



Lessons from Escape Rooms: Designing for the Real World and VR

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L'Arrivée d'un train en gare de La Ciotat (1896)



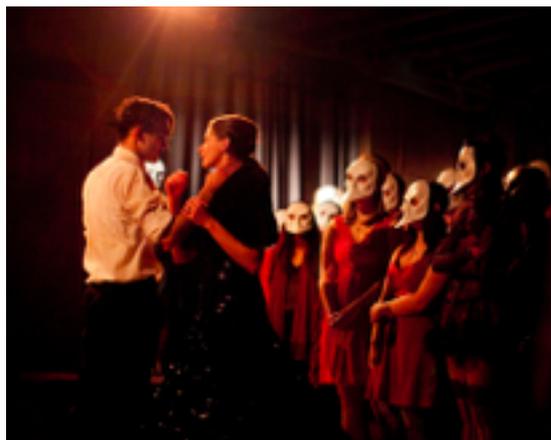


“Morning, Brad.”

“Morning, Angelina.”



*The Voyage of Sinbad, Tokyo
Disney*



Sleep No More, NYC

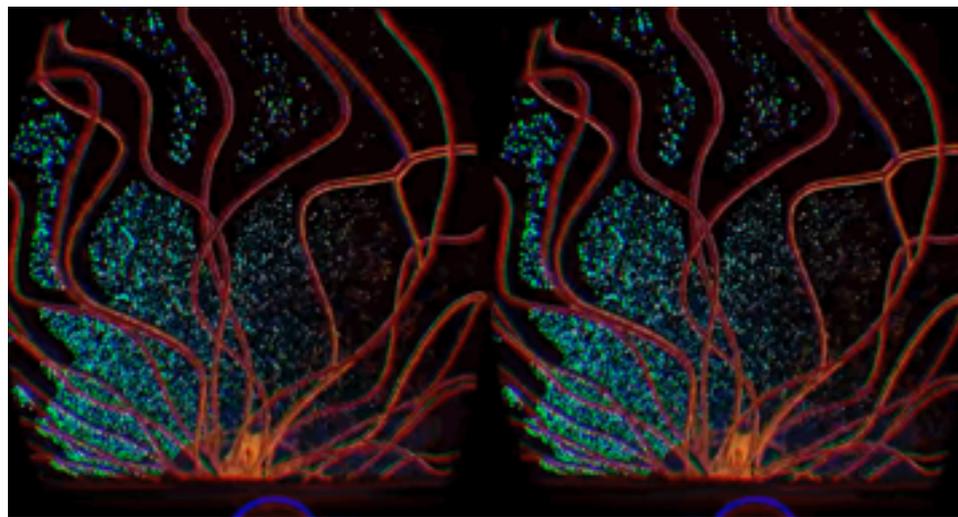


*Spark of Resistance escape room,
Portland, Oregon*





Glen Keane, Tilt Brush

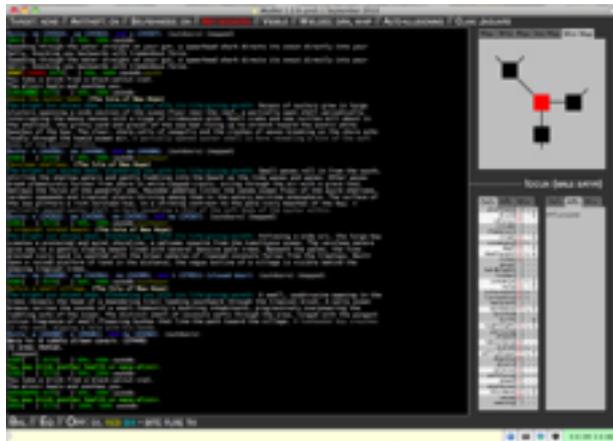


InMind VR





Spark of Resistance escape room, Portland, Oregon



Achaea, Dreams of Divine Lands MUD

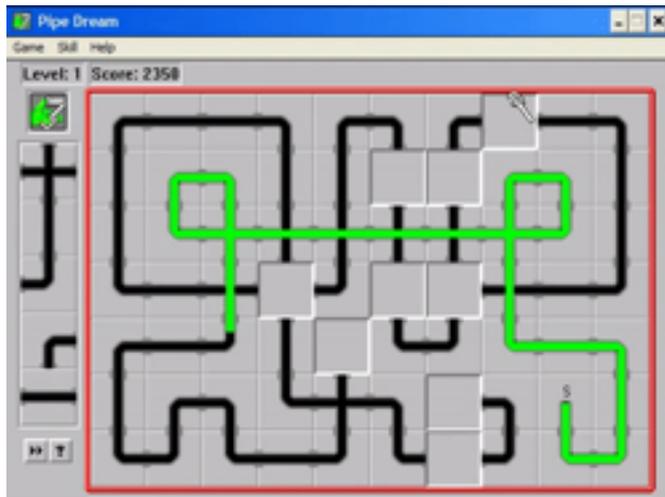
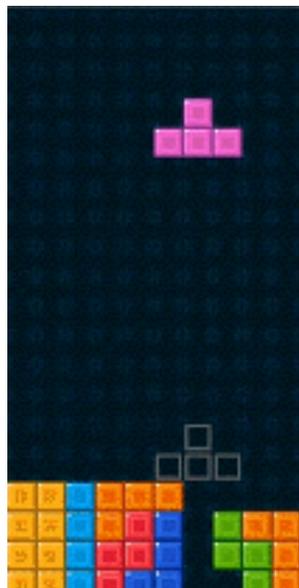


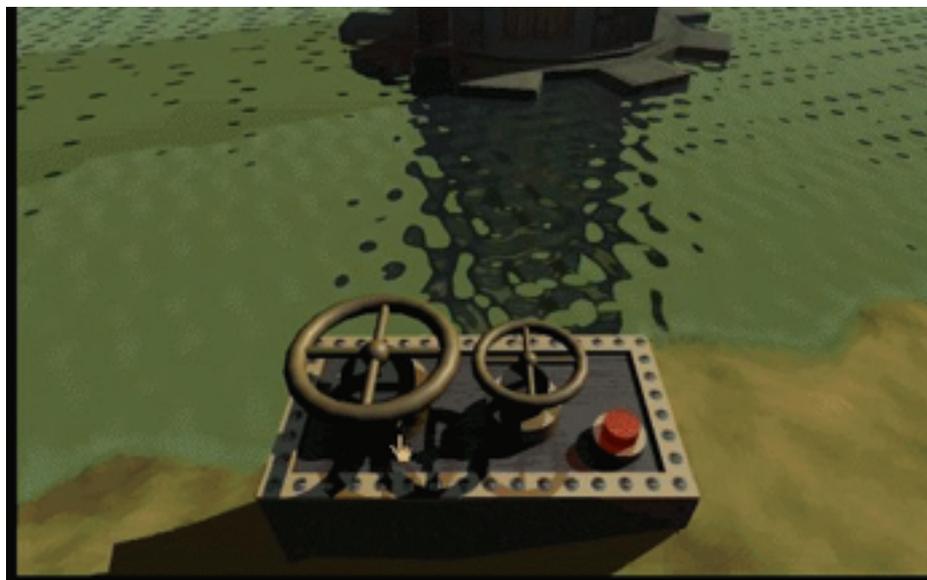
I Love Bees, Halo 2 ARG



“People solve puzzles because they like pain, and they like being released from pain, and they like most of all that they find within themselves the power to release themselves from their own pain.”

- Mike Selinker and Thomas Snyder, *Puzzle Craft*







Crimson Room by Toshimitsu Takagi, 2004





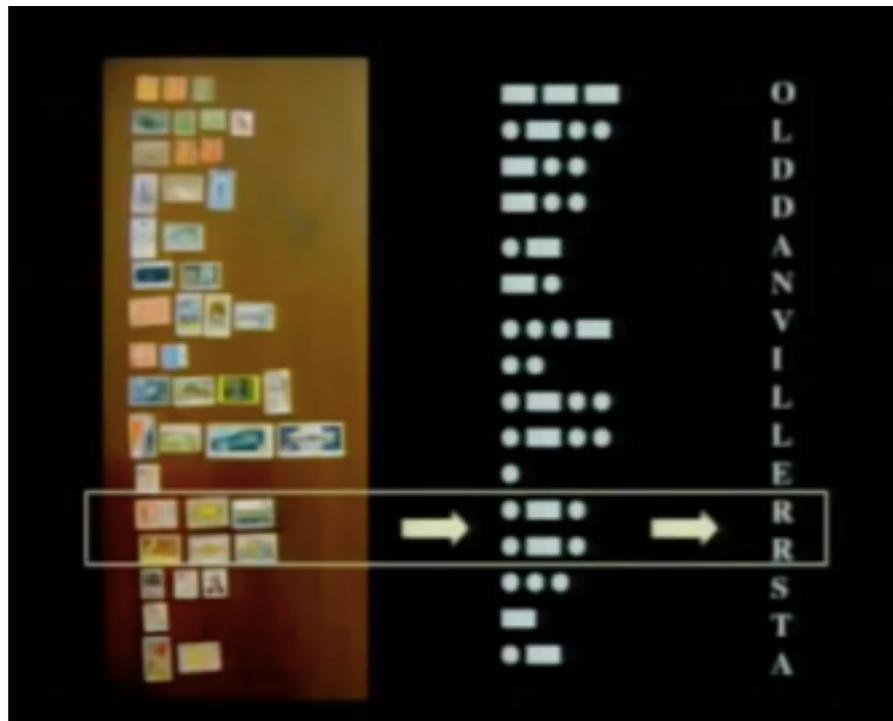
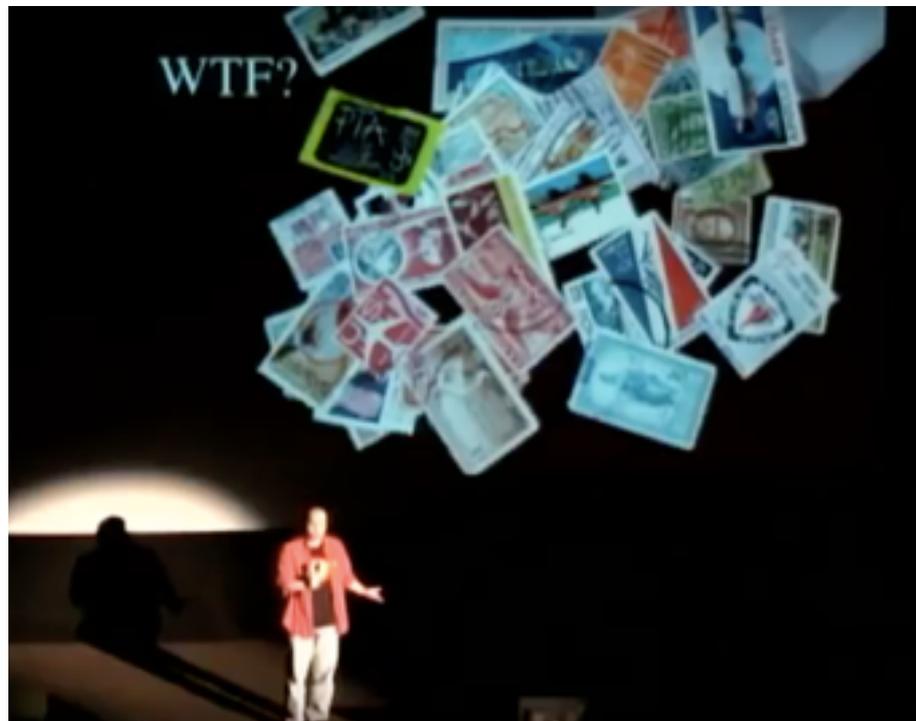
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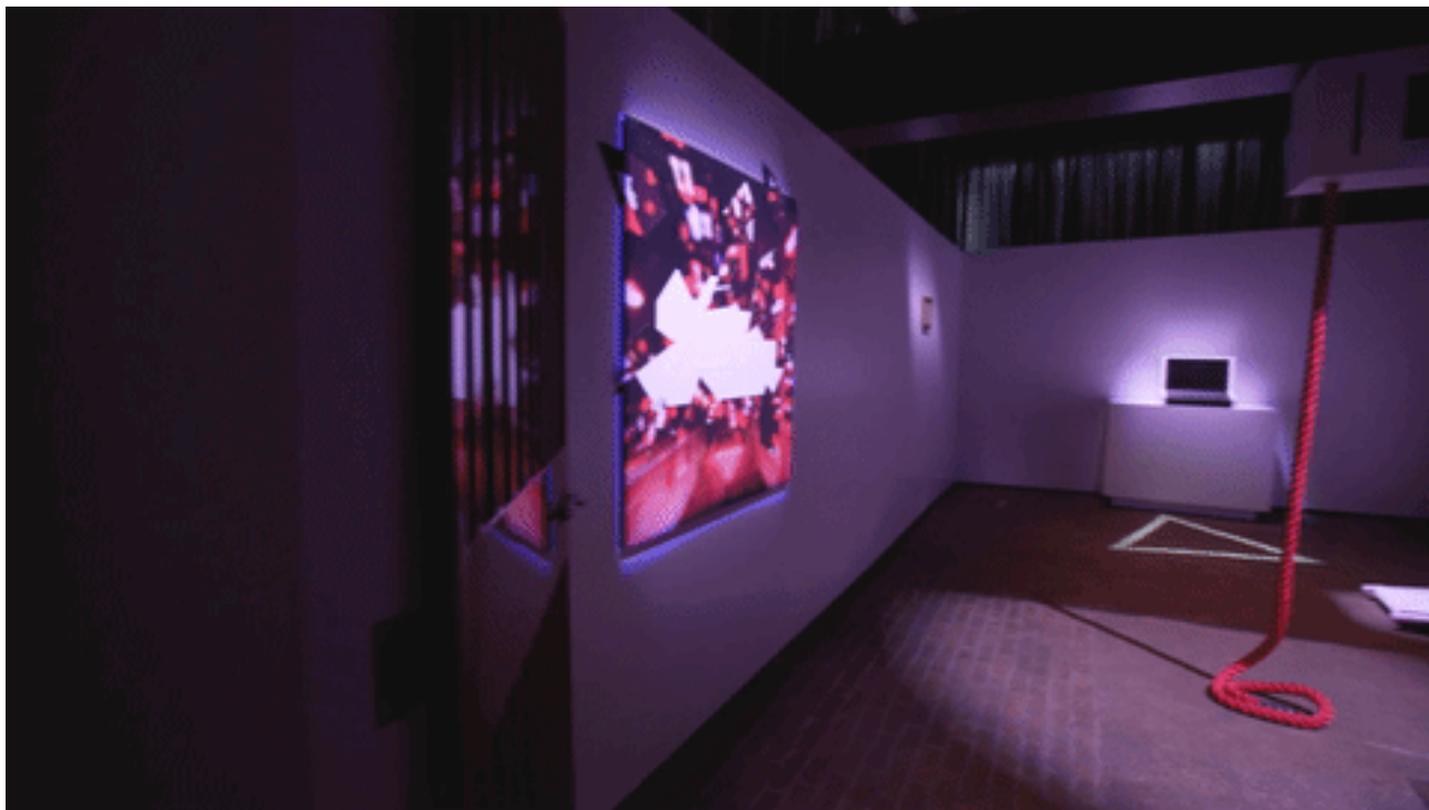




*Curtis Chen,
Ignite Portland 2012*



















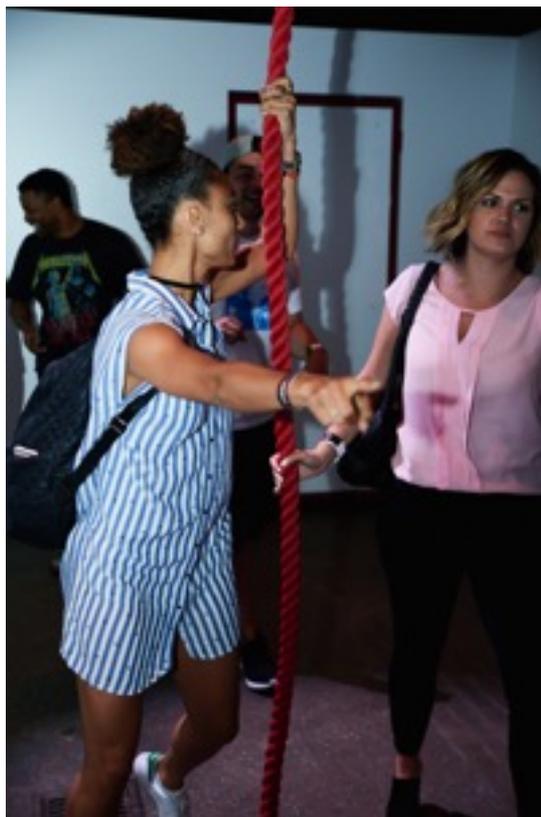
E N E R G Y















Flow:

“Energized focus, full involvement, and enjoyment in the process”



SAFETY BRIEFING CARD

In the unlikely event of an emergency follow the directions of your flight crew and the procedures on this card.

SEAT BELT



BRACE POSITION



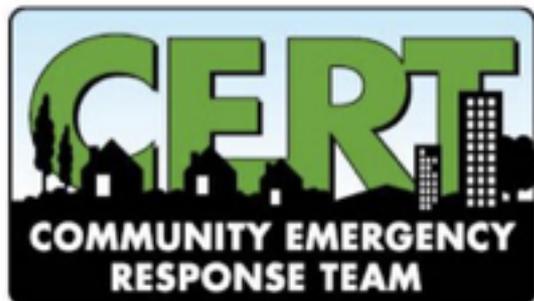
OPENING EXITS



LIFE JACKET



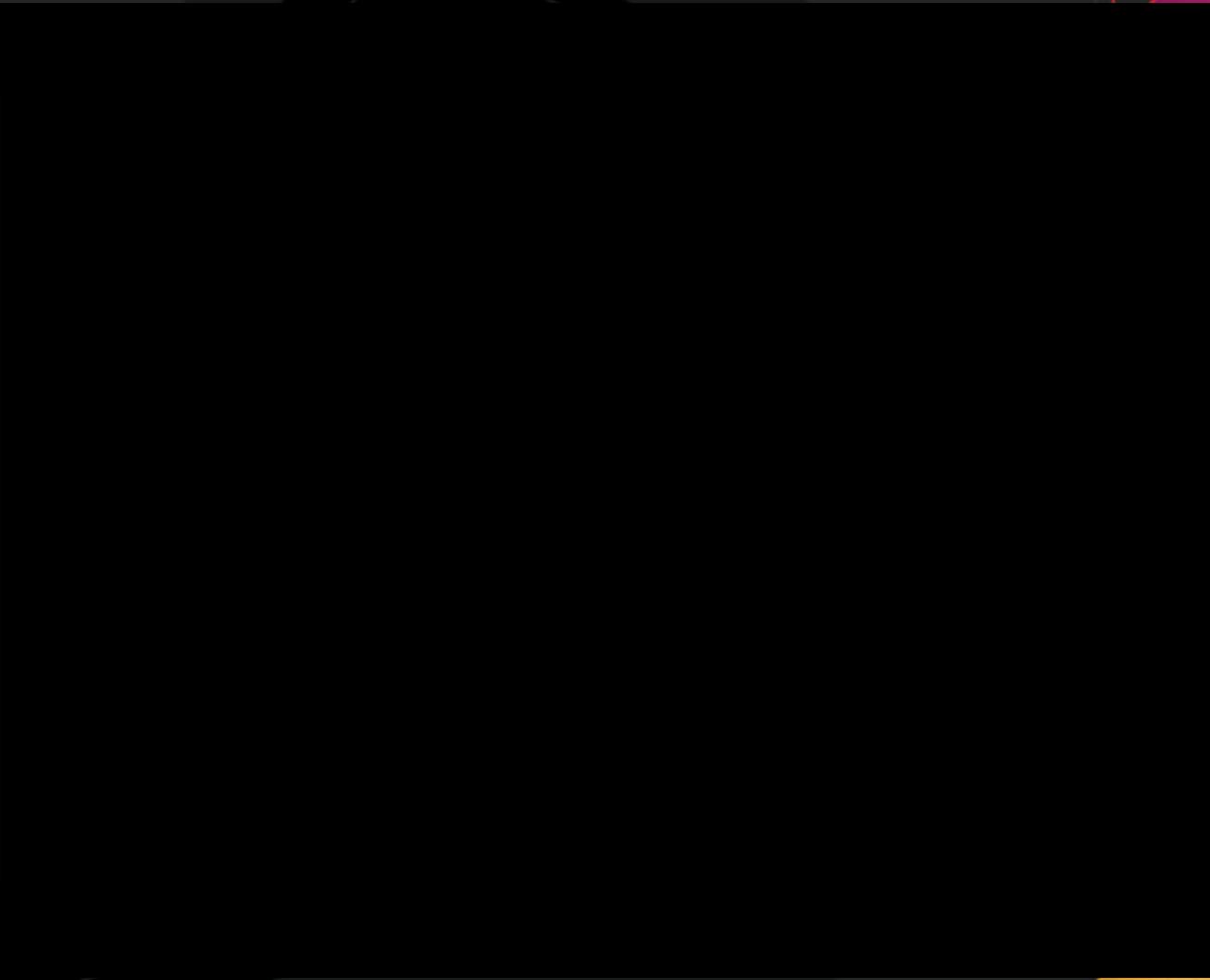
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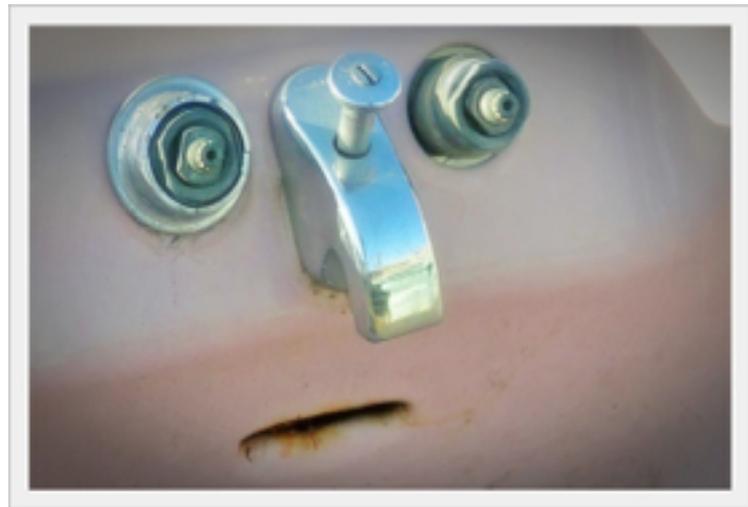
“I’ve had some really weird experiences, where I’ve gone into VR and thought I played for 3 hours, and then came out and realized I had been in there for 12 hours. I’ve had that happen a couple of times.

It was a tower defense game ... I know those are addictive on iPhones, it was a fairly simple tower defense game, it just seemed like, hey, i’ll just go in here, pop in and have a little fun, and before I knew it, the whole day was gone.”

- Karl Krantz, *Voices of VR* podcast with Kent Bye, #311











Inside the Brain

- They're deeply focused, to the exclusion of other information
- They're quickly searching and processing, to try and make connections
- And they're getting mentally exhausted by what they're seeing and doing



- Enjoyment
- Engagement (mental immersion)
- Spatial presence
- Transportation (immersion in a narrative)

- *“The better the story, the bigger the serving”, Lyons, Tate, Ward 2012*



“When we go to see a movie or have an evening at the theatre, we instinctively know to suspend our disbelief before we sit down. We leave a lot of what we know about the real world at the door and allow ourselves to be completely transported by the events on the stage and screen.

If the stage curtain closes and we are told upon its reopening that 10 years have passed, we happily buy into the notion. If the screen fades to black and a morning scene magically turns into a night scene, we don't even think twice about it. Unfortunately this is not true of physical places.”

- theme park designer Don Carson



**Kyle Marquis**

@Moochava



Follow

Yearly reminder: unless you're over 60, you weren't promised flying cars. You were promised an oppressive cyberpunk dystopia. Here you go.





“The whole value of a game is in the mental model of itself it projects into the player’s mind.”

The Player Model Principle - Tynan Sylvester









ERICAL PHOTOGRAPHY
by Sherry Ott











CATCH - 22
NGL

THE JUNGLE
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1984
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THE TRIAL
237.

BRAVE NEW WORLD
THE JU

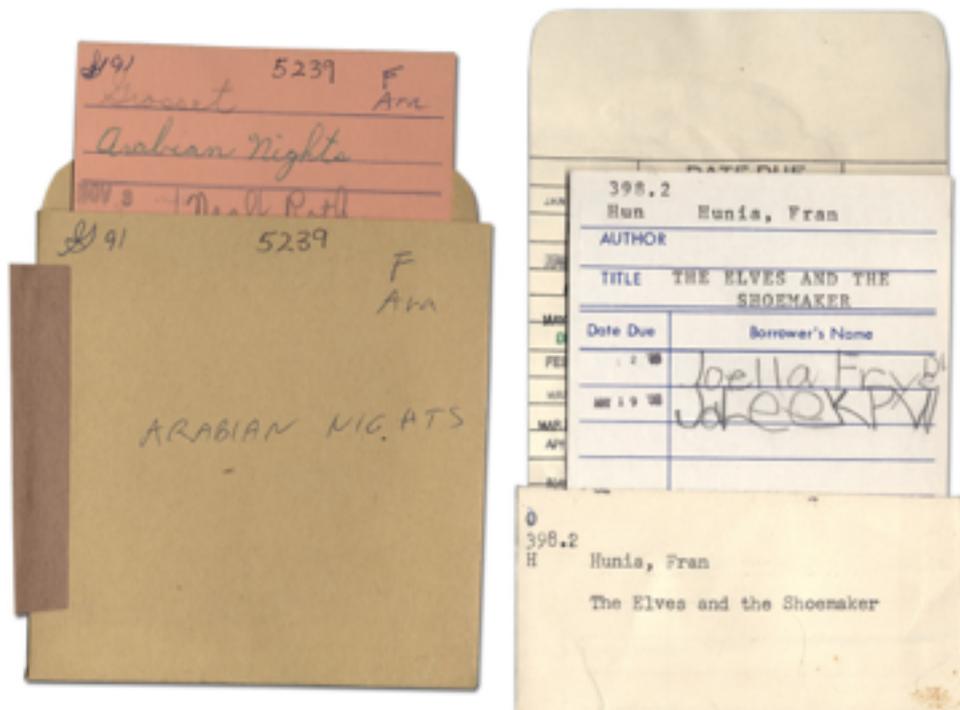




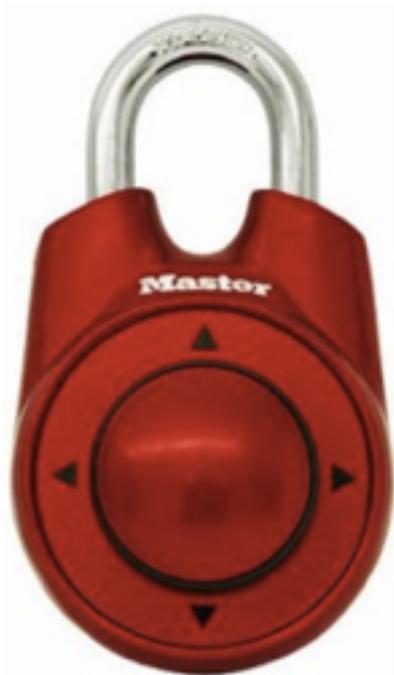
1984	BRAVE NEW WORLD	CATCH - 22	THE JUNGLE	THE TRIAL
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BRAVE NEW WORLD	CATCH - 22	THE JUNGLE	1984	THE TRIAL
THE JU	NGL	E PA	GE	237.



- Designing a cohesive world with a complicated backstory and letting that inform our design choices
- Making sure that all puzzles move action forward and give a sense of progression
- Designing character interaction to change the game state in a specific way, with minimal dialogue lines involved









"Any sufficiently advanced technology is indistinguishable from magic."

- *Arthur C. Clarke*





GDC

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GAME DEVELOPERS CONFERENCE | FEB 27-MAR 3, 2017 | EXPO: MAR 1-3, 2017 #GDC17





I'm going to start by showing you one of my favorite videos from the internet.

I love that video so much. To me, it's a perfect example of pure play.

That dog is thinking of nothing except how good it feels to roll down that hill, and how quickly it can get back up there to do that again.

And the reason I love this so much as an example of play is that through play, humans get to feel that way too. It's a kind of magical feeling. And humans love magic.

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L'Arrivée d'un train en gare de La Ciotat (1896)

The slide features a dark header with the GDC logo and event dates. Below the header are three images: a shadow puppet on the left, a circular diagram of a clock face with figures in the center, and a historical black and white photograph of a train arrival on the right. The photograph is captioned with its title in italics. The footer contains colorful geometric shapes and a small logo.

Another dimension of fun that also feels like creating and experiencing magic comes from storytelling. Storytelling lets you get carried away, you can forget yourself and become a different person in a different place. It excites you, it makes you feel things. In short, stories transport people, and we're inevitably tell stories using whatever technology we have on hand to do it.



As much as popular media likes to warn us against a future where we're all in cubicles operating little digital facsimiles of ourselves, the truth is that a side effect of our relationship with screen-based entertainment is that the value of in-person experiences begins to rise--for example, the increasing popularity of board games.



*The Voyage of Sinbad, Tokyo
Disney*



Sleep No More, NYC



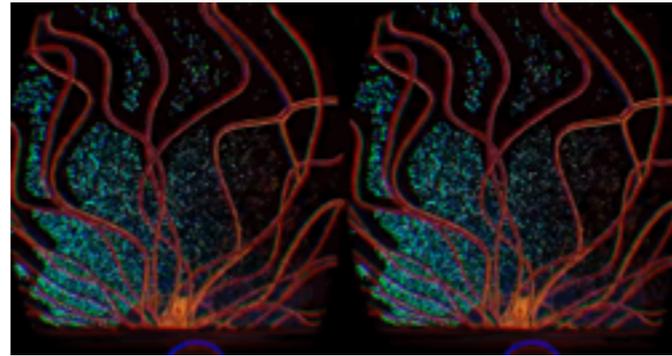
*Spark of Resistance escape room,
Portland, Oregon*

But this is nothing new. People always have and always will crave experiences, no matter where they're coming from --because they want: magic, transportation, connection--all the things that make the human experience pleasurable.

As videogame designers and filmmakers, we are very familiar with the mental side of that, the language and mechanics that go into constructing stories for people to consume. And there's another field, known as experience design, that focuses on the physical, real world side of things. That includes theme parks, haunted houses, immersive theater, and escape rooms. These are all disciplines that explore use of space, human agency, interaction between viewer and story.



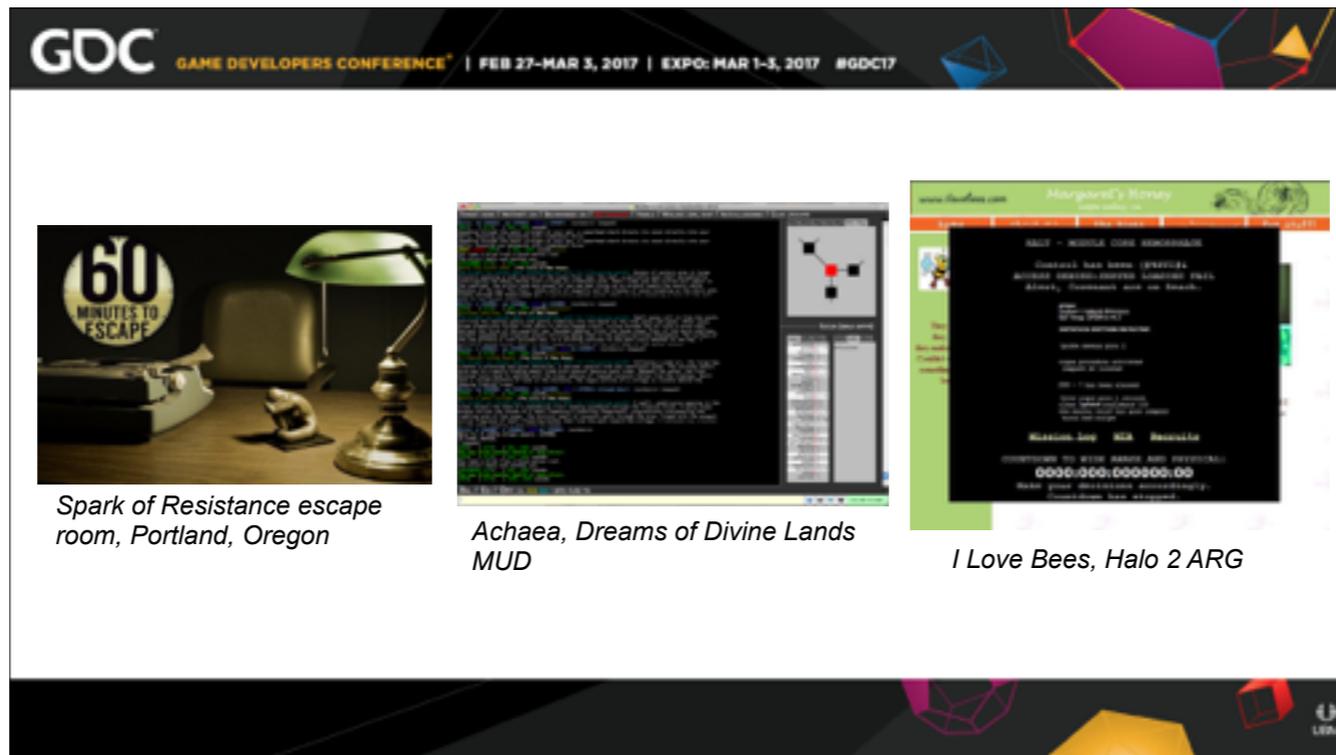
Glen Keane, Tilt Brush



InMind VR

VR has the potential to combine both of those worlds, and we're just at the start of understanding where it can go. Even more exciting, we can use VR to make a new language that takes into account the physical body, the cognitive processes of the brain, and the new methods of design that must emerge when we begin to make material that takes into account the human subconscious.

When that works, we can make that magic happen, that people have always and will always want.



I'm Laura E. Hall. I live in Portland Oregon, and I currently design escape the room puzzle games. But before that, I was into alternate reality games (ARGs), which were interactive, real-time stories that played out online and often involved a lot of puzzles and interacting with characters played by live humans, and before that, I was into MUDs, multiplayer text based adventure games, which are basically like a live, real time interactive novel.

So I think a lot about what drew me to all of those experiences, because they actually share a lot of the same DNA.

And it's that magic stuff: transportation, connection.

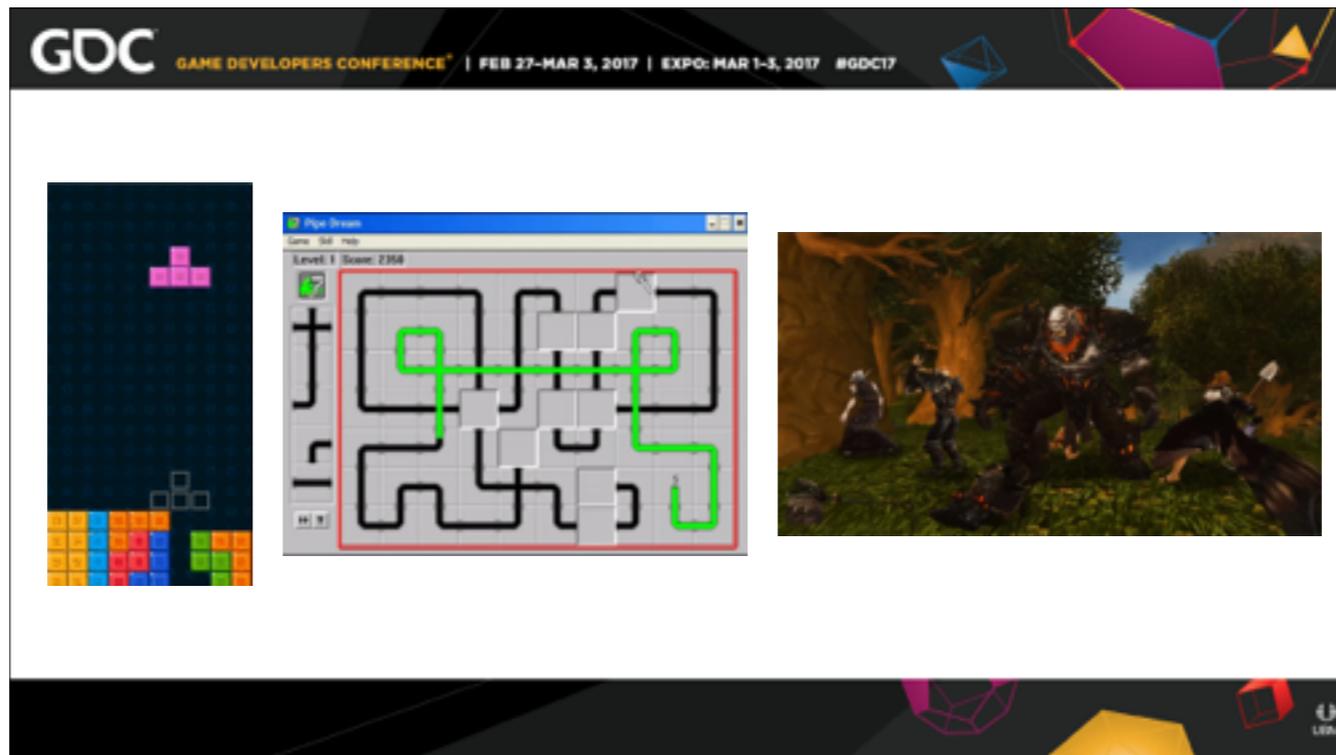
So right now, the thing that I think has the same sort of appeal is VR. It has an incredible potential to speak to those same fundamental desires.

“People solve puzzles because they like pain, and they like being released from pain, and they like most of all that they find within themselves the power to release themselves from their own pain.”

- Mike Selinker and Thomas Snyder, *Puzzle Craft*

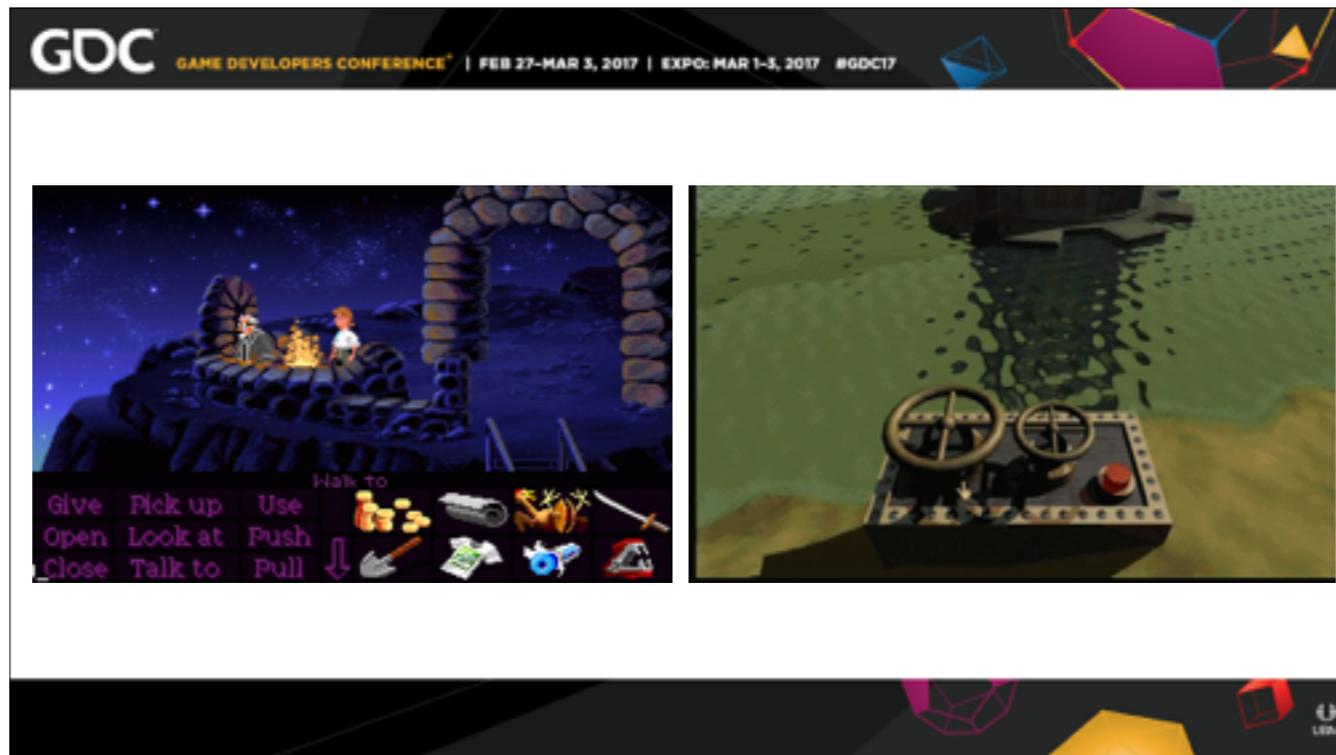
They also share another thing in common: puzzles.

Puzzles are fun, they're challenging, sometimes it's just as much about you vs. the puzzle as it is you vs. your own cleverness.



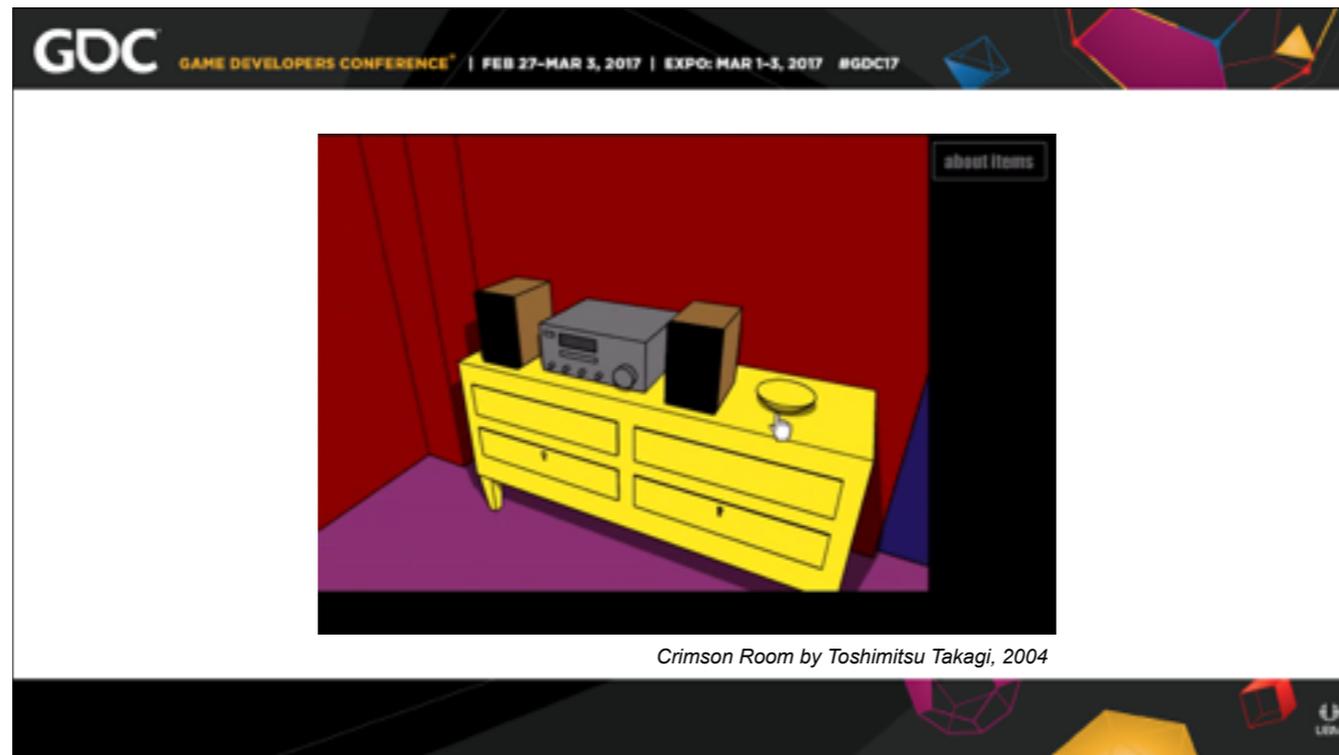
Puzzles and games have a long history together. Escape room games are a very specific type of puzzle-meets-environment. But puzzles can be almost anything: falling blocks, logic, obstacle courses, plumbing.

If you want to look at it more abstractly, lots of games use mechanics of withholding or gating information or access, and asking players to work toward opening up that avenue. It can be as simple as collecting objects for a quest to unlock a dungeon door. So, long story short, it's a pretty useful technique for moving people forward in gameplay.



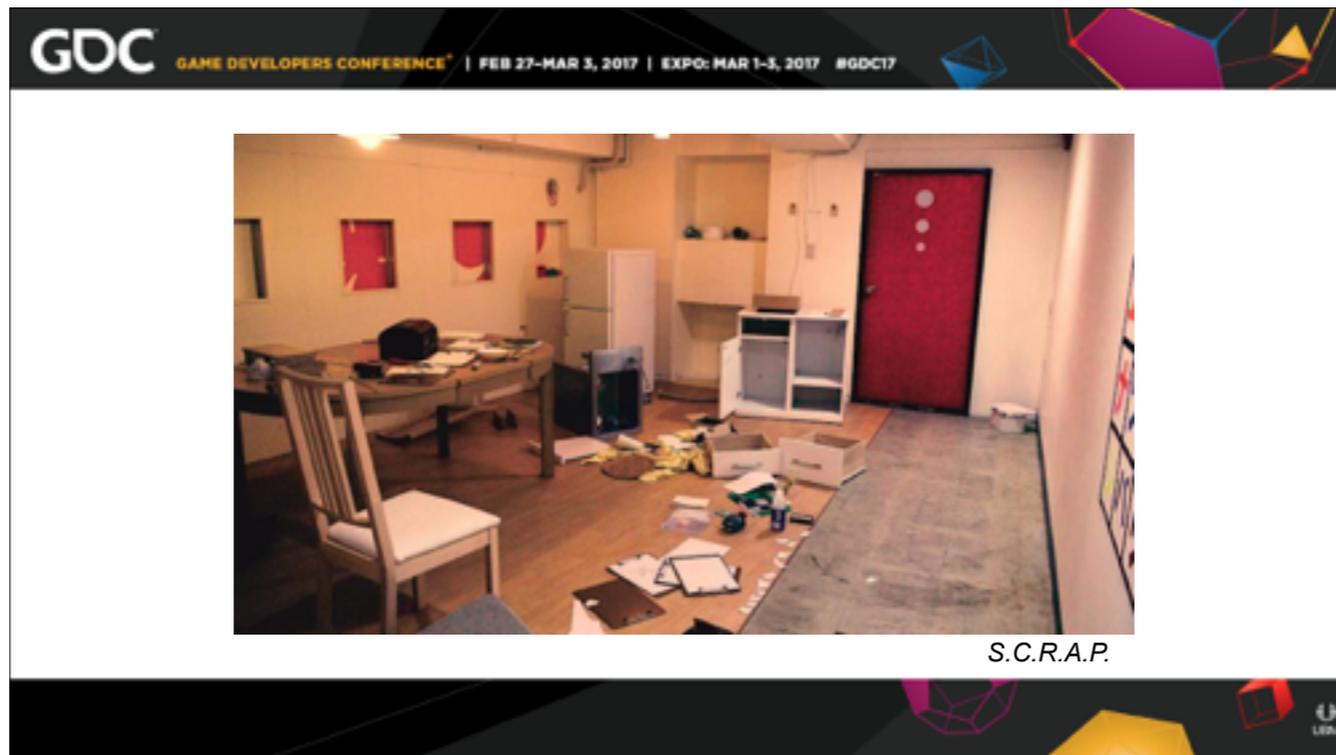
In the early 90s we entered a golden age of puzzles and games, including Myst, The Secret of Monkey Island, and Return to Zork.

But the puzzles in them definitely have their own flavor...which usually means trying to pair every single object together until you figure out which one is supposed to go with which, not always with real logic as to what goes together, or how objects might work in real life, which can make it hard to guess, but it ends up being pretty funny.



And then in the late 00s, you started to see a new sort of puzzle game emerge as Flash proliferated around the web. The one shown here is the first or at least the most famous digital escape the room game, *Crimson Room* by Toshimitsu Takagi, from 2004.

Locked rooms have long featured in detective stories, presenting impossible mysteries based on who had--or didn't--have access to that space. But these games actually placed you into the room itself. In *Crimson Room*, you click around, turning over the edges of pillows, looking behind curtains, in a sequence that eventually allows you to escape from that locked room.



And then, someone had the pretty brilliant idea of building one of these things in real life.

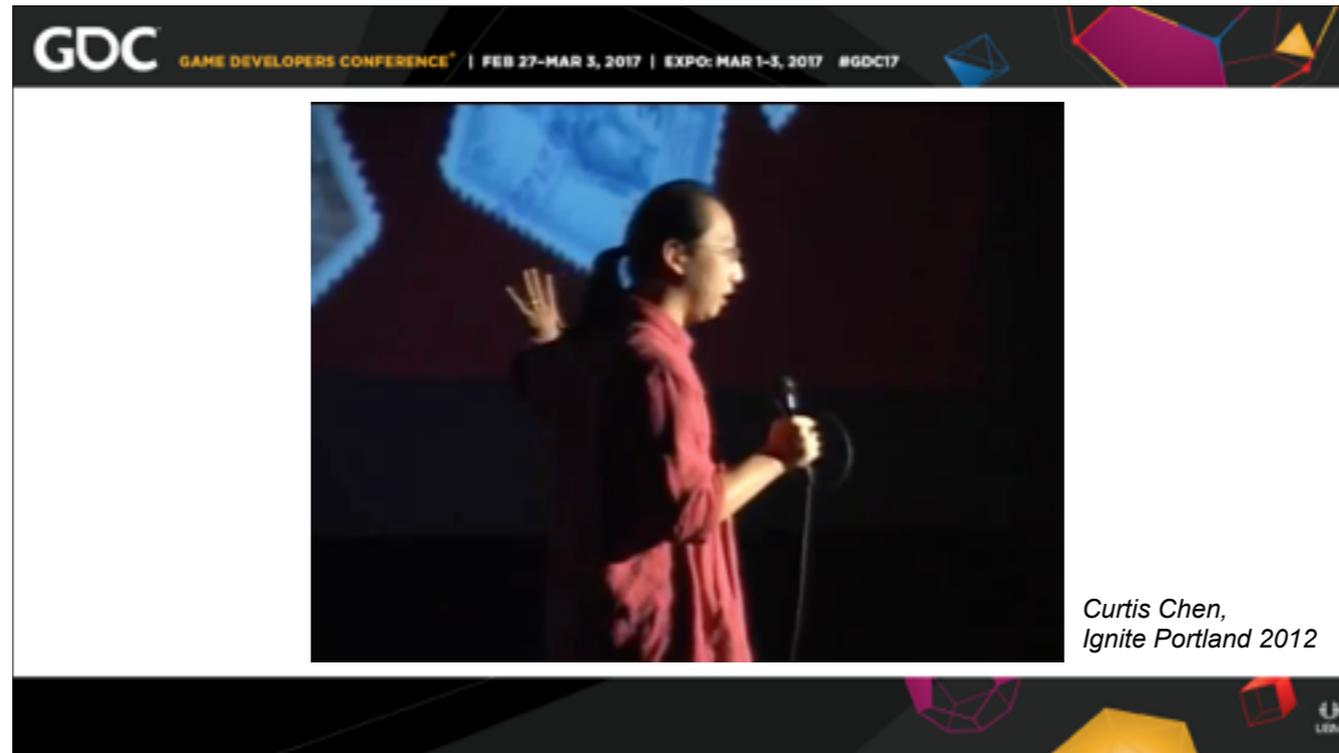
Enter escape games.

As you might imagine from seeing the Flash versions, escape rooms are real-life games in which groups of players are locked inside a room. They have to investigate, poke around, uncover clues, solve puzzles, sometimes even physically escape from restraints, all while racing against a clock.

They started out in Europe and Asia, with SCRAP Entertainment opening in Japan in 2007/8, and then in the United States in 2012. (<http://www.marketwatch.com/story/the-weird-new-world-of-escape-room-businesses-2015-07-20>)

As I said, these have a lot in common design-wise with theater, haunted houses, museums, and theme parks--there are established best practices that we can see there, as well as in things like video game level design--anything where you're moving people forward in a narrative, directing their attention. One distinguishing factor for escape room games is the use of puzzles, of course, but also the time restraint.

These real world builds are physical manifestations of what had been previously been 2D. And the challenge that escape room designers face is is translating puzzles and components that had been entirely digital, to the physical realm, and for an audience that was probably more used to those digital versions than physical ones.



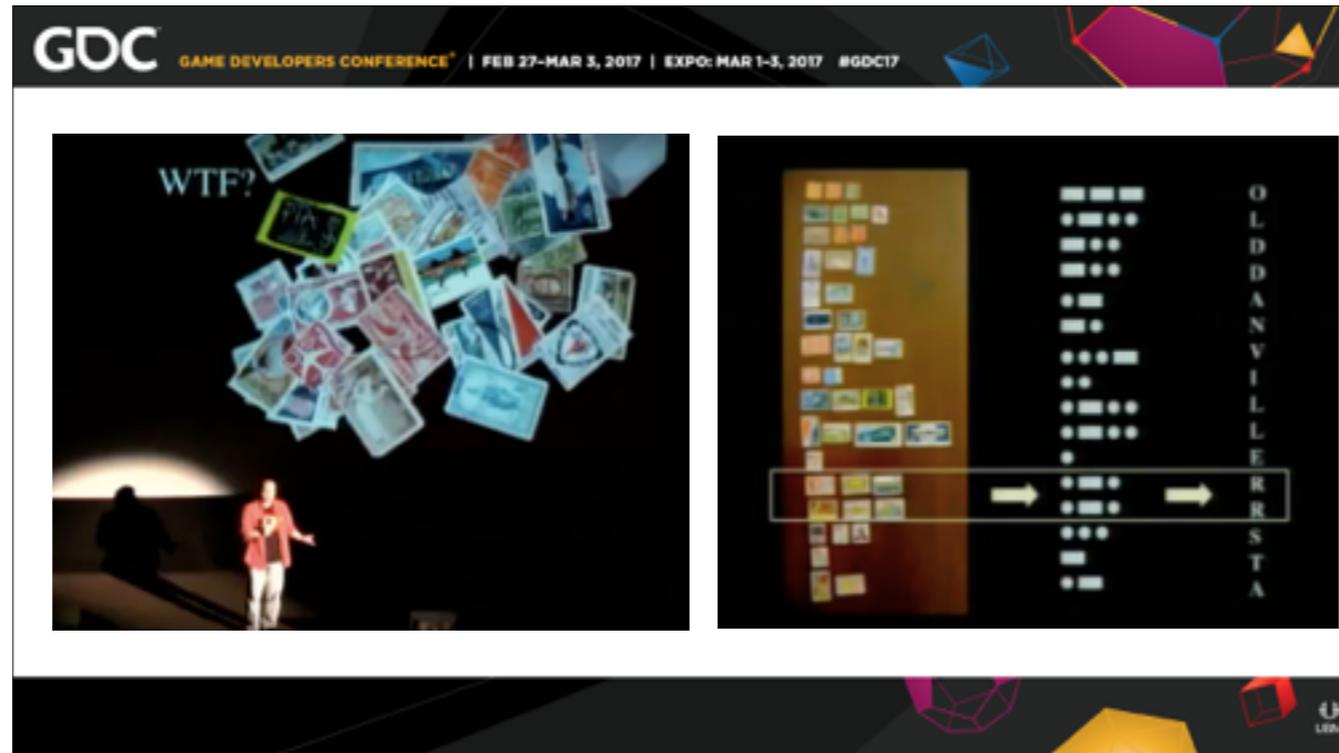
So let's talk about puzzles for a minute.

Ideally, a well designed physical puzzle should be a combination of bodily interaction, cognitive challenge, and subconscious design cues. And to understand how to design one, you have to first understand how a player will approach solving one.

Puzzle solving is an exercise in observation, first and foremost. You must assess exactly what information you have at any given time, and how it might work together with other pieces of info you've uncovered.

Here's puzzle designer Curtis Chen, explaining how to solve a puzzle in 47 minutes.

For this, players were given an envelope that contained a big pile of postage stamps. Nothing else. No instruction, no guideline. They know that it's self-contained, that all of the information that they need will be in or on those stamps somehow. So here's how an experienced puzzler would approach that challenge.



Morse code! That's so cool. And that solution, when translated, gave those puzzlers the next location to go to, to pick up the next puzzle in the challenge.

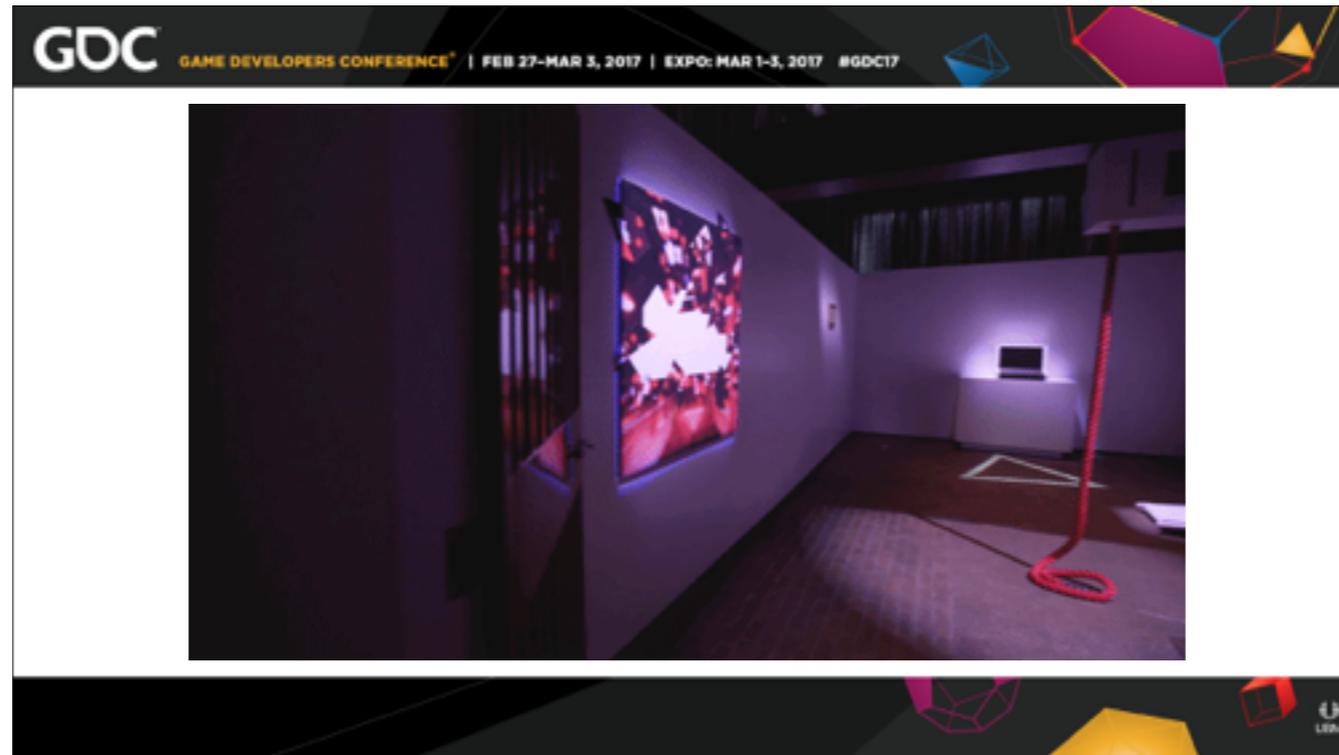
And that's a great example of the steps that a player should be going through, how they're mentally and physically engaging with the game pieces, in order to solve it.

Assess. Organize. Look for patterns. Determine what information has or hasn't been used. And assess again.

A good puzzle: tells you how to solve it, inherent in its design

A good puzzle is also adjustable in difficulty by adding or reducing information

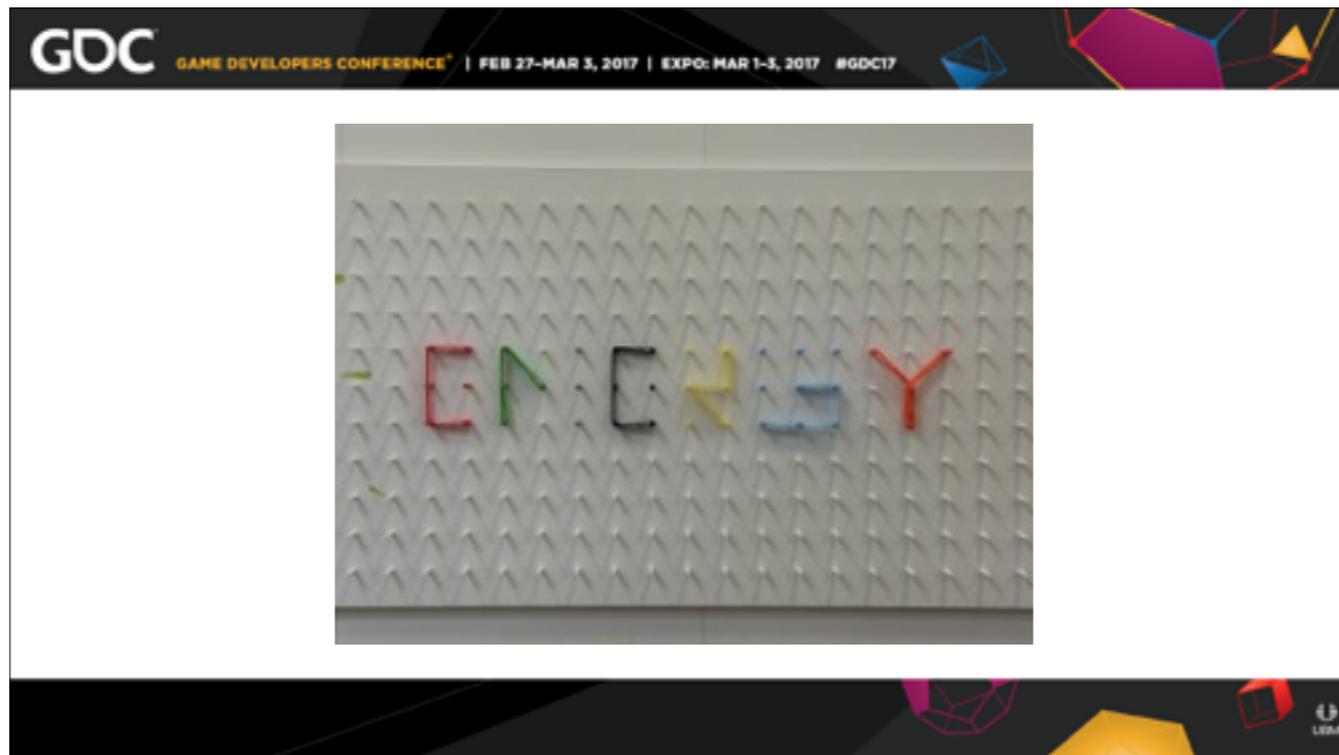
So, knowing that's how a player is going to approach solving a puzzle, here's how one is constructed.



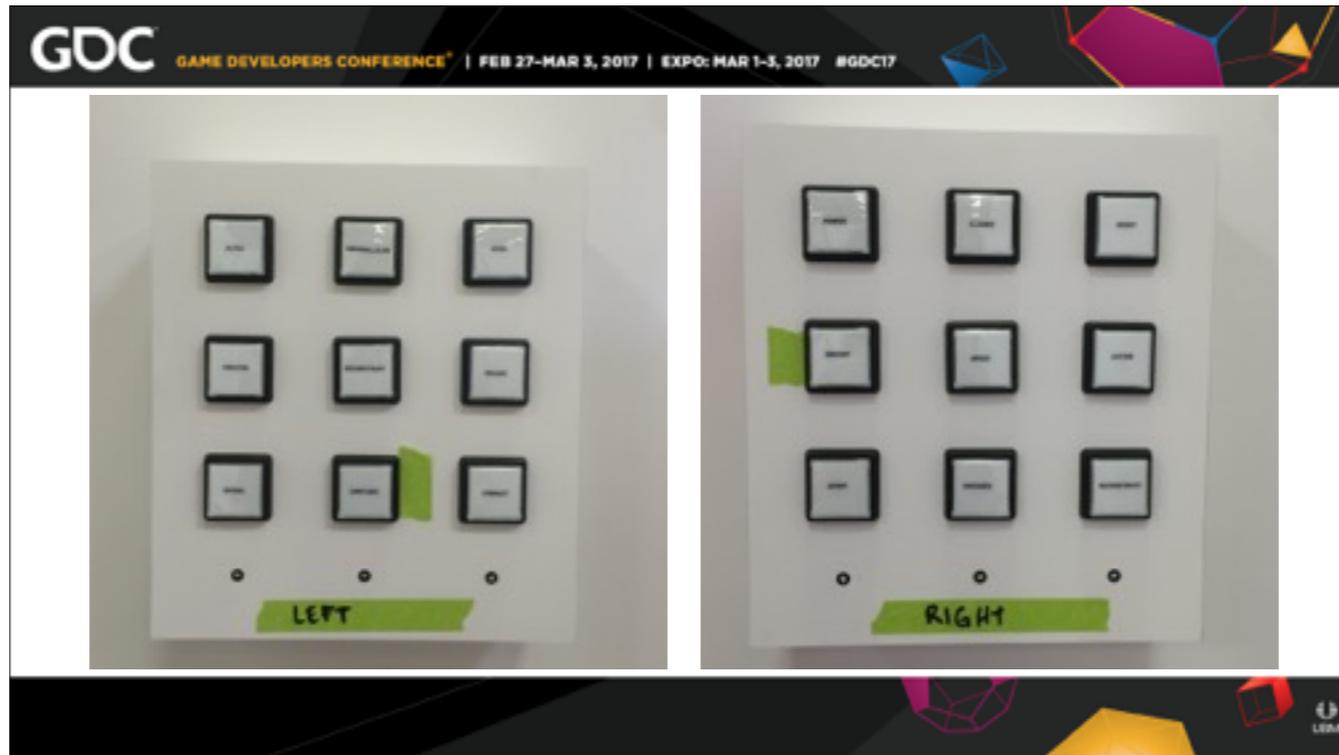
I'll walk you through a puzzle I designed for an athletic shoe company. The puzzles for this needed to be physical, incorporate teamwork and cooperation, speak to the brand messaging, and also ideally utilize physical components of the shoes or other exercise equipment.

For context, there were a variety of puzzle types in the room that players had encountered before. Some that required physical tasks, some that required connecting the dots, some that required using phones to look up information, some that were based on visual perspective.

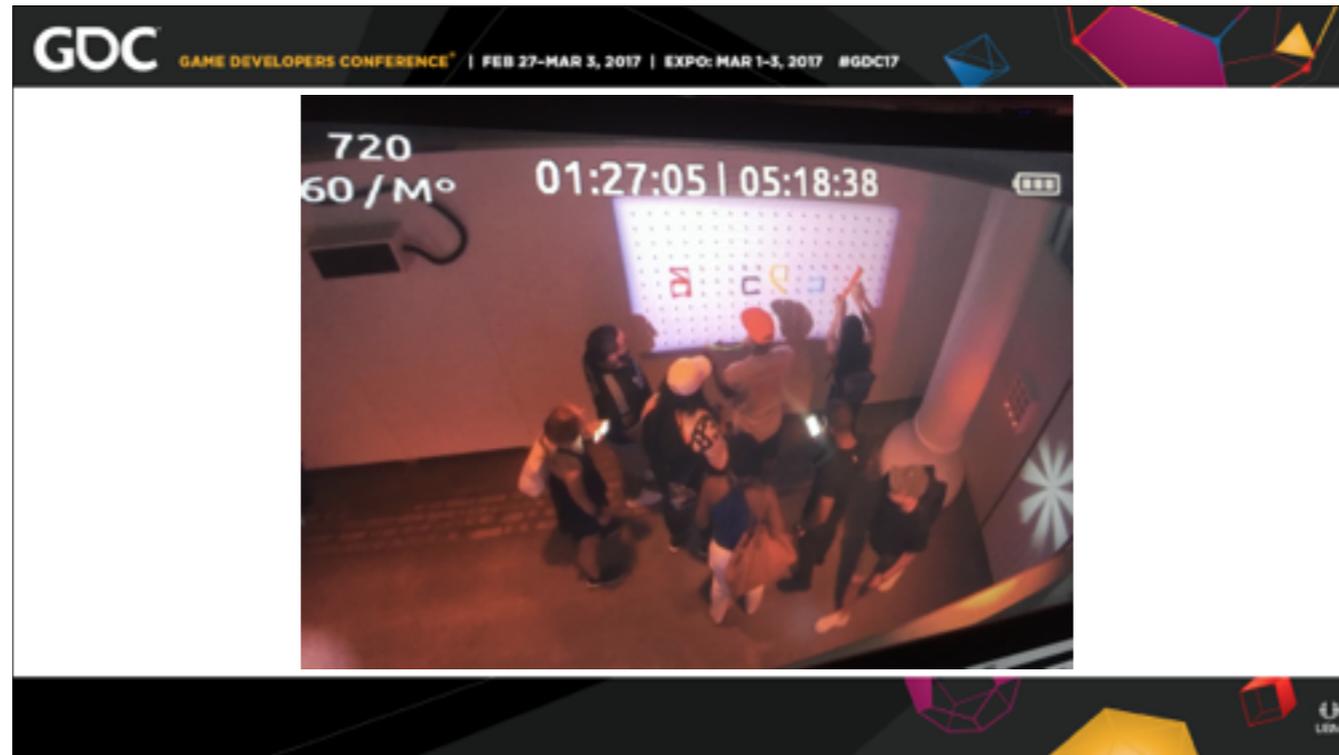
And this was for a party that people were invited to, not knowing there would be a puzzle room. Probably most of the people who were going to be there had never been in one before. So the puzzles needed to be simple enough that they didn't require a lot of instruction, while still being fun.



For this puzzle, players encounter a huge pegboard, with colored pegs on it. They get these stretchy resistance bands from another puzzle, and some are already arranged on the board itself. The color of the band is the color of the pegs.



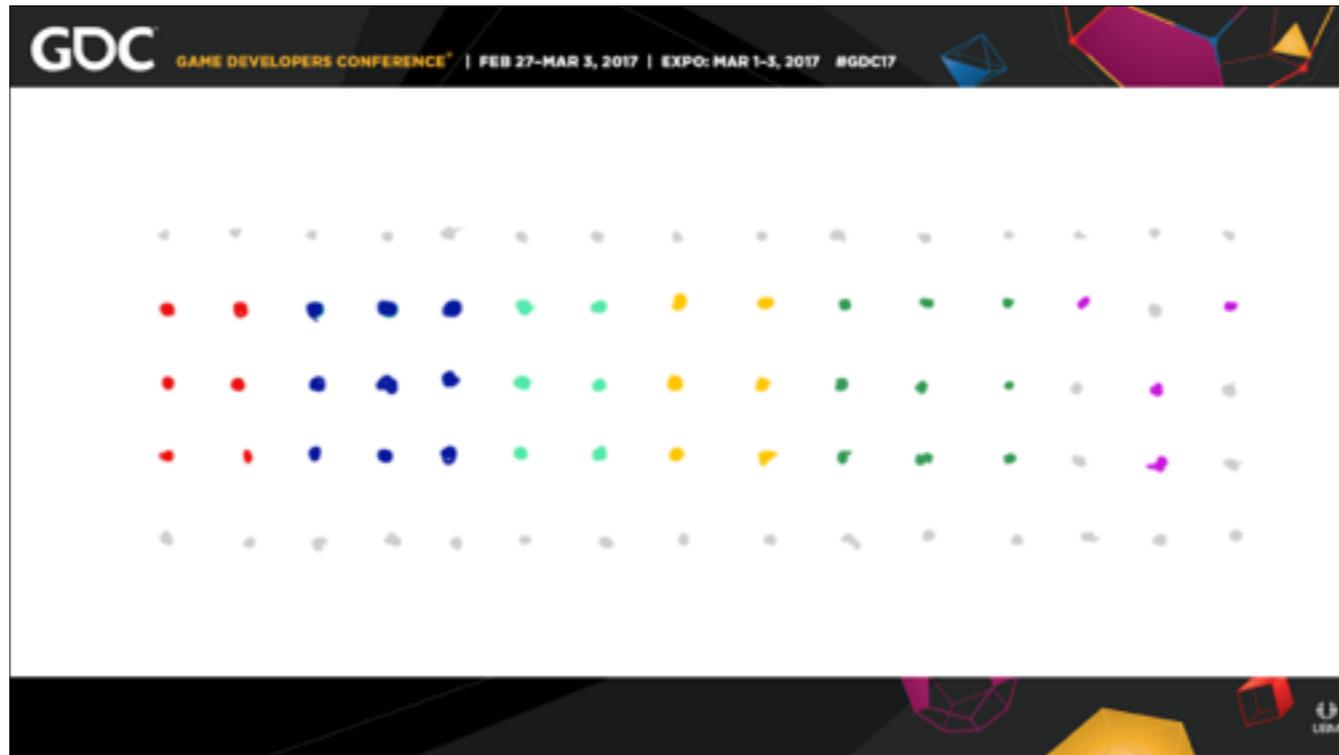
Nearby, they have two boxes, with buttons that have words written on them.



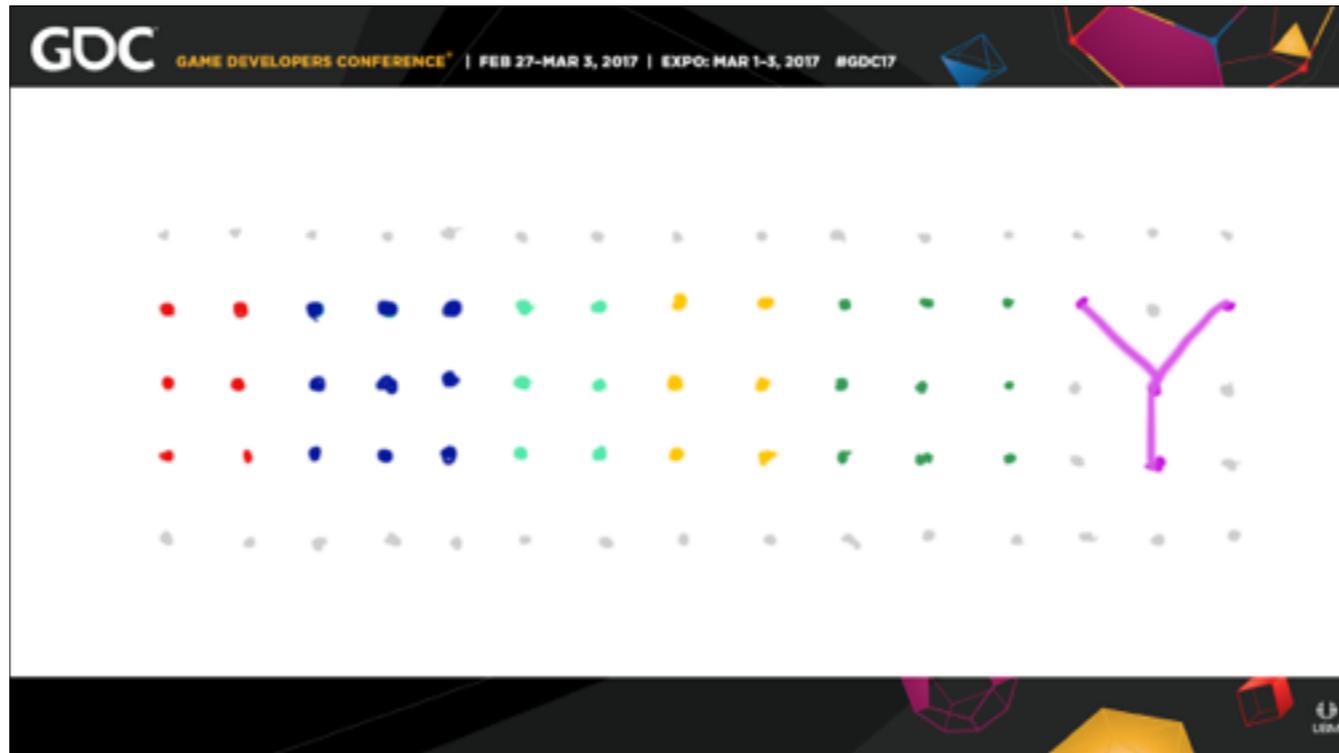
In the room, that looks like this. You can see the button box there on the right, they're on both sides of the door.

The solution is to get a keyword from that pegboard, which is on one button box, and a keyword from another puzzle, which is on the other one. Pushing both buttons at once requires coordinating with your team, and that's what opens the final door.

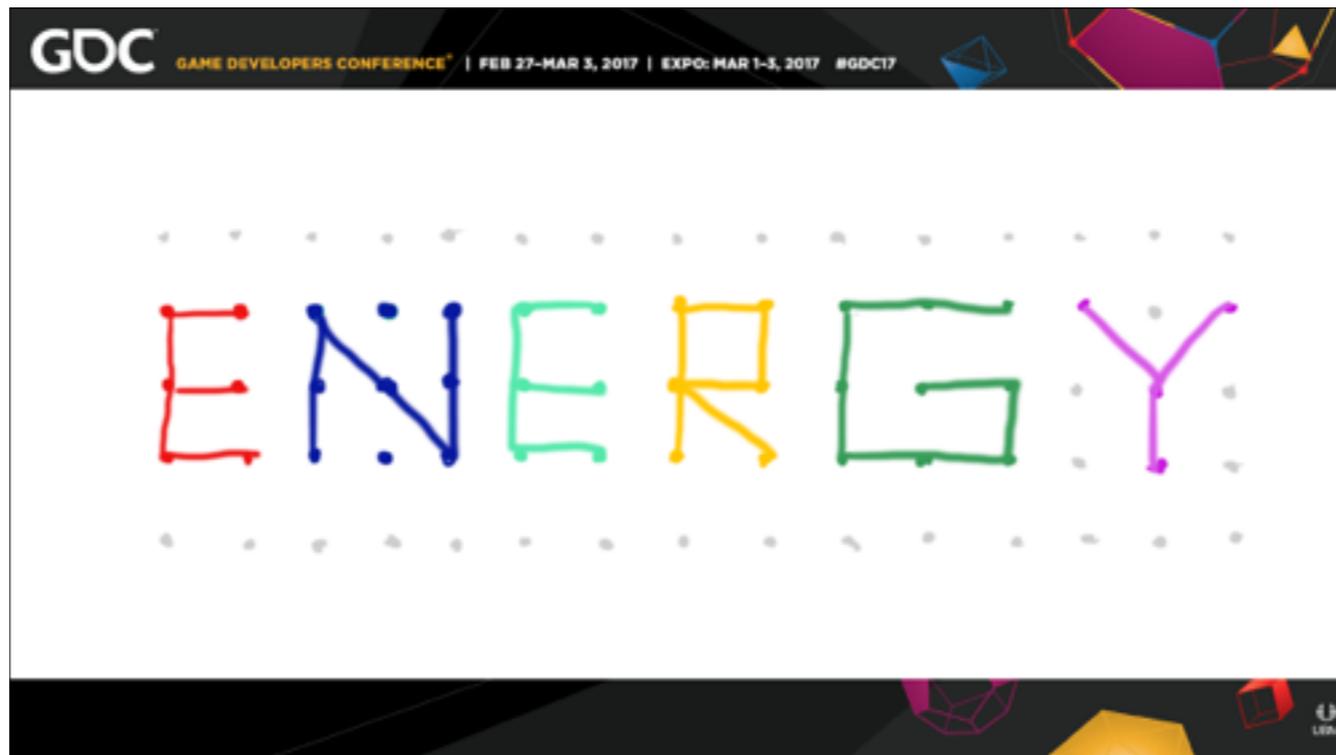
So as I said, when players encounter that board, it already has some shapes of letters on it. That's because if we didn't provide any information at all, it would look like this:



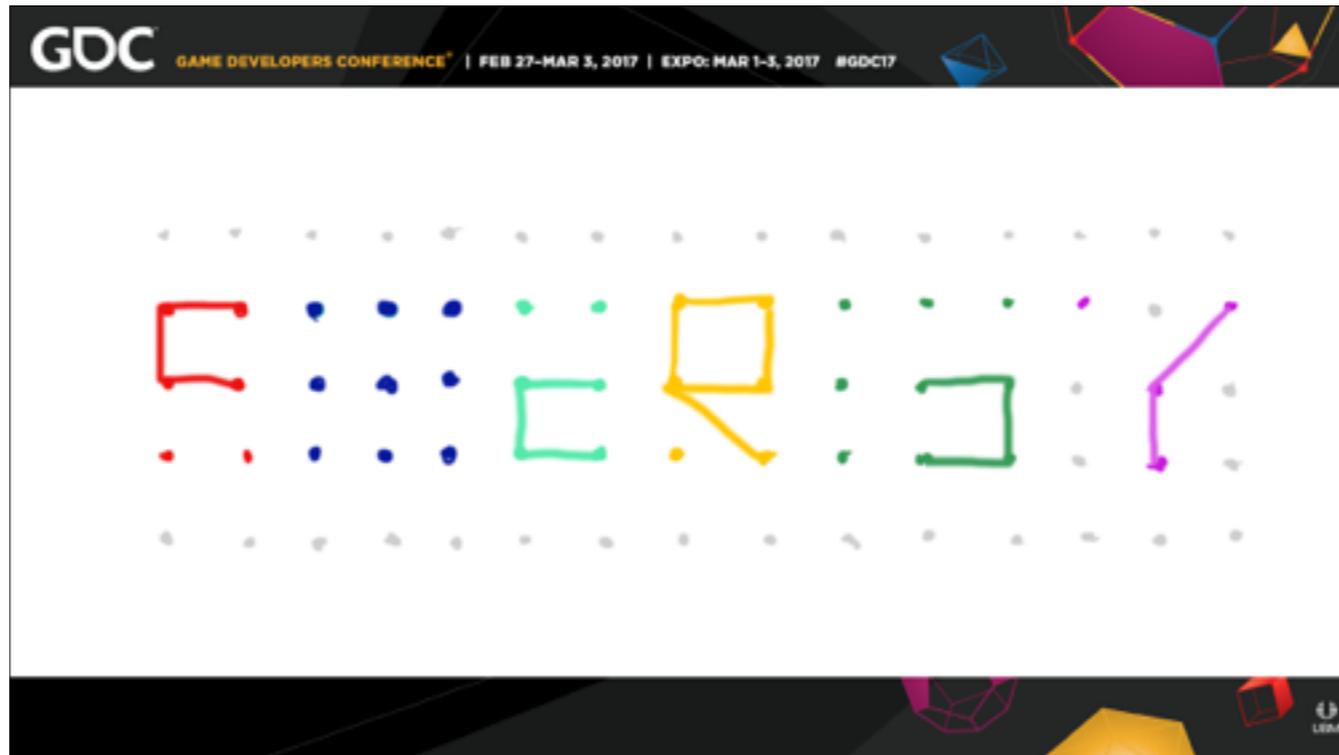
Colored pegs only, no information at all.



I mean, technically that's not true. You can sort of make out the shape of a Y.

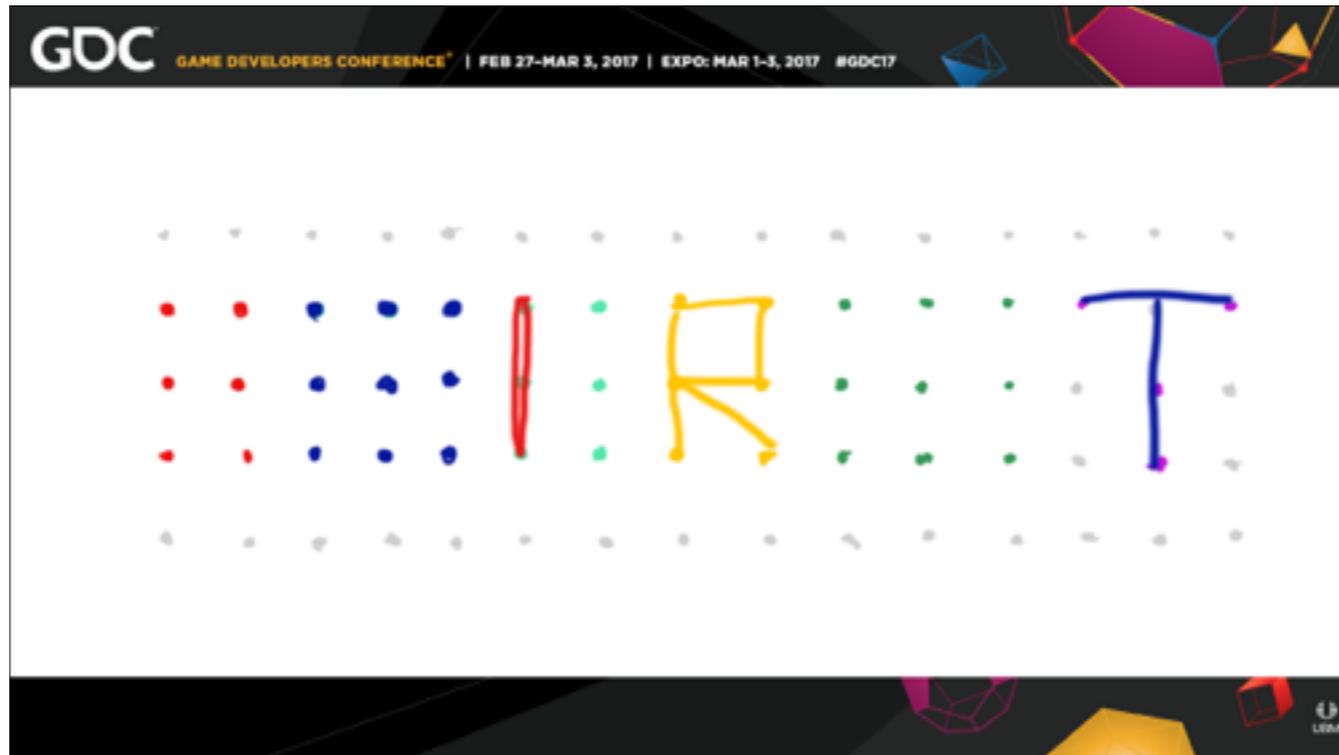


The solution word for this, by the way, is "ENERGY", and there's only one button on the box that ends in a Y. So if you were really, really stuck, you could maybe make that connection. But that's not actually very fun.



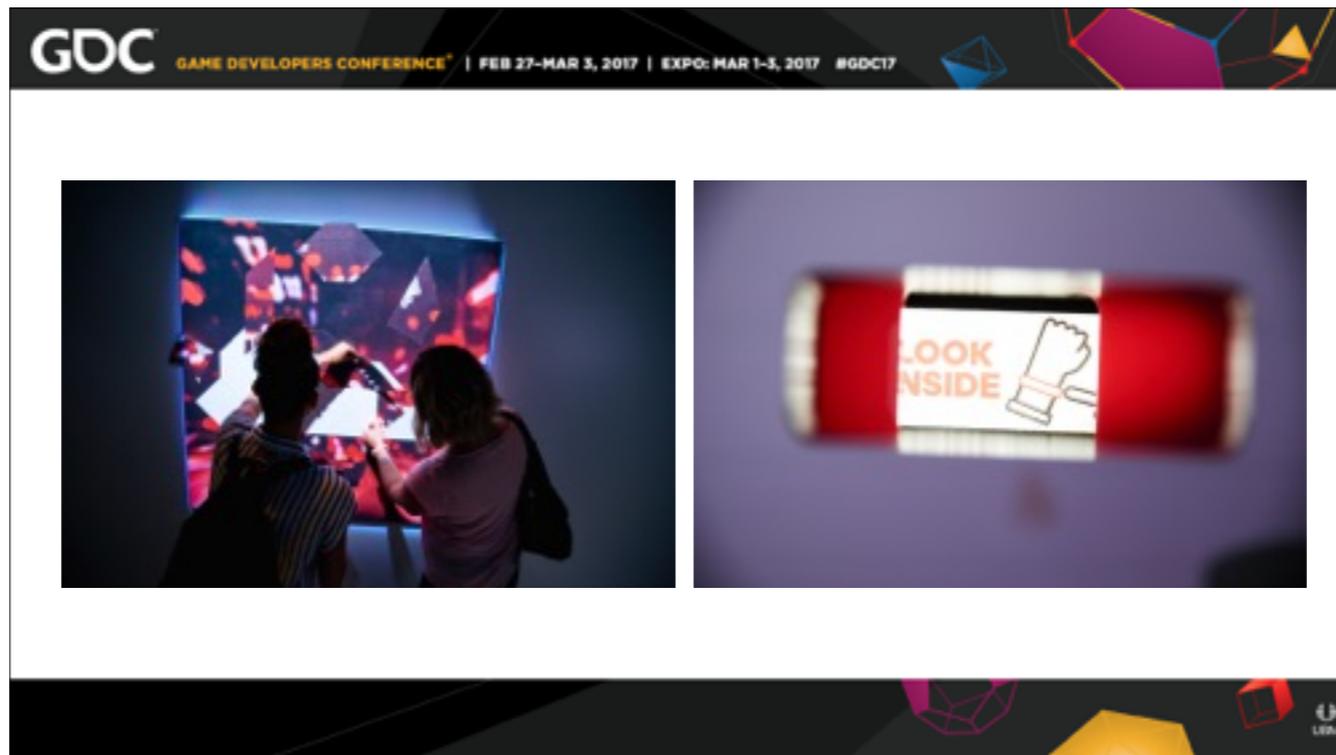
Here's the arrangement people actually encountered, when they came into the room for the first time.

It's suggestive of some of the more complicated letters, like R, but still isn't super revealing, if you're in a hurry.



Here's another example of how that board could have been arranged, to make it more difficult. Because the R is arranged on the yellow pegs, using a yellow band, you're telling them to match colors. But by putting wrong-colored bands on wrong-colored pegs, like this I and T, you're throwing them off in a serious way. And to arrange it in a way that suggests an alternate six-letter word (which here is SPIRT), you're priming them from the beginning to see only that one word.

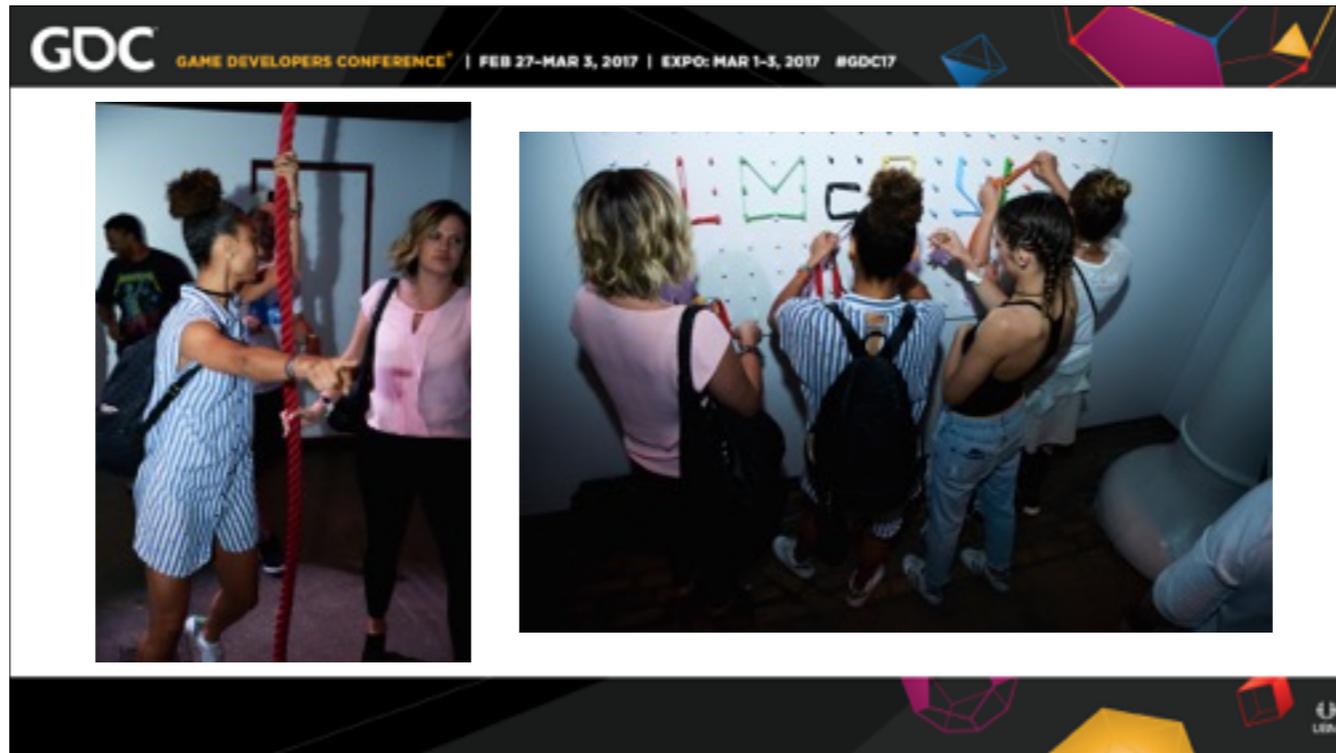
Since this room was built for people who had never encountered a puzzle room before, and who arrived at the event not knowing that they were going to be in a puzzle room, it couldn't have this many layers of encoding. Because in that context, it wouldn't be fun. But in a different room situation, this could be a pretty good challenge.



So, one thing to keep in mind as a puzzle designer is to always consider what your player knows, and what they need to know.

And part of that is an inherent understanding of how interactions are supposed to work. In Monkey Island, it's pretty hilarious to try x with y until you finally figure out how it fits, and it makes sense with the comedic tone. But in a situation where you're racing against a clock, suddenly being stumped in that way is much less appealing.

In our escape room, we always tell people that having fun is the goal--nothing in there is meant to thwart you, or prove somehow that you're bad at puzzles. You want to always be building an experience that lets people challenge themselves, first and foremost.



But there's a long way to go before we even reach that point in any design.

When designing an experience, there are many questions we need to ask ourselves up front. One of those is:

What are we asking the player to do?

In a real life space, it's not quite as simple as, "Run through this level." Because they might be, quite literally, running. In a real life escape room game, you're usually standing the whole time.

There's a major physical demand when you're in a real space, and the same applies to room scale VR in particular. You may be asking people to stand, crouch, crawl, or wave their arms around. Even just standing for an hour is very tiring. (Especially if you're giving a talk while you're doing it.)

In escape rooms, we have to be mindful of the physical strain on the player. So this is the first lesson for VR: even though it's a world with infinite design possibilities within that headset, there are limitations on the physical realities of what we can ask the human body to perform.

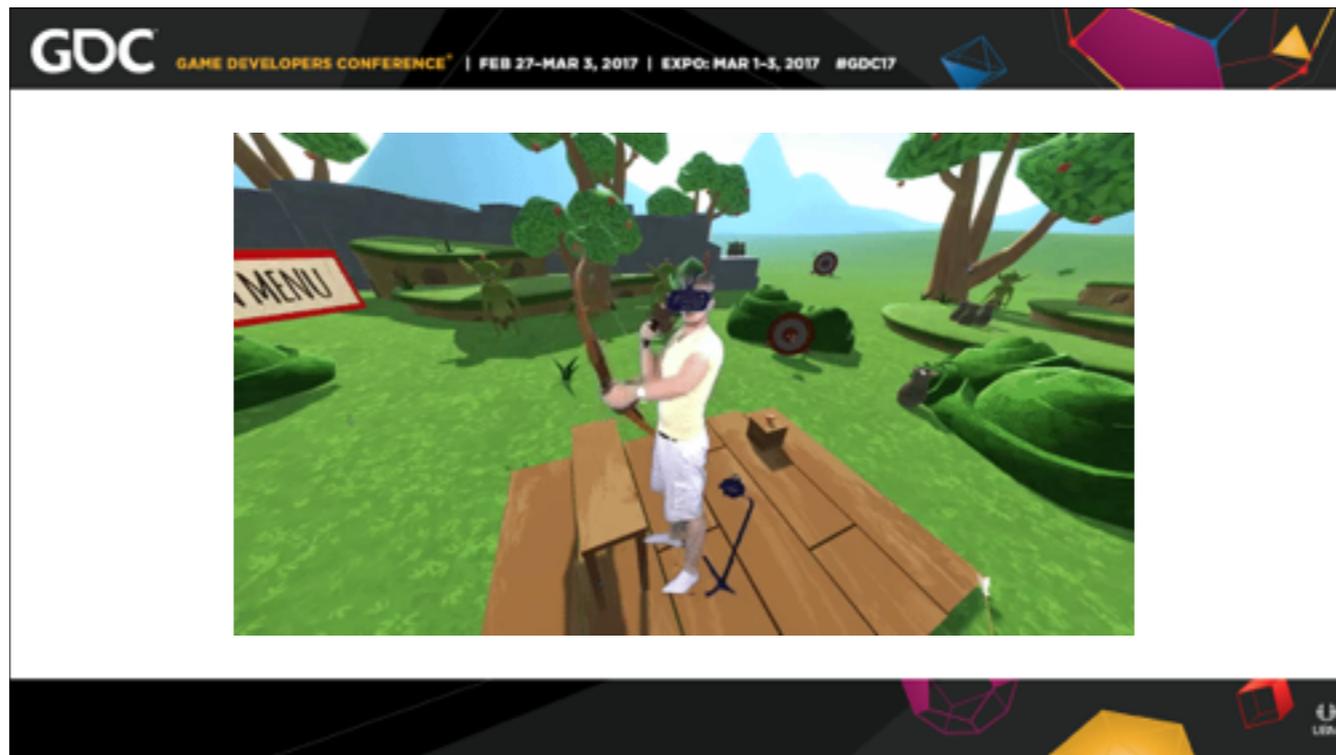


The movie *Minority Report* is one of the best and most obvious examples of this. In the film, Tom Cruise needs to comb through lots of evidence of a crime, which he throws up onto a huge, transparent screen, and controls with a series of complicated hand gestures.

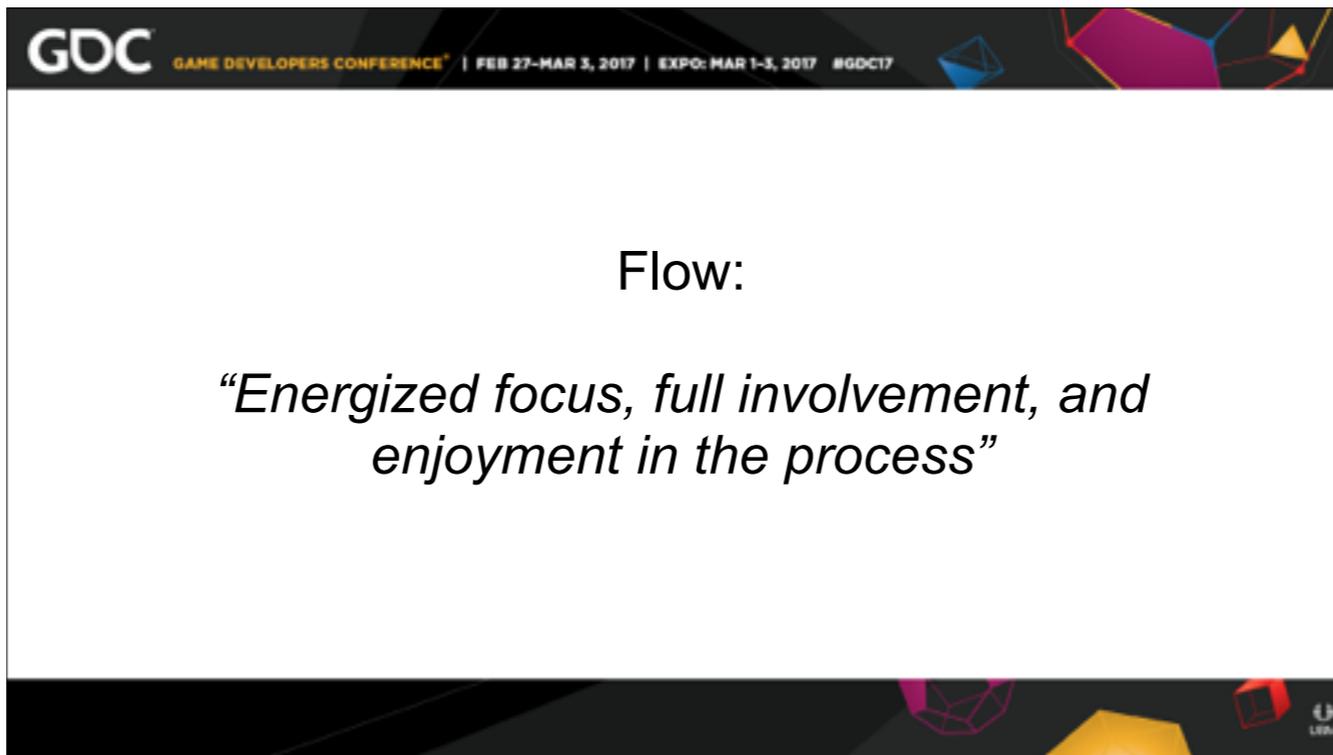
It looks amazing.

But it's not real, and frankly should never be real. On that movie set, Tom Cruise had to rest his arms between takes. If a man as professionally fit as an action film star gets tired doing that, there's really no hope for the rest of us.

That fatigued condition is known as "gorilla arm", by the way. It's why you'll generally only encounter vertical touchscreens without support for interactions that are short term, like a map in an airport, or at an ATM.

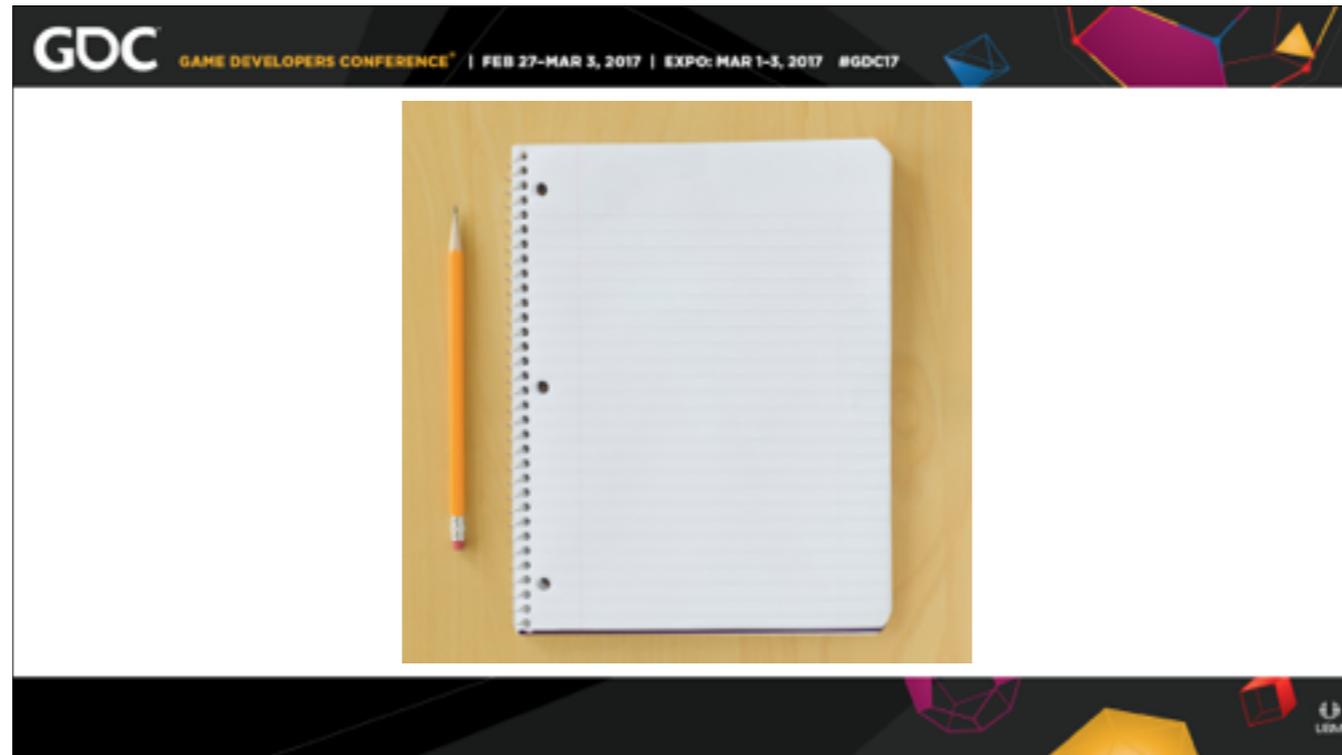


In my own case, when the Valve Lab came out, I spent a long, long time playing the archery and spaceship arcade games. And when I came out of those sessions, my arms really hurt. I was having so much fun playing that I totally forgot the demands on my body, and it was only afterwards, when I took off the headset, that I was reminded in a very real way.



But that's actually kinda cool. Something really special happens to people's bodies when they set foot in an escape room. And it's something you see in other fields of experience design, like haunted houses and immersive theater. The lights are dark, players don't know what to expect. In that situation, you're basically entering survival mode. Your heartbeat increases, your adrenaline rises, and your focus narrows.

You're entering the flow state.



In a non-game context, inducing a flow state from scratch, like if you're a professional athlete or a creative, can be pretty tough. It requires a lot of practice and training, and showing up when it's difficult to do, to be able to get yourself into the zone on demand. And sometimes, as any creative person knows, it just doesn't happen. So being able to induce it for novices through environment and gameplay is, in a way, a gift.



There's another side to this, though. Emergency responders work in pairs when they're in the field, because it's so easy for the world outside them to fall away completely, which can put them in danger; they might not see things happening in the environment around them. Or they will work themselves into a state of exhaustion, simply because they don't notice that time is passing.

Time dilation in VR is a real and potentially dangerous problem.

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It was a tower defense game ... I know those are addictive on iPhones, it was a fairly simple tower defense game, it just seemed like, hey, i’ll just go in here, pop in and have a little fun, and before I knew it, the whole day was gone.”

- Karl Krantz, *Voices of VR* podcast with Kent Bye, #311

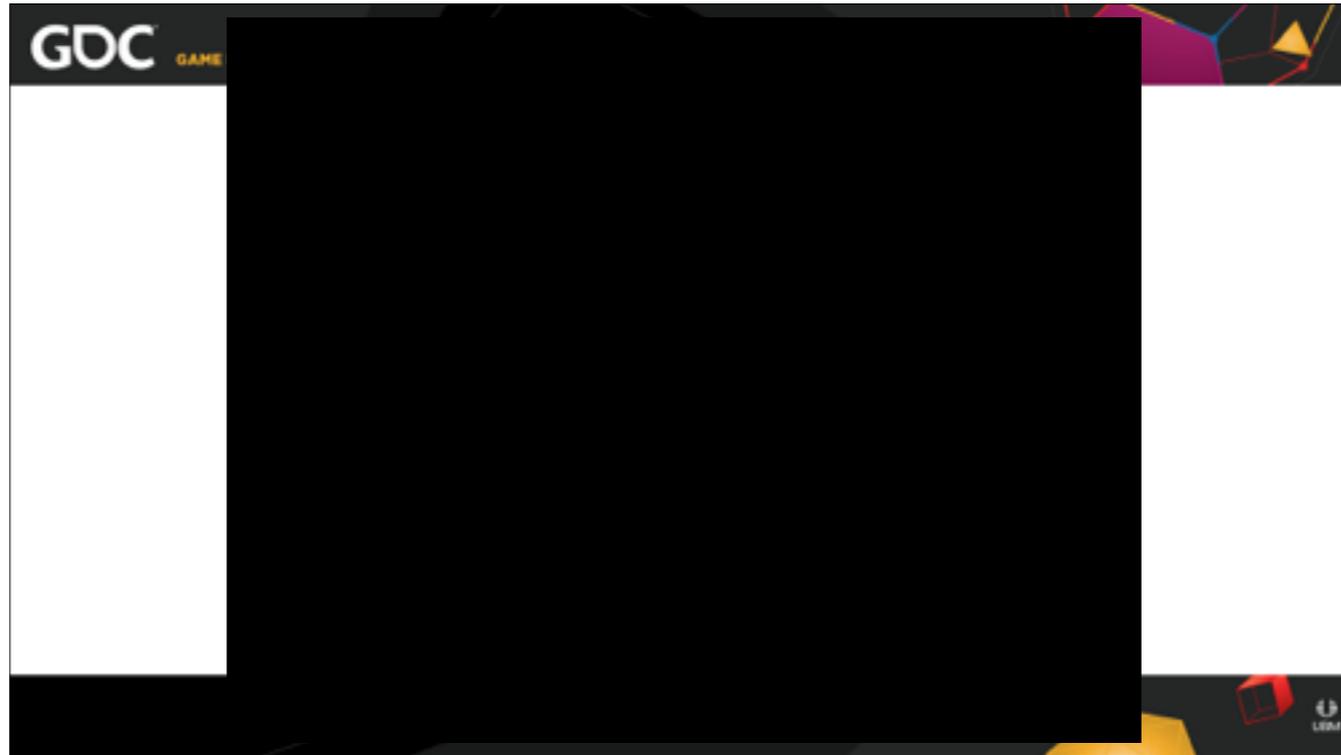
UBM

This is a quote from the Voices of VR podcast by Kent Bye, which is an awesome podcast that I highly recommend listening to.

“I thought I played for three hours, and came out and realized I had been in there for 12. I’ve had that happen a couple of times.”

This person is a member of the VR community, he’s an early adopter, he understands the technology and design. And even for him, he can lose time. That’s a little scary.

In escape rooms, you have a timer, you’re entering into the experience knowing how long you’ll be there. But in VR, you have no external cues to indicate how much time is passing. So we really need to be good stewards of the flow state, when we’re working to deliberately induce it in people.

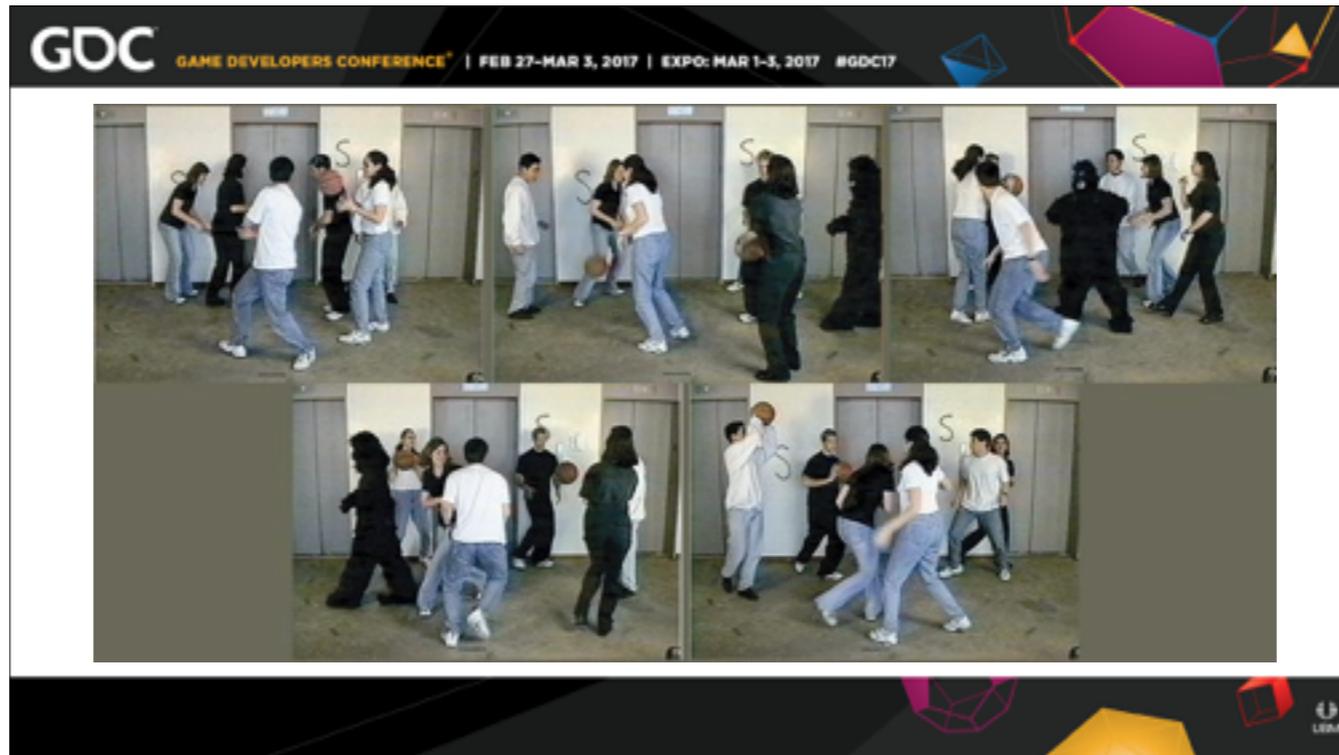


However, that narrowed focus from the flow state can also be useful and positive when it comes to design.

And other elements of the human brain are less about the responsibility you have for the player's body, and physical needs and limitations, and more about manipulating them for fun. That's both your fun, and theirs.

Let's talk for a minute about what's happening to the players mentally when they're in an escape room. We know they're in survival mode, they're excited, we've used lighting cues and design to bring them into that flow state. What does that mean to design for that brain state?

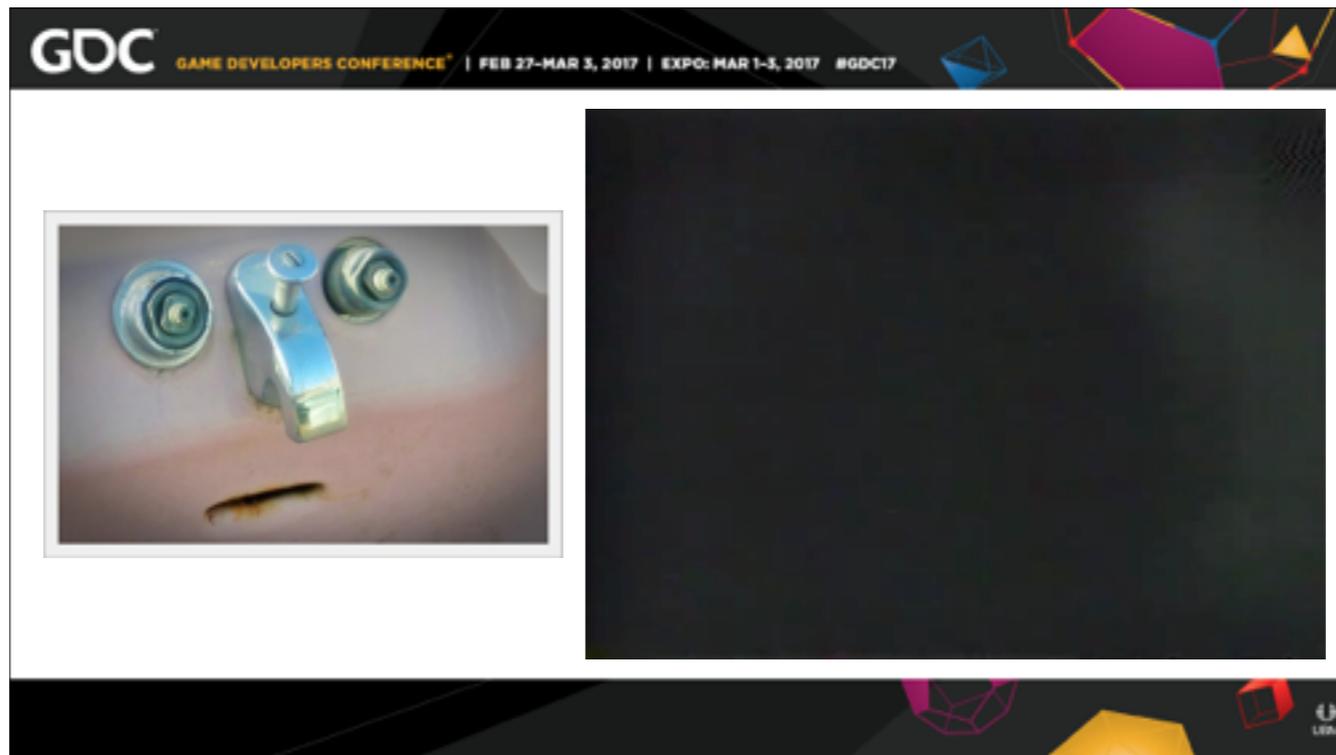
I'm going to show you a video. It's very important that you follow the instructions on the screen very carefully.



That's more generally known as the Invisible Gorilla Experiment. And it's a great example of how brains and bodies do really weird things in concert when they're in stressful situations. It's that survival mode thing.

And you see this play out in escape rooms all the time. In ours, there's a siren that blares whenever a hint is sent via a screen on one wall. You'd think it would be pretty hard to miss, right? It's loud.

But players miss it all the time, because they're so deeply engrossed in whatever they're working on.



Another funny lizard brain survival mode thing is that we loooove to look for patterns in things.

Does this sink look worried to you?

Yeah, me too.

Playing now is the Heider-Simmel illusion, which is a demonstration of how people will come up with a narrative for something because it's so easy to.

Long story short, we love to read too much into things.



So we're so focused that we're actually distracted. We're processing so much info so quickly that we're seeing things that aren't there.

And that's exhausting. It's a real thing called brain fatigue. We only have so much processing power in there before we need to recharge the batteries. And that power is being spent very quickly when you're throwing a lot of stuff at people.

[It's why, when you're buying a car, you're given tons of customization options right up front. All the stuff that's expensive by default comes later, when you're too tired to fight it anymore.]

Inside the Brain

- They're deeply focused, to the exclusion of other information
- They're quickly searching and processing, to try and make connections
- And they're getting mentally exhausted by what they're seeing and doing

So that's what's happening in people's brains:

They're deeply focused, to the exclusion of other information

They're quickly searching and processing, to try and make connections

And they're getting mentally exhausted by what they're seeing and doing

Luckily, there is a huge world of design principles and best practices to help us deal with these brain quirks.

- Enjoyment
- Engagement (mental immersion)
- Spatial presence
- Transportation (immersion in a narrative)

- *“The better the story, the bigger the serving”, Lyons, Tate, Ward
2012*

And they also help us to answer another, larger question: what do we want people feel?

“When we go to see a movie or have an evening at the theatre, we instinctively know to suspend our disbelief before we sit down. We leave a lot of what we know about the real world at the door and allow ourselves to be completely transported by the events on the stage and screen.

If the stage curtain closes and we are told upon its reopening that 10 years have passed, we happily buy into the notion. If the screen fades to black and a morning scene magically turns into a night scene, we don't even think twice about it. Unfortunately this is not true of physical places.”

- *theme park designer Don Carson*

Our brains are always searching for reasons to identify something as strange or out of place--it's a survival mechanism. So you have to play with the level of suspension of disbelief that people are willing to provide, as well as speak to them unconsciously in how your environment is set up, and how they're performing in it. And let me tell you--building real life things is hard in and of itself. But even though we instinctively are searching for odd things out, people fundamentally want to be entertained, so they're also very forgiving. They WANT to be drawn into the illusion.

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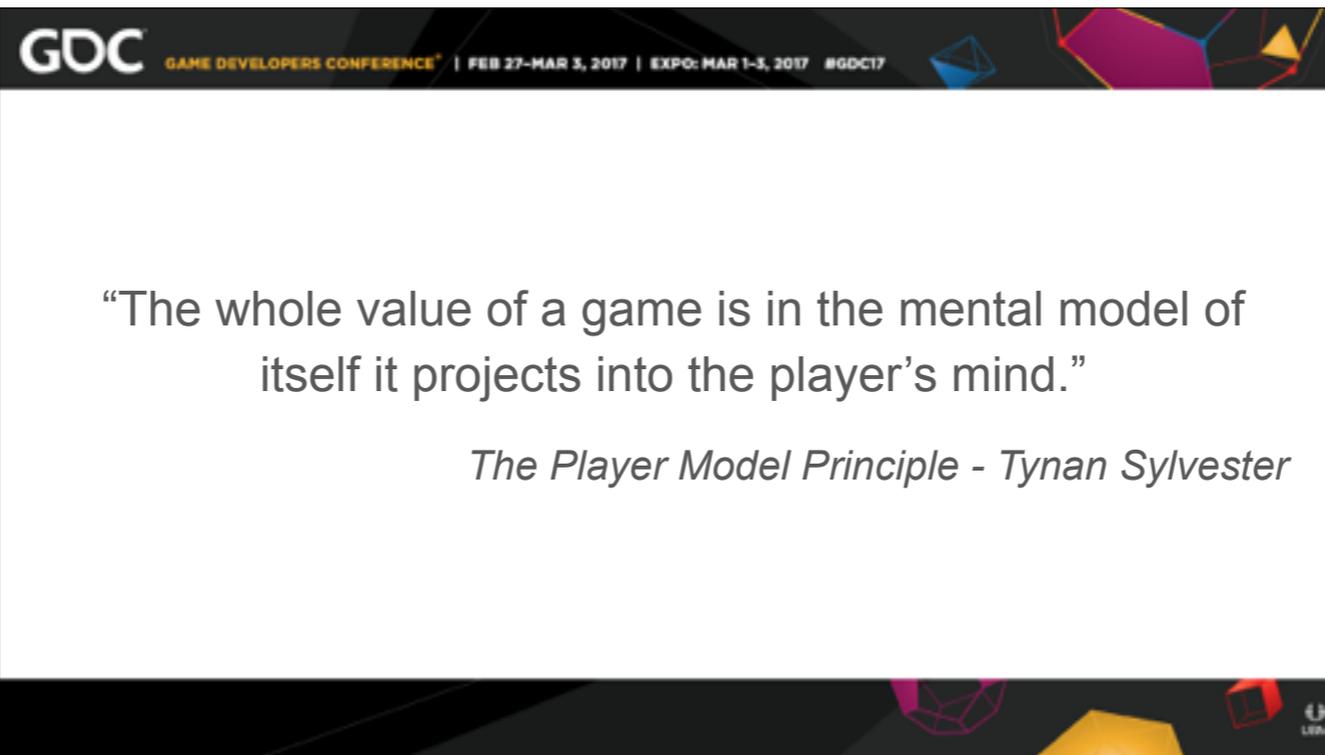
  Follow

Yearly reminder: unless you're over 60, you weren't promised flying cars. You were promised an oppressive cyberpunk dystopia. Here you go.



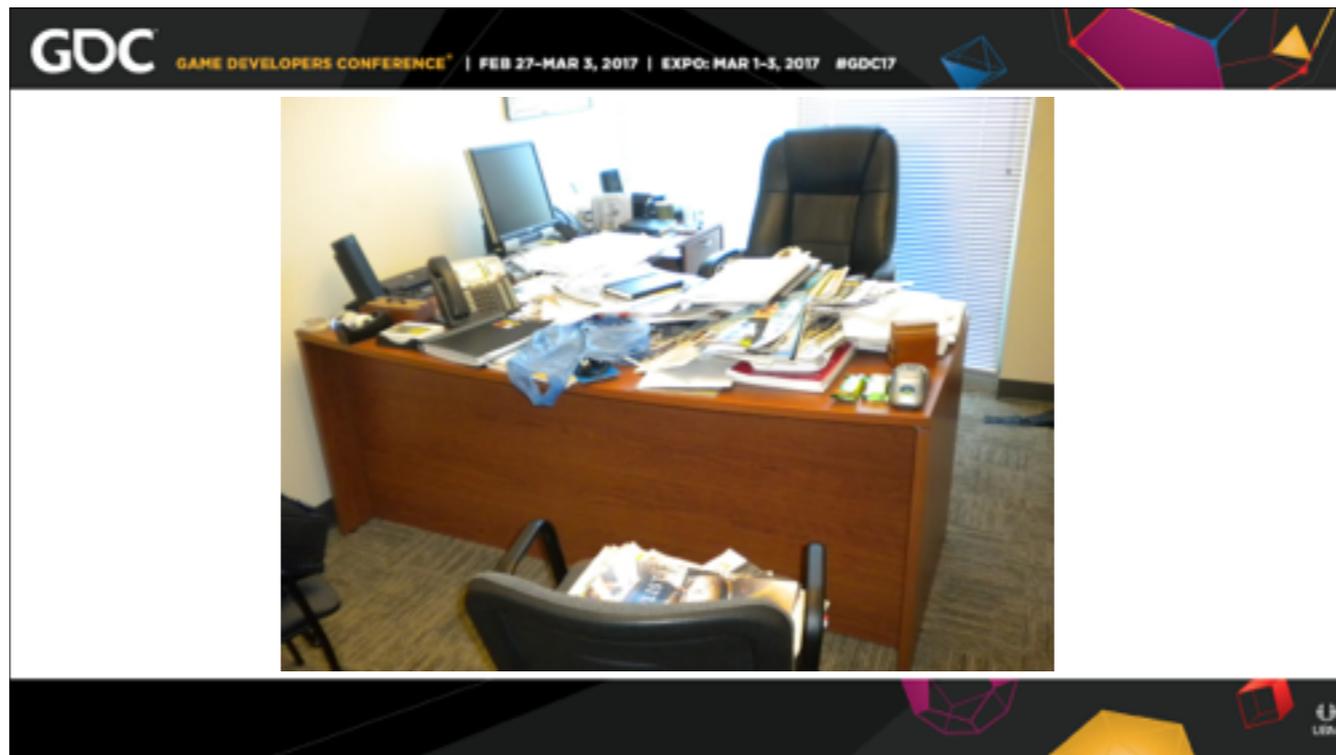
In this context, understanding cognition and processing load guided us in making choices about the environment and what's placed in it, with the ultimate goal of never breaking the illusion for people.

World-building, diegesis, and internal logic as a way to ground people when their cognition and physical capabilities are overloaded

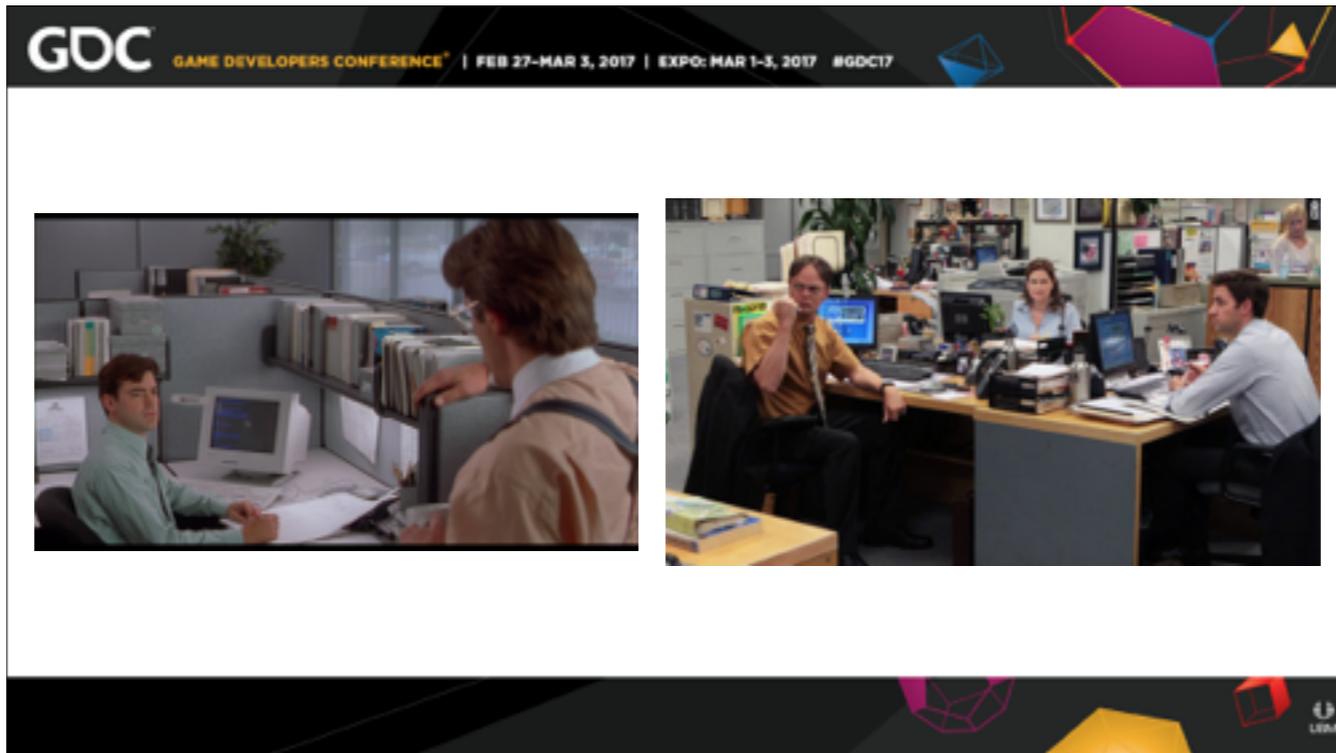


Because you're relying on the players to build the mental model of the world, you're providing as much indication of that world as possible -- so what are they familiar with? This is where the other media -- physical and otherwise -- that shares qualities with escape rooms, comes into play: namely, haunted houses, and movie and theatrical design.

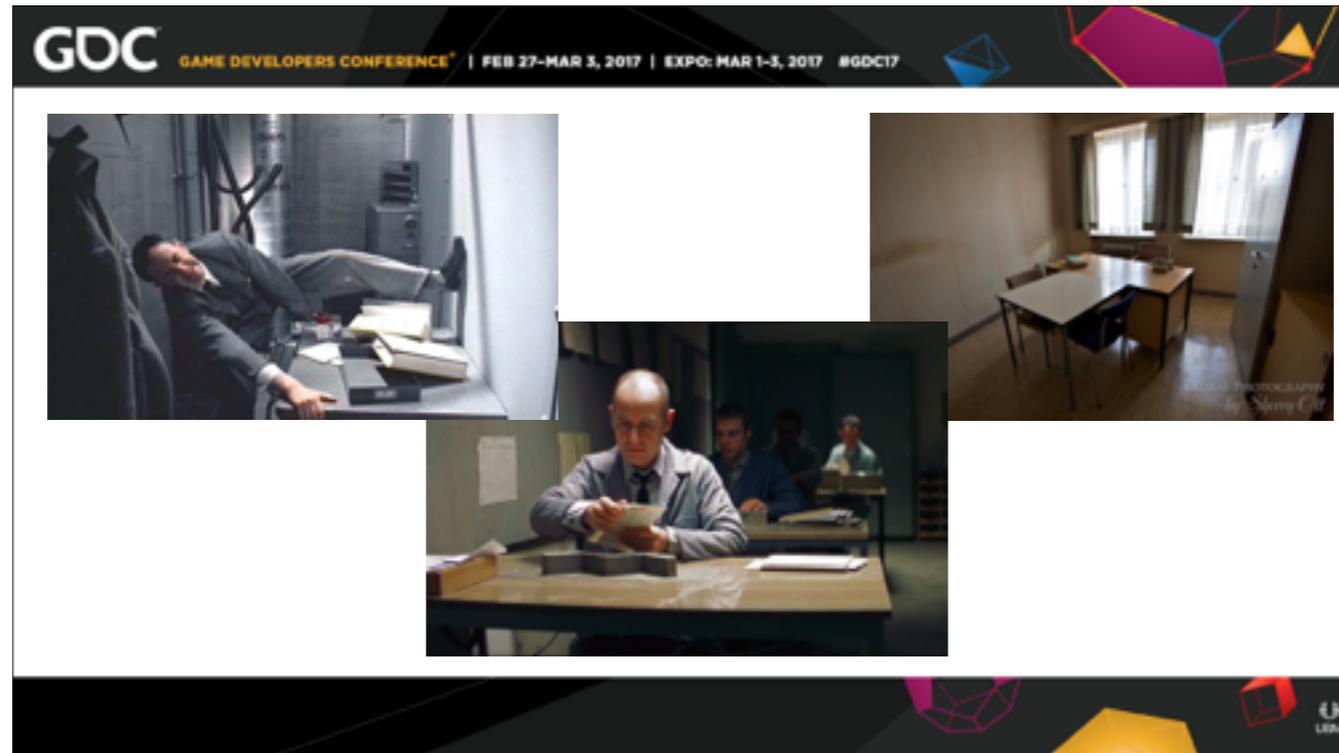
Cinema and television in particular have a language that we're all familiar with -- the use of high or low camera angles to convey power or weakness, for example. But the backgrounds for these, dressed by set decorators and production designers, consistently convey specific notions of time, location, space, quality, character. The way a person has folded their clothes neatly, or kicked them under their bed, reveals a lot about them. Nothing placed in a movie frame is by accident.



What does an office look like, in your mind? Maybe florescent lights, a messy desk, filing cabinets. Probably not too pleasant. It might be better designed, you could have a cool desk, a plant, an office dog. But it's still a place where work is happening, so there's a lot of utilitarian elements and things you gloss over -- cables, mail collection.

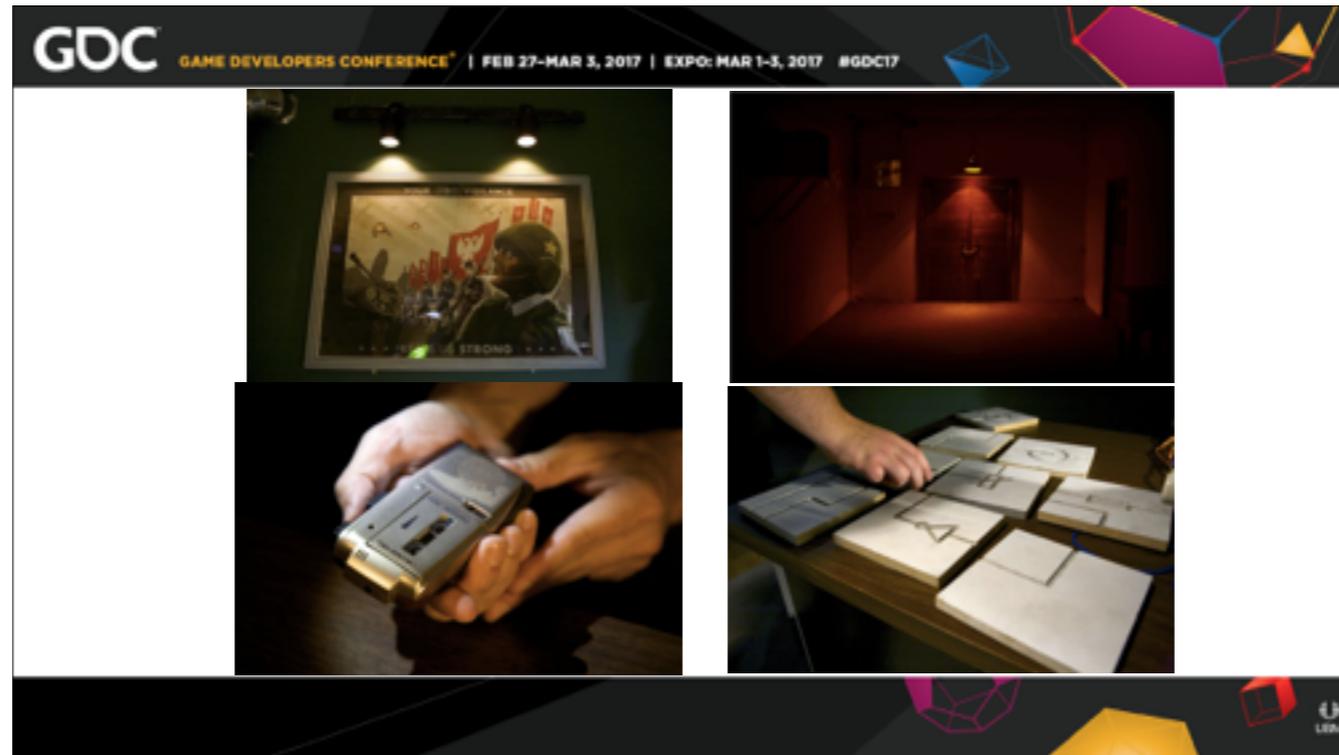


An office in a film or on television is the same -- the workers in the show *The Office* have small, beige desks, littered with stuff, to convey how boring their jobs are.



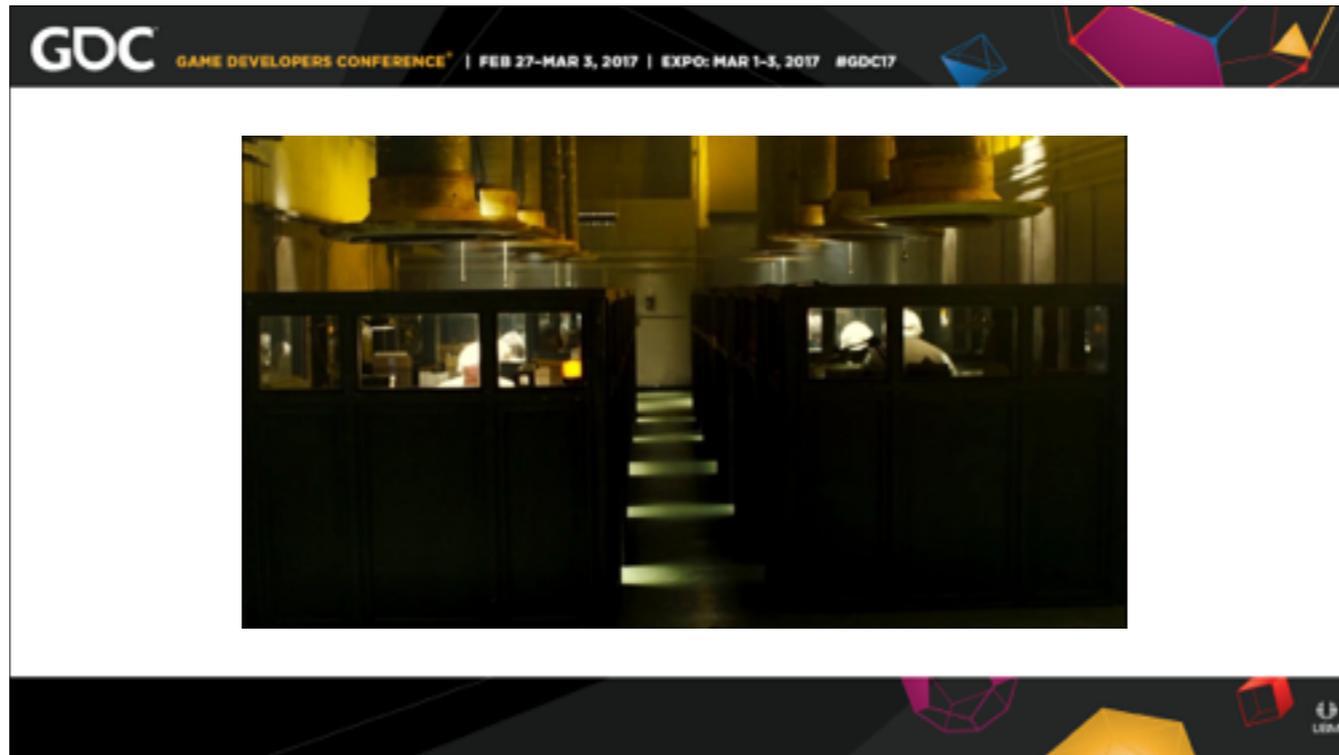
Compare that to some of the offices we looked at for design inspiration, which represent some of the story themes we wanted to exemplify:

Brazil (huge group area, magnifying screen, terrible desk shared through the wall), The Lives of Others/actual real-life Stasi offices (East German utilitarian design, specific color palette, moody).

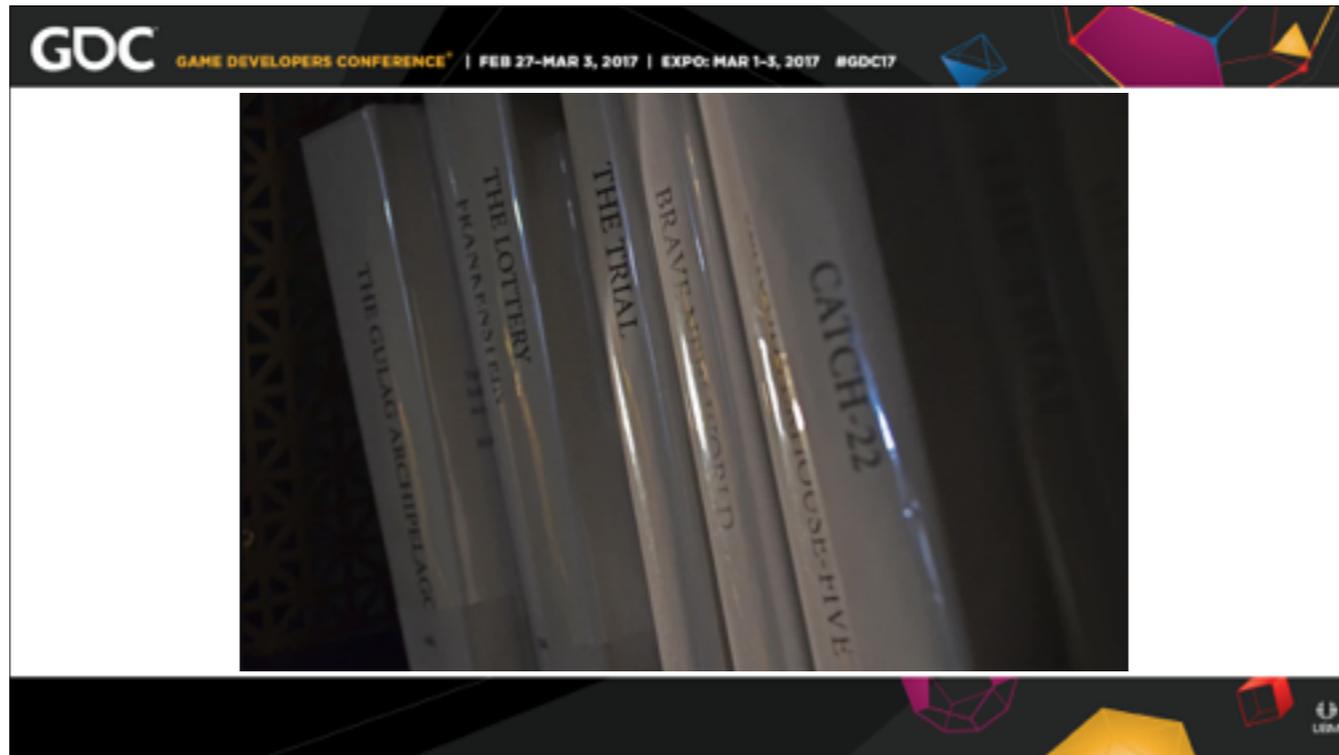


Here's what we came out with--sparse furnishings, theatrical directed lighting, propaganda posters, a bonus duct, banks of technology. We knew that these were the sorts of things you'd likely find in an office of this type and used that to deliberately evoke a sense of: otherworldliness, oppression, distance in time, economical sparseness...without ever explicitly stating any of that in words.

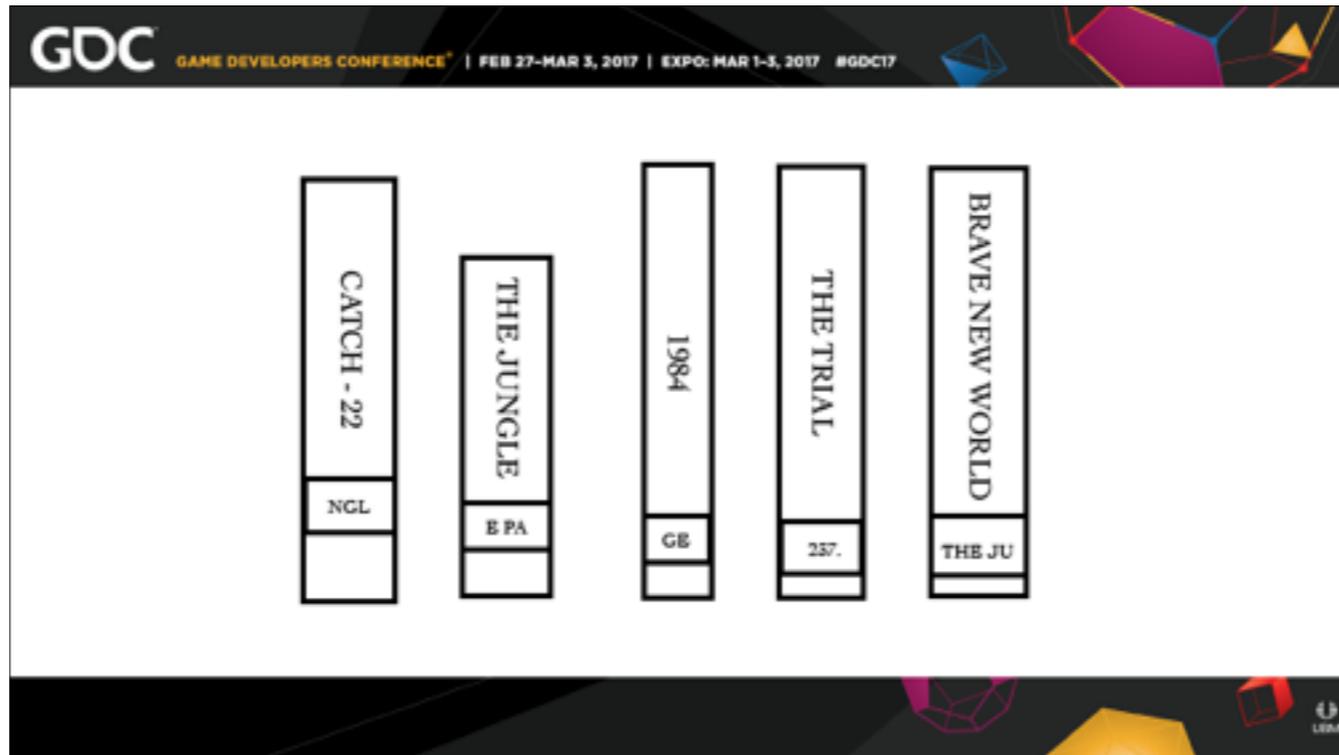
The color palettes of those films also dictated the choices we made in colors and other sorts of visual design (mostly green or yellow, only one red object in the whole thing and it's indicative of a puzzle solution.)



These choices were pleasantly validated by a movie that came out after we'd created our room -- *The Double* (nearly identical colors, lighting, mood).



One other thing we adhered to, for efficiency of communication, was the diegesis of puzzles. When the world has an internal logic, objects and reasons for encoding emerge naturally from it. And good puzzles should tell you, in their design, how to solve themselves.

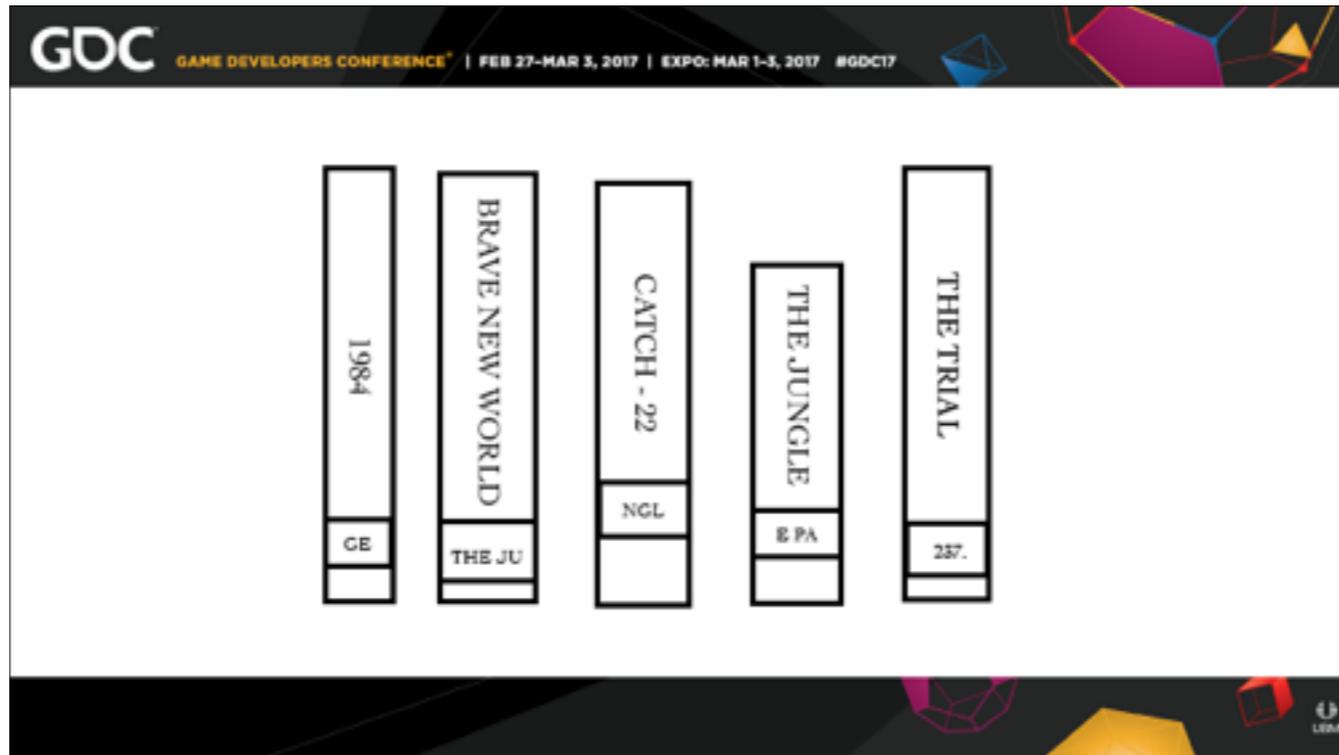


You break into a locked bookshelf, finding books.

What information do you have about them, immediately?

They're covered with censored book covers—they've been taken from the Argovian library.

They all have titles. You don't need to know the titles to solve the puzzle, but if you look, they're all books that are among the most frequently banned books in our own society, and have themes related to the overarching themes of our room.



So you might try ordering them alphabetically.

But that doesn't work.



So you look at the Dewey decimal labels—those are not in alphabetical order, when the titles are aligned.



They do have the start and end of a sentence, though.

From that, you can piece together a full sentence: The Jungle, page two six three.

The Jungle is one of those titles.

If you haven't found it already, in the jacket of the book is a library card. All of the books have the pocket, but only one has this card.

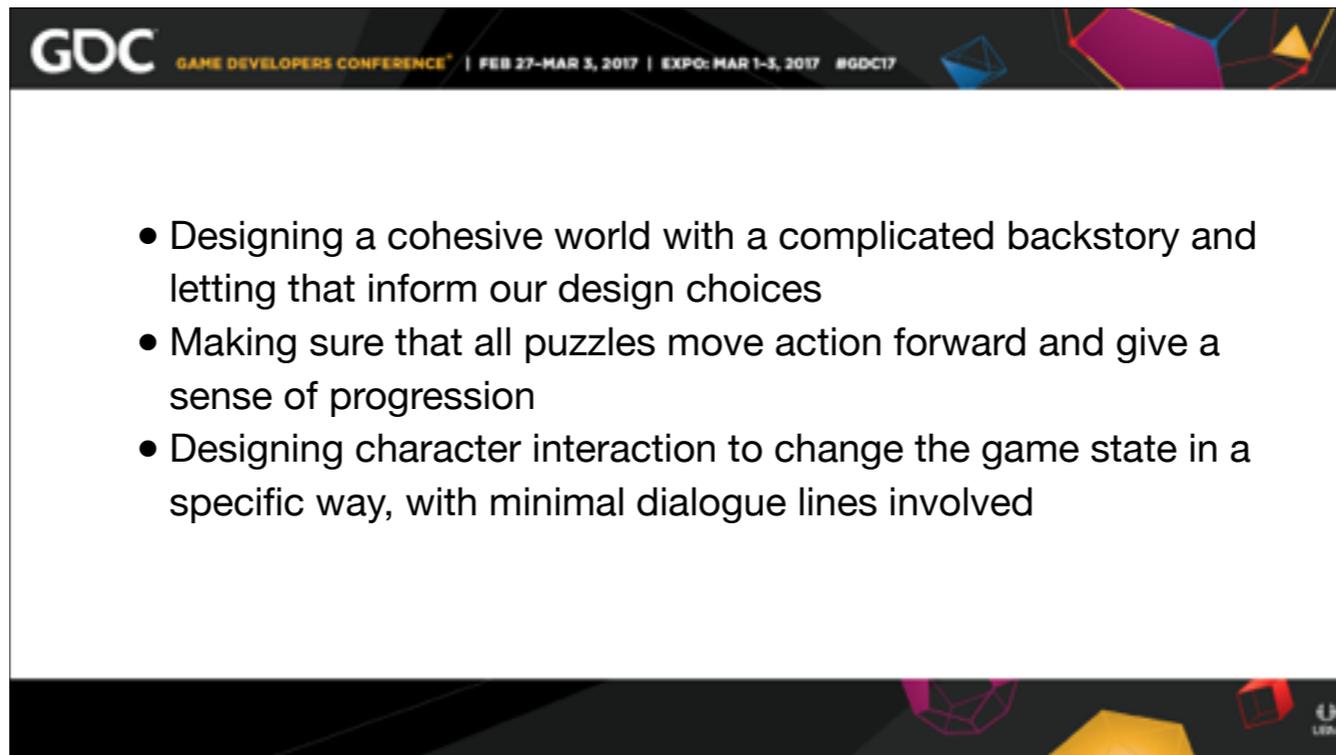
Again, knowing it's a library book suggests the presence of such a card.

(Here I'll note that the design of this puzzle is starting to become an issue because fewer and fewer people use the Dewey decimal system in libraries. The same goes for the typewriter and cassette tape player in the room--our audience is aging out of it.)

Opening the book to this page shows a faint outline. If you put the card on there, it aligns with certain words: a number solution.

Because there's only one place to enter a four digit number, you immediately know where it goes--or in searching, it becomes obvious as soon as you find the four digit "hole".

And this is also the first instance of censorship in this world that you encounter--it sets you up to understand the nature of the world, why people might be paranoid enough to hide puzzles all around their propaganda office. The solution for this gives you access to another, higher security level clearance--you keep opening up deeper and deeper secrets as you progress. As a player, you're gaining dominance over this world. When it's done right, you don't even question that this is the right and just arrangement of the world: you are the star.



Don't make people read stuff.

So, we'd done a lot of work in setting up a world that felt like it had its own inherent logic, so that we would never have to actually state any of that in words.

We wanted to convey as much as possible without distracting people from their sense of presence in the room and their urgency.

So that meant:

- Designing a cohesive world with a complicated backstory and letting that inform our design choices
- Making sure that all puzzles move action forward and give a sense of progression
- Designing character interaction to change the game state in a specific way, with minimal dialogue lines involved

People remember how they felt, not the words they heard, and especially not the words they read--so interacting with a human makes it so much more real, *even more so* because they're in the flow state (more of that 'speaking to the human brain' thing).

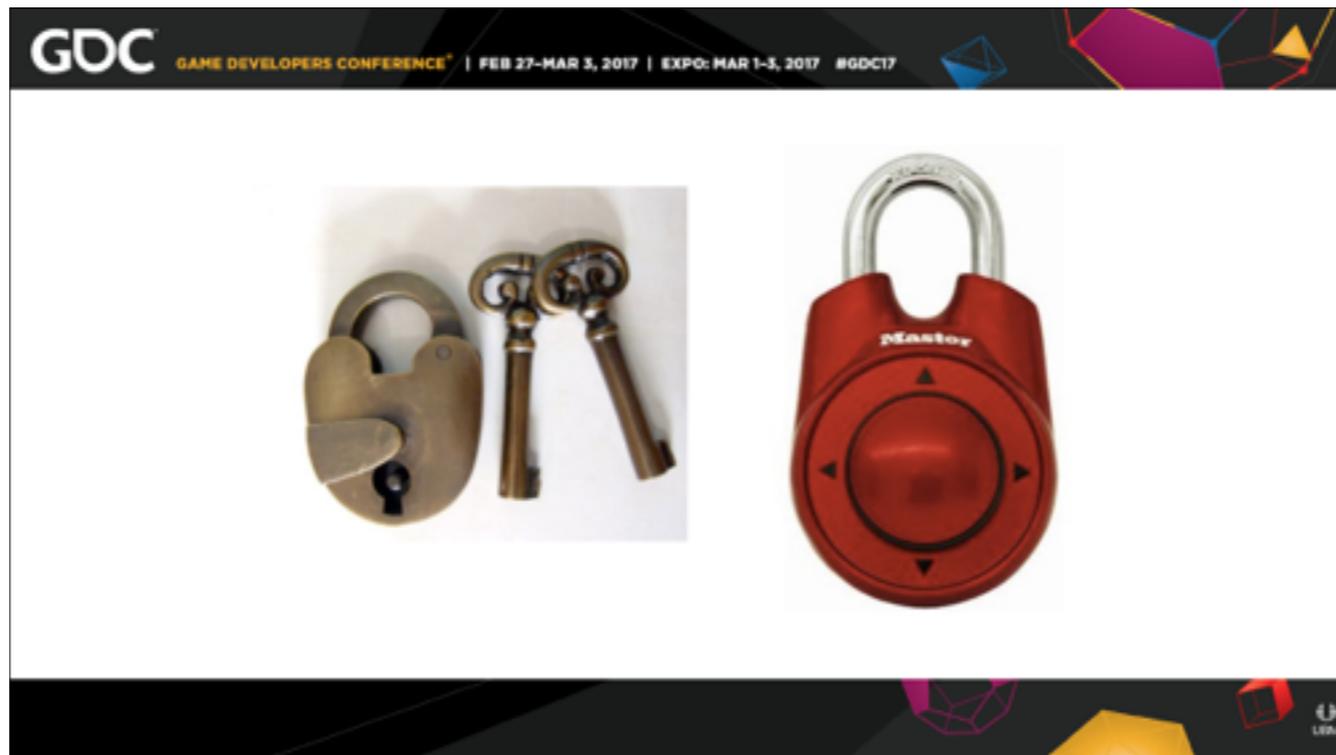
We reduced all character interaction to essentially 1 line, every 15 minutes (4 total).

When you first enter the room, it's to investigate a character who has gone missing.

You learn immediately that the character has left hidden messages for whoever might come find them, and help them. This is conveyed via an audio recording, found in a locked desk drawer. (Which also teaches you about paranoia, technology, the possessions of the office's owner, etc.)

Your first interaction is changing the security level clearance on a keycard, which you send to a pre-arranged hiding spot, which alerts them to your presence--he sends back a handwritten note asking for your help escaping the building, along with a coded puzzle that uses a typewriter in the room. (Which teaches you more about technology, encoding and spycraft, etc.)

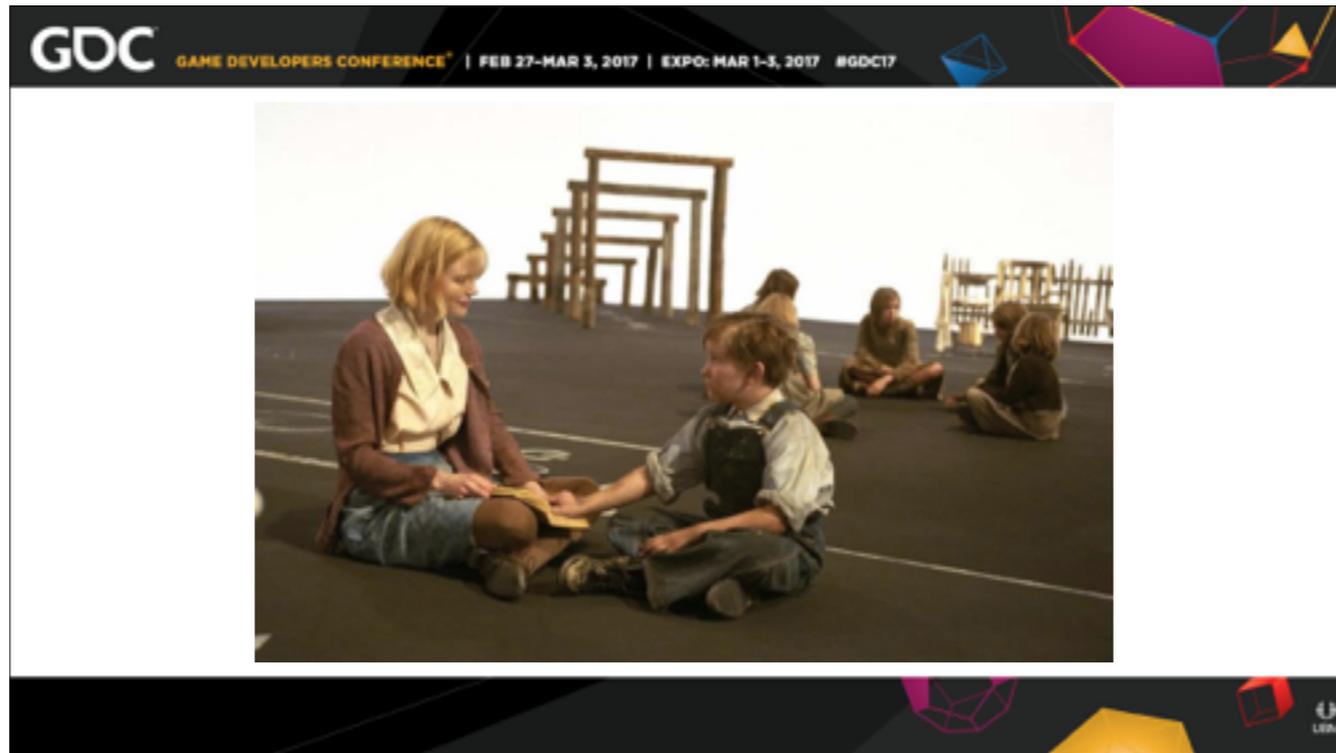
That puzzle gives you access to a security system, which you use to trace a guard's path through the space. Entering that solution sends the path to the character, who uses the information to avoid the



So how does this affect us in VR?

In some cases, it's the difference of what can be done only physically, vs. in a digital VR environment.

Padlocks are a great example of a physical interactions that's extremely limited by physical realities, whereas in VR can be anything, although with less fidelity.

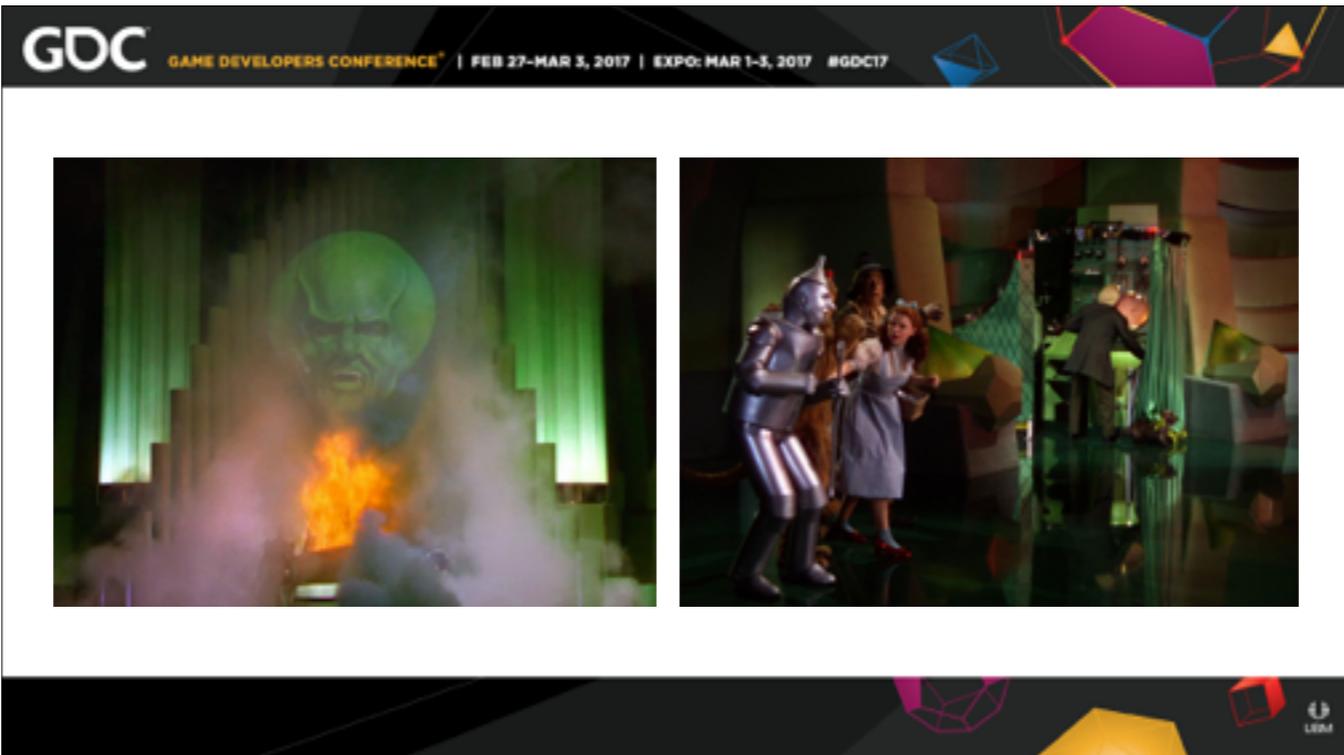


But there's also a tech benefit here. If you're letting people fill in the blanks for themselves, by using an emotional reaction to carry the weight of a story, you don't have to make as much stuff. So you can use these principles in an efficient (dev time) and positive (their experience) way.

Playing with imagination in this way is something you see a lot of in black box theater, for example: people don't necessarily even need a full set to enjoy what they're seeing, and for it to be real to them.

This is tapping into the imagination. We don't need hyperrealism, because we have magic. Engaging with the mind's eye.

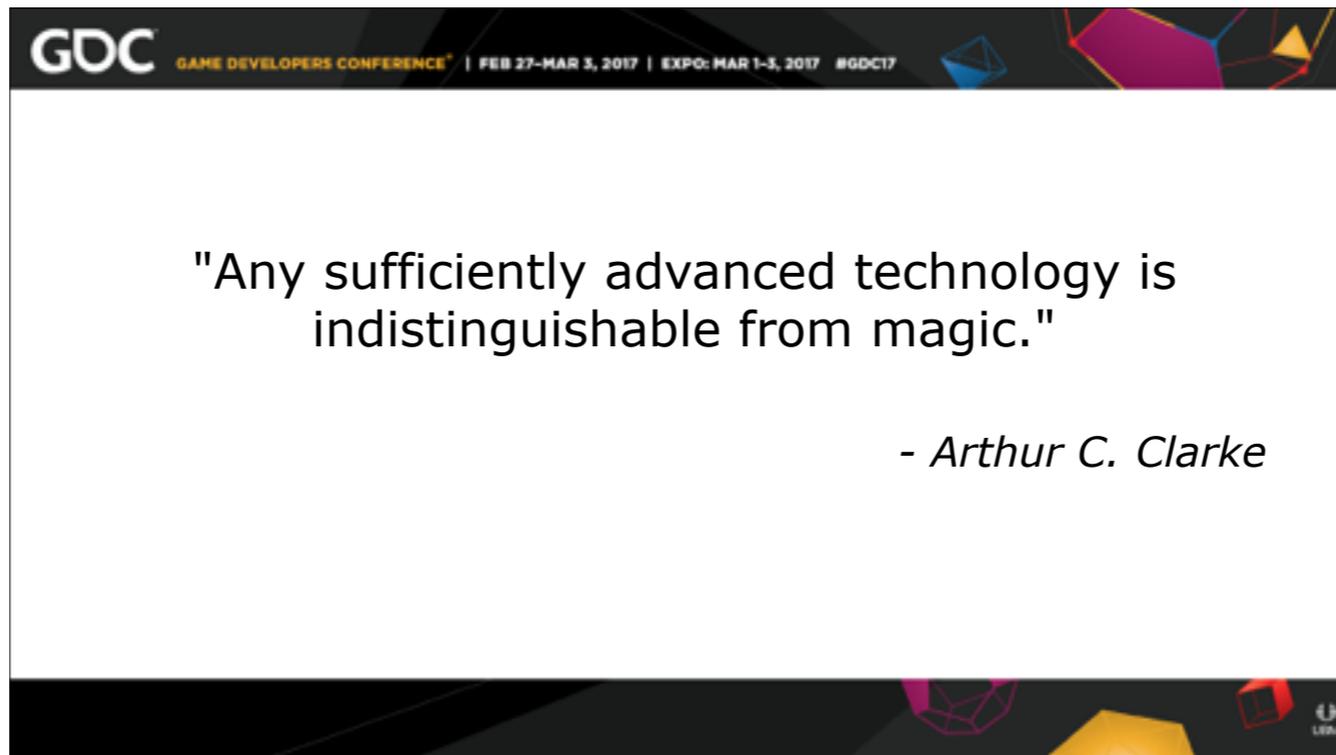
A lot of this comes down to reducing the already overloaded cognitive burden of the players by suggesting information and speaking to the subconscious rather than putting it all in their faces.



Does this matter?

Will people even notice?

It is completely natural to want to look behind the curtain--it's our inevitable human state. It's our job as entertainers to try and prevent that from happening.



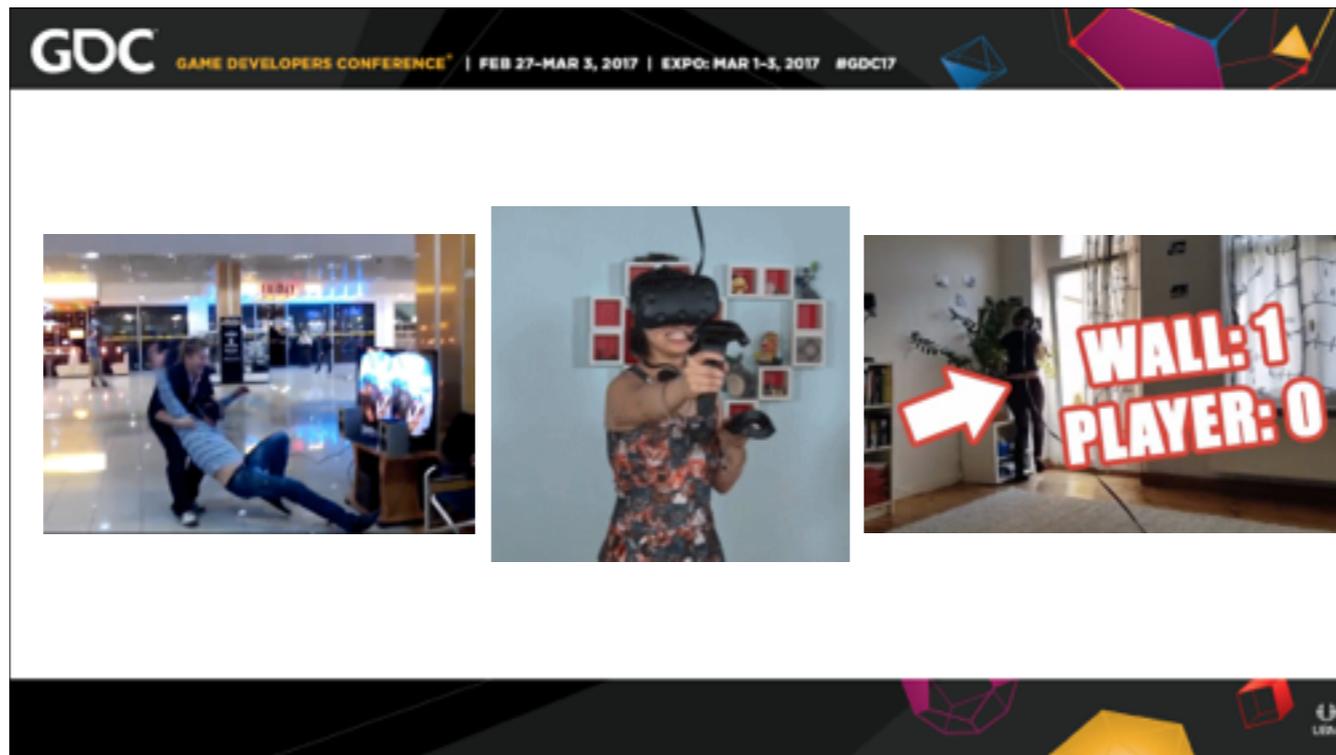
When it's done right, it's completely invisible to people--that's because it's working. This also makes sometimes people believe it's not important.

So why should we care or put in the effort?

VR has been around a long time, but the technology has only recently caught up to our imaginations. We have a chance to engage with the mind's eye in a language that doesn't even exist yet.

Anything we make now is going to set the standard for everything that comes later. We need to make the foundations for the kind of work we wish to see in the future.

Right now, there's a lot of work that speaks directly to the lizard brain: stuff that plays on claustrophobia, startle response, vertigo. And it's super fun to explore that. But it's resulting in an image of VR that looks, to people on the outside, like this:



One of the most common questions that I've seen for both escape rooms, and VR experiences, is: "Is it scary?"

And being scary is fine! Scary is fun. That middle gif is of Erika Ishii, who has a great show called Scaredy Cats.

But the human brain is such an amazing, complicated, beautiful thing. Scary is such a small part of it.

When we talk about VR as a medium of infinite possibilities, we're talking about feeling and experiencing those infinite things. Talking in the language of the brain is what gives us such an incredible palette.

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- How do we best take care of the people inside our experiences?
- How do we show them respect?
- How do we transport them, entertain them, give them magic in a way that's never been experienced before?

UBM

How do we best take care of the people inside our experiences?

How do we show them respect?

How do we transport them, entertain them, give them magic in a way that's never been experienced before?

These are the questions that it is our responsibility to find answers for. This is what we've been tasked with.

With the rise of industrial automation, like self-driving cars, we can also expect increased leisure time and demand for entertainment.

And the answers that we find right now, that we prioritize and decide to pursue, are going to influence future generations.

So together, let's make magic happen.

Thank you.

Thank you!

Follow me on Twitter: @lauraehall