

## Virtual Adventures, Real Challenges: Analyzing Harassment Controls in VR

### BACKGROUND:

- Virtual Reality (VR) offers full-body tracking, synchronous voice chat, and haptic feedback, enabling users to interact in newer, more immersive ways compared to traditional social media
- Along with these novel affordances, VR also lowers the bar for unwanted behavior (virtual violence, groping) by malicious social actors
- Embodiment and presence in VR makes harassment realistic and traumatizing
- VR apps have safety controls such as mute, block, and personal bubble to help users deal with harassment

### RESEARCH QUESTIONS:

- How do characteristics of harassment vary across different VR environments?
- How do VR users perceive the usability and effectiveness of existing safety controls and reporting mechanisms?
- What are VR users' recommendations to make VR safer?

### METHODOLOGY:

- We interviewed 19 users with varied VR usage across 5 Social, 11 Gaming, and 2 Streaming VR apps

We interviewed **19 victims** of harassment in VR, and learned about the **limitations** of existing **VR harassment controls**

Participants felt that existing safety controls were **ineffective** in many ways



*"I don't think that the game tells them that I have muted them. So they would have no feedback [that] this person can't hear me." (P18, RecRoom)*

*"If somebody is being rude and you vote kick them, and it doesn't go through, they vote kick you back, and it becomes a gamble who gets kicked." (P8, Pavlov VR)*

Participants believed **reporting** to have little to **no effect**, and expressed their **lack of faith** in VR developers to take necessary action

*"You expect me to experience the negativity, to videotape the negativity, to go out of my way and submit the report to you. And then you're going to kick them out for 24 hours or 48 hours? How much of a punishment is that? That's a total waste of my time. I will never videotape anyone." (P20, Echo VR)*



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### KEY TAKEAWAYS:

- VR enables new forms of abuse, including virtual sexual harassment, stalking, and bullying
- Muting is the most used safety control
- Blocking and proximity settings that help mitigate space abuse are the second most frequently used controls
- VR users find the process of reporting to be time-consuming and cumbersome

### RECOMMENDATIONS:

We implore VR platforms and developers to incorporate:

- Live moderators who can act as "VR security guards" in social spaces
- Reputation score for users across apps
- Age based segregation of VR users
- In-app disclaimers about harassment
- Multiple ways of reporting: in-app, via headset, through a website
- Automatic audio/video capture for easier reporting

Type of harassment	Possible actions
Verbal abuse	Defamation, Trolls, Name-calling, Insults, Ridicule, Mockery, Slurs, Epithets
Space abuse	Invasion of personal space, Unwelcome sexual advances, Groping, Fondling
Vulgarity	Sharing of intimate images without consent, Offensive jokes of sexual nature
Obscenity	Pornography, Child pornography
Bullying	Threats, Stalking, Repeated messaging
Hate	Promotion of sexual content or physical assault, Sharing violent content, Violent language
Fraud	Impersonation, Misleading representation, Deception

Type of VR app	Type of harassment encountered by our participants					
	Verbal abuse	Space abuse	Vulgarity	Bullying	Hate	Fraud
Gaming	✓	✓	✓	✓	✓	✓
Social	✓	✓		✓		✓
Streaming	✓	✓	✓		✓	

Fig. 1: Overview of our methodology