Introduction

When we originally discussed developing the exhibits detailed in this booklet, our idea was to think through the development of the work from a user experience standpoint. Above all, we wanted to emphasize empathy for the people who would ultimately use the exhibits. For us, empathy meant clarity of purpose and design that was intuitive and responsive not just to user needs, but to their ability to participate. As a context for this work, we had spent some time discussing Nina Simon’s work on participation in museums, specifically the importance of participation in learning and expressing emotions not easily categorized or catalogued. We felt inspired by the potential for sound to provide an outlet for people to express themselves, and we believed that our exhibits had to foreground participation not only as a concept, but as a design feature.

What we found throughout the development process was that we faced a great deal of ethical and rhetorical decisions. Some of the ethical decision-making was conceptually tied to the transformational processes offered by critical making practices. While we discuss critical making a bit more in depth in the next section of this booklet, we mention it here as an essential touchpoint of our work. For us, critical making invited us to transform tools to move ideas or emotional response into a more or less liminal space that could be iterated through trial and error—a sense of guided “play.” Our play was guided by what the audience might do with the exhibit. In this way, our ethical imperative was to make space for people to participate—to arrive at their own conclusions and achieve their own goals or epiphanies without us overtly trying to script their experience. We provided constraints, yes, but at the risk of sounding contradictory, we also did not provide any single one course of action. There were many paths through
each exhibit, and that was the point.

The rhetorical decisions we faced were also directly related to the transformations of the tools; in this case, computing technologies, poster design, and software applications, to help deliver and circulate our ideas. That is, as the exhibit designers, we had to transform the tools in ways that would align with the audience and could provide them with the ability to be composers of their experience. We felt compelled to invite our audience to exercise their rhetorical agency when participating in the exhibits. To set the stage for this kind of work, we also thought about the arguments our exhibits were forwarding—both in design and in infrastructure—including the realities they presented. These arguments, we hoped, would deliver a symbolic invitation to participate in the exhibits—for the audience to make meaning *with* and *through* delivering and circulating sound.

To sum up, our goals of empathy and participation presented us with ethical imperatives and rhetorical decisions that both guided our design and artistic view of curation rooted in experience design. What follows in this booklet is more information about our process and statements about our work that emphasizes experience design as our methodological approach.
Importantly, scholars in rhetoric and writing have been thinking about rhetorical delivery quite a bit recently (see Ridolfo, McCorkle, Morey, Porter, etc), particularly as circulation (Gries and Brooke). We want to acknowledge this scholarship as important to our thinking and understanding of rhetorical delivery as we approached our exhibits. To narrow our list of influences, we want to point to three specific areas that we believe speak to rhetorical delivery and circulation studies: critical making, participatory art, and sound art. In the following paragraphs we explain these influences a bit more, and how they influenced our process.

Process (or Logos)
In a recent conversation with our colleague Dawn Opel, she argued for the importance of critical making as essential for experience design work. Since experience design was our foundational approach for developing our exhibits, we sought to explore Dawn’s thinking. We started by asking what is critical making? John Dunnigan (2013), of the Rhode Island School of Design, defines critical making is “the process of creating things by altering materials and giving forms to ideas” (p. 98). In developing the ideas for our exhibits, we spent a good deal of time thinking through and strategizing how people would engage and participate with the exhibits. We wondered how to configure materials to communicate the ideas. How would we have to transform the materials we were using?

To begin, we wrote out a use case to help us understand the range of interactions with the exhibits. In other words, we designed a process for our making, and then paid attention to how that process gave form to our ideas. Our use case imagined the possibilities for the room where the exhibit would be
live. We also imagined how people might approach the exhibit and work with the technology in front of them. We asked questions about the steps participants might take, and where there could be design bottlenecks or confusing steps. We wondered if there would need to be instructional materials, and if so, what form they would take? We also asked if those materials might better take the form of the us prompting and interacting with participants during the exhibit. Image 1 depicts our first process discussion.

Next, we continued to iterate our exhibit design through bi-weekly meetings and research. Our research was done by interacting with art and sound art exhibits to understand the interactions and participatory elements. For example, with her colleague Jessica Gibbons, Larissa worked on a research project related to participatory design elements in exhibits. The goal of that project was to understand how the participatory elements of exhibit design can contribute to learning (for more information, see Gibbons and Babak, 2018). Additionally, Ben sought out sound art and art exhibits that had participatory elements to develop ideas. One exhibit, *Everything Speculative* by Nida Abdullah, Zachary Kaiser, and Scott Swarthout (2018) helped Ben understand that participative elements can be simple, but provide complex information (see https://detroit.sciencegallery.com/hustle-exhibit). The insights from our research and exploration helped us further develop our initial use case, and expand on it. This approach also helped us further understand how we would need to transform the tools we wanted to use to support participation, and how they would need to be transformed.

**Participation (or Ethos)**

Another way we paid attention to our process was by practicing empathy for the people who would eventually engage in our exhibit. Inspired by Allan Kaprow’s (2006) work “Notes on the Elimination of the Audience,” we sought to integrate the boundaries between artist (composer) and audience by
focusing on designing an experience for people to participate in. While we want to be careful here--because we were not developing a Happening, as Kaprow called them--we found his ideas about the need for clarity when approaching participation to be particularly valuable. He explained that artists must conjure audience participation “by writing out the scenario or score for all and discussing it thoroughly with them beforehand” (p. 103). When developing these kinds of materials, we meant to emphasize the importance of empathy and understanding for our audience. We strategically worked during our making process to attend to what our audience would need to know in order to participate and make something from their experience with our exhibits.

As well, Nina Simon’s The Participatory Museum (2010) was a foundational text for relating our work to the context of an exhibit. One of Simon’s main points is that participation in museum contexts should not be viewed as simply a “fun activity” and should be tied to larger institutional goals (p. 16). Similarly,
we felt that the takeaways from interacting with our exhibits should be grounded in illustrating the intersections of sound studies, rhetoric, and memory. Further extending the previously mentioned work Larissa completed with a colleague on the participatory elements of exhibit design, we drew from their argument that participation in museum spaces is shaped by the affordances of an exhibit’s design and the “tacit knowledge” of participants (Spinuzzi, 2005, p. 165). When we designed our exhibits, we considered the ways tacit knowledge would impact participant interactions with the expressive tools we designed, while also ensuring there were ways for visitors to build their own meanings and understandings.

This tacit knowledge was evident in our process when we iterated the use case for each exhibit. We imagined our audience as a group of scholar-practitioners working in sound, and believed they would have ideas about how to interact with the sound elements of the exhibits. This tacit knowledge did not excuse our engagement with effective and ethical design patterns, but it did help us to think through the design in a way that would lend ethos to the exhibits’ invitation to participate.

**Relationality (or Pathos)**

The last idea we drew from was explained by Brandon LaBelle in *Background Perspectives on Sound Art*, that sound is relational. Metaphorically, we see sound as the glue between the material and the memory. Music is a great example to illustrate this point. A song can invoke a specific time in an individual’s history. Ben remembers, for example, the first time he heard Nirvana’s “Unplugged.” He recalls the TV he was watching and where he was (a hotel room in Daytona Beach). He recalls his age—14—who his friends were, and the time of year (Spring). Even more, he remembers the feeling the music communicated to him and how easy it still is to time travel back to that time when the song “About a Girl” starts. When we think of sound evoking memories, we deliberately call attention to its relationality and its ability to recall the past in vivid, perhaps
Another example of relationality occurred when we conducted user testing on our work. Because Larissa took all of the photos featured on her poster and recorded most of the sounds, their meaning is automatically relational to her as memories of places and people that are special in her life. Subsequently, when participants interacted with her work, many mentioned personal memories related to both the images and/or the sounds, such as vacations they took as a child, places featured that were near where they grew up, and nature-focused TV segments they enjoy watching. So, for us, relationality is an important part of both our work as designers and the paradigm we considered with our audience in mind. In other words, we wanted to design for multiple responses, even if guided by specific kinds of visual or sonic constraints.
Snapshot 39. You’re hiking on the Skyline Trail at Mount Rainier National Park with your best friend. The steep, black concrete path below you is shimmering with heat, and even though you’ve only been climbing for ten minutes, your ankles burn like you’ve been hiking for ten hours. You hear a barely distinguishable thump, but you ignore it because you’re trying to figure out how you’re going to make it two miles up to Panorama Point. A man nearby asks a volunteer trail guide what the sound is. The volunteer says it’s a ruffed grouse, and during mating season, the bird thumps its wings in a pattern that creates a low frequency bass sound. They’re hard to see, but they’re regularly heard. You keep hiking. When you hear the thumping again, you listen.

Snapshot 4. You’re alone, walking on the boardwalk in the Norris Geyser Basin at Yellowstone National Park. You approach a hot spring that’s labeled as Veteran Geyser. Its water is dark grey yet crystal clear, and its walls are lined with white travertine. You stand and watch as it shoots a small stream of water to the side. You hear heavy breathing, like a sprinter gasping for air, coming from the ground next to the geyser. You realize you’ve found your favorite geothermal feature at Yellowstone, mostly because Veteran Geyser is a living meme.

Snapshot 28. It’s late in the day, and you’re hiking on the Navajo Loop Trail in Bryce Canyon National Park. You’ve descended into the canyon on a winding trail of puffy orange rocks. The colors have changed from red and orange to green and brown as delicate pine trees and fallen logs hide the rock walls in the distance. You’ve passed several groups of hikers, some of whom you’ve chatted with, getting to know them for only a minute. When they’re gone and you can’t hear their feet crunching on the gravel anymore, you stop and listen to the
silence. The only sound you hear is the mysterious boom of the wind on canyon walls far above you.

These three memories are all moments I experienced while traveling over the past year. Between August 2017 and July 2018, I was privileged enough to have the opportunity to visit 10 of America’s National Parks in five states. Before visiting, I’d scrolled through enough Instagram posts and read enough guidebooks to know that each of these places would have its own visual personality. What I never expected were the sonic personalities—the chatter of tourists at Arches’ Delicate Arch overlook, the popping of mud pots at Yellowstone, the crunching of snow under my feet at Mount Rainier—that can’t be captured in photographs or guidebooks.

This exhibit is an attempt to bridge that gap by allowing the audience to look at photographs from my trip and listen to sounds I’ve attributed to them. Individually, the sounds reflect the photos. Collectively, they provide a sonic look into the national park experience. All of the photos I’ve featured were taken on my trips, and I’ve chosen sounds to match each of the photos. I didn’t actually hear all of these sounds while at the parks. For example, although I saw elk at Yellowstone, I didn’t get the chance to hear their haunting song. However, many of the sounds I’ve featured here are ones I’ll never forget—the grunting of bison at Badlands, the slithering of a desert spiny lizard on rocks at Zion, and the pounding tide of the Pacific Ocean at Olympic. Participants can choose whether they’d like to listen to the sounds individually, or they can merge them all together to create their own soundscapes.

By interacting with this work, I hope that participants enjoy the process of discovering the dynamic and sometimes surprising affordances of adding sounds to static visual images. At the same time, I also hope this exhibit provides a moment for participants to reflect on personal memories of vacations, home, or anything else that these sounds evoke, and to share
Yellowstone
- Dragon's Mouth Spring
- Elk
- Mammoth Hot Springs
- Gibbon River
- Yellowstone Calcite Springs Overlook
- Old Faithful Geyser
- Riverside Geyser
- Bison
- Mountain Bluebird
- Grand Teton
- Snake River
- Canada Goose On the banks of the Snake River
- Bald Eagle Flying over the Snake River
- Angel's Landing Trail
- Desert Spiny Lizard
- The Narrows Trail
- Virgin River
- Zion
- Lower Emerald Pools
- Zion Canyon
- Upper Emerald Pools
- Angel's Landing Trail
- Spotted Towhee
- Angel's Landing Trail
- The Narrows Trail
- Virgin River
- Bryce Canyon Utah
- Mule Deer
- Prairie Dogs
- Bryce Point
- Navajo Loop Trail
- Uintah Chipmunk
- Pronghorn Antelope
- Along UT-63
- Common Raven
- Stella’s Jay
- Near Fairyland Canyon
- Arches Utah
- Windows Trail
- Delicate Arch
- Badlands South Dakota
- Bison
- Prairie Dog
- Bighorn Sheep
- Ruffed Grouse
- Stream
- Mount Rainier
- Marmot
- Olympic Washington
- Hurricane Ridge
- Marymere Falls Trail
- Marymere Falls
- Sol Duc Falls
- Second Beach
- Tide Pools
- Mountain Goat
- Hurricane Ridge
- Skyline Trail
- Roberts Prairie Dog Town
- Along UT-63
- Upper Emerald Pools trail Along UT-63 Near Fairyland Canyon
- Canada Geese On the banks of the Snake River
- Bald Eagle Flying over the Snake River
- Wyoming
- Black-tailed deer
- Second Beach
- Hoh River
- Tide Pools
- Mountain Goat
- Olympic Washington
- Marymere Falls Trail
- Marymere Falls
- Sol Duc Falls
- Second Beach
- Tide Pools
- Mountain Goat
- Hurricane Ridge
those reflections with others. Whether participants are mixing sound effects together or listening to the photos one-by-one, I hope they’re able to not only learn what certain natural places sound like, but also consider the places and people that are important to them.

Snapshot 10. It’s your last day in Yellowstone, and you’re eating lunch with your family in the cafeteria. Through large windows, you see a massive crowd, cameras in hand, waiting for Old Faithful to put on a show for the crowd. You’re exhausted from the hiking all day, and you saw Old Faithful perform earlier in the day, but you decide to leave the cafeteria and go watch the show from the cafeteria’s patio anyway. You wait a few minutes in silence, watching over the enormous crowd. And then, just as Old Faithful begins to spew steam and water out of the ground, you hear the crowd of hundreds gasp in exhilaration. It’s your favorite sound you’ve ever heard.
Ben's Artist Statement

It was the afternoon of a Thursday. In through the classroom door whooshed our instructor. She thwapped several folders down on the front desk, which sounded like a sudden breath, held. We listened and waited as the air conditioning softly hummed, leaning in the corner. She looked up and brightly introduced herself as “Wendy Bishop,” our creative nonfiction instructor. Ceremoniously, Wendy began that class sitting criss-crossed on top of a desk, and just above a whisper asked us to “Draw out a map of your childhood home.”

Right away we got busy scribbling out the streets, secret passageways, playgrounds, and backyards. A chorus of pencils recalled childhood memories through a series of tapping and scraping rhythms on notebook paper, sounding off on fake wood grain desks. When we were done sketching, Wendy quietly directed us to choose a point on our map and write a story about what happened there. I don’t remember what I wrote about, but it was that prompt that inspired this installation, “Sound in/as Memory.”

Here, I’ve reimagined Wendy’s prompt: “Tell a story using sounds as your map, as your guide.” My goal for this approach was to invite participants to think about soundwriting by beginning with sound, with and through all its constraints and affordances at play. By doing so, I wanted to prompt other soundwriters to emphasize the role of sound in memory. That is, to emphasize the nature of sound as a relational tool for memory recall. We’ve all been there before, I hope, where a song helps us time travel to the past. Or how the sound of a diesel engine reminds someone of a job they once worked, but had forgotten.

From a rhetorical perspective, I see this exhibit starting a con-
versation about the relationship between rhetorical invention and delivery. I believe, given the tools and circulation methods available today, soundwriting is a practice steeped in constant (re)combination(s) of invention and delivery. Let me explain that a bit more. The delivery of sound is itself an invention activity (choosing EQ, pan, volume, compression, and so on), and these considerations are separate from arrangement or style. When a soundwriter sits down to work with sound, they have to make choices about what the audience will hear, yes, but also, understand and feel. They are imagining all the different ways sound can be delivered, and responding accordingly.

While I have arguments with myself about whether or not soundwriters can actually deliver sound in a way that will pre-determine audience response, I also recognize that after-the-fact decisions are often made to frame sound in specific ways. This exhibit demonstrates these frames through proximity of recording device to the sound source, or even the clarity of one frequency versus another. How do these frames influence the ways in which people choose to tell a story? Even the headphones used will provide another frame--and all before the sounds are able to be layered together.

It is these frames that interest me, and which I seek to invite the audience to explore in this exhibit, as I believe they shape how we remember through sound, and how we understand the relationship between invention and delivery. Like Wendy’s prompt that Thursday afternoon, I imagine the launchpad as the participant’s map and the buttons as stories waiting to be told.
Larissa Babak

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Benjamin Lauren

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Book Citations


Sound Files from Larissa’s Exhibit

Row 1: Yellowstone

Crackling Lake: Recorded by Larissa Babak on August 7, 2017
Grotto Geyser: Recorded by Larissa Babak on August 8, 2017
Dragon's Mouth Spring: Recorded by Larissa Babak on August 6, 2017
Mammoth Hot Springs: Recorded by Larissa Babak on August 7, 2017
Gibbon River: Recorded by Larissa Babak on August 7, 2017

Row 2: Yellowstone & Grand Teton

Calcite Springs Overlook: Recorded by Larissa Babak on August 7, 2017
Old Faithful: Jerrett, J. & Comley, P. (2015, March 22). “Old Faithful (Remixed).” Re-
Row 3: Zion
Lower Emerald Pools: Recorded by Larissa Babak on May 12, 2018
Zion Canyon from the Upper Emerald Pools trail: Recorded by Larissa Babak on May 12, 2018
Upper Emerald Pools: Recorded by Larissa Babak on May 12, 2018
Spotted Towhee: Recorded by Larissa Babak on May 12, 2018
Angel’s Landing trail: Recorded by Larissa Babak on May 13, 2018
Desert Spiny Lizard: Recorded by Larissa Babak on May 13, 2018
The Narrows trail: Recorded by Larissa Babak on May 13, 2018
Virgin River: Recorded by Larissa Babak on May 12, 2018

Row 4: Bryce Canyon
Bryce Point: Recorded by Larissa Babak on May 14, 2018
Navajo Loop trail: Recorded by Larissa Babak on May 14, 2018

Row 5: Arches, Badlands, and Mount Rainier
Windows Trail: Recorded by Larissa Babak on May 16, 2018
Delicate Arch: Recorded by Larissa Babak on May 16, 2018
Stream: Recorded by Larissa Babak on July 17, 2018

Row 6: Olympic
Hurricane Ridge: Recorded by Larissa Babak on July 14, 2018
Marymere Falls Trail: Recorded by Larissa Babak on July 15, 2018
Marymere Falls: Recorded by Larissa Babak on July 15, 2018
Sol Duc Falls: Recorded by Larissa Babak on July 15, 2018
Second Beach: Recorded by Larissa Babak on July 16, 2018
Hoh River: Recorded by Larissa Babak on July 16, 2018

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Sound Files from Benjamin’s Exhibit

These files were retrieved from http://bbcsfx.acropolis.org.uk

1. Sound of acid blobs.
2. Quiet street corner (Swakopmund) - traffic, children, pedestrians and distant ocean surf.
4. Passing overhead.
5. Digital watch alarm
6. exterior - continuous alarm sounding, close perspective
8. Freeway (nr Fort Lauderdale, Florida)
9. Train Station - Buenos Aires, Argentina
10. Surf (recorded in Argentina, but suitable for anywhere in South America)
11. Floating iceberg - Lake Grey, Chile
12. Buggy-mule driven cart - used as a taxi in rural Brazil
13. Santa Monica: Bowling alley.
15. Outdoor rock concert - cheers, applause and calls of ‘more’
16. Applause at end of item with shouts of ‘more’ and atmosphere with tuning - 1972 (1C7,reprocessed)
17. Martian computer - 1972 (7K, reprocessed)
18. Dialing out through modem.
19. Sounding like twangs on a metal ruler - 1967 (7F, reprocessed)
20. London Central Mosque, Regents Park - congregation at Friday prayers - near end of prayers, with chanted responses from congregation
21. Typing with three hands - 1972 (7K, reprocessed)
23. Ford 7610 Tractor, interior, engine started, idles, pulls away.
25. Merton College, Oxford - 1/4 hour
26. Open fire burning.
27. 1 woman departs (reprocessed) x
28. Raking stony ground. x
29. Khao Yai National Park, nighttime insects' chorus. x
30. Farm garden, July, mid-morning - with housemartins, swallows, pigeons, rooks, bees and grasshoppers - 1981 (1B17, reprocessed) x
32. Skateboarding: One passing.
33. Open field atmosphere, May, afternoon - with distant traffic and birdsong, 1980 (2S13, reprocessed) (technical note: to be used at low level)
34. Baby boy, waking up sounds, 10 weeks old, with distant birdsong - 1984 (8B2, reprocessed) x
Cover & booklet design by Larissa Babak