Creating Middle Ground: Transforming Urban Outdoor Spaces with Social Science Exhibits and Facilitation about Biases

Pull up a chair...
...let’s talk.

Middle Ground
Reconsidering ourselves and others

ASTC
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Session Overview

- A model for community engagement through STEM exhibitions
- Context of Civic Center
- Exhibition and Facilitation
- Research Study on Facilitation and Results
- Discussion
- Q&A
Middle Ground
Middle Ground

Understanding an era of division: Social science of bias, stereotyping, connection (humor)

Goal: Promote interactions with strangers, empathy for others, and metacognitive self-reflection about social science phenomena and the forces that shape those phenomena
Context: Civic Center
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Context: Civic Center
Urban Alchemy
Unseen Stories exhibit

Because I … am a therapist.

People think …
I don’t have emotional problems.

But actually …
Oh, I do! 😊
Making It in America

In 10 years, how many do you think will move into the top 20% of income?
Making it in America

Most people think it's much easier to move up than it actually is.

People who call themselves upper class are especially likely to get it wrong.

Does knowing the facts change how you think about people and opportunity in our society?
Pay It Forward Café

BUY YOURSELF A CUP:
COFFEE $4.00

BUY ONE FOR SOMEONE ELSE:
COFFEE $2.00

HOW IT WORKS: Pay for an extra drink and we will add a token to the board below. Someone can have it later. Because we all need a little help sometimes... THANK YOU!

TAKE ONE TOKEN FOR A FREE CUP:
Hands-on Music exhibit
Facilitate prolonged engagement
Facilitate deeper reflection
Research Question

What’s the effect of Urban Alchemy facilitation?

- Overall experience rating
- Motivation for exhibit use
- Feeling compassion, connection, respect for “different” others
- Self-reflection about biases and interactions
Methods

- Quasi-Experimental design
Middle Ground plan - Facilitated condition

√ Keep Safe
√ Keep clean
√ Invite people in
√ Interact/play/facilitate

81 Interviews in Facilitated Condition
Middle Ground plan - Non-facilitated condition

√ Keep Safe
√ Keep clean
X Don’t invite
X Don’t facilitate

88 Interviews in Non-facilitated Condition
Methods

- Quasi-Experimental design
- Community-based research approach
Results: Overall Experience

Visitors who were facilitated:

- Rated their **overall experience** more positively, $U = 2768$, $p < .01$, $r = .21$. 
Results: Overall Experience

Interpersonal factor: $\chi^2 (1, N = 160) = 21.5$, $p < .001$, $\phi = .37$. 
“Well the person that introduced me to it, he's very open about his life. And that opened me up and that allowed me to be very open as well. So I enjoyed it.”
Results: Motivation

Visitors who were facilitated:

- Rated their **overall experience** more positively
- Were more likely to mention interpersonal reasons as their **motivation** for engagement
Results: Motivation to Stop

Interpersonal factor: $\chi^2 (1, N = 160) = 18$, $p < .001$, $phi = .34$. 
“I: Who or what motivated you to first stop and use the exhibition?

P: I was just walking by and I think Robert stopped me and asked me if I wanted to hear a joke, and I was like sure.”
Results: Motivation to Continue

Interpersonal factor: $\chi^2 (1, N = 160) = 43.6$, $p < .001$, $\phi = .55$
Overheard: Motivation to Continue

“I: I think you used several exhibits. Who or what motivated you to use multiple exhibits?

P: F1 did. I had tried the holding hand music one (Hands On Music) by myself first, but realized I needed someone else, and he offered, and then he showed me two or three of the others.”
Results: Affective Experience

Visitors who were facilitated:

- Rated their *overall experience* more positively
- Were more likely to mention interpersonal reasons as their *motivation* for engagement
- Felt more *connected* to different others
Results: Affective Experience

Feelings Toward Different Others

- Discomfor: Facilitated = 1.3, Non-facilitated = 1.2
- Respect: Facilitated = 1.1, Non-facilitated = 0.8
- Connection: Facilitated = 1.3, Non-facilitated = 1.1
- Compassion: Facilitated = 1.3, Non-facilitated = 1.1

Connection: $U = 2320.5, p < .05, r = .18$. 
"Again, so that curiosity and that sort of desire to learn about someone, you know. And I hope that people just generally look. I think [Facilitator] was saying - if this wasn't here would he and I have met - and that sort of brings up this whole idea of how we're all just sort of walking by each other, you know? Whereas we could just stop by and even just a little simple hello or wave, you know, that's a form of connection."
Results: Metacognition

Visitors who were facilitated:

- Rated their **overall experience** more positively
- Were more likely to mention interpersonal reasons as their **motivation** for engagement
- Felt more **connected** to different others
- Were more likely to engage in **metacognition about bias** during their experience in the exhibition
Results: Metacognition

Presence of metacognition: $\chi^2 (1, N = 151) = 3.98$, $p < .05$, phi = .16.
Results: Metacognition

Metacognition About How One Acts With Others

Timing of metacognition: $\chi^2 (1, N = 106) = 5.25$, $p < .05$, phi = .22.
Overheard: Metacognition

“I think a key element to all of that was how important listening to others is. So hopefully [it] encourages non-judgmental, where you're listening and you're not pre-deciding whether they are. And I think having him [F] as one of the volunteers here is very interesting . . . a real local guy and he's living here in San Francisco….And just to see we're all people.”
Results Summary

Visitors who were facilitated:

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- Were more likely to mention interpersonal reasons as their **motivation** for engagement
- Felt more **connected** to different others
- Were more likely to engage in **metacognition about bias** during their experience in the exhibition
Facilitation Implications

- Creates interpersonal connections
- Reduces barriers for engagement
- Strengthens exhibit interaction and content learning
- Enhances place-making
Discussion: Challenges

• Protect the physical and emotional safety of visitors and staff
• Considerations for designing for outdoor exhibits
  – Glare
  – Weather
• Vandalism
• Ownership of the space
  – People literally live in this space
  – When do we open and close, so they can comfortably reclaim it as their spot for sleeping?
  – Did we reduce the quality of their lives?
Discussion: Takeaways

• Radical accessibility model: Free and placed in high traffic, highly diverse area
  – breaks down barriers to informal science learning
  – allows science centers to create more equitable learning opportunities for excluded communities

• Place-making: Social science exhibits in urban spaces
  – content more salient, prominent, relatable
  – space more welcoming

• Partnering with CBOs: greater cultural relevance and inclusivity
This exhibition is temporarily closed due to COVID-19.

Larkin Street Entrance of the San Francisco Main Library, 100 Larkin St, San Francisco, CA 94102

From August 2019 through June 2020, the Exploratorium invites you to pull up a chair and dive into Middle Ground, an exploration into human social interactions in the middle of San Francisco's vibrant Civic Center.
Questions?

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