



Who am I? Role and Narrative in 360 Video

Lisa Castaneda, Co-Founder & CEO, foundry10
Mike Scanlon, Researcher, foundry10



Who we are



Lisa Castaneda, M. Ed.
Co-founder & CEO



Mike Scanlon, M.A.
Researcher





foundry10

- We are a philanthropic educational research organization
- We run programs for kids/teachers, do applied and experimental studies
- Our goal is to expand the ways in which people think about learning

ROBOTICS
DRAMATIC ARTS
DANCE & MOVEMENT
AUTOMOTIVE TECH
VIRTUAL REALITY
AUDIO PRODUCTION
ARTISTIC DESIGN
GAMES & LEARNING
STUDENT-LED INTERNSHIPS

redefine learning





What we will discuss today

Design of the study

Contextual Clues

Presence

Engagement

Take-aways





What impact, if any, does hardware type have on user perception of role in 360 video?





The content we selected

Invasion!



Henry

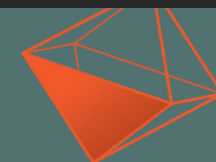




The Study

- Recruited 65 Adult Participants with no knowledge of the 360 content
- Two conditions: Smartphone (Samsung Galaxy 5) or flat-screen & Oculus Rift
- Pre-survey and scaled measures: baseline empathy, personality
- Post-content: interview & survey questions regarding role, empathy, presence and narrative engagement
- Recorded footage of immersed participants

Today, we are going to focus on the perception of role!





CONTEXTUAL CLUES





Types of Contextual Clues Participants Utilized

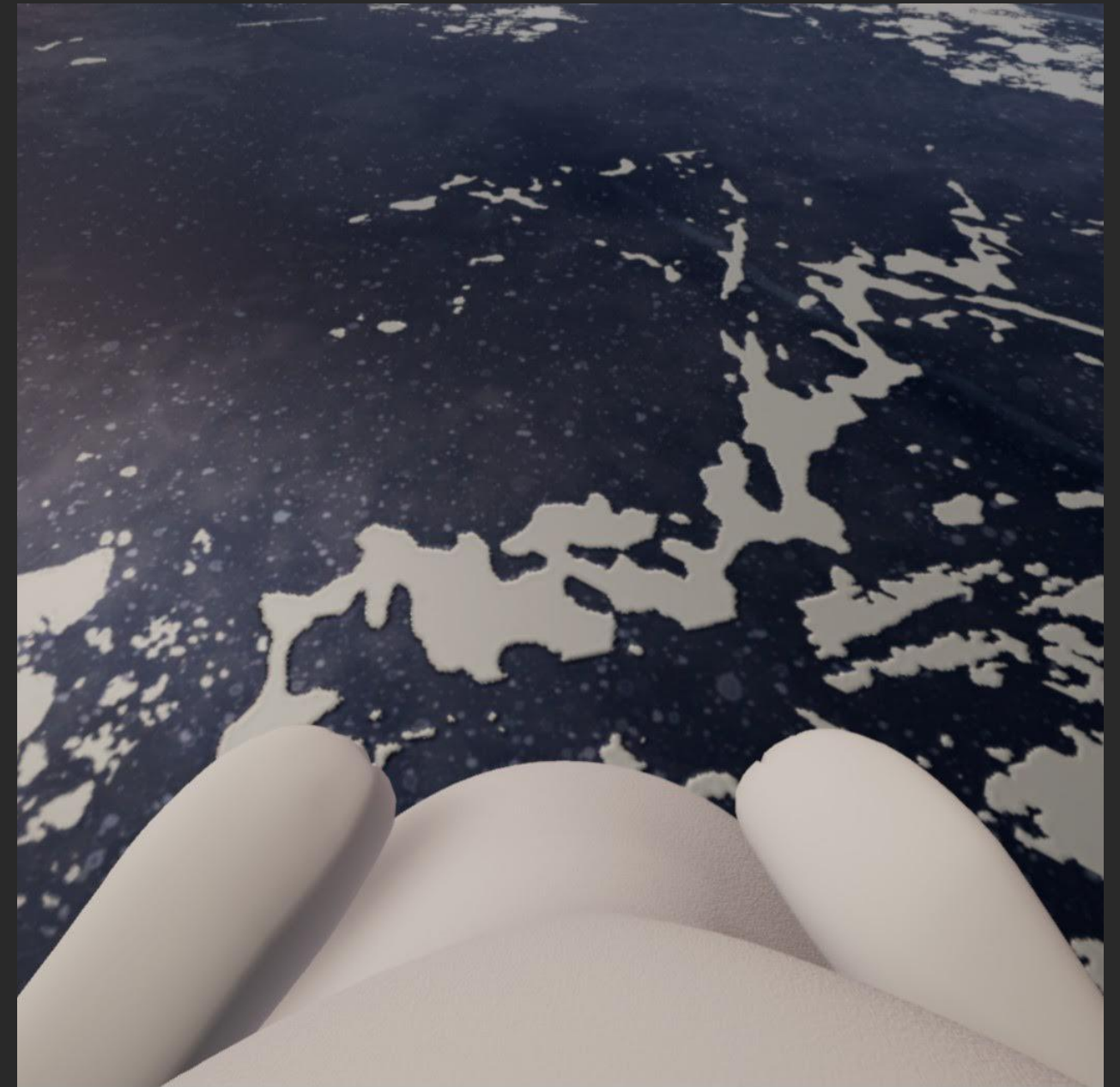
- Body
- Interaction with other characters
- Relative size
- Location within environment
- Connections to other stories



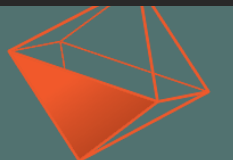


Embodiment

- Depending on participants' understanding of context, their interpretation of "self" changed.
- Advanced Headset
 - Bunny vs. snowman
 - Bunny vs. woodland creature
 - Bunny vs. some other character
- Smartphone
 - Bystander



Bunny body in Invasion!





Invasion!

Headset

"I'm another bunny, because I had a body."

"At first I thought I was a snowman, but then I realized I'm probably just another rabbit, like the other guy, cause I got the white paws. And the rabbit is acting like I'm another rabbit, more or less, not like a stranger."

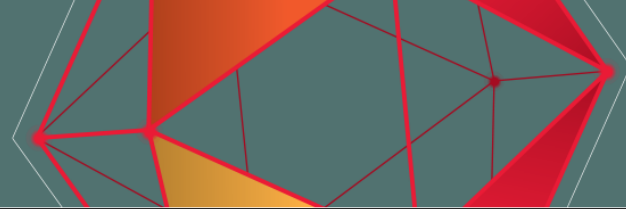


Smartphone

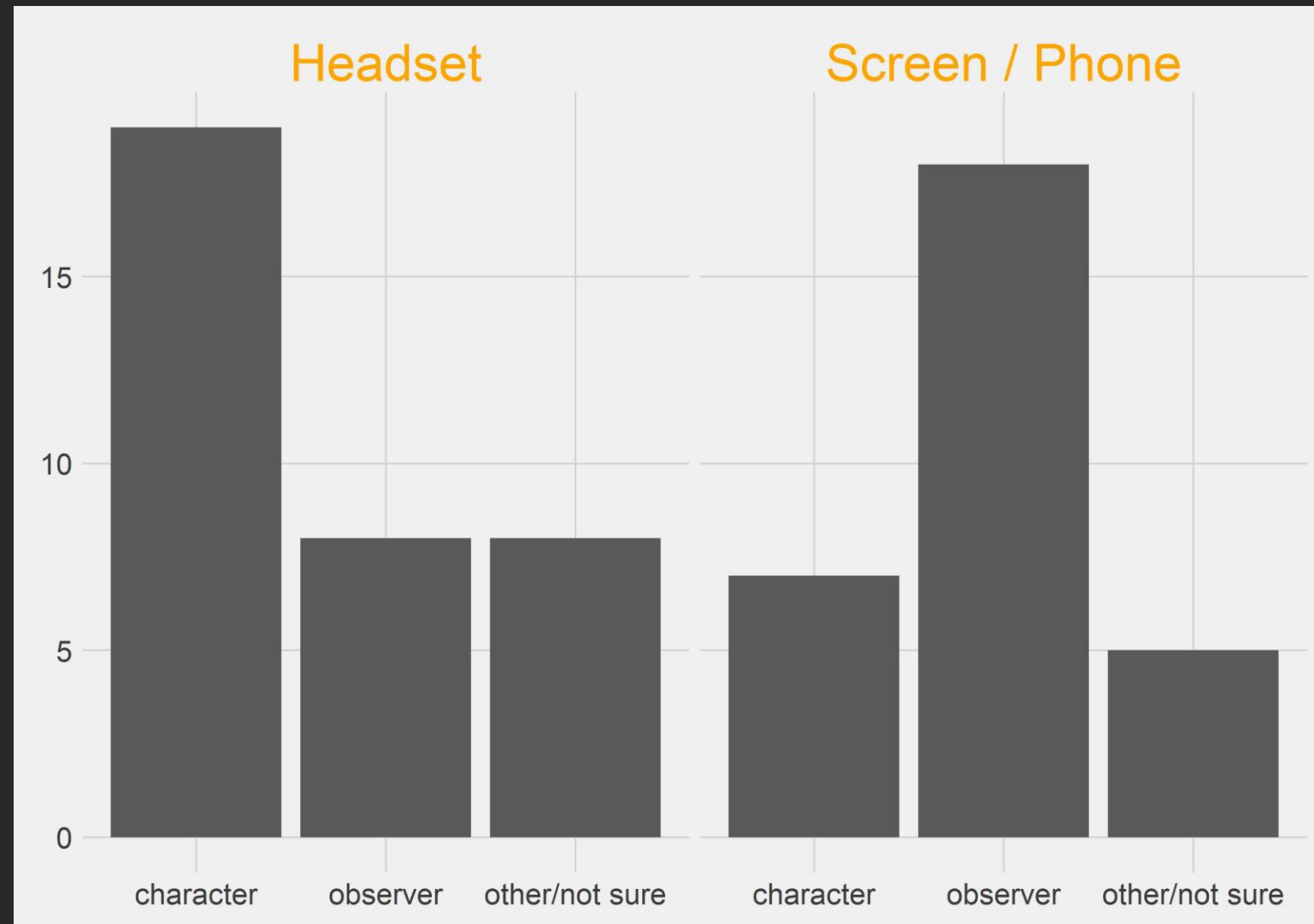
"That's a good question, I didn't even think about it... I don't think I'd be a woodland creature because the hawk would come to get me. I don't know what I was."

"Well, I thought I was just an observer, I didn't think I was any particular character. I can see how it could be designed towards maybe being from the perspective of a bunny, but yeah, for me, I thought I was a spectator."





Without exposition of their role as a bunny character beforehand in *Invasion!*





Henry

Headset

“I felt like I was just an observer. I felt like he made eye contact with me a couple of times, but I wasn’t really involved in the story.”

“This was different for me, because when I looked down this time, I couldn’t see my legs. I could see that I wasn’t in anything...that took me out of the feeling I was in the room for whatever reason cause I couldn’t see anything that was me.”

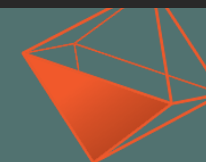


Screen

“I was a weird observer. A creepy observer. Because I was looking in his home. Yeah, I was an after-the-fact person receiving a narration.”

“Henry I guess. I knew I was Henry because of the sounds. I was in Henry’s house and everything.”

“I guess I don’t know who I was really. If I was a balloon animal, I would’ve been escorted out the door. Maybe I was a fly on the wall.”





Lack of Embodiment

- Participants attempted to come up with rational explanations for their role when it wasn't clearly defined by the presence of a “body” in the experience.

“If he is looking right at me, aren't I at the party? Wouldn't he have a friend in me?”

“I'm thinking, was I supposed to jump in or something? So, I don't know who I was, maybe I was a ghost.”





If I'm not sure who I am, I can figure it out

Clues participants used:

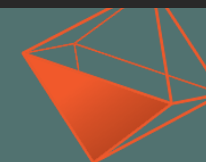
- Relative size
- Physical placement in virtual space
- Perceived interactions

Thoughts they shared:

“Well, I *seemed* to be the same size as the bunny”

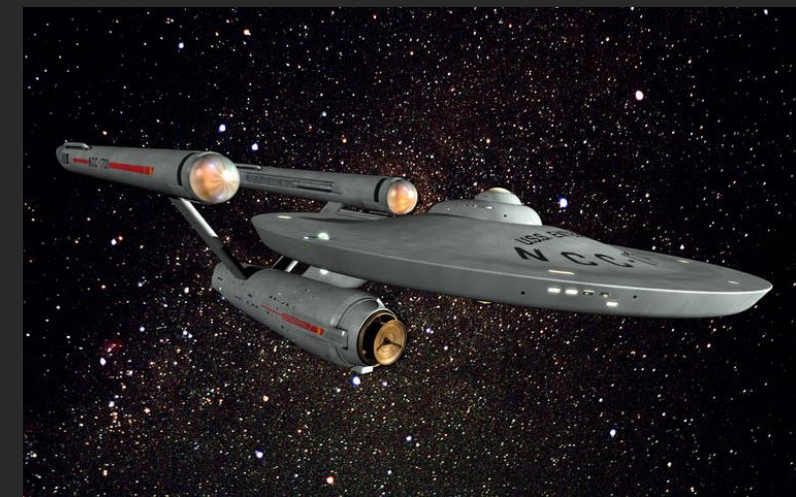
“The hawk didn't seem interested in ME so therefore...”

“Bunny did come up to me, so I must not be human...”





“This story is not like other stories I know”





Take-aways

- How can contextual information help support viewer understanding within the narrative construct? How do we know the viewer actually captured the essence of what we are trying to show?
- How is a story similar to and different from other stories the viewer may know?





Presence



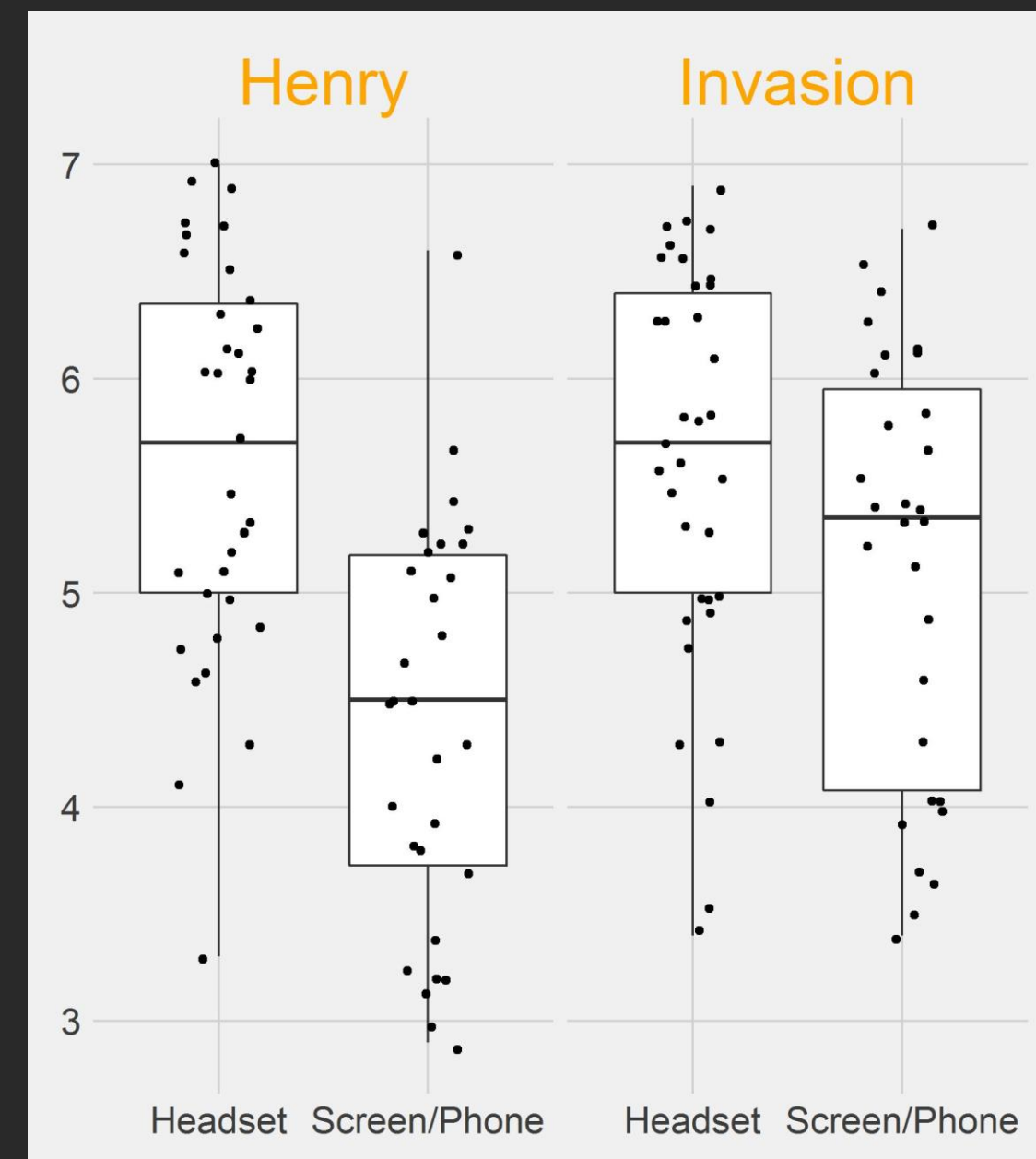


Participants felt high levels of presence in both films, particularly for the headset versions

- No surprise here...

“I liked that it felt like you were actually there. That was pretty cool.”

“It was more intense than watching TV because you felt like you were in the room with them.”





...but feeling present isn't always a good thing.

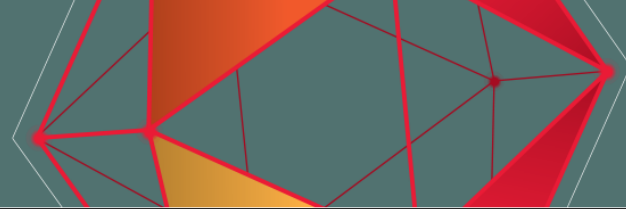
- Too close for comfort (Proxemics)

“I mean I don't know if it's just because I am new to VR but just how close everything is, I have to literally do that [moves back in seat]”

“I felt it was too close. I felt I wanted to zoom out a little bit. Like I was too, like I wanted to get a perspective on the scene, and there was no way I could get a perspective. It was forced, the distance was forced upon me.”







Am I supposed to be here?

- Some participants felt “weird”, “creepy”, or “uncomfortable”
- Viewers felt present but knew they really couldn’t be there or the story wouldn’t make sense





Take-aways

- Awareness of themselves as “viewers who were there” altered the experience for participants.

Does the feeling of presence enhance or take away from the story that's being told?

How do we create experiences where the viewer is close, but not too close? Are there opportunities to give the viewer some control over their perspective (changing vantage point, slowing things down or pausing)?





Engagement

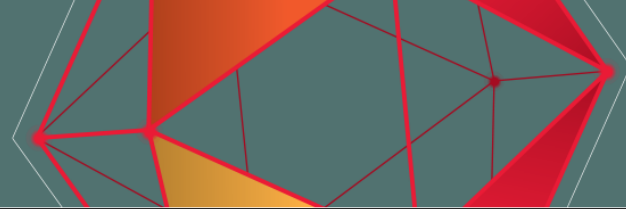




A powerful story is really important

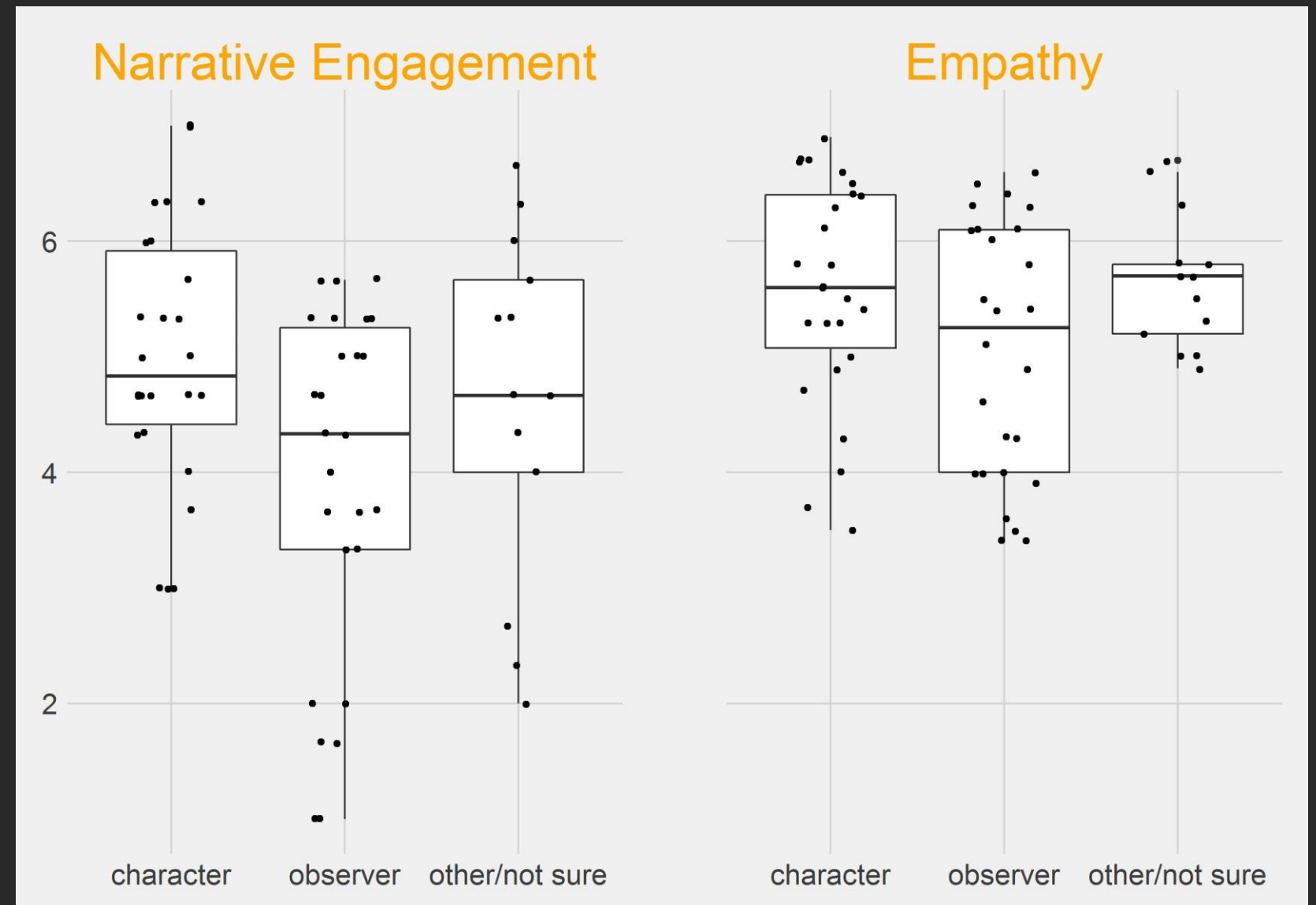
- People who watched *Henry* on a 2D screen were just as engaged as viewers of the high-immersion headset version (using a standard scale of narrative engagement)
- Similarly, people who watched the phone version of *Invasion!* Were just as engaged with the narrative as participants who watched the headset version





It *matters* who you are in the experience

- Folks who saw themselves as characters in *Invasion!* were more engaged with narrative and reported more empathy towards other characters in the experience.





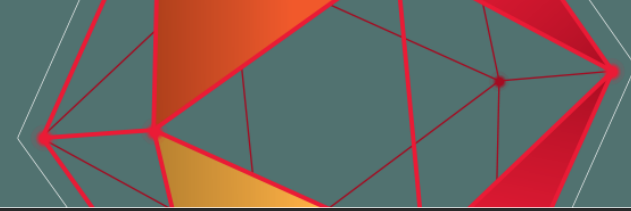
Implications of these findings

We can start to answer the question, “What drives narrative engagement?”

In a good story, engagement seems to have less to do with how advanced the technology is.

Sense of “presence” impacted a participant’s narrative engagement, but a clear perception of one’s own role in the experience also drove engagement.





Additionally....

Plausibility is a major factor which makes or breaks engagement

- The Plausibility Illusion – the extent to which the system can produce events that directly relate to the user, and the scenario being depicted meets the user's expectations of credibility. (Mel Slater, 2009)
- Even if something is “fantastical” in nature, users can still suspend disbelief and find the situation credible if it makes sense





Conceptual leaps and the connection to role

- Both pieces of content asked the user to take some big leaps within the confines of a plausible storyline...and in most cases, they made the jump.
- At times, when participants had trouble making sense of their role, they struggled to make the leap.





Take-aways

- What are the conceptual leaps we are asking viewers to take, and, given their role in the story, will those leaps inherently make sense and keep users engaged?
- What other narrative clues will help viewers more easily adjust to leaps in the story?





Final thoughts

When designing 360 video content and virtual experiences it is important for us to consider the range of devices that could be utilized.

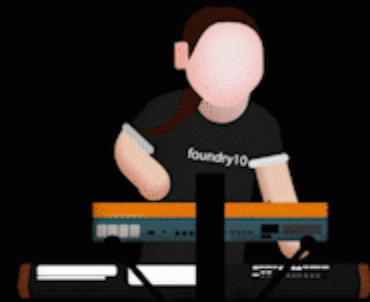
Users may perceive their role differently, depending on the type of hardware they use to view content, and that may change their expectations for the narrative experience.

By considering contextual clues, embodiment, setting and plausibility from various perspectives we can more effectively help viewers engage successfully with content.





Questions and Contacts



LISA CASTANEDA

lisa@foundry10.org



MIKE SCANLON

mike@foundry10.org

Study details and statistics can be found in our upcoming CHI paper:

Bindman, S., Castaneda, L., Scanlon, M., & Cechony, A. (2018). Am I a bunny? The Impact of high and low immersion platforms and viewers' perceptions of role on presence, narrative engagement, and empathy during an animated 360 video. In Proceedings of the 2018 CHI Conference on Human Factors in Computing. ACM.

