



Computers Are Terrible Storytellers — Let's Give Humans a Shot

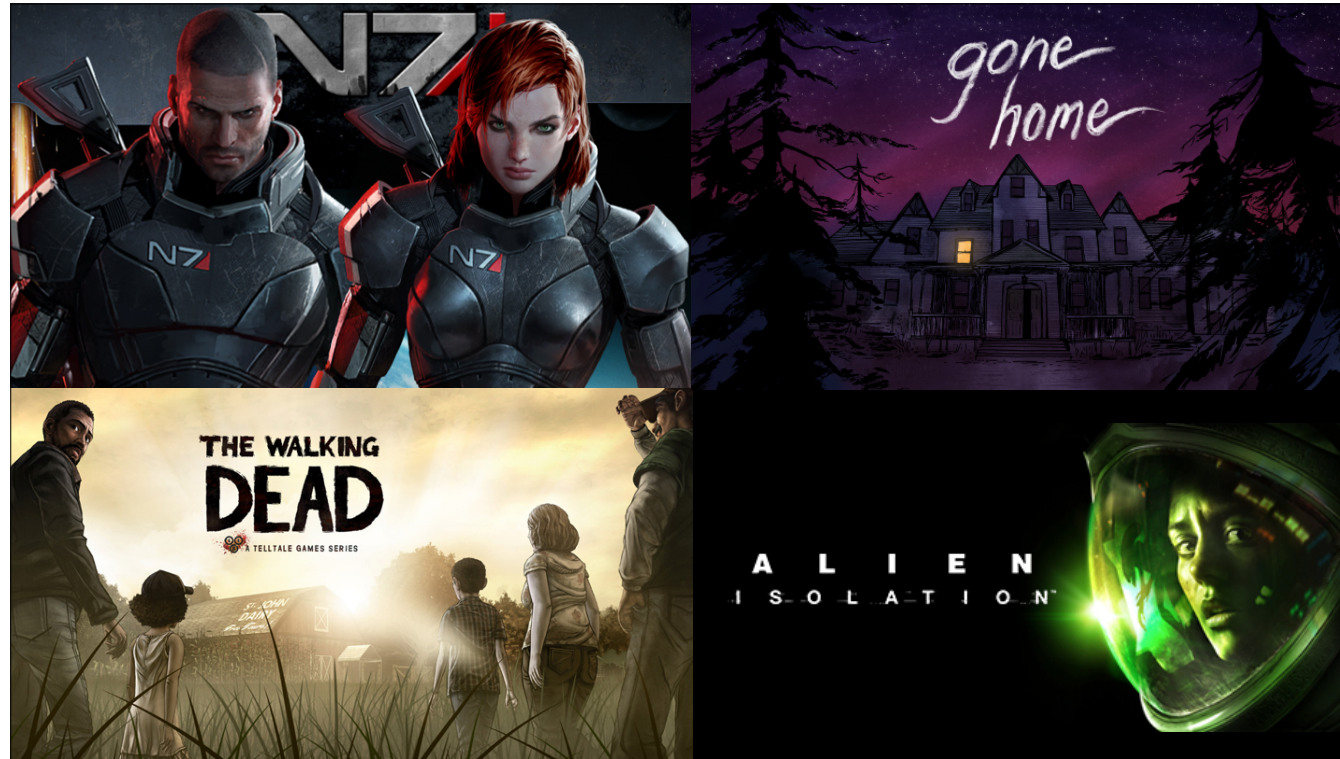
Stephen Hood
Co-founder, Storium

GAME DEVELOPERS CONFERENCE™
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Hi everyone, thanks for coming this morning. I'm Stephen Hood, and I'm co-founder and CEO of Storium, the online storytelling game. Storium was crowdfunded on Kickstarter last year, it's been in development and beta testing since then, and we have our public launch coming up this summer.

First off, I don't see any lit torches or obvious pitchforks in the audience, so... I assume that means you've either taken the title of this talk in the tongue-in-cheek spirit in which it was intended, or you're simply waiting until I finish before you tear me apart.

So let me start by getting one thing out of the way. When I say that computers are terrible storytellers, I'm of course NOT saying that you can't tell great stories using a computer. You obviously can!



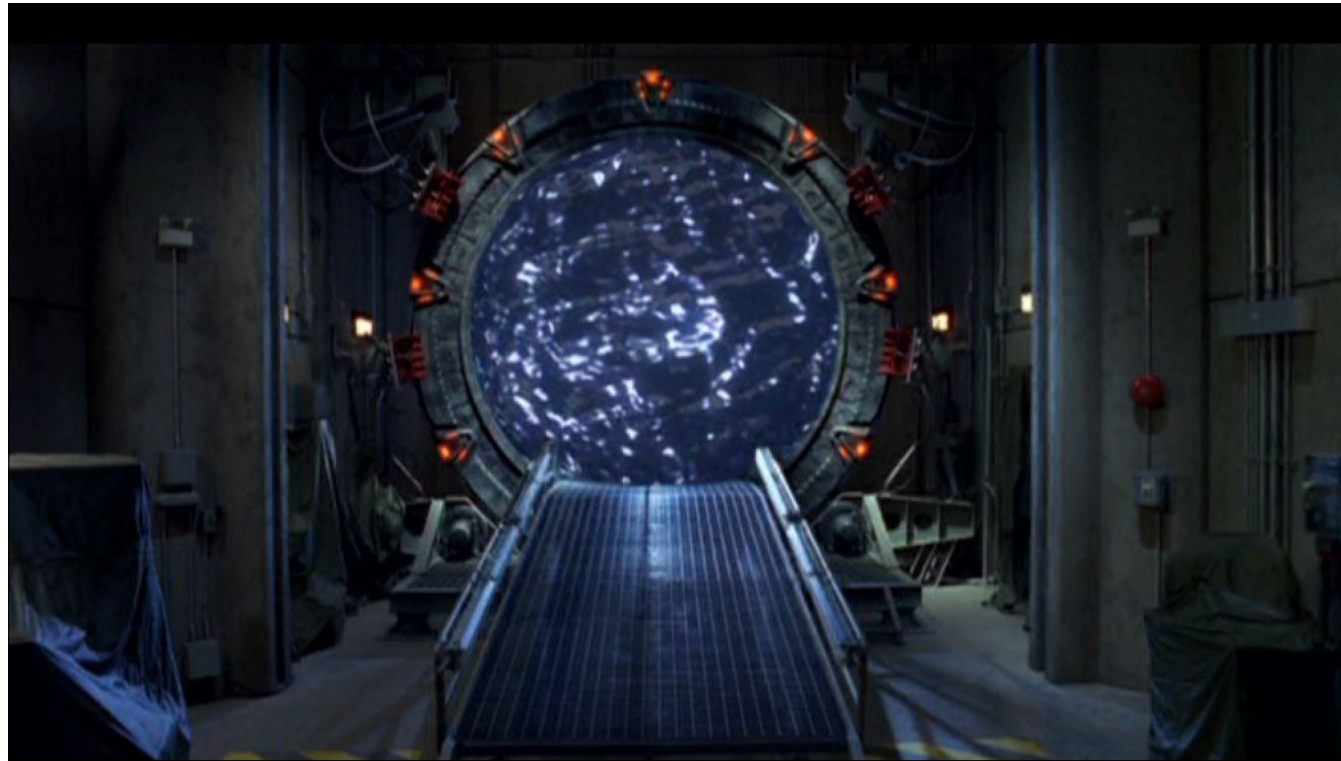
Here are just a few examples, some of my own favorites. I'm sure you have your own. These are games that tell rich, compelling, involving, emotional stories, with characters you truly care about. And as you play, you really feel like you have a stake in what's happening, and at least some say in the outcome.

But I would argue that these stories aren't great because of the computer, but rather in SPITE of it. They are great because of the talented people who made them. Designers, writers, developers, artists, musicians, who poured out their passion and skill in ways that have enabled them to overcome the inherent limitations of the computer as a storyteller.



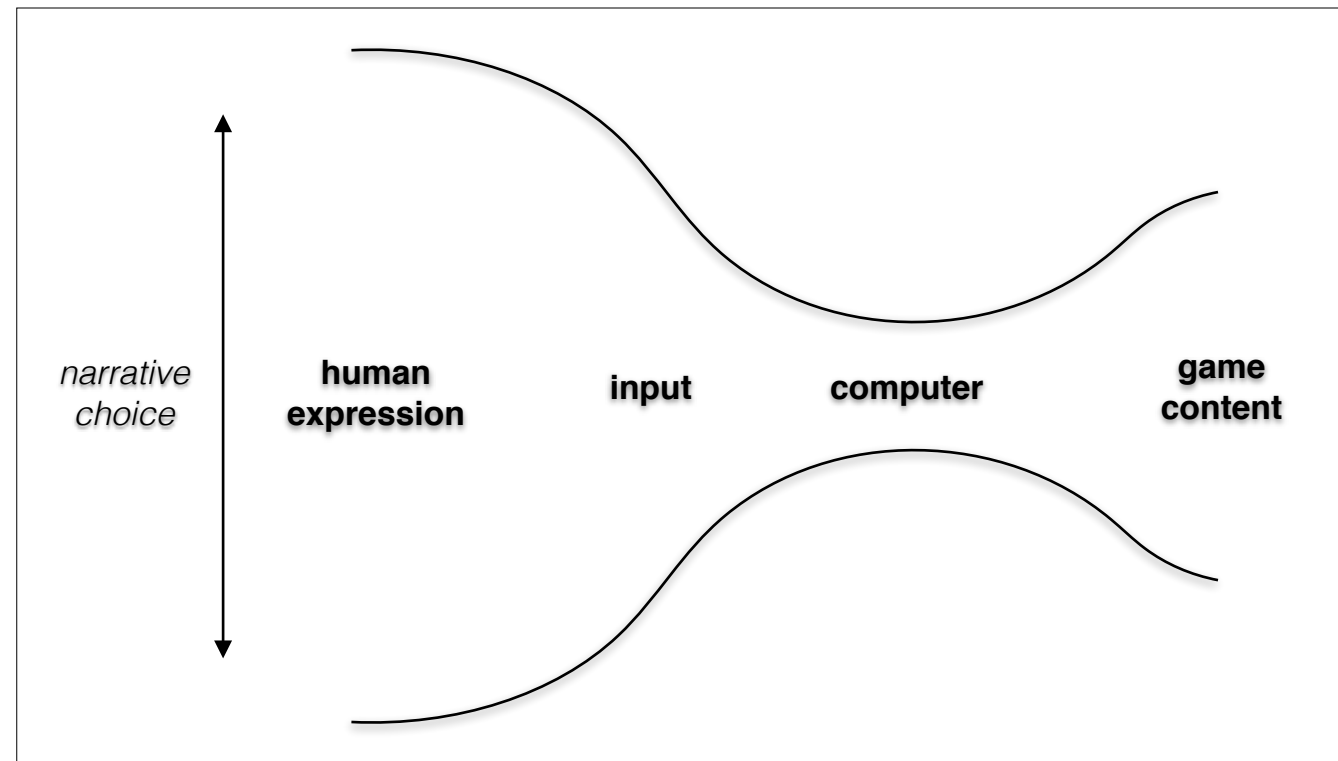
Because the reality is that despite much progress over the last few decades, in areas from artificial intelligence to emergent narrative, huge gaps still remain between what people can express and what computers can comprehend, and how they can respond to it.

Human ideas and their expression are infinitely variable. But computers are finite machines that have no creativity, no intuition, and perhaps most importantly for our purposes today, very limited ability to improvise. This makes it fundamentally challenging for a computer to engage humans in an interactive storytelling experience.



Let me introduce you to the computer narrative wormhole.

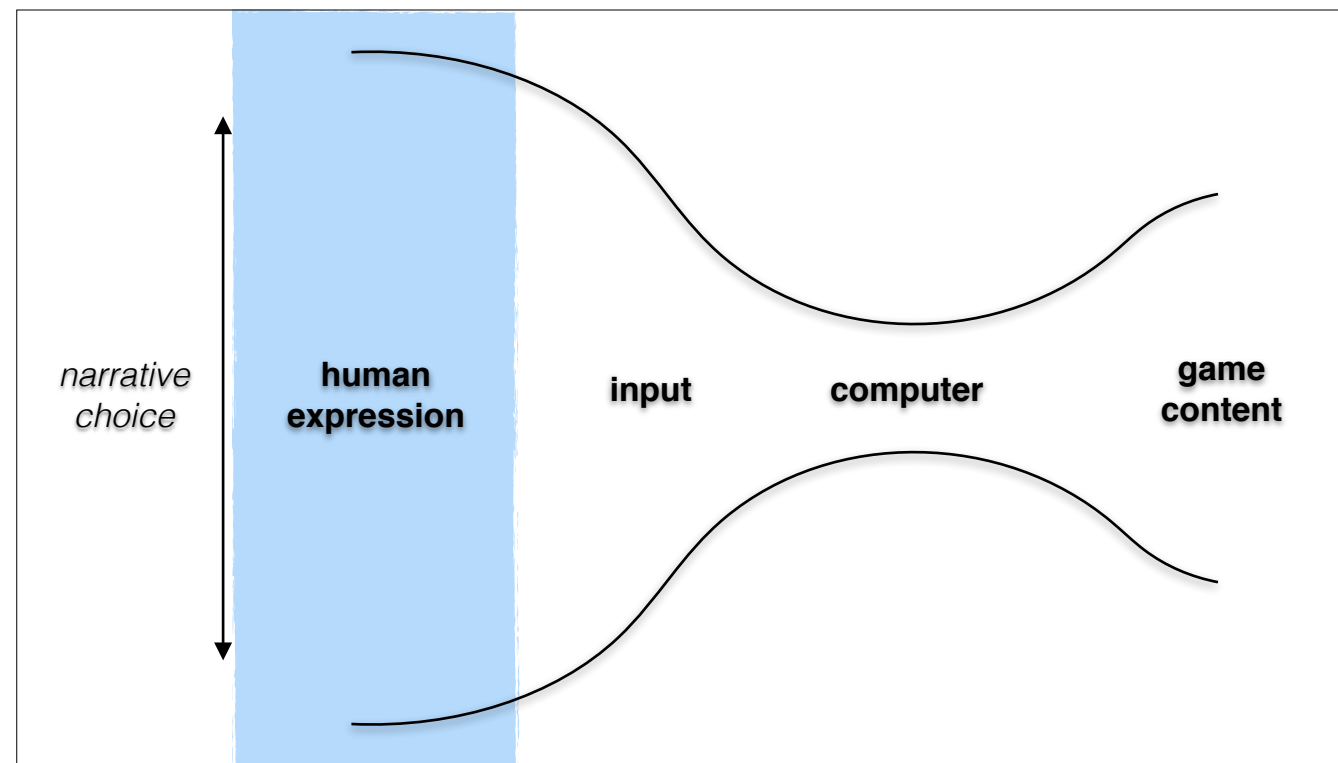
Wait, wrong wormhole.



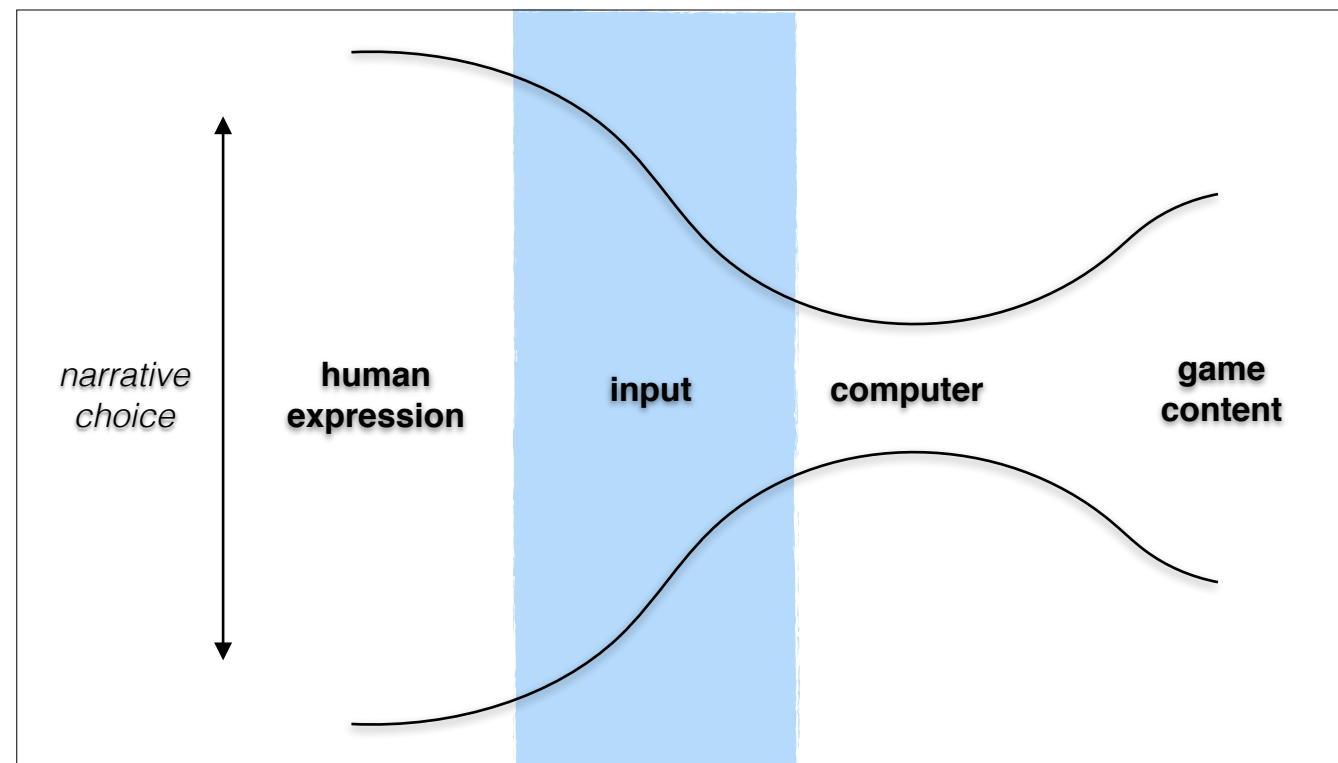
THIS wormhole.

I call it a wormhole because wormholes are awesome. And also because a little part of me dies every time I hear someone call something a “pipe” or a “funnel” or a “curve.”

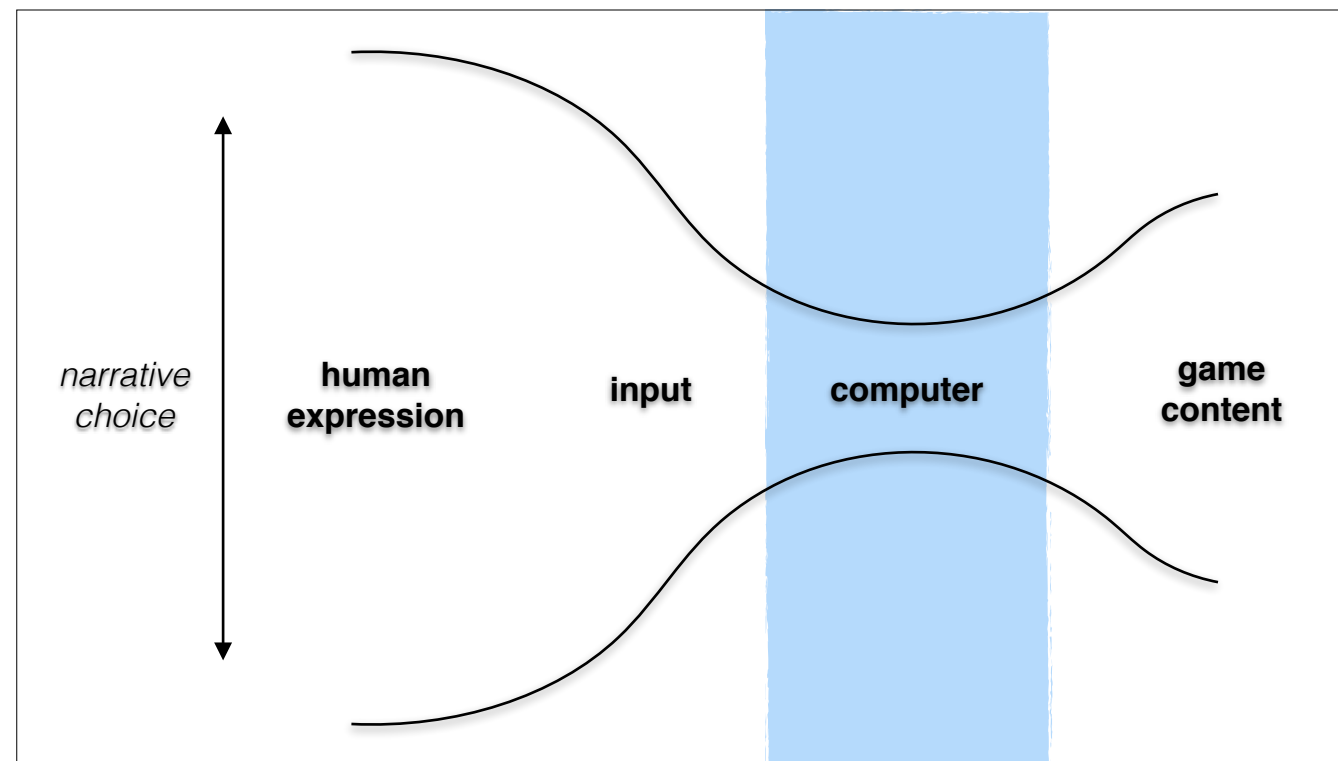
What it shows is how having the computer at the center of our games affects our storytelling options both as players and as designers.



On the left side we have players. The wormhole is very wide here because we're talking about the infinite creativity of human expression. Players can truly imagine anything. And it is guaranteed that they will think of things that you can't anticipate.

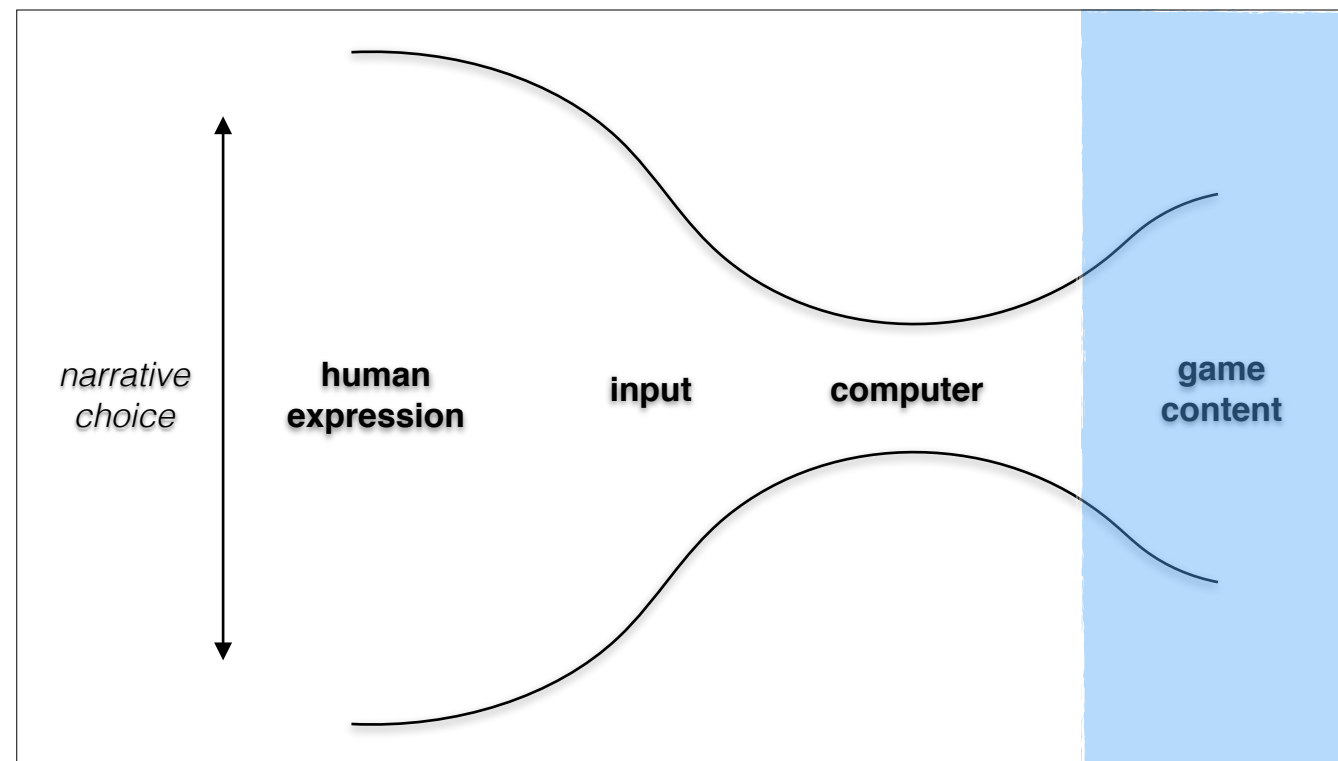


But the computer can only understand input that it EXPECTS TO RECEIVE, so that infinite creativity has to be narrowed down to a much smaller set of options, and thus the wormhole narrows considerably as the player uses the available controls to translate their intent...



...into something the computer can understand. And this process often means that the player has to **CHANGE** their intent, just to move forward.

The computer then maps that limited input to a set of scenarios and behaviors provided by the game's designers...



...as represented by the right side of the wormhole. You'll notice it's wider than the middle, but it's still much more narrow than the player's side. That's because designers don't just imagine things, they of course have to also define and implement them in a way that the computer can understand.



The result is that relying on the computer as a storyteller requires us to narrow our vision on both sides of the wormhole, as both players and designers. We make tradeoffs and sacrifices that have come to feel natural to us.

As players, we trade depth of input for volume. We turn what could be rich expression and intent into a rapid-fire sequence of repetitive actions.

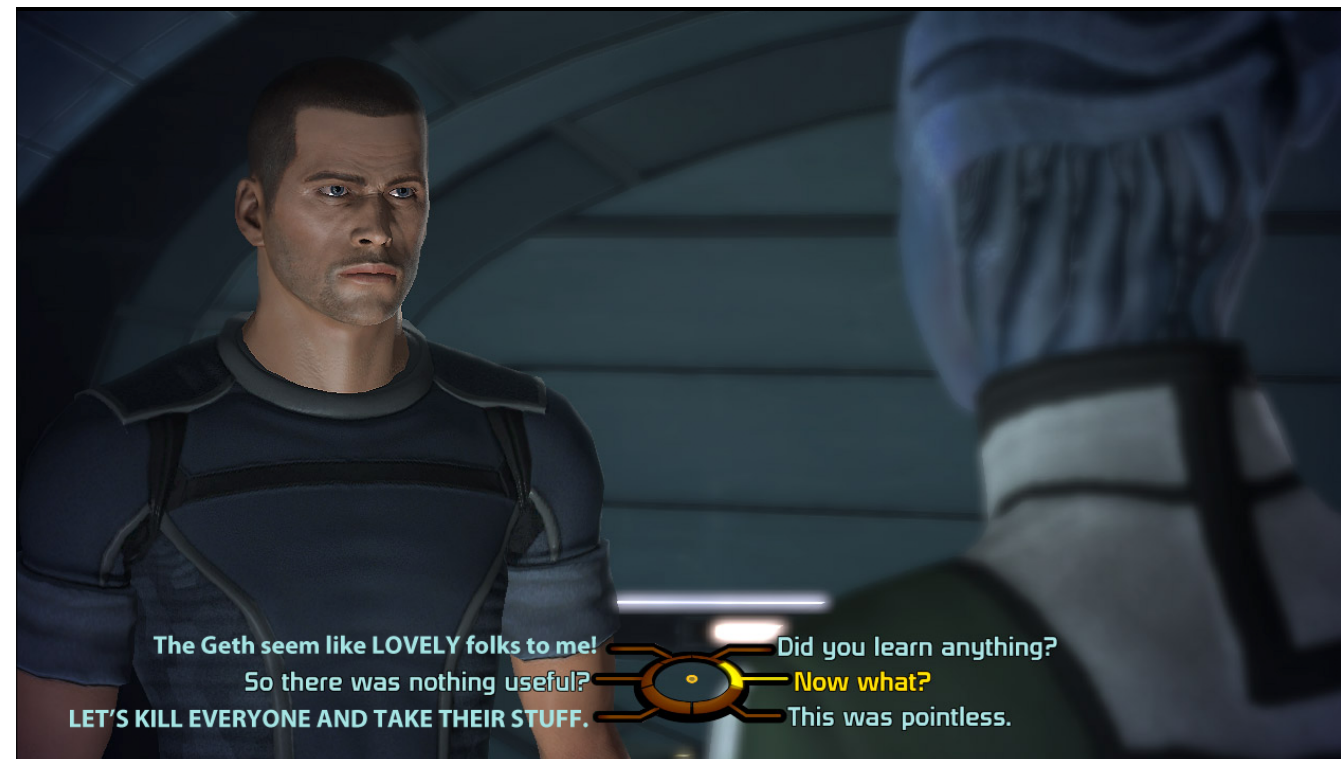
On the designer side, we make sacrifices for practicality, time, and expense. Our original visions are almost never truly realized.



This has a very real effect on gameplay. There will always be places you cannot go, because — strangely — they don't exist, and neither the computer nor the player are fully empowered to create them.

Yes, I know about procedural generation. It can do stunning things! But it's challenging to procedurally generate content based on a player's intent.

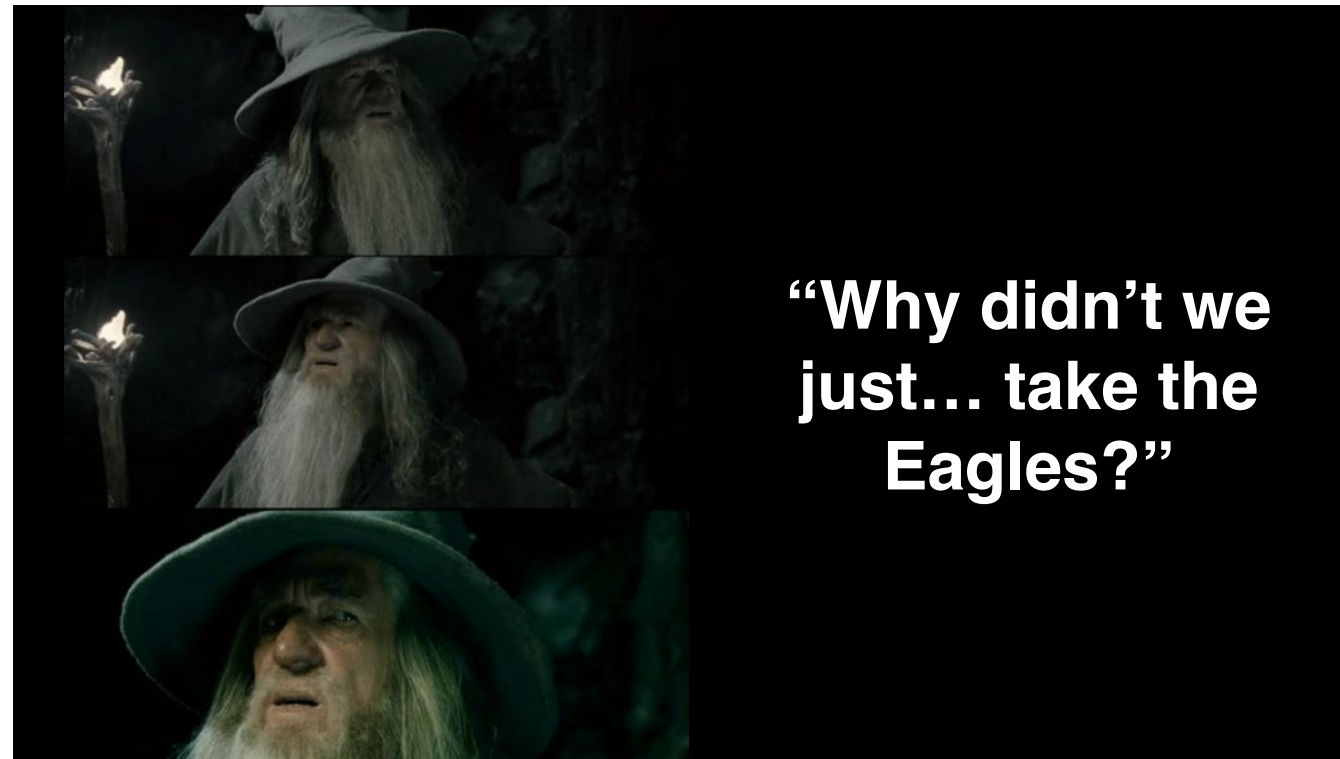
By the way, who can name the movie here? Anyone? Yes, DARK CITY. If you haven't seen this, you need to. For now, I'll just say this: this scene is what you should find in the dictionary when you look up the phrase "no clipping."



Moving on, another issue is there will also always be things you can't say, because the computer hasn't been told how the other characters should respond to your crazy idea, and it can't effectively improvise a response on its own.

Now, yes, I know there are exciting things going on out there, particularly in the world of AI, with regard to NPC dialog and behavior. That is not my area of expertise, and I don't mean to talk it down or dismiss it in any way. But it seems that we still have a long way to go before a computer can respond to players in ways that live up to the capabilities of a human storyteller.

And by the way: when SkyNet finally goes online, who's going to be responsible? The military? Pfft. No. They're amateurs. It's going to be us game developers that make it happen. So.... yay us?



And finally, with a computer storyteller there will always be decisions that you can't make, paths you can't take, even if they seem FACE-PALMINGLY obvious to you.

(I could do a whole talk on why they didn't take the Eagles, but... that's a different conference.)



So why do we build games this way? I mean, there's nothing wrong with it. But do we HAVE to do it this way? I'm not sure we do. Part of it is perhaps just history. Some of first video games were about having the computer handle the rules for you, play the referee. The computer replaced the need for a second player. It made it possible for you to play alone while feeling you were playing with someone else.

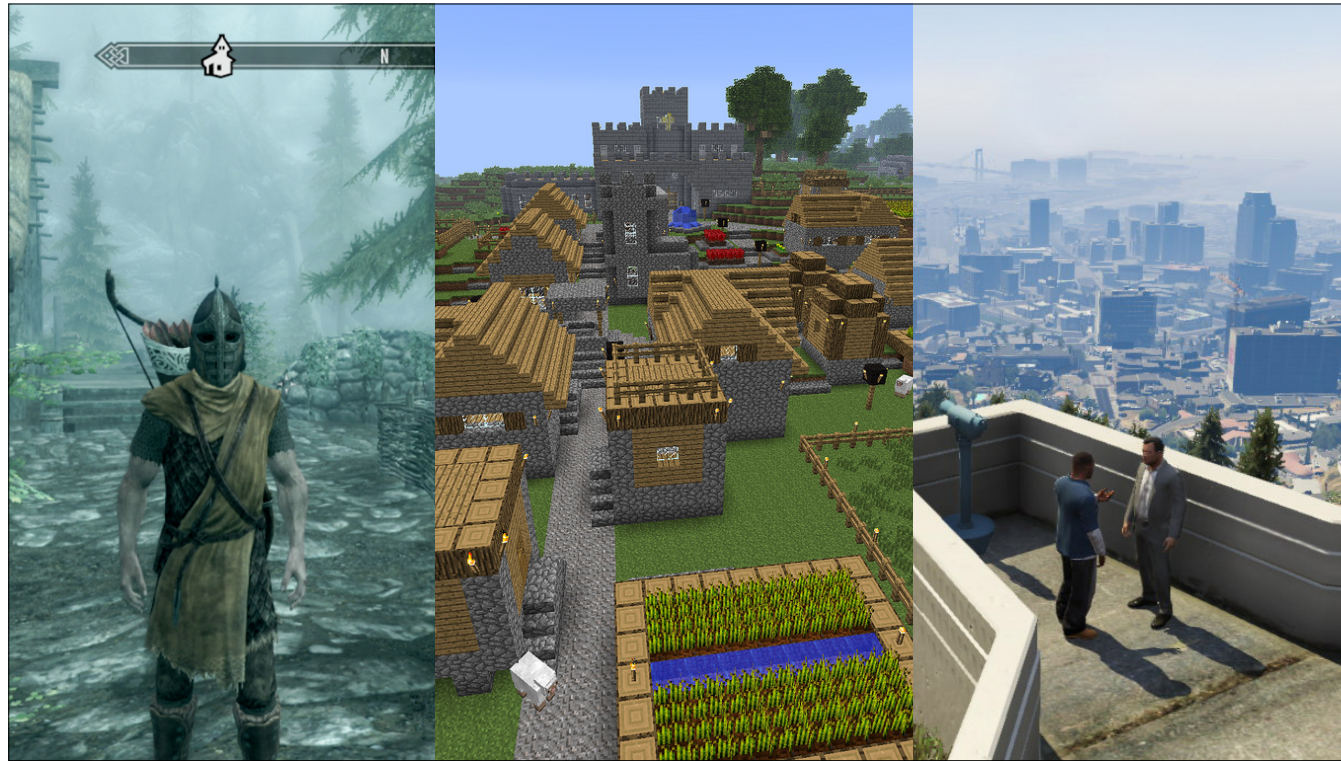


the computer as a mind

I would also suggest that as a culture we tend to think of the computer as a mind. Something that is trying to become a person. Something that is trying to simulate reality. This is ingrained in our cultural awareness, and in our fiction. It permeates the history not just of gaming, but of computer science.

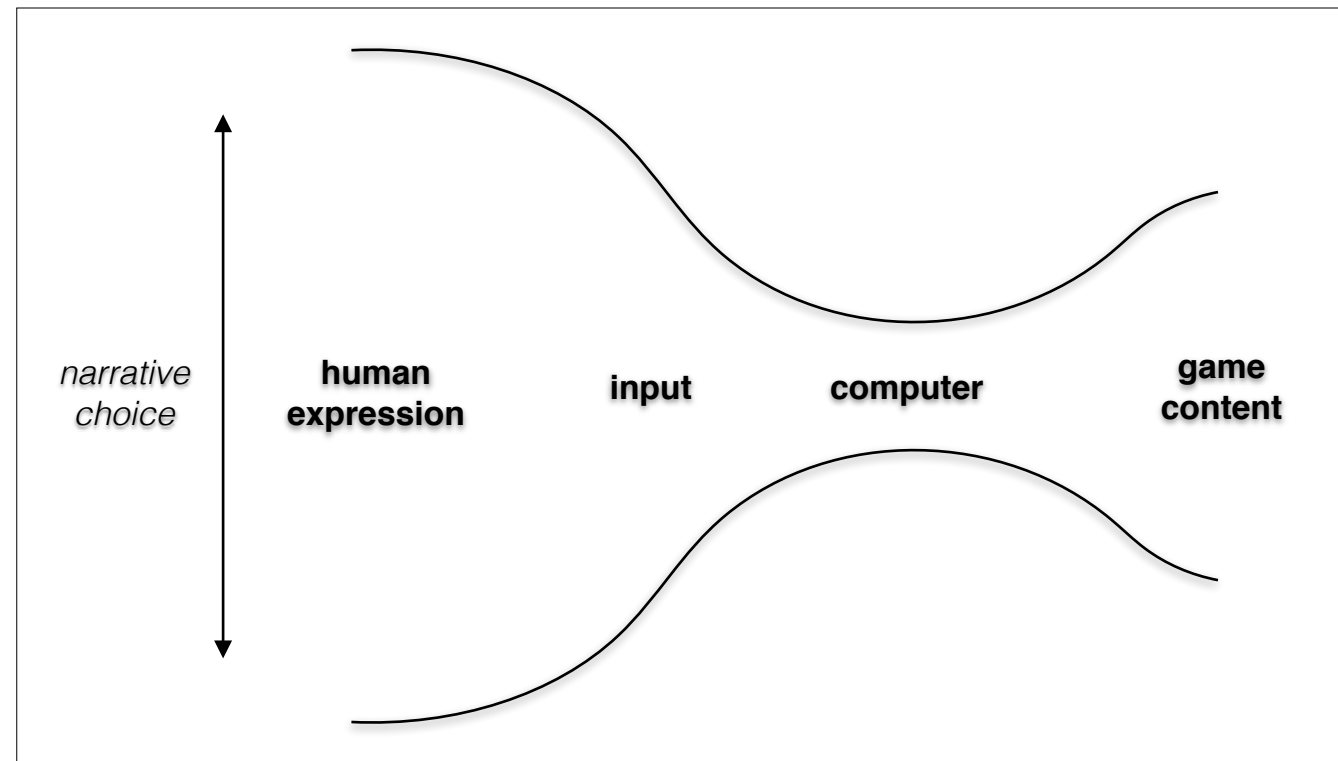


Fast forward by 30 years, and we seem to have doubled-down on that philosophy. We've enjoyed huge leaps in computing power, and we've deployed it largely in the service of simulation: using the computer to imitate a reality, and the people, or environments, or situations contained within.

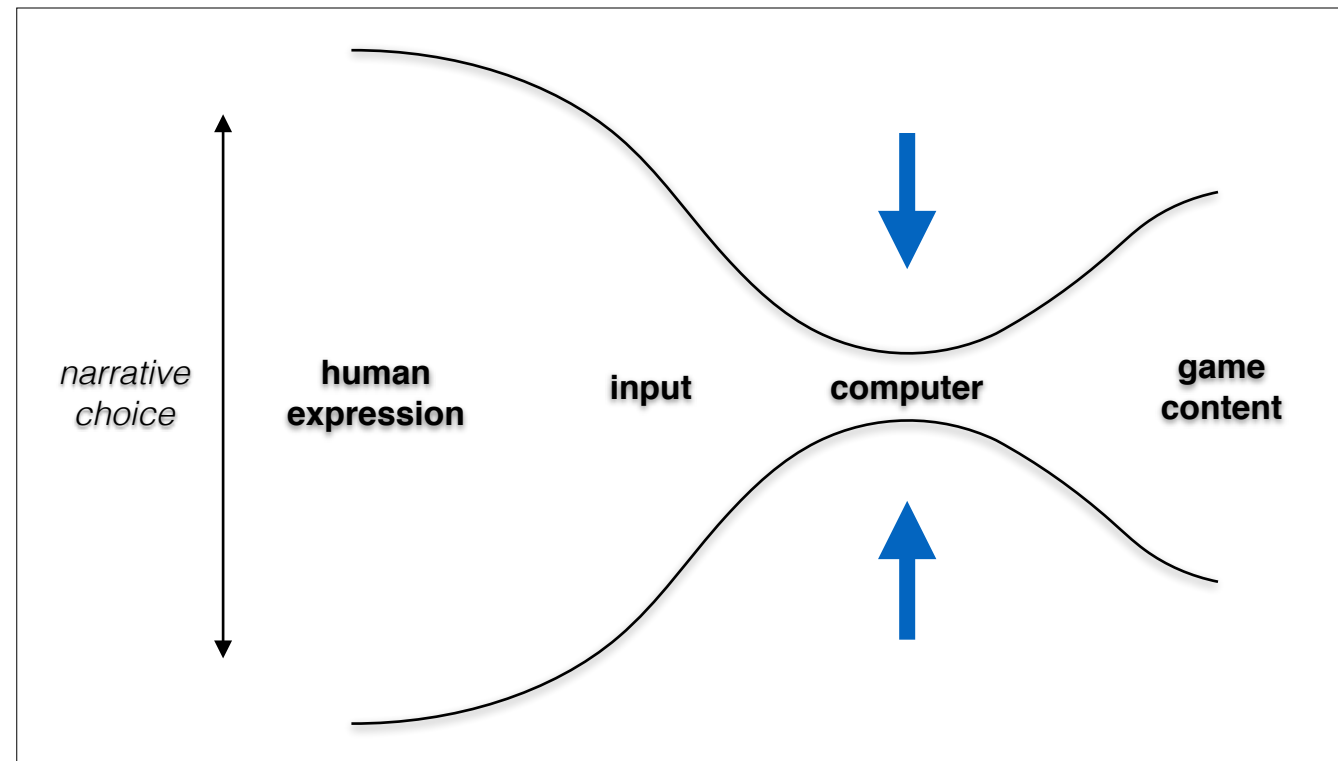


It's news when a game provides room for players to do their own storytelling. The best examples are usually "open world" games. Whether it be Skyrim, or GTA, or Assassin's Creed, or even Minecraft: these are games that allow for emergent narrative.

But even emergent narrative still relies on simulation. On fundamental building blocks that someone has to build. There may be more of those blocks in an open world game, and they may have more behaviors attached to them. But they still have to be created by designers and developers. It's the same problem, just at a different scale.



We can do amazing things these days with simulation! But it is also a bit of a trap, because doing so increases our reliance on the computer...



...and that further narrows the narrative wormhole. It further erodes our narrative freedom, and requires even more ingenuity and effort and expense to compensate for the loss.

simulation

improvisation

There is a fundamental tension here, between simulation and improvisation. Computers simulate, and they do it better and better all the time. But humans? Humans improvise. That's what we do. It's part of what makes each of us and our experiences unique and unpredictable. It's also one of the keys to truly involving someone in a story.

Now, I want to be clear here. I'm not criticizing today's games and methods. I'm not dismissing AI. I'm not dismissing emergent narrative. I'm not talking about abandoning any current path. That would be folly. All I'm doing is suggesting that we re-examine a path that we seem to have left behind.

Image this: what if we were to find ways to harness our players' powers of improvisation? What if we could use that to give them more agency in the stories we tell? What would our games look like? They would almost certainly look different from what we're building today.



card games



tabletop RPGs



story games

Well, it turns out we don't have to start from scratch. There are a bunch of games that already give players a more active role in the storytelling. They do this by introducing mechanics that leverage the improvisational talent of human players.

Many of these games happen to be analog in nature, but not all. Today I want to share three examples that have inspired me and my team, and which I hope will inspire you. I'll identify six techniques that they use, and then I'll tell you about how we applied these techniques to our own game, Storium.



**card
games**



**tabletop
RPGs**



**story
games**

I'll start with a card game called Once Upon A Time. Specifically, it's a storytelling card game in which you and your fellow players collaboratively tell your own fairy tale.

card game:



Once Upon a Time

from **Atlas Games**

by Richard Lambert, Andrew, Rilstone, James Wallis



Its rules are genius in their simplicity. I'll give you a quick summary here, but I highly recommend you watch Will Wheaton's show "Tabletop" on YouTube. They have a whole episode dedicated to this game.



So here's how it works. You've got a deck of cards. Each player draws a random set, which represent fundamental aspects of storytelling, like characters, things, places, events, and so forth. The deck comes with cards that represent all sorts of common fairy tale tropes, from princes and princesses, to monsters and castles.



Each player also draws one secret Ending card which, as the name suggests, describes a stereotypical ending of a fairy tale (like, “they lived happily ever after,” or “the prince took back his kingdom”).

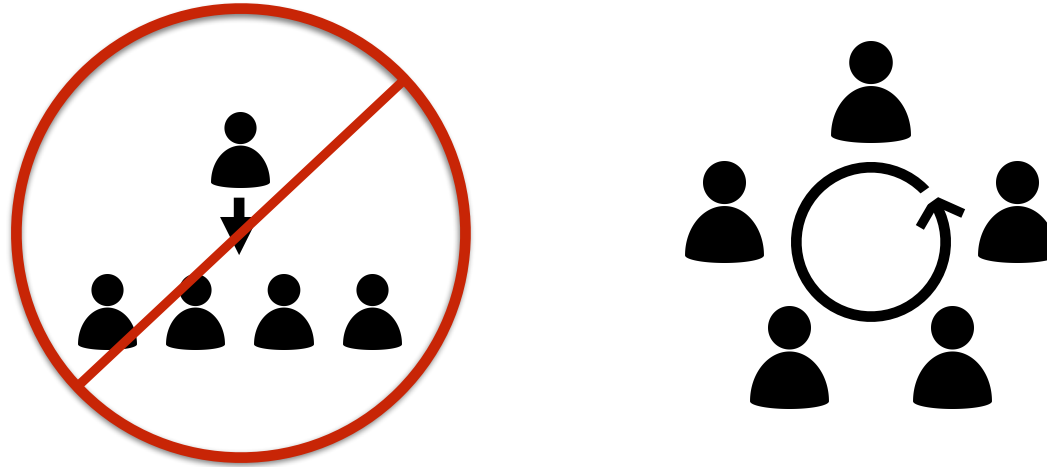


The goal of the game is to steer the story towards YOUR secret ending. You do this by playing your cards, one by one, and working their themes into the story. You literally just start talking. As long as your additions to the story make sense, you can keep on playing your cards. But if you happen to mention something that's on one of your fellow players' cards, they can interrupt you and seize the mic.

The game ends when somebody steers the story to their own secret ending and plays their last card.

This game is special because with a very small and simple set of building blocks it manages to provide an infinitely repayable experience. You can never predict what kind of story will be told, or how it will play out.

shared narrative



There are three techniques in Once Upon A Time that I want to call out today:

First, this is a game of shared narrative. I don't just mean that it's multiplayer. I mean that each player truly gets a voice in the storytelling and their own turn at the mic. There is no single person who controls the story, and that includes the game's designers. Almost nothing has been determined in advance by a writer or storyteller. There are no narrative branches to navigate.

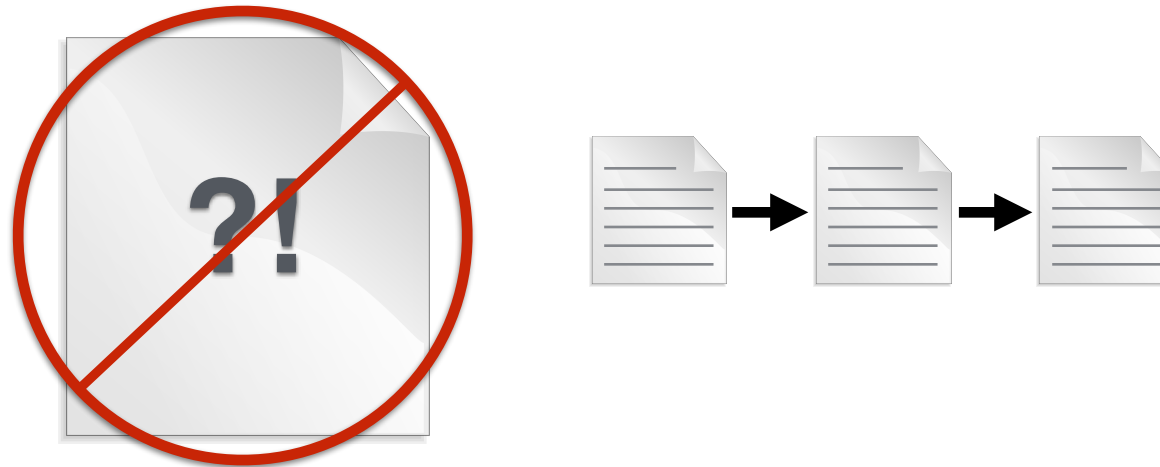
Exploiting shared narrative makes games more deeply interactive and more re-playable. But it also means that, as designers, we don't have to build as much ourselves.



Second, these cards essentially serve as the verbal equivalent of writing prompts. If you've ever done flash fiction, you've heard of writing prompts. They are simply words or phrases meant to inspire a writer.

These cards demonstrate that game content need not be deep or broad to inspire play. Players respond to creative whitespace. Our imaginations automatically want to fill in the blanks when we encounter them. But as designers we have to leave those blanks in the first place. We must resist our natural urge to finish every sentence and polish every surface.

creative constraint



Third, this game is an excellent example of the power of creative constraint. In most creative endeavors, the greatest enemy is the Blank Page. You stare at it, and it stares back at you and laughs.

But Once Upon A Time avoids the blank page problem by dividing the creative task into a series of small, clearly-bounded steps. It turns an open-ended creative task into a much smaller one with structure and boundaries. And yet within those boundaries, the player retains almost infinite flexibility to express whatever they want. This balance of freedom and constraint ends up unlocking creativity instead of inhibiting it.

If we give our players more input and more control, we need to recognize that we're also in a way creating more work for them. It's up to us as designers to manage that through things like constraints.



**card
games**



**tabletop
RPGs**



**story
games**

The next game I want to talk about is a tabletop role-playing game called Fate.

tabletop roleplaying game:



Fate

from **Evil Hat Productions**

by Leonard Balsera, Brian Engard,
Jeremy Keller, Ryan Macklin, Mike
Olson, Clark Valentine, Fred Hicks,
Amanda Valentine

Fate has been evolving for a number of years and just last year published its latest, definitive edition, called Fate Core. It also has a simpler, lightweight version called Fate Accelerated Edition that you can pick up for just a few bucks and play with people of any age.

Most tabletop RPGs have a game master role — the person who is responsible for moderating and overseeing the game. Traditionally the game master has almost all of the power in an RPG.

Fate is interesting here because its rules and mechanics directly empower the players to seize control of the story from the game master and bend it to their purposes. Fate does this in a number of compelling ways, but I only have time to cover one of them today...



...and it's dramatic economy.

Good stories have an ebb and flow. Rising and falling action. Their arcs aren't just "up and to the right". They fluctuate as characters struggle to reach their goals. Fate encourages this ebb and flow by introducing a dramatic economy. Players have to earn their characters' successes by also at times accepting setbacks, failures, and complications. Fate represents this economy with "Fate points", which are physical tokens that move between the game master and the players as they negotiate these moments of progress and setback in the story.

Dramatic economies are powerful tools for driving storytelling. They can also be used to encourage productive competition between players. And they naturally tap into familiar habits that already motivate many gamers.

(By the way, these gorgeous tokens you're seeing are made by Campaign Coins — <http://www.campaigncoins.com>. If you want to play Fate, pick some of these up.)



**card
games**



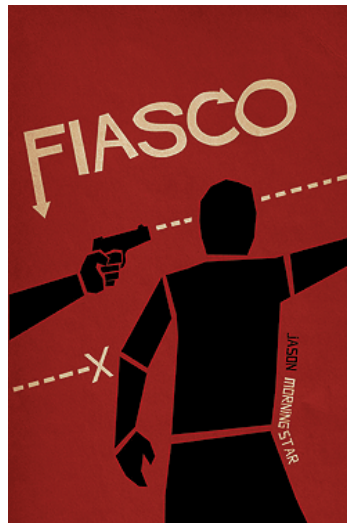
**tabletop
RPGs**



**story
games**

The third example I want to share is a game called Fiasco.

story game:



Fiasco

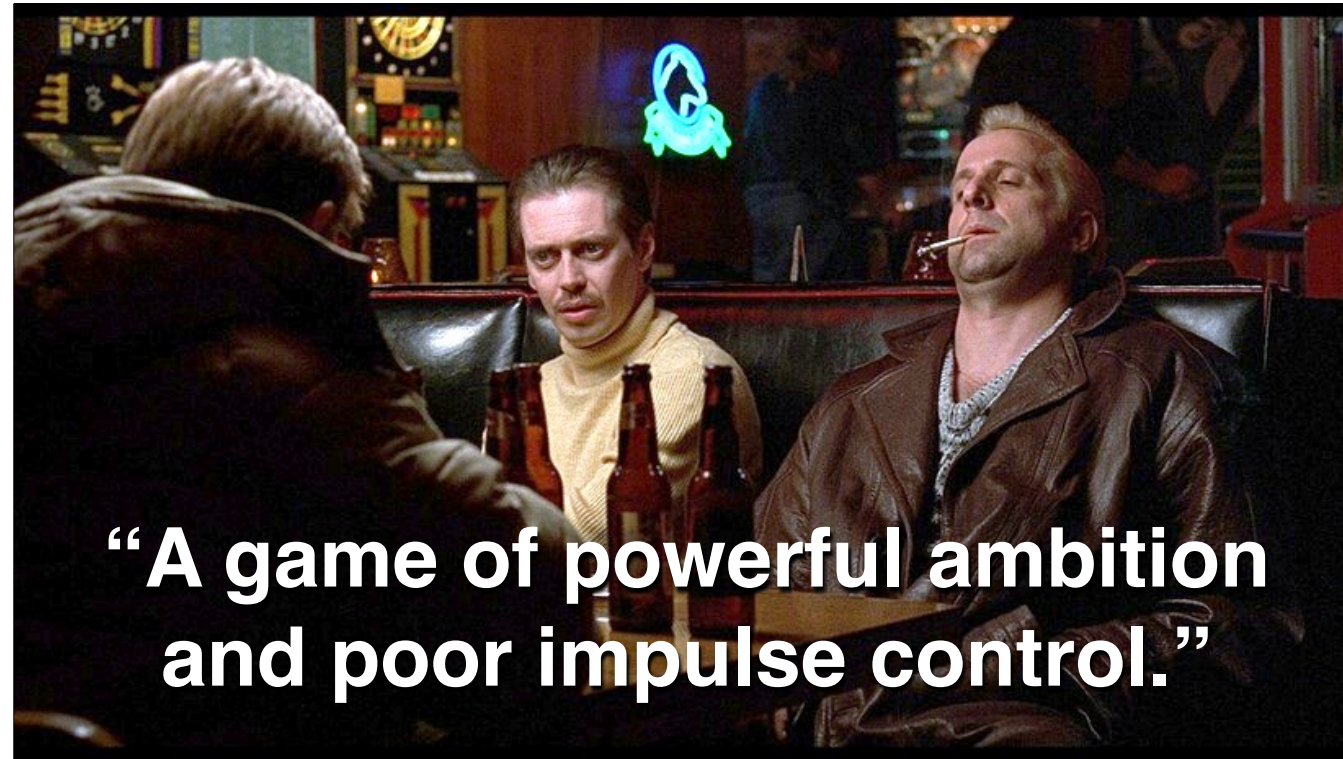
from **Bully Pulpit Games**

by Jason Morningstar



It's a bit hard to classify, but here I'm calling it a "story game." Story games are an off-shoot of tabletop RPGs and tend to be much more focused on narrative and on mechanics that share narrative power among the players.

If you haven't played Fiasco yet, you need to. Again, checkout Will Wheaton's Tabletop. They dedicated an episode to Fiasco, and in my opinion it's one of their best.



Fiasco describes itself as “A game of powerful ambition and poor impulse control.” This is a game where you and your fellow players tell stories in the style of a Cohen Brothers film. You create a rich, interconnected mix of characters motivated by greed, fear, and lust. You put them in an unstable situation. And then you cackle in glee as it all goes horribly wrong.

Fiasco is amazing and there isn't enough time to cover it all. So I'll focus on two points.

“the setup”



One of Fiasco's great tricks is what it calls “the Setup.” When you start the game, you follow a very simple process that results in that rich mix of characters I mentioned. Fiasco comes with a number of “playsets”, which are really just tables of short phrases describing the building blocks of the story: relationships, needs, locations, and so forth. They’re sort of like the writing prompts we talked about earlier, except...

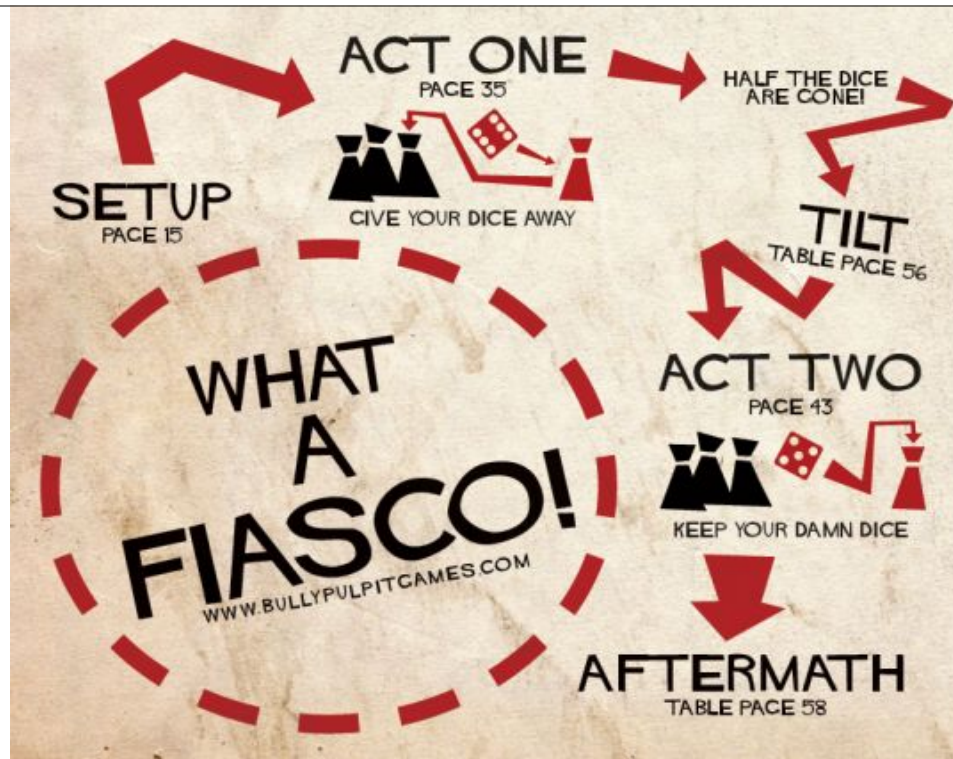


collaborative worldbuilding

...what you're really doing here is worldbuilding. You and your fellow players are collaboratively creating the space in which you will play. And it is guaranteed to be unique from anyone else's.

This is another example of how it takes very little content to inspire players and set them off on their storytelling. But it also shows that empowering players to create their own settings increases re-playability and decreases the asset burden on game makers.

pacing



Another key characteristic of any story is that it has a beginning, a middle, and an end. A story that goes on forever is likely to be boring and unsatisfying. And if you're talking about a story that is being written collaboratively, there's a very real risk of that happening.

Fiasco solves this problem by building pacing right into the system. Every Fiasco game has two Acts, which usually take about an hour each to play through. You know when an act is finished because you've used up a certain number of the dice that you started the game with. It's like a progress bar. Everyone always knows just how much time is left in the story and in the game, and everyone knows that closure is coming, one way or another.

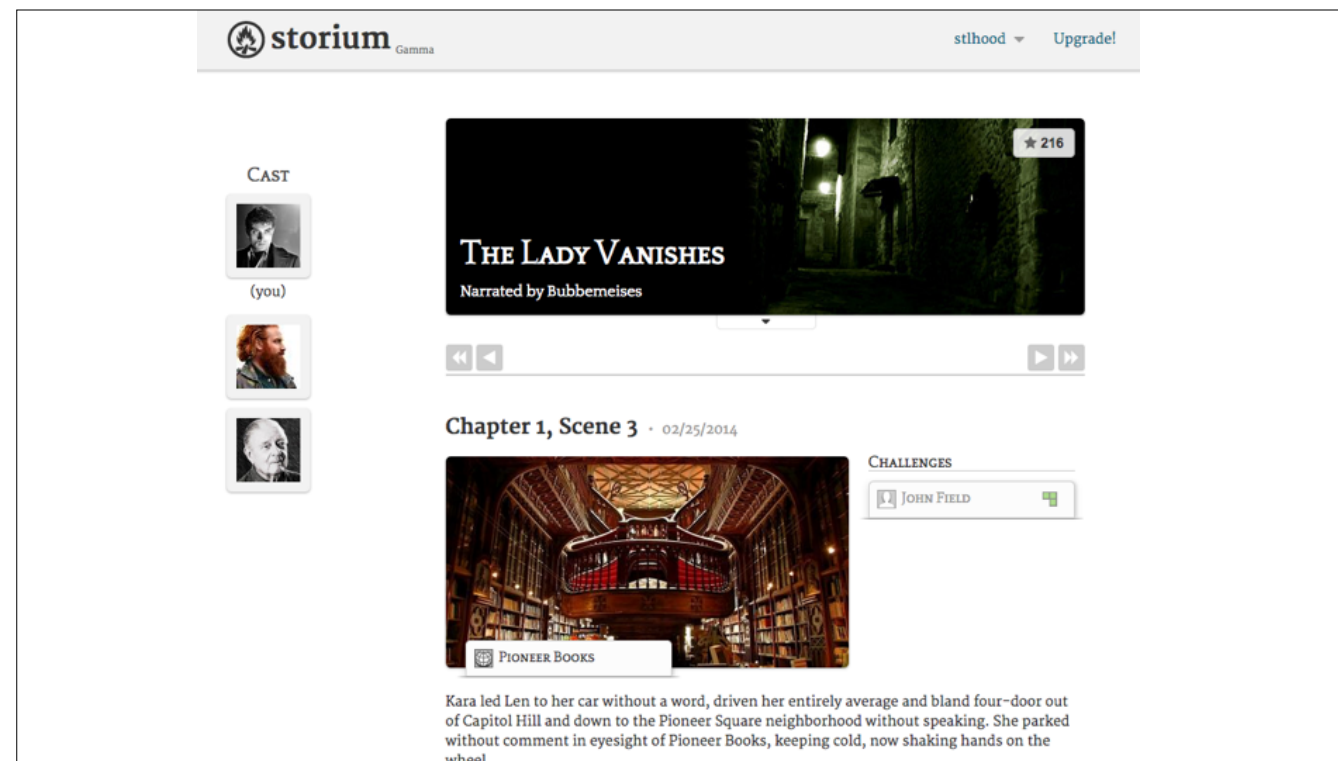
These are things that professional writers are good at. Fiasco's pacing mechanic helps players be good at it, too.

- | | |
|-------------------------------|---------------------------------------|
| 1. shared narrative | 4. dramatic economy |
| 2. leaving whitespace | 5. collaborative worldbuilding |
| 3. creative constraint | 6. pacing |

So I've now called out six techniques that analog storytelling games use to give players more of a role in their storytelling. But most of us here work in the digital realm, myself included. How can we possibly apply these techniques to OUR work?



My team and I have thought a lot about that question. We wanted to create a game that harnessed player creativity and improvisation to power the storytelling. That led us to create Storium. It incorporates many of the techniques I've identified, though not yet all of them.



Storium is a bit unusual in that it's a web-based multiplayer online game that revolves around... creative writing.

In each game, one player is the narrator, and the other players take on the role of a character in the story. Everyone takes turns playing virtual cards that represent fundamental aspects of narrative. They also write short passages that add to the story. The system manages the cards and the mechanics that underlie them. Play happens asynchronously, whenever people have the time.

As you play Storium, you are collaboratively telling a story. But you are also WRITING. You are creating a readable artifact, something like a mix between a screenplay and a forum thread, crossed with a novel.

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There's a lot more to it than that, but I don't want to turn this into a lesson on Storium. If you'd like to learn more, I would invite you to visit our web site at storium.com and view a short tutorial video that shows you how it works.

What I want to do instead is talk about how we incorporated some of those narrative techniques I mentioned earlier, and what the results were.

The first technique to discuss is whitespace.

leaving whitespace: story cards



Much of the gameplay in Storium revolves around these virtual playing cards, which are conceptually similar to the cards from Once Upon A Time.

Narrators have cards that they use to set the stage for each scene of the story. Players have cards that they use to create their characters and describe their actions in the story. You can use cards that we provide, or you can make your own, digitally, in seconds. The playing of these cards drives and inspires the players' writing. They are, quite literally, writing prompts, and they provide significant creative whitespace for players.

leaving whitespace: story cards



In an early version of Storium, we didn't have cards at all. When we added them, it immediately led to an order of magnitude increase in player engagement and in the amount actually written by our players. Cards have turned out to be one of the most powerful mechanics in the entire game.

Giving players creative whitespace? Room to fill in the blanks? It's hugely powerful, and empowering.

1. shared narrative

2. leaving
whitespace

3. creative
constraint


**4. dramatic
economy**


5. collaborative
worldbuilding

6. pacing


Next, let's talk about shared narrative and dramatic economy.

shared narrative & dramatic economy: challenges and outcomes


 Character




ABAGAIL WRIGHT
Abigail is a new name, just a century or so old. But this vampire is far, far older. They say she knew Nero.


 This challenge was completed with a **weak** outcome.

Outcomes
Strong:
Abigail is scared off. She flees and will not harass the players again for some time.
Weak:
Abigail leaves but the players' conflict with her escalates. She swears revenge and will return...

 Obstacle



PROTECT THE INNOCENT
A hapless commuter who was in the wrong place at the wrong time. Now their life hangs in the balance.

 This challenge was completed with a **strong** outcome.

Outcomes
Strong:
The commuter struggles free and flees the subway station, terrified but unharmed.
Weak:
The henchman turns the commuter into a new vampire right before your eyes.

Another thing we noticed early on with Storium was that too many players were taking a passive role in the storytelling. They were sitting back and letting things happen to them and their characters, and then reacting. In retrospect it's perhaps not all that surprising, since that's how SO many games fundamentally operate. We've trained players to expect limited agency in their stories.


So we added something called challenges. Challenges are special cards that narrators play to give the players specific, dramatic obstacles to overcome in the story. It could be anything from an angry monster to a difficult conversation with a tenuous ally.


shared narrative & dramatic economy: challenges and outcomes


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
Outcomes


Strong:
The commuter struggles free and flees the subway station, terrified but unharmed.

Weak:
The henchman turns the commuter into a new vampire right before your eyes.


Challenges have points, which are the number of cards that players need to use to complete the challenge. Often, players will have to work together to overcome a challenge. Other times, they can resolve it on their own.

shared narrative & dramatic economy: challenges and outcomes


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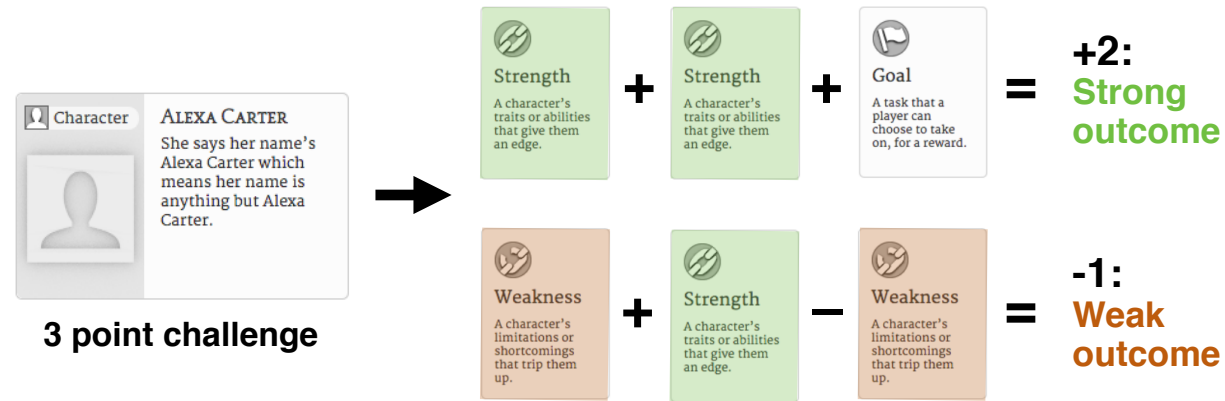
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The cool part is that if you are the one who completes a challenge, YOU get to say what happens next. You get to take the microphone and run with it. The narrator provides some text to guide you. But otherwise you have a lot of narrative power. It's truly a shared narrative.

shared narrative & dramatic economy: challenges and outcomes



But challenges do more than that. They also force players to use their cards strategically, like they would in a real card game. Because based on the cards you play, different narrative options are available to you.

This is a dramatic economy in action. Your cards have value in the story, both thematically AND mechanically, and you have to choose the moments when your character will succeed and when they will fail. It leads to more interesting gameplay, and more satisfying stories.

shared narrative & dramatic economy:
challenges and outcomes

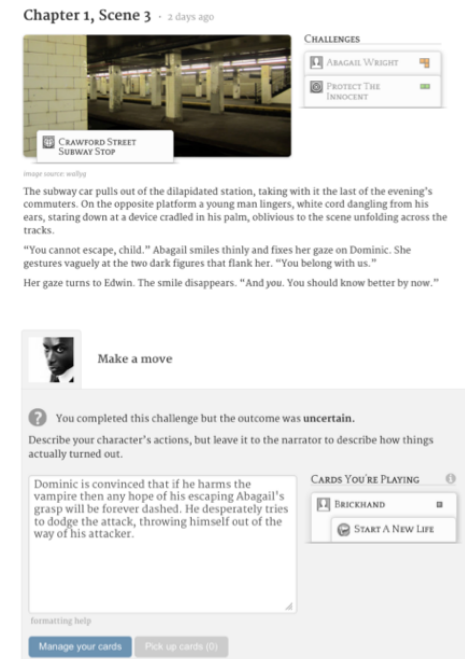
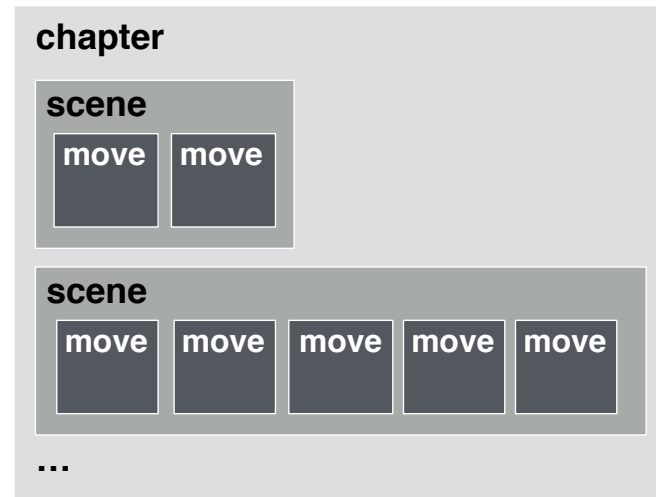


Since we added challenges to Storium, games have on average doubled their rate of progress. Players feel more empowered to affect the story, and thus more motivated to get involved and “go for it.”

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|-------------------------------|--------------------------------|
| 1. shared narrative | 4. dramatic economy |
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Finally, let's talk about creative constraint.

creative constraint: chapter-scene-move flow



Storium may be a writing game, but it's not a blank sheet of paper. Surrounding all the mechanics like cards and challenges, there's a structure.

Each game is divided into scenes. Each scene has a set of challenges from the narrator, and players make moves to address those challenges. When the challenges are complete, everyone knows the scene is over, and the narrator starts the next one. Scenes can also be grouped into chapters or acts, to help organize the ongoing story.

To abuse the "blank page" metaphor, this structure turns what would be a blank page into a number of much smaller, clearly labeled boxes. It makes the task of storytelling feel less intimidating, more tractable. And it encourages balance among the players, since it becomes clearer when one player is hogging the spotlight.



Chapter 1, Scene 3 • 02/05/2024

CHALLENGES

GO HOME

over 44 million
words written to date

(>880 novels)

So how are these techniques working out for us?

To date, Storium players have collectively written more than 44 MILLION WORDS. That's nearly 900 novels worth of content. And this is in a product that's still in playtesting. The storytelling mechanics we're using have unlocked a tremendous flurry of player creativity and participation that shows no sign of dropping off.

techniques to try:

1. shared narrative
2. leaving whitespace
3. creative constraint
4. dramatic economy
5. collaborative worldbuilding
6. pacing

recommended games:

Fiasco	Dogs In The Vineyard
Fate Core	Monsterhearts
Fate Accelerated	Hillfolk
Once Upon A Time	Trail of Cthulhu
Apocalypse World	Microscope
Dungeon World	Hobbit Tales
Always/Never/Now	Elegy For A Dead World
Lady Blackbird	A Penny For My Thoughts

Thank you!

Now, I don't have all the answers, and MY answers may not suit YOUR game. Storium is digital, but its roots are more in the tabletop realm than they are in simulation. But regardless, I challenge you to look more closely at these games and their mechanics, and see if you can find new inspiration!

I've reiterated here the list of techniques I covered on this talk. And I've also listed a number of other games that I highly recommend you check out. They are all fantastic games, and actually playing them is all but certain to inspire you beyond what I've said here today. If you google these games, you'll find places you can buy them either online or in local gaming shops, like GameScape in San Francisco and Endgame in Oakland. The game Elegy For a Dead World is actually a video game and is available via Steam.

Thanks so much for your time. Go tell more stories!