Thresholds of Reality: Creating Coherent Enchantment in AR

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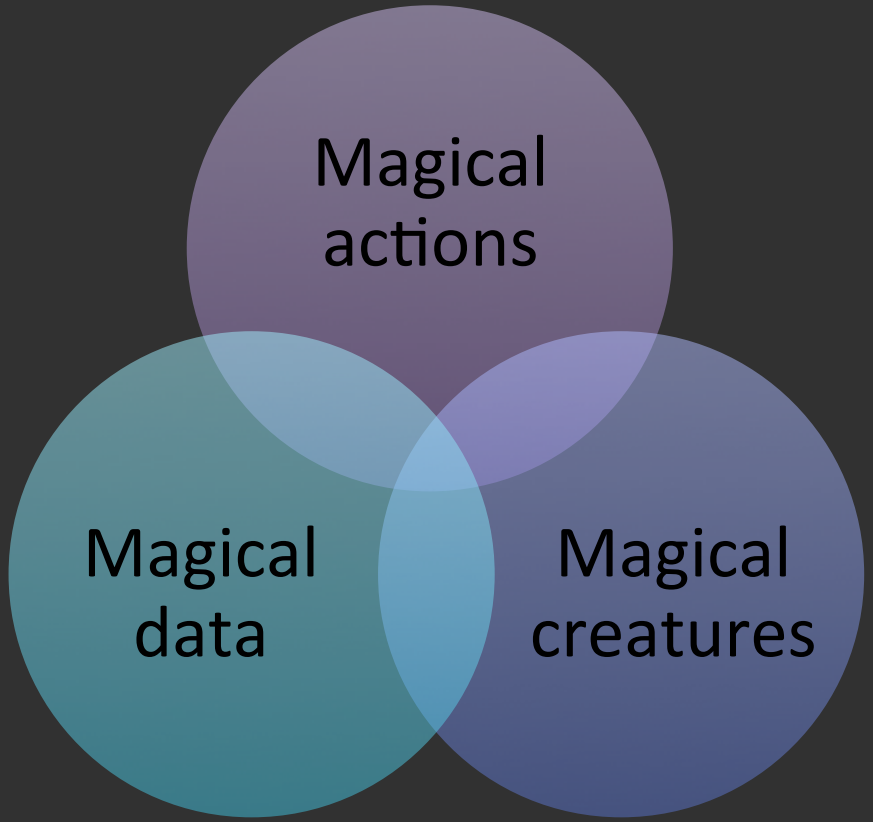
Enchantment

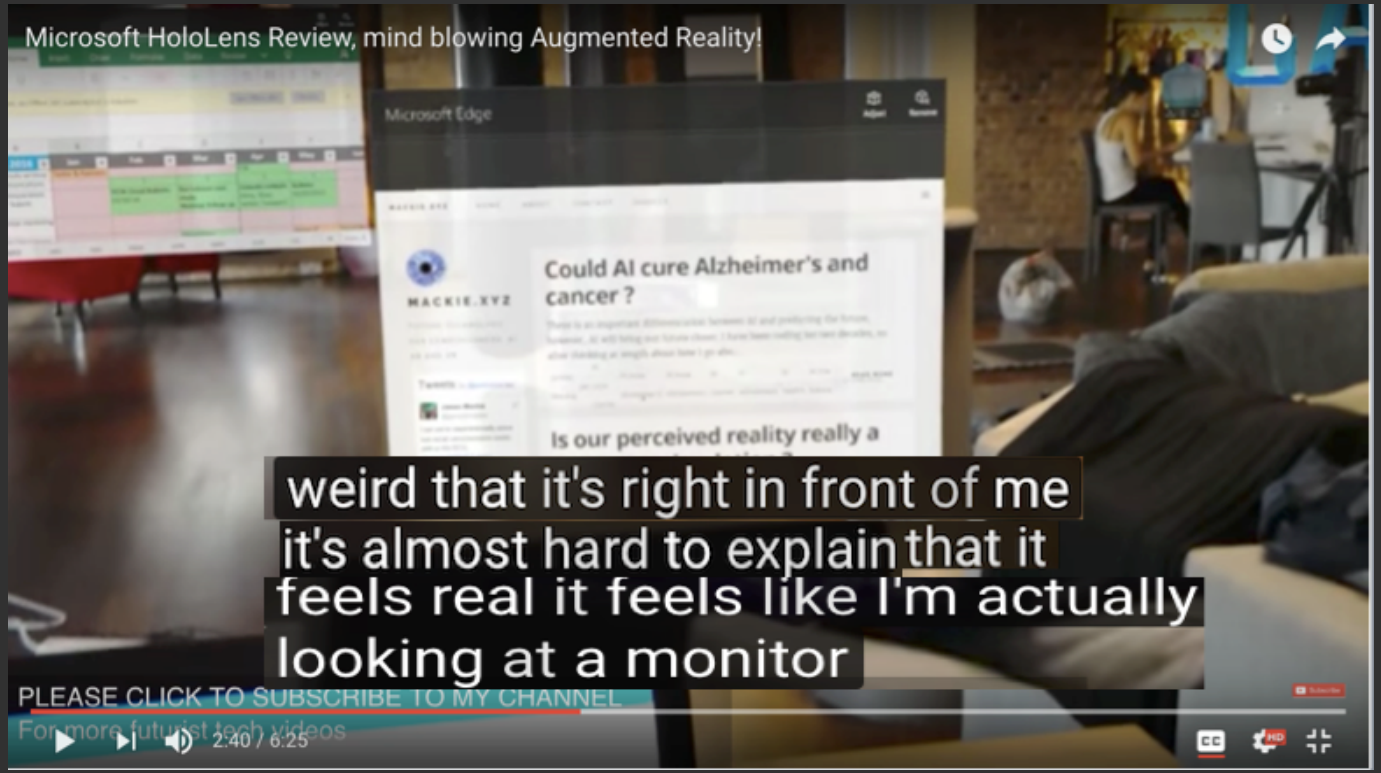
Sense of dwelling in an augmented space adjacent to the real world where contrary-to-reality things – things that we wish for or fear in real life – fill our senses, and we are given contrary-to-reality powers to create effortless transformations.

Media are intrinsically magical

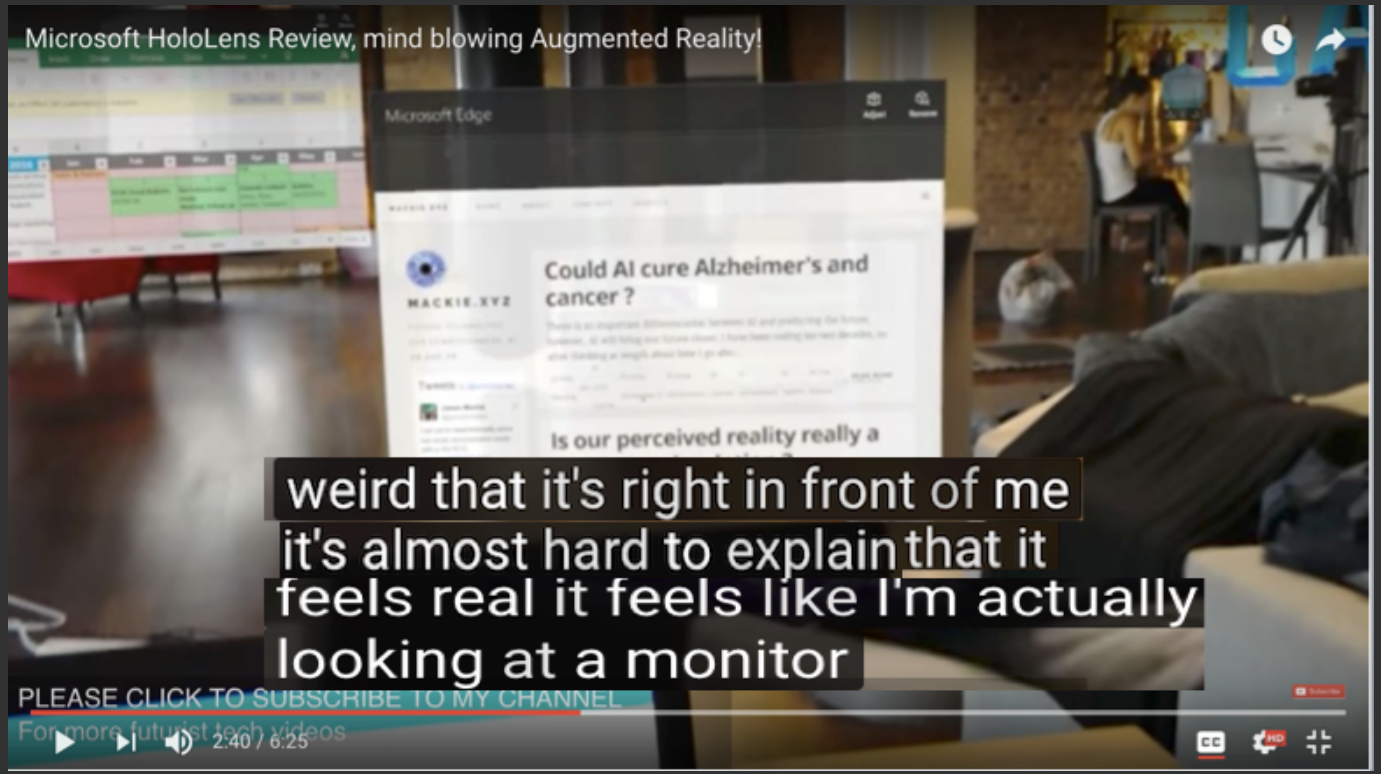
we expect enchantment in AR



we experience enchantment…



…from the sheer novelty of AR

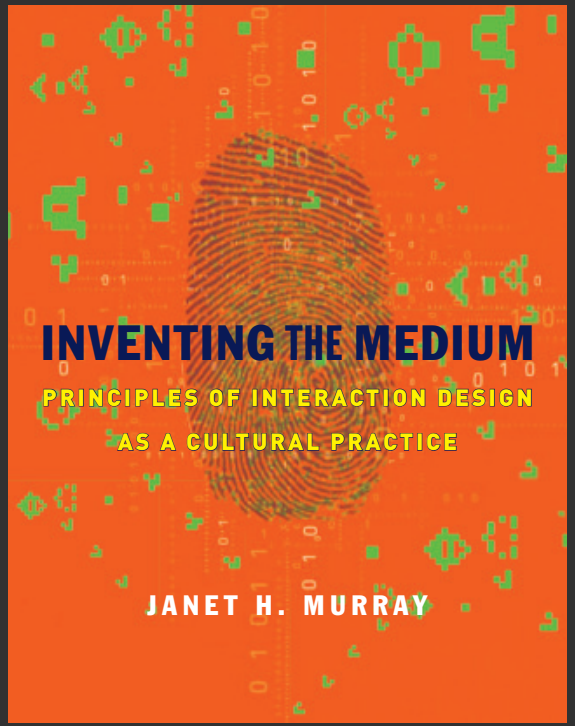


But novelty wears off

leaving us disappointed

To deliver on the promise of enchantment we need a **new medium** not just a **new headset**

Mature media need:



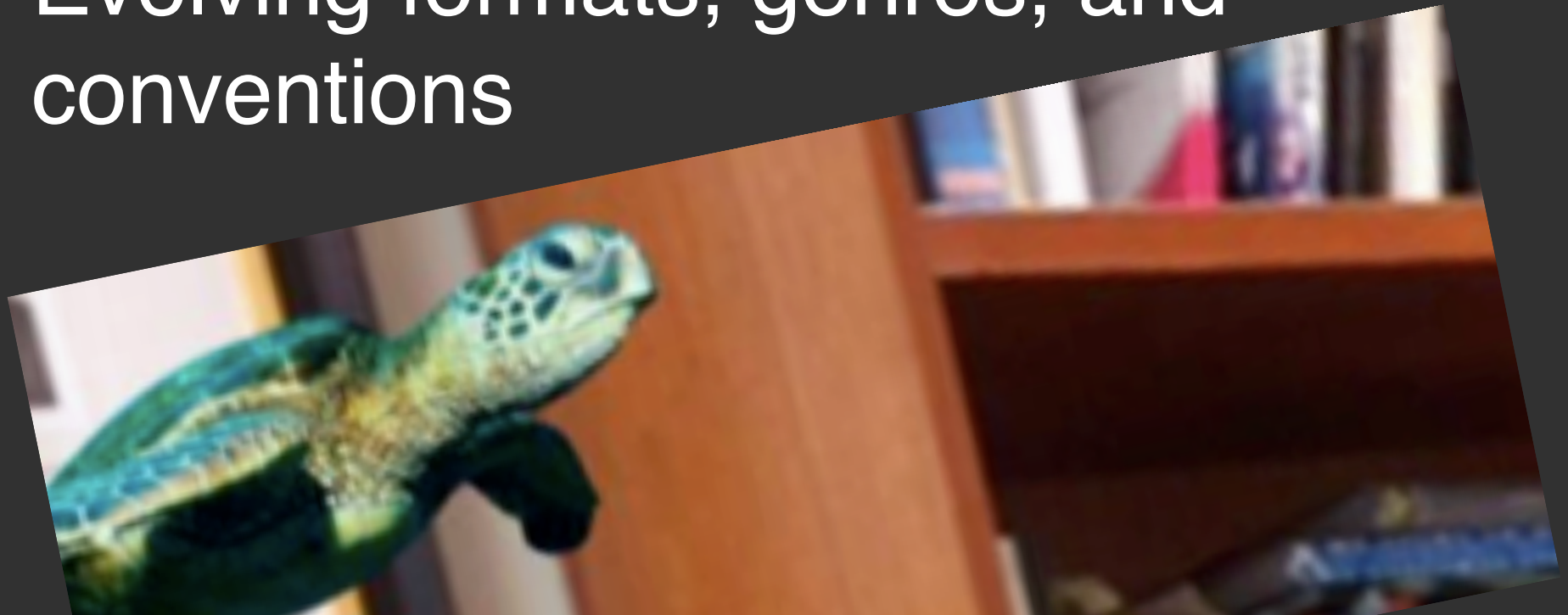
Stable Platforms
- reliable inscription
- standardized transmission

Shared Systems of Representation
- formats
- genres
- conventions

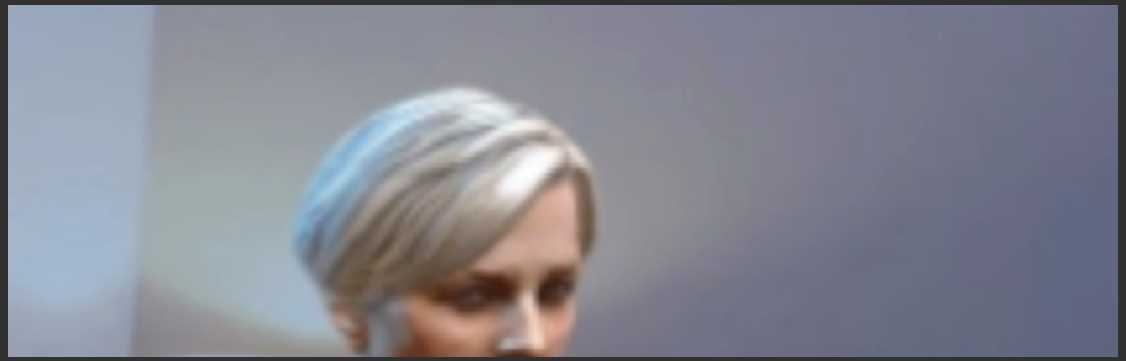
Is AR *potentially* a new medium?

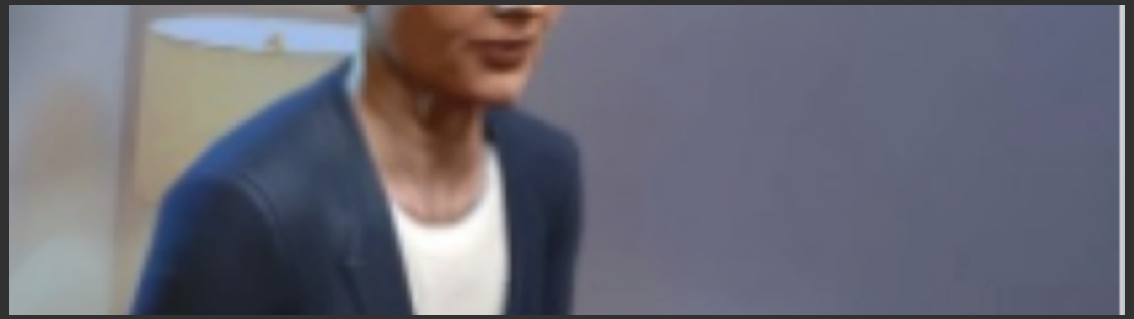
Yes! … but not yet

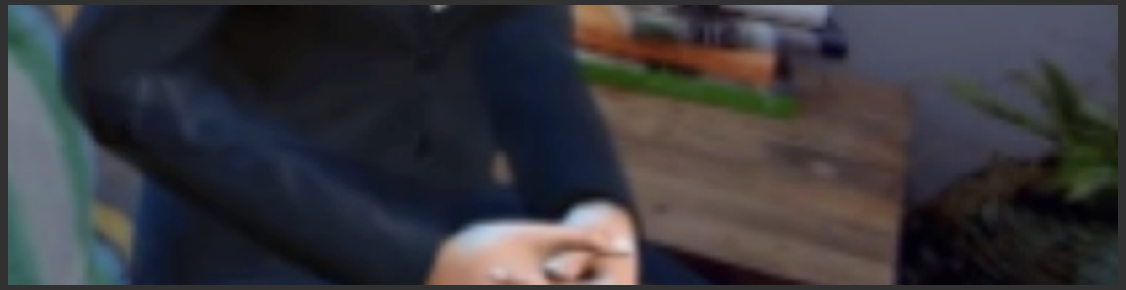
No stable platform
Evolving formats, genres, and conventions



Demo Videos Promise Enchantment







Designing beyond the affordances of the platform

Sized to the platform of mobile viewer

Pokemon Go

Coherent interaction → enchantment

Familiar collection game mechanic maps onto familiar camera functionality (agency)

Geolocation exploits spatial affordance, seems encyclopedic (immersion)

Relying on novelty and jump scare

Tica Lin,
AquaRium
ticalin.com

Actively captured with Info on Whale Shark

Actively chosen and placed in MIT Media Lab elevator, a specific retrievable real world location by end-user
NeverMind Project / Pattie Maes

RoboRaid
Sized to the platform of the HoloLens

RoboRaid

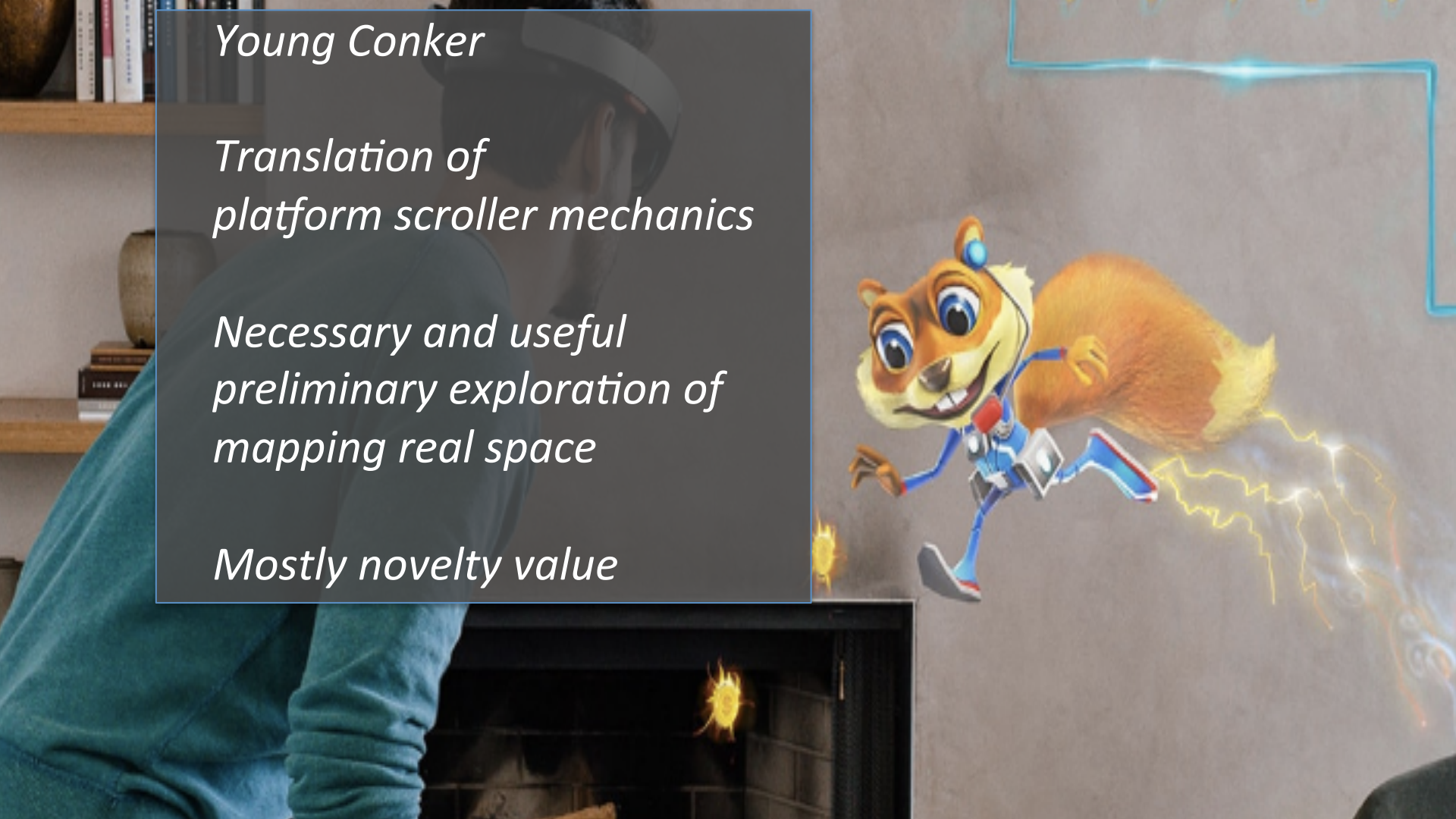
- Suits the viewing & the hand action constraints
- Direct manipulation mechanic reinforces presence
- Rapid, frequent feedback to point and shoot
- Clearly unreal adversaries do not raise expectations of behavior
- Robots bursting through wall is a playful metaphor for AR itself

Young Conker

Translation of platform scroller mechanics

Necessary and useful preliminary exploration of mapping real space

Mostly novelty value



Strategies that undermine immersion

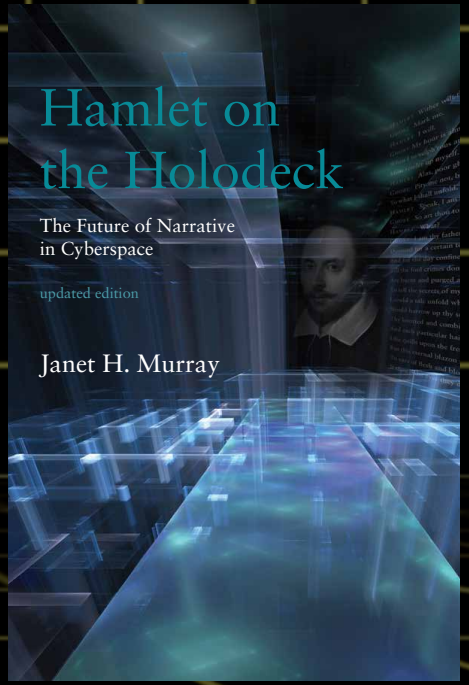
- Placing narrative action in the past
- Cutting between virtual places without the interactor's movement
- Using recorded video cut scenes
- Introducing characters or objects that suggest actions that are not possible (like talking, grabbing, gaming)
- **Assuming that virtual presence is satisfying in itself**

Strategies to create dramatic agency in narrative AR

- Intrusion into reality of magical/alien/ghostly beings
- Collection/revelation by camera-like action
- Discovery of something virtual hidden behind something actual
- Chasing something small and elusive
- Luring something small and shy by moving something real or virtual

Longing for the Holodeck

The Holodeck is a misleading goal



We don’t become immersed unless we know where the boundary is

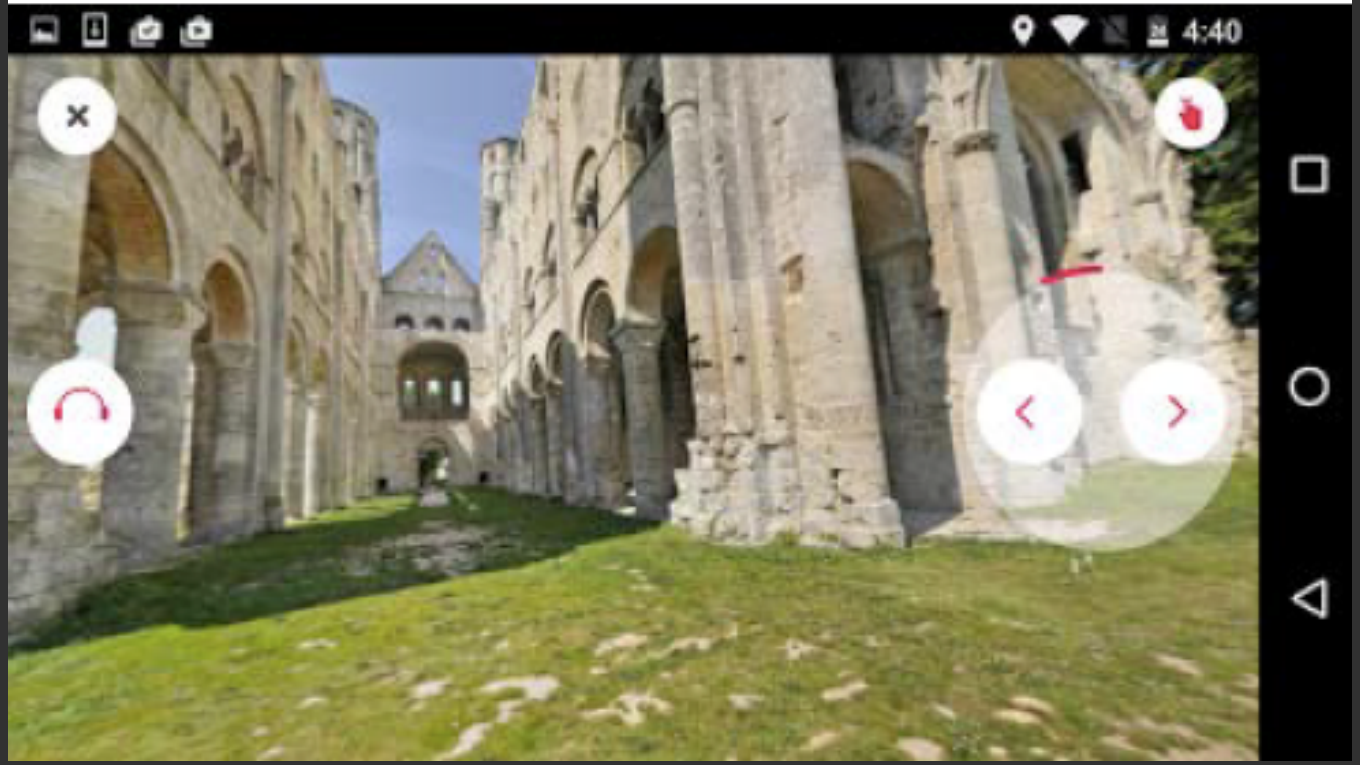
Audience members at Punchdrunk Theatre production

Threshold objects create a boundary

Nintendo 3DS
“Spirit Camera”

Harry PottAR
prototype
etv.gatech.edu
5972

Jumieges3D - Time travel in a French Monastery



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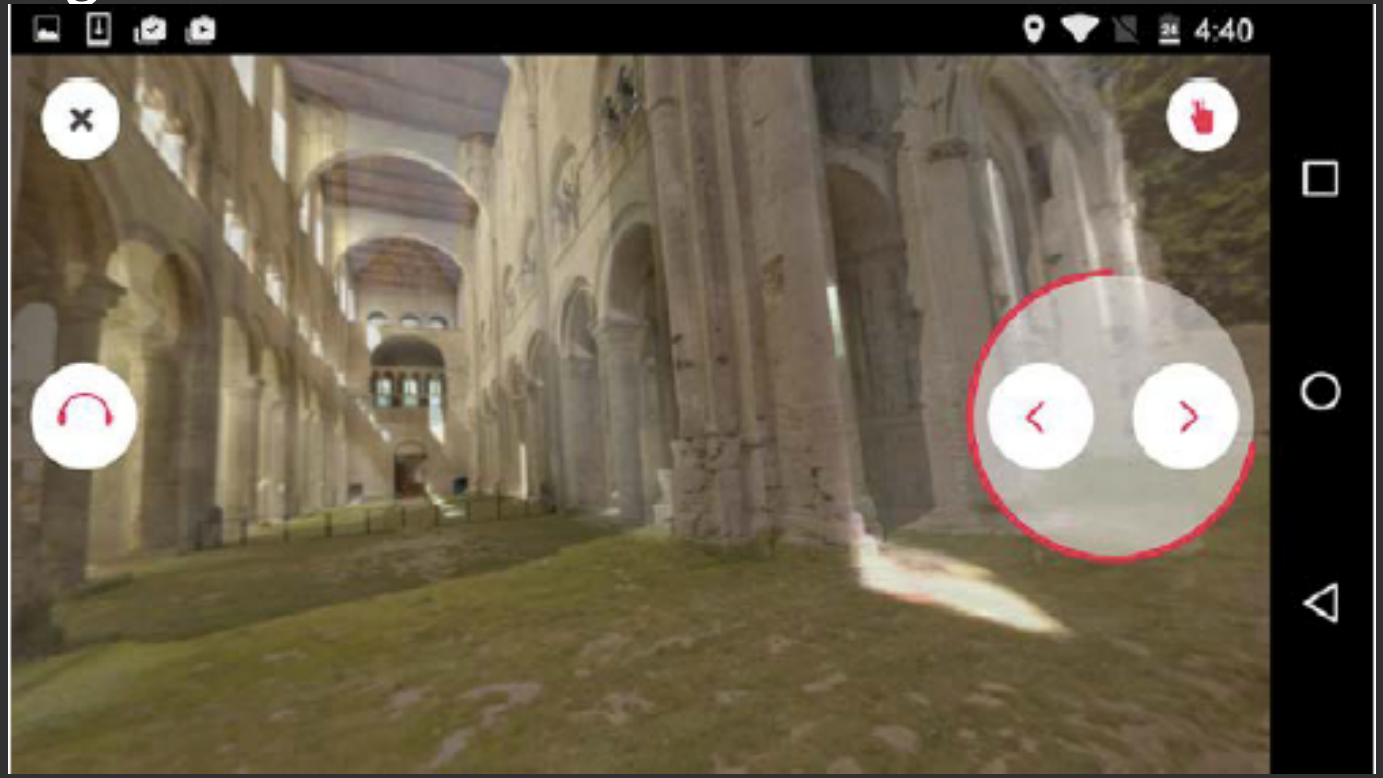


Incoherence in location-based informational AR

1. Too much focus on the mobile AR screen at the expense of the historical or natural site
2. Too much distraction from AR experience from liveliness of the actual world
3. Too literal replication of legacy media formats – audio tours, pamphlets of text – with too little interaction

Location-based AR design

- Blended experience with close sync between real and virtual overlay
- Multiple granularities of augmentations, all tightly mapped to physical space
- Call attention to spatial details, entice closer view, contextual view, multiple POVs, time sliders

How to watch any AR demo

Is it blowing your mind using jump scares, children, or animals?

Does it avoid showing how the platform is actually operated by the interactor?

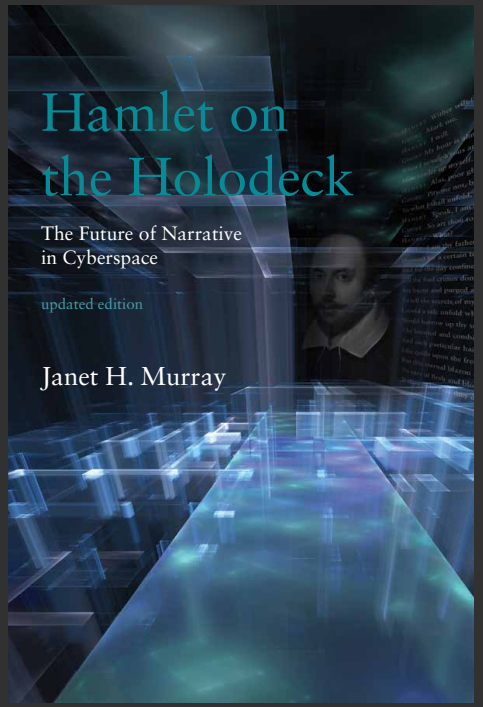
How to watch any AR demo

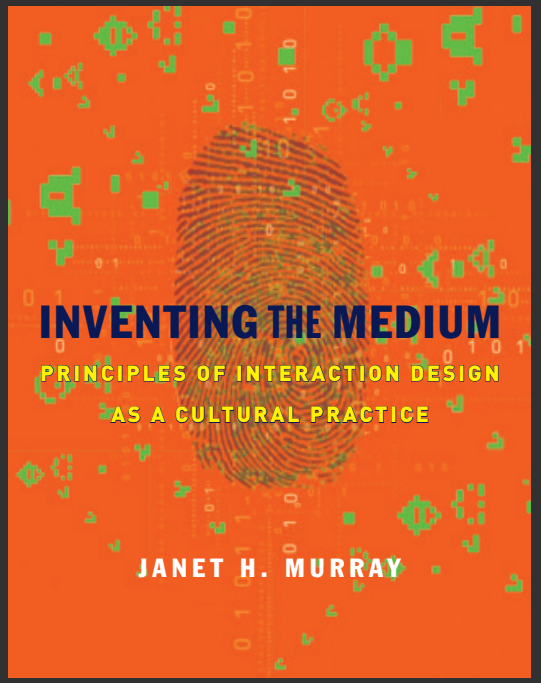
Does it assume 24 hour surveillance is a good thing?

Does it promise to read the thoughts of the people around you using AI and Big Data?

If so, it is probably relying on the enchantment of novelty.

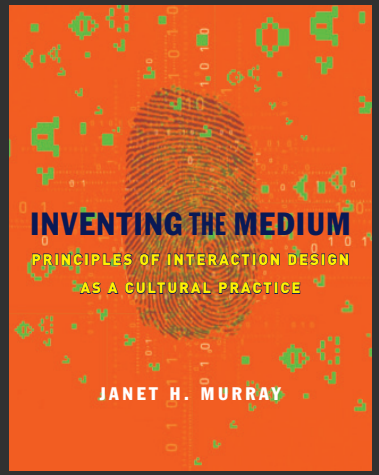
The collective invention of a new medium can expand human understanding

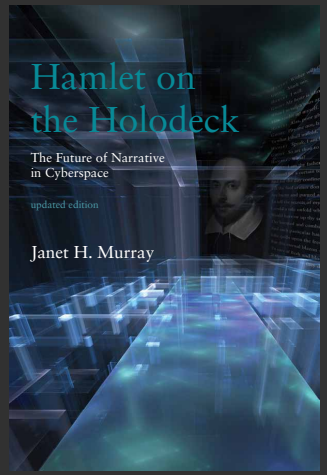


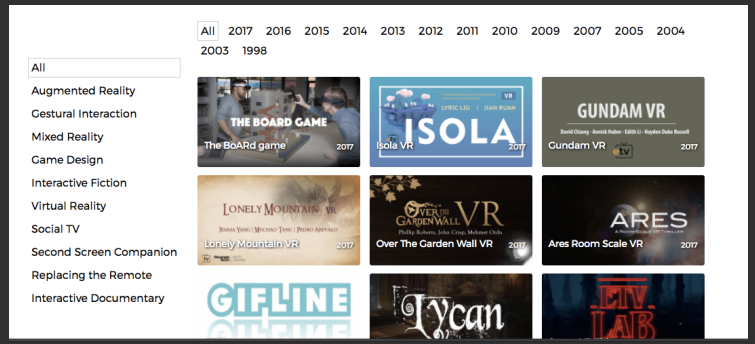


Enchantment!

…from coherent interaction design!







Thank you!

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