Lowell NHP website through QR codes. Along with background information about the composers and their

Videos produced in partnership with the Lowell Telemedia Center will feature American Sign Language interpretations of the music performed by six local Deaf female artists.

full composer statements, visitors will find the audio files for each composition. In addition, Think Outside the Vox, an organization dedicated to making the arts accessible, is producing accessibility experiences for Deaf and Hard of Hearing visitors. Each composition will have a full description written by a Blind musician. Videos produced in partnership with the Lowell Telemedia Center will feature American Sign Language interpretations of the music performed by six local Deaf female artists. More than just making the compositions accessible, these experiences themselves serve as accompanying creative and interpretive projects.

The project speaks to the power of aesthetic forms to expand our thinking and disrupt our conceptual frameworks. A sound-centric history of labor throws into relief the extent to which work is a multisensory phenomenon. It puts the usual stories of increasing productivity, worker exploitation, and the like into the periphery in favor of revisiting the lived experience of work. Weaving at the Boott Mills, for instance, involved watching the movement of the looms, listening for mechanical problems, feeling the cloth to make sure there were no defects, all in an environment kept humid to protect the yarn, with cotton fibers floating through the air. By bringing together sound, music, and interpretation, *The Measure of Work* demonstrates that labor history is more than just a record of economic change. It explores labor history as an archive of changing perceptions of what constitutes work and how it fits into our lives—as tradition that reaches across generations, as part of our domestic spaces and human relationships, or as a reflection of the separation of public and private spheres.

ENDNOTES

1. Some of the best work on this period of Lowell history includes Thomas Dublin, *Women at Work: The Transformation of Work and Community* (New York: Columbia University Press, 1979); Mary Blewett, ed. *Surviving Hard Times: Working People of Lowell* (Lowell, MA: Lowell Museum, 1982); Robert Dalzell, *Enterprising Elite: The Boston Associates and the World They Made* (Cambridge, MA: Harvard University Press, 1987); and Theodore Steinberg, *Nature Incorporated: Industrialization and the Waters of New England* (Cambridge, UK: Cambridge University Press, 1994).
2. This section of the exhibit is focused on the farming settlement then known as East Chelmsford. The area was incorporated as Lowell in 1826.
3. See Gretchen Woertendyke, “History, Romance, and the Novel,” *Oxford Handbook of Charles Brockden Brown*, Philip Barnard and Stephen Shapiro, eds. (New York: Oxford University Press, 2019), 155–170.
4. Wilhelm von Humboldt, “On the Historian’s Task,” *History and Theory* 6:1 (1967), 57.
5. Humboldt, 58.
6. Humboldt, 57.
7. See Daniel Woolf, *A Concise History of History: Global Historiography from Antiquity to the Present* (Cambridge, UK: Cambridge University Press, 2019); Jeremy Popkin, *From Herodotus to H-Net* (New York: Oxford University Press, 2016); Rolf Torstendahl, “Fact, Truth, and Text: The Quest for a Firm Basis for Historical Knowledge around 1900,” chapter in his *The Rise and Propagation of Historical Professionalism* (New York: Routledge, 2015: 99–128); Peter Novick, *That Noble Dream: The ‘Objectivity Question’ and the American Historical Profession* (Cambridge, UK: Cambridge University Press, 1988).
8. J. Hillis Miller, “Narrative and History,” *ELH* 41:3 (1974), 455–473.
9. George Eliot, *Middlemarch: A Study of Provincial Life*, Rosemary Ashton, ed. (London: Penguin Classics, 2003; first published, 1872), 278.
10. For a more thorough exploration of the practice of audience-centered interpretation, see National Park Service, *Forging Connections Through Audience Centered Experiences Workbook* (Harpers Ferry, WV: Stephen T. Mather Training Center, 2018); National Park Service, *Vision Paper: 21st Century National Park Service Interpreter Skills* (Washington, DC: National Park Service, National Park System Advisory Board Education Committee, National Education Council, and George Washington University, 2014).
11. One example comes from Lowell National Historical Park’s 2019 Long Range Interpretive Plan. The list of

- references cites Bakhtin's 1986 book, *Speech Genres and Other Late Essays* (Austin: University of Texas Press), which includes a typology of the novel, but parenthetical citations also cite a Bakhtin publication from 1981, which is presumably *The Dialogic Imagination: Four Essays* (Austin: University of Texas Press, 1981), in which Bakhtin defines dialogism as part of his theory of the novel. Materials used by Indiana University's Eppley Center for interpretation training include "The 'Dialogic Museum' Revisited: A Collaborative Reflection" by John Kuo Wei Tchen and Liz Ševčenko (in *Letting Go?: Sharing Historical Authority in a User-Generated World*, Bill Adair, Benjamin Filene, and Laura Koloski, eds.; Philadelphia: Pew Center for Arts & Heritage, 2011: 80–97), which also references Bakhtin's *Dialogic Imagination*.
12. M.M. Bakhtin, *The Dialogic Imagination*, 47. For other examples of literary theory that think about the formal logic of the novel or realist fiction, see Georg Lukacs, *Theory of the Novel* (Cambridge, MA: MIT Press, 1971); Roland Barthes, "The Reality Effect," chapter in his *The Rustle of Language*, Richard Howard, trans. (Berkeley: University of California Press, 1989); Frederick Jameson, *The Antinomies of Realism* (New York: Verso Books, 2013); Franco Moretti, *The Bourgeois: Between History and Literature* (New York: Verso Books, 2013).
 13. Bakhtin, 46.
 14. Kate Lacey, *Listening Publics: The Politics and Experience of Listening in the Media Age* (Cambridge, UK: Polity Press), 8.
 15. Lacey, 6.
 16. Lacey, 9.
 17. Richard Rath, *How Early America Sounded* (Ithaca, NY: Cornell University Press, 2003) 3.
 18. Rath, 3.
 19. Rath, 3.
 20. Rath, 2.
 21. Historically, the land around the Merrimack and Concord Rivers was inhabited by the Pennacook, but the Mashpee Wampanoag, who are geographically tied to southern Massachusetts and Rhode Island, is the federally recognized Tribe nearest to Lowell.
 22. Henry David Thoreau, *A Week on the Concord and Merrimack Rivers*, William L. Howarth, Carl F. Hovde, and Elizabeth Hall Witherell, eds. (Princeton, NJ: Princeton University Press, 2024).
 23. Nathan Young, composer statement for "Resonant Bodies," *Measure of Work: Sounds of Labor in Lowell*.
 24. Manar Hashmi, composer statement for "Time and the Seasons," *Measure of Work: Sounds of Labor in Lowell*.
 25. Alison Plante, composer statement for "Warp and Shift," *Measure of Work: Sounds of Labor in Lowell*.
 26. Steven Aprahamian, composer statement for "Industrial Lowell," *Measure of Work: Sounds of Labor in Lowell*.
 27. Aprahamian, composer statement.
 28. Michelle Tucker, composer statement for "What It Really Means to Start Over," *Measure of Work: Sounds of Labor in Lowell*.
 29. Christopher Player, composer statement for "The Lowell Loom," *Measure of Work: Sounds of Labor in Lowell*.
 30. Player, composer statement.
 31. Player, composer statement.
 32. Anticipated installation date is end of 2025 or early 2026.