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Middle Ground: Reconsidering Ourselves and Others
Exploratorium
Summative Evaluation

June 2021

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Overview

Middle Ground, funded by the National Science Foundation, was an outdoor public installation developed by the Exploratorium and located in San Francisco's Civic Center. This installation focused on the social science of how people think about others, particularly the cognitive basis for biases, judgements, and stereotypes, as well as more pro-social behavior and ways of connecting with others. Garibay Group conducted a summative evaluation to assess project outcomes.

The *Middle Ground* installation consisted of 14 interactive multimedia exhibit units situated on the San Francisco's Main Public Library Western plaza. In addition to the exhibits, the space included tables and chairs throughout the plaza and a café kiosk.

The project was part of San Francisco's Civic Center initiative to create a lively and welcoming heart of the City. In addition to the collaboration with the City of San Francisco, *Middle Ground* involved a number of partners, including the San Francisco Public Library, Urban Alchemy (UA), and Community Housing Partnership, among others.

Through the collaboration with UA, *Middle Ground* also integrated human facilitation in the experience. Additionally, the project drew on principles of placemaking to create a convivial community space.

Project Goals
The project included the following goals:

- Create a place that feels welcoming for the whole community; be widely seen as a positive addition to the neighborhood for the wide variety of audiences that use the area.

- Encourage social interactions among users, including strangers.

- Provide compelling learning experiences based on social psychology, especially in the areas of bias and stereotyping.

- Have people reflect on their own social responses, ideally moving toward greater compassion and empathy for others.

Summative Evaluation Focus
The primary goals of the summative evaluation included:

Visitors
- The success of exhibits and activities in engaging visitors with social science concepts to create insights about themselves (i.e., metacognition).

- The degree to which experiences at *Middle Ground* foster empathy and connection for those who appear to be different from themselves.

- The ways in which visitors generally use the installation and the extent to which *Middle Ground* draws more individuals to the space compared to prior to the installation.

Placemaking
- The extent to which *Middle Ground* creates a convivial space for people from all walks of life to gather and interact with each other.

Partnership
- Document the overall qualities of the collaboration that contributed to project outcomes and examine salient elements to inclusive placemaking efforts.

Methods

Data collection for the summative evaluation was scheduled to begin in spring 2020. Due to COVID-19, the installation was closed in March 2020. In lieu of collecting data at the exhibition for summative, evaluators used the data collected by the Exploratorium for a research study about the effects of facilitation on the visitors. These data were used to assess visitor and placemaking outcomes. Evaluators collected interview data with select project partners to gain insights into the collaboration.

Data Sets

Visitor Interviews
The interview data set used for summative evaluation consisted of 74 interviews with visitors at the exhibition during a facilitated condition.

Participants who visited the installation and used at least two exhibits and had an interaction with a facilitator were then randomly sampled and approached as they exited the exhibition area. Data were collected from August to October 2019.

Structured interviews consisted of Likert scale rating questions with open-ended probes asking participants to explain the reasons for their ratings. Participants were asked about their motivation for engaging with the *Middle Ground* exhibits, overall experience, and affective responses (e.g., discomfort, feelings of respect, compassion) and asked questions related to meta-cognition, such as whether the experience helped participants learn anything about themselves or their actions toward others.

The majority of interview respondents (60%) self-identified as female. More than half (56%) were between 18 and 39 years old.

Most (89%) did not have children with them. Nearly all interviews (95%) were conducted in English. See Appendix A for a detailed profile of respondents.

Video Recordings
Video recordings of the plaza space taken before and after installation of *Middle Ground* were used to understand *Middle Ground's* effect on placemaking.

Video cameras were positioned at the SF Public Library building with a view of the plaza. One set of video was recorded before *Middle Ground* was installed (July 1–6, 2019), and another after installation (August 18–24, 2019). Two hours of video were recorded each day, from 11:00 a.m.–12:00 p.m. and 4:00 p.m.–5:00 p.m. The total data set included 24 videos (11 before installation, 13 after).

Partner Interviews
We conducted interviews with project partners to understand their perspectives and experiences in the collaboration. We conducted interviews with ten staff, including six in leadership positions representing the City of San Francisco, the SF Public Library, Urban Alchemy, Downtown Streets Team

A still from the video camera located above *Middle Ground* inside the SF Public Library. The red outline indicates the boundaries used by researchers to determine whether someone entered the space.

Methods, cont'd.

(formerly staff at Community Housing Partnership and Adobe Services), and four Urban Alchemy facilitators who had also participated as researchers with the Exploratorium team. (See Table 1.)

The focus of these interviews was to understand the motivations and goals of the partner organizations, their experiences in the partnership, and their insights on the collaboration with the Exploratorium. For UA facilitators, interviews also included questions to provide understanding of their experiences as facilitators.

We conducted Interviews between November 18–20, 2019 (facilitators) and November 2020–March 2021 (partner leadership).

Data Analysis

For visitor interviews, basic descriptive statistics—used to analyze quantitative components of data—are summarized in tables and histograms. Survey data is presented in percentages (some percentages do not add to 100% due to rounding). Where appropriate, the actual number of responses (N) is provided.

Qualitative visitor interview data were analyzed using a hybrid approach to coding (Fereday & Muir-Cochrane, 2006) involving both deductive and inductive coding (Strauss and Corbin, 1990; Patton, 2015). We initially developed a set of broad a priori codes. During coding of data, inductive codes were added as new themes emerged.

We used video data to track individuals through the space both before and after the exhibition was installed.

The following video recordings were removed from the analysis because of unusual circumstances affecting the use of the plaza: Sunday, June 30, 2019, 11:00 a.m.—4:00 p.m. (street festival); Wednesday, July 3, 2019, 11:00 a.m. (street festival); and Wednesday, August 21, 2019, 11:00 a.m. (SPL book fair).

Pass-through rates: During the first stage of video analysis, we calculated the pass-through rates for 22 videos, 11 from before *Middle Ground* was installed and 11 after.

We analyzed the first ten minutes of each video and tracked individuals as they moved through the area. Those who entered and moved through the designated space for 29 or fewer seconds were counted as passing through, while individuals entering and stopping for 30 seconds or more were not. We calculated a pass-through rate for the plaza, dividing those who entered and left in 29 seconds or fewer by the total number of people who entered the space. We then used a Chi-square test to assess whether the differences in pass-through rates between conditions (pre- and post-exhibition installation) were statistically significant.

Tracking and Timing: For the second part of the video analysis, we collected and entered tracking and timing data for 142 people.

Table 1. Partner Interviews by Organization

Organization	Title
City of San Francisco	• Project Manager, Civic Center Commons Initiative, SF Planning Department
San Francisco Public Library	• Chief of Main Branch, San Francisco Public Library
Urban Alchemy	• Executive Director • Director of Civic Center • Facilitators/researchers (N=4)
Downtown Streets Team	• Executive Director, Streets Team (formerly Senior Programs Director, Community Housing Partnership) • Senior Director, Streets Team (formerly Director, Health and Wellness, Adobe Services)

Methods, cont'd.

We tracked 61 before *Middle Ground* was installed (on six different days between 7/1/19–7/6/19) and 81 after *Middle Ground* was installed (on seven different days between 8/18/19–8/24/19).

As with the first stage of the video analysis, we used the first ten minutes of each video as our sampling window. To select visitors, the observer imagined a line at either the upper right-hand or upper left-hand corner of the screen and selected the third adult visitor to cross this imaginary line. Once the visitor crossed the line, the observer noted the time on the video player and observed the visitor's movements through the space and recorded the time s/he spent.
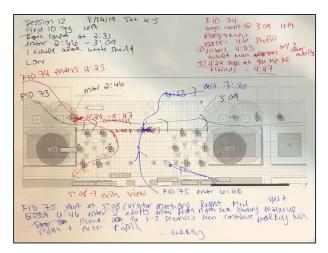
For visitors after *Middle Ground* had been installed, researchers recorded the components "used" and the time spent. (We considered "use" to mean that the selected visitor was observed attending to/stopping at one of the *Middle Ground* components for two to three seconds.) As in traditional tracking and timing studies, we tracked the visitor selected until s/he left the area.

After the selected visitor left, we restarted the selection process and continued this cycle until reaching the ten-minute mark.

Due to the limitations of the video recordings (a few blind spots, as well as glare on especially sunny days), the study team focused here primarily on stay times, which

reflect the amount of time people spent in one continuous, unbroken visit.

We also included everyone we were able to track entering and exiting the space, regardless of whether that visitor stopped at anything *Middle Ground*-related and regardless of how long that person stayed in the *Middle Ground* area. Sometimes, timing and tracking studies exclude visitors who stay in an area less than a set time or who do not engage with any exhibit during their visit. We chose to not impose these restrictions initially, in order to capture how people move through the public space, not just how visitors with the intention of visiting an exhibition interact with its components. In addition to recording timing data, we noted our observations of crowd size and group composition.

Thus, tracking and timing data can be organized into three main groups. Group 1 includes those who visited *Middle Ground* after it was installed and stopped at no less than one component. Group 2 includes those who visited *Middle Ground* after it was installed but were not seen stopping and/or attending to at least one component. Group 3 includes those who visited the *Middle Ground* area before it was installed. We used a Kruskal-Wallis test to assess whether differences in the three datasets were statistically significant.

Tracking map sample with *Middle Ground* present.

Methods, cont'd.

Limitations

As with any study, this evaluation had limitations. The closure of *Middle Ground* in March 2020 meant that evaluators used data collected by the Exploratorium team for research, not data collected by Garibay Group specifically for evaluation. Thus, evaluators were unable to use a culturally responsive approach (Hood, Hopson, Kirkhart, 2015; Garibay & Teasdale, 2019) as had been planned in the original summative evaluation design.

Garibay Group, however used a culturally responsive lens during the analysis, which revealed some limitations of the research instrument and the potential validity of data. Three questions asked respondents if the *Middle Ground* experience brought up feelings of respect, compassion, or connection with "people who are different from you." This phrase appeared to draw attention to differences in negative ways. In some cases, it felt othering to people who are already marginalized (e.g., individuals experiencing homelessness). In other cases, the question seemed to provoke defensiveness and caused individuals to minimize differences (see page 16 for further discussion of minimization).

Additionally, the difference and nuances between the terms *respect*, *connections,* and *empathy* were not well defined and some respondents appeared to see these terms as interchangeable.

This led to some confusion and frustration for some respondents, who perceived being asked the same question multiple times. In some cases, respondents did not elaborate on their answers because they indicated they had already answered the question. Thus, qualitative data that could have helped triangulate quantitative ratings and provide deeper insight into participant outcomes were limited.

Regarding the video data, camera placement inside the SPL limited the view of *Middle Ground*. A few units were obscured by trees and at times the glare from the window made it difficult for researchers to clearly discern individuals in the space. Moreover, it is arguably questionable to translate established timing and tracking methods in a museum to an outdoor installation like *Middle Ground* since people were not explicitly entering the space to have an experience, but instead using an open, public plaza. Unlike museum visitors, each user of a public plaza has their own individual goals that likely have little do to with experiencing an installation like *Middle Ground*. Thus, tracking and timing in this context may not be the strongest metric.

Exhibits Used & Overall Experience

Exhibit Units Used

More than two-thirds of respondents used "Hands-on Music." Half used "Unseen Stories" while just fewer than half used "Pulling Together" and "Face to Face." The three exhibit units used by the fewest respondents were "Intro Panel," "Thought Bubbles," and "Northside You, Me, We." Respondents used an average of four exhibit units during their visits.

Figure 1. Exhibit Units Used by Respondents

Exhibit Unit	Percentage
Hands-on Music	70%
Unseen Stories	50%
Pulling Together	47%
Face to Face	45%
My Side Bias	38%
Making it in America	36%
Don't Push the Button/Compliance Video	34%
Tell a Joke	32%
Pay it Forward Cafe	23%
SFPL Kiosk	18%
Standby or Standup	16%
Southside You, Me, We	15%
Intro Panel	9%
Thought Bubbles	4%
Northside You, Me, We	1%

Exhibit use was based on observational data. During observations, researchers did not always have clear views of the You, Me, and We exhibit units, which may have resulted in lower percentages of use for these units.

N = 74

Overall Experience & Welcome

Respondents rated their experience in *Middle Ground* very highly. A large majority (80%) gave it a "Very Good!" rating, with the rest rating it "Good." Moreover, all reported feeling welcome in the space.

Figure 2. Overall, how good or bad was your experience during this visit?

N = 74

Figure 3. Did you feel welcome in the space?

N = 74

It's a lot of fun. I think you learn a lot or you remember things that you tend to forget, right? But it's so fun….it brings you joy to participate in that activity. So instead of just kind of preaching to you these things that we all know and sometimes forget, it gets you—it gets you moving, gets you busy, and it's fun.

I think that the way the games are designed is very interactive and also we are in a very open area.

I've always dealt with the Exploratorium since I was a little kid... I like the science aspect of it and the kind gentleman that was explaining things to me....because I don't think I would have got that it was supposed to be interactive…to enhance community and in meeting people just on my own….It's a positive message.

The environment was pretty much welcoming and the exhibits were easy to navigate. I felt like I could ask anyone who worked here how to do anything…I knew if I asked someone they would also open a conversation that was friendly.

It's out here on a beautiful day, for one, so...and …everybody in the area seems to have a great attitude and it was fun. I don't know necessarily if it was educational for me, but it was fun.

It was very interesting, the whole idea behind the exhibit about making people come together and realize how important it is to have a human touch with each other. So I found that very interesting.

After rating their experience, respondents were asked what made the experience good (or bad). Nearly all respondents gave more than one reason. As these reasons were analyzed, categories emerged, although the categories were not mutually exclusive.

Five major categories were prevalent in interviews. The top reason for a good experience, given by more than a third (39%) of respondents, was that *Middle Ground* was intellectually engaging. It was, to quote respondents, "thought-provoking" or "fed the mind." The next most common category of responses (35% of respondents) was engagement with the Urban Alchemy facilitator. For example, one respondent said, "[It's] super-unique. And I like the interactivity of it."

Finally, the fifth major category—mentioned by 22% of respondents—was the social nature of the experience. As a respondent said, "It was fun to do with someone."

A number of other categories were less prevalent, mentioned by fewer than 15% of interviewees. These included references to the content or topics addressed, its uniqueness, the opportunity it gave to engage with strangers, the design of the exhibition, the fact that it was unexpected, and the way it piqued curiosity. In addition, a few caregivers also mentioned that the experience was a good way to teach a child about issues such as bias and judgements.

One respondent explained, "My favorite part was talking to the young people." Another said, "Just talking to the lady that was showing me everything [made it a good experience]."

The next highest-scoring reason, given by 28% of respondents, was that *Middle Ground* was entertaining or fun. One respondent said, "It is very interesting. It's not very common. People do stuff…out of curiosity, I think it was fun."

Just over a quarter (26%) of respondents noted that the interactive/hands-on nature of the exhibits made for a good experience.

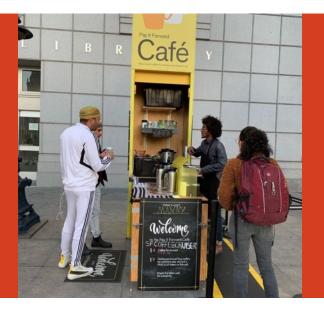*Because it's fun. It's new. I never have seen this before here.*

I thought I was interesting because I feel like a lot of social experiments are just done through, like, one day…if you look on YouTube there's a lot of social experiments where they try to break, like, prejudice about like different races and genders…it's like just one YouTube video and that's it. But I feel like with an exhibit like this you really get to experience it and you're taking something that, like, had been done before but then pushing it to another level that people may have not necessarily thought about before.

It's nice to see there are artists putting up this kind of exhibition to let people explore different aspects of…social issues and also help people to think in a way slightly different, maybe, from sometimes they probably don't care.

I noticed that it's about communication and not only communication—put yourself out there—and I wanted to not only experience it because I see a lot of people go to these exhibits, but I felt the need to express myself…when you're out here in the streets, you see certain things happening and…you want to just put your opinion out there, which I did. I wrote my opinion on a piece of paper.

I thought that it gives different perspectives about things that is always helpful for people to be able to understand one another.

Metacognition & Social Science Concepts

Metacognition & Social Science Concepts

In this section we discuss social science content in the exhibit, focusing primarily on the extent to which *Middle Ground* fostered metacognition and impact of the experience. (Table 2 shows the key social science concepts addressed by exhibit unit.)

Metacognition
At its most basic, metacognition is thinking about one's thinking. While there is no one definition of metacognition (Veenman, et al., 2005), the term generally refers to awareness of one's thinking and learning (Chick, n.d.). In *Middle Ground*, it was posited that metacognitive self-reflection about the way one thinks about others and how one acts toward others paves the way for behavioral change (Gutwill, personal communication).

The dataset analyzed consisted of self-reported Likert-scale questions (e.g., yes, no, don't know) as well as open-ended prompts that asked respondents to further articulate their responses. Answers to these probes were analyzed to look for evidence of metacognition and impact.

Self-reported data asked about two categories of metacognition. Compared to self-reported ratings, our analysis of qualitative data found less evidence that respondents engaged in metacognition. However, when we coded for all instances of evidence of *any* metacognitive thinking, 80% of interviews showed at least one instance of metacognitive thinking.

This pattern held true for self-reports related to affective impact—that is, bringing up feelings of respect, connections to others, and/or empathy/compassion. Overall, however, in the qualitative data, 89% of respondents showed evidence of at least one instance of affective impact.

Specific Social Science Concepts
We also looked for evidence that visitors were engaging and reflecting on the key social science concepts addressed by the exhibit units. We were not able, however, to assess the full extent to which participants recognized these ideas or compare prevalence across exhibit units. The interview instrument used primarily closed-rating questions with an additional prompt as opposed to more open-ended questions that would typically elicit richer qualitative data that allows for a more full range of ideas and perspectives. Additionally, data did not include equal numbers for each exhibit unit. Some units (e.g., Unseen Stories) were visited by many more respondents while other exhibits were visited by very few (e.g., Thought Bubbles).

Despite these limitations, however, analysis of qualitative responses taken as a whole revealed that visitors did engage with and reflect on the key social science concepts in some way.
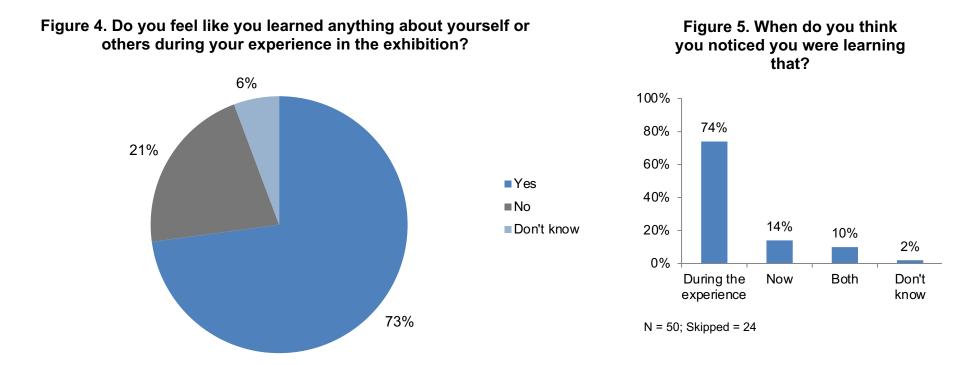
We first present the self-reported data and then discuss the analysis of qualitative data.

Table 2. Exhibit Units and Key Social Science Concepts

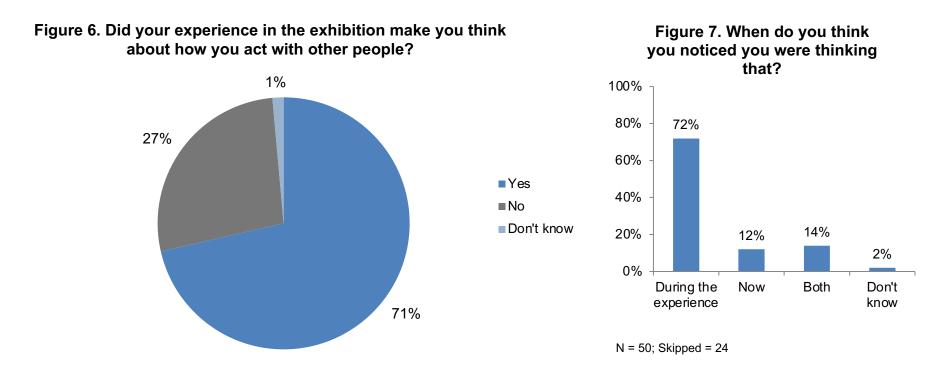| Exhibit Unit	Key Social Science Concept(s)
Don't Push the Button/ Compliance Video	Power & compliance
Face to Face	Including others in the self
Hands-on Music	Intergroup contact
Making It in America	Social mobility
My Side Bias	Issue involvement & selective exposure
My Side Bias	Quick & slow thinking
Pay It Forward Cafe	Pro-social behaviors
Pay It Forward Cafe	Reciprocity
Pulling Together	Social loafing
Standby or Standup	Bystander effect
Tell a Joke	Positive effect of humor
Thought Bubbles	Quick & slow thinking
Thought Bubbles	Stereotype
Unseen Stories	Perspective-taking
Unseen Stories	Quick & slow thinking
Unseen Stories	Stereotype
You, Me, We	Including others in the self

Learn About Self or Others

Nearly three quarters (73%) of respondents reported feeling that they learned something about themselves or others during their *Middle Ground* experience. About a quarter, however, reported *not* feeling that they learned something or did not know whether they did. Of those who reported learning something, 84% said they noticed they were learning during the experience.

Figure 4. Do you feel like you learned anything about yourself or others during your experience in the exhibition?

Figure 5. When do you think you noticed you were learning that?

- Yes
- No
- Don't know

N = 70; Skipped = 4

N = 50; Skipped = 24

Think About How they Act

More than two-thirds of respondents (71%) reported feeling that their *Middle Ground* experience made them think about how they act with other people. Of those who reported that the exhibition made them think about how they act with others, 86% said that they noticed doing so during the experience.

Figure 6. Did your experience in the exhibition make you think about how you act with other people?

1%
27%
71%

- Yes
- No
- Don't know

N = 70; Skipped = 4

Figure 7. When do you think you noticed you were thinking that?

	During the experience	Now	Both	Don't know
	72%	12%	14%	2%

N = 50; Skipped = 24

Respect

The majority of respondents (86%) reported that their *Middle Ground* experience brought up feelings of respect for people who were different from them. Only 9% reported that it did not.
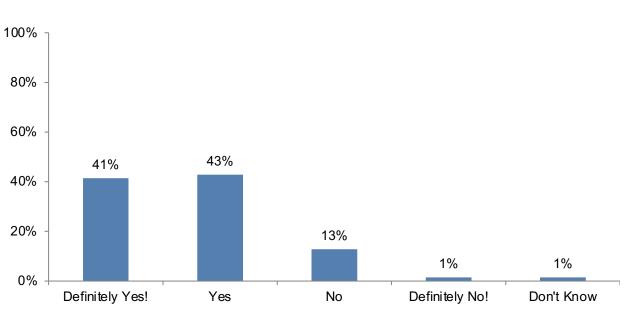
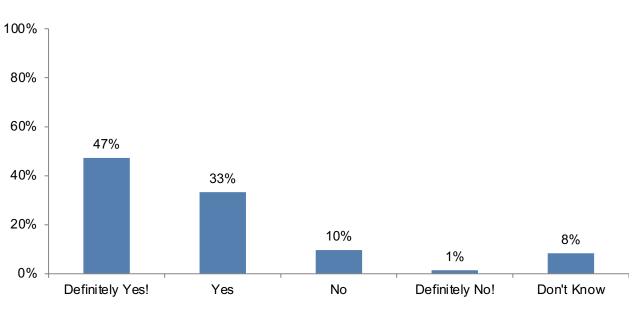**Figure 8. Did your experience in the exhibition bring up feelings of respect for people who are different from you?**

N = 73; Skipped = 1

Connection

Most respondents (84%) said that their *Middle Ground* experience brought up feelings of connection with people who were different from them, while 14% said it did not.

Figure 9. Did your experience in the exhibition bring up feelings of connection with people who are different from you?

N = 70; Skipped = 4

Compassion

The majority of respondents (80%) said that their experience in *Middle Ground* brought up feelings of compassion for people who were different from them. While 11% said their exhibition experience did not bring up feelings of compassion, 8% said they were not sure whether it did.

Figure 10. Did your experience in the exhibition bring up feelings of compassion for people who are different from you?

N = 72; Skipped = 2

Discomfort

Most respondents (84%) reported that the *Middle Ground* experience did not bring up feelings of discomfort with people who were different from them. Some (15%), however, said that they did experience feelings of discomfort in the exhibition.
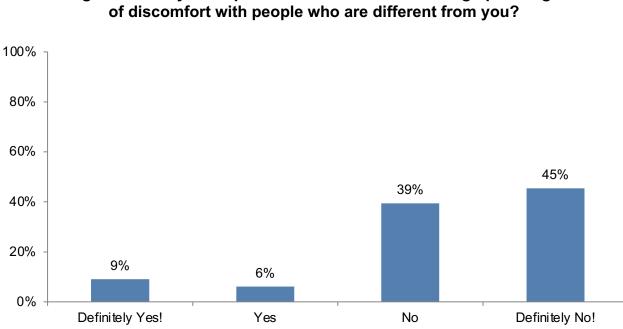
Figure 11. Did your experience in the exhibition bring up feelings of discomfort with people who are different from you?

N = 66; Skipped = 8

[At Making It in America] I think I recognize that I started a little higher…than many other people….[my discomfort is] not about other people, it's about like how do I address this from the standpoint of being a little higher up?

It's a little weird because…It's like treading into the unknown and interacting with somebody that you don't know.

I feel like most people are uncomfortable working with people they don't know….It's about not seeing that feeling as necessarily negative, but also embracing that feeling….it can also be really good because it's interactive and collaborative and I think that's a feeling that we should feel more.

Analysis showed that some participants' ratings to the discomfort question did not match their qualitative responses. On further analysis, using the Bennett Developmental Model of Inter-cultural Sensitivity (2004) (a framework for understanding how people orient with and engage cultural difference), we found that these respondents appeared to be in the "minimization of difference" stage. Those at this stage believe that similarities outweigh differences and may overestimate their own tolerance. By focusing on similarities, minimization enables people to avoid recognizing their own biases and avoid discomfort. Thus, the number of respondents who reported having no discomfort may be overestimated.

For those who did report feeling discomfort, our analysis found that these respondents most commonly reported being initially uncomfortable interacting with strangers, particularly at You, Me, We and Hands-on Music. All who reported feeling initially hesitant, however, eventually overcame the feeling, and saw these interactions as positive. A few specifically mentioned that facilitators put them at ease. Other reasons given by respondents who felt discomfort: a) their own privilege (in Making It in America); b) other people's opinions that differed from their own (My Side Bias); c) the realization of their own bias and judgement of others as well as feeling judged by others (Unseen Bias), and d) not knowing if they would help someone else in the situation depicted in Standby or Standup.

Social Science Concepts

There was evidence that respondents who engaged with an exhibit unit recognized the key social science concepts associated with it. In our analysis, there were only two units—Pay It Forward Café and Thought Bubbles—in which we did not find such evidence, in those cases perhaps due to limitations of data collected.

Table 3. Exhibit Units, Key Social Science Concepts, and Representative Quotes

Exhibit Unit	Key Social Science Concept	Illustrative Quote Sample quotes showing ways respondents articulated the specific social science concept
Don't Push the Button/ Compliance Video	Power & compliance	*I was reminded of how we all fall in that trap just because someone looks official, we accept that this guy is some authority figure….No matter how stupid his order because he's wearing something that looks like a uniform, people do it….it was a reminder sometimes how people…are very ready to accept orders even if they don't know why or from who it's coming.*
Face to Face	Including others in the self	*I love the photo exhibit because it showed all ages, all skin colors...But everybody has similar expressions. That was an amazing exhibit.*
Hands-on Music	Intergroup contact	*We started with just us and the lady [facilitator] brought us round and then a guy was walking by we said, "Come here." He didn't look particularly rich, but we held hands and danced for a minute. And why not? We were all happy.*
Making It in America	Social mobility	*It was funny that it [Making It in America] had the social mobility…I underestimated the truth every time. (laughs) So I don't have any faith in the social mobility. But that was interesting to see that most people overestimated, and I underestimated it. So that was interesting.*
My Side Bias	Issue involvement & selective exposure	*I think…[My Side Bias] made me think about the other side a little bit better….I understand their side a little bit better because…I think kids shouldn't be on social media as much…I think that there's a lot of crazy [stuff], but then I looked at the other side of it and it seemed like there's a lot of reasons why it's good too…not just the bad stuff.*
	Quick & slow thinking	*There's the one about snap judgements and I think that's something we can all relate to. Whether it's, you know, just going through traffic or you're dealing with a rude person….It's relatable.*
Pulling Together	Social loafing	*It was a little striking…"Oh, you tend to work harder when other people can see your progress,"…I think that that's definitely true, and also like I was thinking... if I had been able to see my own progress the first time, it was more like against myself...I want to see how hard I'm pulling, just for myself...I felt myself kind of reflecting on that process.*
Standby or Standup	Bystander effect	*And there's also one exhibit [Standup or Standby] where it's like kind of like the effect where you, like, you ignore people who might need help.*
Tell a Joke	Positive effect of humor	*She [a stranger] was reading the description of the exhibit so when I offered to tell her a joke she was very open to it and then we both shared a lot over a simple silly joke.*
Unseen Stories	Perspective-taking	*The one [exhibit] where you hear other people's opinions and stuff, and how they see themselves, is cool because even if they're not present then you're still, like, learning about someone.*
	Quick & slow thinking	*Not being so quick to judge people I think, is the main thing I thought of. I think [I thought this] when I saw the thing where…there's a picture of someone, then you flipped it, and it says what their real story was and that was pretty cool.*
	Stereotype	*Just getting that information of…people who are different from you—what they experience, what kind of stereotypes that are put against them, but what they actually identify with? I have compassion for that.*
You, Me, We	Including others in the self	*[It brought up feelings of connection with people who are different from me] when I was looking across from somebody in the mirror.*

Metacognition: Qualitative Data

Analysis of interview data also showed that *Middle Ground* prompted and supported metacognition, particularly as it related to observations of one's own behavior or values and bias/judgement. Moreover, this metacognition led to positive impacts—in particular, learning about oneself, fostering feelings of empathy and compassion, and making connections with others.

Metacognition

Analysis showed a range of ways in which participants experienced moments of awareness of their own thinking about themselves or others. This could include observations of their own behaviors, beliefs, or values; reflecting on biases, judgements, and stereotypes; and perspective-taking. We found that when the experience fostered metacognition, it often prompted reflection in more than one of these areas or "categories." For example, respondents often thought about their own behavior and values in terms of their biases or judgements about others or their ability to see issues from someone else's point of view. It is important to note that these "categories" are not exclusive; usually, participants described several of these types of reflections taking place in their experiences at *Middle Ground*.

Awareness of biases or judgements was the "category" mentioned by the largest number of respondents in interviews. Half of the respondents (50%) interviewed described at least one instance of thinking about bias or judgement as a result of their experience in *Middle Ground*. The exhibit unit Unseen Stories closely linked to instances in which participants were prompted to think about their biases and judgements.

Unseen Stories was specifically mentioned in nearly 40% of instances of respondents talking about biases or judgement. The only other exhibit unit which spurred awareness about biases or judgement was My Side Bias, which was specifically mentioned in fewer than 20% of responses.

In addition, we found that experiences with the Urban Alchemy facilitators themselves—especially when they shared their personal life stories with visitors—also prompted respondents to think about biases and judgements.

When visitors had positive interactions with UA facilitators and then found out the facilitators had been previously incarcerated, it spurred visitors to reflect upon the snap judgements they make and their own biases about others who are different from themselves. For instance, one respondent said, "I think having him [the facilitator] as one of the volunteers here is very interesting…while I was talking to him, I didn't rush to any conclusions, and it was interesting just to hear, kind of, his life story. It became evident that he came from a difficult home life when he was young, and so it really explained how he might have done things without having good parental supervision or community supervision."

I like to…see myself as a person who is…open-minded….I lean much more towards liberal ideals….But then sometimes I kind of cast-type people who maybe don't hold the same ideals.

[I learned] knowing about people not only culturally but also…racially and…economically. Like those differences and how those kind of intersect. And just how many ways you could judge people and how many ways you really shouldn't.

That one question [in My Side Bias] where they were asking…does it feel harder to look at the other side of this story if you're pretty passionate about this topic versus if you're not passionate about this topic and you're like "Oh yeah, indeed, it gets hard to listen to another side when you're so deeply passionate or convinced of your side of the story."…It brought quite a lot of subtlety in opening up the doors a bit more, which was nice.

Having never met this person before [the facilitator], I'd made no assumptions. And it was a surprise to have him admit right up front that he had been incarcerated. I didn't pass judgement…I could still talk to him and he seemed like a nice person. And so it was easy to ask him questions and he was comfortable and responded and he was open.

Metacognition: Qualitative Data, cont'd.

Moreover, UA facilitators interviewed mentioned they had a sense that these interactions were changing the ways visitors thought about others who were different than themselves; it challenged visitors to think about societal issues from a different perspective than their own.

Respondents' observations of their own behavior and values was also a common "category" in coded interview data. Nearly half the respondents (47%) mentioned at least one instance of observing their own behavior. For example, respondents talked about how their *Middle Ground* experience prompted them to think about how they act in social situations, such as complying with authority, making snap judgements about others, or avoiding interacting with strangers in public.

Exhibit units commonly cited by respondents as spurring thinking about their own thinking and behavior, and where they were clearly engaging, were the Compliance Video, Unseen Stories, and My Side Bias. Respondents, for example, often said that watching the Compliance Video led them to consider past interactions and behaviors with authority figures, noting that they would likely comply with someone in a uniform just as the people in the video did. Unseen Stories prompted many respondents to think about and even confront their own behavior in terms of biases, judgements, and even stereotypes of others based on visual appearances.

My Side Bias, which involved reading other visitors' views on different issues, helped respondents consider the perspectives of those who did not agree with their opinions. For example, some of respondents said that reading some the opinions about universal health care they did not agree with made them uncomfortable, but that while they struggled to understand the other perspective, they did value the experience.

There was also evidence of respondents beginning to see, and perhaps even appreciate, others' points of view and perspective-taking as a result of their experience at *Middle Ground*. About a third of respondents (32%) described at least one instance of perspective-taking related to their exhibition experience. For example, as one respondent explained, *Middle Ground* helped "kinda open my mind up to the fact that there are two sides…There's another side other than my side." Another talked of "putting myself in other people's shoes…Trying to remain open and not close-minded… walking into the exhibition, [I] kind of already had that mind frame. [My experience here] just reaffirms things."

The exhibit unit that respondents most closely linked to perspective-taking was My Side Bias. This exhibit prompted them to think not only about their own opinions but also others' beliefs and opinions—and, even if they disagreed strongly, to at least acknowledge the legitimacy of beliefs and opinions other than their own.

I mean, those words with the 'think twice.' You just look at them, and, like, "I do this" (laughs). So, oh my God, this is, like, a lot of feelings. This experience was awesome in all the ways possible….[it made] you look inside and rethink everything you know.

It opened my mind up again to this, you know, I gotta be more open-minded because I found myself becoming more narrow-minded and just in this little box right here and it's my way or the highway. But, you know, the world does not work like that. And I know it. So this was a refresher…to be more open-minded.

I tend to speak my mind about certain matters whether, like, people want to hear it or not, but with exhibits like this…now that I realize that, like, I do have to take into consideration of everyone and what they've been through, not just what I think I want to say because people might not necessarily need to hear that or want to hear that.

It makes me look at the different people that are that are walking around that I'm not seeing, you know, that your mind kind of blanks out and to project onto them to see, consider their points of view or their own perspective.

[Unseen Stories] asked "What may people think about me?"…I'm really quiet, people think I'm shy, I'm introverted. I was thinking how you can be introverted but not necessarily shy. I'm just thinking about that.

It made me wonder would I have stopped to step on that thing on the ground just because this guy is asking me. I don't think I would have been smart and said "I don't know who you are."

Metacognition: Qualitative Data, cont'd.

There were fewer instances in the data related to respondents reflecting on beliefs and values (20%), quick and slow thinking (18%), or stereotypes (8%), yet all these responses did appear. Some participants noted that their experiences in *Middle Ground* led them to think about their own beliefs and values when interacting with or judging others. For instance, one respondent explained, "My history of living in San Francisco has always been one of wanting to interact with many different people." Another talked about how the exhibition reminded him that "it's important for me to always check up on myself and how I'm thinking but also be more aware about what other people might be thinking or what they're experiencing differently in their own lives…these are things that I already know, but I feel like I should be doing it more often."

Quick and slow thinking was often linked with bias and stereotypes, which can often result from making snap judgements. As one respondent explained, in *Middle Ground*, "[I was] kind of thinking back on my experiences and trying to look at it, like, was it, like, the first thought, or, like, should I have taken like a second moment to try and evaluate who that person is before kind of, like, jumping to a conclusion?" Another remarked, "I think that's [snap judgements] something we can all relate to. Whether it's, you know, just going through traffic or you're dealing with a rude person…It's relatable."

These three types of metacognition—reflecting on beliefs and values, quick and slow thinking, or stereotypes—were less strongly associated with any particular exhibit, though Unseen Stories was the one exhibit mentioned most often across the board.

Impacts
We found that when the experience fostered metacognition, it also led to positive impacts, such as feeling respect for others, feeling connected to or aware of others, feeling empathy/compassion for others, learning about oneself or others, interacting with or thinking about others, and reflecting on how one wants to be or act. In examining the prevalence of the co-occurrence of metacognition and impact codes (e.g., fostering empathy, connection, respect), we found that 97% of interviews in which metacognition occurred also included evidence of at least one type of impact (e.g., fostering empathy, connection, respect).

Well over half the respondents (59%) described at least one instance of feeling respect for others based on their experience in *Middle Ground*. Similarly, in more than half the interviews (57%), respondents described feeling connection to or awareness of others. Finally, more than half the respondents (53%) also described at least one instance of feelings of empathy or compassion for someone else during their experience.

It opened my eyes a little bit more. You know instead of walking down the street, "There's another homeless person," you know, you think "Well, how did they get that way?" Problems we need to solve to help people in that situation.

The [Unseen] Stories were definitely a good reminder of…you can't always see what someone's going through. And I think a lot of people know that, but seeing it more and more, and in people's own handwriting, is a really good reminder.

I read some of these stories and I'm like, "Wow, they're so sad," like, people go through this, like, on the daily.

I also catch myself being very biased very quickly. And it doesn't take too long to switch me to not biased anymore. But I feel like I still come to any place with my point of view and it was nice…for a second to take a step back…we just had this discussion about homelessness and reading some stories made me think that maybe I'll…be less judgmental a little bit about that…So that was good.

Metacognition: Qualitative Data, cont'd.

In the qualitative data, interacting with or thinking about others was less prevalent (41% reported at least one instance), as was evidence of learning about oneself or others. Finally, 30% of respondents described at least one instance of how *Middle Ground* helped them reflect on how they aspired to be or act. For example, one respondent said, "even if you're not thinking about it along your day, I think going through this exhibit, you think about being more empathetic toward other peoples' situations."

Among the exhibit units that prompted or supported these impacts, interviewees specifically mentioned Unseen Stories most often. In particular, they mentioned that Unseen Stories evoked empathy and compassion in respondents or helped them feel a sense of connection to others, particularly the people whose stories were featured. For example, one said, "I'm just being more…more empathetic, really. It's not, not being so quick to judge people I think…[specifically] when I saw the thing where it like, you flip the picture, like there's a picture of someone [Unseen Stories] then you flipped it and it says what their real story was and that was pretty cool."

When asked what in *Middle Ground* triggered feelings of empathy, another respondent explained, "Just reading the stories. Looking at the faces of these people.

Looking at the faces, reading the stories. That's [Unseen Stories] the main installation that brings me these kind of feelings." Still another respondent said, "Reading the stories made me feel connected. I also see something that is part of me at the same time, so I read a story and I see me in that kind of story. So, I feel connected to the people that I read the story of."

The other exhibit that was strongly linked to impacts—particularly interacting with and fostering a sense of connection with others—was Hands-On Music. The physical linking of hands with strangers, whether Urban Alchemy facilitators or other visitors, was unusual and powerful. As one respondent explained, "the music one (Hands-On Music) spark[ed], like it made us feel a lot of joy…like we wouldn't have felt in any other way…. we all came together. We were interacting in a way that like we would never interact before." Another said, "It [Hands-On Music] was just really cool to feel like, when people join together, a lot of good things could happen. I felt like when you saw the result of activities, you never really thought about how awkward anything was."

It feels like the holding hands [Hands-On Music] is like a good introduction to, 'oh, let's do something together,' but it's overall just playful and delightful, versus those stations here with, like, the stories [Unseen Stories] and the, like, bias [My Side Bias] is much more [thought-provoking]…you take your time here.

Because in reading other people's stories I was thinking what I would do in that situation…what I would say about myself and what people, like, friends, would say of me. So that definitely got me thinking. And some of the other ones where it's like, 'don't do this' and, like, but I want *to do this (laugh). That definitely got me thinking.*

[I felt connection] when I was holding other people's hands. And when I was looking across from somebody in the mirror. And reading the notes over there where people were writing about themselves. You always see yourself in other people's stories, if you pay attention to their stories.

I really felt that with the hands-on music activity, that one, since we were all holding hands, you felt, like, the physical connection. But also seeing how we made the music start playing, it was also, like, kind of metaphorical as well.

Placemaking

Placemaking

Drawing on the placemaking movement and philosophy, one stated goal of *Middle Ground* was to create "positive pedestrian experiences at street-level in urban centers to increase social interaction and build community" (NSF project proposal, p. 3). This evaluation found evidence that the installation contributed to placemaking in the Civic Center.
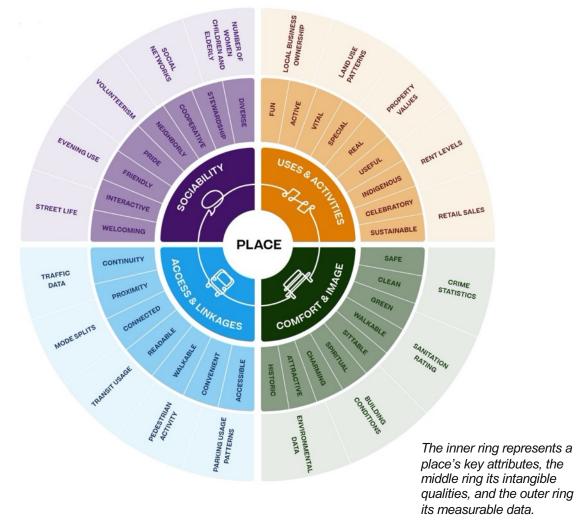
Although the data on which this evaluation drew did not specifically focus on placemaking, we were interested in finding out whether we could glean insights about the extent and ways in which *Middle Ground* contributed to creating a convivial space (Shaftoe, 2012) where people could come together in a public, open space to relax and interact.

The plaza where *Middle Ground* was installed has historically been a pass-through area in the Civic Center; individuals use it as a "corridor" to move from one point to another. One potential measure of placemaking, therefore, is whether more individuals stopped and stayed in the space after *Middle Ground* was installed. We analyzed video data to examine use of the space.

The Project for Public Spaces (PPS) developed a model that defines characteristics of placemaking spaces and groups them into four broad categories (see Figure 12). Using the PPS model as inspiration, we analyzed interview data to look for the presence of any of these elements of placemaking,

We first discuss video analysis results and then present interview findings.

Figure 12. "What Makes Places Great?" from the Project for Public Spaces

The inner ring represents a place's key attributes, the middle ring its intangible qualities, and the outer ring its measurable data.

Placemaking, cont'd.

The average pass-through rate for the space with *Middle Ground* present dropped to 75% compared with an average pass-through rate of 93% without *Middle Ground*. This difference was statistically significant.
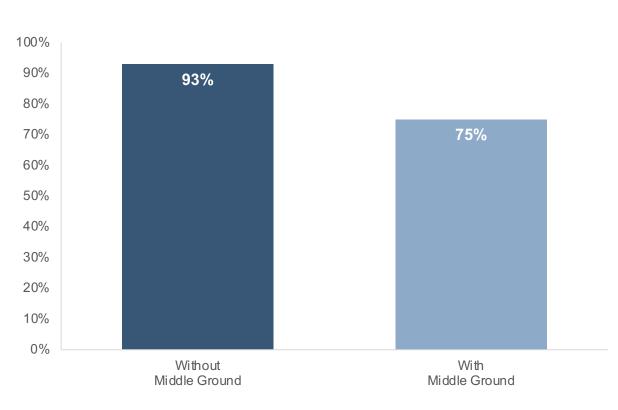
Figure 13. Average Pass-through Rate for the Space

We found that when *Middle Ground* was installed, fewer individuals used the space as a pass-through than did prior to the installation of the exhibit. This reduction in pass-through rate suggests that *Middle Ground* encouraged more people to stop in the plaza than they did without the installation present.

Chi-square test p = .001, the result is significant

N = 797 without *Middle Ground*
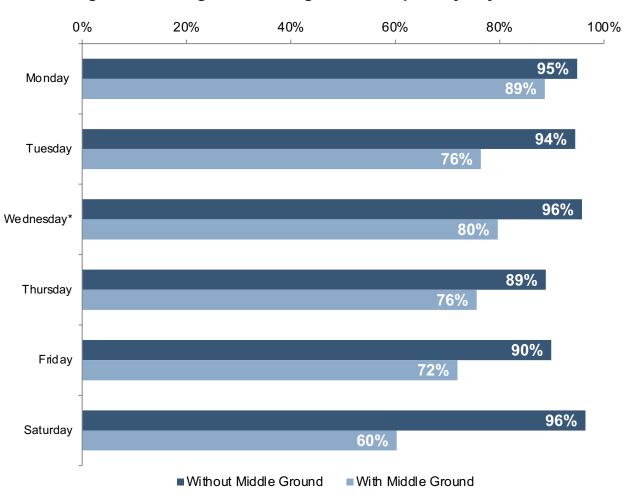N = 984 with *Middle Ground*

Placemaking, cont'd.

Figure 14. Average Pass-through Rate for Space by Day of Week

Monday: 95% (Without Middle Ground), 89% (With Middle Ground)
Tuesday: 94% (Without Middle Ground), 76% (With Middle Ground)
Wednesday*: 96% (Without Middle Ground), 80% (With Middle Ground)
Thursday: 89% (Without Middle Ground), 76% (With Middle Ground)
Friday: 90% (Without Middle Ground), 72% (With Middle Ground)
Saturday: 96% (Without Middle Ground), 60% (With Middle Ground)

■ Without Middle Ground ■ With Middle Ground

* Wednesday 11:00 a.m. data not included in this analysis.

N = 797 without Middle Ground
N = 984 with Middle Ground

When we compared pass-through data with and without *Middle Ground* from the same day of the week, we found Saturday had the greatest difference in pass-through rate, dropping to 60% from 96%. On the other hand, Monday had the smallest reduction in pass-through rate, falling slightly to 89% from 95%.

These differences may be due to that fact that many people may have fewer constraints on their time on Saturday, and, thus, could take the time to stop at *Middle Ground.*
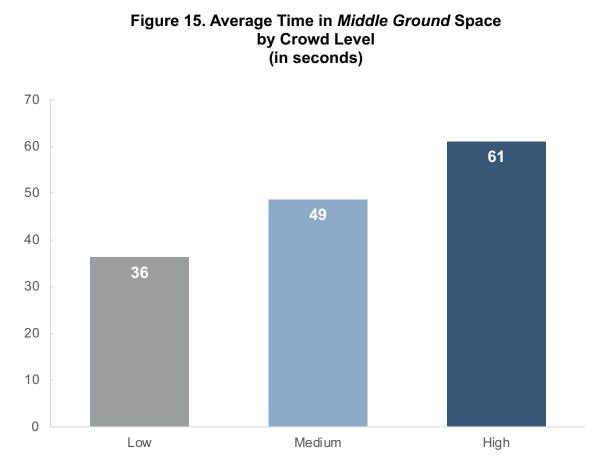
Placemaking, cont'd.

The average stay time for individuals who visited *Middle Ground* and stopped/attended to at least one exhibition component was 1:44 minutes. The average stay time for those who visited the plaza while *Middle Ground* was installed but did not stop/attend to any components was 28 seconds, compared to the average stay time of 21 seconds prior to installation.

Table 4. Tracking and Timing: Stay Times With and Without *Middle Ground*

	N	Mean (seconds)	Median (seconds)	Min (seconds)	Max (seconds)
Group 1: Visited *Middle Ground* and stopped/attended to at least one component	16	104 (1:44 min)	83 (1:23 min)	20	280 (4:40 min)
Group 2: Visited *Middle Ground* but were not observed stopping/attending to at least one component	65	28	19	10	417 (6:57 min)
Group 3: Visited the plaza area before *Middle Ground* was installed	61	21	20	9	43

For those individuals who stopped at one or more exhibition components, stay time data suggest solid engagement with the *Middle Ground* exhibition.

When not attending to the exhibition, however, stay times with and without *Middle Ground* are somewhat more comparable. It is interesting to note, however, that maximum stay times were higher when *Middle Ground* was present than when it was not.

Placemaking, cont'd.

Interestingly, when data were clustered by crowd level, the average time increased from a low of 36 seconds to a high of 61 seconds as the crowd level increased. This increase suggests that having more people in the space encouraged others to linger there longer. The differences, however, were not statistically significant.

Figure 15. Average Time in *Middle Ground* Space by Crowd Level (in seconds)

We also analyzed the video data by examining crowd level in the space to see what effect, if any, that crowd level had on how long people stayed in the plaza when *Middle Ground* was installed.

The data were classified into three categories: low (0–5 other people in space), medium (5–10) or high (10+) crowd levels.

While at first glance it appears crowd size increased stay time, these were not statistically significant differences. Median stay times were very similar, in fact, for low (20. 5 seconds), median (22 seconds) and high (23 seconds).

Chi-square p = .712, the result is not significant.

Low = 0–5 other people in space N=48
Med = 6–10 other people in space N=22
High = 11+ other people in space N=11

Placemaking, cont'd.

More than half (58%) of interviews showed at least one instance of visitors commenting on some element of placemaking when describing their experience in *Middle Ground*.

Based on the PPS model, we analyzed interview data to look for the presence of any of these elements of placemaking. Data were coded as having some general evidence of placemaking if visitors, describing their experiences, commented on any of the following: a) seeing the space as accessible, inviting, attractive, or comfortable; b) seeing the space spur social interactions with strangers; c) feeling a sense of welcome or belonging; or d) characterizing the space as active and/or fun.

It was interesting to note that even though interviews did not explicitly ask about placemaking, more than half of participants (58%) interviewed did mention some element of placemaking in describing why their experiences were generally very positive.

Our analysis also identified four specific aspects of *Middle Ground* that contributed to creating a convivial space.

Design: The design of the space, with its bright colors, seating, and interactive exhibits, signaled to participants that it was an active spot for people from all walks of life to gather and engage.

Social Dimension: The ways in which *Middle Ground* fostered social interaction among visitors was among the most-often mentioned elements of placemaking.

I think visually it just gets passers-by to see that there's so many different people just using the space and connecting with each other and talking to each other.

It looks appealing. It looks like people like to come and sit and chat and have some coffee and talk...all those different people from different places. That's nice.

You know I actually want to keep exploring more of the stuff but then I'm, like, conflicted because I want to go to the farmers' market and buy stuff 'cause I'm hungry (laughs)....it's fun, I want to come back here and do this now.

OK, say for instance there was an older person, generation-gap-wise, and another one was an immigrant. And he'll say, I've got something to do and I want to keep [unintelligible] and then we'll say just come in here for a moment and he may not want to be interested but after maybe awhile, maybe after two or three minutes, you get used to this place and you don't want to leave. You want to sit down, have coffee, and chat. So versatility is a good thing....These chairs, you get to sit. You know, you don't just-- two or three hundred people standing around. I like that. You get to sit down and I know you don't want people on your property (laughs). I want to sit down; if I had coffee I would have. Maybe tomorrow or maybe some other time I'll enjoy some coffee.

It just made me feel like the city became a bigger, closer community rather than all separated.

An image from Google Maps (street view) showing the emptiness of the plaza without *Middle Ground*. Many people sit on the concrete edging around the trees, but the plaza itself is lifeless, with nothing drawing them to interact with one another or linger.

People in *Middle Ground* during a book sale at the SF Public Library. *Middle Ground* was seen as an active gathering space.

Placemaking, cont'd.

While the majority of interactions were between visitors and facilitators, just over a quarter (27%) of interviewed visitors interacted with a stranger other than the facilitator. (Facilitators often served as a bridge in encouraging interactions between visitors.) Some visitors even expressed surprise at their own pro-social behavior (e.g., talking to a stranger, dancing in public) because, they said, it was not how they would normally behave.

Exhibits: The exhibits themselves, particularly Hands-on Music and Tell a Joke, also encouraged visitors to interact. The fact that exhibits focused on content that was 'about' people (i.e., social science) appeared to contribute to placemaking in that it spurred visitors to think about themselves and others.

UA Facilitators: Urban Alchemy facilitators were critical to *Middle Ground's* contribution to placemaking at the Civic Center. Among the most prevalent findings across all interviews was the significant contribution that facilitators made to visitors' positive experiences. Their specific philosophy and style of facilitation seemed key to the experience.

Having UA facilitators was a way making the space feel active and convivial while also making it feel comfortable and safe. At the most basic level, UA facilitators provided *Middle Ground* with "eyes on the street," defined in Jane Jacob's classic volume, "The Death and Life of Great American Cities" as

those whose presence and attentiveness to an area provide a sense of safety for residents and strangers in a natural way (as opposed to more formal security). Moreover, UA staff facilitated strangers interacting with one another in ways that felt comfortable to them, another aspect of public places necessary for a vibrant city. (Jacobs, 1961).

UA facilitators' manner of approaching strangers— from all walks of life—in *Middle Ground* with friendliness, openness, and respect was especially noted by interview respondents and was central to the positive experiences that visitors had in the space.

As explained by UA facilitators in interviews, the approach they brought to facilitating *Middle Ground* (and core to the UA philosophy as discussed on page 33) included:

- Possessing a calm demeanor that put visitors at ease;
- Exhibiting a positive attitude to others;
- Paying close attention to people's behaviors, body language, and tone to understand what they are thinking and feeling;
- Understanding of the challenges of the space (e.g., illegal activity, people experiencing mental illness people who were unhoused, etc.), and at the same time being welcoming to all; and
- Respecting at a deep level the different types of people using the space including the unhoused people living nearby.

I saw some people around me that were also enjoying the activities. so it made me more comfortable.

Oh my God. I just danced over there. And I don't dance outside. People see me on the street. (laughs) I just did it!...I need to be more outgoing. Feel more free to do things...It was fun.

Look, I got that family to stop. He was walking by and I said "Hey, Mr. Tall Guy with a Beard, go let your wife have a beard too. It's fun." And they're still here. And look, he just bought somebody a cup of coffee. And he [unintelligible] taught his kid something too. They were walking by when we were dancing.

Well, you know, it has a lot to do with the way you relate to the world and a lot of times we're all locked up in our own little world, doing our own thing, and we don't take the time to think beyond our immediate surroundings and our immediate universe. So when you come to an exhibit like this it makes you step out of that shell and expand your considerations about the rest of the world and how you think of other people and their experiences.

It was just really cool to feel, like, when people join together, a lot of good things could happen, so…I felt like when you saw the result of activities, you never really thought about how awkward anything was.

I think it just brings people from different walks of life into a space where nothing else outside of it matters and sort of brings everyone into one particular goal, without any other judgement.

I think the first impression is that, whoa, these people are very nice and engaging and it's trying to create a really nice community space.

Placemaking, cont'd.

Urban Alchemy and Its Philosophy
The Urban Alchemy organization (UA) trains previously incarcerated persons to bring "a sense of peace and respect to America's most chaotic urban areas that are struggling with the intersection of extreme poverty, addiction, mental illness, and hopelessness." UA says they use "the transformative power of love, passion, respect, and a sense of belonging to reshape the lives of society's most vulnerable members into society's most valued members." (https://www.urban-alchemy.us/)

Their trained facilitators employ pro-social interactions, including greeting people, serving as docents, and maintaining a positive appearance. In their positions, facilitators are also expected to negotiate negative behavior using their communication skills and keep areas clean and safe for children.

Urban Alchemy CEO Lena Miller explained their organization and work in this way:

> These urban places…have been really hurt by a mental illness, extreme poverty,… homelessness,…people living in SROs…and addiction….We come in, and we perform this alchemy….What we're doing is transforming the energy where we are. So, how do you transform it?...You have to love, respect, [and show] compassion. And how do [UA] people get this love, respect, and compassion in the face of such chaos? Because they've been there, because they've done this work on themselves…. they've already been out there in the life, got arrested, done decades in prison, had to deal with all the chaos in prison and come back to this place of love. Come back to this place of healing themselves, of understanding righteous principles….The average person can't do it. It's too heavy…The price you have to pay to get that kind of knowledge, wisdom, and experience is a price that people would actually pay any price not to have had that experience…you either die or you're bitter and fall apart or you come out the other end…holding onto the light the whole time….you come out this wholly transformed person, and you develop these super-powers. You can transform people in spaces around you.

A UA facilitator engaged three women at Hands-on Music. Facilitators' ability to set people at ease and model social interaction was key to *Middle Ground* being a positive experience.

> *I interacted with [the facilitator] and he introduced me to, I believe, a homeless gentleman with a rabbit and so I bought him a coffee (laughs).*
>
> *I hang out here a lot and I'm not used to that many people being so openly friendly…. everyone else went out of our way to try to include us in whatever was going on here and to be honest, we had no idea what it was, we thought it was just an art installation.*
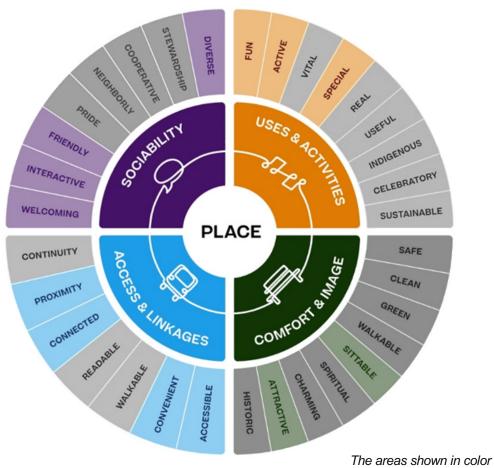>
> *When people make an effort to just be friendly, that kind of brings up everyone's energy level, you know. He [facilitator] was just amazing.*
>
> *I didn't really see anyone as different but everyone I did talk to was just really, really, really super-friendly. Like beyond friendly….is this always like this? Are people always this friendly here?*

Placemaking, cont'd.

When the placemaking aspects of *Middle Ground* mentioned by respondents are mapped to the PPS model, we can see that the qualities mentioned fall in all four quadrants of the model. Remember that the interviews were not designed to probe on placemaking aspects of the exhibition, so respondents are identifying these aspects of *Middle Ground* unprompted by the interviewers, which suggests they were strong, recognizable aspects of the experience. We suspect respondents would have identified other aspects of the model had there been specific, related probes.

The Sociability and Access & Linkages were the quadrants where *Middle Ground* has the most overlap with the model. The Sociability overlap reflects the social nature of the *Middle Ground* experience, particularly the UA facilitators who were especially effective at giving the area a friendly and welcoming feeling. The Access & Linkages overlap also reflects *Middle Ground's* location outside the SF Public Library, near transportation hubs and other areas of activity such as a playground and City Hall.

Figure 16. *Middle Ground* Data Mapped to PPS's "What Makes Places Great?"

The areas shown in color represent qualities for which we found evidence in the Middle Ground data.

Partstnership

Middle Ground Partnership & Placemaking

The collaboration between project partners was essential to achieving *Middle Ground*'s outcomes and goals. The evaluation found the partnership itself was successful, bringing together organizations and individuals who brought their expertise and skills to create a strong collaboration.

An initiative on the scale of *Middle Ground* requires a network of partners to vision, create, and implement the project. The Exploratorium partnered with the City of San Francisco, the SF Public Library, and Urban Alchemy for *Middle Ground*. Individuals from Community Housing Partnership and Adobe Services (now both at Streets Team) also played important roles as consultants. While partners were not the central focus of the evaluation, we were, nonetheless, interested in gleaning insights about their experiences, including elements of the collaboration that they perceived contributed to project outcomes.

Nature of the Collaboration
The partnership literature stresses that the quality of relationships are an essential factor in developing a successful partnership (Mattessich, et. al., 2001). While the Exploratorium had long-standing partnerships with the City, other relationships—such as those with the SF Public Library and Urban Alchemy—were newer. Despite differences in the duration of these relationships, all partners were very positive about the collaboration and felt the relationships created were strong and respectful. For example, the partners we interviewed said that they had felt comfortable voicing their opinions and

expressing their organization's needs and could have candid conversations when challenges arose in the project.

Positive relationships and communication in collaboration seemed essential for a project as complex as *Middle Ground*, which included working with city agencies and different types of organizations with varied missions. Because *Middle Ground* plans were emergent, partners were required to be flexible and tolerate some uncertainty. For example, plans had to be approved by multiple City departments and exhibition designs had to be revised based on specific requirements. Even the exact location of the installation was not certain at the beginning of the project.

The complexity of the project also required significant time from partners; many meetings and discussions were held before decisions could be made. Partners also had to be comfortable with shifting timelines and fluid deadlines, some of which were out of their control. In fact, the major challenge cited was the time requirement, particularly for partners serving as liaisons between different departments of the City. (In fact, this was something they felt they could not do in the future at that level of time commitment.) Ultimately, however, partners'

I love the relationship; it's very respectful. The folks I worked with were excited, they really understood our work and what it was we were doing and valued it. And so all the way around, it's just been a great experience.

We had a really great working relationship…we also had to be open to, like, things [that] might have changed [in my organization] since the last time we worked together and that was the case…We had very candid conversations….It was a deep collaboration.

I really appreciated just how really thoughtful the Exploratorium team [was]. They really cared about having it be very specific to the neighborhood. They really cared about how they employed the [facilitators]. They were very conscious and thoughtful, and that really came through. It was part of what made the project so good. I think it's a real strength of that team. They're very creative and they're very thoughtful.

One of the challenges of working at the Civic Center is just so how many agencies were involved. It's so multi-jurisdictional. But there's no design standard for an interactive art installation on the steps of the library. We're in uncharted territory.

The whole point of the initiative was, 'Hey, city agencies and community partners, let's all try to bring our best to this space and let's create a space where we can collaborate.' And so I'm grateful [everyone was] willing to work with such a multi-headed [thing] on the site.

flexibility and commitment to the process allowed for a successful project, one that fit the context of the space as well as the needs and strengths of the partners.

In any collaboration, it is important to fully use the expertise each partner brings so that all feel that they are authentically contributing to the project and that everyone benefits from their work together (Agger and Lofgren, 2008). Partners interviewed in this collaboration felt that their expertise was recognized and leveraged and that they were able to contribute to the project in many ways—from their deep understanding of local contexts and city processes, their skill sets and cultural competence, and their deep experience in inclusive practices that embrace serving all San Franciscans, including the most marginalized.

All recognized and appreciated the range of expertise brought by other partners, which all felt contributed to the success of the project. Partners also described various, concrete ways in which they felt their respective organizations benefitted from the project.

Beyond *Middle Ground*'s contribution to the City of San Francisco's Civic Center Initiative, the project also resulted in a new permitting process created for unique installations such as parklets and *Middle Ground*. The SF Public Library partner noted that the installation itself resulted in a positive, welcoming, and safe space that extended the "radical inclusion" they practice in the library to the space right outside their walls. Additionally, this partner noted that it provided a morale boost for staff who deal daily with the many challenges of working in a space like the Civic Center.

Urban Alchemy leadership noted a number of benefits, including that the project helped elevate its organization's and team's expertise, including through the research on facilitation led by the Exploratorium at *Middle Ground*, and provided opportunities for those team members to hone their interview skills for future employment.

Facilitators involved in the research felt that they were able to bring their skills to the project—in some cases modeling for Exploratorium researchers how to approach visitors in culturally competent, friendly ways appropriate to the context—and appreciated the relationships they built with museum team members.

Perspectives on Project Outcomes
One critical aspect of successful collaboration is a shared vision for the project (Mattessich, et. al., 2001, McCarthy & Herring, 2015). Interviews with partners in leadership positions found that they shared the clear project goal of creating a welcoming space. All partners noted that the Civic Center attracts a broad diversity of people that, while important, also brings challenges. One partner described the library space this way:

This project it didn't fit any of the mold. [We had had to figure out how to create] the permit process to streamline all these cool, wacky things from parklets to art to whatever. There's now a better way to get them permitted, and the Middle Ground was one of the first ones that actually helped make that happen.

I think it kind of blew [The Exploratorium's] mind, really, what it means to be inclusive…about being inclusive and open…people talk about open access, but it's hard to achieve, but it's happening here and we have all kinds of problems, but everyone, literally everyone, is welcome here.

Urban Alchemy does an amazing job—what they do. They are always very professional and their mission and philosophy is so central to creating a really positive thing. It's very aligned with what we do as well.

We bring love, respect, compassion. What we do is…we have a unique perspective and skill set that we brought to the table. Our staff contributed in so many ways.

I think it was great. I mean, I think what it did was it gave us [at Urban Alchemy] a language and a platform to really understand our work and to talk about our work.

it was a positive engagement for our staff because a lot of [the] time, I'm just looking for morale-boosting things for our staff because they see all manner of behavior in this building. And something like this was really engaging for them and they understood the mission of it, how appropriate it was for the library.

It was just an incredibly unique, site-specific thing that really served the community.

Middle Ground Partnership & Placemaking, cont'd.

"The broadest cross section of America goes through that [library] atrium… [this can include] someone who was unhoused, people who are going up to the archives to do research because they're writing a novel, someone who just smoked crack, kids going into the children's room [for] story time, people coming in to take out books in Spanish…This is what it means to be radically inclusive… [it does bring] all kinds of problems and challenges. We have overdoses, we've had suicides."

Partners were enthusiastic about what they had accomplished together and considered *Middle Ground* to have met its goals, particularly in terms of placemaking: creating a welcoming, vibrant space for all people, including some of the most marginalized, to come together in positive ways. All felt the project transformed the space and significantly impacted the community.

The only wish from a couple of the partners was that the project remained sustainable past the grant-funding period, which as one partner pointed out raises its own set of equity issues.

"[You have to commit to] a certain amount of, like, stake [to it]. You don't just leave... if you're dealing with equity issues…I wonder about that because…I mean, was there ever a sustainability plan that would say this would continue past the NSF funding? Was that ever bridged in conversations?"

Creating a Sense of Belonging
One notable aspect of this collaboration was the strong focus among partners to create vibrant space that fostered a sense of belonging for all. In other words, partners felt it would not have been enough—nor would it have been appropriate—for the installation to result in excluding anyone, particularly those from the most marginalized groups.

Given the success of the partnership and the project in meeting this goal, we examined the collaboration in order to identify the types of orientations partners brought to the project and how these were woven to achieve placemaking that centered inclusion.

Although each partner had many areas of expertise—for example, the Exploratorium brought exhibition design and fabrication expertise while Urban Alchemy brought de-escalation skill sets—our goal was not to document the broad range of experience of each partner. Instead, we tried to identify specific elements that coalesced to contributed to achieving a sense of inclusion at *Middle Ground*. We identified four unique elements (see Figure 17).

The first element we identified was deep knowledge of the community context, which was central to developing a project responsive to place. The partners with most of this knowledge were, Urban Alchemy, the SF Public Library and the City of San Francisco. They all understood the history of

Figure 17. Key Elements Toward Inclusive Placemaking in *Middle Ground*

These four elements work in concert. At the center is the relationship between partners who bring their practices and skill sets to support placemaking efforts which center creating inclusive spaces.

It was very intellectual [at first]. That was definitely their safe space [for the Exploratorium]….It's an easy thing for intellectuals to think, like, "Oh, okay, we have to dumb it down." Right? I think our work was having to help them kind of check themselves [on those assumptions and approaches] and also check in in an emotional way that allowed them to come down to the surface a little bit more to be able to engage in an authentic way.

the space, its current uses, and the wide range of people who used it. This knowledge was important to center community priorities and needs and ensure that *Middle Ground* served as an authentic means of placemaking.

The second key element was an inclusion-centered orientation that deeply focused on respecting and welcoming even the most marginalized individuals. Partners from the SF Public Library and Urban Alchemy centered and embodied their work. The library partner, as noted earlier in this report, described its "radical inclusion," where on a daily basis it welcomed everyone—unhoused people, tourists, families, seniors, etc. Urban Alchemy also deeply embraced this orientation in its philosophy as an organization working with people who are routinely excluded from civic life.

The third essential element was a focus on cultural competence. While all partners were aware of the importance of this dimension, partners who brought this lens to support the partnership included Urban Alchemy, staff from the Downtown Streets team, who conducted cultural competence training with some Exploratorium staff, and the SF Public Library. Partners with this lens helped support and build cultural competence capacity in the partnership.

Cultural competence was an area where some community partners noted they most had to support Exploratorium staff.

One interviewee, for example, described how UA's approach to interacting with the public helped the Exploratorium staff reconsider ideas about what were appropriate in the context of the Civic Center. In essence facilitators were raising issues of cultural competence and validity in research.

"[The Exploratorium staff] were kind of like robots…They were kind of timid at first, but then they got into the groove, they opened up…. Whoever's interviewing for the facilitators, if [people] don't see a personality there, that's not going to work. Seriously. I know we let our personality pop out, then [that helped] everybody's personality pop out. And it was an easier process. Way easier than feeling like you [were] ambushing somebody [trying to interview them]. [Otherwise] they see you and they want to go the opposite way."

The social science frame was also an important element in placemaking that centered inclusion at the level found in *Middle Ground*. This tapped into Exploratorium's expertise in developing STEM-focused exhibits. That *Middle Ground* content was about social science concepts—quick and slow thinking, bias stereotypes, power and compliance, and social mobility—aligned beautifully with the goal of inclusion. Moreover, the UA facilitators—both with skills they brought to the project and with training by Exploratorium staff—supported visitors in reflecting on these ideas.

There's a lot of unhoused people who are just forgotten people and it's just the worst thing. They suddenly felt comfortable out there.

It transforms that patio in the library from a space that many people avoided to a space that people wanted to hang out [in], and that was a huge deal. It was partly the project but it was the way the project embedded stewardship and worked in tandem with Urban Alchemy and that's what did it.

The people that we were getting [in Middle Ground]…you would never see at the Exploratorium. They're the people that live around here…[in] the little areas in front of the doors…so the exhibit is their front lawn.

The Exploratorium team] had a chance to see something within themselves that they knew existed, but they never acted on...Because on your daily walk, you walk right by people, like they don't exist. But now you have to talk to these people. They're people….The Middle Ground was the middle ground….Over here, we're all one people. And I think that's what they got to experience … up close and personal and also how to get at compassion. To feel that. Just being a human being.

The people that we see visiting this are not the people that you see visiting the Exploratorium ….they're just as engaged as somebody that would be at the Exploratorium, but they don't have pretty much anything to [do with the] Exploratorium. So to have an exhibit like this and its location like this, it's impacted a lot of peoples' lives.

To have something so beautifully and thoughtfully designed for the space, a really challenging space with a lot of diverse needs, that's what it accomplished.

Conclusions

Conclusions

Based on data analyzed to date, summative evaluation indicates that *Middle Ground* met its public audience and placemaking goals.

Overall Experience & Welcome
Middle Ground positively engaged respondents, with the majority (80%) rating their experience "very good." Moreover, 100% of respondents interviewed reported feeling welcome in the space.

Metacognition & Social Science Concepts
Summative evaluation found solid evidence that the *Middle Ground* installation fostered metacognition and, as a result, positively impacted visitors, including by prompting empathy, connection, and respect.

Over 70% of respondents reported that they learned something about themselves or others during their *Middle Ground* experience. Likewise, more than 70% reported feeling that their *Middle Ground* experience made them think about how they act with other people. Furthermore, for both measures of metacognition, over 80% of respondents said that their metacognition took place during the experience.

While qualitative data showed less robustness than self-reported data, our analysis of interview data still revealed a range of ways in which the experience fostered metacognition in visitors. Most commonly, respondents: a) made observations of their own behaviors, beliefs, or values; b) reflected on their biases, judgements, and stereotypes; and c) engaged in perspective-taking. Importantly,

we found that 80% of interviews showed evidence of at least one instance of metacognitive thinking.

Based on the qualitative data, the exhibit units that respondents mentioned most often when describing instances of metacognition were Unseen Stories, My Side Bias, and the Compliance Video. These units correspond with the social science concepts most prevalent in the qualitative data: Quick and slow thinking; perspective-taking; stereotypes; and power and compliance.

Social Science Concepts
There was a strong relationship between the social science concepts that respondents engaged with and the exhibit units that respondents used. We found evidence that in all but two components (Pay it Forward Café and Thought Bubbles) respondents recognized the key social science concepts for that exhibit unit.

Impact
Evaluation also found strong evidence of affective impact as a result of successfully prompting metacognitive thinking. Over 80% of respondents reported that their *Middle Ground* experience brought up feelings of respect, connection with, and compassion for people who were different from them. This self-reported data was triangulated through coded qualitative data that showed evidence of at least one instance of affective impact in 89% of interviews.

Placemaking
This evaluation also found evidence that *Middle Ground* contributed to placemaking in the Civic Center.

Video tracking data show that *Middle Ground* encouraged more people to stop in the plaza than without the installation present. More than half of the interviews contained at least one instance of respondents commenting on an element of placemaking during their experience in *Middle Ground*.

Evaluation identified four specific aspects of the installation that contributed to creating a convivial public space: the design of the space, the social interactions fostered by *Middle Ground*, the exhibits themselves, and the UA facilitators.

The UA facilitators, in particular, were critical to the experience and made significant contributions to visitors' engagement with exhibit concepts and overall positive experiences.

Mapping the placemaking aspects of *Middle Ground* mentioned by respondents (and unprompted by interviewers) to PPS's "What Makes Places Great" model shows that these placemaking aspects were perceptible to visitors and touched on all four quadrants of the model. Aspects of the Sociability quadrant were particularly prevalent in interviews.

Conclusions, cont'd.

Partnership
The evaluation found that the *Middle Ground* partnership was successful and was essential to meeting project goals. An installation this complex, involving collaboration among many stakeholders, requires a clear vision. Data indicated that the unique expertise and skill sets partners brought to the table were not only critical to the success of *Middle Ground* but also worked in concert to center inclusion in developing an installation that was welcoming to all. This evaluation also identified four elements within the collaboration that supported inclusive practice.

The collaboration was not without challenges, of course, most of which stemmed from the complexity of the project. Implementing *Middle Ground* required ensuring that City regulations were met and permits secured and that engagement and buy-in were achieved across a broad group of stakeholders. Flexibility, tolerance of ambiguity, and the continued commitment to the project vision were required.

Although data for summative evaluation were limited by the inability to collect additional observation and interview data due to the pandemic, we nonetheless found strong evidence that *Middle Ground* met its goals, developed a strong collaboration, and is a promising model for engaging a broad and diverse public.

The one issue that we would be remiss to not point out is the lack of sustainability plans for projects such as *Middle Ground*. Part of true equity-centered work requires making an unwavering commitment to the communities with which organizations seek to be in relationship with and having a continued presence. While this issue is not unique to *Middle Ground*, it is important to reflect on the systemic issues at play.

References

References

Agger, A., & Löfgren, K., (2008). Democratic Assessment of Collaborative Planning Processes. Planning Theory. 7. 145-164.

Bennett, M. J. (2004). Becoming interculturally competent. In J.S. Wurzel (Ed.) *Toward multiculturalism: A reader in multicultural education*. Newton, MA: Intercultural Resource Corporation.

Chick, N. (n.d.). *Metacognition*: *Thinking about one's thinking*. Vanderbilt University Center for Teaching. shorturl.at/xCPUZ

Fereday, J. & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1).

Garibay, C. & Teasdale, R. (2019). Equity and evaluation in informal STEM education. In A. C. Fu, A. Kannan, and R. J. Shavelson (Eds.), Evaluating outcomes of informal science, technology, engineering, and mathematics (STEM) education. *New Directions for Evaluation*.

Hood, S., Hopson, R. K., & Kirkhart, K. E. (2015). *Culturally responsive evaluation: Theory, practice, and future implications*. In K. E. Newcomer, H. P. Hatry, & J. S. Wholey (Eds.), Handbook of practical program evaluation (4th ed., pp. 281–317). Hoboken, NJ: Jossey-Bass.

Jacobs, J. (1961). *The death and life of great American cities.* New York: Random House.

Mattessich, P. W., Murray-Close, M., and Monsey, B. R. (2001). Collaboration: What makes it work, a review of research literature on factors influencing successful collaboration (2nd edition). St. Paul, MN: Wilder Publishing.

McCarthy, C. and Herring, B. (2015). Collaboration guide for museums working with community youth-serving organizations. Retrieved from http://nisenet.org/collaboration-guide

Patton, M. Q. (2015). *Qualitative research and evaluation methods*. Thousand Oaks, CA: Sage Publications.

Project for Public Spaces (n.d.). *Placemaking*. Retrieved January 29, 2020. https://uploads-ssl.webflow.com/5810e16fbe876cec6bcbd86e/5b71f88ec6f4726edfe3857d_2018%20placemaking%20booklet.pdf

Shaftoe, H., & International Institute for Environment and Development. (2008). *Convivial urban spaces: Creating effective public places*. London: Earthscan, in association with the International Institute for Environment and Development.

Strauss, A. & Corbin, J. (1990). *Basics of qualitative research.* Newbury Park, CA: Sage.

Veenman, M., Van Hout-Wolters, B., & Afflerbach, P. (2006). *Metacognition and learning: Conceptual and methodological considerations.* Metacognition and Learning. 1. 3-14.
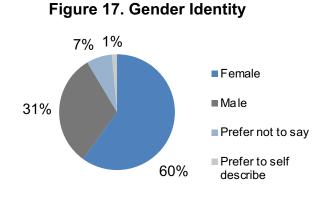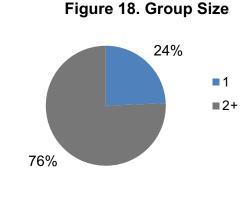
Appendix

Appendix: Respondent Profile

Note that in some cases these percentages do not add up to 100% due to rounding.

Table 5. The rung that most represents where respondents think they stand at this time in their life compared to others in the United States

Level of Rung	% of Respondents (N = 69, Skipped = 5)
1	1%
2	3%
3	4%
4	10%
5	13%
6	23%
7	16%
8	17%
9	9%
10	3%

Table 6. Age

Age Range	% of Respondents (N = 66, Skipped = 8)
18–29	35%
30–39	21%
40–49	9%
50–59	12%
60–69	17%
70+	5%
Prefer not to say	2%

Figure 17. Gender Identity

7% 1%
31%
60%

- Female
- Male
- Prefer not to say
- Prefer to self describe

N = 70; Skipped = 4

Figure 18. Group Size

24%
76%

- 1
- 2+

N = 74
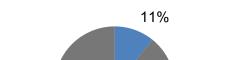
Figure 19. Interview Language

4% 1%
95%

- Chinese
- English
- Spanish

N = 74

Figure 20. Children in Group?

11%
89%

- Yes
- No

N = 74