

# Extraordinary Women Summative Evaluation

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## Key findings

The Minnesota Historical Society's (MNHS) temporary exhibit Extraordinary Women invites guests to “walk among extraordinary Minnesota Women who changed their communities” (<https://www.mnhs.org/historycenter/activities/museum/extraordinary-women>). A summative evaluation was carried out by MNHS and Wilder Research to understand how guests utilized the exhibit space, where they spent their time, how they interacted at exhibit sections, and what key messages they left with.

This study was conducted through a mixed method approach; timing, tracking, and unobtrusive observations measured visitors' attention to the exhibit, tracking their movements and interactions. After visitors left the exhibit space, they were approached to participate in a short exit interview designed to explore their understanding of the exhibit messages and collect demographic data.

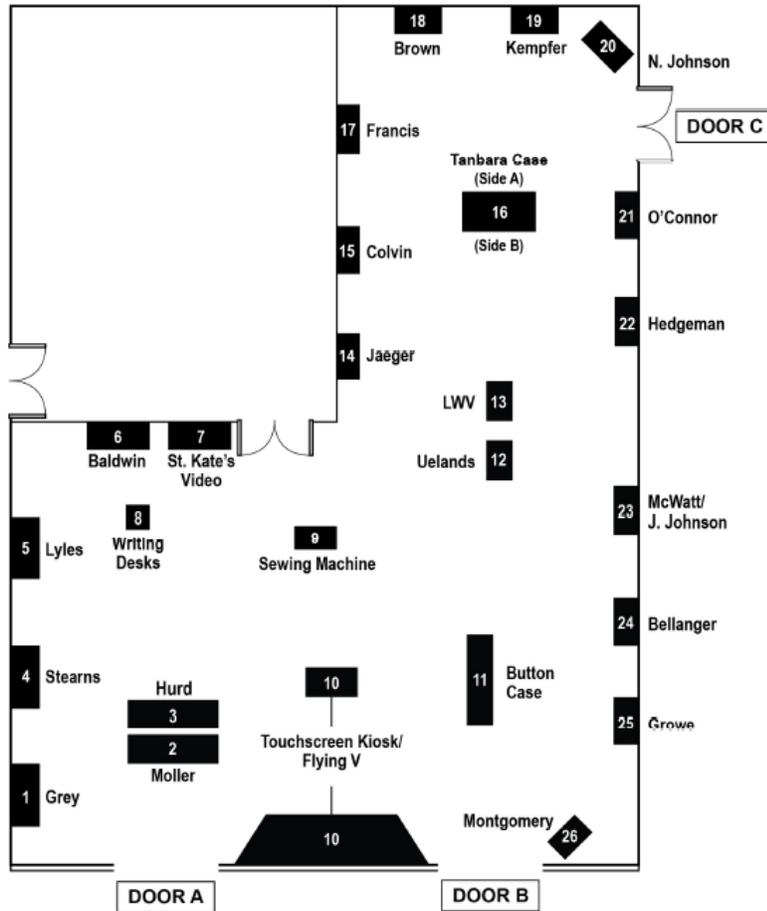
This evaluation found that visitors stopped at and interacted with exhibit sections in a variety of ways. Additionally, visitors were able to identify exhibit messages and indicate where in the exhibit they saw them.

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*A lot of women before us helped us get to where we are today. You don't recognize a lot of the names because they haven't been highlighted. There's a lot of history we don't know*  
– Extraordinary Women visitor

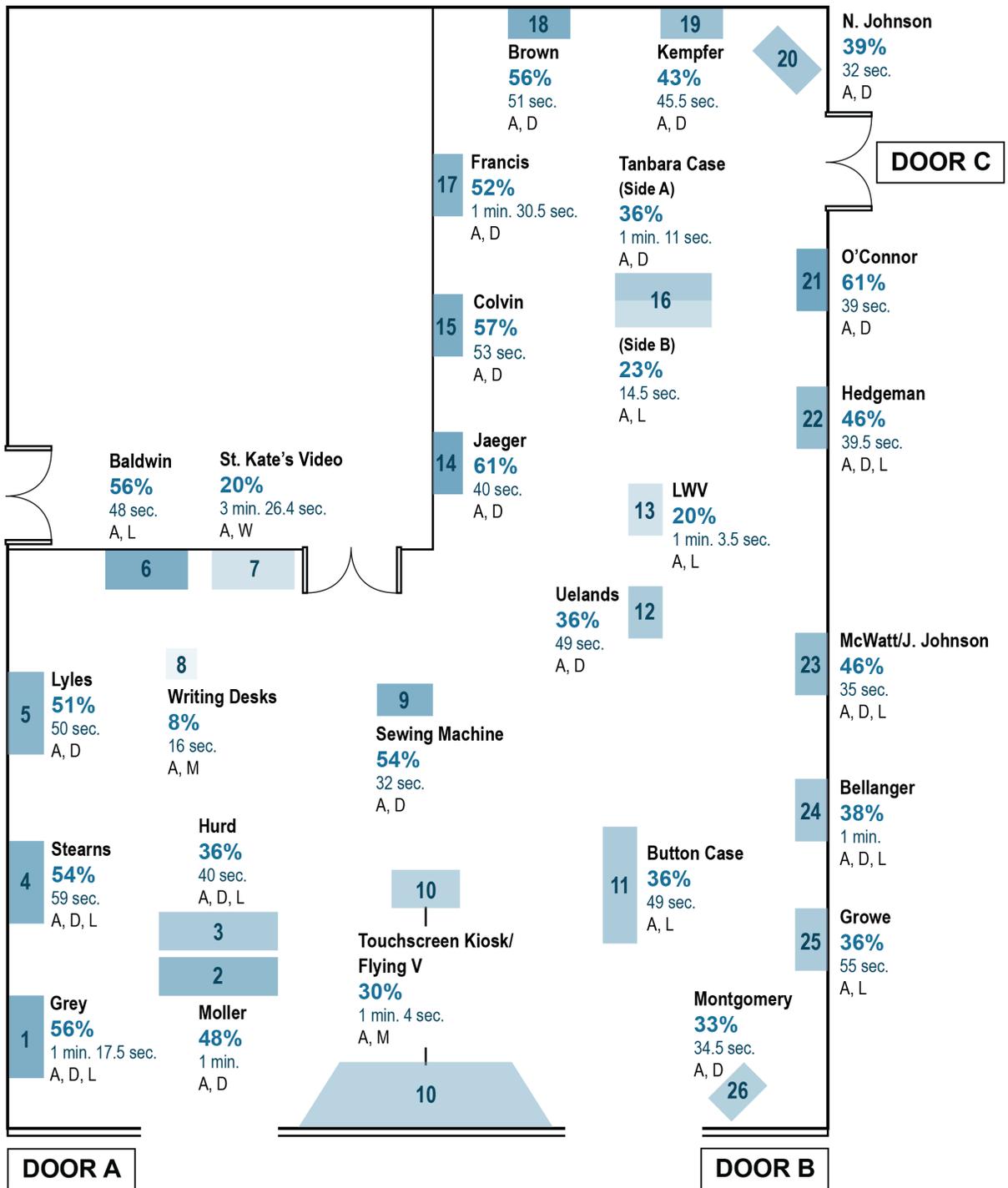
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## 1. Exhibit floor plan



- The Extraordinary Women exhibit was thoroughly used by visitors in the study – with a sweep rate index of 200 and percentage of diligent visitors of 46%. This means visitors spent a good amount of time engaging with the exhibit and paying attention to its content.
- 92% of visitors entered door A; sections 1 (Grey) and 2 (Moller) were the most popular first stops for visitors.
- Over 92% of visitors stopped in at least one section, with sections 14 (Jaeger) and 21 (O'Connor) being the most popular sections. Interactive sections were the least popular exhibit sections during this study.
- Door C was a confusing to some visitors who may have exited the exhibit by mistake at this point and therefore missed seeing a large portion of the exhibit.
- While visitors did engage with exhibits, they showed lower levels of engagement (passive) versus more advanced levels of engagement (active). Engagement was typically higher in sections 1-6, with the most engagement occurring at sections 1 (Grey) and 2 (Moller).
- After viewing the exhibit, visitors were able to identify a key theme, most often identifying the main message as learning about women's suffrage/equal rights movement. Visitors noted the design as a key factor in identifying where the main message was. Visitors also called out information on specific women when asked where they found the main message. Ruth Tanbara was mentioned the most in visitors exit interviews.

2. Extraordinary Women exhibit: Visitation, time spent (median), and interactions



Percentage of people WHO STOPPED HERE  
 100% ————— 0%  
 x min. x sec. = Median time spent here

A - Attends to exhibit (plants feet and looks for 3+ seconds)  
 D - Discusses exhibit with party member  
 L - Leans in/crouches for better look

W - Watches video  
 M - Manipulates exhibit (sits at writing desk and writes a postcard)

# Introduction, exhibit design and methods

The Minnesota Historical Society (MNHS) welcomes more than 850,000 guests each year to its 26 historic sites and museums spread throughout Minnesota. Through their Minnesota-centered exhibits, extensive collection, historic preservation, research efforts, and dedication to education, MNHS advances its mission of using the power of history to transform lives.

In keeping with their mission, MNHS developed a research and mission-driven exhibit entitled Votes for Women in 2020, to celebrate the centennial of the ratification of the 19th amendment. However, due to the COVID-19 pandemic, the exhibit's opening was delayed to March 6, 2021 and its content was expanded to include activism beyond women's suffrage and voting rights. This 3,400 square foot exhibit allows for visitors to "walk among extraordinary Minnesota women who changed their communities."

In late spring of 2021, the Minnesota Historical Society (MNHS) contracted with Wilder Research to conduct an evaluation of this exhibit, which is housed at the History Center in St. Paul. This report details the findings from the evaluation conducted at the Extraordinary Women exhibit from June 2021 through August 2021. The findings from this evaluation provide insight into the messages that resonated with visitors after walking through the exhibit, as well as the time visitors spent in the exhibits and how they interacted with exhibit components. These results have the potential to inform future exhibit planning and design, as well as future mission-driven communication with visitors about history-making Minnesotans.

## Exhibit design

One of the goals of the exhibit was for visitors to be able to interact and connect with the story of each woman highlighted in the exhibit. MNHS did this through a new design concept utilizing life-size cutouts (see Figure 3), which allowed the visitor to interact with these extraordinary women face-to-face. In addition, exhibit designers utilized the exhibit hall as a timeline where visitors could follow the stories chronologically, starting with women born before Minnesota was a state to women who are still active today. The exhibit sections can be grouped based on the following five ways information or artifacts are presented:

- A cutout of the highlighted women, with a text panel or sign, accompanied by a small case with an object or objects that relate to that highlighted women (13 sections; see Figure 3 for an example)
- A cutout of the highlighted women with a text panel or sign (9 sections)
- Interactive elements where manipulation by the visitor is required for full engagement (2 sections)
- Object cases with an object or objects (2 sections)
- Video area, which requires a button to be pushed to start the film. (1 section)

More information on the exhibit sections can be found in Appendix A.

### 3. Sarah Colvin section 15



## Methods

This evaluation employed a mixed-method evaluation approach that consisted of timing and tracking (see Appendix C for the instrument), observation (see Appendix C for the instrument), and an exit interview (see Appendix D for the instrument). While Wilder Research created the instruments and protocol for this study, MNHS staff from the exhibits department carried out the data collection for the evaluation, with Wilder Research analyzing the data and preparing this report.

A total of 61 observations (timing, tracking and observations) were conducted; of these visitors, 51 agreed to do an exit interview. Only adults 18 years of age and older were included in this evaluation. While visitor group composition was recorded, only the focal visitor's actions and responses were included in this dataset. Data collection occurred from June 26 through August 29. To see more details about the methods please see Appendix B.

# Results

## Visitor demographics

Most visitors were accompanied by others (94%), including children (64%). The majority of respondents were women (64%), and they spanned an array of ages. Figures 4-7 summarize the demographics of the focal visitors who agreed to an exit interview.

### 4. Group composition (N=50)

Group composition	%
Visited alone	4%
Visited with at least one other person	96%

### 5. Children in group (N=51)

Children vs. no children	%
Visited with children	63%
Visited without children	37%

### 6. Age of focal visitor (N=48)

Age	%
18 - 24	8%
25 - 34	17%
35 - 44	13%
45 - 54	17%
55 - 64	13%
65 - 74	21%
75+	13%

\* Due to rounding percentages do not total 100%

### 7. Gender of focal visitor (N=50)

Gender	%
Female	64%
Male	34%
Non-binary/third gender	2%

## Timing, tracking, and observation results

### Sweep Rate Index (SRI) and Diligent Visitors (%DV)

Sweep rate index (SRI) and percentage of diligent visitors (%DV) are two metrics developed by Beverly Serrell in the late 1990s to identify patterns of visitor engagement with exhibitions. According to Serrell (2020), understanding engagement is crucial for institutions when “creating meaningful content and experiences for the public” (p. 1). Together SRI and %DV can represent how thoroughly visitors used a space based on how much time they took and how deeply they engaged with the exhibit elements. Serrell (2020) notes that “thorough use is based on the assumption that exhibitions with more evidence of visitor engagement are overall likely to be a good match between the expectations and motivations of visitors and the affordances of the exhibition environment” (p. 6).

**Sweep rate index** is the exhibit’s square footage divided by the average total time spent there by the sampled visitors. According to Serrell (2020), “a lower sweep rate means that visitors spent more time in the exhibition and were engaged in more learning-related behaviors” (p. 5). **For the Extraordinary Women exhibit the SRI was 200**, out of a possible range of 0-900.

Percentage of diligent visitors is the number of visitors who stopped at more than half of the exhibit sections divided by the total number of observed visitors in the study. Serrell (2020) notes that “higher percentages of diligent visitors mean that more people were paying attention to more exhibits” (p. 6). **For the Extraordinary Women exhibit the %DV was 46%** out of a range of 0-100.<sup>1</sup>

One way MNHS can utilize this data is to compare their results to other studies as a way to examine their SRI and %DV in the context of exhibits that are similar in nature (history museums) and size (around 3,000 – 4,000 square feet). In a recent study of 65 exhibits, Serrell (2020) categorized exhibits into five groups based on their SRI and %DV. Group 1 represents exhibits that visitors stopped at occasionally but spend more than a few seconds at the section (underutilized exhibits) the SRI for this group is higher than 300, %DV is less than 25%. Group 2 represents exhibits that did not “not hold visitors for longer times, [but] are above average in their %DV” (Serrell, 2020, p.10), the SRI for this group is higher than 300, and %DV higher than 25%. Group 3 represents low %DV and slow sweep rate, meaning many exhibit sections were skipped, with a SRI below 300, and %DV less than 25%. Group 4 represents more thoroughly used exhibits meaning visitors spent more time and looked at more sections than in the previous zones, with an SRI below 300, and %DV between 25%-50%. The final Group or Group 5 represents “exceptionally thoroughly used” exhibits, with SRI below 300, and %DV more than 51%. Within these, groups, the Extraordinary Women exhibit would fit into the second highest group (group 4), which represents “more thoroughly used exhibits.” This means that visitors spent more time and looked at more sections than in most other groups.

If MNHS continues to collect this type of data, the exhibit developers will be able to make internal comparisons of other exhibits within the institution. While this would require resources to carry out timing studies of exhibits at MNHS, this information would allow MNHS to better understand their visitors’ engagement with their exhibits. This information could help MNHS identify trends and patterns to help modify current exhibits in real time or inform exhibits in the future.

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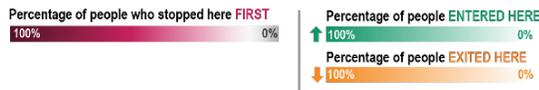
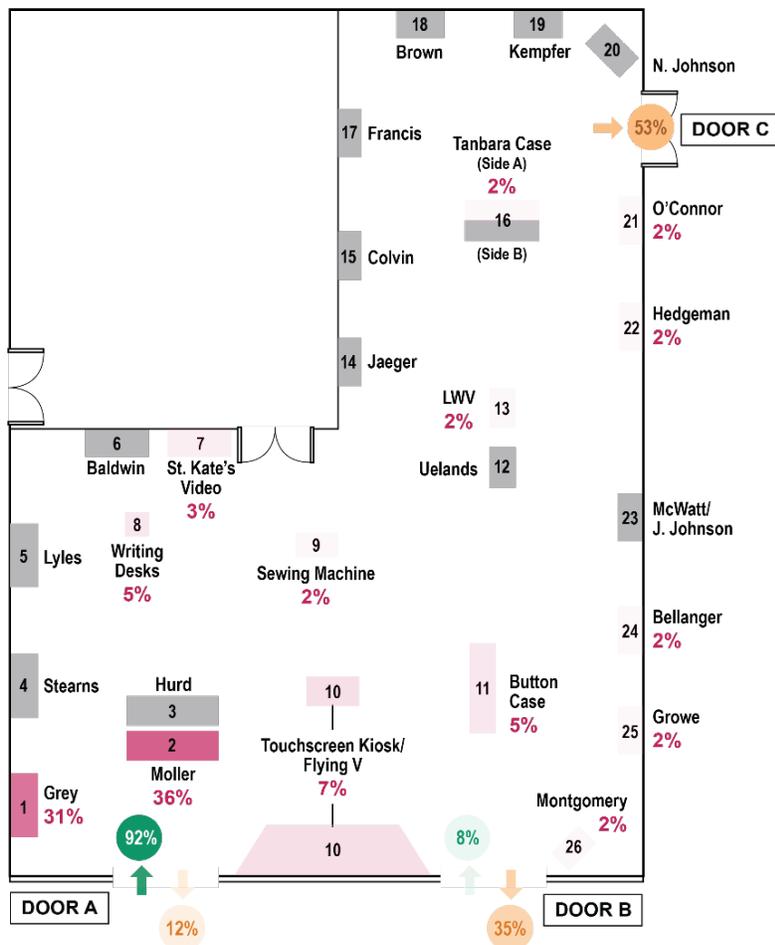
<sup>1</sup> For the purpose of this evaluation 13 sections is considered half. Those who visited upwards of 14 sections were included in the calculation of %DV.

## Initial path

The Extraordinary Women exhibit is housed in a temporary exhibit space that was divided into two exhibit areas housing Extraordinary Women and Sinclair Lewis: 100 Year of Main Street. This space can only be accessed through one set of main doors off of the main gallery floor. The Extraordinary Women exhibit is the first exhibit visitors see when they walk into the temporary exhibit space. For this study, visitors who crossed an imaginary line and entered the Extraordinary Women exhibit first were identified to track. While visitors could enter the Extraordinary Women exhibit through Door C, which connected the two temporary exhibits, the entry of Extraordinary Women was designed to be Door A or B.

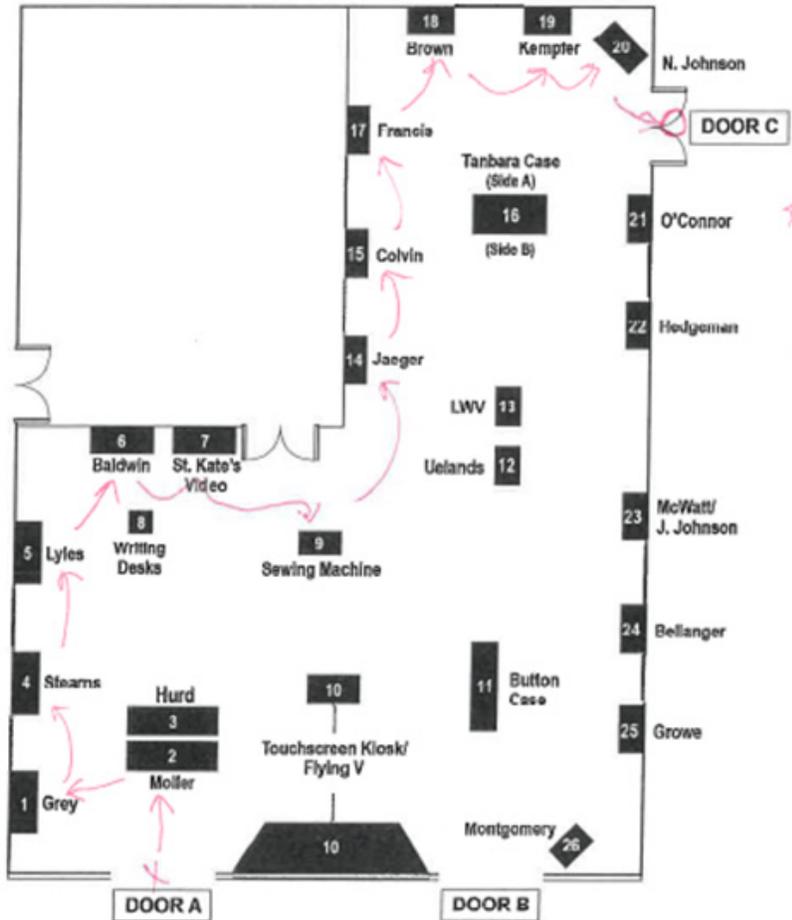
The timing and tracking tool allowed for data collectors to indicate the entrance and exit doors, as well as the first exhibit visitors stopped at. The majority of visitors (92%) entered the Extraordinary Women exhibit through door A. Over half of the visitors (53%) left the exhibit through Door C directly into the Sinclair Lewis: 100 Year of Main Street exhibit (see Figure 8). Of the 53% of visitors who left through Door C, 72% ended up missing one or more main walls (section 21-36, section 14-20, section 1-7, and/or the area of sections 2, 3, 8, 9, 10) of the Extraordinary Women exhibit.

### 8. Entry door, exit door, and first section stopped at by visitors



Most often visitors missed the wall containing sections 21-26 or the walls containing 14-20 when they exited Door C. For example, Figure 9 shows the path of visitor 53, who missed a large portion of the exhibit when they left through Door C. Something to note is that visitors may have been confused about Door C and may have unintentionally left thinking the exhibit continued into the next room. If visitors did leave Door C and immediately returned (less than 30 seconds) they continued to be tracked.

## 9. Visitor 53 path



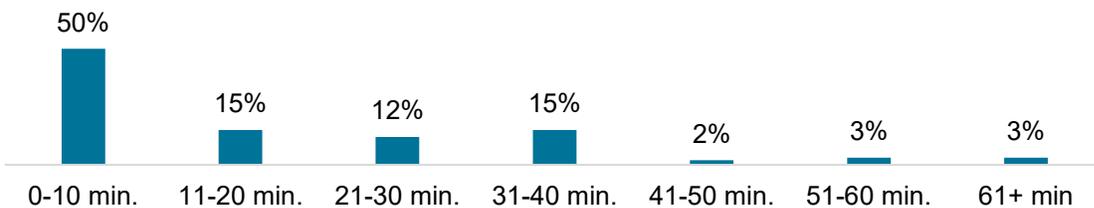
Once visitors entered the exhibit space, most either went to section 2 (Moller) or section 1 (Grey) as their first stop (Figure 8). While this was a bit unusual for visitors who typically make a right turn when they enter an exhibit space, the chronological layout and visual design of the exhibit may have influenced visitors favoring sections 1 (Grey) and 2 (Moller). Since most visitors entered Door A, it was natural for visitors to stop at section 2 (Moller) due to its position in front of the door. In general, visitors spend more time at exhibit components that are closest to entry doors, which also may explain visitors favoring those two particular sections. This exhibit was also designed in chronological order with large dates printed above the sections, as well as large narratives on the walls starting above section 1 (Grey). Visitors may have noticed this information and choose to start their visit in this area because of that. Something to note is that Section 10 (Touchscreen Kiosk/Flying V) only drew in 7% of the visitors for their first stop, despite taking up the most space in the exhibit, being interactive, and being positioned in front of two doors.

## Time spent in exhibit

The timing and tracking tool allowed data collectors to record time spent in the exhibit overall, as well as time spent at individual sections. **Half of the visitors walked through the exhibit in ten minutes or less, while approximately 23% spent over a half an hour in the exhibit (Figure 10).** All but two visitors fell into the range of 1 minute to 55 minutes; the two outliers spent slightly over an hour in the exhibit space. Due to these two outliers the average time is skewed to an average of 17 minutes. For a more accurate representation of time, the median time will be used throughout the report. The median for time spent by visitors in the Extraordinary Women exhibit space was 10 minutes (meaning half the visitors fell below and above the ten minute mark). The following groups had the highest median time spent in the exhibit (to see more demographic breakdowns by time spent, please see Appendix E):

- Those visiting alone versus visiting in a group
- Those visiting with children
- Older visitors (55+)
- Visitors who identified as female

### 10. Visitor time spent in the Extraordinary Women exhibit space (n=60)



### Time spent by exhibit section

For the purpose of this study, a stop is defined as when a visitor planted their feet in front of an exhibit for 3 seconds or longer. When looking at specific exhibit sections visitors stopped for a length of time between 3 seconds and 11 minutes. Section 7 (St. Catherine University or St. Kate's) drew the longest stoppage time with a median time of around 3 minutes. This is to be expected since visitors can watch a series of videos that range between 1-2 minutes long. Additionally, this section received the longest single stop by a visitor at 11 minutes. Something to note is that section 7 (St. Kate's Video) was one of three areas in the exhibit that provided seating to visitors, which may have impacted the amount of time spent at that section.

Not including section 7 (St. Kate's Video), section 17 (Francis) was the exhibit section that people spent the most time at, with sections 1 (Grey) and 16a (Tanbara) following closely behind. While section 16a (Tanbara) was a section that visitors spent the most amount of time at, section 16b (Tanbara) was the section that visitors spent the least amount of time at in the exhibit. Sections 8 (Writing Desks), 9 (Sewing Machine), and 20 (N. Johnson) followed closely with the least amount of time spent by visitors.

Sections 1 (Grey), 17 (Francis), and 16 (Tanbara) are all close to doors, which aligns with previous research showing that people spend more time at areas closest to entrance doors. If people did think Door C was the entrance to more exhibit space they may have spent more time at sections like 16 and 17, which are close to that door. With the majority of visitors (92%) entering Door A, and 31% of visitors starting their experience at section 1 (Grey), it makes sense

that visitors spent more time at this section than others. Section 10 (Touchscreen Kiosk/Flying V) also saw higher time spent by visitors even though it was not a popular first choice of exhibit visited. What is surprising is that while sections 11 (Button Case) and 26 (Montgomery) are close to an entry door, they tended to have much lower time spent compared to other sections close to doors.

## Visitor stops at exhibit sections

The timing, tracking, and observation tool allowed for data collectors to record visitors' stops at each section. **92% of visitors stopped in front of at least one section** (Figure 11). While none of the visitors observed during the study stopped at every exhibit section, three visitors did stop at 26 of the 27 sections.<sup>2</sup> During this study, the median amount of stops for visitors was 12.5. The following groups made the most stops during their time in the exhibit (to see more demographic breakdowns by stops, please see Appendix F):

- Those visiting in groups
- Visitors with children
- Older visitors (55+)
- Visitors who identified as female

### 11. Visitors' stops (n= 61)



During this study, data collectors observed that at least five visitors stopped at every exhibit section (see Figure 2 or Appendix E for the number of stops per section). The most popular sections were sections 14 (Jaeger) and 21 (O'Connor), both with 61% of visitors who stopped, followed by section 15 (Colvin) with 57%. Section 8 (Writing Desk) was the least popular section with 8% of visitors stopping, followed by section 7 (St. Kate's Video) and section 13 (League of Women Voters) at 20%. Something to note is that while five guests (8% of visitors) stopped at section 8 (Writing Desk), only four of the guests sat down at the desk and wrote on a postcard.

While both sections 14 (Jaeger) and 21 (O'Connor) had the highest amount of stops, visitors spent less time at these two sections compared to other sections in the hall; section 14 (Jaeger) ranked 10th in the time spent, while section 21 (O'Connor) ranked 7th. The location of section 21 (O'Connor) being the closest to Door C may have been the reason why it was so popular, since over half of visitors left through that door.

Three sections in Extraordinary Women involved some sort of physical manipulation to fully participate:

- Section 7 (St. Kate's Video) – visitors have to push a button to start
- Section 8 (Writing Desk) – visitors have to sit down and write a postcard
- Section 10 (Touchscreen Kiosk/Flying V) – visitors have to use a touchscreen

<sup>2</sup> Please note, sections 16a and 16b are considered two stops.

These **three interaction sections fell into the five least popular sections in the study**, with section 8 (Writing Desk) being the least popular in the study. One reason why these exhibits may not have been popular is due to COVID-19. Visitors may have not felt comfortable touching the features like buttons or shared writing utensils, which could have resulted in low popularity.

## Visitor interactions

The observation tool allowed data collectors to record occurrences of nine different interactions (10 including an “other” category). Interactions were recorded regardless of whether guests planted their feet or not – for example, they could have walked past and pointed at the exhibit, which qualified as an interaction. These interactions included:

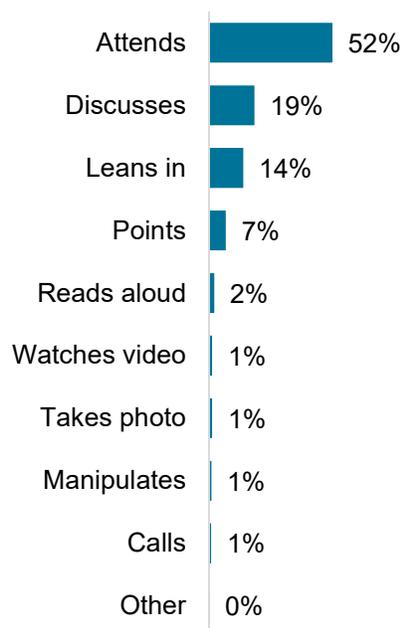
- A - Attends to exhibit (plants feet and looks for 3+ seconds)
- C - Calls party member over to look
- D - Discusses exhibit with party member
- L - Leans in/crouches for better look
- M - Manipulates exhibit (sits at writing desk and writes a postcard)
- P - Points to exhibit or panel
- Ph - Takes photo of exhibit
- R - Reads aloud to another party member
- W - Watches video
- O - Other, please describe: \_\_\_\_\_

Attending to the exhibit is considered the lowest level of engagement with the exhibit sections, while the other actions are considered more advanced indicators of engagement.

**Fifty-two percent of visitors engaged in the lowest level of engagement, while advanced engagement made up a combined 48% of interactions. Discusses was the most popular advanced engagement by a small margin** (Figure 12). The overall distribution of behaviors is listed below; Figures 13-21 map the relative frequency of those interactions across the different exhibit sections to provide a picture of where visitors were directing their attention. The following groups displayed more interactions during their time in the exhibit (to see more demographic breakdowns by interactions, please see Appendix G):

- Those visiting alone
- Visitors with children
- Visitors over the age of 35
- Visitors who identified as female

### 12. Visitor engagement





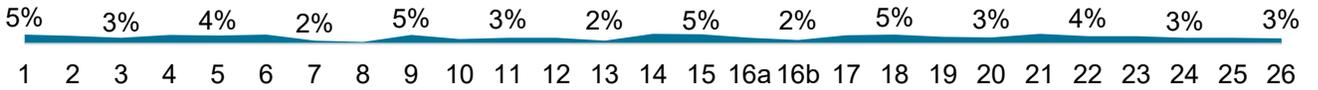
## Interactions by exhibit section

There were a total of 1,234 instances of interactions during this study. **Engagement was typically higher at the beginning of the exhibit (chronologically in the exhibit section and time starting from sections 1- 6).** Section 1 (Grey) had the most amount of engagement followed by sections 2 (Moller) and 4 (Sterns). This corresponds with the previous finding that most visitors entered through Door A, and the first stop for many guests was in sections 1 (Grey) and 2 (Sterns). Guests tend to have more energy at the beginning of the exhibit and show exhibit fatigue further on in their visit. MNHS may want to explore ways to encourage active engagement throughout the exhibit, especially in the middle of the exhibit area and closer towards Door C.

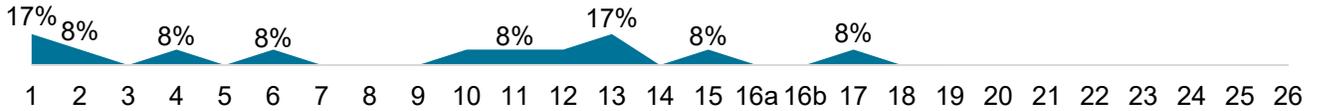
- Visitors **attended** to sections fairly consistently throughout their visit (Figure 13), meaning that visitors chose to spend their time at the exhibit sections.
- Visitors did not call out to others often during this study, but when they did they tended to **call others overphysically** in the exhibit space in sections 10-13 (Figure 14). These four sections were four of the most centrally placed exhibit sections in the hall. Future studies could examine if visitors tend to stay closer to the wall compared to venturing into more open space.
- Visitors tended to **discuss** the exhibit with others at the beginning of the exhibit (chronologically in exhibit sections and time starting from sections 1- 6) with sections 1 (Grey) and 2 (Moller) hosting the most amount of discussion interactions. There was a bit of an uptick in the middle before dropping toward the end (chronologically in exhibit sections and time from sections 22-26; Figure 15). Because visitors engaged with others more toward the beginning, MNHS may want to consider ways in which they can get visitors to engage with each other consistently throughout the exhibit, especially if MNHS hopes for visitors to have continued dialogue about the exhibit.
- Visitors **leaned in** consistently throughout the exhibit space, with fewer signs of leaning in for the interactive sections. Section 1 (Grey) and 2 (Moller) had the most amount of visitors leaning in (Figure 16). While leaning in may be a sign of active engagement (visitors are drawn to something they read or see, and want to get a better look), it may be also an indication of small text size. MNHS may want to look into how text size affects visitors' physical interaction of leaning in.
- Visitors **pointed** more often in the beginning and middle (section numbers 1-17) than towards the end (section 18 onwards; Figure 18). The two most popular areas were section 1 (Grey) and section 11 (Button Case). Section 11 (Button Case) is one of two sections that consisted solely of an object, in this case many different sized buttons. This may be the reason for more people pointing at this section compared to other sections in the exhibit space.
- Visitors had two opportunities to **manipulate** components, which resulted in fewer instances of engagement during this study (Figure 17). Additionally, there was only one opportunity to **watch a video** (Figure 21) Future studies on exhibits with more opportunities for manipulation and viewing content may yield more insight on these types of engagement.
- Visitors did not take as many **photos** compared to other signs of engagement. While the largest section did see the most photos at 17%, one must keep in mind that 17% is only three visitors showing this type of engagement (Figure 19). Something to note is that every section has a QR code – while these results are not able to discern the difference between a visitors taking a picture of a QR code versus a picture of another exhibit component, it is safe to say that for the observations in this study the QR codes were underutilized.

- Visitors **read aloud** primarily at the start of the exhibit (chronologically in exhibit sections and time starting from sections 1- 6), with few instances throughout the rest of the exhibit (Figure 20). In three instances, data collectors noted that it was adults reading aloud to a child or children.

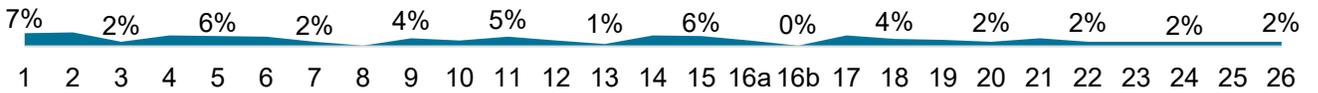
**13. Attends (n=689)**



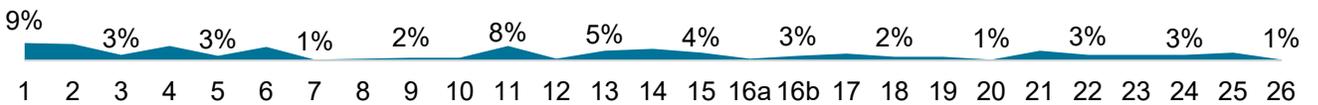
**14. Calls (n=12)**



**15. Discusses (n=254)**



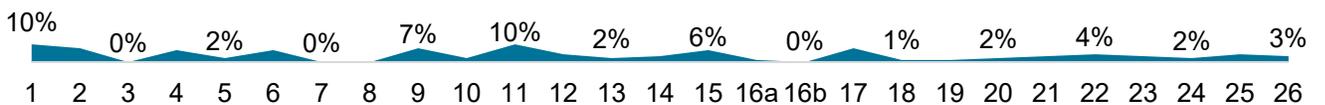
**16. Leans in (n=191)**



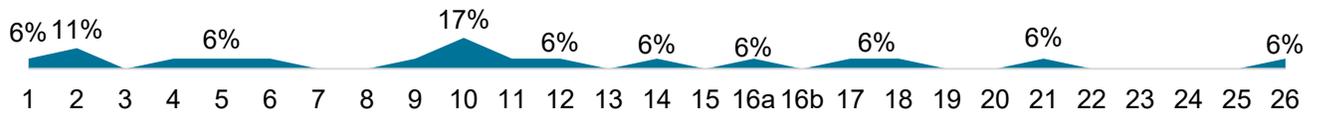
**17. Manipulates (n=13)**



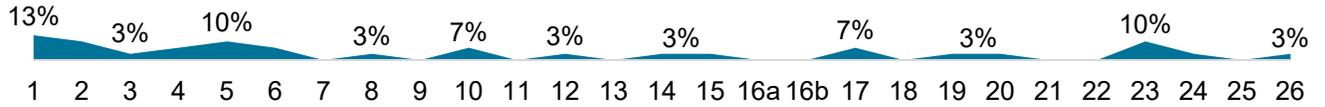
**18. Points (n=94)**



19. Takes photo (n=18)



20. Reads aloud (n=30)



21. Watches video (n=18)



\* While section 5 and 6 do not have video components, it was noted that one person at each section positioned themselves at these areas and turned their attention to section 7 to watch the video. One reason may be guests socially distancing themselves away from each other.

## Interview results

Once visitors left the Extraordinary Women exhibit, data collectors intercepted them for a brief interview asking them three open-ended questions, followed by a few demographic questions. The open-ended questions asked visitors what they saw as the main message of the exhibit, where they saw that message, and if there were any parts of the exhibit they found challenging to use or understand.

### What do you think were the key messages of the exhibit you just saw?

When asked the key message, 50 of the 51 visitors were able to identify a key theme. Nearly half of those interviewed (47%) said that the exhibit's key message was to learn about women's suffrage/equal rights movement. Terms visitors used when answering this question often included "empowerment," "power," "hard work," and "perseverance."

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*The determination of women in our history  
contributed to many positive changes in our nation.  
[T]he suffrage movement and the ongoing nature of the movement.*

---

Visitors also pointed out that one of the main messages was to learn about the specific women in the women's rights movement, including the diversity of women, unrecognized women, and specifically women from Minnesota and the communities they came from.

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*Showcases not only Minnesota suffragists, but also the various communities they came from.*

*People that are closer to home make a difference.*

---

Other key messages visitors identified were:

- Appreciation of the impacts of the women's efforts and accomplishments

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*Women from long ago worked hard to make improvement for modern women.*

*It's been a progression that continues today.*

---

- Inspirational reactions or takeaways from the exhibit, while acknowledging there is still work that has to be done

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*Everyday people can make a change.*

*Women continue to fight for their right to get into things men automatically get into.*

---

- Women's history in general

---

*Women's journey through our country's history.*

*Getting out info about a variety of women and issues in which they've been involved.*

---

## Can you give me an example of where you saw that message?

When asked where they saw the main message, almost half of the visitors (47%) noted a specific exhibit design element, most commonly the structure of the room (i.e., chronological order), with text/specific information (e.g., quotes) closely following behind. Other design specific components mentioned were: cutouts/statues (1 mention), pictures/visuals (4 mentions), exhibit name (1 mention), objects (2 mentions), and interactions/videos (1 mention). This speaks to the success of the design in helping visitors take away key messages through a variety of connection points to visitors, with the structure/order of the setup being mentioned most often. Most visitors started at Door A and visited either section 1 (Grey) or 2 (Moller) first, which echoes that they saw the main message through the chronological design of the exhibit. Additionally, most interactions occurred at the beginning of the exhibit, especially around sections 1 (Grey) and 2 (Moller).

---

*Structure and chronological order - from Grey to Growe.*

---

Visitors also mentioned that the content-specific topics like marches and anti-lynching are where they took away the main message. In addition, visitors also noted that the diversity in perspectives and backgrounds, specifically the areas on Indigenous women, are where they identified the main message.

---

*Marches for suffrage. Women coming out of the background to be leaders, especially in education and politics.*

---

It was the exhibit-specific sections that were called out the most when visitors were asked where they saw the main message. Over half of the visitors were able to identify a highlighted woman in the exhibit, with Ruth Tanbara being identified most often (7 of the 51 visitors interviewed).

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*I'm from Japan, so Ruth Tanbara's story stood out for me. I live in CA, and the way things are there, I want to try to do more things like she did.*

---

One thing that could have factored in to 16 (Tanbara) being the most recalled section is that many visitors left through Door C, and section 16 is the largest exhibit section by that door. Often people can recall the first and last pieces of information given. For those who left through Door C and were immediately intercepted for the interview, section 16 may have been the last section they saw, so that is what they remembered.

Of the other specific women mentioned, sections 1 (Grey), 2 (Moller), and 4 (Sterns) were mentioned at least once. These sections are at the beginning of the exhibit with most people starting their visit in that area; additionally, most of the interactions also occurred in this area. Sections 1 (Grey), 17 (Francis), and 7 (St. Kate's Video) were also mentioned specifically, each by one visitor; these areas were where visitors spent the most time. Surprisingly, while most visitors stopped at section 21 (O'Connor) and it is located near Door C, no one mentioned this section specifically in the interview.

## 22. Women mentioned in interviews

Section	Number of people who specifically mentioned a highlighted woman
16a. & 16b. Ruth Tanbara	7
23. Josie Johnson	3
20. Nellie Johnson	3
15. Sarah Colvin	2
25. Joan Growe	2
14. Nanny Jaeger	2
2. Bertha Moller	2
6. Marie Bottineau Baldwin	1
22. Anna Hedgeman	1
19. Hannah Kempfer	1
4. Sarah Stearns	1
17. Nellie Francis	1
1. Emily Grey	1

## Where there any parts of the exhibit that you found challenging to use or understand?

Visitors were also asked if there were any parts of the exhibit that they found challenging to use or understand. Three main themes emerged from answers: first, feedback on overall satisfaction with the exhibit; next, feedback on improvement for design and content; and third, personal reflection from the overall theme of the exhibit.

### Satisfaction

Overall most visitors had positive comments and were generally satisfied with the exhibit, noting that the exhibit was straightforward and made sense.

---

*Really well done. Liked sections for each individual.*

*Loved illustrations. Good amount of information presented.*

*Very straightforward*

---

## **Improvement**

There were a few comments regarding design that visitors said made it hard for them to fully participate, including hard-to-read text (this may be a reason for visitors having to lean in), too much text/reading, and not enough diverse perspectives.

---

*Writing seemed far away, hard to read especially in cases.*

*It's a lot to read. After a while I felt I might not get to the rest of the museum.*

*How much effort was put into seeking Asian American representation - saw only one.*

---

There were some visitors who also noted that the exhibit was hard for their children to engage with, especially with the amount of reading in the exhibit.

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*Maybe harder for a 1st grader. It's so much to read, that's why I had to read and explain it to them.*

*Would be cool to have an audio portion, especially for kids who don't want to stand and read.*

*[M]y kids were unclear on what a suffragette was.*

---

## **Personal reflection/takeaways**

Visitors also mentioned leaving with a sense of personal reflection and thought, while also feeling challenged personally by what the women did, and personal exhaustion by how far women have to go.

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*Challenging to see the pain that some people went through. Easy to use and understand. Felt exhausted by the sense of how long we've been doing this [and] how far we have yet to go.*

*[T]he challenge is finding a way to use my voice.*

---

## QR code

While tracking visitors' use of QR codes was not part of this study, MNHS did have QR data from April through August 2021. Below is some initial analysis of the data and how it relates to the findings in this summative evaluation report. Please keep in mind that participants in this study may or may not have used QR codes, and direct comparisons cannot be made. Some patterns from the QR code data and this summative evaluation are noted below.

- Section 1 had the most QR code sessions at 340 (anytime a visitor took a photo of the QR code and was taken to a webpage on the particular section). This aligns to the results from the summative evaluation study that found this section to be one of the first stops in the exhibit, as well as one of the most popular sections to engage with. While section 2 was also a popular first stop and had higher instances of engagement, it reached only 72 QR code sessions, placing it slightly over the median number of sessions.
- Sections 1, 26, 21, and 10 had the most QR code sessions (over 200 each). Section 1, 26, and 21 are the closest sections to doors, and the summative evaluation showed that section 21 was the most popular in terms of stops.
- While visitors called out section 16 most often in the interview, QR sessions for this section fell into roughly the halfway point relative to the other sections.
- Section 15 appeared to be a popular stop according to the data collected for the summative evaluation; however, it had the least amount of QR sessions at 4.

## Moving forward

This summative evaluation is a good way for MNHS to learn about how visitors utilized the Extraordinary Women exhibit and what they learned from their time spent in the space. Below are recommendations that Wilder Research identified for MNHS to consider when designing future exhibits similar in size and scope to Extraordinary Women, or even when reusing the exhibit space.

- Consider carrying out timing and tracking studies for current and future exhibits. By gathering more timing, tracking, and observation data MNHS can:
  - Better understand and gauge visitor engagement specifically in MNHS exhibits through obtaining SRI and %DV
  - Understand visitor behaviors in greater depth, including trends and patterns across exhibits and elements
  - Understand how visitors use the space – over and underutilized space can be identified, and this may help to indicate where key messaging could go to have the most impact on visitors
- Door C may have hindered some visitors’ overall time spent and number of stops in the exhibit. Visitors may have been confused by the door, thinking that the exhibit continued into the next room. Consider making that change in space more prominent to ensure visitors are knowingly leaving the space. This could be done by utilizing the space by section 21, which had the most amount of stops by visitors, to place signage or other indicators that the exhibit does not continue into the next room. MNHS may also want to consider other multisensory indicators to alert visitors that they are leaving the exhibit space – this could be something on the door frame that changes color to catch visitors’ attention or even changing the scent of the room to correspond to the exhibit theme. It is best to keep in mind accessibility when thinking of these indicators.
- Utilize the area around sections 1- 6 (especially the area by sections 1-2) with main messaging/key takeaways. This area is the most popular starting point for visitors, the area where most visitors indicated they took messaging away, and the area which showed the most amount of interactions.
- Look for ways to entice visitors to stop at exhibits further away from doors and in the middle of the room so that the full space is utilized.
- Consider creating more ways in which visitors can interact with exhibit components. Offer both passive and active opportunities for visitors, with the understanding that not all visitors take in content the same way. By offering different ways for visitors to engage, MNHS is creating a larger opportunity for full engagement by visitors. Something to keep in mind is universal design and the benefits of multiple ways information can be delivered. For example, one visitor noted the desire for an audio tour for their children, who may not have wanted to read. Audio tours may help visitors who are younger and just learning to read, but can also help those who have visual disabilities or conditions, or those who are non-English speakers. Similarly, offering large print text can assist the same groups of people.
- Consider creating a space for visitors to share and reflect on their thoughts, as well as to provide actionable “next steps” for guests when there is an emotionally charged topic. While guests left with understanding of the exhibit messages, some left with questions on what people can do moving into the future.

- This summative evaluation was carried out and reported at an unprecedented time in our history. The number of COVID-19 cases, social distancing measures, and other changes and restrictions may have had an effect on the number of people visiting the exhibit, how they used the space, how they interacted with the sections, and what they may have taken away from the exhibit. MNHS may want to continue to observe visitors to see how they utilize exhibits throughout the MNHS system during this time. Something to look at is how guests engage with exhibit components, especially those active components that require touch. If guests are showing fewer signs of physical interactions, MNHS could consider ways to compensate for that loss of engagement in order to ensure that visitors who learn through hands-on activities are not missing out.



# Appendix

## A. Exhibit section type

### A1. Exhibit design type by section

Section	Type
1. Grey	Case with object and text/panel
2. Moller	Case with object and text/panel
3. Hurd	Text/panel only
4. Stearns	Case with object and text/panel
5. Lyles	Text/panel only
6. Baldwin	Case with object and text/panel
7. St. Kate's Video	Video
8. Writing Desk	Interactive
9. Sewing Machine	Object case only
10. Touchscreen/Flying V	Interactive
11. Button Case	Object case only
12. Uelands	Case with object and text/panel
13. LWV	Case with object and text/panel
14. Jaeger	Case with object and text/panel
15. Colvin	Case with object and text/panel
16a. Tanabara	Text/panel only
16b. Tanabara	Case with object and text/panel
17. Francis	Case with object and text/panel
18. Brown	Text/panel only
19. Kempfer	Text/panel only
20. N. Johnson	Text/panel only
21. O'Connor	Case with object and text/panel
22. Hedgeman	Text/panel only
23. McWatt/Johnson	Case with object and text/panel
24. Bellanger	Text/panel only
25. Growe	Case with object and text/panel
26. Montgomery	Text/panel only

## B. Methods

### Timing, tracking, and observations

A timing and tracking instrument was developed to map the initial entry point of visitors, the first exhibit component visitors walked to, the amount of time they spent in the exhibit, the amount of time they spent at each component, and their exit point (see Appendix B). Understanding how long visitors stay in an exhibit and the amount of time visitors pay attention to components in the exhibit are critical “indicators of learning in museum exhibitions” (Serrell, 1998, p.1). In addition, understanding how visitors use components and how they navigate the space can allow exhibit developers to refine their design elements and structures on future exhibits. For instance, based on past timing and tracking studies, museums know that visitors favor a right turn when they enter an exhibit, and exhibit components near an exit door are often missed (Diamond, et al., 2009). In addition, timing visitors allows for institutions to examine two visitor behavior indexes, sweep rate index and diligent visitor index.

In addition to the timing and tracking instrument, an observation portion was added so that visitors’ interactions and behaviors at exhibit components were recorded. Nine pre-coded and one “other specify” interactions/behaviors were provided (see Appendix B). Interactions/behaviors “provide direct information about what visitors are actually doing in an institution or program, and they offer opportunities for identifying unanticipated outcomes” (Diamond, et al., 2009, p. 59). Observations for summative evaluations in particular are “a way of assessing the degree to which visitors engage with various exhibits and with each other throughout their experience” (Diamond, et al., 2009, p. 60). This can be useful for exhibit developers when thinking about the types of exhibit components they are offering (passive vs. active) and content developers when thinking about what information will be included.

### Interviews

In consultation with MNHS a short interview instrument was created for visitors after they exited the exhibit (Appendix C). The interview consisted of three opened-ended questions to gauge the message(s) the visitor took away from the exhibit, where they saw that message, and if there was anything that was challenging or difficult to use or understand in the exhibit. In addition, there were a few demographic questions in the interview as well. These interviews allowed MNHS to understand what visitors were taking away as themes from the exhibit and where they were identifying those themes. This information can also be cross analyzed with timing and tracking information to examine if what visitors are recalling as themes reflects where visitors stop, how long they use the space, and how they may interact with exhibit components. Additionally, the interviews allowed MNHS to learn a little bit more about who was visiting the Extraordinary Women exhibit in terms of demographics.

### Sampling and protocol

A total of 61 observations were conducted. Of these visitors, 51 agreed to an exit interview. Only adults 18 years of age and older were included in this evaluation. While visitor group composition was recorded, only the focal visitor’s actions and responses were included in this dataset. Data collection occurred from June 26 through August 29. Of the 61 observations, 50 were collected during a weekday (Thursday-Friday) and 11 were collected during a weekend (Saturday-Sunday); out of the interviews, 41 were conducted during a weekday and 10 were conducted on a weekend.

Visitors identified to be tracked, observed, and asked to participate in an exit interview were selected via an invisible line. Data collectors were positioned in the hallway outside the exhibit in the eyesight of those entering the exhibit hall. The first visitor who crossed a pre-determined line would be the focal visitor. If there was more than one guest who crossed the line the visitor nearest to the exhibit wall was the focal visitor. Focal visitors were then tracked throughout their time in the exhibit, while the data collector watched them and recorded their movement, interactions, and time spent at each component. After they left the exhibit, they were approached and asked to complete a short follow-up interview. Visitors who were part of this evaluation were given incentives that included MNHS pens, stickers, and pins, regardless of their participation in the exit interview.

## **Limitations**

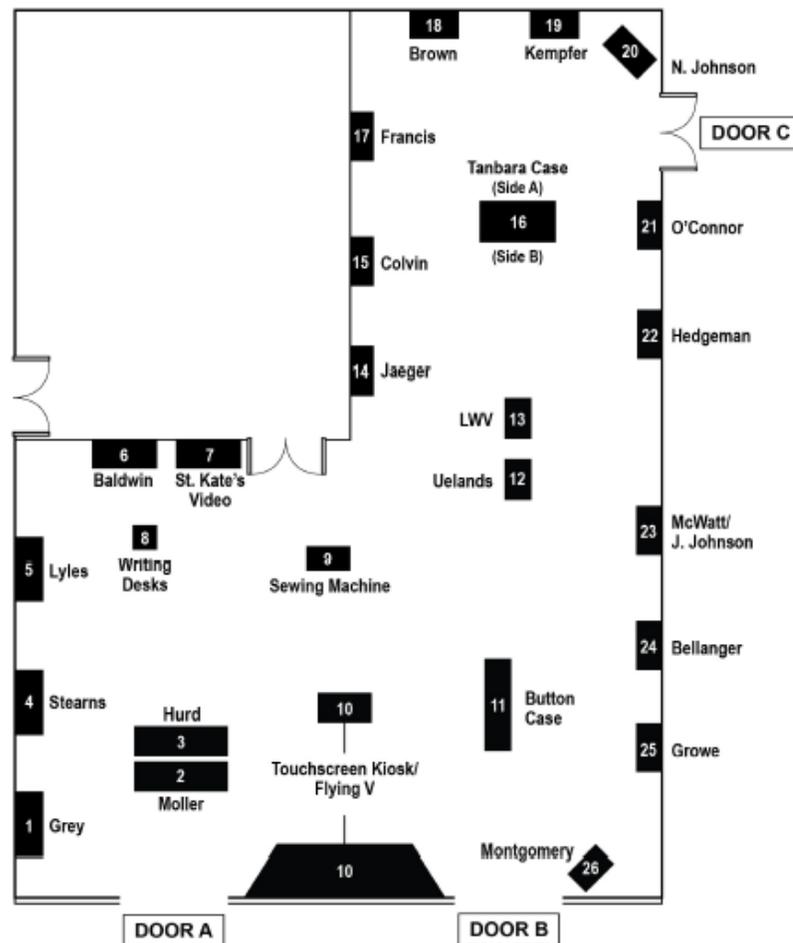
Due to the ongoing pandemic, MNHS had been operating with reduced hours and staff. This limited the amount of time internal MNHS staff could devote to data collection, as well as the dates and times they could carry out the study. This summative evaluation is intended to give MNHS a brief introduction to timing, tracking, and observations to evaluate their exhibits. This evaluation was not intended to be a deep dive and detailed timing and tracking study, which would have required greater funds and time. Ideally, a much larger sample size would have been used to be more comparable with other studies. Additionally, the sample size does affect the SRI and %DV and should be taken into account in the future. It would also be advantageous to have samples collected equally on weekdays and weekends for future studies. COVID-19 has also been a prevalent issue in museum attendance, with people choosing to perhaps spend time outdoors for safety reasons. Attendance to this exhibit may have been down compared to if it had opened without the pandemic.

## C. Timing, tracking and observation instrument



**Instructions:** Start stopwatch when your target enters the exhibit. Draw an "X" at entry point and arrow on their first turn/route. Draw an "O" at exit point. Note any behaviors and where they occurred. Time ends when they leave the exhibit. **Remember:** you are only following one individual.

Entry time: \_\_\_\_\_  
 Exit time: \_\_\_\_\_  
 Total time in exhibit: \_\_\_\_\_



- |  |   |
|--|---|
| A - Attends to exhibit (plants feet and looks for 3+ seconds)        | P - Points to exhibit or panel  |
| C - Calls party member over to look                                  | Ph - Takes photo of exhibit   |
| D - Discusses exhibit with party member                              | R - Read aloud to another party member  |
| L - Leans in/crouches for better look                                | W - Watches video- please note if guest presses button then leaves (within 3 seconds) |
| M - Manipulate exhibit (sits at writing desk and writes a post card) | O - Other, please describe: _____   |

Data Collector: \_\_\_\_\_ Date: \_\_\_\_\_

Section	Total time (feet planted/3+ seconds)	Interactions/Behaviors	Notes
1. Grey			
2. Moller			
3. Hurd			
4. Stearns			
5. Lyles			
6. Baldwin			
7. St. Kates video			
8. Writing desks			
9. Sewing machine			
10. Touchscreen/Flying V			
11.Button Case			
12.Uelands			
13.LWV			
14.Jaeger			
15. Colvin			
16a. Tanbara	16b. Tanbara		
17. Francis			
18. Brown			
19. Kempfer			
20. N. Johnson			
21. O'Connor			
22. Hedgeman			
23. McWatt/Johnson			
24. Bellanger			
25. Growe			
26. Montgomery			

Interview >>>

## Interview Instrument

Hello, my name is [NAME] and I am the [TITLE] here at the Minnesota Historical Society. I saw that you had a chance to walk through the Extraordinary Women exhibit. Would you be willing to take a few minutes to answer some questions about your experience?

1. **What do you think were the key messages of the exhibit you just saw?**

*Probe: If a friend asked you what the theme of the exhibit was, what would you tell them?*

2. **Can you give me an example of where you saw that message?**

*Probe: Was there a section or specific area you could point out to me that gave you that impression?  
What stood out about it?*

3. **Where there any parts of the exhibit that you found challenging to use or understand?**

We are interested in learning a little bit more about who is visiting this exhibit, I have a few more questions for you.

4. How many adults including yourself, came to the museum today? \_\_\_\_\_

5. How many children came with you today? \_\_\_\_\_

6. What is your age group:

18-24

25-34

35-44

45-54

55-64

65-74

75+

*Prefer not to answer*

7. What is your gender identity?

Female

Male

Non-binary/third gender

*Prefer not to answer*

## D. Time and overall stops by section

### D1. Time spent and overall stops by visitors

Section	Median time spent in exhibit space (in seconds)	Minimum time spent in exhibit space (in seconds)	Maximum time spent in exhibit space (in seconds)	# of people who stopped at section
1. Grey	77.50	10	250	34
2. Moller	60.00	10	180	29
3. Hurd	40.00	3	148	22
4. Stearns	59.00	10	325	33
5. Lyles	50.00	6	160	31
6. Baldwin	48.00	4	201	34
7. St. Kate's video	206.50	31	707	12
8. Writing desks	16.00	5	306	5
9. Sewing machine	32.00	3	443	33
10. Touchscreen/Flying V	64.00	3	542	18
11. Button Case	49.00	7	295	22
12. Uelands	49.00	3	148	22
13. LWV (League of Women Voters)	63.50	5	150	12
14. Jaeger	40.00	3	230	37
15. Colvin	53.00	3	239	35
16a. Tanbara	71.00	17	174	22
16b. Tanbara	14.50	4	90	14
17. Francis	90.50	10	233	32
18. Brown	51.00	5	159	34
19. Kempfer	45.50	5	108	26
20. N. Johnson	32.00	7	105	24
21. O'Connor	39.00	5	147	37
22. Hedgeman	39.50	5	134	28
23. McWatt/Johnson	35.00	9	190	28
24. Bellanger	60.00	8	276	23
25. Growe	55.00	5	114	22
26. Montgomery	34.50	4	99	20

## E. Time spent - demographics

### E1. Group composition (N=49)

	<b>Median time spent in exhibit space</b>
Visited alone	36.5 minutes
Single adult with children	14 minutes
Multiple adults with or without children	11 minutes

### E2. Children in group (N=50)

	<b>Median time spent in exhibit space</b>
Visited with children	17 minutes
Visited without children	7 minutes

### E3. Age of focal visitor (N=48)

	<b>Median time spent in exhibit space</b>
18 - 34	6 minutes
35 - 54	13 minutes
55+	18 minutes

### E4. Gender of focal visitor (N=49)

	<b>Median time spent in exhibit space</b>
Female	20 minutes
Male	7 minutes
Non-binary/third gender	6 minutes

# F. Number of stops - demographics

## F1. Group composition (N=47)

	Median number of stops
Visited alone	13
Single adult with children	16.5
Multiple adults with or without children	14

## F2. Children in group (N=47)

	Median number of stops
Visited with children	16.5
Visited without children	8

## F3. Age of focal visitor (N=44)

	Median number of stops
18 - 34	9
35 - 54	14
55+	15.5

## F4. Gender of focal visitor (N=46)

	Median number of stops
Female	15
Male	9
Non-binary/third gender	11

# G. Interactions - demographics

## G1. Group composition (N=48)

	<b>Median number of interactions</b>
Visited alone	30.5
Single adult with children	26
Multiple adults with or without children	23

## G2. Children in group (N=49)

	<b>Median number of interactions</b>
Visited with children	26
Visited without children	12

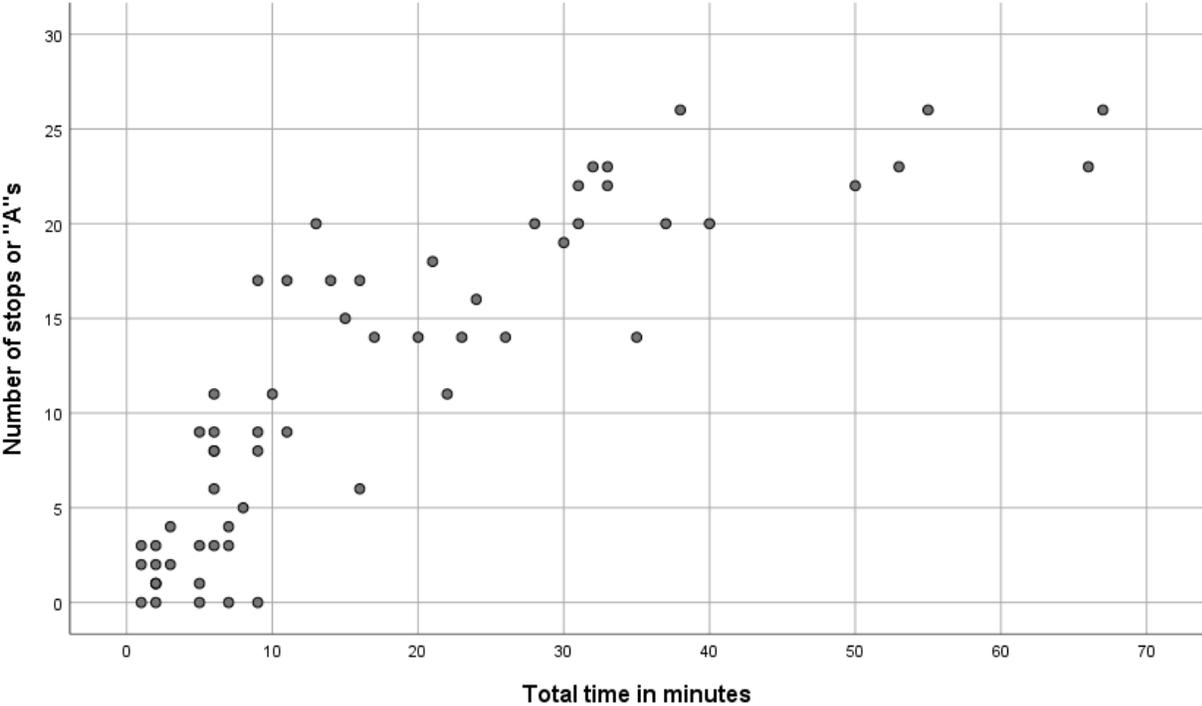
## G3. Age of focal visitor (N=45)

	<b>Median number of interactions</b>
18 – 34	13
35 - 54	24.5
55+	25.5

## G4. Gender of focal visitor (N=47)

	<b>Median number of interactions</b>
Female	25.5
Male	12.5
Non-binary/third gender	16

# H. Scatterplot of visitors' time spent in the exhibit and number of stops



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