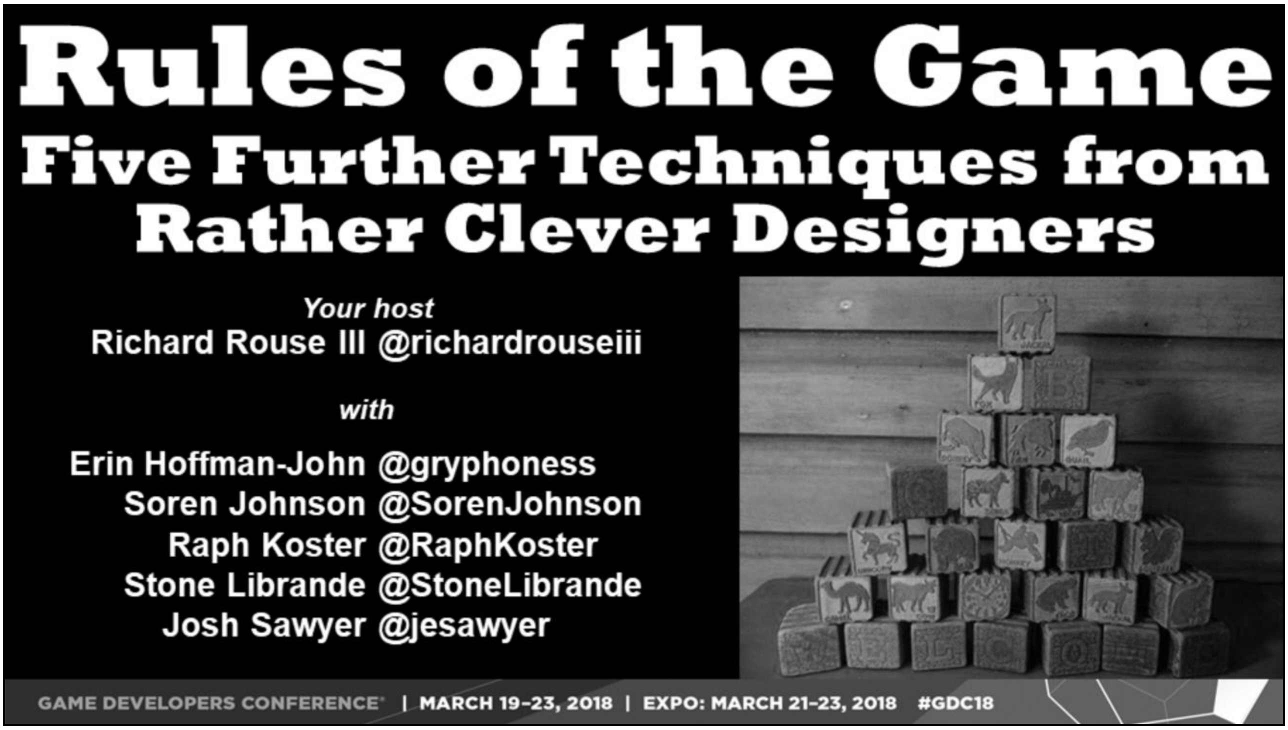


Rules of the Game

Five Further Techniques from Rather Clever Designers

Your host

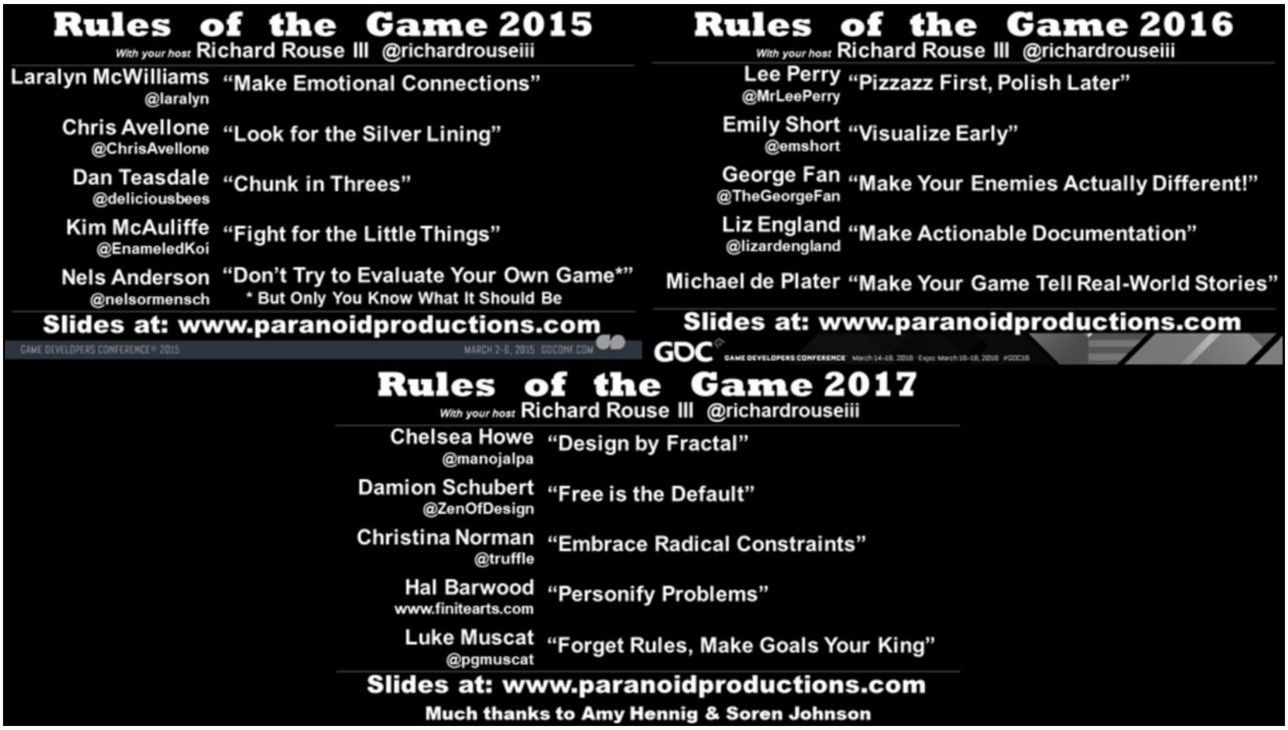
Richard Rouse III @richardrouseiii

with

Erin Hoffman-John @gryphoness
Soren Johnson @SorenJohnson
Raph Koster @RaphKoster
Stone Librande @StoneLibrande
Josh Sawyer @jesawyer

GAME DEVELOPERS CONFERENCE® | MARCH 19–23, 2018 | EXPO: MARCH 21–23, 2018 #GDC18

Welcome



Rules of the Game 2015

With your host Richard Rouse III @richardrouseiii

Laralyn McWilliams @laralyn	“Make Emotional Connections”
Chris Avellone @ChrisAvellone	“Look for the Silver Lining”
Dan Teasdale @deliciousbees	“Chunk in Threes”
Kim McAuliffe @EnameledKoi	“Fight for the Little Things”
Nels Anderson @nelsormensch	“Don’t Try to Evaluate Your Own Game*” * But Only You Know What It Should Be

Slides at: www.paranoidproductions.com

GAME DEVELOPERS CONFERENCE® 2015 MARCH 2-6, 2015 GDCONF.COM

Rules of the Game 2016

With your host Richard Rouse III @richardrouseiii

Lee Perry @MrLeePerry	“Pizzazz First, Polish Later”
Emily Short @emshort	“Visualize Early”
George Fan @TheGeorgeFan	“Make Your Enemies Actually Different!”
Liz England @lizardengland	“Make Actionable Documentation”
Michael de Plater	“Make Your Game Tell Real-World Stories”

Slides at: www.paranoidproductions.com

GDC GAME DEVELOPERS CONFERENCE March 14-18, 2016 Expo: March 16-18, 2016 #GDC16

Rules of the Game 2017

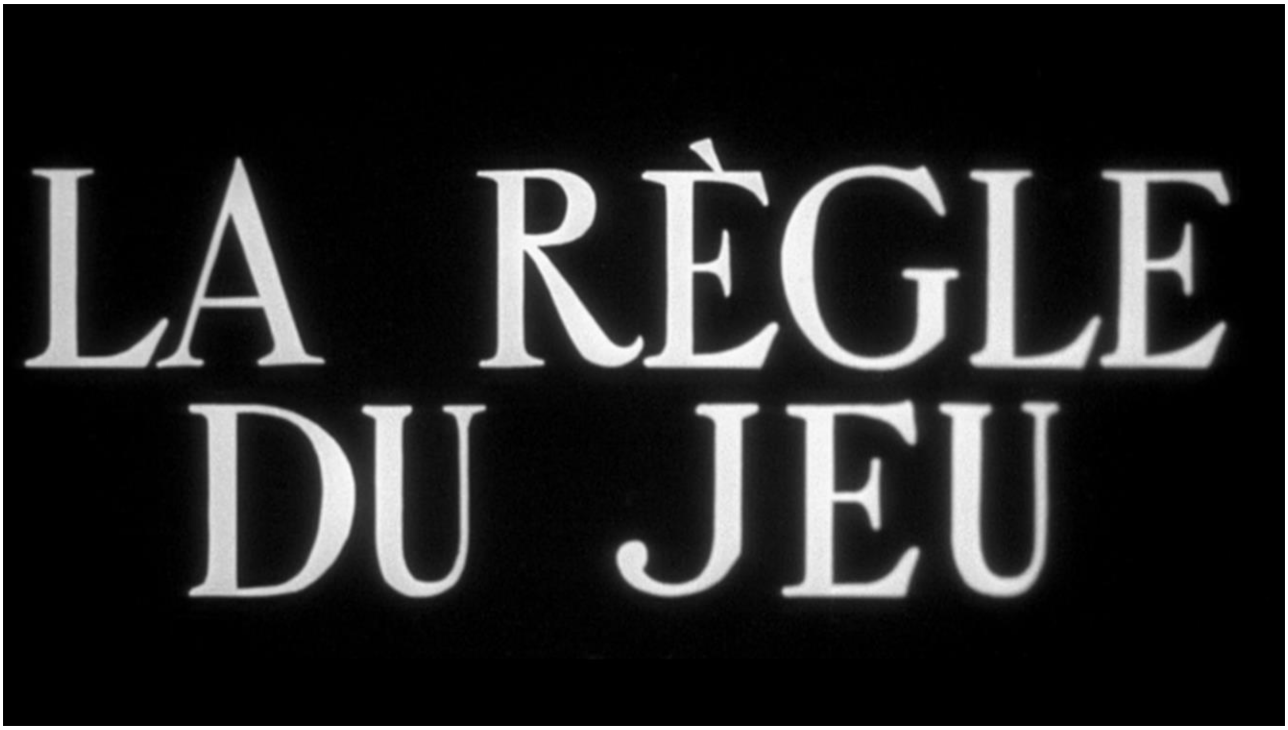
With your host Richard Rouse III @richardrouseiii

Chelsea Howe @manojalpa	“Design by Fractal”
Damion Schubert @ZenOfDesign	“Free is the Default”
Christina Norman @truffle	“Embrace Radical Constraints”
Hal Barwood www.finitearts.com	“Personify Problems”
Luke Muscat @pgmuscat	“Forget Rules, Make Goals Your King”

Slides at: www.paranoidproductions.com

Much thanks to Amy Hennig & Soren Johnson

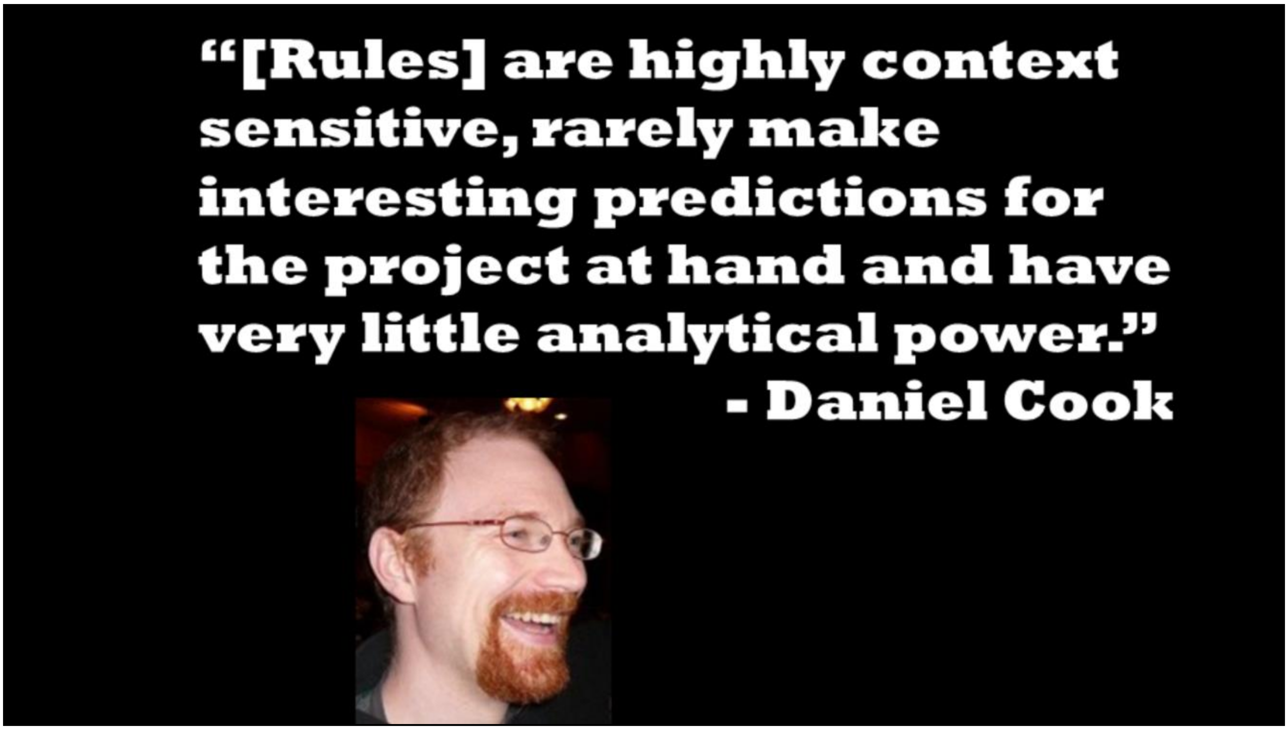
We’ve been doing this talk for a number of years, check out some of our earlier years editions – on the GDC Vault, some on YouTube.



LA RÈGLE
DU JEU

So what do we mean when we talk about rules?

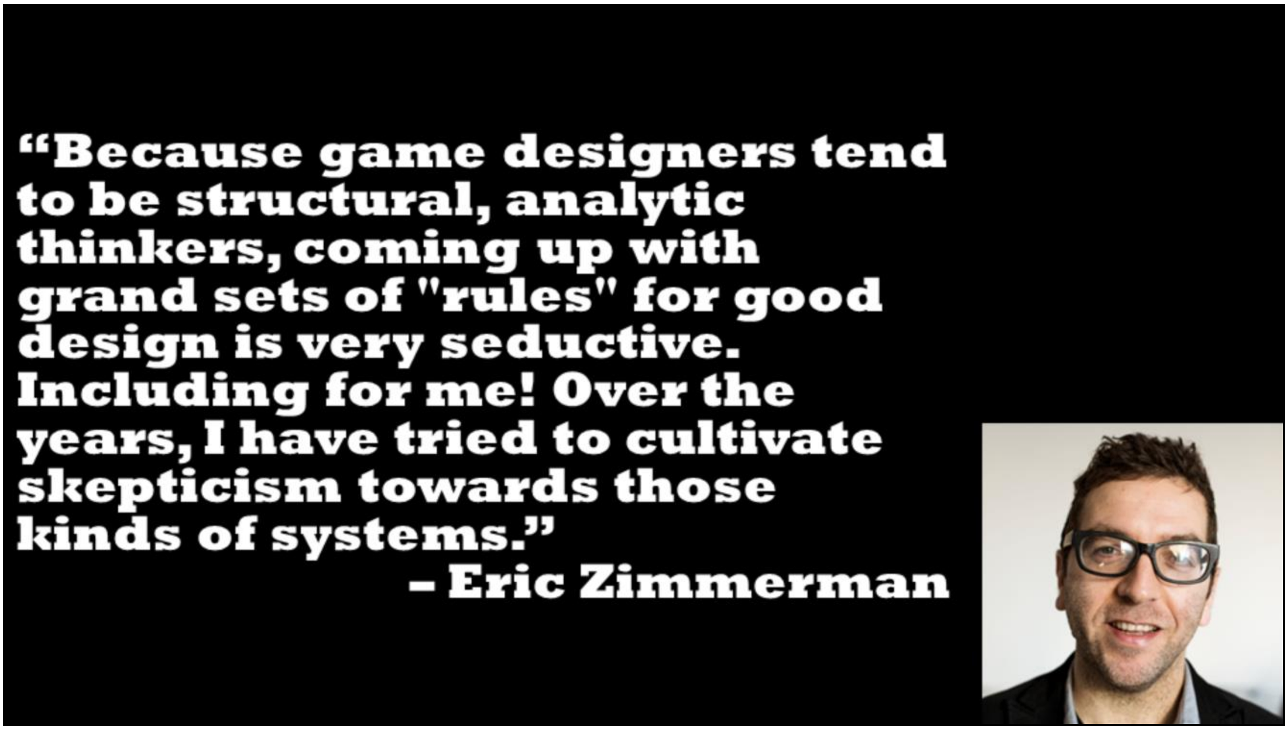
Well I've found that some designers are not big fans of thinking about there being any "rules" for how to design your game.



"[Rules] are highly context sensitive, rarely make interesting predictions for the project at hand and have very little analytical power."

- Daniel Cook

My friend Daniel Cook said…



“Because game designers tend to be structural, analytic thinkers, coming up with grand sets of "rules" for good design is very seductive. Including for me! Over the years, I have tried to cultivate skepticism towards those kinds of systems.”
– Eric Zimmerman

Eric Zimmerman, author with Katie Salen of a book called “Rules of Play” said…

I think as digital game designers, when we think of rules we think of the rules for the games we work on.

The rules in digital games are strictly enforced, because the computer is a on-or-off device. It won't bend the rules for you. They are what they are.

You can't put the Tetris piece where the game won't let you.

But we move back into the analog space, we might understand rules can be more… malleable.

Who hasn't heard of house rules in Monopoly? The most famous being getting all the cash for landing on Free Parking.

You might think that Chess would be fairly fixed, but then you haven't played with my kids who have developed their own crazy rules about how pawns make it across the board to get a replacement piece. When I explained to them the way the rule is supposed to work they were uninterested.

And if anyone's been engaged in intense Scrabble games knows, sometimes you need to come up with some rule variants to prevent your games from….

From turning into this.

Literally the picture you get when you google “Scrabble Fight”

So custom rules can keep things civil in Scrabble.

But I think the idea that the rules of a game need to be changed to suit the players playing it starts to suggest that the rules are more malleable than we thought.

And of course as we move into RPG land, a good DM will bend the rules to maximize fun and try to get the right amount of challenge but also let their players succeed.

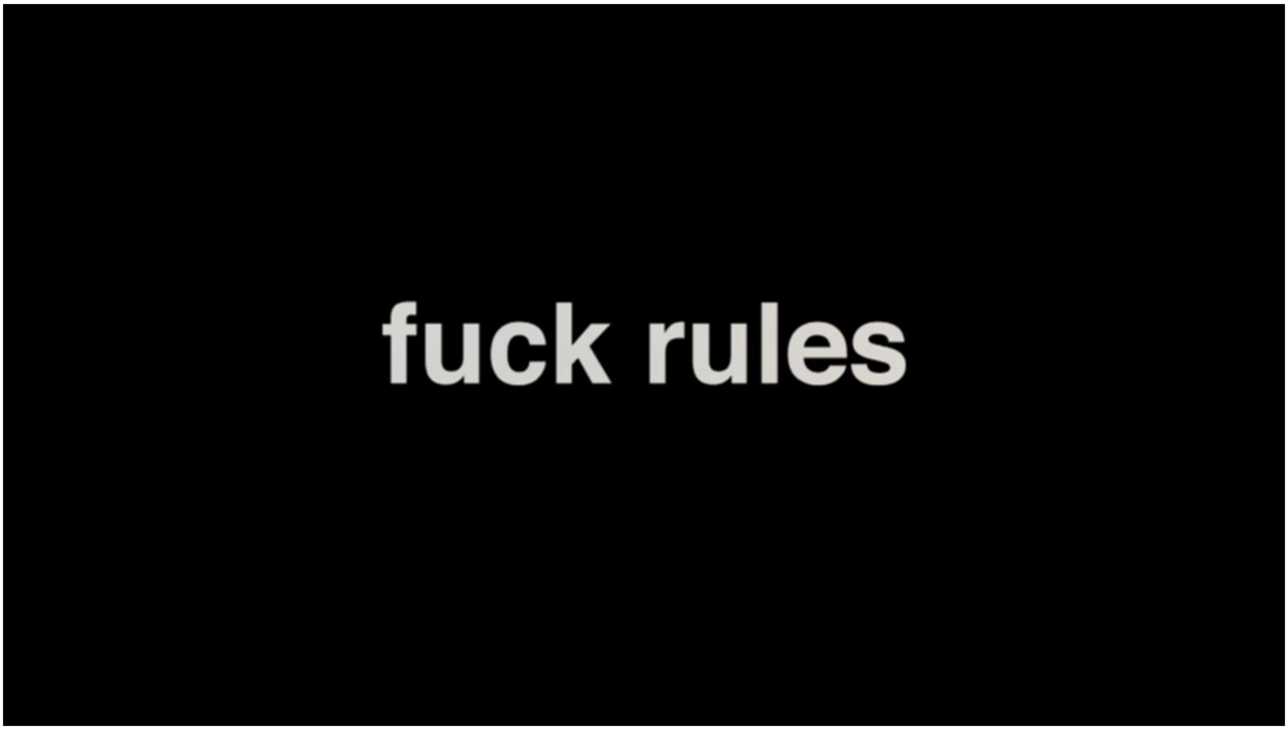
The rules of D&D are modified real-time to make sure everyone has a good time.

Or it can be used to artist effect, where challenging and potentially defying the rules becomes the point of the game and the narrative in something like Brenda Romero's Train

Forget Rules
Make Goals Your King

Last year, Luke Muscat subverted the objective of the session, with his talk Forget Rules, Make Goals Your King.

(Go check it out on the Vault as well!)



fuck rules

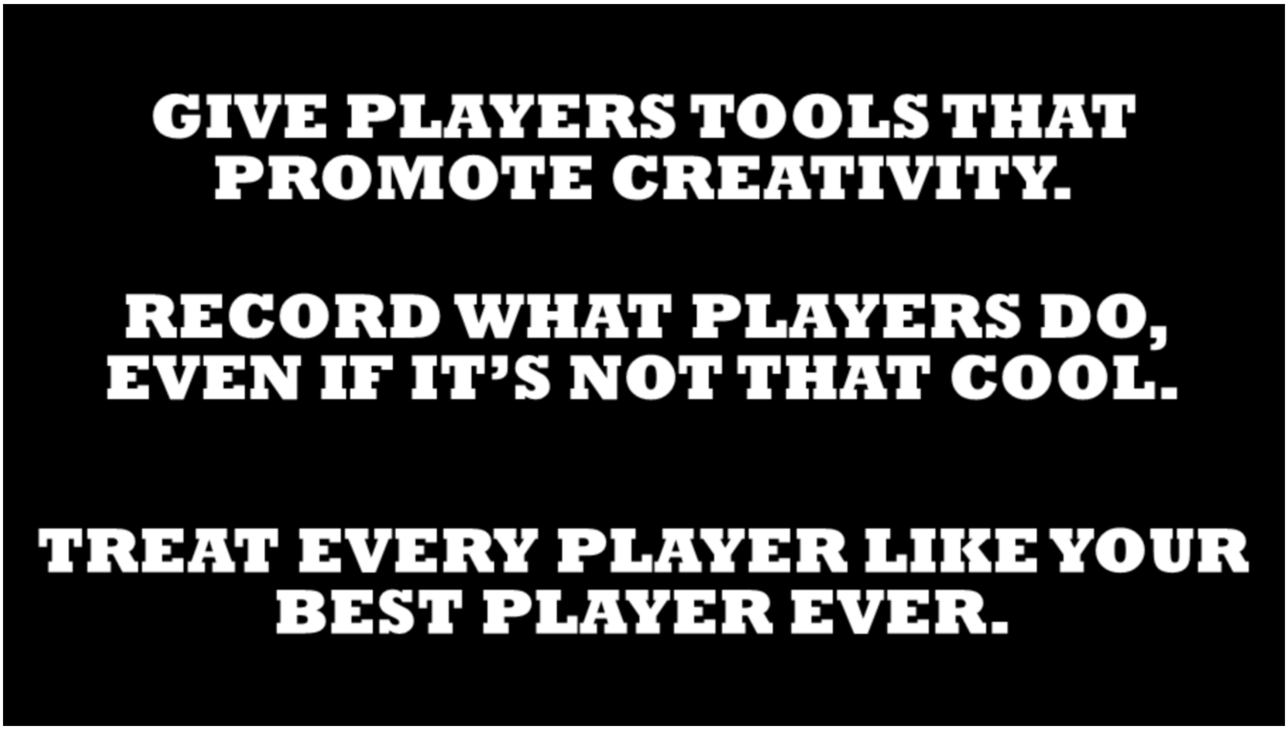
But he used different words to describe how he felt about them.

What My Parents Taught Me About Game Design - Richard Rouse III

Now I gave my own version of this talk some years ago at another conference, where I talked about what my parents, non-game designers, taught me about game design, in how they raised me.

I translated some of those parenting techniques into how I think about players.

You can go watch this on YouTube if you'd like to know more.



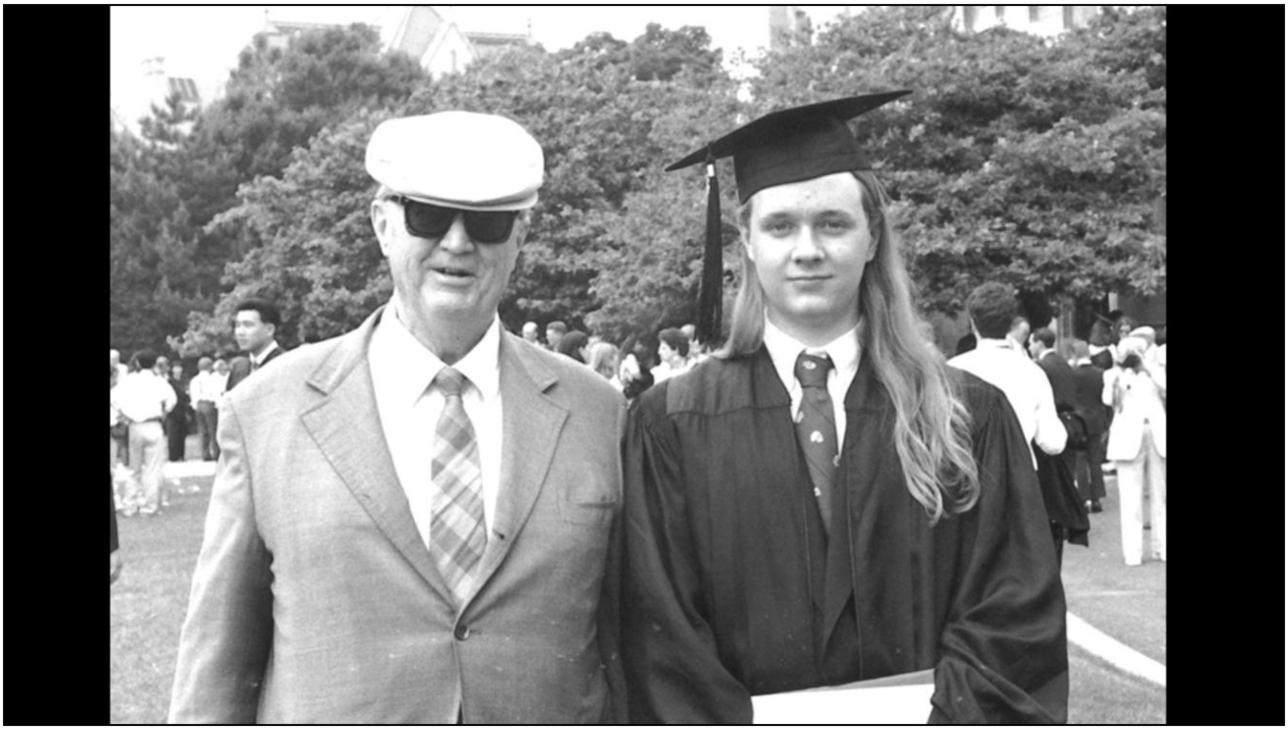
GIVE PLAYERS TOOLS THAT PROMOTE CREATIVITY.

RECORD WHAT PLAYERS DO, EVEN IF IT'S NOT THAT COOL.

TREAT EVERY PLAYER LIKE YOUR BEST PLAYER EVER.

But spoiler, here are the key rules I put forward at that talk.

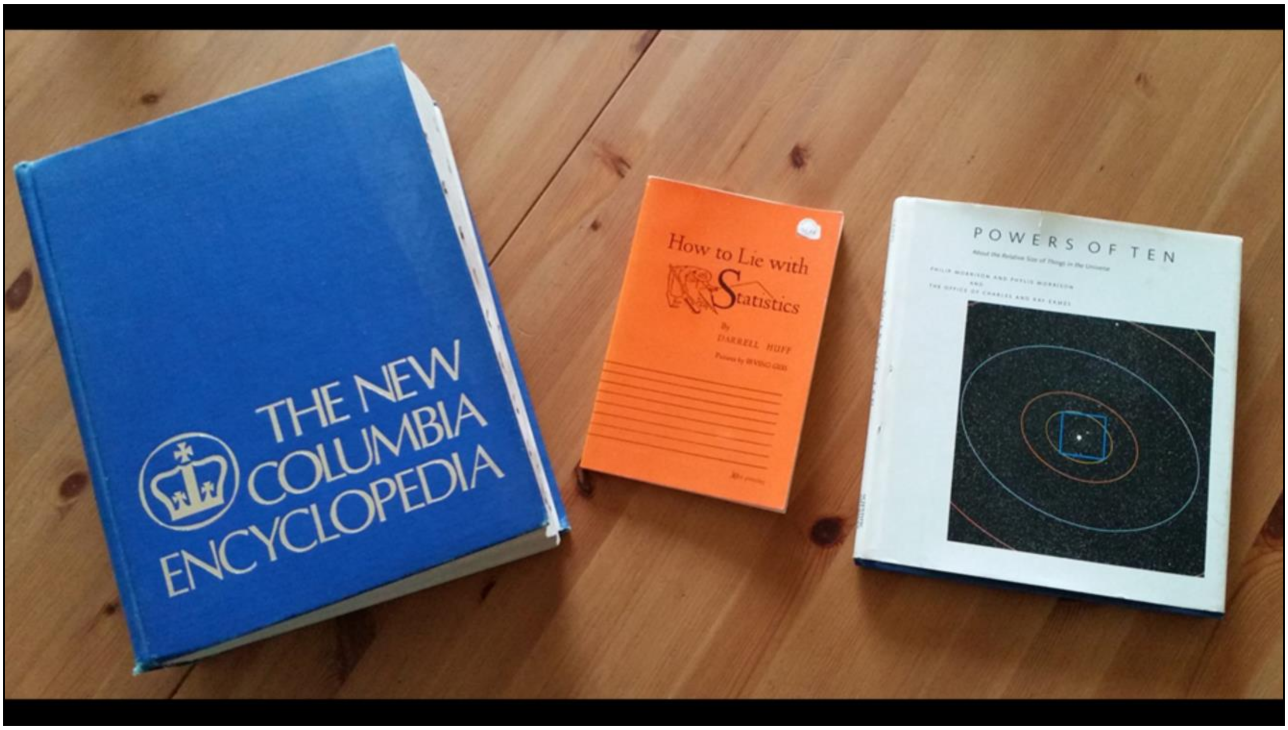
These were things interpreted from how my parents raised me.



But if I could make one addendum to that talk, it would be to bring up something I learned about my dad.

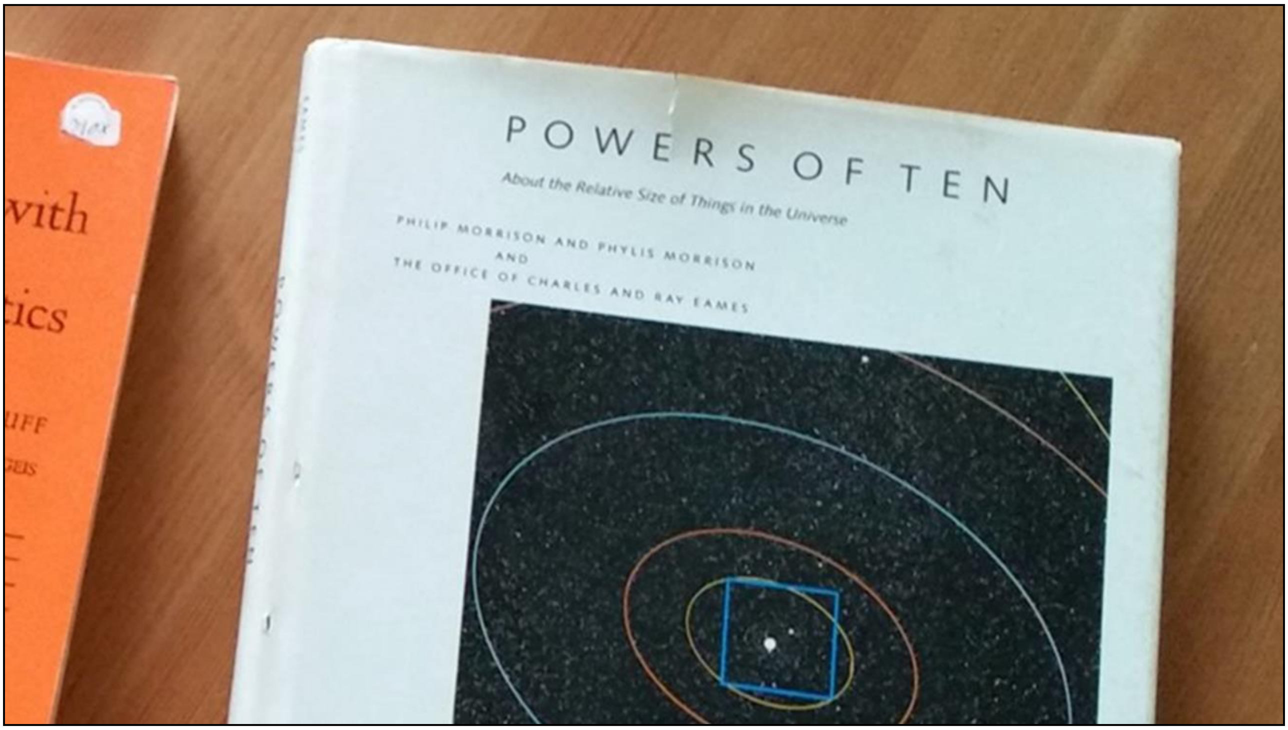
A lifelong psychology professor, my dad passed away this past year, and at the memorial and in the process of writing his eulogy, I learned something my Dad used to say to his many students that I talked to.

My father always liked to say: “Are you asking the right question?”


THE NEW COLUMBIA ENCYCLOPEDIA
How to Lie with Statistics
By DARRELL HUFF
Pictures by IRVING GEIS
POWERS OF TEN
About the Relative Size of Things in the Universe
PHILIP MORRISON AND PHYLIS MORRISON AND THE OFFICE OF CHARLES AND RAY EAMES

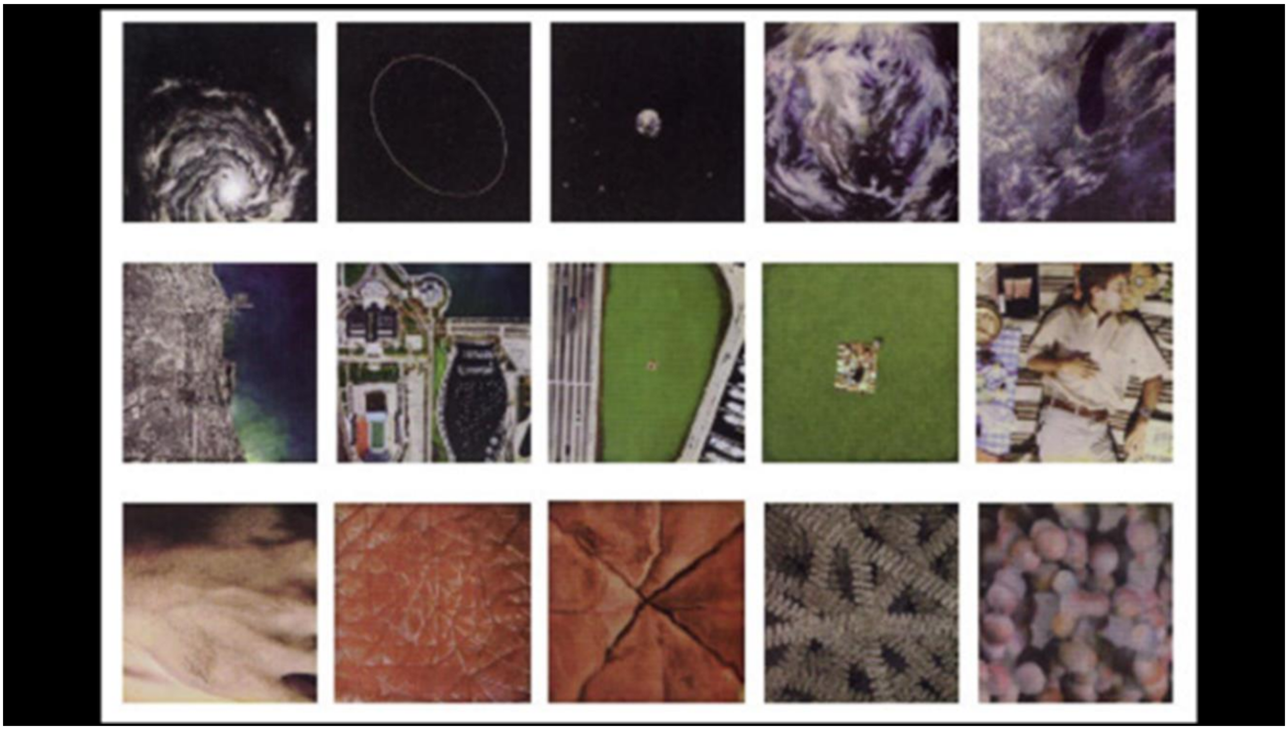
So what does that mean? Let me give you an example from an interaction I had with him as a kid.

My dad loved books – these are some of his favorites that I now have.


POWERS OF TEN
About the Relative Size of Things in the Universe
PHILIP MORRISON AND PHYLIS MORRISON
AND
THE OFFICE OF CHARLES AND RAY EAMES

When I was 10, I had asked my dad a question about the size of planets, I think… honestly I can’t remember.

What I do remember was that a few days later my dad gave me a book called "Powers of 10: About the Relative Size of Things in the Universe." It took the question I had asked and exploded it into more depth and complexity than I had ever imagined.



The book focuses on looking at a single point from powers of 10 levels of magnification, to see how things fit together from a galactic view to a subatomic one.

This book is not aimed at a 10 or 12 year old, and I remember being confused why he gave it to me.   But fortunately it had a lot of great photographs that I liked, and I find I appreciate it more with each passing year.

The book delved into the question I had asked… but went way beyond. It reframed the question and opened up a bunch of new ones.

Instead of being a “fixed” answer as a game design might be, it made me think.

So that’s how I encourage you to think about the rules you will hear here today.

I see each of the talks our speakers will give here today, as an opportunity to expand your horizons.

To think about the work you do here as game designers from a different perspective.

Now I must confess, my inspiration for this intro partly came from seeing Powers of Ten reference in Soren’s talk, and coming up soon. Erin will also ask if you are asking the right questions of your players,

Later on, Stone will show you why he made a board game for a movie he was too young to actually see, while Josh will tell you why he likes to only write half a story.

but first…

RAPH KOSTER

Designer
Independent
@RaphKoster

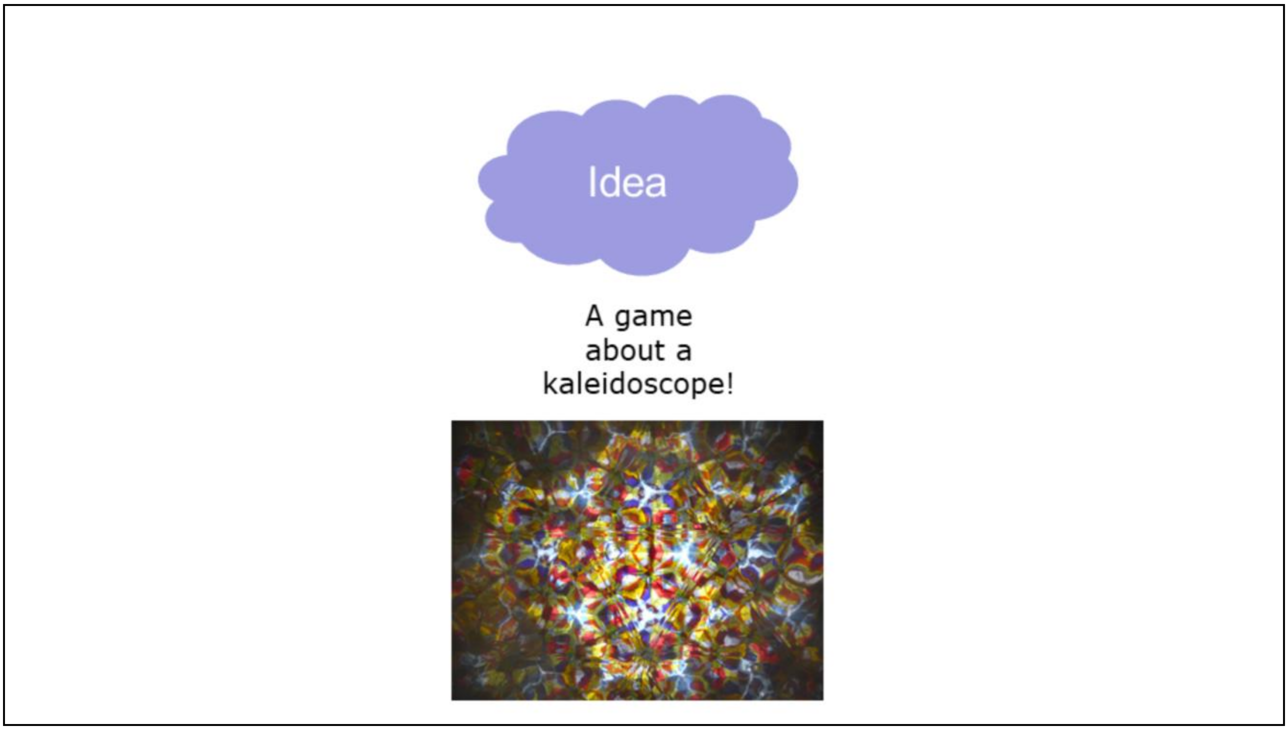
Our first speaker is widely known for his work in online games, going back to his work MUDs

Working on one of the first commercial MMOs in Ultima Online, to Star Wars Galaxies

He now works as an independent designer on a wide range of game (both digital and analog) and game-related projects…

Raph Koster!

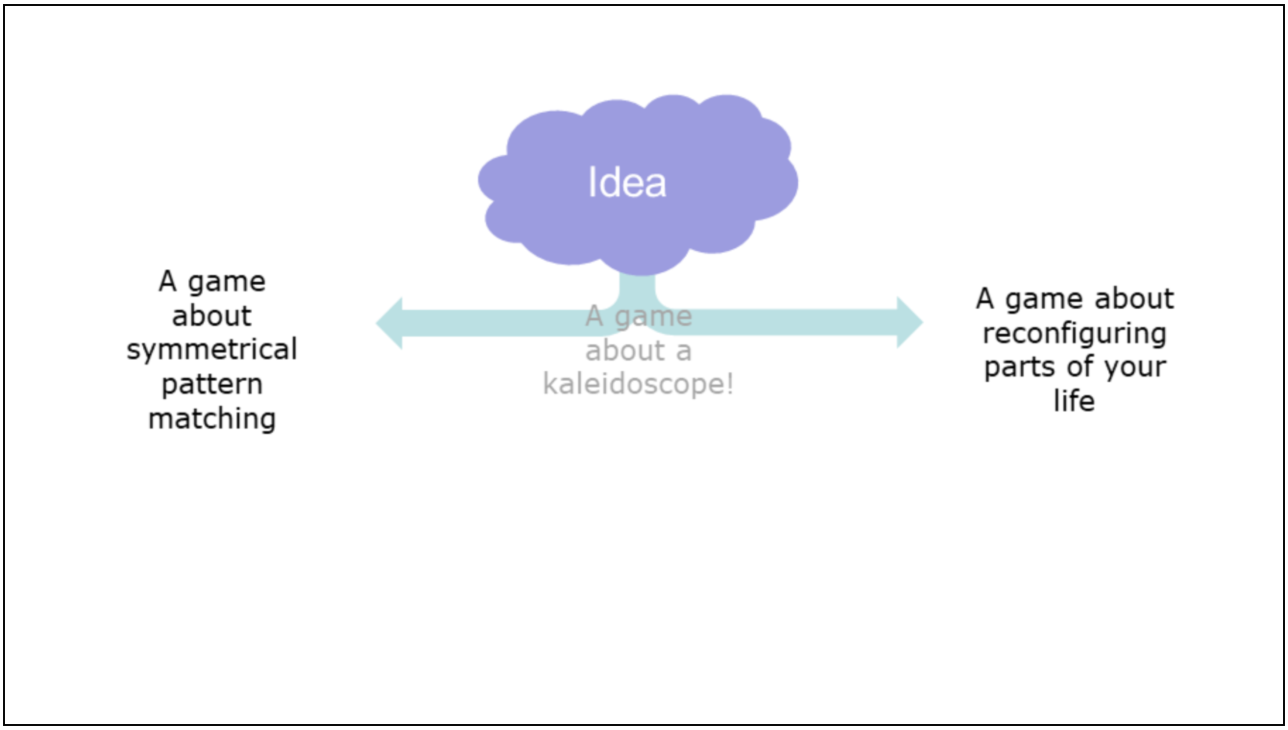
Start with the sim



Idea

A game about a kaleidoscope!

So here’s an idea I’ve had more than once. (Like, literally, I’ve made four or five games about trying to capture this idea).



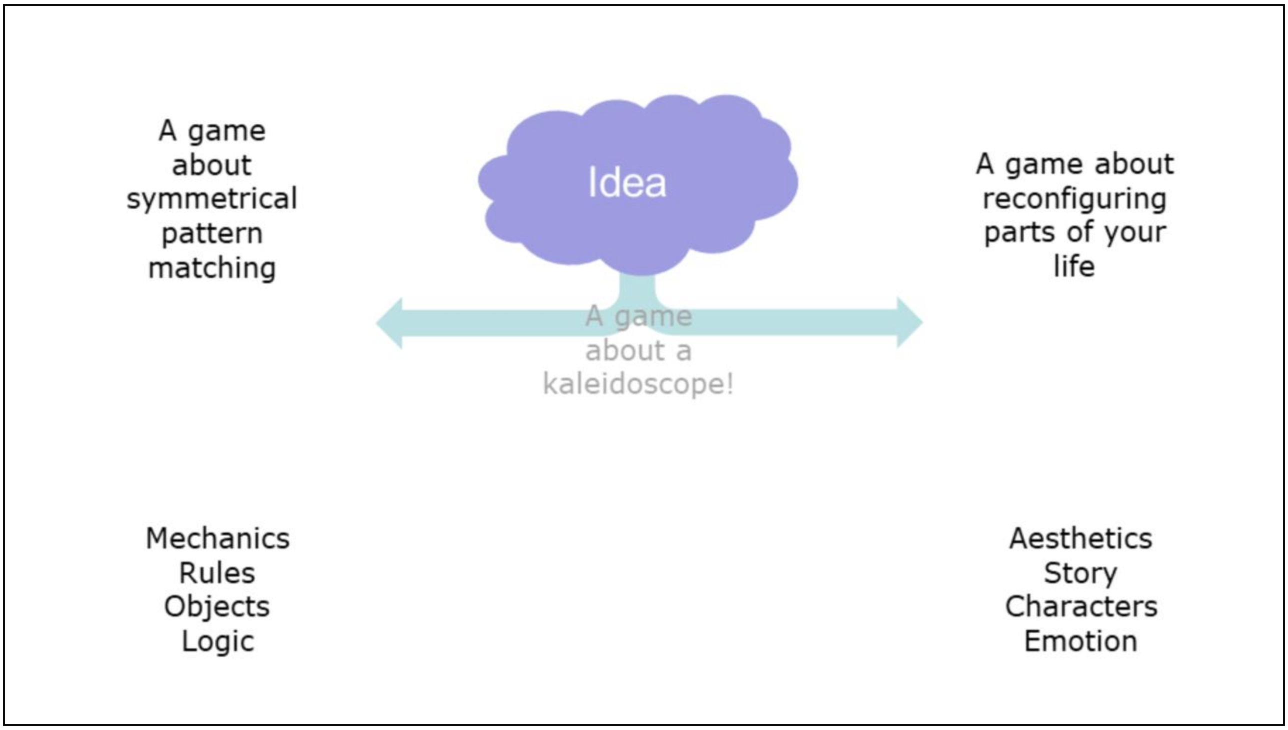
Idea

A game about symmetrical pattern matching

A game about a kaleidoscope!

A game about reconfiguring parts of your life

The thing about an idea like that is that it can really go either way – it can be about the math behind how kaleidoscopes tumble, or it can be about the sensation of a kaleidoscope, the human experience of it.



A game about symmetrical pattern matching

Idea

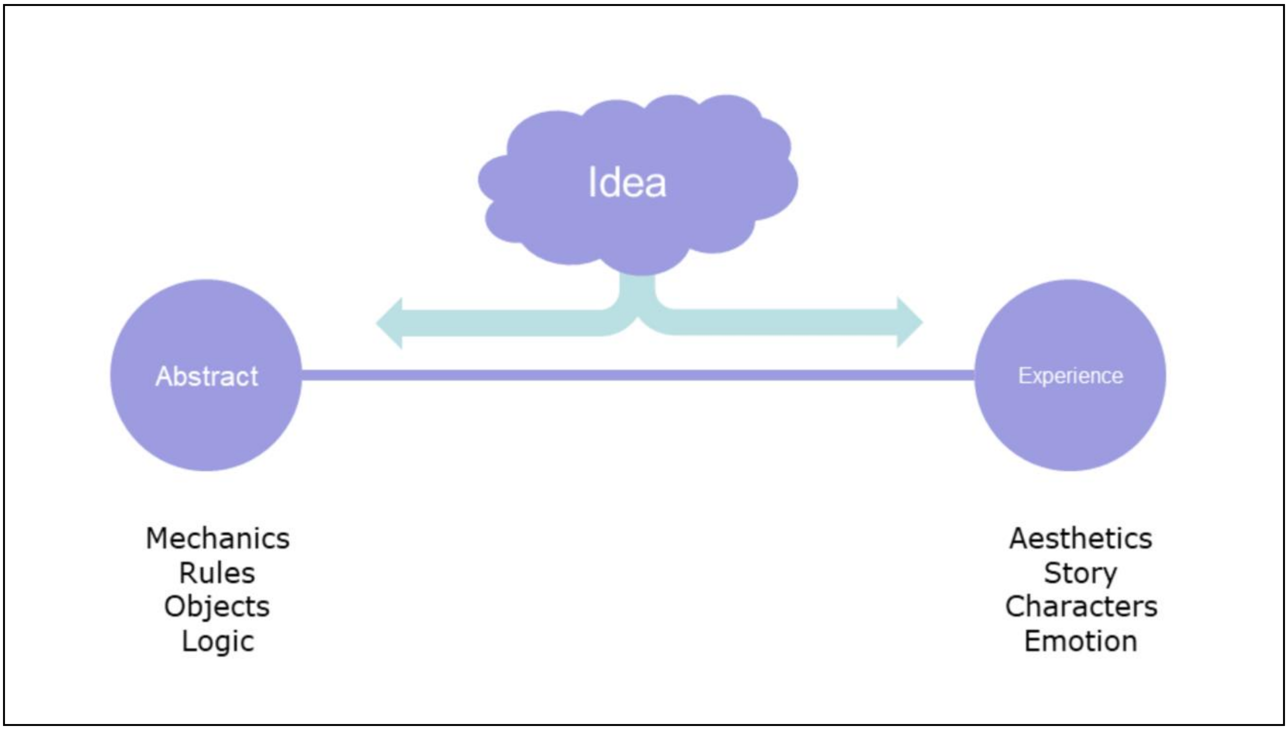
A game about reconfiguring parts of your life

A game about a kaleidoscope!

Mechanics
Rules
Objects
Logic

Aesthetics
Story
Characters
Emotion

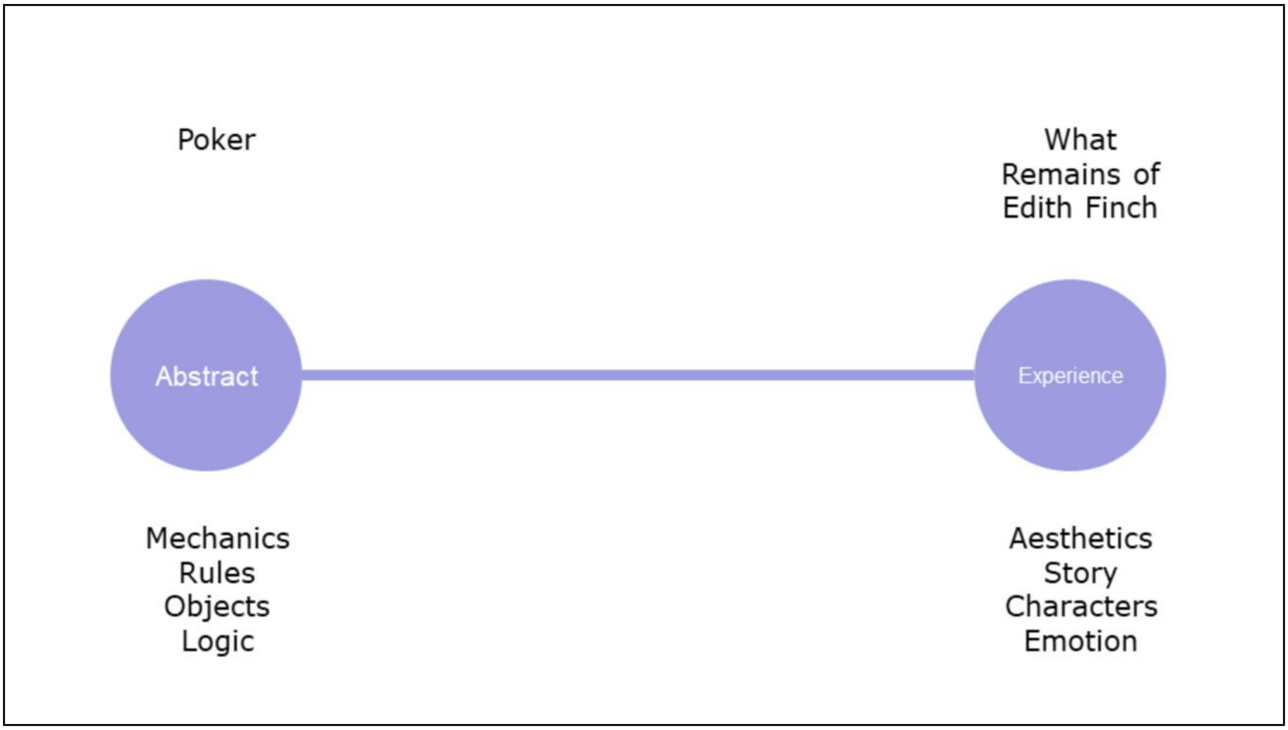
I like to say you can start from either end: have a strong idea for a game system, a set of mathematical relationships or dynamics; or have a strong narrative or experiential idea. In fact, different designers will often have very different biases towards where they start!



Mechanics
Rules
Objects
Logic

Aesthetics
Story
Characters
Emotion

Board game designers, perhaps, start with a bias towards the systemic end, and certainly much AAA starts with a bias towards the experiential end. We’d never say “you can put any skin you want on this Telltale game” and think that the experience is intact, and we’d never say “why don’t we swap out the conflict resolution mechanic in Poker” and think that remains intact either.



Poker

What
Remains of
Edith Finch

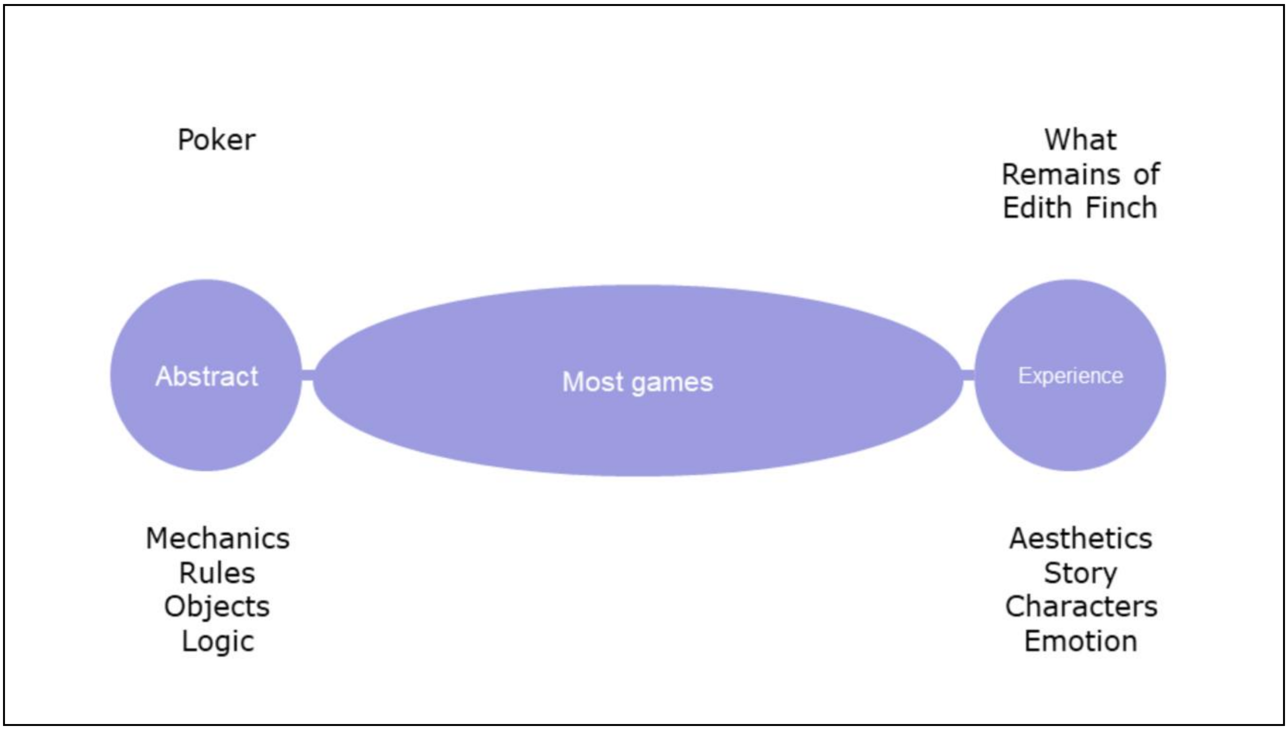
Abstract

Experience

Mechanics
Rules
Objects
Logic

Aesthetics
Story
Characters
Emotion

Starting with either is perfectly valid, since by the time you finish, you rather need to have both ideas solidly in place.



Poker

What
Remains of
Edith Finch

Abstract

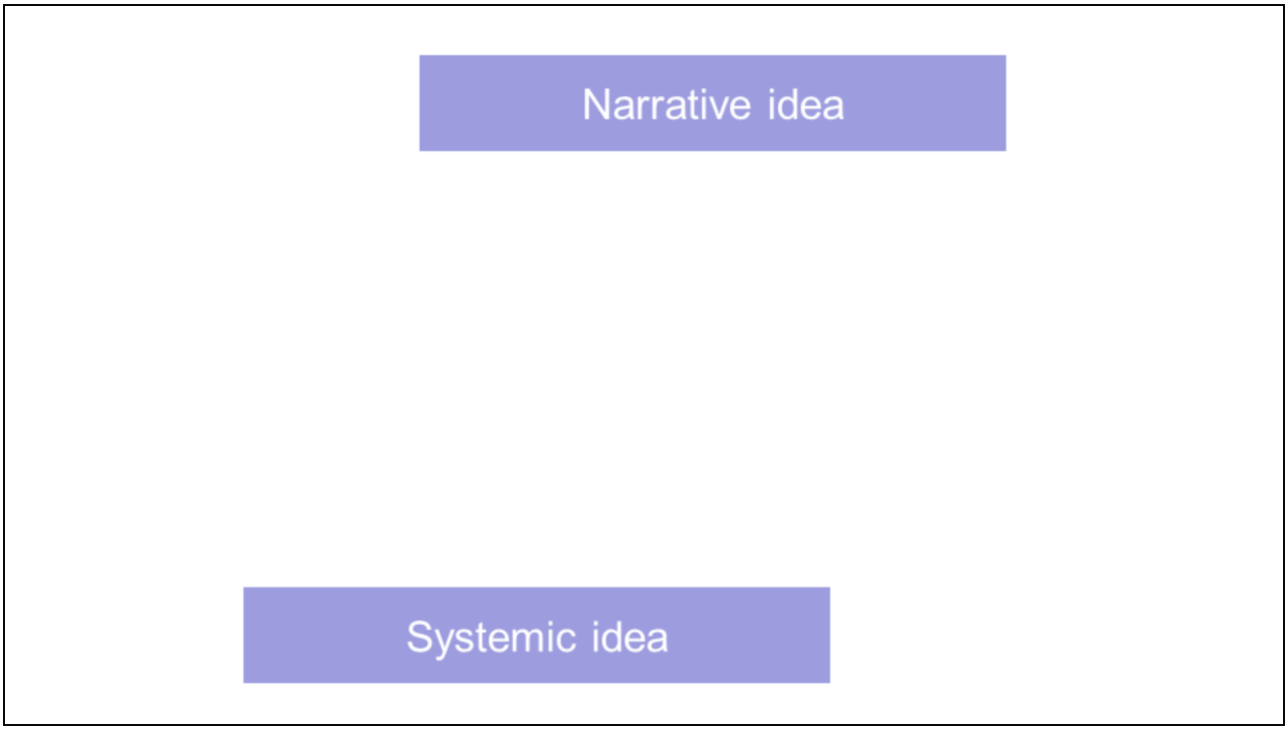
Most games

Experience

Mechanics
Rules
Objects
Logic

Aesthetics
Story
Characters
Emotion

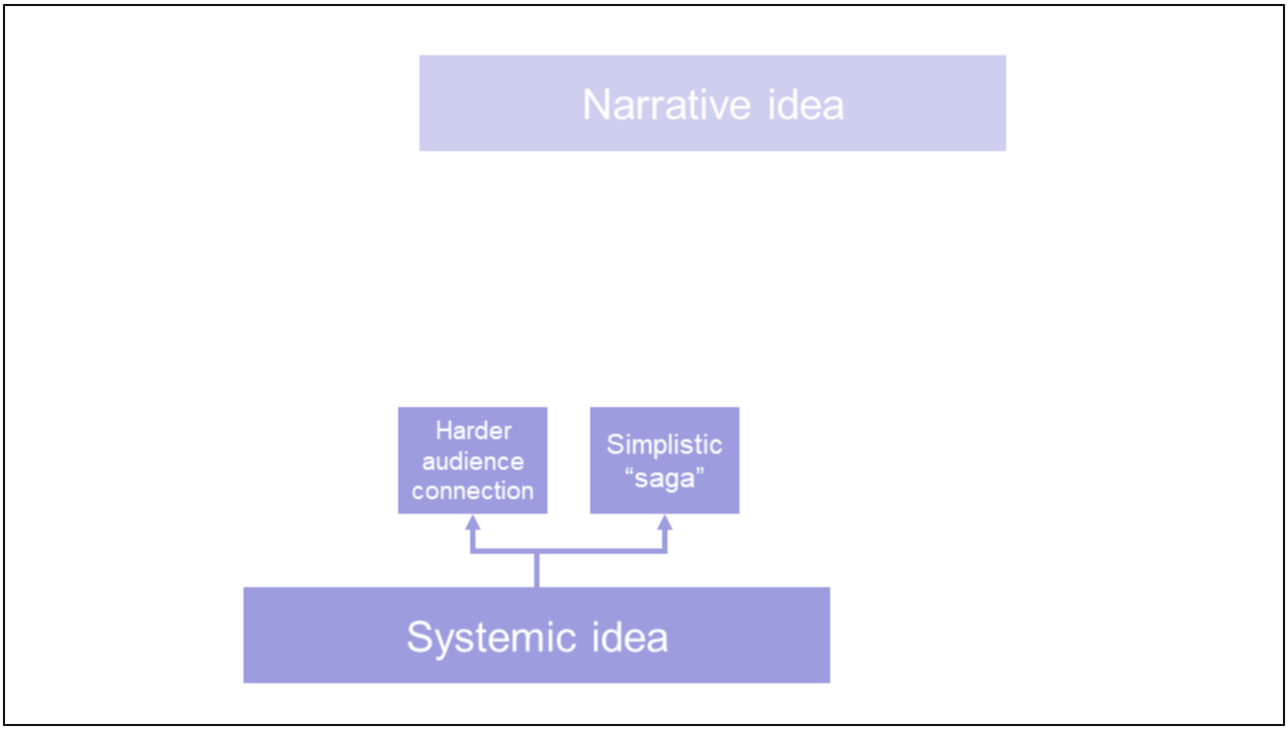
because after all, very few games are pure experiences or purely abstract.



Narrative idea

Systemic idea

But starting from one end or another has implications, and it’s important to move to the middle quickly.



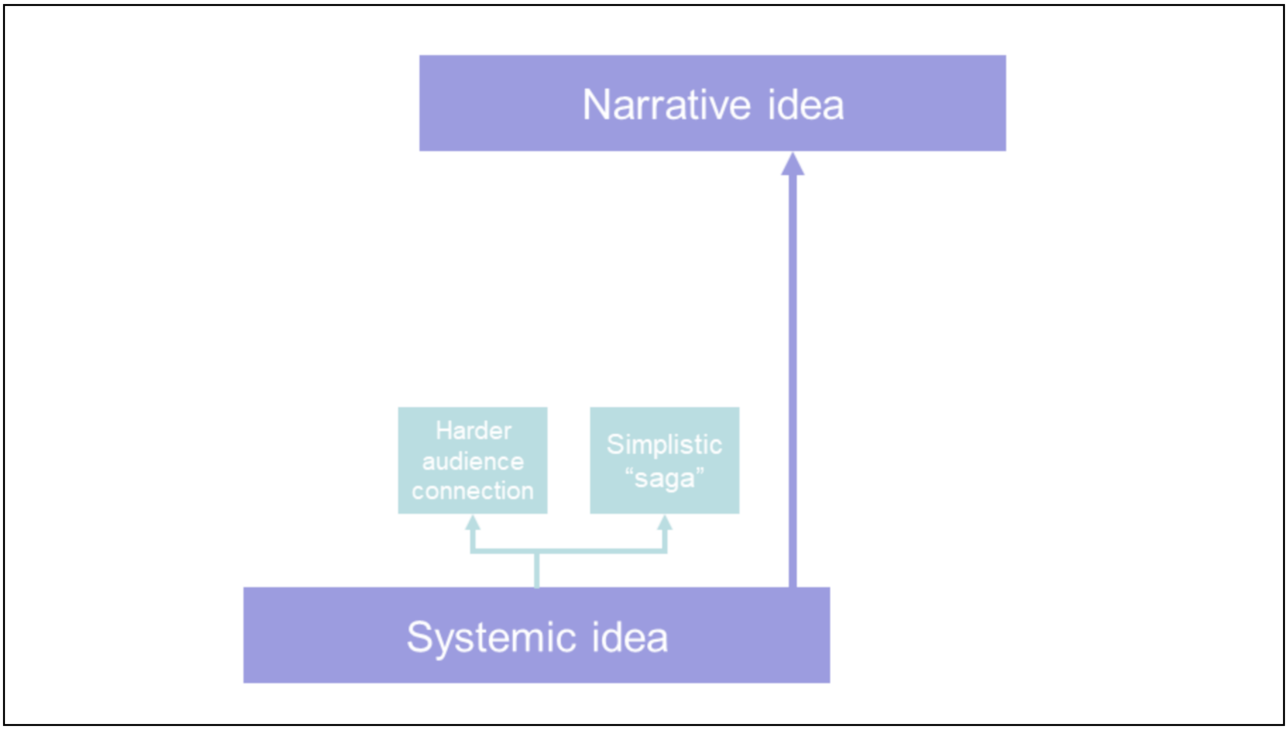
Narrative idea

Harder audience connection

Simplistic “saga”

Systemic idea

Think about starting from the system. If you fail to move to the middle, you can get stuck with an abstract game – it might be harder to market – or with really simplistic narrative wedged in between levels or something.



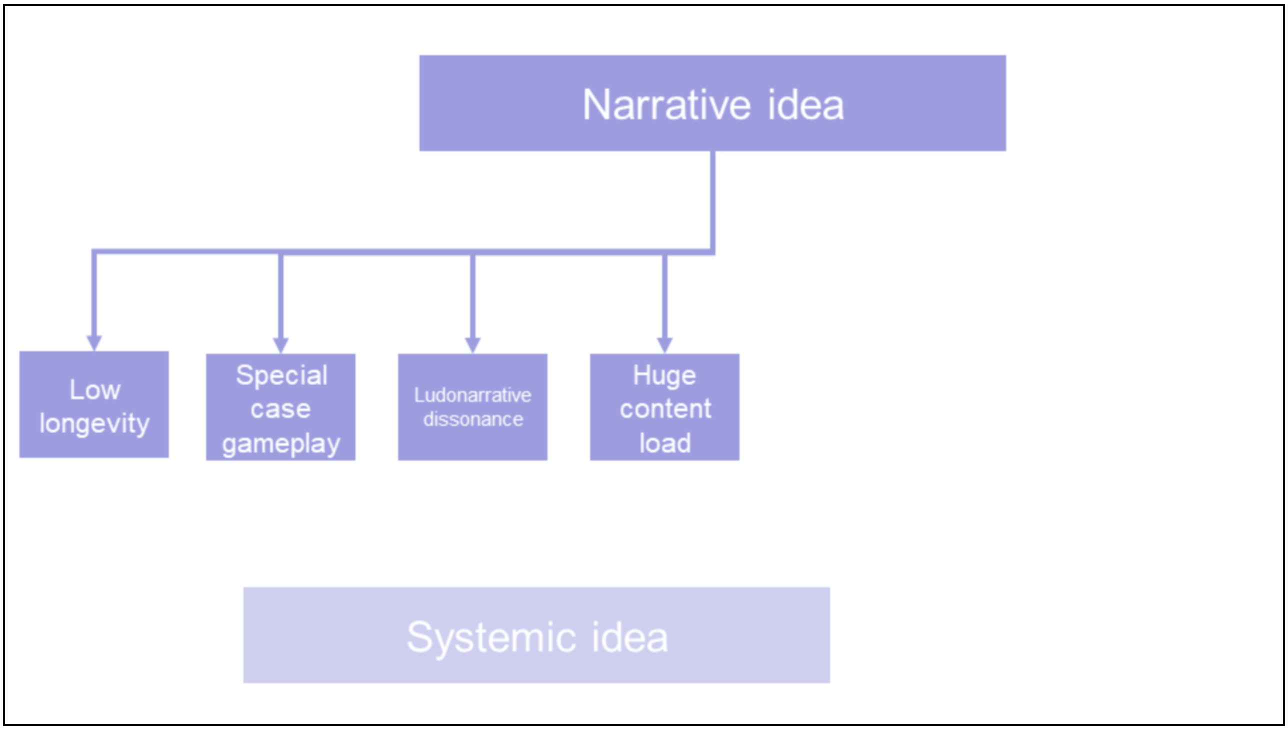
Narrative idea

Harder audience connection

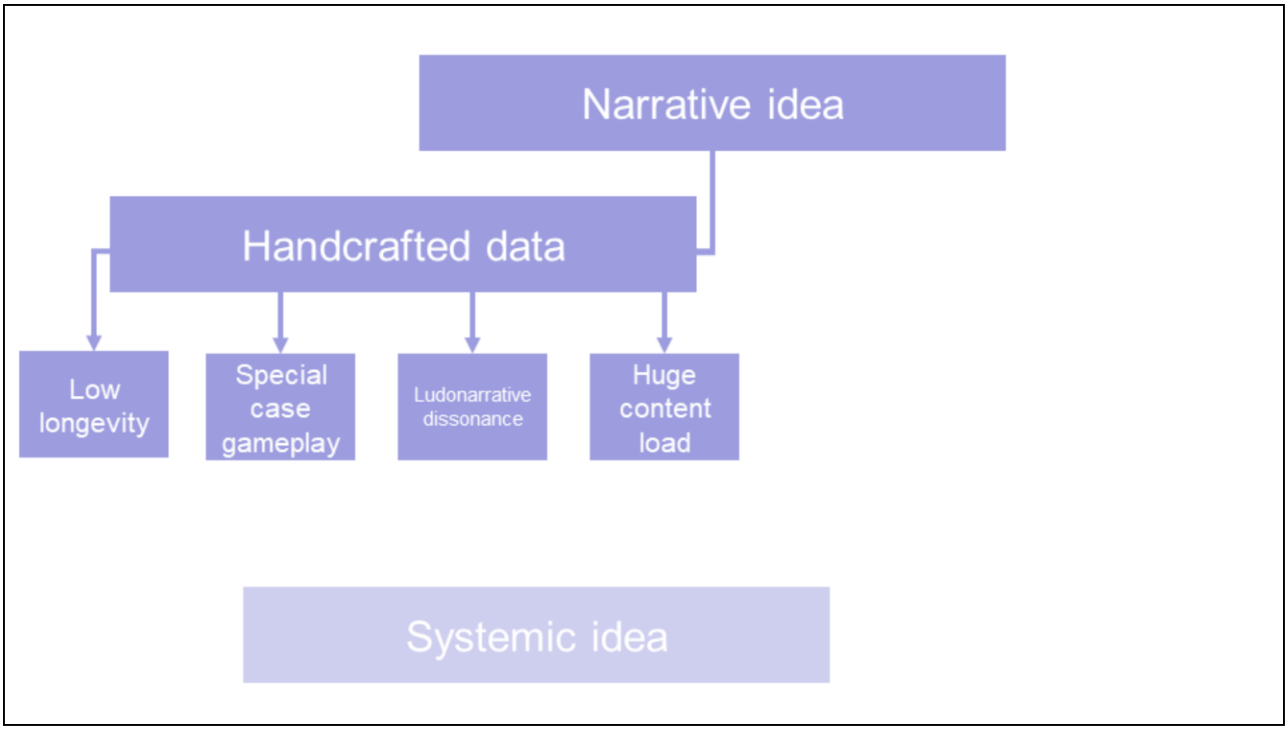
Simplistic “saga”

Systemic idea

Finding an experience or metaphor that fits the system quickly is a better path – though often a strong system idea can actually be skinned in many different ways, all of which are viable. Think of chess sets, for example.



If you start from a narrative or experiential idea, there are a lot of dev pitfalls if you don’t develop a strong systemic core. Your game is consumable, which might even happen via Twitch. You often have to spend disproportionately on content. You end up making tons of smaller minigames, multiplying your design problems.



Narrative idea

Handcrafted data

Low longevity

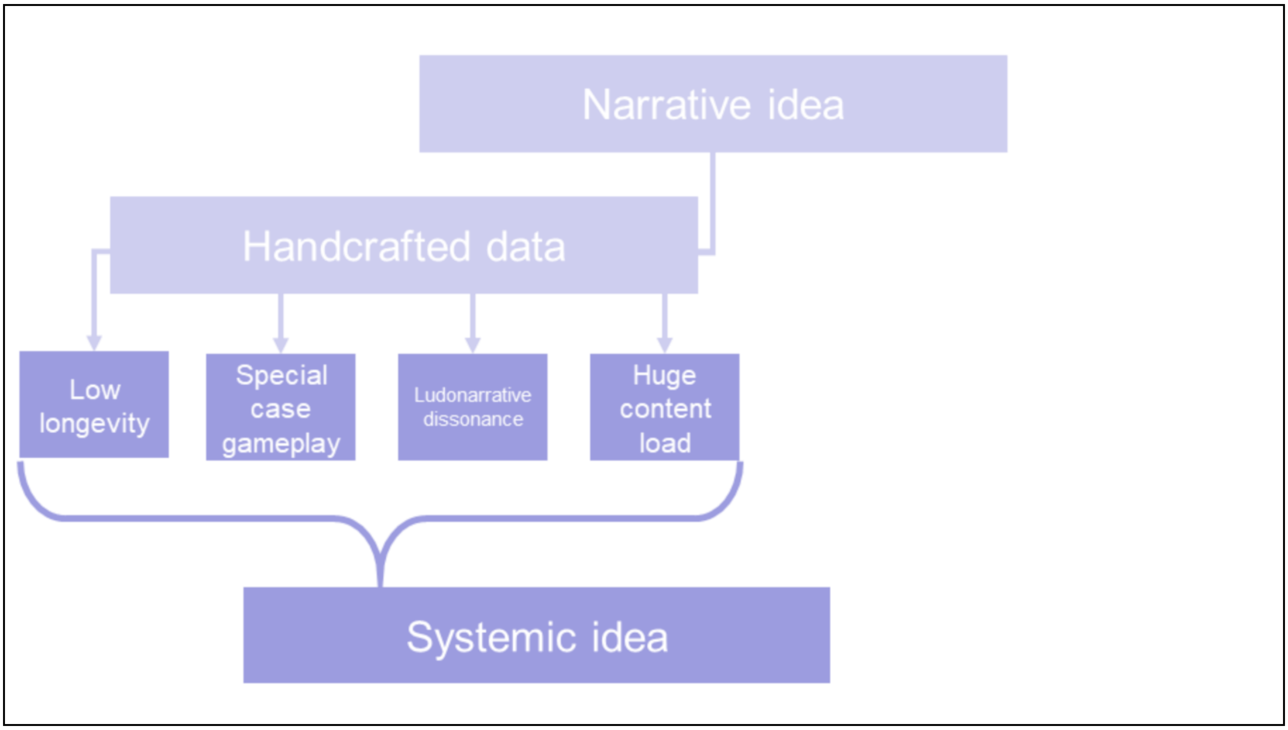
Special case gameplay

Ludonarrative dissonance

Huge content load

Systemic idea

At heart, all of these issues have to do with the fact that it is always possible to layer missions, narrative, and static data on top of a simulation; it's rarely possible to go in the reverse direction, as attempting to add rich emergent systems to a game built mostly out of data is usually futile.



Narrative idea

Handcrafted data

Low longevity

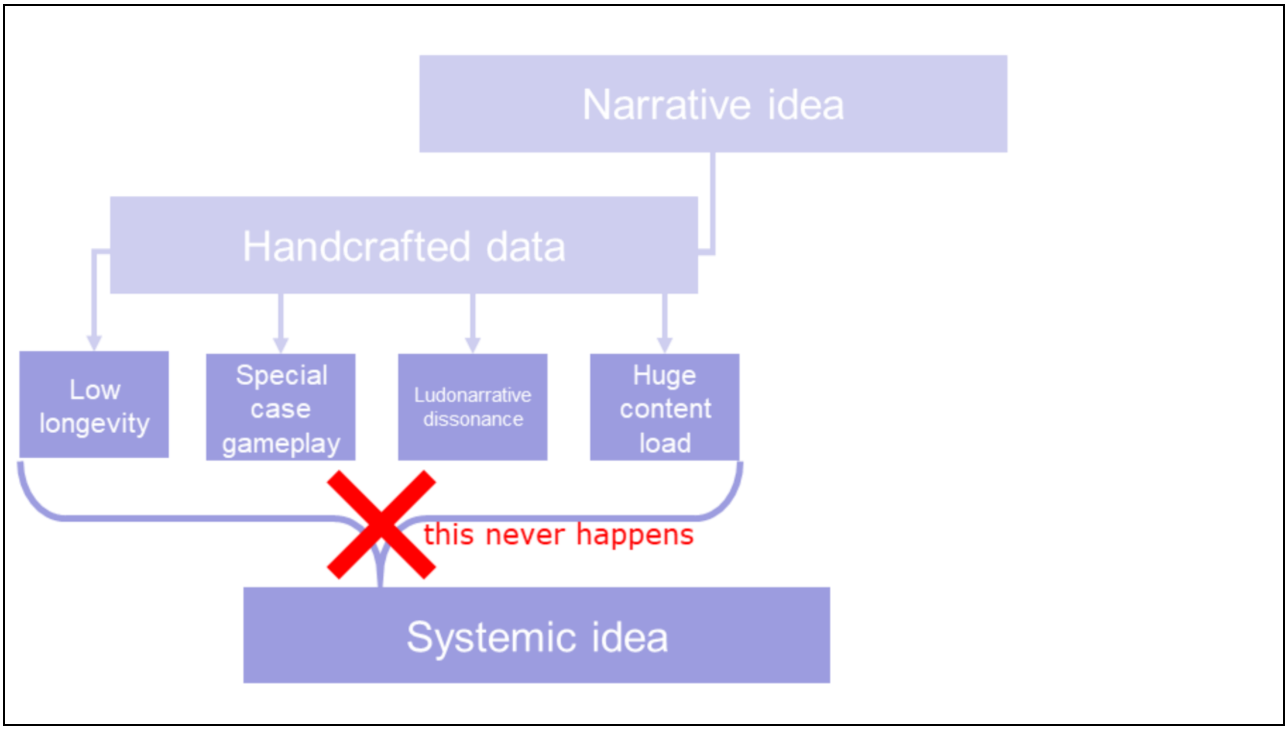
Special case gameplay

Ludonarrative dissonance

Huge content load

Systemic idea

We often get into a development project and think that the various disparate pieces of content will add up to something systemic…



Narrative idea

Handcrafted data

Low longevity

Special case gameplay

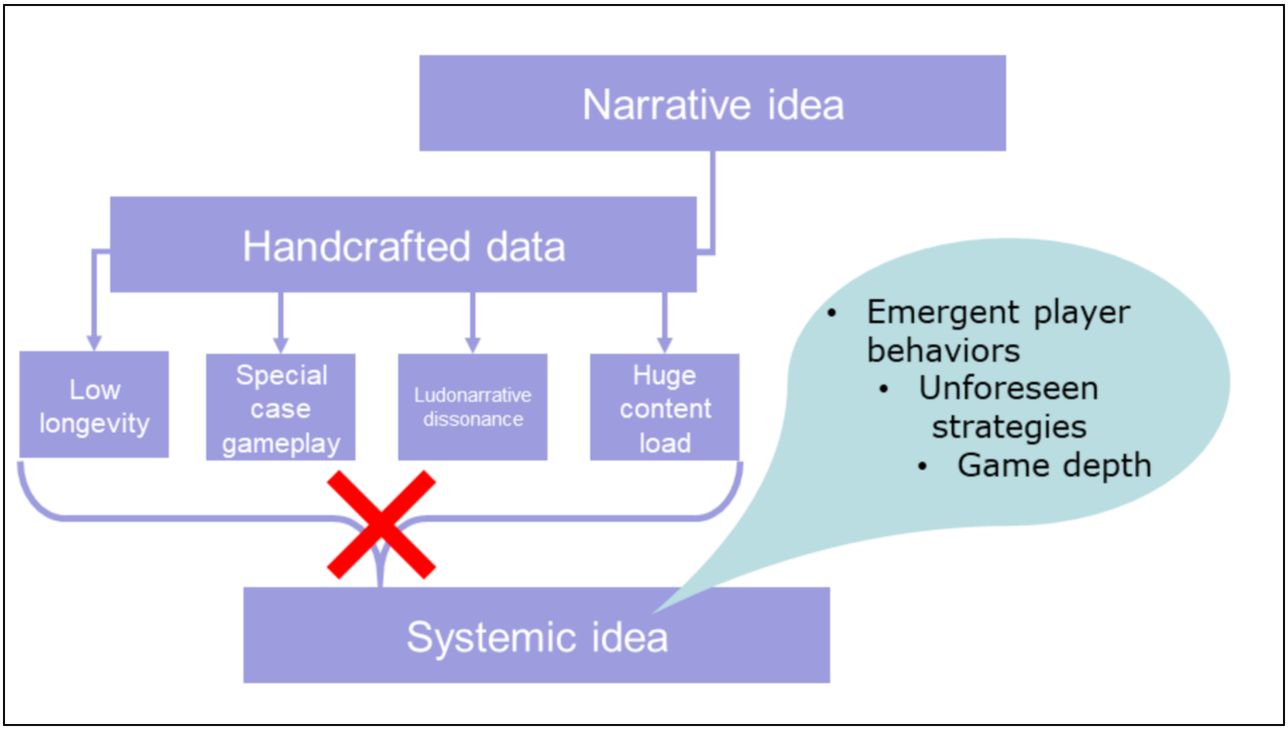
Ludonarrative dissonance

Huge content load

this never happens

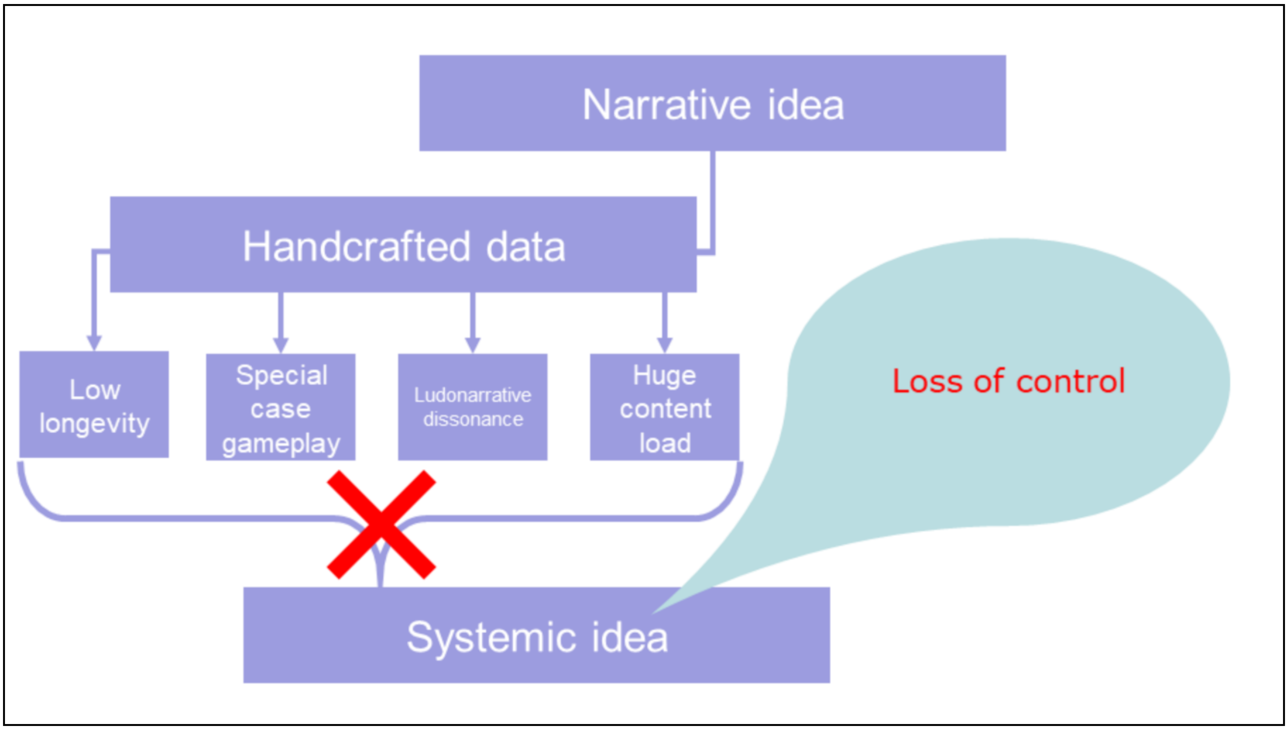
Systemic idea

But it's rarely possible to go in the reverse direction, as attempting to add rich emergent systems to a game built mostly out of data is usually futile.

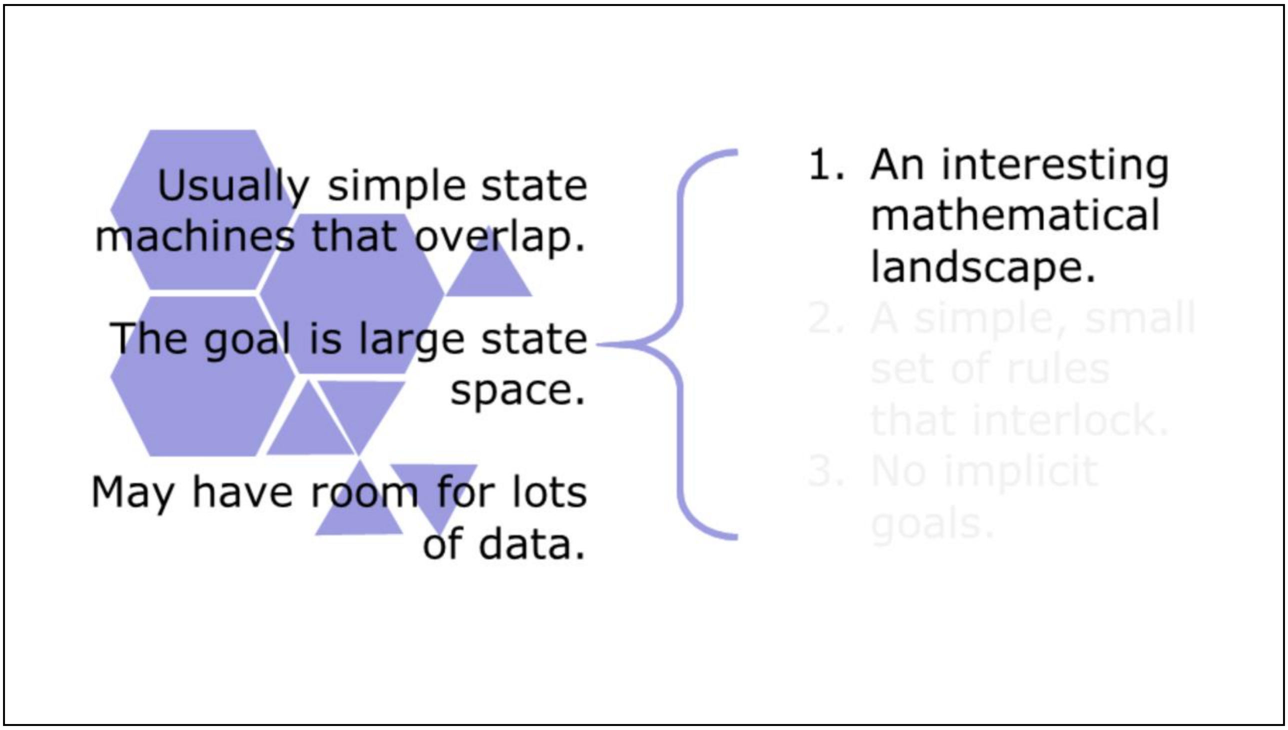


- Emergent player behaviors
  - Unforeseen strategies
    - Game depth

This matters because game longevity – in which I include a bunch of stuff that drives revenue, for those of you with a business tilt – is driven by how much “space” there is in the game. Despite our desires as creators, a lot of the power in a game experience comes from



the loss of designer control over the player experience.



Usually simple state machines that overlap.

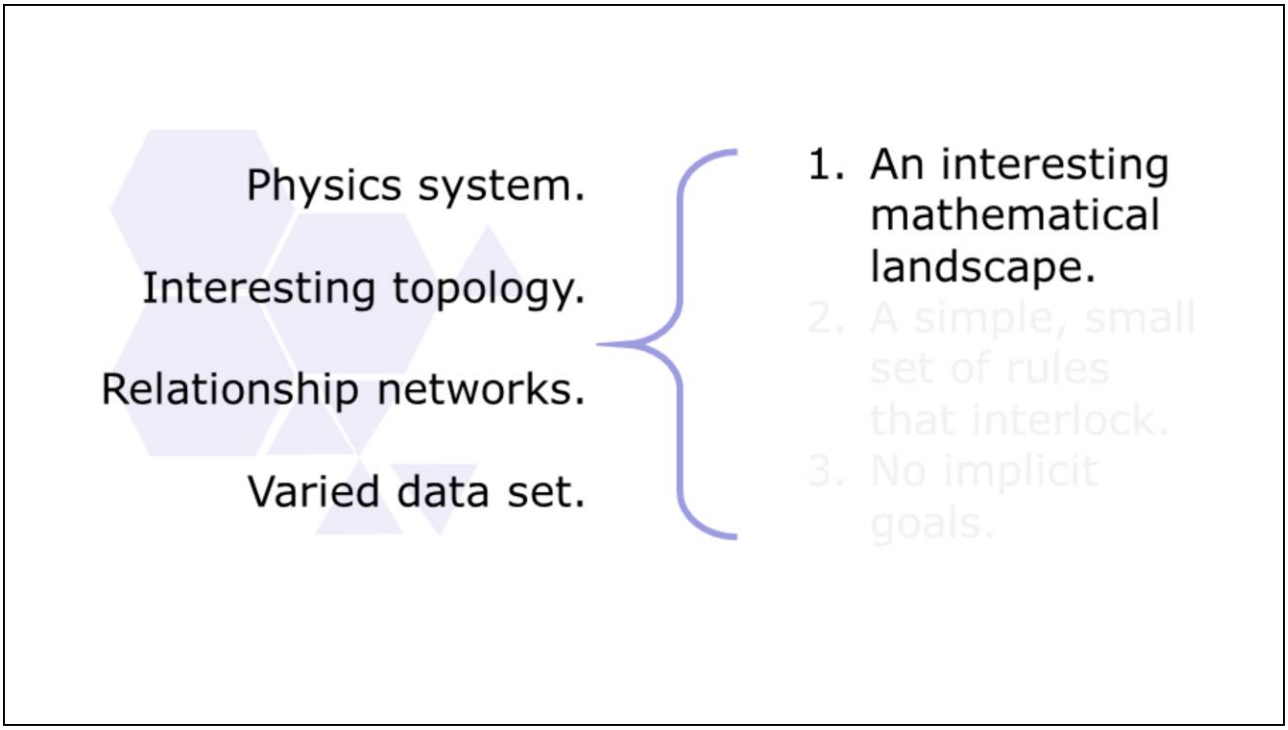
The goal is large state space.

May have room for lots of data.

1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
3. No implicit goals.

The three critical ingredients in the core sim are:

(a) A space that just "is" an interesting mathematical or structural landscape.



Physics system.

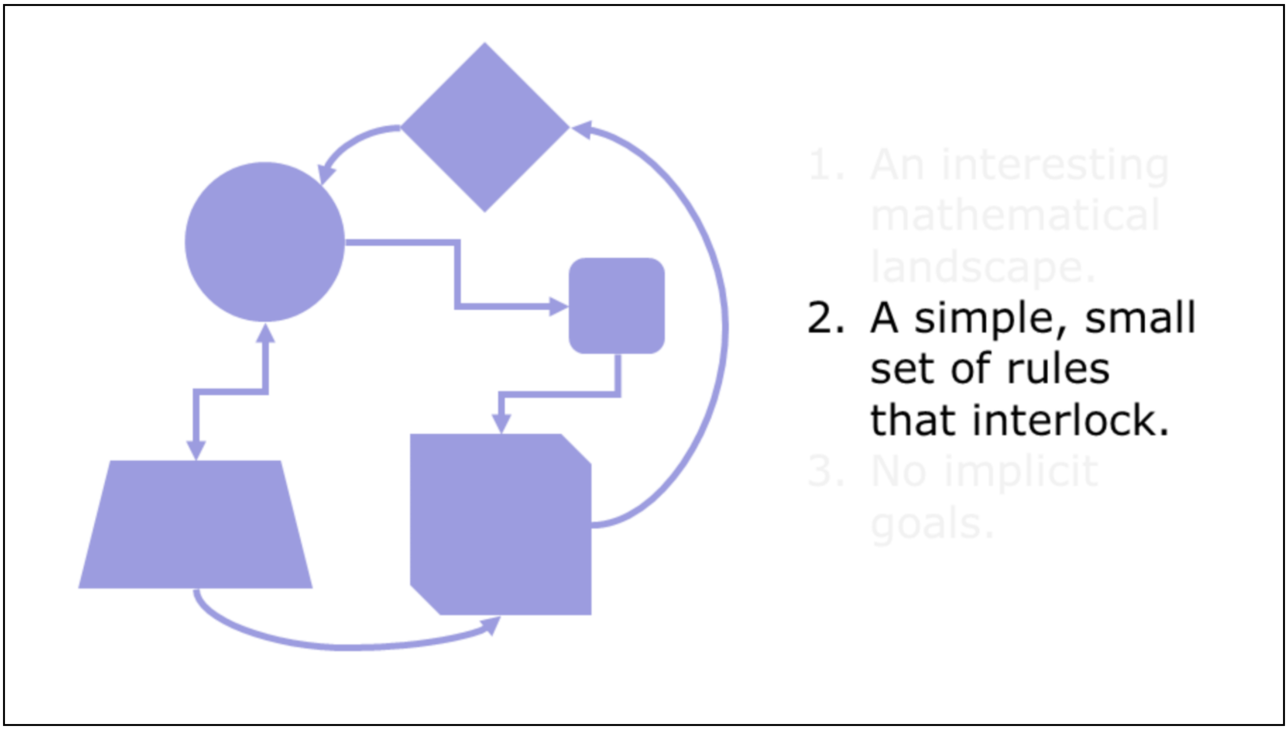
Interesting topology.

Relationship networks.

Varied data set.

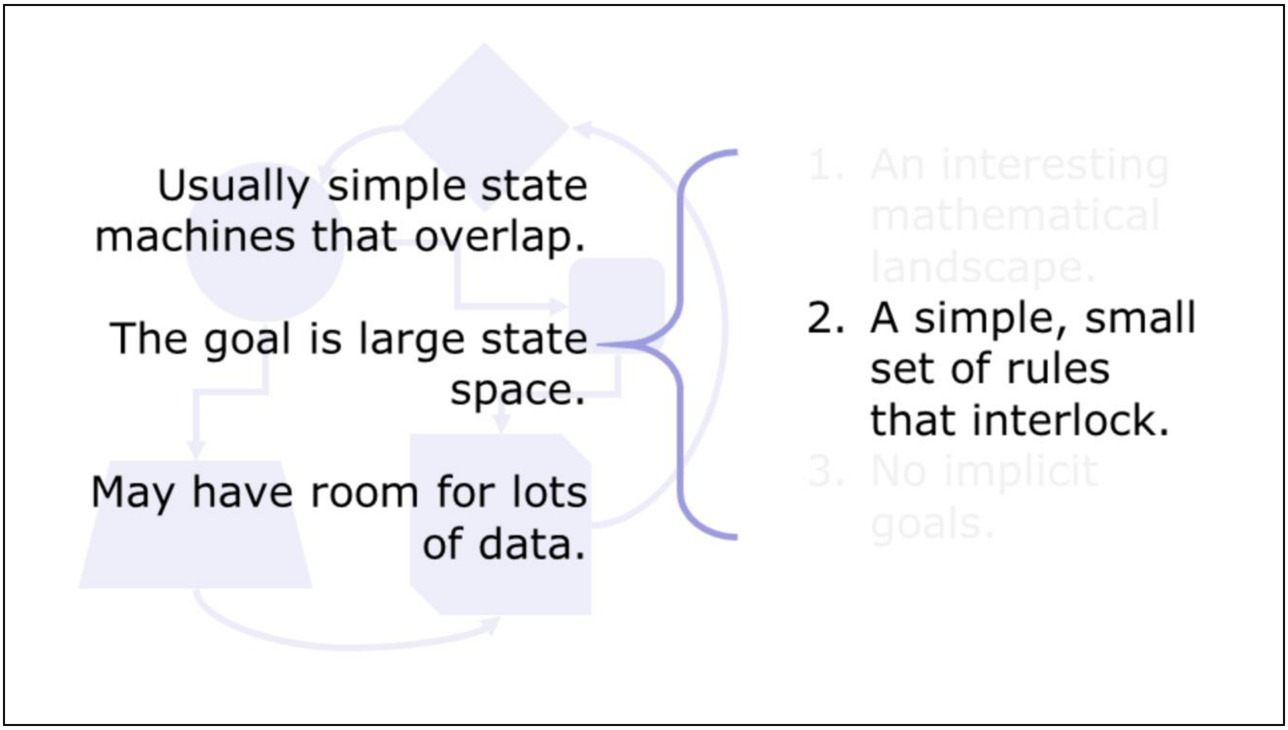
1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
3. No implicit goals.

Examples might include physics. But also interesting relationships between objects. The relationships between suits, numbers, colors, and so on in a deck of cards is such a landscape.



1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
3. No implicit goals.

(b) Simple, consisting of few rules, though it may have room for lots of data.



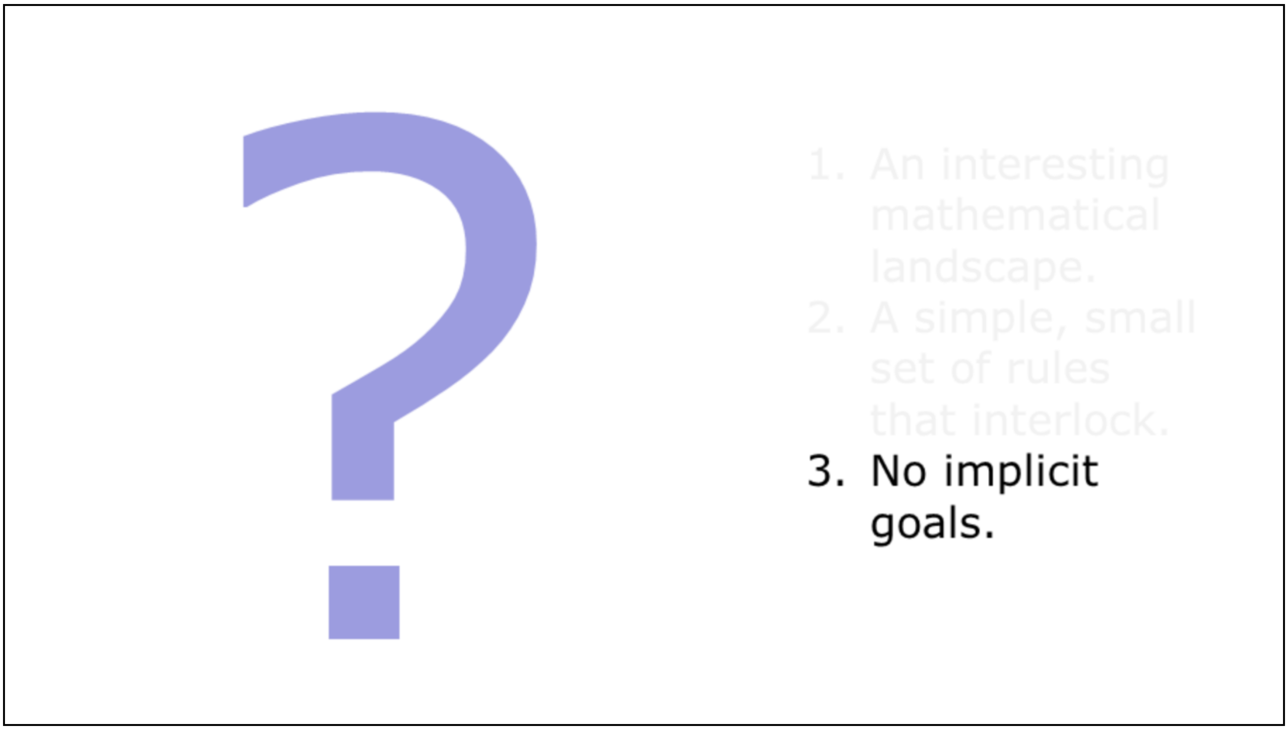
Usually simple state machines that overlap.

The goal is large state space.

May have room for lots of data.

1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
3. No implicit goals.

What generally works is a way to have lots of kinds of data that work on top of that underlying system, and rules for how they interact. Poker leverages the set of playing cards; Pokemon leverages the types Pokemon and the attack types.



1. An interesting mathematical landscape.
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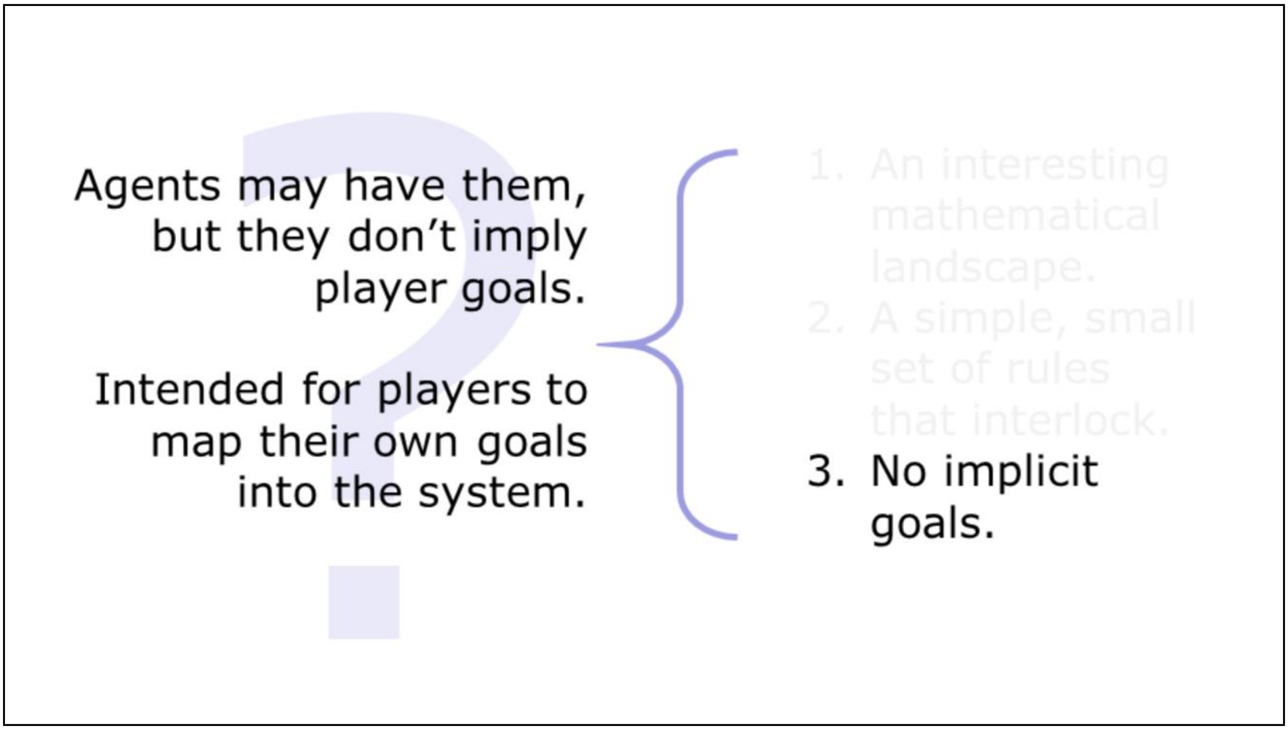
3. No implicit goals.

(c) No goals to the underlying sim, so that players can instead create their own goals atop the system.

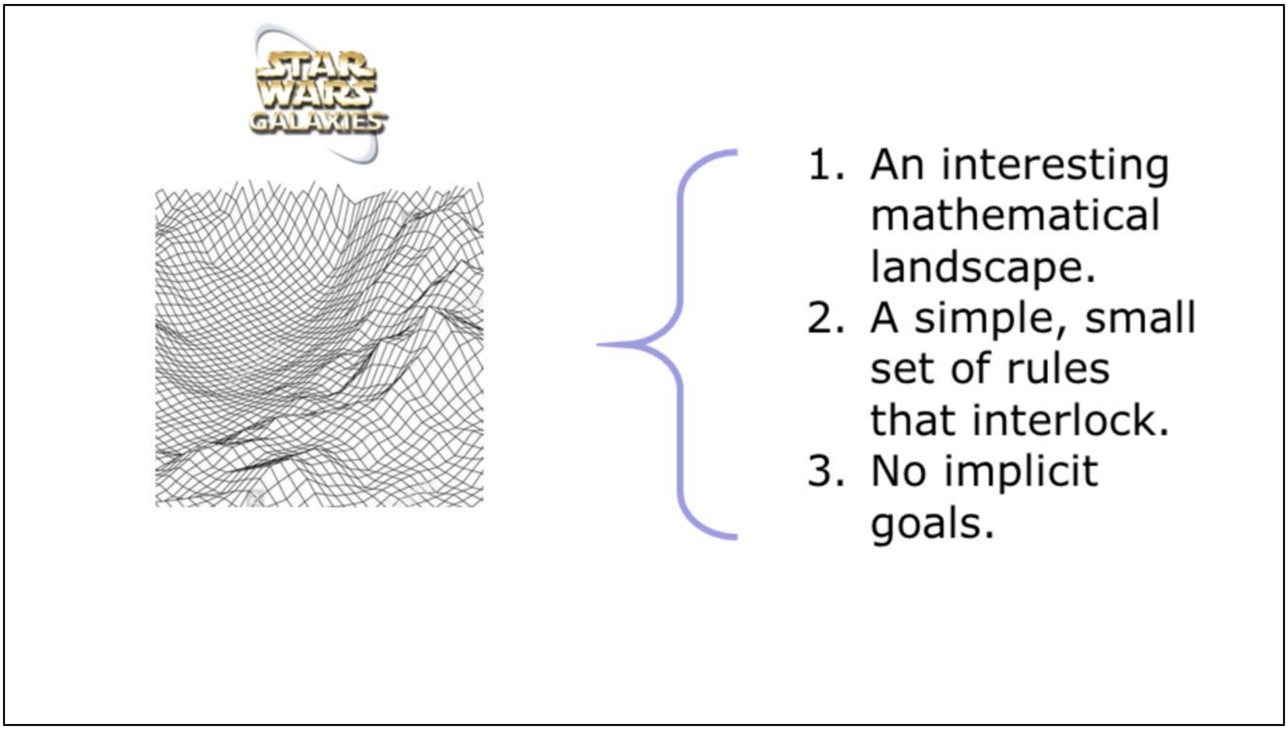


Agents may have them, but they don’t imply player goals.

Intended for players to map their own goals into the system.

1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
3. No implicit goals.

This doesn’t mean that you can’t have AI with its own goals, and it doesn’t mean that the game can’t provide goals. It means that the *system itself* doesn’t imply goals, we select them based on narrative or experiential intent. There’s a difference between a system that implies something like “get to the other side” and a system that just says “here’s cool movement physics.”



1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
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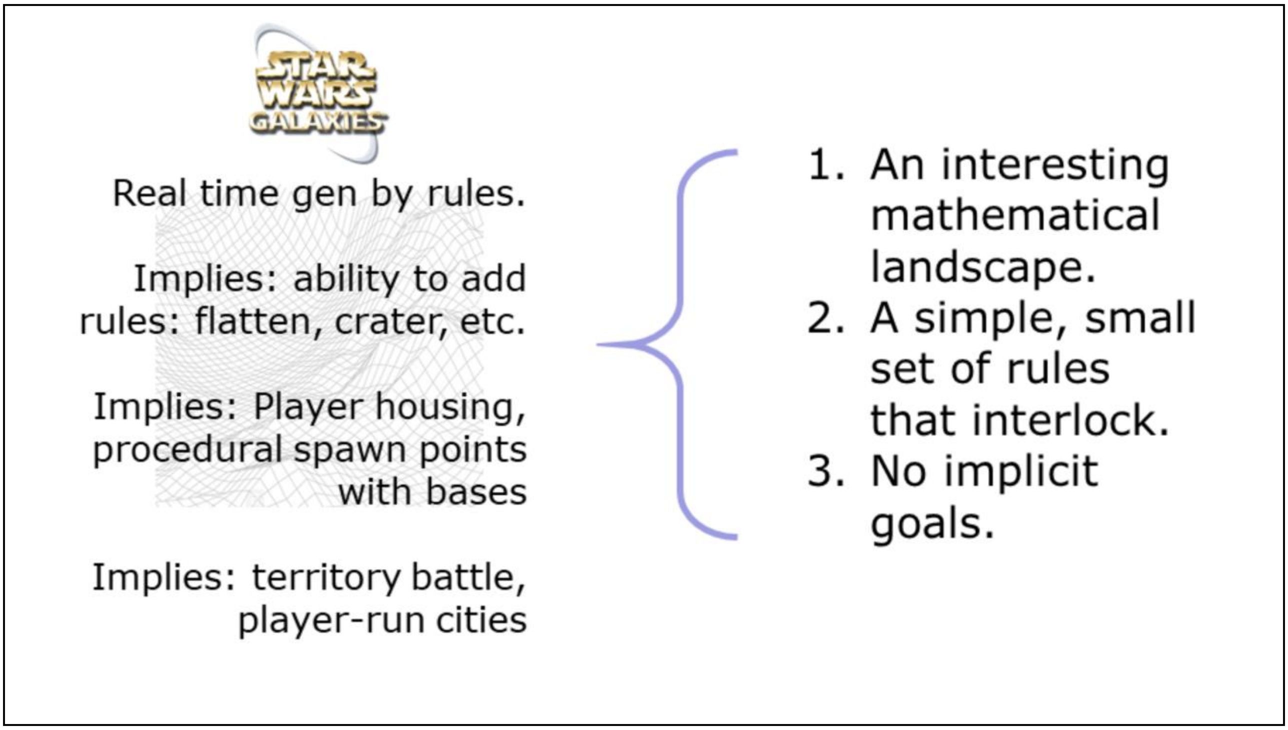
Some examples of how I’ve tried to leverage these principles over the years. SWG was built entirely around real-time procedural terrain. We generated it around you as you walked.



STAR WARS GALAXIES

Real time gen by rules.

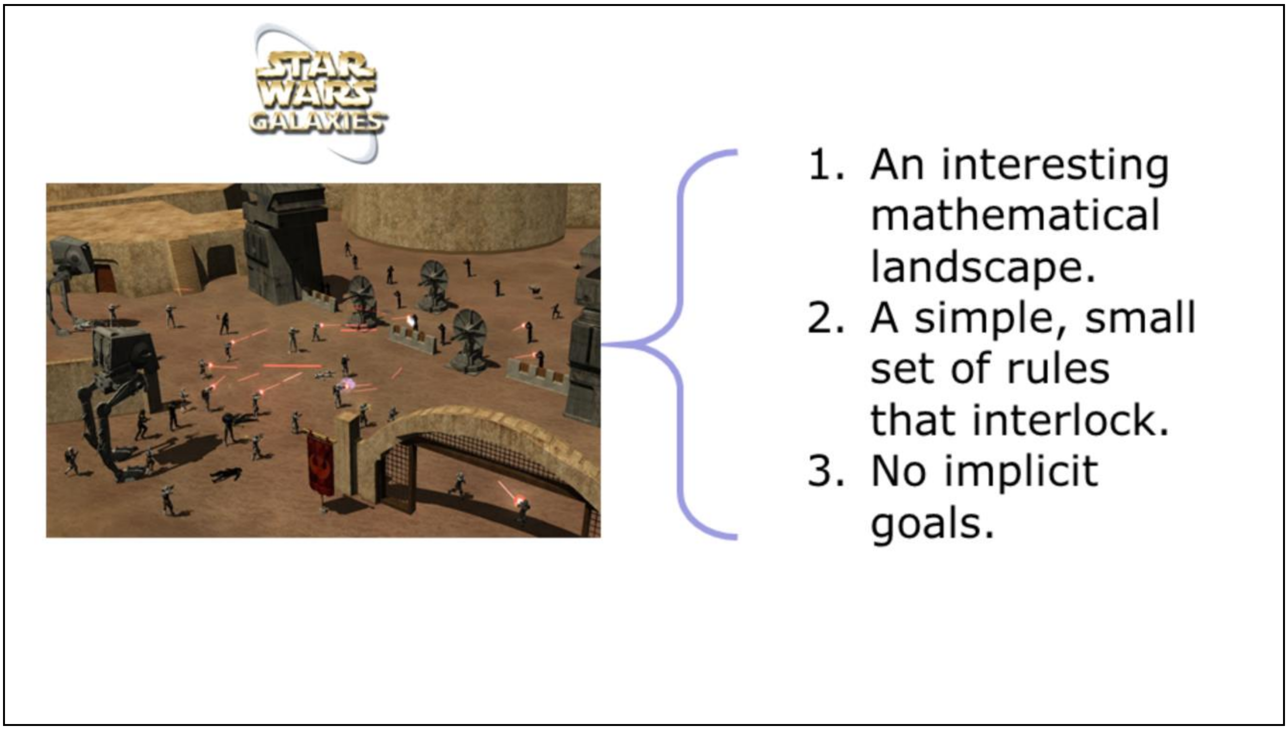
Implies: ability to add rules: flatten, crater, etc.

Implies: Player housing, procedural spawn points with bases

Implies: territory battle, player-run cities

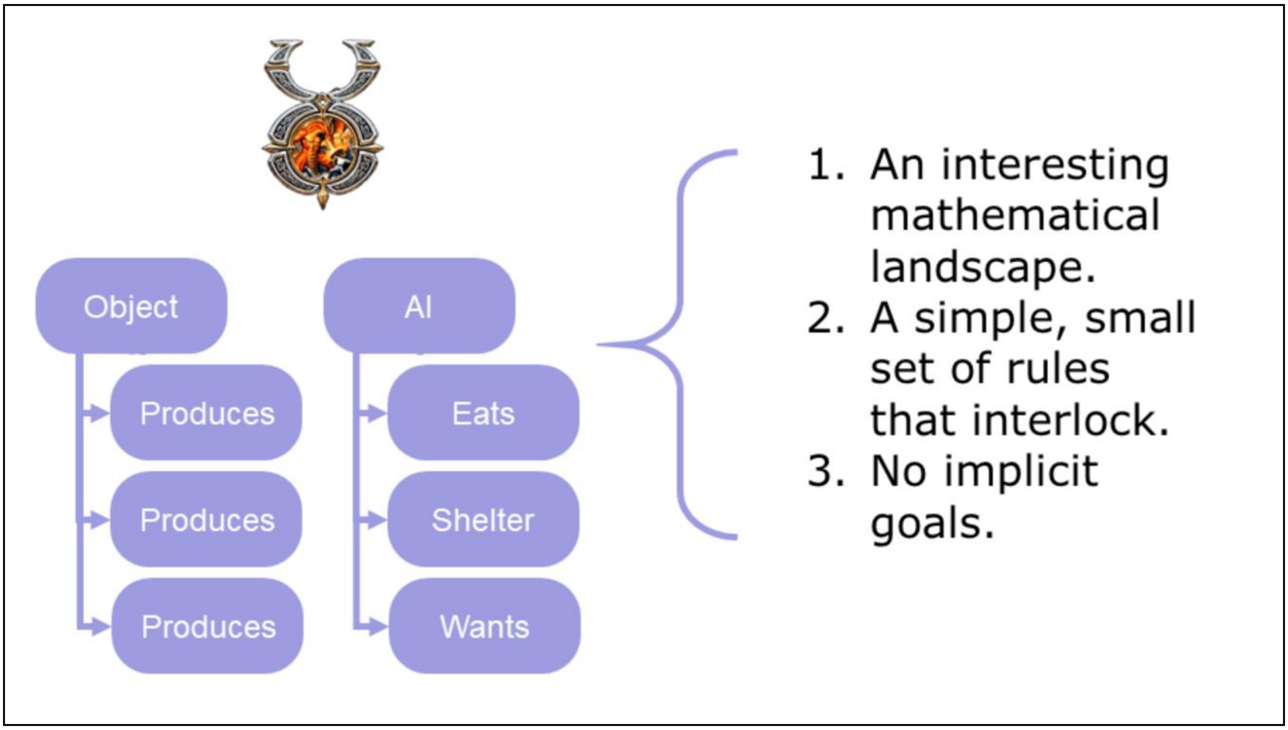
1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
3. No implicit goals.

By itself that just sounds like a content tool. But it actually opened up both emergent and narrative gameplay, because of the tools it afforded us.



1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
3. No implicit goals.

We could not have had players having massive Rebel vs Imperial wars with destructible bases that could be built anywhere without that underlying sim.



Object

Produces

Produces

Produces

AI

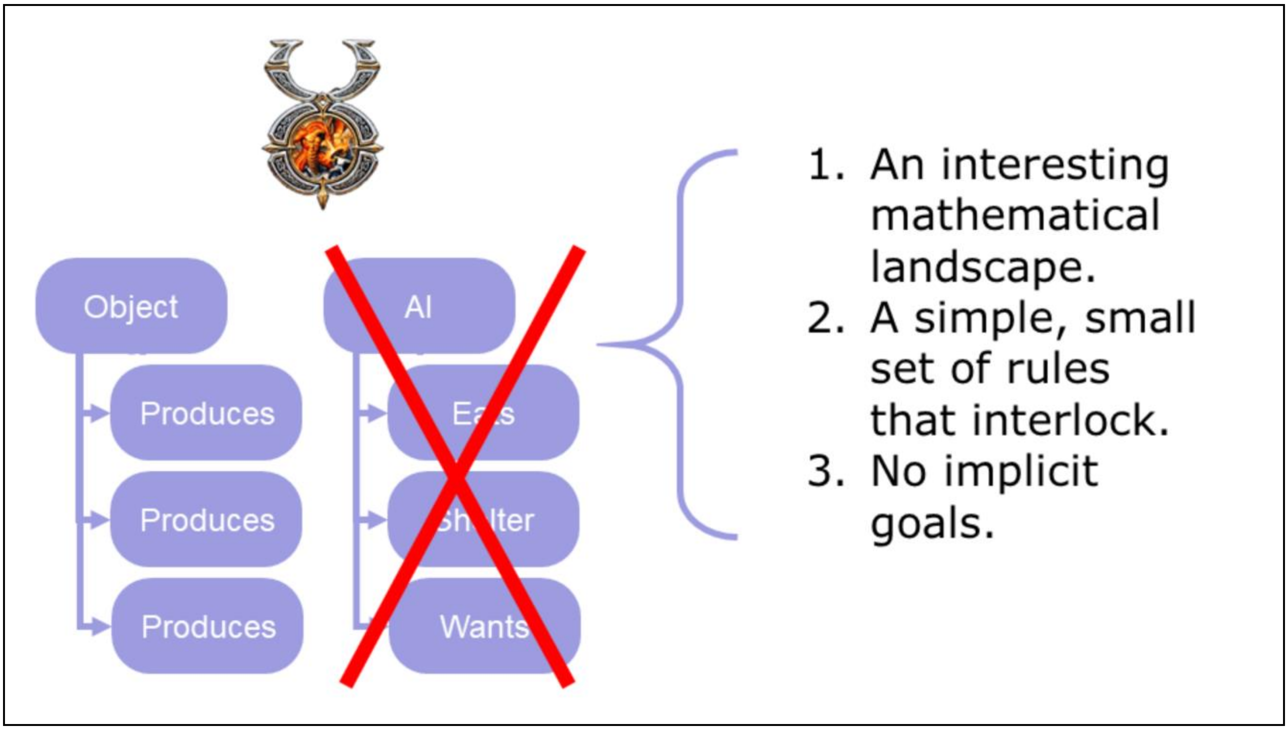
Eats

Shelter

Wants

1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
3. No implicit goals.

In Ultima Online we started out with a “resource system” that was intended to drive all the AI. Every object was “made of” resource types, and all AI was based on Maslow’s hierarchy of needs.



Object

Produces

Produces

Produces

AI

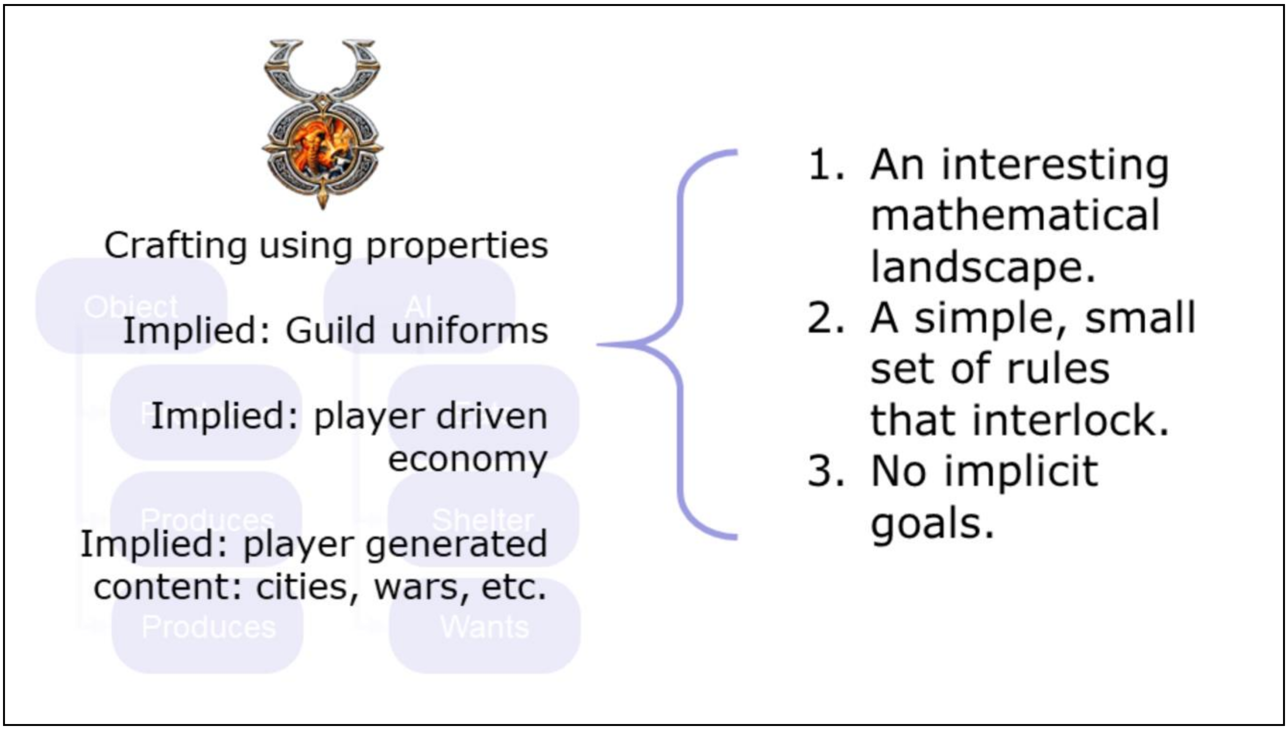
Eats

Shelter

Wants

1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
3. No implicit goals.

We weren’t even able to ship with that AI! But it didn’t matter, because the resource model was super powerful.



Object
AI
Produces
Shelter
Produces
Wants

Crafting using properties

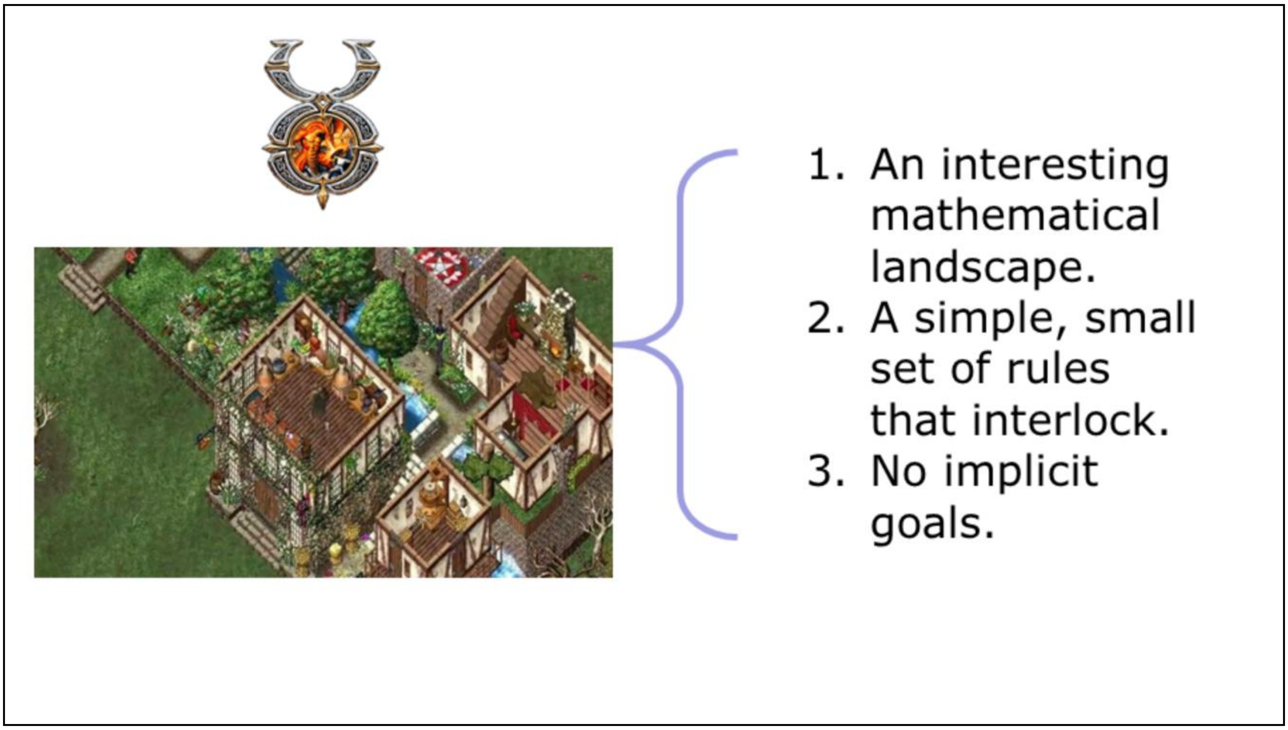
Implied: Guild uniforms

Implied: player driven economy

Implied: player generated content: cities, wars, etc.

1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
3. No implicit goals.

It unlocked everything about the crafting system, which led to all sorts of emergent things like color-coded guild uniforms, or player shops and economy, and then up through player-run cities.



1. An interesting mathematical landscape.
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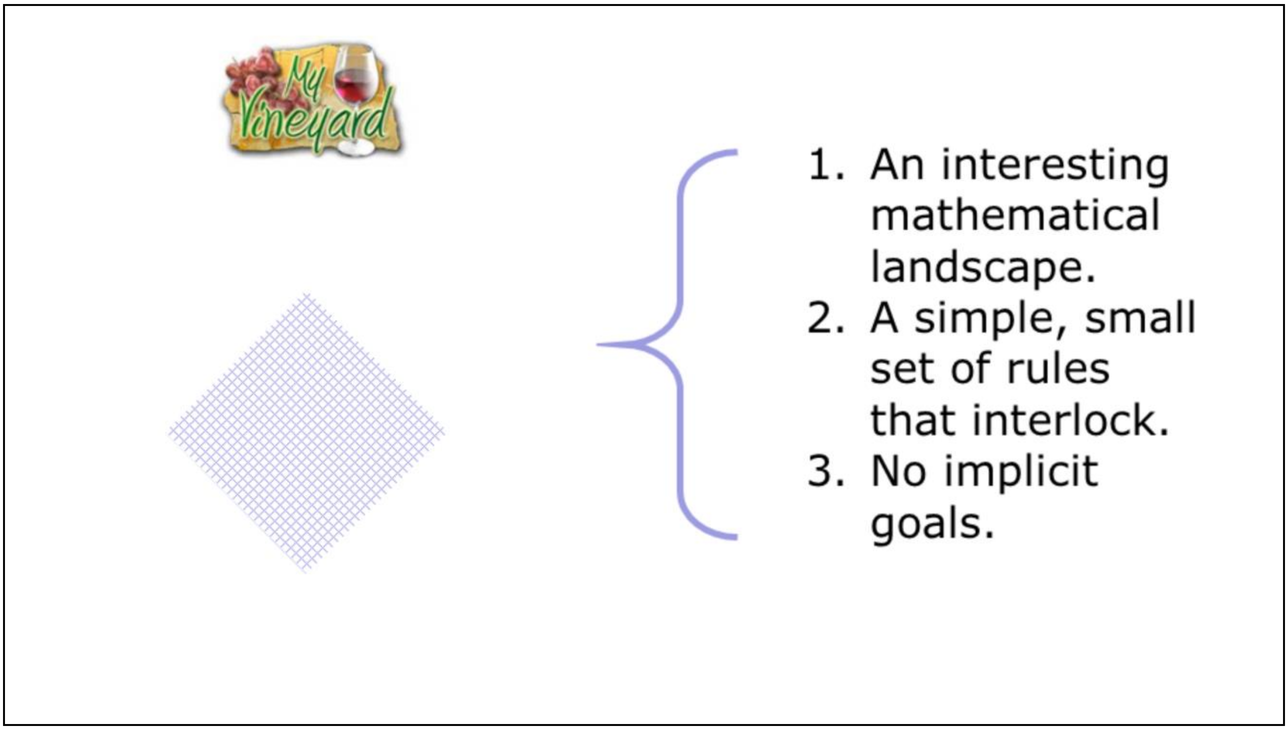
Minecraft too uses basically an underlying resource model and simple rules to achieve all the amazing things it does.



1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
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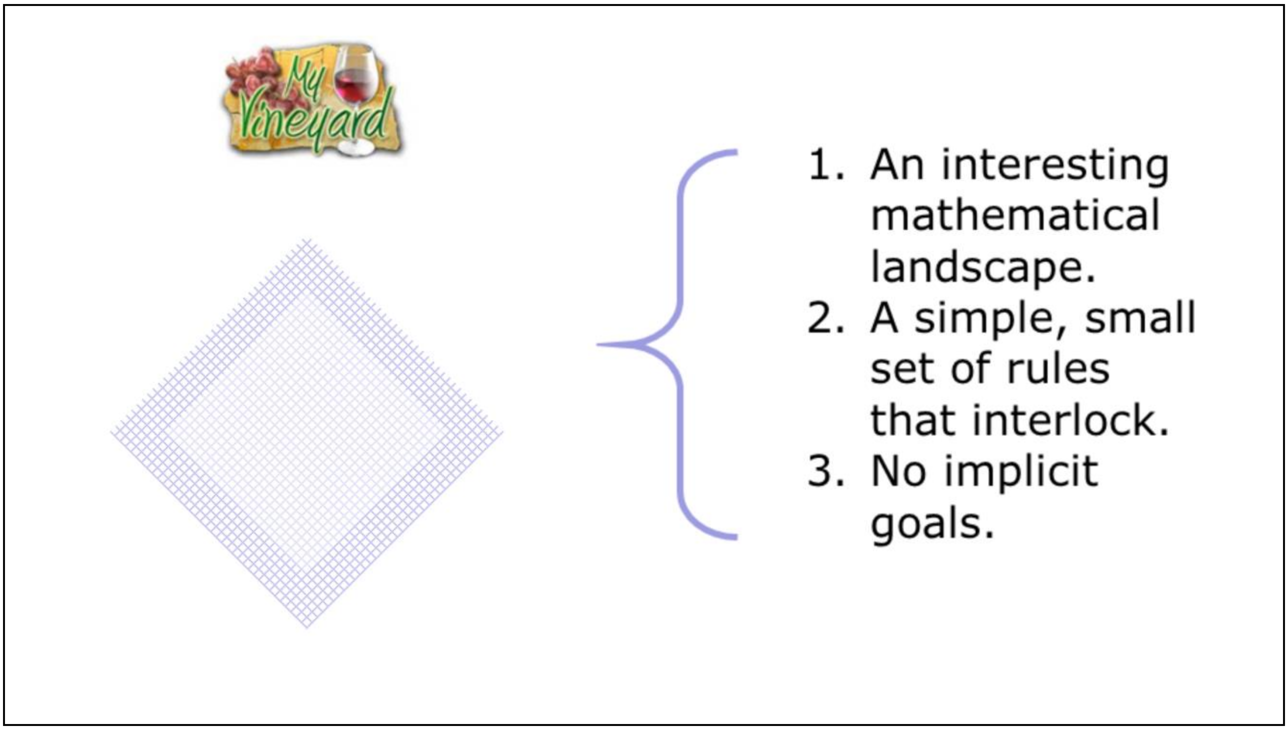
Even in really small simple games, like My Vineyard, which we did for Facebook, you can see this working. The experience, we knew: running a vineyard. In FB games of that era, you may recall



1. An interesting mathematical landscape.
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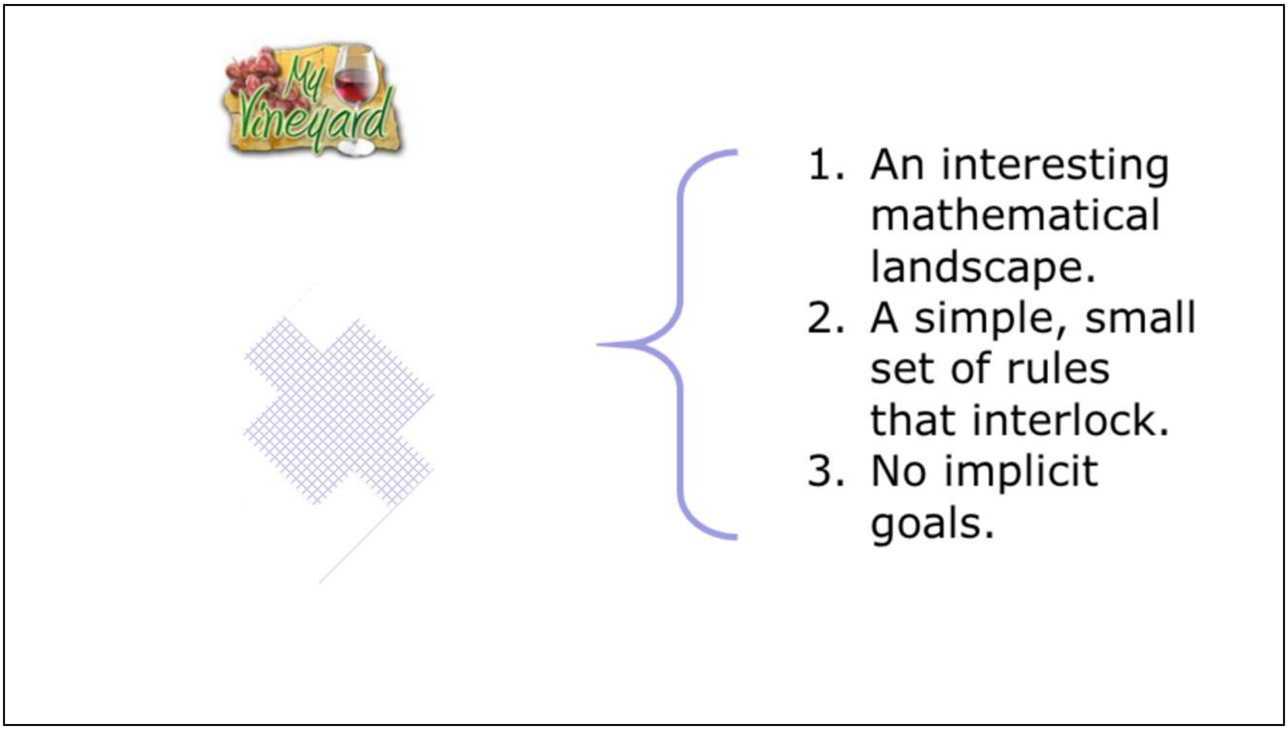
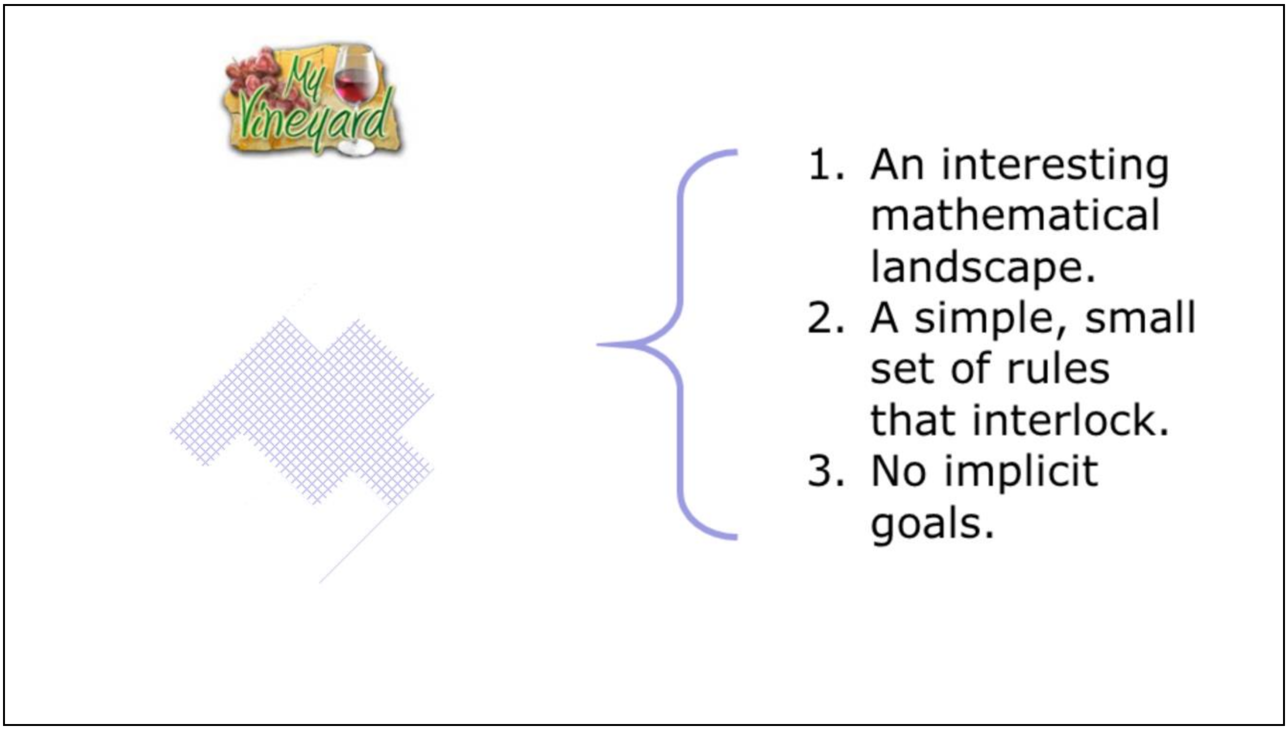
Maps expanded on all sides at once, and objects were one to a tile.


My Vineyard

1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
3. No implicit goals.

We used the simple idea that if the vineyard was really yours, you’d want to shape it, so we allowed you carve away the forest. Island Life, our predecessor game, was actually the first FB game to do this, we think.



1. An interesting mathematical landscape.
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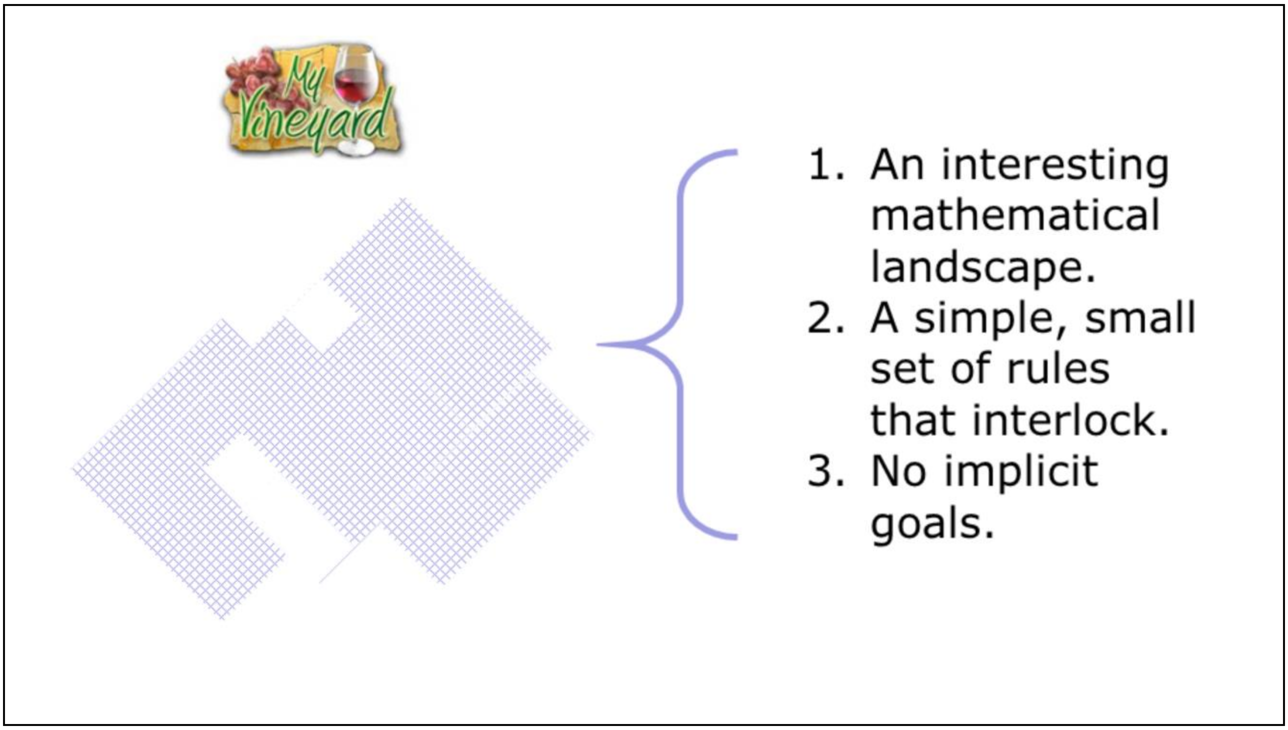
This meant that discovery became a central idea – not just of the map, but of new wine varietals,



1. An interesting mathematical landscape.
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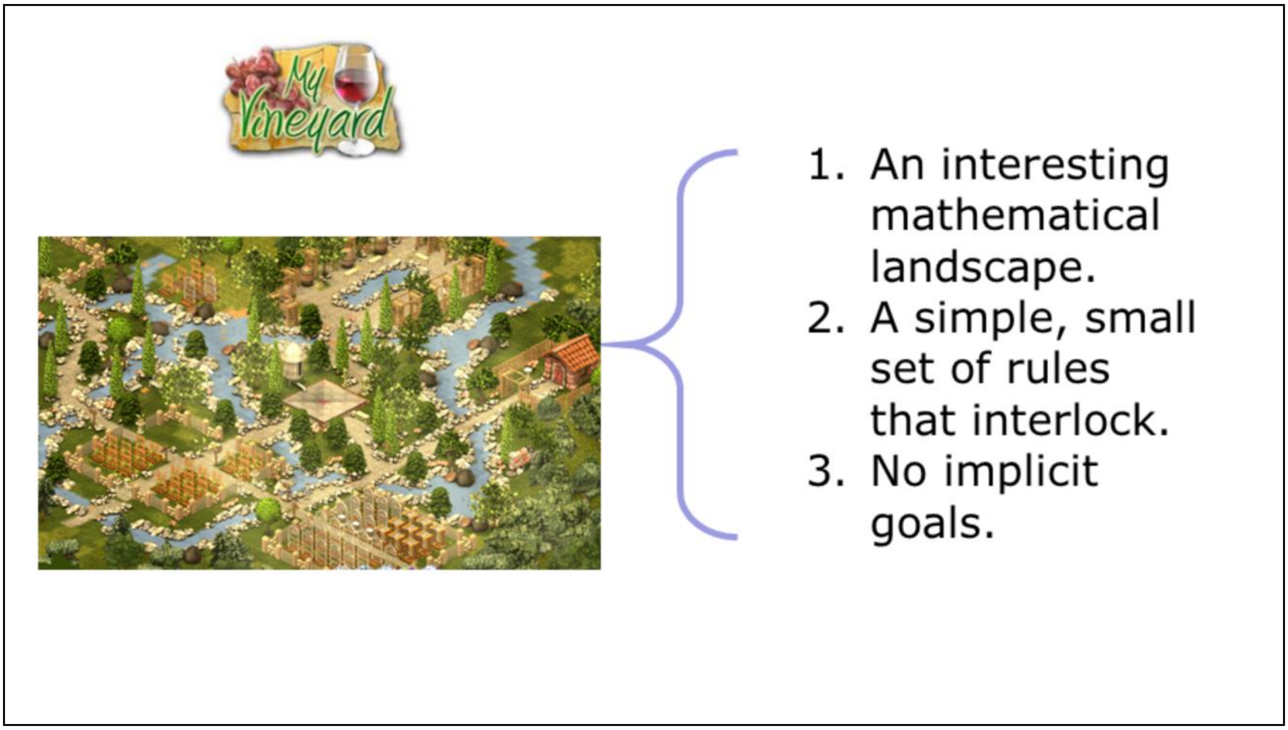
New layout ideas. We let you place objects at pixel granularity rather than tile, which hugely opened up the amount of play.



1. An interesting mathematical landscape.
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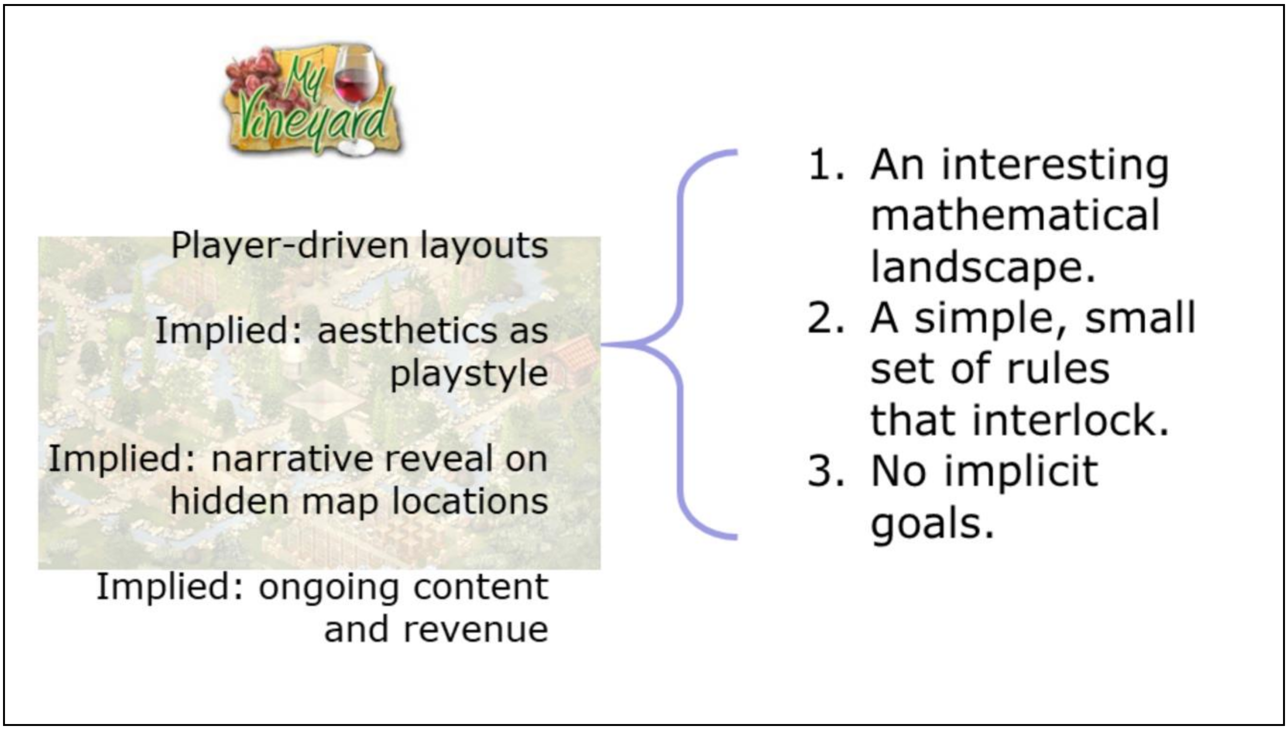
The result was maps like this – huge explosions of creativity which we leveraged into new features such as vineyard tours



Player-driven layouts

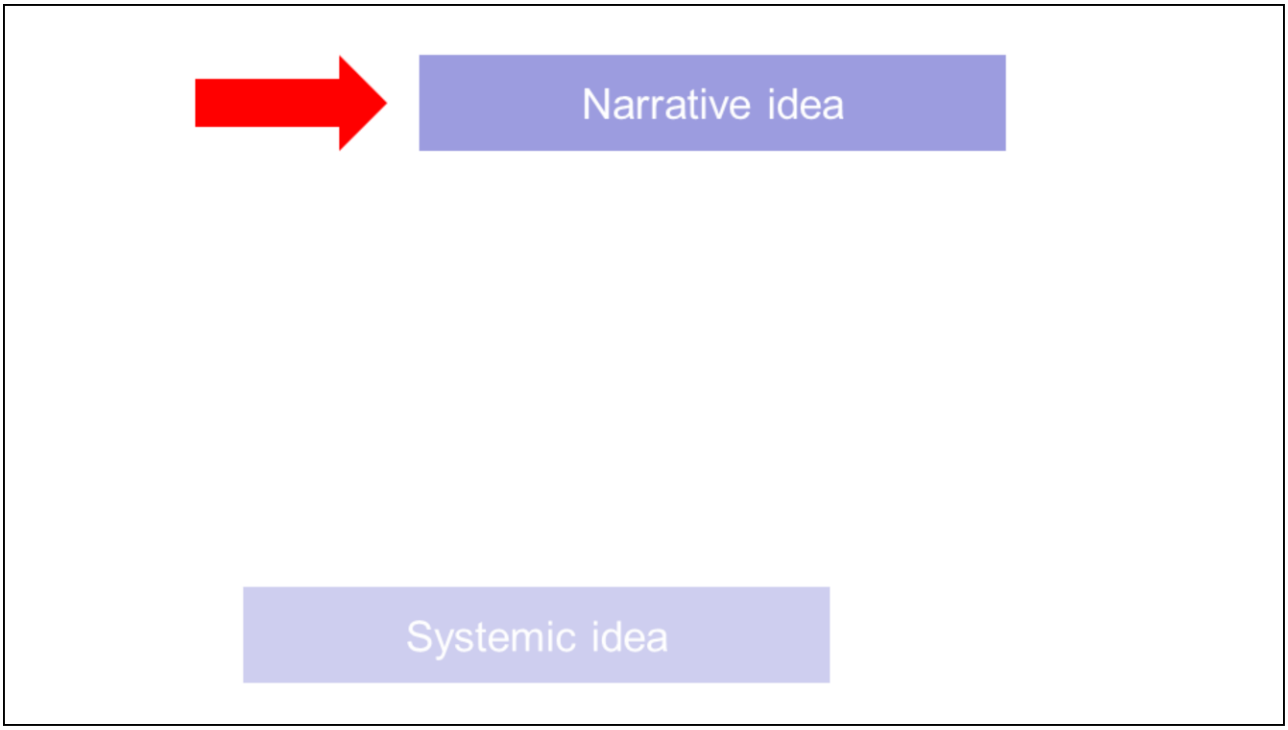
Implied: aesthetics as playstyle

Implied: narrative reveal on hidden map locations

Implied: ongoing content and revenue

1. An interesting mathematical landscape.
2. A simple, small set of rules that interlock.
3. No implicit goals.

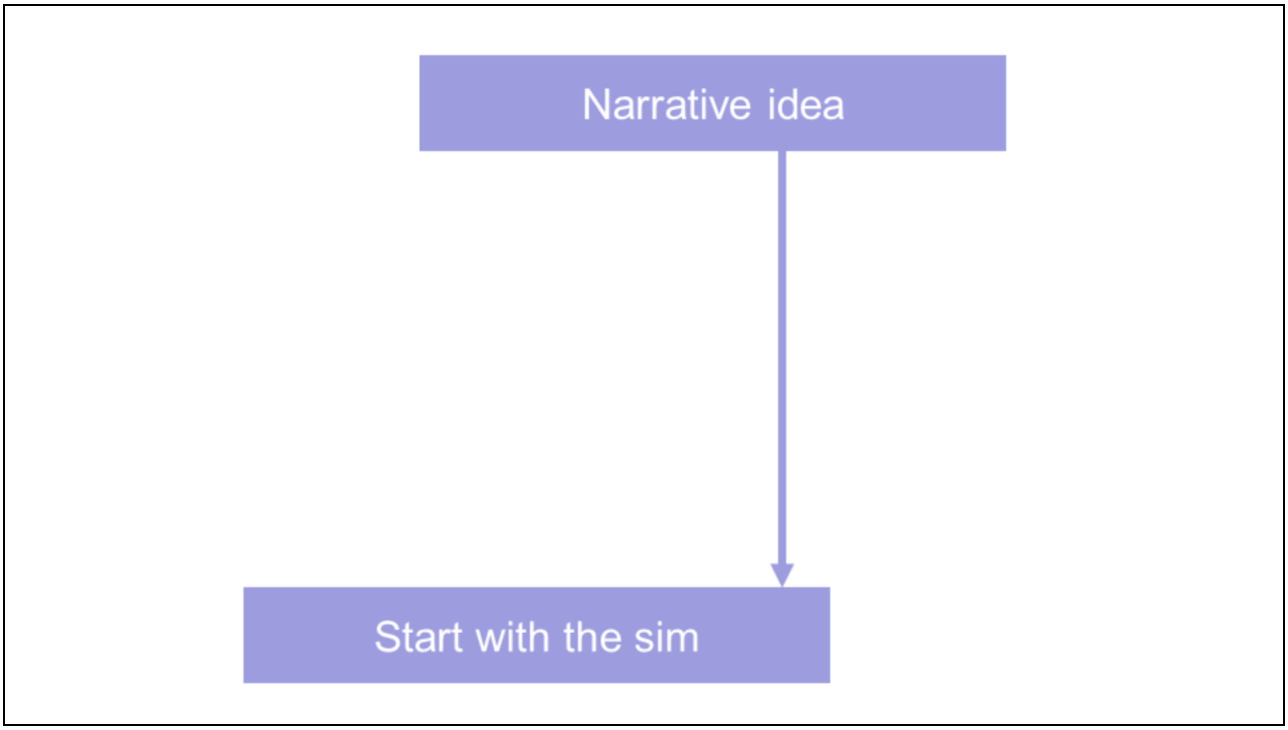
Which led the game to having one of the highest ROIs and retention figures in Playdom even though it didn’t have the same size userbase or even daily revenue numbers.



Narrative idea

Systemic idea

Even if you begin with the idea of a particular experience you want to give players, starting out with the sim is incredibly helpful for the eventual depth of your game.



Narrative idea

Start with the sim

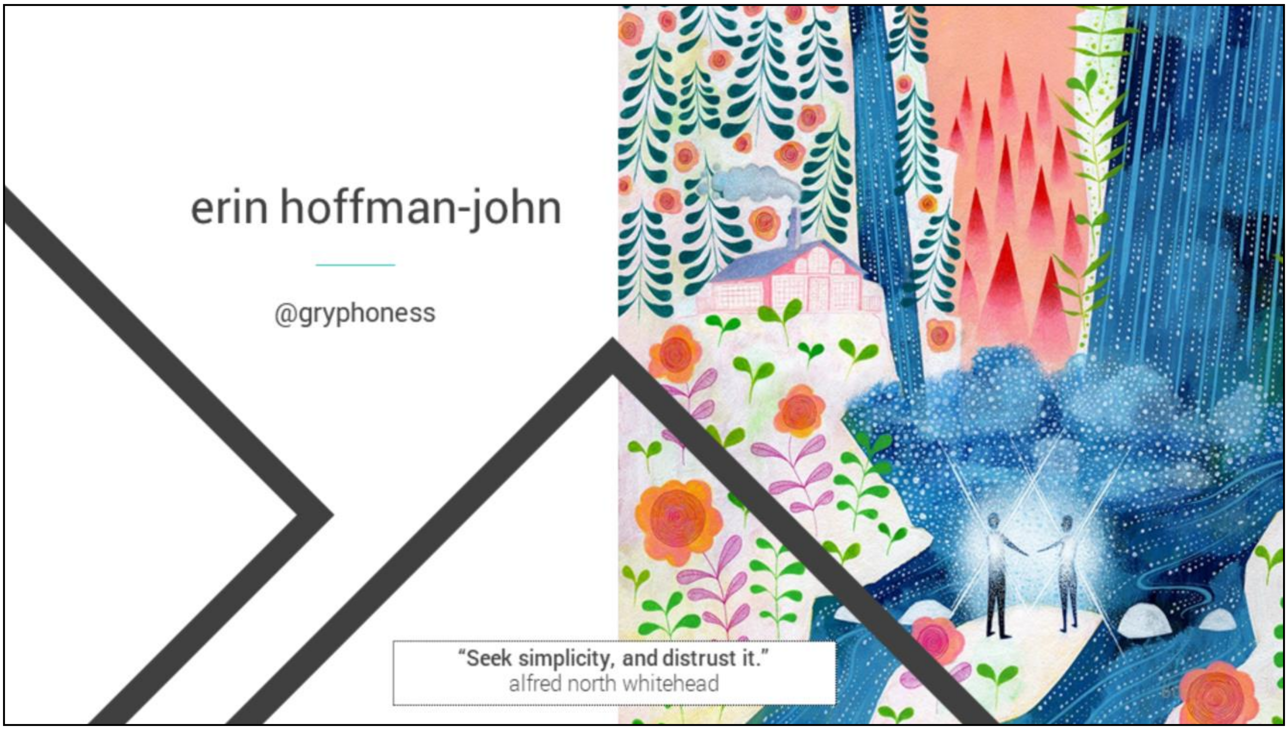
So that’s my rule: if I have an experience I want to get across, the first thing I ask myself is “how do I model this experience mathematically?” It ends up opening many more doors.

ERIN HOFFMAN-JOHN

CEO & Designer
Sense of Wonder
@gryphoness

Erin Hoffman –John Is known for her work on a wide range of “smart fun” games and is a teaching professor at Carngegie Mellon’s Silicon Valley campus.

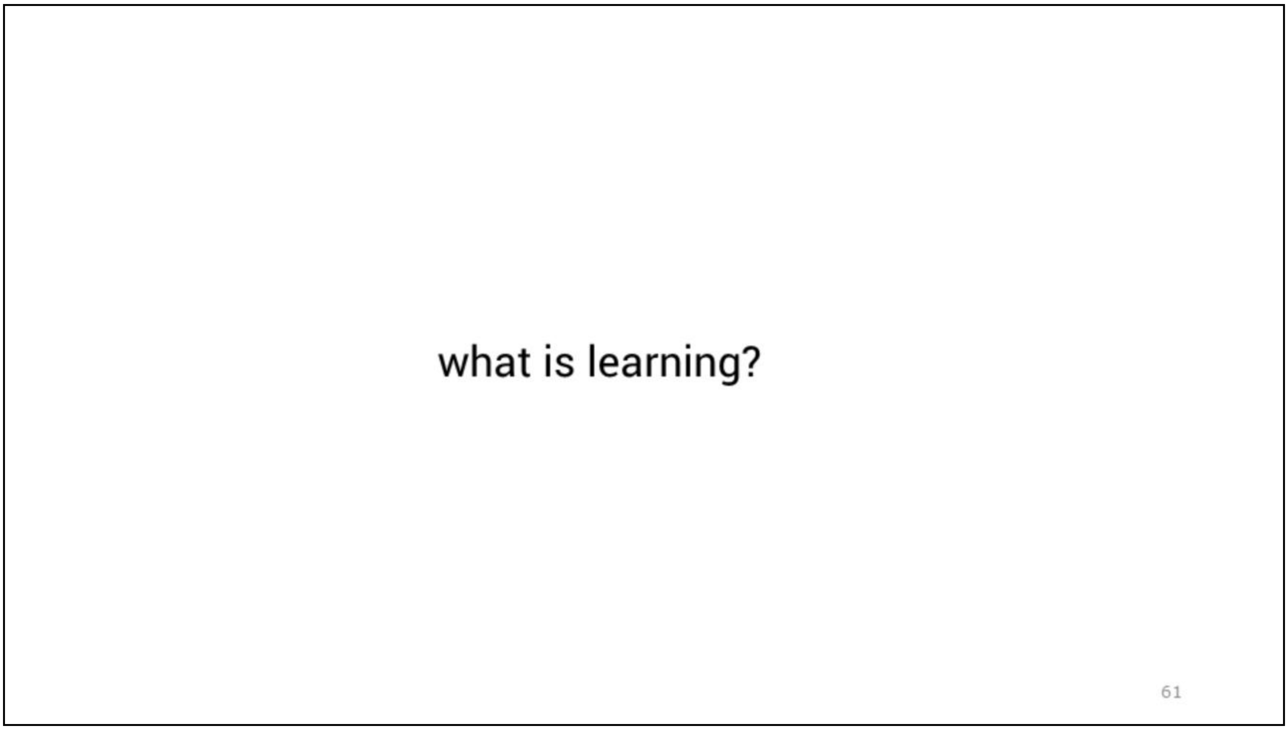
Previously she led design at GlassLab and she is also author of the Chaos Knight fantasy trilogy



erin hoffman-john

@gryphoness

> "Seek simplicity, and distrust it."
> alfred north whitehead



what is learning?

We all know playtesting is important, but most of us playtest with a machete instead of a scalpel.

the rule

ask players the right questions

Project

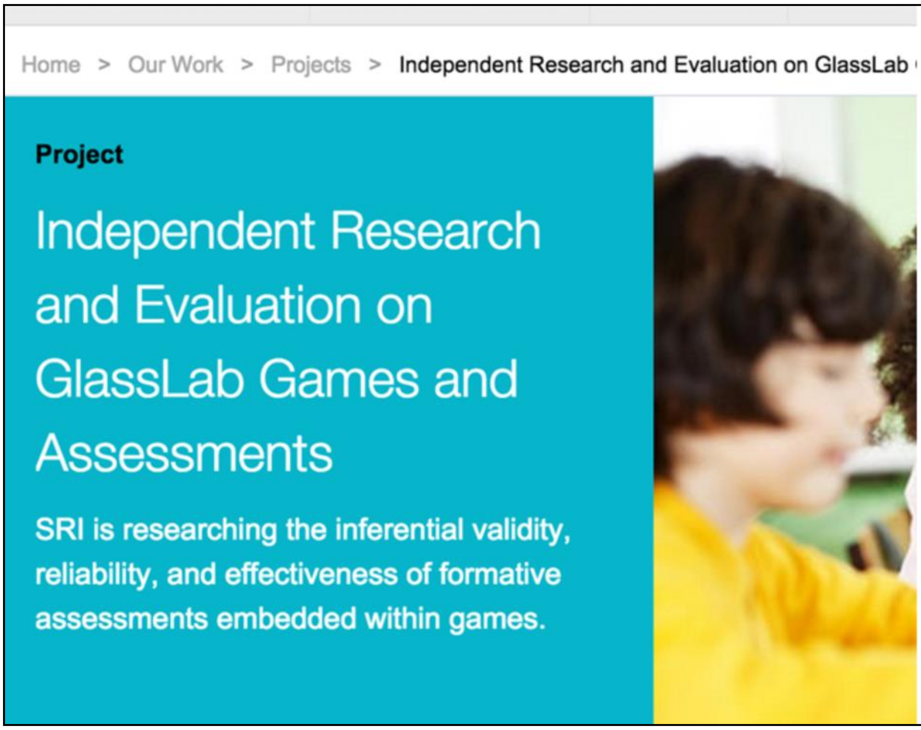
Independent Research and Evaluation on GlassLab Games and Assessments

SRI is researching the inferential validity, reliability, and effectiveness of formative assessments embedded within games.

In summer 2012, the Bill & Melinda Gates Foundation, in cooperation wit establish the Games Learning and Assessment Lab (GlassLab), which in researchers from multiple fields and disciplines. The program was divided independent validation of assessments developed by the program.

The programming and development group (GlassLab) was tasked to desi assessments. These assessments are being developed in response to th

For me this was put to the most extreme test when I joined GlassLab, which was promising to reinvent education with AAA level game design. Working with assessment scientists from SRI and ETS really impressed upon me the fine art that is *asking questions*. We tend to think in game development that if we’re asking any questions at all we’re on the right track, and that if we can manage not to ask leading questions we’re doing well, but that’s pretty far away from being sure we’re asking the RIGHT questions.



Home > Our Work > Projects > Independent Research and Evaluation on GlassLab

Project

Independent Research and Evaluation on GlassLab Games and Assessments

SRI is researching the inferential validity, reliability, and effectiveness of formative assessments embedded within games.

masters in the art of asking the right questions

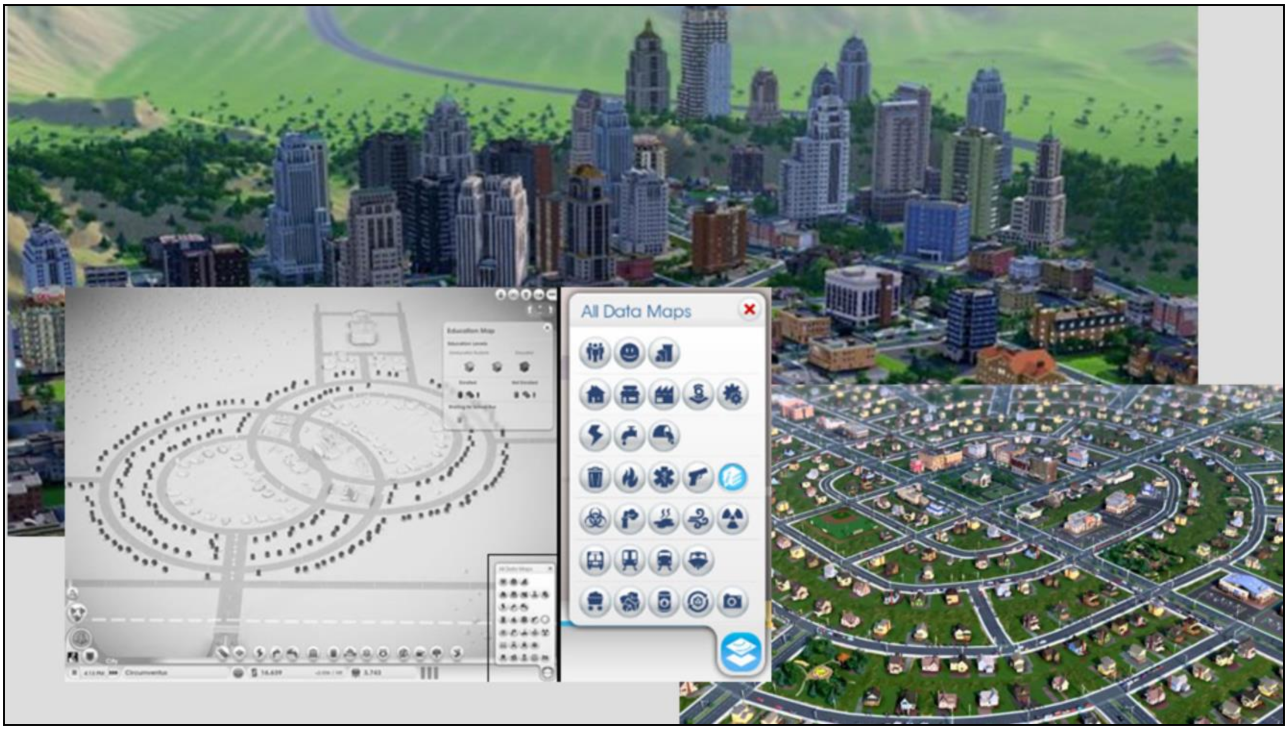
So what I want to talk about is how to ask the right questions. With more attention to the intentionality behind the conversations we have with players, we can uncover a whole new level of potential specificity in our design decisions.

At GlassLab we were trying to hit an extremely small target: we had to be able to create measurable (e.g. Testable) learning results based on common core topics for middle schoolers.

In commercial games, we mostly try to hit this massive but awfully vague target that is "fun". It might be "shooty fun" or "racy fun" or "puzzley fun", but at the end of the day it's still this gross excitement state that causes people to throw money.

(If you want to do a fun experiment, google image “people having fun” and you can go down a deep mental rabbit hole about what we mean when we say ‘fun’, and how, for instance, ‘people having fun’ sounds like a simple phrase but if you think about what’s going on in each of these people’s heads, it may or may not be what we usually think of when we think about to ourselves having ‘fun.’. [I’m a social game designer - I think about ‘fun in groups’ a lot, where what you’ve got on the surface is rarely representative of what’s going on underneath.)]

and how much might they be trying to fool us if we just ask them if they’re having fun?

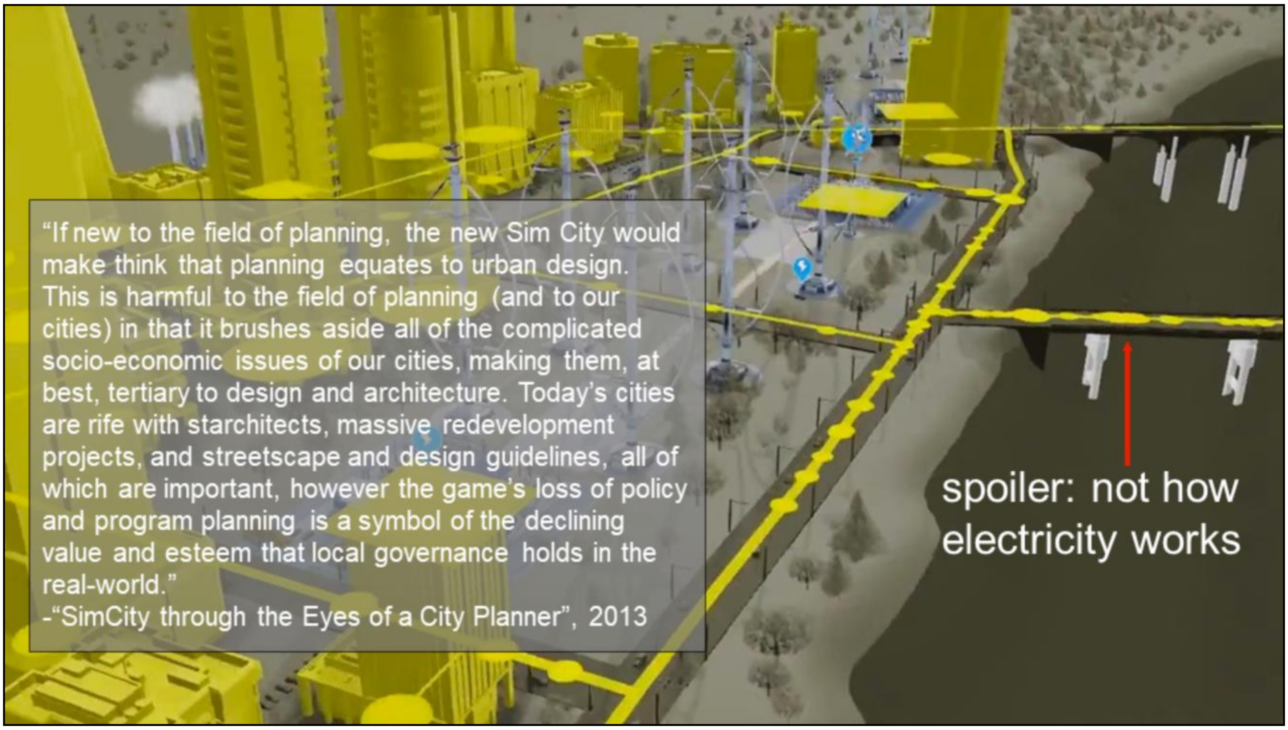


Because we're accustomed to these squishy targets, we started with SimCity and sort of assumed it was educational in and of itself. It FEELS educational; it makes us feel smart, so we've gotta be learning, right?

it has all these systems that make you FEEL like you’re learning - interrelatedness, complexity, systems, unintended consequences. all of these are built on a game state machine that facilitates your learning about a complex system which is so close to reality that it feels like you’re learning about reality. but you’re not.

when we started ASKING THE RIGHT QUESTIONS about what SimCity was teaching, it popped like a bubble

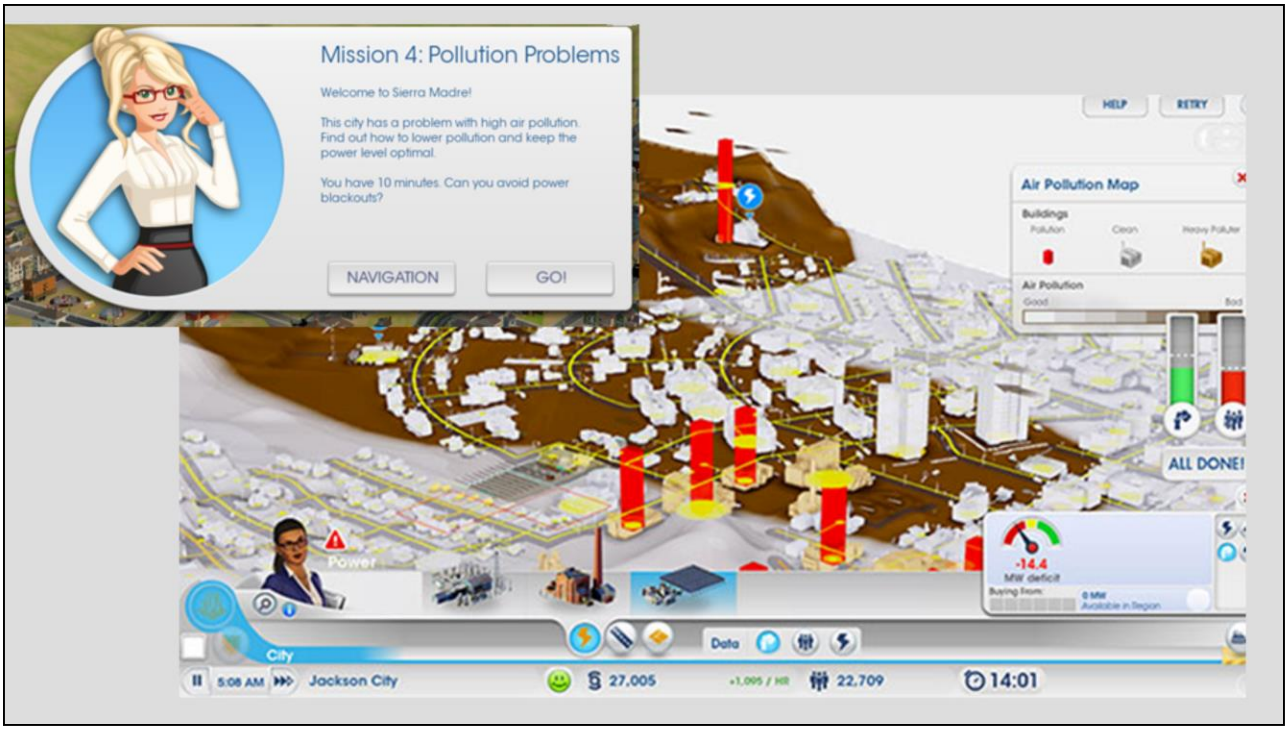
and by the way this is no aspersion on simcity - what it made me realize was that the designers of this game were freaking wizards



"If new to the field of planning, the new Sim City would make think that planning equates to urban design. This is harmful to the field of planning (and to our cities) in that it brushes aside all of the complicated socio-economic issues of our cities, making them, at best, tertiary to design and architecture. Today's cities are rife with starchitects, massive redevelopment projects, and streetscape and design guidelines, all of which are important, however the game's loss of policy and program planning is a symbol of the declining value and esteem that local governance holds in the real-world."
-"SimCity through the Eyes of a City Planner", 2013

spoiler: not how electricity works

When we started asking questions targeted around what SimCity was teaching, one system after another fell down. We thought we could teach about electricity, but the power grid was all wrong (it flows like water). Most of the intelligence of SimCity is in its feedback, which is another way of saying what Sid Meier said about the original SimCity: that it's great, but the computer seems to be having all the fun. When you take apart what the player DOES in the game -- because what you DO is how you learn, in an interactive medium -- most of what you DO in SimCity is WATCH the rippling effects that cascade away from a single small action. That means any learning is taking place in the player's head, where we can't see (or more importantly, measure) it.



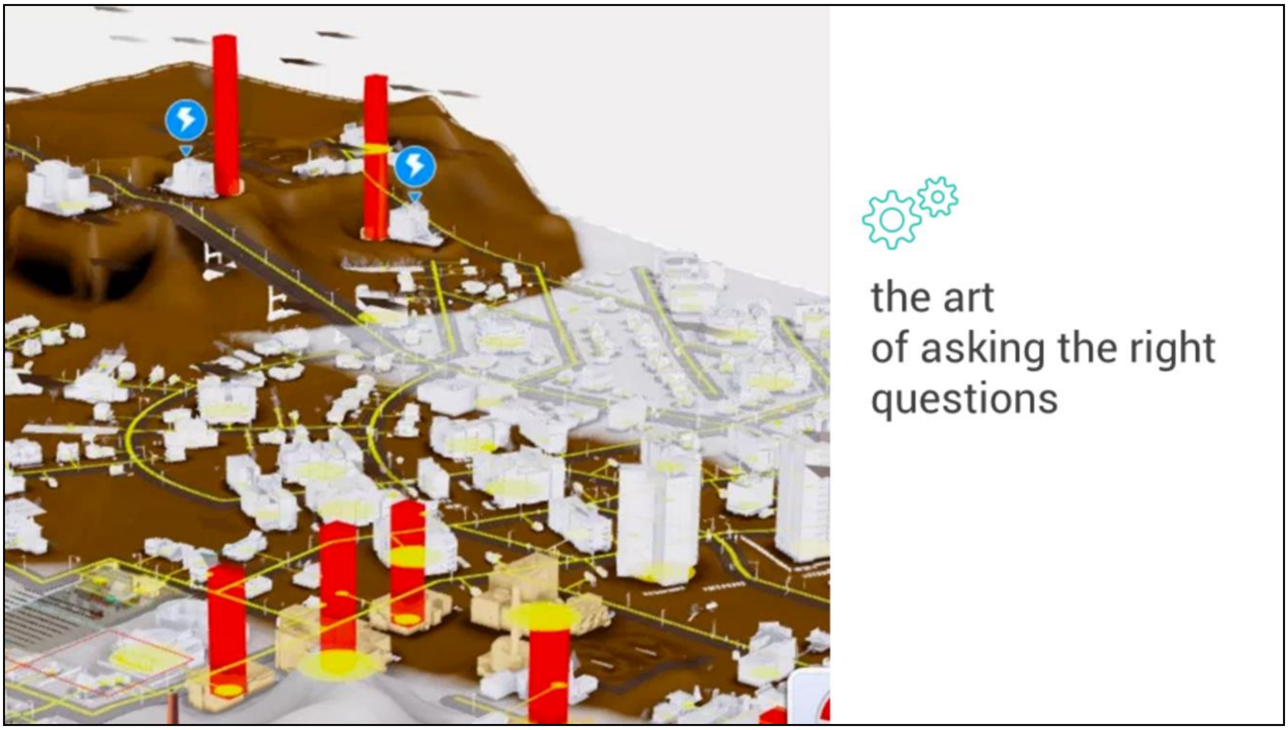
Mission 4: Pollution Problems

Welcome to Sierra Madre!

This city has a problem with high air pollution. Find out how to lower pollution and keep the power level optimal.

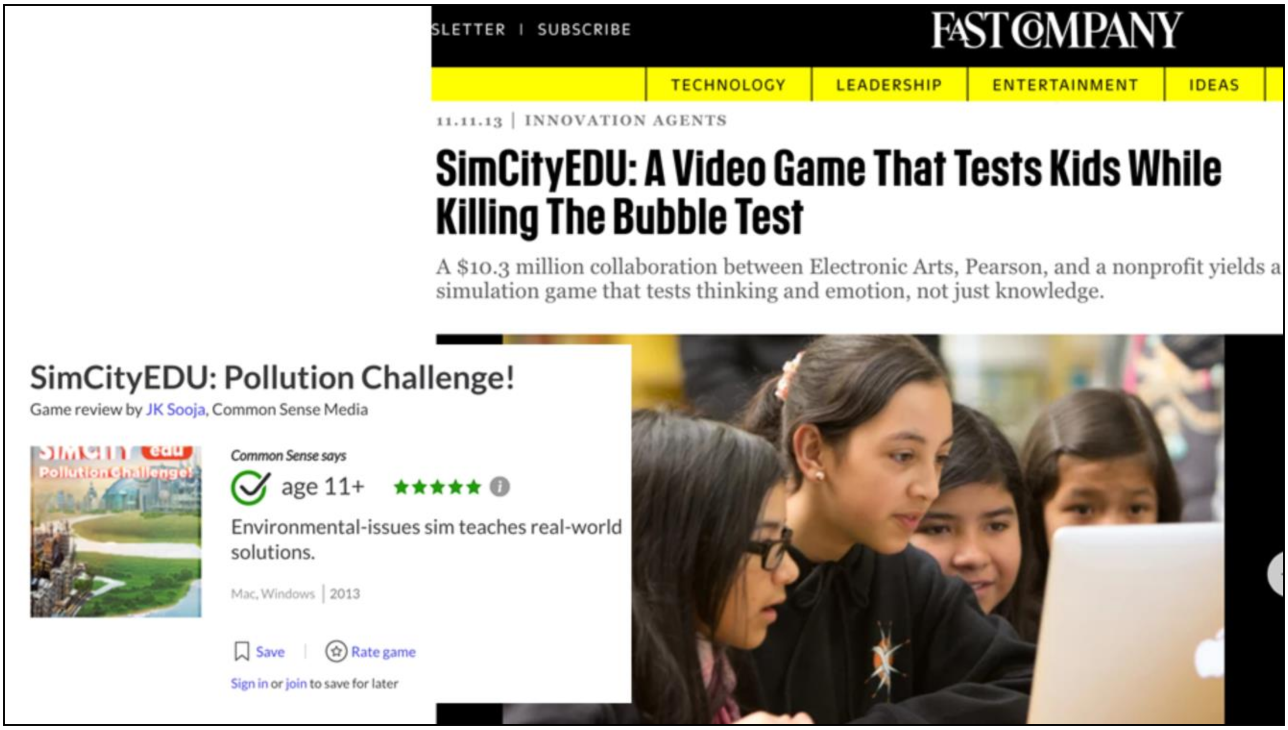
You have 10 minutes. Can you avoid power blackouts?

In the end we had to find a scrap of truth inside of SimCity -- one of which happens to be its environmental pollution system and its relationship to power generation industry -- and then bill it as environmental science plus systems thinking -- the latter of which isn't in the common core but is a key 21st century skill. So it's called "Pollution Challenge" and it does have environmental science concepts in it, but mainly what it teaches is systems thinking.



the art
of asking the right
questions

Since we knew we weren’t going to be able to remake the software from scratch — nor would we even want to, since what we were trying to do was take advantage of what was already in SimCity — when we started asking kids questions about how SimCity was making them FEEL, and then aligning THAT with what was natively inside the learning standards already, that’s when we started to get traction. Probably the most powerful thing we ever heard from a kid about SimCity was “this game makes me feel like my decisions matter” — which is a really powerful thing to think about when you take into account the inflection of surprise with which she made that statement. Most games did not make her feel important. Powerful, sure. Reckless, strong, destructive, imaginative, limitless — but not important. SimCity gave that to her. That was what we had to double down on.



11.11.13 | INNOVATION AGENTS

SimCityEDU: A Video Game That Tests Kids While Killing The Bubble Test

A $10.3 million collaboration between Electronic Arts, Pearson, and a nonprofit yields a simulation game that tests thinking and emotion, not just knowledge.

SimCityEDU: Pollution Challenge!

Game review by JK Sooja, Common Sense Media

Common Sense says

age 11+ ★★★★★

Environmental-issues sim teaches real-world solutions.

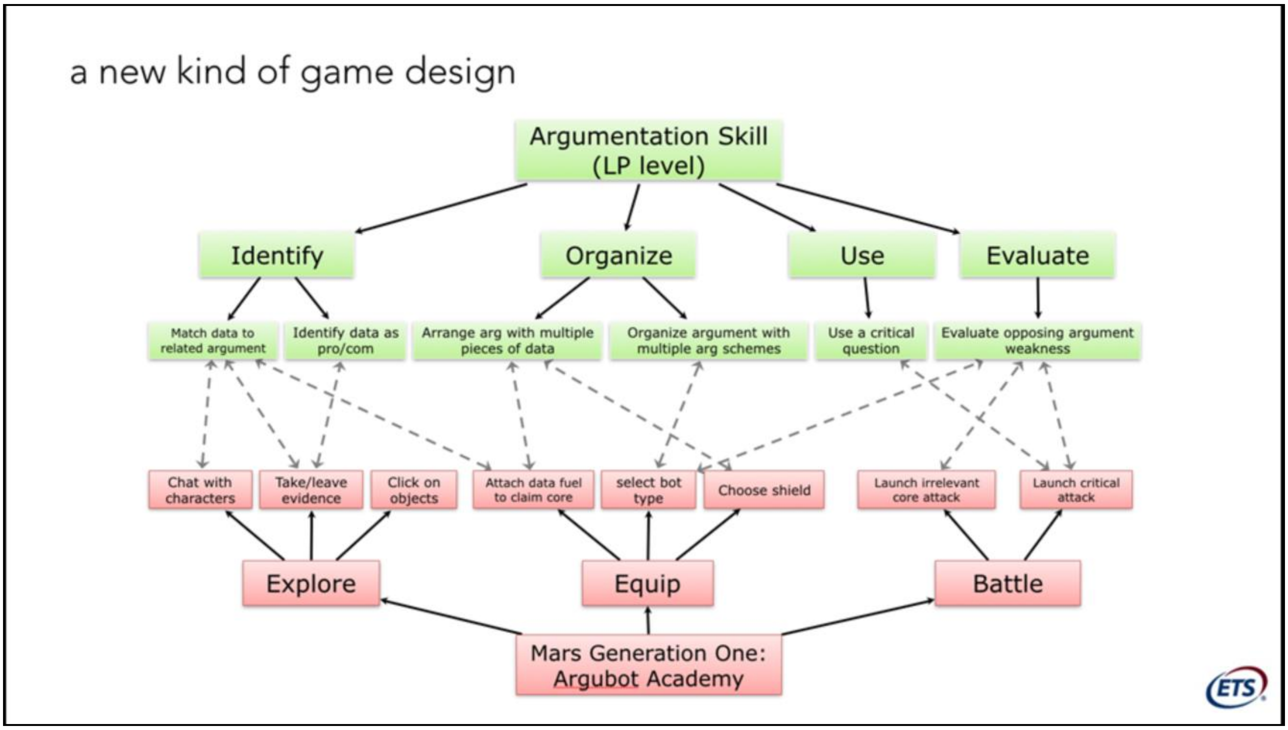
Mac, Windows | 2013

Sign in or join to save for later

Teachers love SimCityEDU -- mainly because it gives them a situated context for their classroom, and is a huge engagement booster, a platform upon which to teach a number of subjects -- and it remains our top downloaded product, so we can't really call it a failure, but from an educational standpoint, it sure felt like failure, because although it was a great conversation piece, in and of itself it didn't hit the standards we were targeting. We realized just how small and narrow a target we were trying to hit, even when we could pick any topic in the common core standards. The questions we asked kids were revealing that, if they were learning something, it sure wasn’t anything we could find in the common core.

that time we tried to assess simcity

For our next attempt we started with what we thought was that narrow assumption: argumentation. And we knew we'd have to build a game around that central concept rather than trying to bend an existing game in its vague direction.



a new kind of game design

Argumentation Skill (LP level)

Identify

Organize

Use

Evaluate

Match data to related argument

Identify data as pro/com

Arrange arg with multiple pieces of data

Organize argument with multiple arg schemes

Use a critical question

Evaluate opposing argument weakness

Chat with characters

Take/leave evidence

Click on objects

Attach data fuel to claim core

select bot type

Choose shield

Launch irrelevant core attack

Launch critical attack

Explore

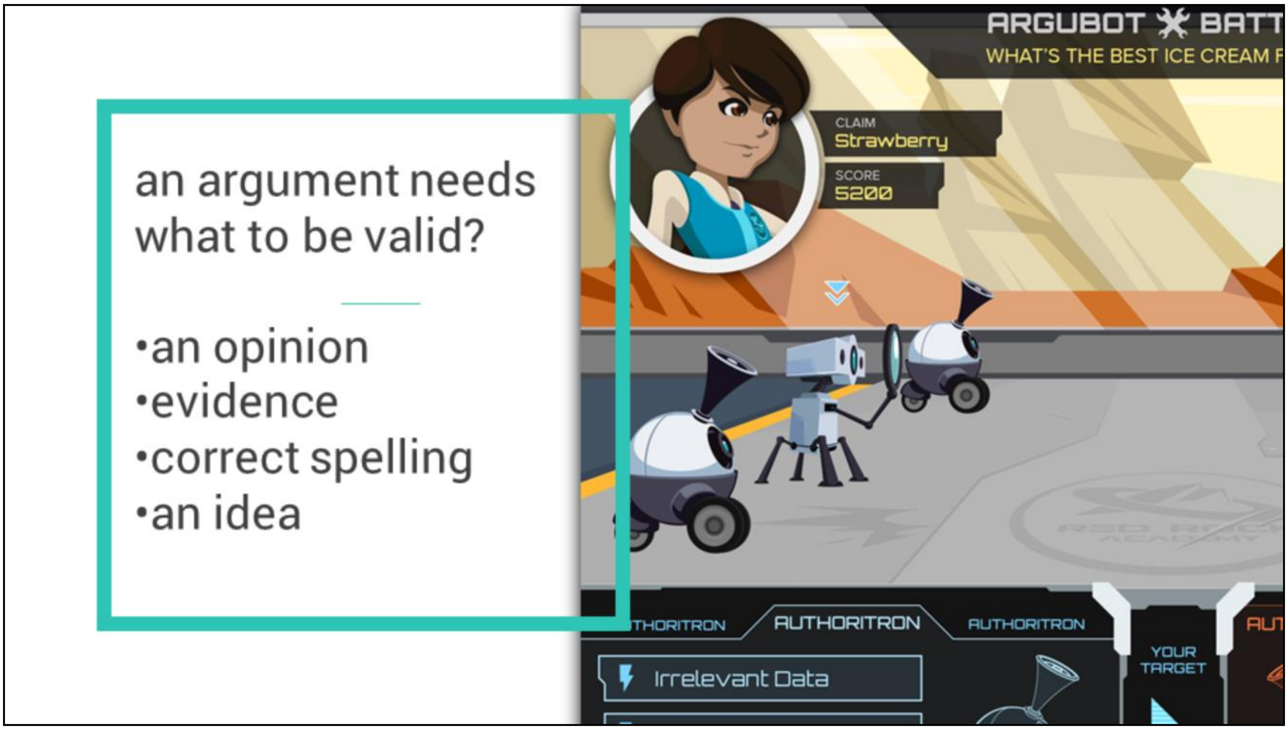
Equip

Battle

Mars Generation One: Argubot Academy

This time we started with a map of argumentation competency provided by our learning designers -- and not just any competency, but one translated into action verbs, things we could actually simulate inside a game. This is the map, which as far as I know is the first of its kind: a verb map that connects game actions to learning actions, aimed at creating evidence of a player's thinking. We started with a carefully crafted hypothesis — the whole game was the execution of that hypothesis.

This game was built with the question at the heart of it: what is the most important thing to teach a 6th grader about argumentation?

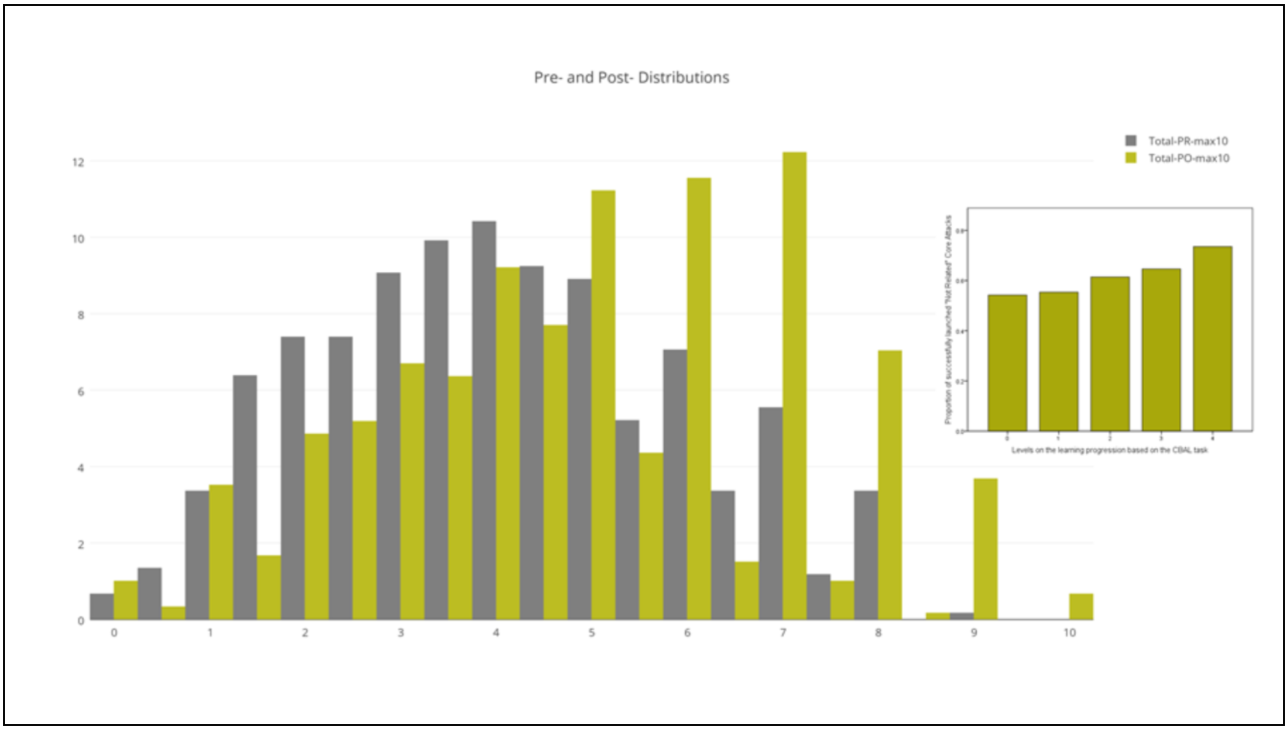


an argument needs what to be valid?

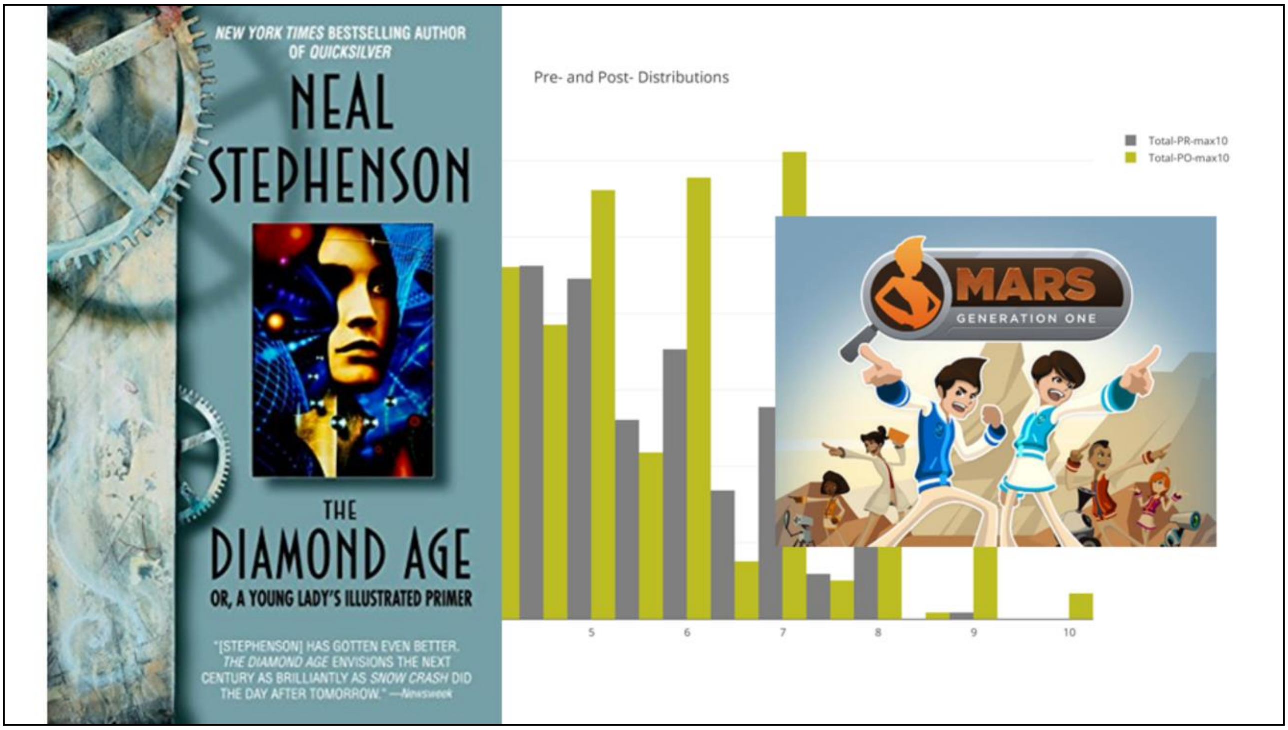
- an opinion
- evidence
- correct spelling
- an idea

Then, during development, even when what we had was a crude prototype, we TESTED whether the game was working by using a five point quiz. It was open-ended, and of course in our early prototypes players failed entirely, but that was good - that meant we had found a problem to solve. As we developed, our scores on those informal quizzes got better and better.

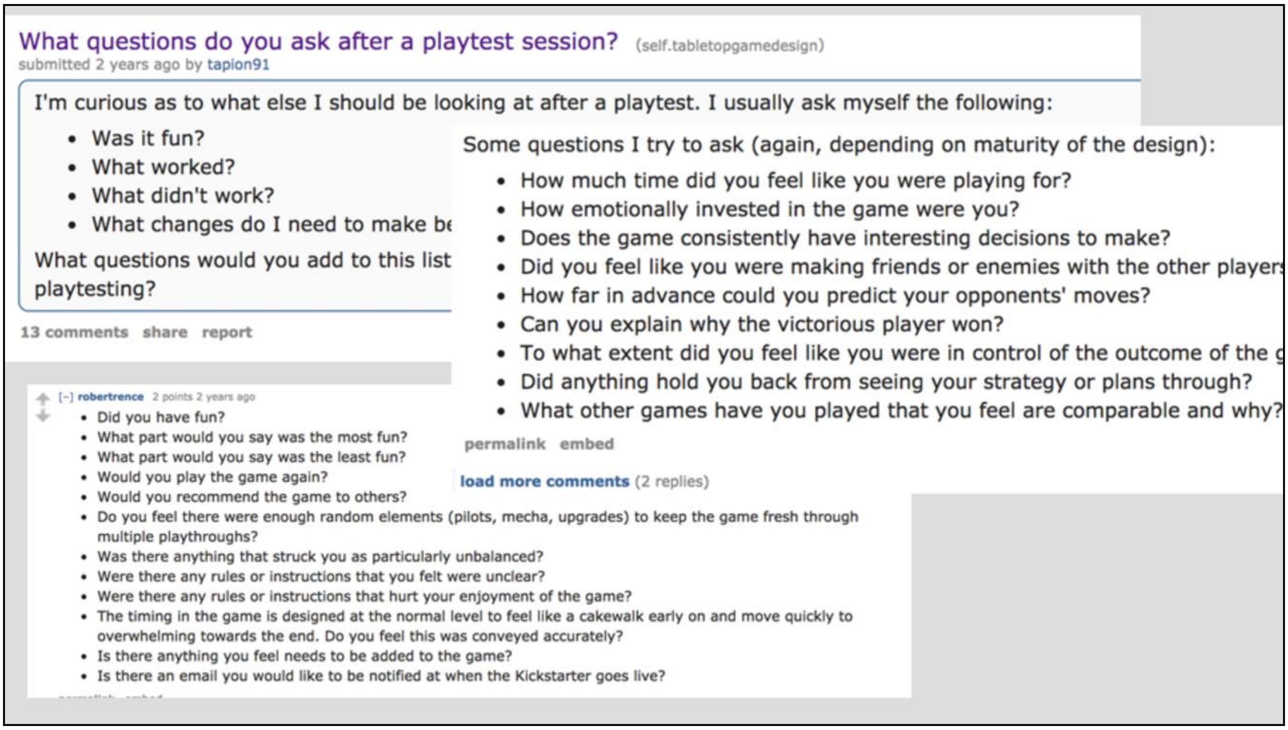
I want to linger on this for a minute because what we did was an unintuitive thing when you think about commercial development, but it strikes me as totally applicable. It had a tremendously focusing effect that I haven’t experienced making commercial games. Every single time we tested we were giving ourselves the same benchmark, reminding ourselves of our goal. If for no other reason, that’s a reason to use a custom tailored play testing quiz: to remind YOURSELF of what you’ve set out to do. **What you ask players is what you’re going to get in your final product.** If all you’re asking them is how they can solve a puzzle, that’s all you’re going to be developing toward.



And in the end we shipped a game that was evaluated by ETS (Educational Testing Service, makers of the GRE and several benchmark education tests) using a pre- and post-measure that had already been proven to be a valid assessment of argumentation. The result was we were able to raise a student's grade level on average a full year of competency in a week of scaffolded play.



I'll linger on that for a minute because it's really important. If you believe that games can teach, we unequivocally proved it -- on a competency teachers struggle to teach. And this thing is scalable. We might not be able to put a top quality teacher in front of every 11 year old on the planet -- but we MIGHT be able to get them a tablet with educational software. The dream is a big one: infinitely distributable education, the kind of thing that could lift the world.



What questions do you ask after a playtest session? (self.tabletopgamedesign)
submitted 2 years ago by tapion91

I'm curious as to what else I should be looking at after a playtest. I usually ask myself the following:

- Was it fun?
- What worked?
- What didn't work?
- What changes do I need to make be

What questions would you add to this list
playtesting?

13 comments share report

Some questions I try to ask (again, depending on maturity of the design):

- How much time did you feel like you were playing for?
- How emotionally invested in the game were you?
- Does the game consistently have interesting decisions to make?
- Did you feel like you were making friends or enemies with the other player
- How far in advance could you predict your opponents' moves?
- Can you explain why the victorious player won?
- To what extent did you feel like you were in control of the outcome of the g
- Did anything hold you back from seeing your strategy or plans through?
- What other games have you played that you feel are comparable and why?

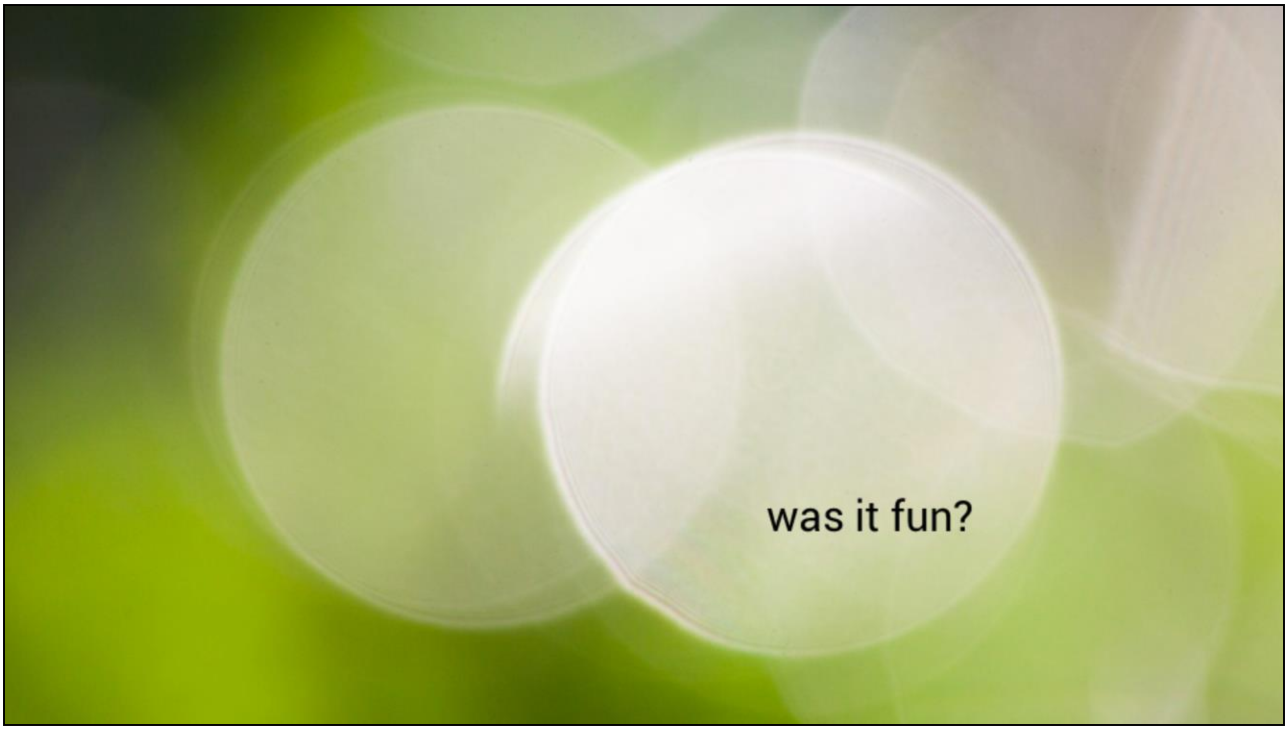
permalink embed

load more comments (2 replies)

[–] robertrence 2 points 2 years ago

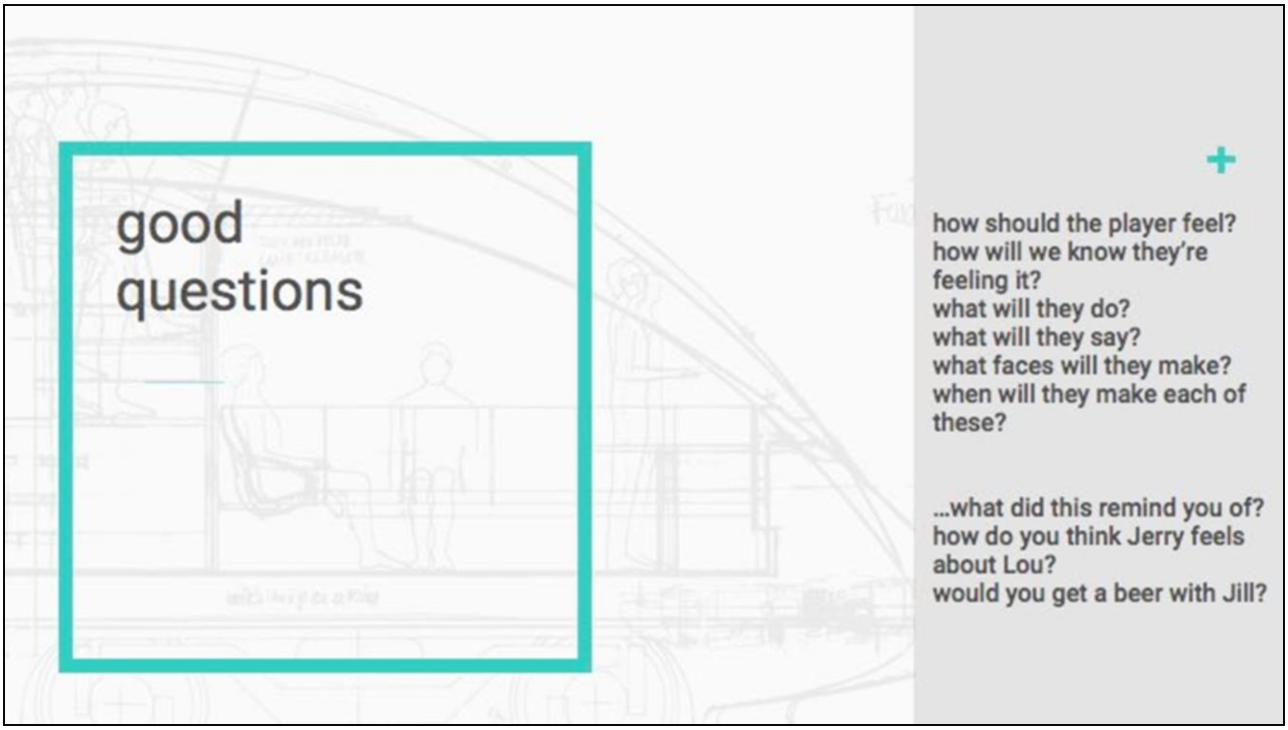
- Did you have fun?
- What part would you say was the most fun?
- What part would you say was the least fun?
- Would you play the game again?
- Would you recommend the game to others?
- Do you feel there were enough random elements (pilots, mecha, upgrades) to keep the game fresh through multiple playthroughs?
- Was there anything that struck you as particularly unbalanced?
- Were there any rules or instructions that you felt were unclear?
- Were there any rules or instructions that hurt your enjoyment of the game?
- The timing in the game is designed at the normal level to feel like a cakewalk early on and move quickly to overwhelming towards the end. Do you feel this was conveyed accurately?
- Is there anything you feel needs to be added to the game?
- Is there an email you would like to be notified at when the Kickstarter goes live?

As I return to commercial game development (because GlassLab was a 3 year mission, which ended), the experience of that kind of precision sticks with me. And it makes me realize how poor we are at playtesting or measuring anything more fine grained than "would you buy this?".



was it fun?

As artists this should bother us, and the truth is that our shots are scattershot fired because our focus is wide and blurry. I've thought about what might tighten it, and what generalizable processes could transfer to any kind of innovative design (if you're making something purely competitive, you can just ask "is this better than X?" -- executing that might be just as hard, but testing it is much easier).

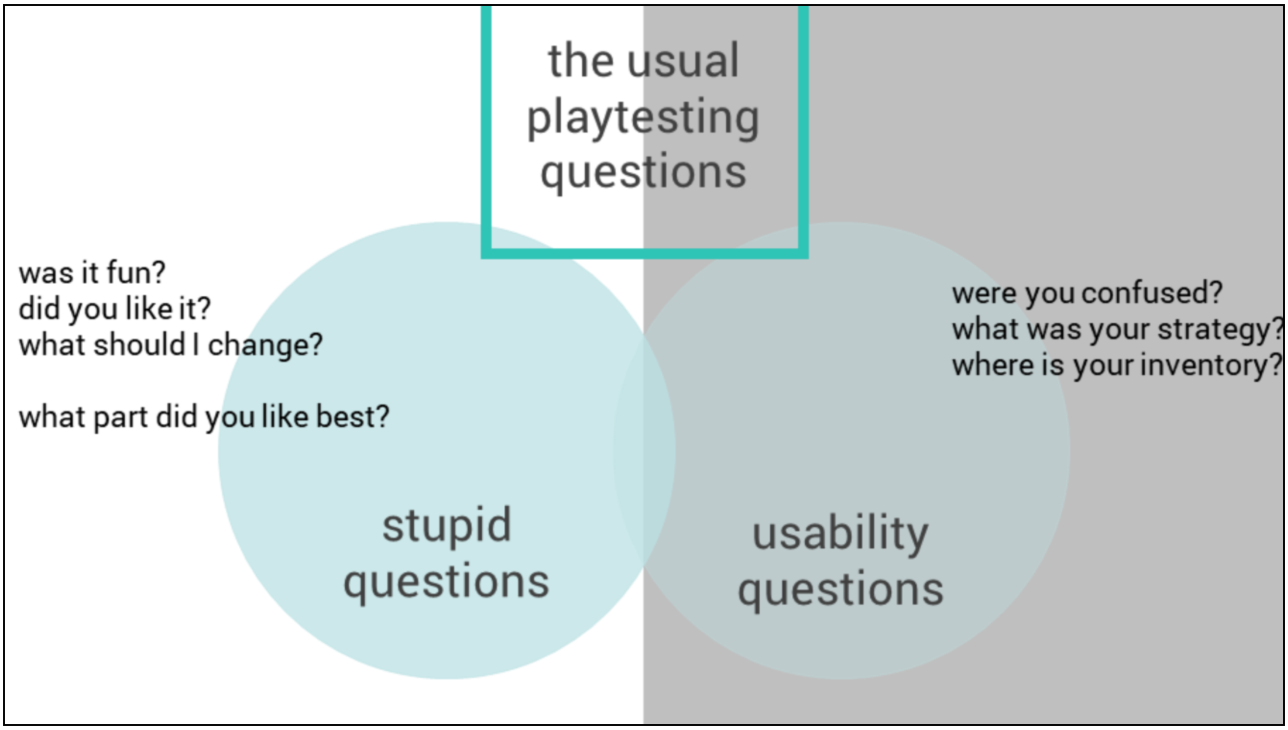


good questions

how should the player feel?
how will we know they're feeling it?
what will they do?
what will they say?
what faces will they make?
when will they make each of these?

...what did this remind you of?
how do you think Jerry feels about Lou?
would you get a beer with Jill?

The razor is asking players the right questions. It means thinking about your playtesting questionnaire while you're still early in design. We don't like to think about player input in this phase because it feels commercial and crass -- but what we should be using it as is a way of testing our own assumptions about what we all want to experience.



the usual playtesting questions

was it fun?
did you like it?
what should I change?

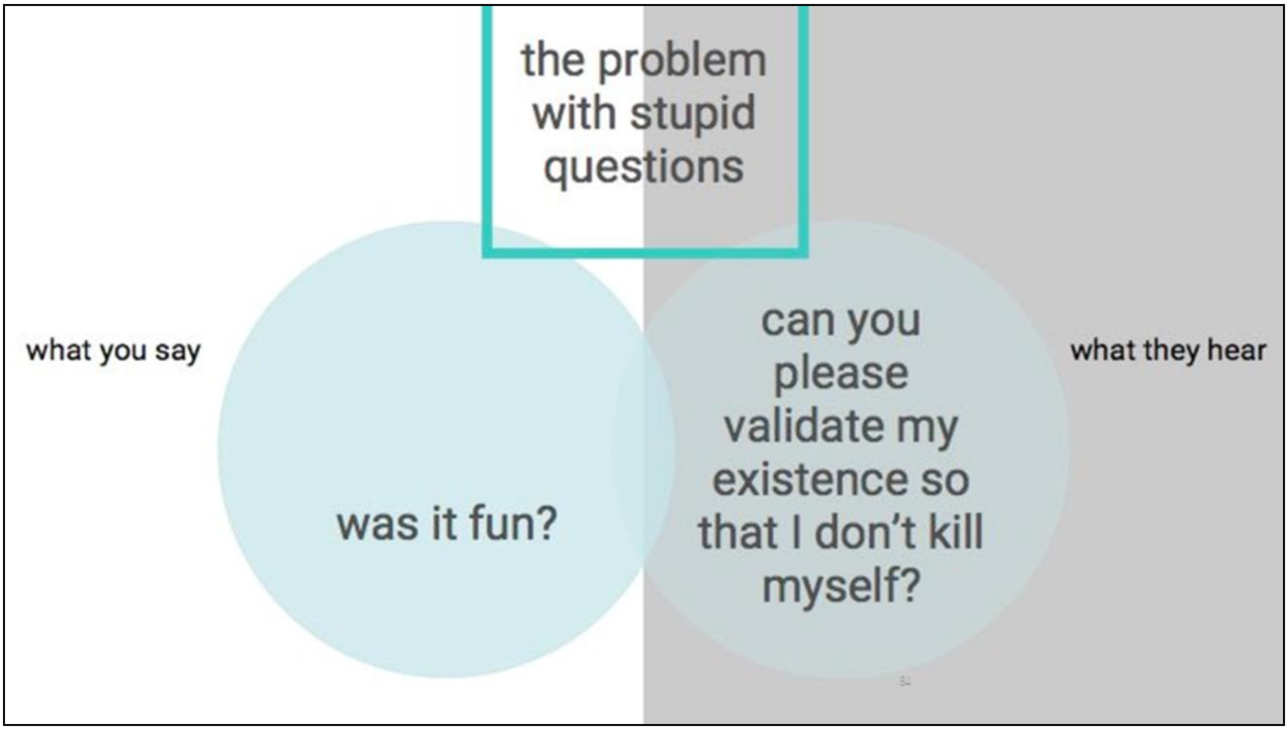
what part did you like best?

stupid questions

were you confused?
what was your strategy?
where is your inventory?

usability questions

When we playtest, we tend to ask one of two types of question: 1) a really stupid question (such as “did you like it?”), or 2) a useful but very emotionally vague question (such as “what were you trying to do?”). The first type of question is really stupid because what you mean is “please lie to me and tell me you liked my game”. The second type of question is totally useful and necessary but tells us nothing about the emotional, subjective, qualitative experience the player is getting. If our game is about revenge but the player is experiencing hate, “what were you trying to do?” won’t give us a clue about our target being off.



the problem with stupid questions

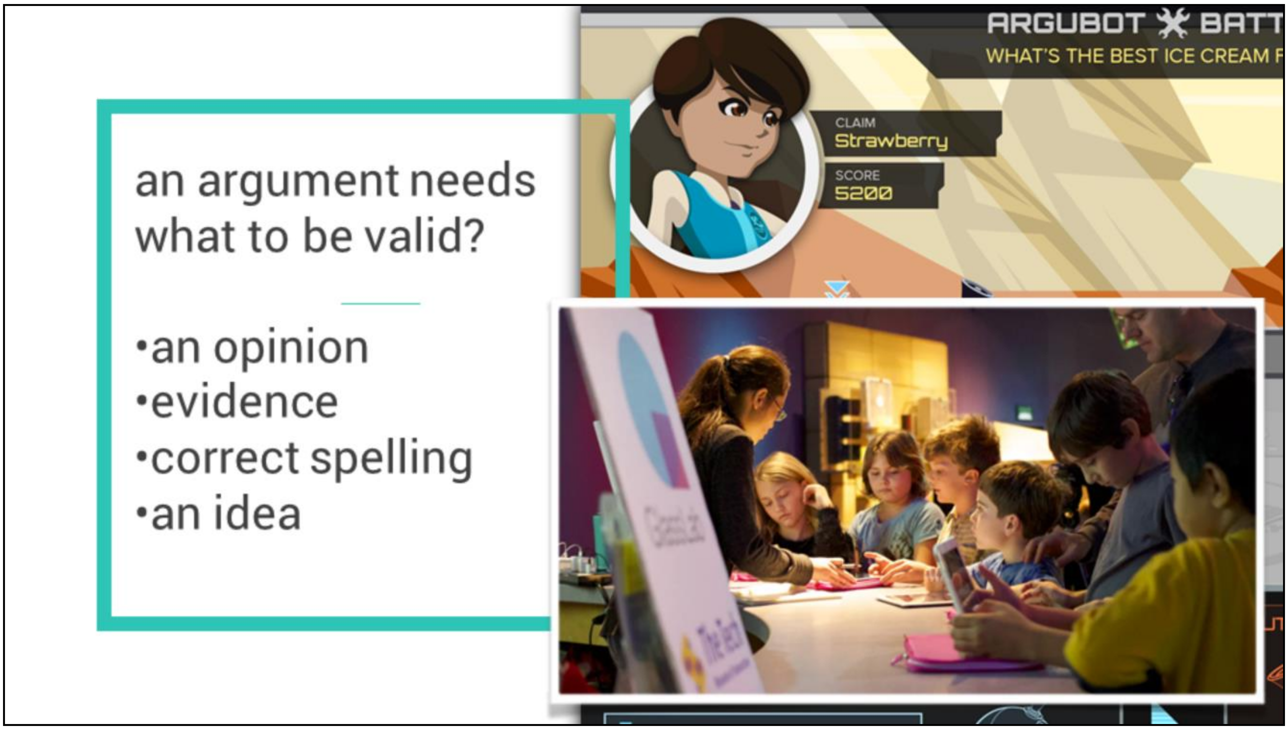
what you say

was it fun?

can you please validate my existence so that I don't kill myself?

what they hear

+ you do have to fix the usability first

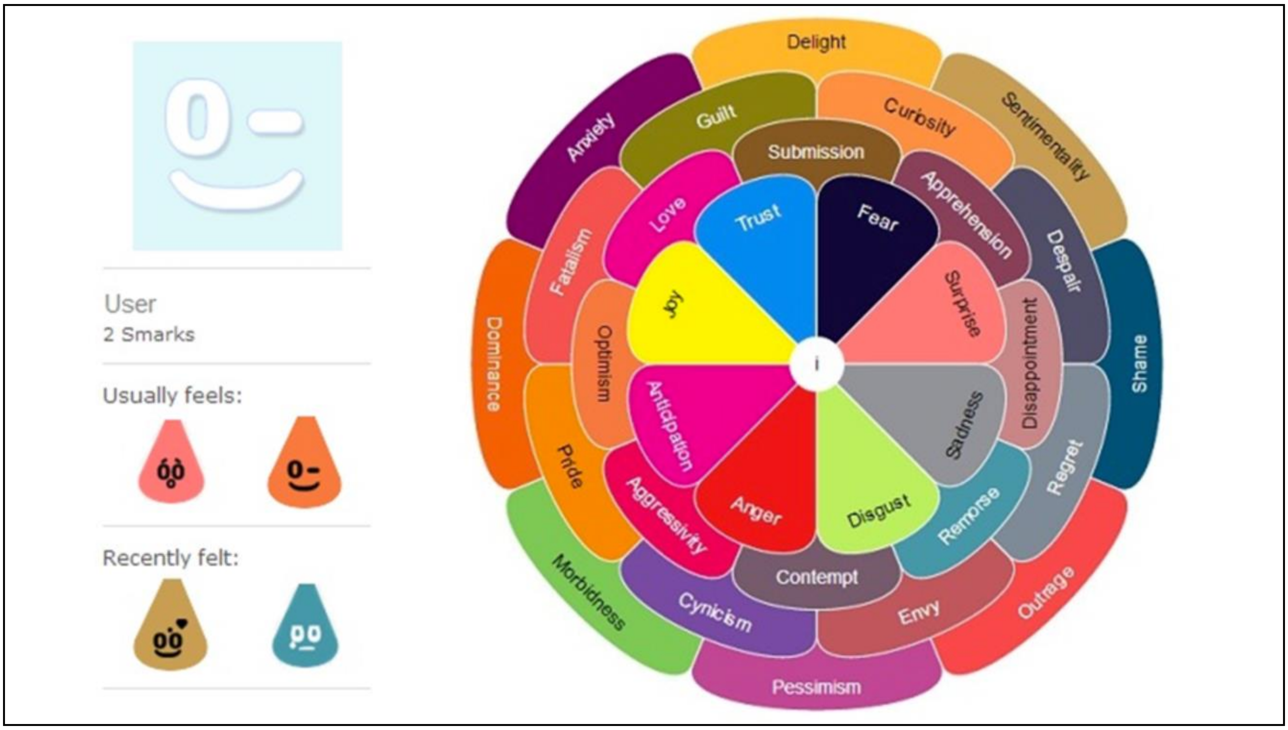


an argument needs what to be valid?

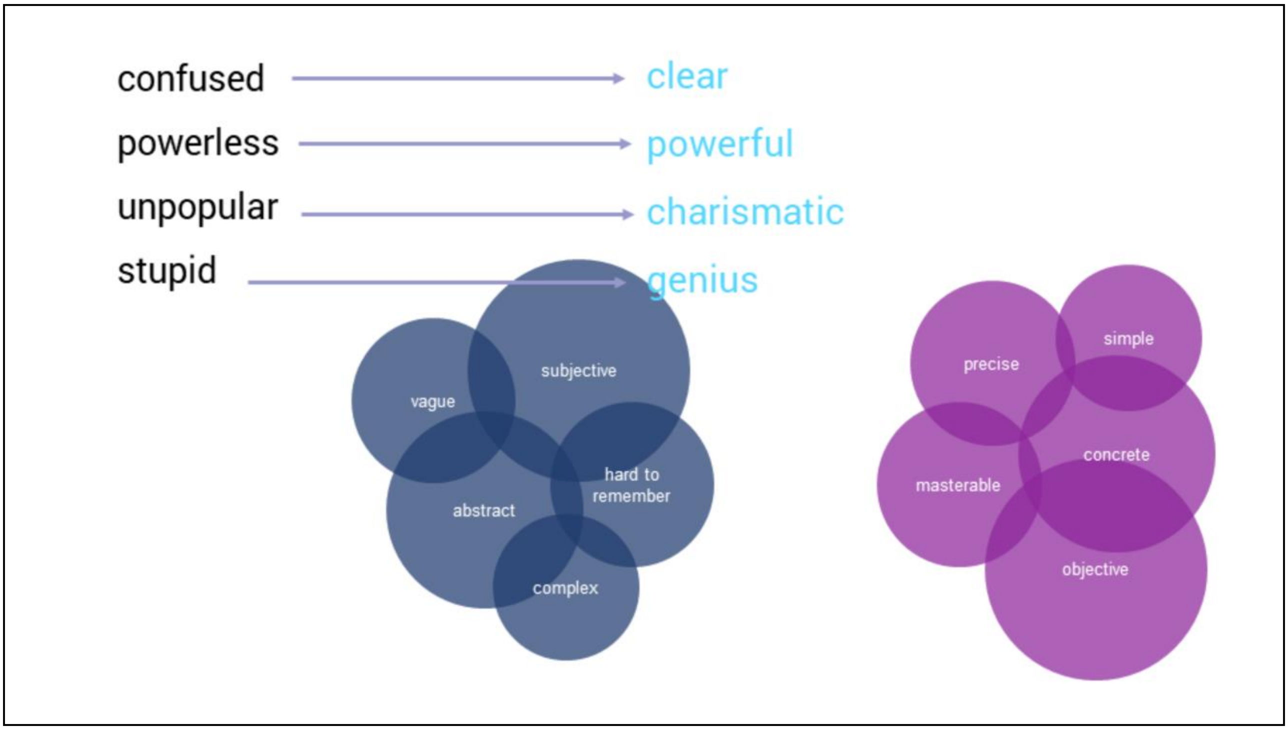
- an opinion
- evidence
- correct spelling
- an idea

In a way what we were doing at Glasslab was radically easier in that the needle we wanted to move was knowledge-based and behavioral. It could be directly observed and players could prove they had knowledge or not. I knew Mars Generation One had hit its target when I saw a girl change a claim she was making with her argubots. When I asked her why she did it, she said “well, at first I thought X, but then once I looked at all the evidence I realized there was more evidence for Y, so I changed what I thought.” Bingo. Reason-based society here we come.

The question I had asked her in that moment was just a standard think aloud question — tell me what just happened. And you need that. But the precision of our focus on this outcome of how she was going to relate to evidence, and what was going to change in her head through the process of making the game (that’s the other important part — the PRE and the POST picture of your player’s mind), gave me the precision to be able to dive in in that moment and realize something important had just taken place. That’s the power of asking the right questions.



“Regular” fun games are looser. And often we aren’t even terribly intentional about what specific emotional experience we’re trying to evoke in the player. Asking precise, emotion-centered questions — such as "if you could use three adjectives to describe your experience playing this game, what would you use?" — can not only tell us more of what’s going on inside the player’s emotional chemistry lab, but help us reflect on whether what we set out to make is really what we want to make at a later given moment in development.



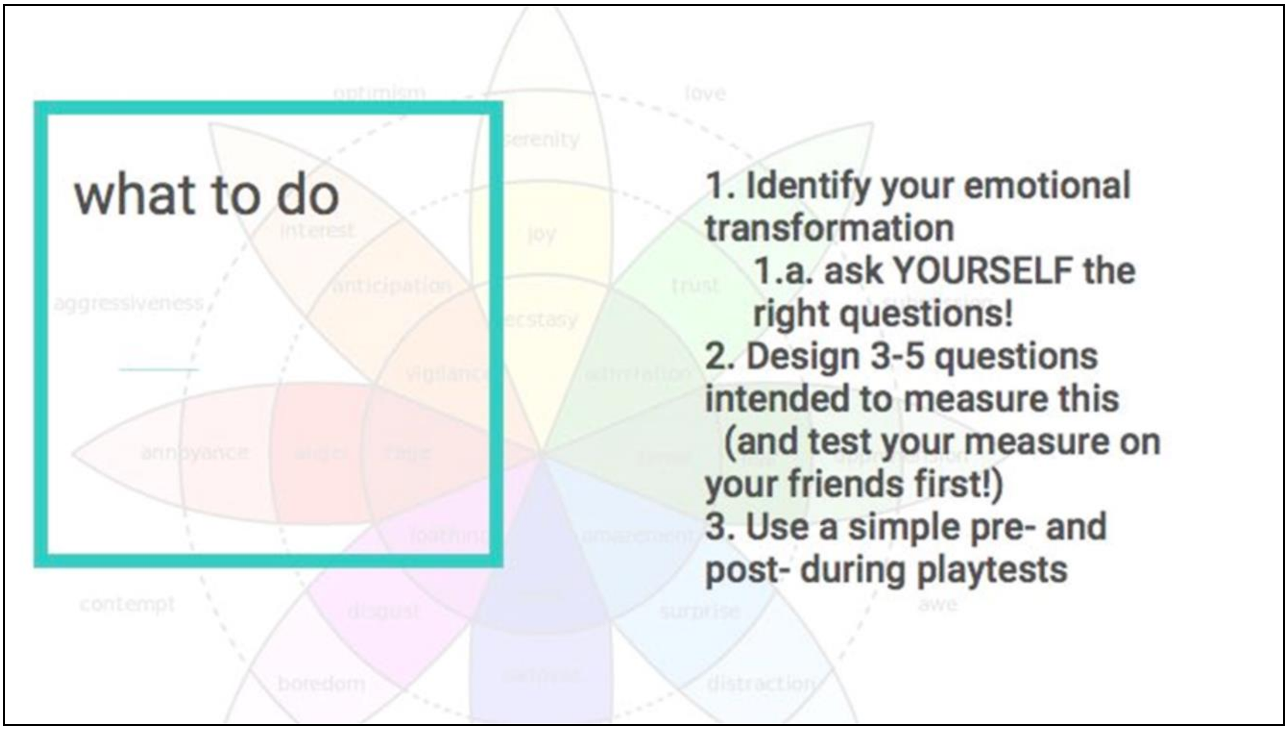
confused → clear

powerless → powerful

unpopular → charismatic

stupid → genius

Again the other important notion here is the idea of the PRE and the POST. How your player starts out, and how they end. You can do this — and we did with Mars Generation One — in terms of an emotional journey. What deep need is your game going to fulfill in your player? That need can be emotional, and our deepest needs most often are. With Mars Generation One, we knew that alongside the cognitive journey we were going to take players on, we also needed to take them on an emotional journey. And if we wanted to be deliberate about this, we were going to lay out their pain state before playing and the emotional goal state we'd bring them to. Making this explicit influenced our smallest aesthetic decisions all along the way. That's the other power of asking the right questions: it gives you **a dynamic frame for how your player will change.**


optimism
love
serenity
interest
joy
aggressiveness
anticipation
trust
ecstasy
vigilance
admiration
annoyance
anger
rage
loathing
amazement
contempt
disgust
surprise
awe
boredom
sadness
distraction

what to do

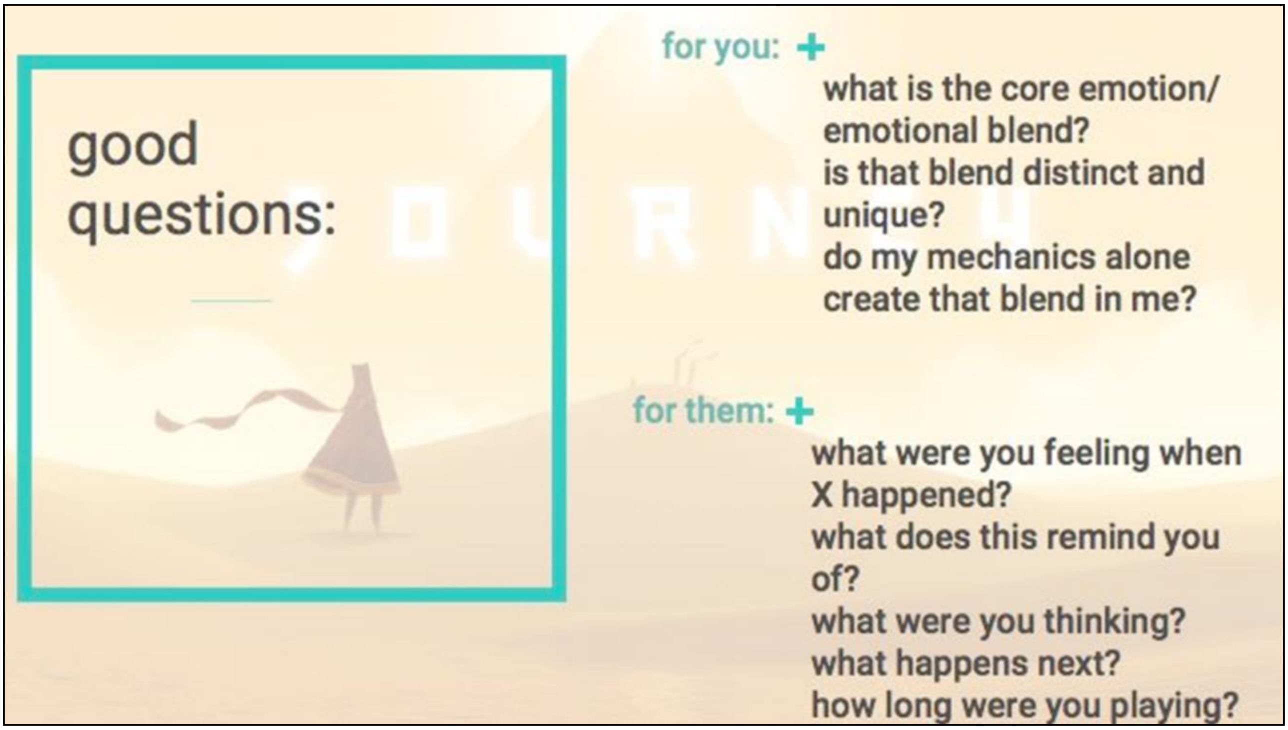
1. Identify your emotional transformation
    1.a. ask YOURSELF the right questions!
2. Design 3-5 questions intended to measure this
  (and test your measure on your friends first!)
3. Use a simple pre- and post- during playtests

So this is what I would challenge you to do: early in design, deliberately set out to define precisely what the player’s emotional experience should be both BEFORE and AFTER they play your game. Design 3 to 5 questions that specifically address this emotional transformation, and use those questions in your player interviews. Try to keep them the same (so that you can tell whether you’ve improved the situation, made it worse, or neither, between iterations), but if you evolve them, that’s okay. The point is the process, which also becomes our thought process, which then becomes intentional game design.

news flash

you can use pre- and post- tests in video game playtesting

what is your theory of change?



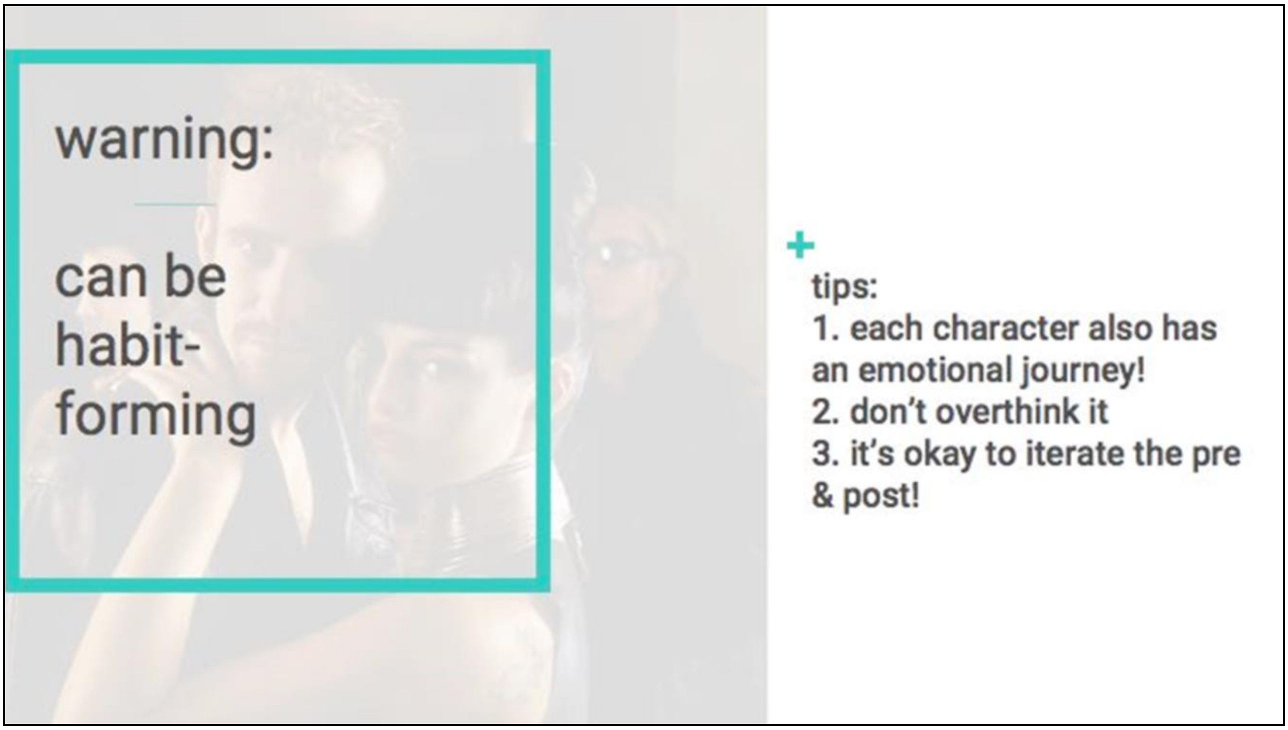
good questions:

for you: +

what is the core emotion/ emotional blend?
is that blend distinct and unique?
do my mechanics alone create that blend in me?

for them: +

what were you feeling when X happened?
what does this remind you of?
what were you thinking?
what happens next?
how long were you playing?



warning:

can be habit-forming

+

tips:

1. each character also has an emotional journey!
2. don't overthink it
3. it's okay to iterate the pre & post!

I think you might find it addictive. Once you open the door to measuring specific changes in your players, there's no going back.

thank you

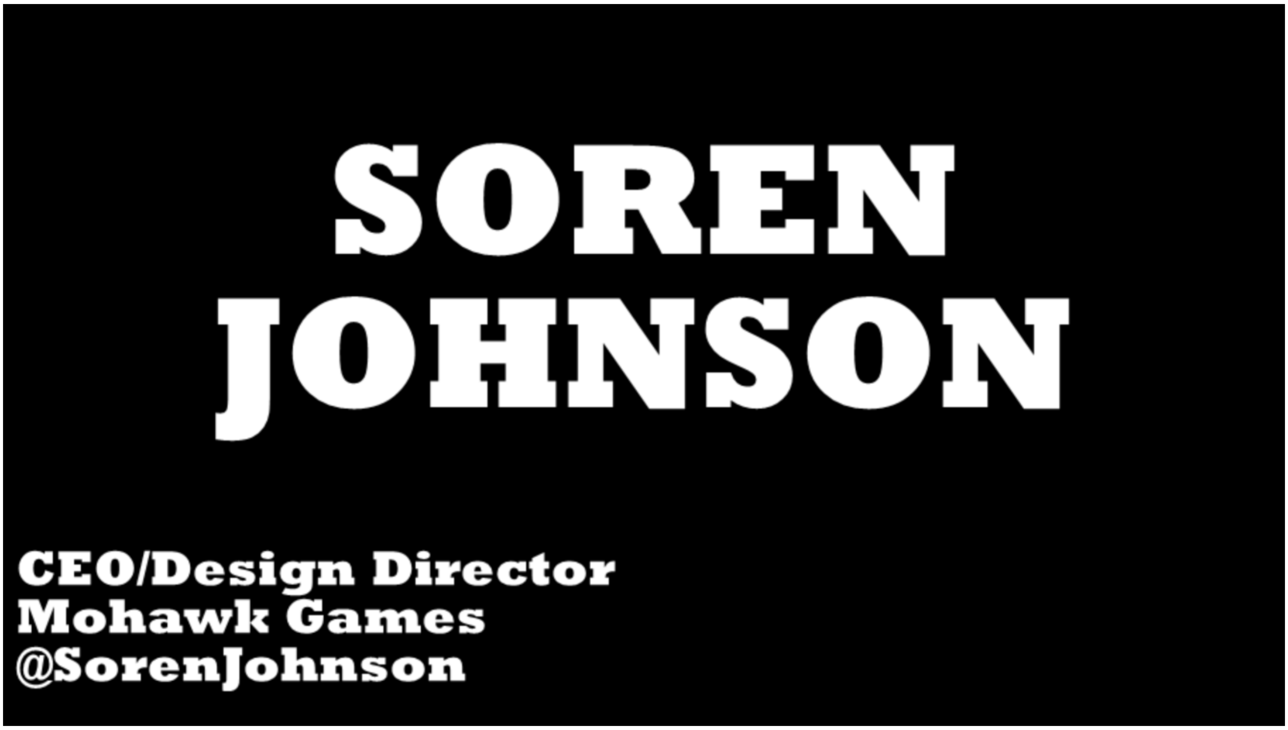
erin hoffman-john

@gryphoness

and @ehj@google.com
(surprise!)

"Seek simplicity, and distrust it."
alfred north whitehead

if you try it, hit me up! I hope it's helpful.



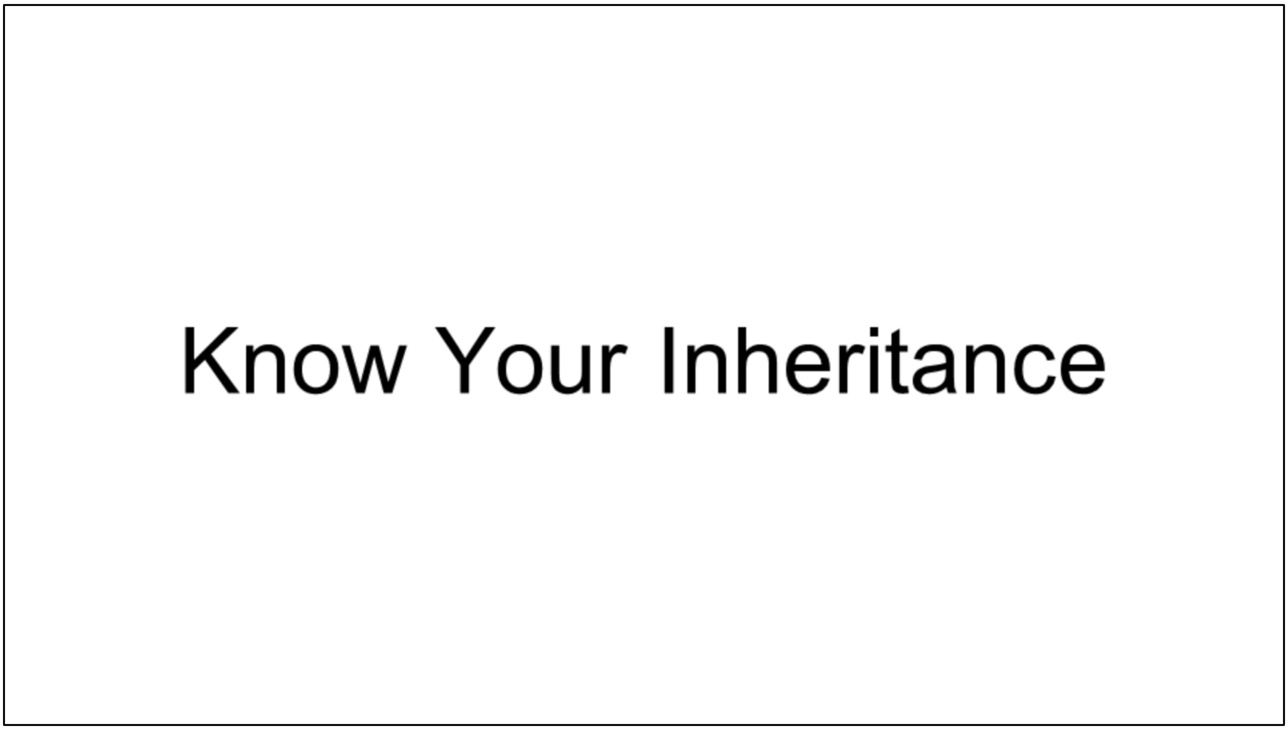
SOREN JOHNSON

CEO/Design Director
Mohawk Games
@SorenJohnson

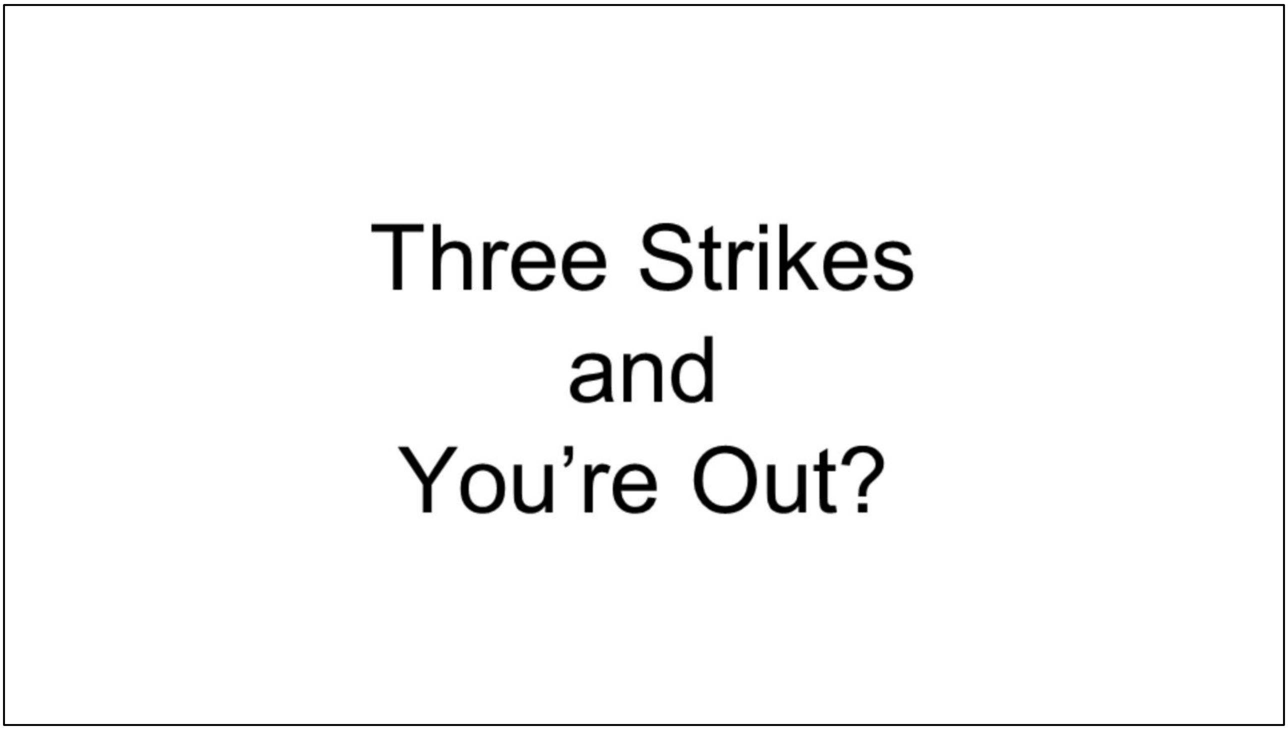
Soren Johnson is most know for his involvement with Civilizations III and IV.

He now runs indie studio Mohawk Games who shipped economic RTS Offworld Trading Company and recently announced their next game called 10 Crowns

And he’s also on the advisory board for this very conference!



Know Your Inheritance



Three Strikes and You're Out?

This phrase is so common, it's basically an idiom. Indeed, while some of our non-American friends here might be baffled by baseball in general, they probably still know this rule. However...

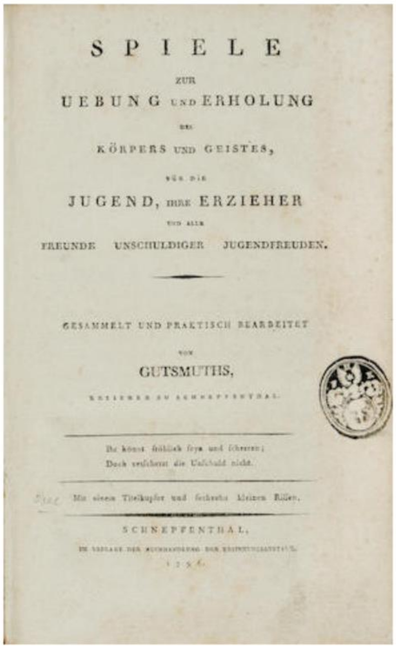
...it’s not actually true. The batter is not out after the third strike. It’s only when the catcher catches the ball that the batter is out.

If the catcher drops or misses the pitch, then the batter is not out and has a chance to advance to first. This almost always results in an out as the catcher simply picks up the ball and makes the easy throw, but occasionally, this little-known rule can become a big deal, as it did in last year’s final game in the playoff series between the Chicago Cubs and the Washington Nationals. Max Scherzer threw a third strike past a swinging Javier Baez, but watch what happens...

...the Nationals catcher Matt Wieters missed the ball between his legs, allowing Baez to make it safely to first base. This would have been the third out of the inning. Instead, the Cubs scored two more runs and later won the game by only one run and advanced to the next round.

Thus, an obscure rule knocked the Nationals out of the playoffs.

Where exactly did the rule come from?



SPIELE

ZUR

UEBUNG UND ERHOLUNG

DES

KÖRPERS UND GEISTES,

FÜR DIE

JUGEND, IHRE ERZIEHER

UND ALLE

FREUNDE UNSCHULDIGER JUGENDFREUDEN.

GESAMMELT UND PRAKTISCH BEARBEITET

VON

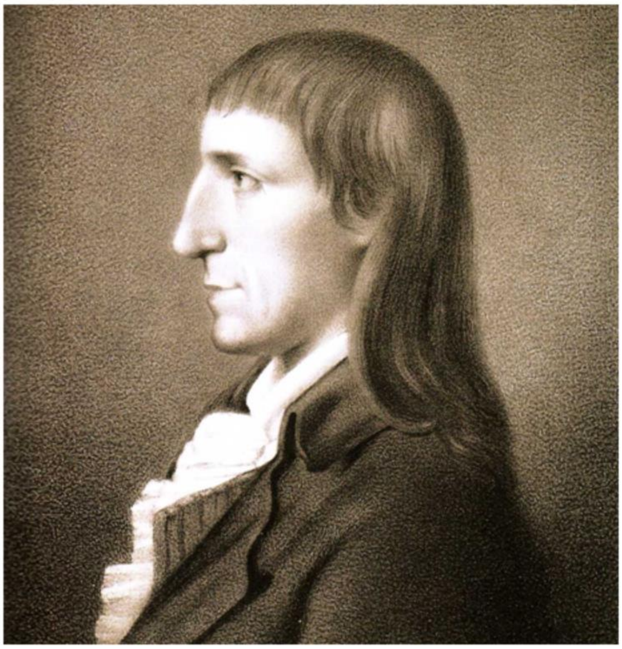
GUTSMUTHS,

ERZIEHER ZU SCHNEPFENTHAL.

Du könnt fröhlich ſeyn und ſcherzen;
Doch verſcherzt die Unſchuld nicht.

Mit einem Titelkupfer und ſechzehn kleinen Riſſen.

SCHNEPFENTHAL,
IM VERLAGE DER BUCHHANDLUNG DER ERZIEHUNGSANSTALT.
1796.



It actually reaches back to the very first time the rules of baseball were put down in print, by the German Johann Christoph Friedrich Gutsmuths.

He outlined something called “English Base-ball” - which was a game of innings with a batter, fielders, safe bases, and scoring at home plate. However, there were no strikes or balls yet. The pitcher stood close to the batter and more or less “delivered” the ball as a soft lob to be hit. The pitcher wasn’t trying to challenge the batter; the game was about fielding the ball AFTER it was hit.

However, what happens when there is a terrible batter who can’t hit anything? In Gutsmuths’ game, he had a special rule for this situation - the batter gets only three swings. On the third swing, the ball is automatically in play whether it is hit or not. So, the batter will run to first either after hitting the ball or missing for the third time. Indeed, there is no catcher to receive the ball; so the pitcher would need to run to home plate to pick it up and throw to first.

THE AMERICAN NATIONAL GAME OF BASE BALL.
GRAND MATCH FOR THE CHAMPIONSHIP AT THE ELYSIAN FIELDS, HOBOKEN, N.J.

In 1845, the American Knickerbocker Base Ball Club writes down their rules for the game, and some things have changed.

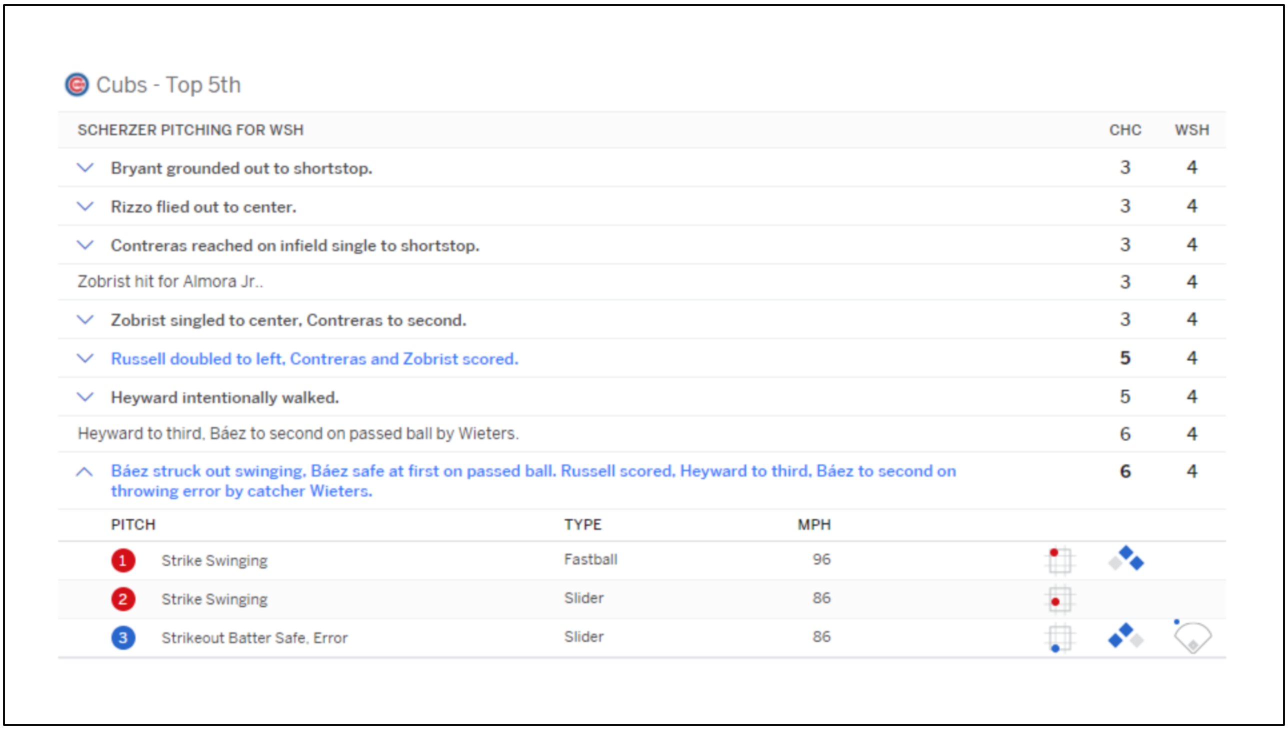
The pitcher is now much farther from the batter and throws the ball horizontally, which requires the new position of catcher. However, they preserve the logic of the old Gutsmuths rule - that the ball is in play after the third missed swing - like old legacy code lying around.

The “strikeout” is actually emergent gameplay because after the third miss, the ball is now technically in play, and the catcher turns it into an out by catching the pitch. Thus, there is no actual difference between the catcher making an out from catching a popup and the catcher making an out from catching the pitch after a third missed swing. In each case, the ball is now “live” and the catcher makes an out by catching the ball before it hits the ground.

However, they had to patch the game later because of an unintended consequence of not taking the time to make the strikeout an official rule. Because the ball would be considered “live” after a third strike, the possibility for a cheesy double- or triple-play existed.

For example, if the bases are loaded, then the catcher can intentionally drop the ball, pick up it up again, step on home plate for an easy out, and then throw to third and then on to second for two more. Therefore, in 1887, they added a new rule so that the batter would automatically be out if a runner was on first base AND there were less than two outs.

Thus, Three Strikes and You’re Out - the way everyone assumes baseball is played - is true... but only under a very specific set of circumstances. They opted for an ugly patch instead of just rewriting the rules to match how the game was actually being played!



Cubs - Top 5th

SCHERZER PITCHING FOR WSH	CHC	WSH
Bryant grounded out to shortstop.	3	4
Rizzo flied out to center.	3	4
Contreras reached on infield single to shortstop.	3	4
Zobrist hit for Almora Jr..	3	4
Zobrist singled to center, Contreras to second.	3	4
Russell doubled to left, Contreras and Zobrist scored.	**5**	4
Heyward intentionally walked.	5	4
Heyward to third, Báez to second on passed ball by Wieters.	6	4
Báez struck out swinging, Báez safe at first on passed ball. Russell scored, Heyward to third, Báez to second on throwing error by catcher Wieters.	**6**	4

	PITCH	TYPE	MPH
1	Strike Swinging	Fastball	96
2	Strike Swinging	Slider	86
3	Strikeout Batter Safe, Error	Slider	86

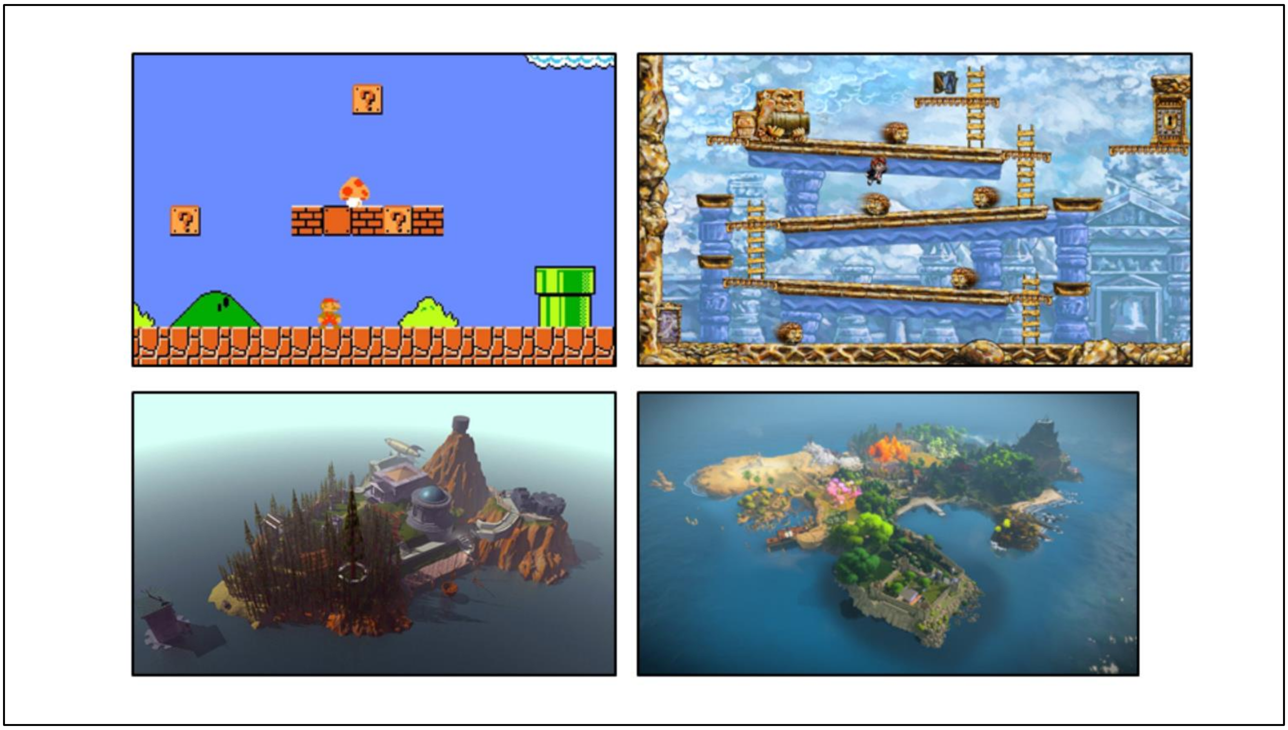
Indeed, think about the situation with Javier Baez. There WAS a runner on first base… so, even though the catcher dropped the ball, it should have been a strikeout… except, there were two outs, so we're now back to the original dropped third-strike rule again.

Think about it - they could have just rewritten the rules so that Three Strikes and You're Out applies at ALL times. Wouldn't that be simpler? More intuitive? Why go to the trouble of fixing the one glaring issue with catchers intentionally dropping the ball and not just get rid of the old, vestigial rule.

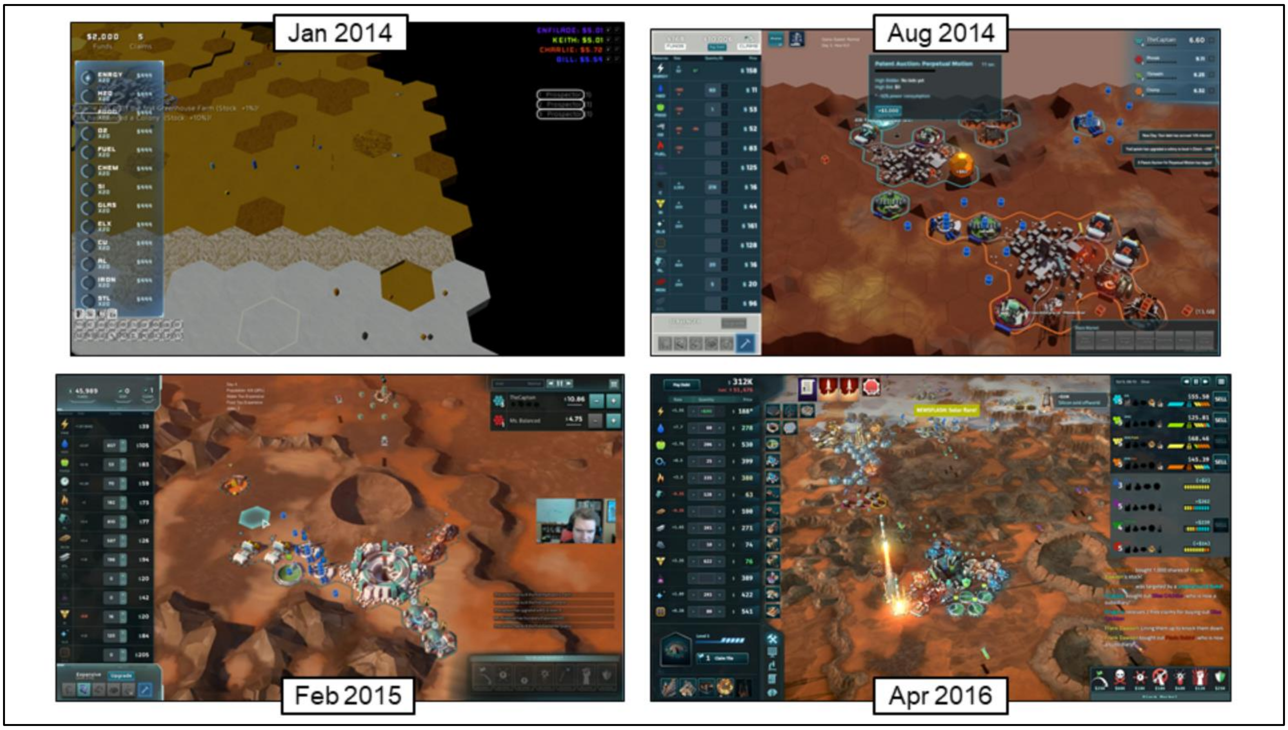
CIVILIZATION
Build An Empire To Stand The Test Of Time
MICROPROSE
CIVILIZATION II
INSTALL GUIDE
MICROPROSE
SID MEIER'S CIVILIZATION III
SID MEIER'S CIVILIZATION IV
SID MEIER'S CIVILIZATION V
FIRAXIS
2K GAMES
SID MEIER'S CIVILIZATION VI
FIRAXIS
2K

The reason is that we inherit our game design from everything that comes before us.

Sometimes, this inheritance is obvious - Civ 6 inherited from Civ 5 which inherited from Civ 4, and so on.



Sometimes, a designer inherits from the games he or she played as a kid (Mario -> Braid, Myst -> The Witness)

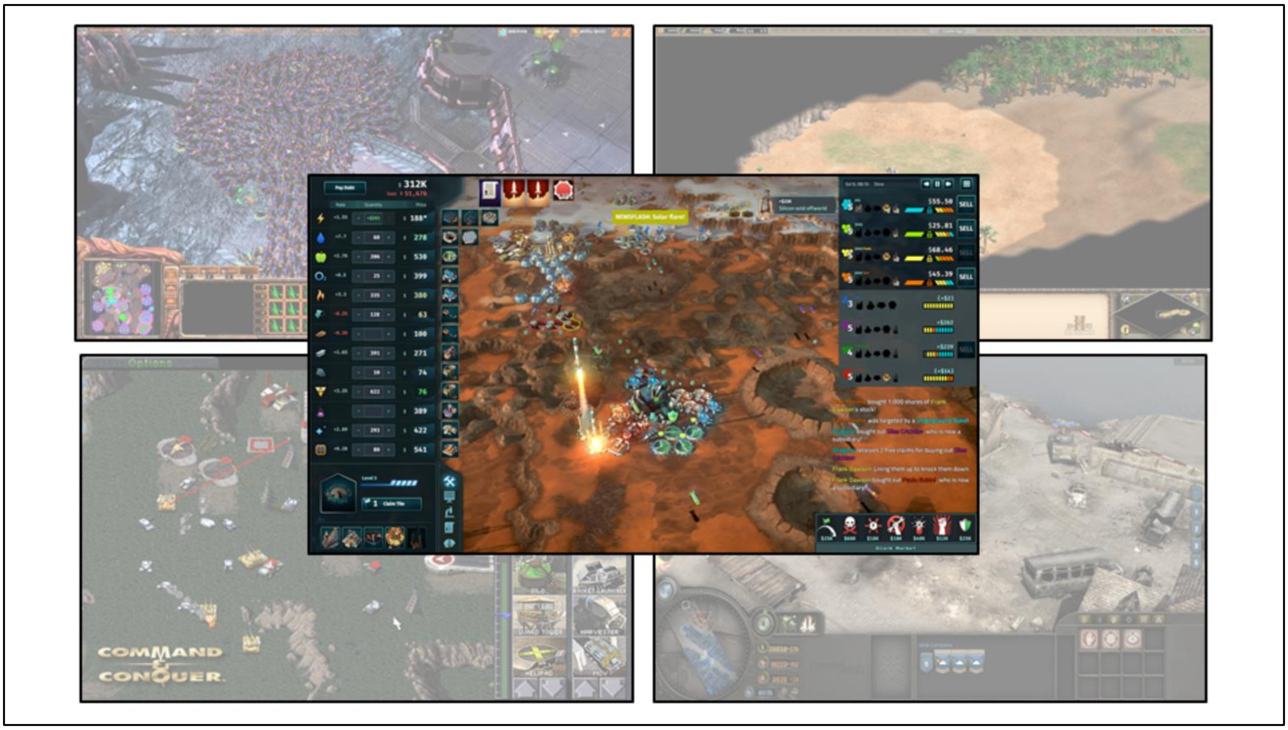


Sometimes, games inherit from themselves. This is a timeline of the development of our economic RTS Offworld Trading Company.

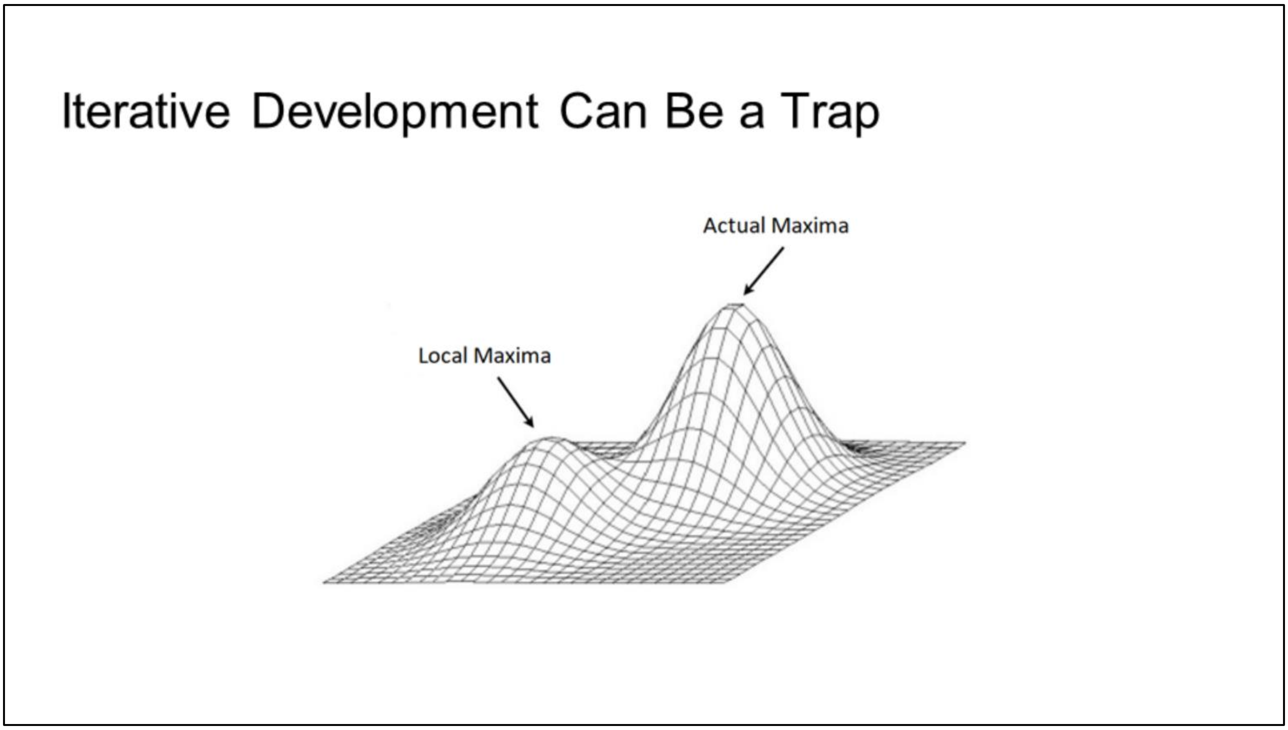
You might make certain development shortcuts or hacks early on just so that you can get your prototype playable, but then these become assumptions are now baked into your design whether you want them there or not. You have to REMEMBER that it was an accidental or arbitrary choice.

The most common thing to inherit, however, is game mechanics, usually from games in the same genre.

For example, although Offworld Trading Company is an RTS, it's notable for being one without units. However, we didn't start there as we inherited from all the other RTSs before us, Starcraft, Age of Empires, and so on. Thus, we had scouts, builders, transports, pirates ships, police ships, and so on.



Over time, we discovered that this inheritance was weighing the game down, forcing the player to spend time wrangling units that would have been better spent playing the market. Slowly, we took these units out one by one, first the transports, then the combat units, then the builders, and finally the scouts. The game looks like a radical break with the past, but it took us a long time to get there.



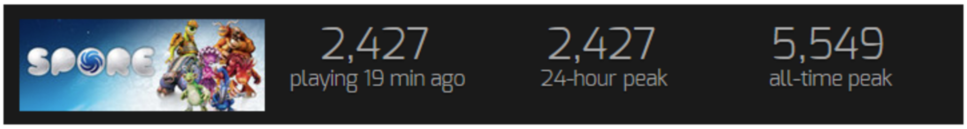
Iterative Development Can Be a Trap

The problem is that iterative design can be a trap - that you can no longer see those parts of your game that are holding you back from a much better design. It’s easier to make small changes that fix glaring issues rather than to re-evaluate your entire design

Sometimes, the problem with a game's inheritance can be at the conceptual level. Consider Spore...

...which was conceived of as a “Power of 10” game that went from cellular-scale all the way up to galactic-scale. That was the hook, the point of making the game.

This part of the game was widely seen as a disappointment, that the five disparate levels felt like five different games duct-taped together. However, something interesting happened with the failure of Spore...

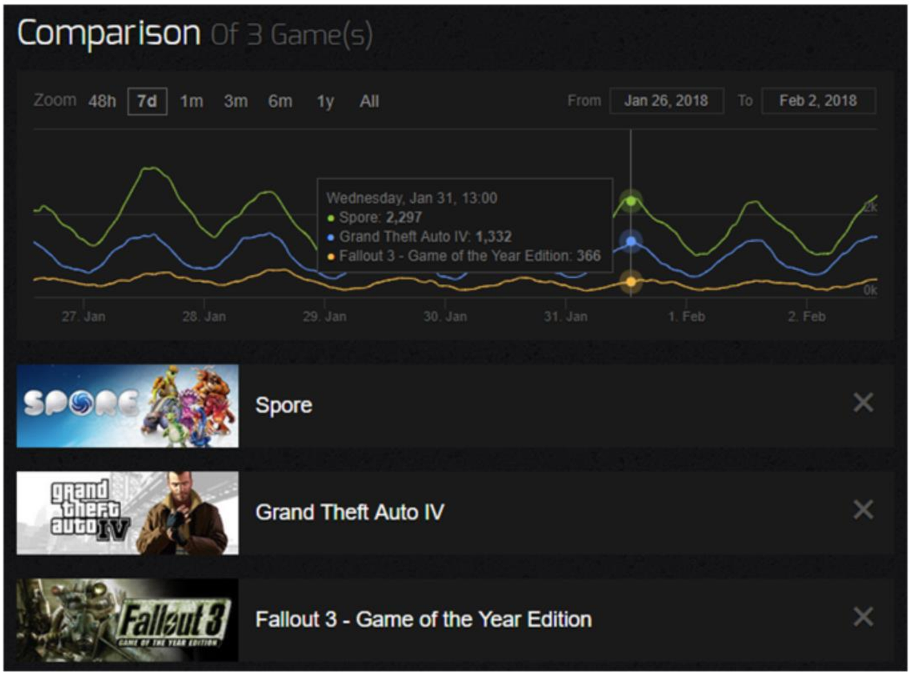


2,427 playing 19 min ago

2,427 24-hour peak

5,549 all-time peak

...which is that it wasn’t actually a failure after all. This is how many people are playing Spore right now - not bad for a 10-year-old game.



Comparison Of 3 Game(s)

From Jan 26, 2018 To Feb 2, 2018

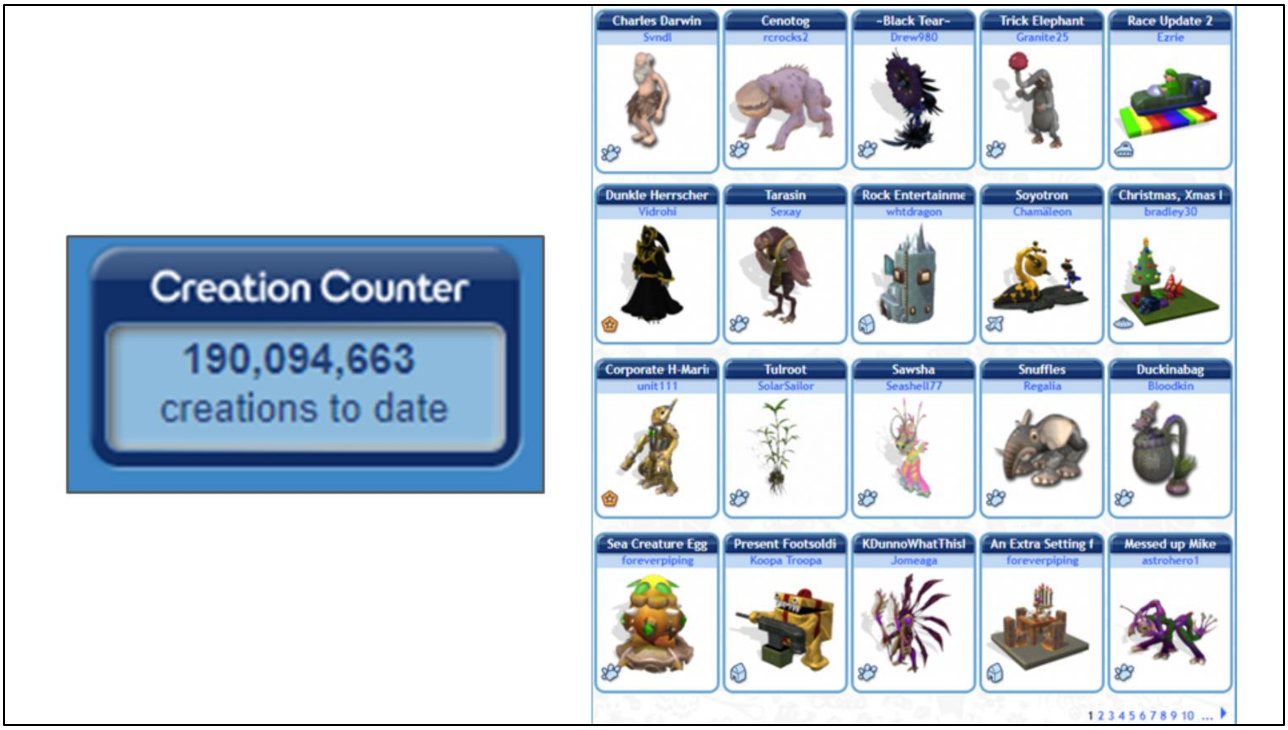
Wednesday, Jan 31, 13:00
- Spore: 2,297
- Grand Theft Auto IV: 1,332
- Fallout 3 - Game of the Year Edition: 366

Spore

Grand Theft Auto IV

Fallout 3 - Game of the Year Edition

Indeed, check out this chart, which compares Spore to the two most successful PC games released the same year - 2008. Spore currently crushes them, and keep in mind that Spore didn’t even launch on Steam.

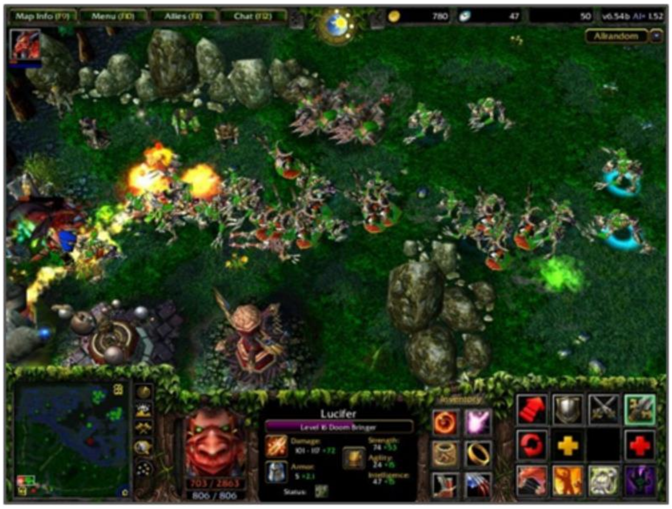

Creation Counter

190,094,663 creations to date

What happened was that the most interesting part of the game did not come from the Powers of Ten concept, but from the editors inside the game - especially the creature creator, which dynamically animated the players' creations.

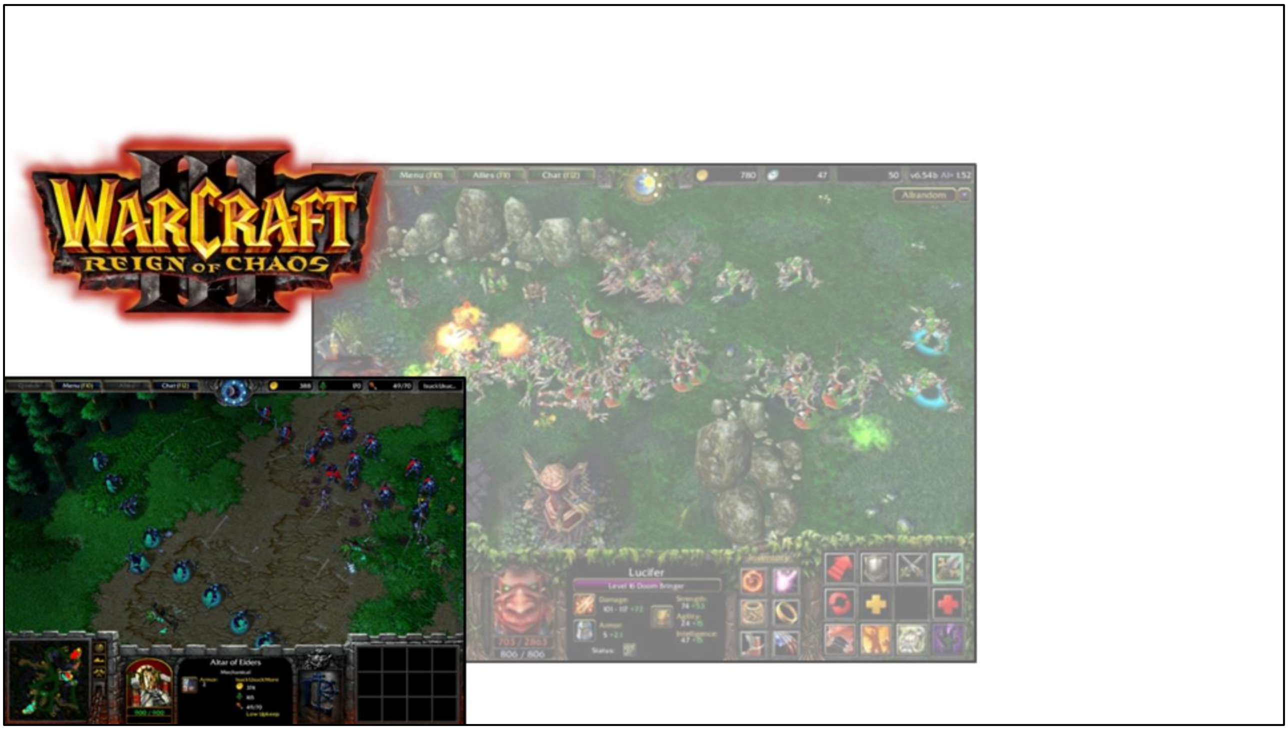
However, these editors were developed midway through the project; Maxis started making a game about one thing and accidentally ended up making a game about something else. One of the big unanswered question about Spore is what could we have done if we had been able to ditch the Powers of Ten concept and refocus the game on the editors?

Creep Denial



Here’s a classic case study in inheriting bad design. Creep denial is a mechanic in the original DOTA where you kill you OWN units to keep your opponents from getting gold and experience from them.

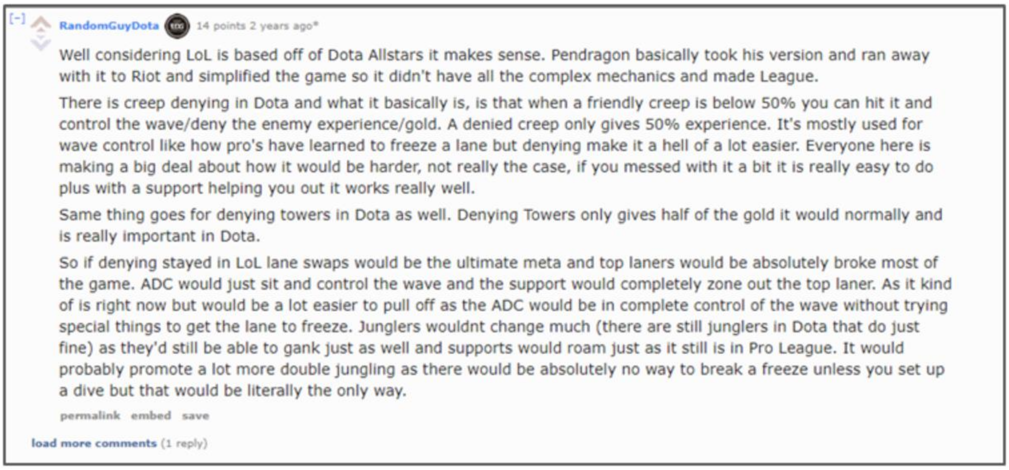
Indeed, creep denial is one of the focal point of high-level play in DOTA, to maximize your experience point gain relative to your opponents to outlevel them. However, it’s an open question whether this is actually GOOD design.



At the very least, creep denial is ACCIDENTAL design because DOTA inherited it from Warcraft 3 - this was simply how that game handled killing your own units. Indeed the fact that Warcraft 3 even ALLOWED killing your own units was likely an afterthought by the designers.

DOTA inherited this rule because the game was literally built inside of Warcraft 3 as a mod. Thus, MOBAs inherited a ton of design and mechanics from Warcraft 3. The original DOTA designers may have wanted many things to work differently, but they really didn’t have a choice given the limitations and assumptions of the Warcraft 3 editor.

Dota 2 and League of Legends, of course, inherit their design from the original Dota mod, but they made different choices about their inheritance of creep denial. Basically, League dropped it while Dota 2 kept it.



[–] RandomGuyDota 14 points 2 years ago*

Well considering LoL is based off of Dota Allstars it makes sense. Pendragon basically took his version and ran away with it to Riot and simplified the game so it didn't have all the complex mechanics and made League.

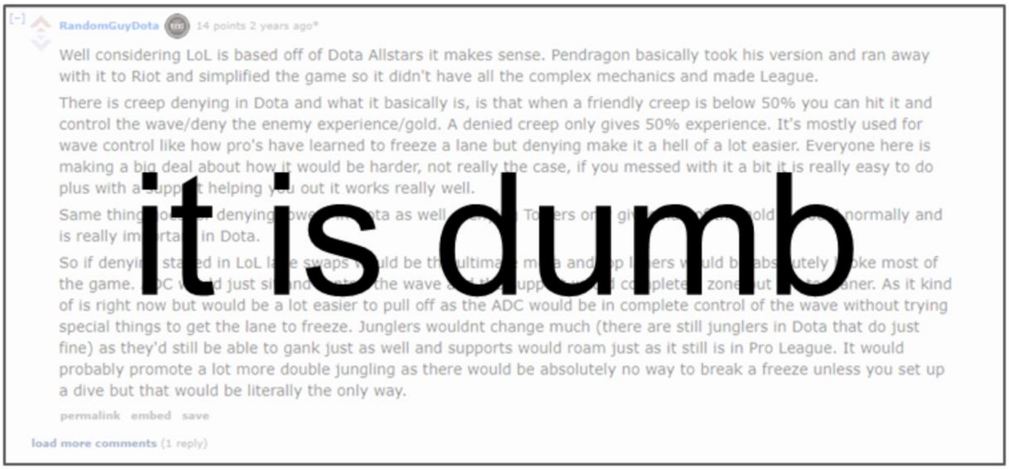
There is creep denying in Dota and what it basically is, is that when a friendly creep is below 50% you can hit it and control the wave/deny the enemy experience/gold. A denied creep only gives 50% experience. It's mostly used for wave control like how pro's have learned to freeze a lane but denying make it a hell of a lot easier. Everyone here is making a big deal about how it would be harder, not really the case, if you messed with it a bit it is really easy to do plus with a support helping you out it works really well.

Same thing goes for denying towers in Dota as well. Denying Towers only gives half of the gold it would normally and is really important in Dota.

So if denying stayed in LoL lane swaps would be the ultimate meta and top laners would be absolutely broke most of the game. ADC would just sit and control the wave and the support would completely zone out the top laner. As it kind of is right now but would be a lot easier to pull off as the ADC would be in complete control of the wave without trying special things to get the lane to freeze. Junglers wouldnt change much (there are still junglers in Dota that do just fine) as they'd still be able to gank just as well and supports would roam just as it still is in Pro League. It would probably promote a lot more double jungling as there would be absolutely no way to break a freeze unless you set up a dive but that would be literally the only way.

This is from a Reddit thread on why creep denial is not in League. Don't worry about reading this, I just want to point out how "RandomGuyDota" is trying to explain why creep denial is bad for the design using the game mechanics themselves. This is pretty typical reasoning for something that has become part of a game's design inheritance - the burden of proof is always on why it should be removed from the game, not on how it got added in the first place.

However, I have a simpler explanation for why creep denial is bad design...



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Same thing [illegible] denying towers in Dota as well [illegible] Towers only give [illegible] gold [illegible] normally and is really important in Dota.

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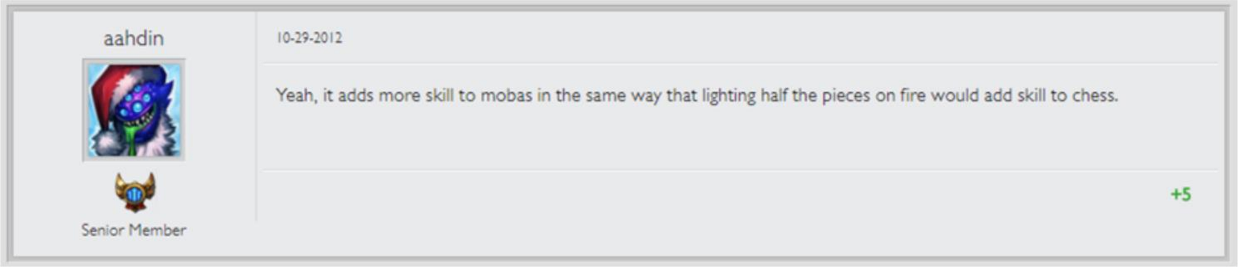
it is dumb

I mean, come on, you want your players to be spending their time killing their own units? Is that really a core part of what makes MOBAs work? The game would fall apart if you couldn’t kill your own guys?



aahdin

Senior Member

10-29-2012

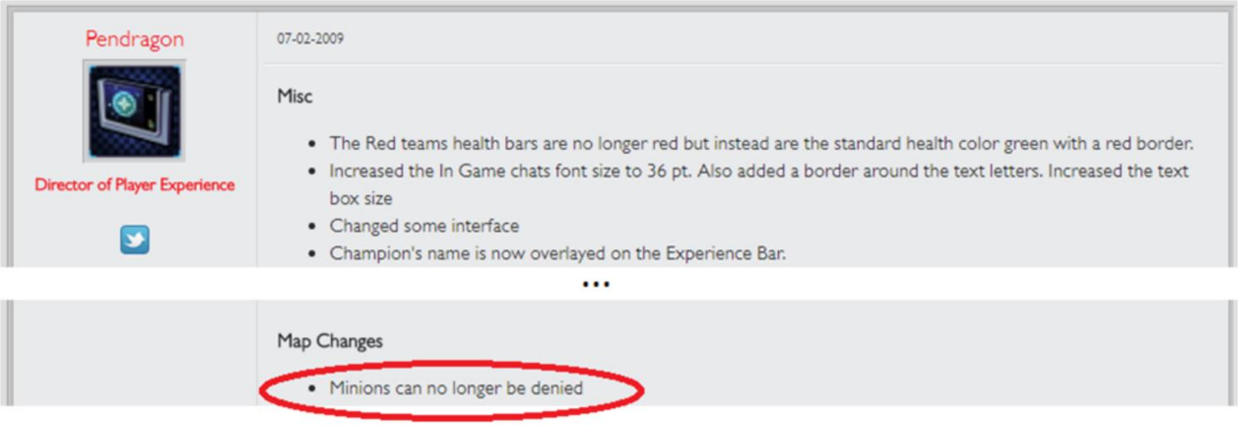
Yeah, it adds more skill to mobas in the same way that lighting half the pieces on fire would add skill to chess.

+5

aahdin perhaps sums it up better than I ever could. <drink>

At some point, you have to step back as a designer and re-evaluate your inheritance. Does the core gameplay survive without the feature? Is the feature unintuitive, making the game harder to understand or to pick up? Is there a better way for the players to be spending their time than on this feature?

In the case of creep denial, the answer to all those questions suggests that the game would be better off without it. There is only one magical core feature to MOBAs, the one feature which cannot be dropped - and that is taking the scope and complexity of an RTS but focusing the player’s control onto just one unit, which makes the game accessible to a larger audience by an order of magnitude. Everything else, EVERYTHING ELSE, is just accidental inheritance resulting from the genre’s origin as a Warcraft 3 mod.



Pendragon

Director of Player Experience

07-02-2009

Misc

- The Red teams health bars are no longer red but instead are the standard health color green with a red border.
- Increased the In Game chats font size to 36 pt. Also added a border around the text letters. Increased the text box size
- Changed some interface
- Champion's name is now overlayed on the Experience Bar.

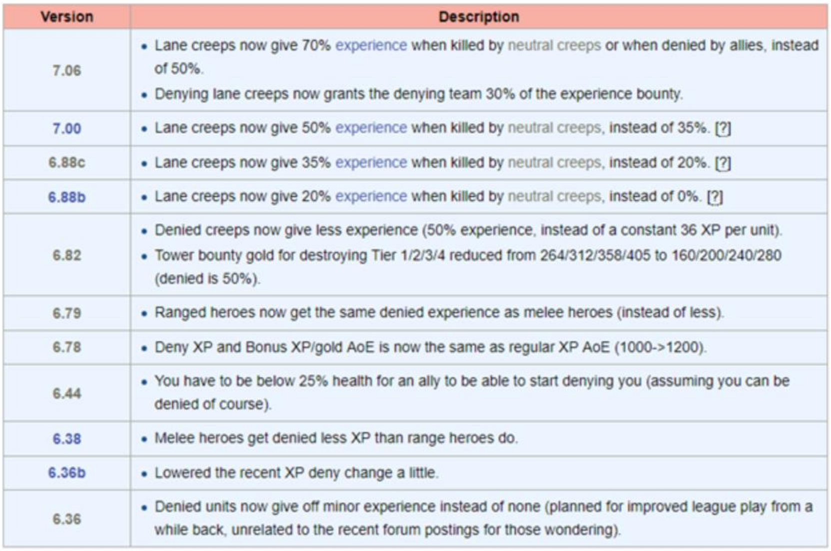
…

Map Changes

- Minions can no longer be denied

In fact, although League doesn't have creep denial now… they actually started with it. These are League of Legend's very first patch notes, published in July 2009. They inherited creep denial but killed it very early.

So, although they got it from the original mod, they were willing to critically examine their game's past.

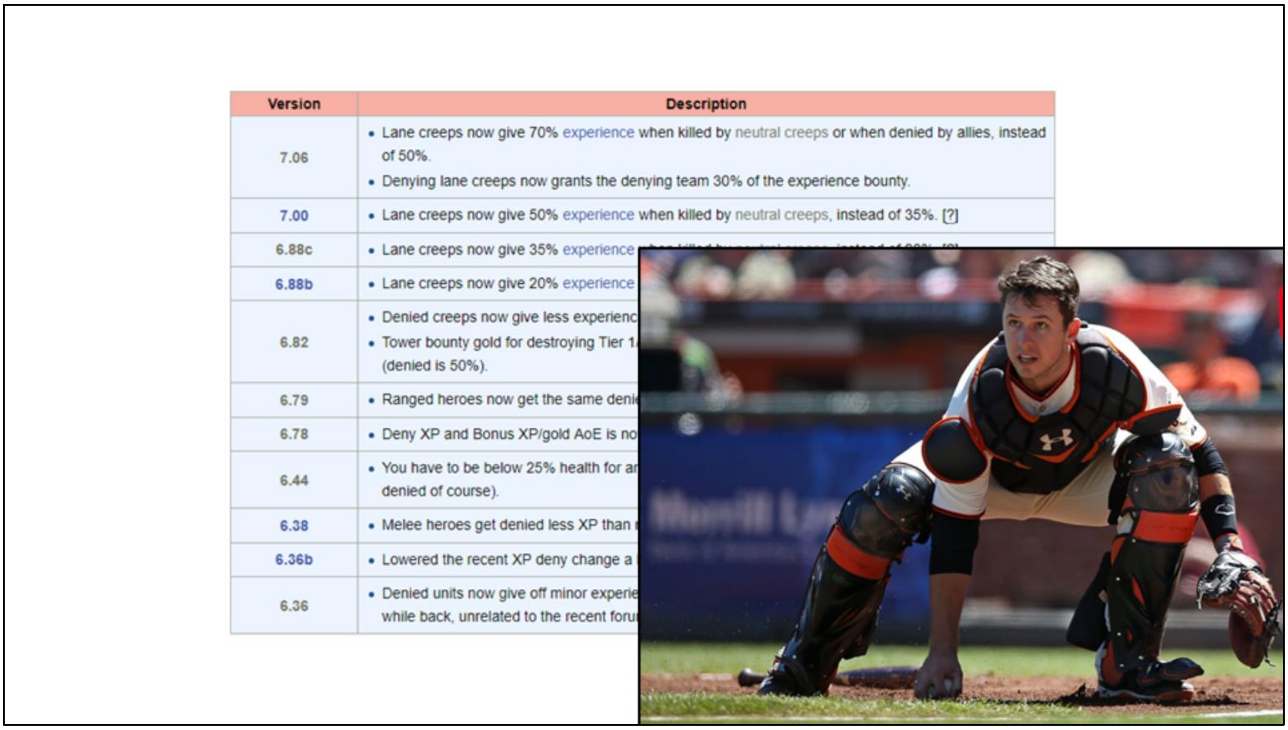


Version	Description
7.06	• Lane creeps now give 70% experience when killed by neutral creeps or when denied by allies, instead of 50%. • Denying lane creeps now grants the denying team 30% of the experience bounty.
7.00	• Lane creeps now give 50% experience when killed by neutral creeps, instead of 35%. [?]
6.88c	• Lane creeps now give 35% experience when killed by neutral creeps, instead of 20%. [?]
6.88b	• Lane creeps now give 20% experience when killed by neutral creeps, instead of 0%. [?]
6.82	• Denied creeps now give less experience (50% experience, instead of a constant 36 XP per unit). • Tower bounty gold for destroying Tier 1/2/3/4 reduced from 264/312/358/405 to 160/200/240/280 (denied is 50%).
6.79	• Ranged heroes now get the same denied experience as melee heroes (instead of less).
6.78	• Deny XP and Bonus XP/gold AoE is now the same as regular XP AoE (1000->1200).
6.44	• You have to be below 25% health for an ally to be able to start denying you (assuming you can be denied of course).
6.38	• Melee heroes get denied less XP than range heroes do.
6.36b	• Lowered the recent XP deny change a little.
6.36	• Denied units now give off minor experience instead of none (planned for improved league play from a while back, unrelated to the recent forum postings for those wondering).

In contrast, here is the history of creep denial from Dota1 to Dota2. You can see an awareness that creep denial might not be the best thing for the game.

Look at 6.82 - “Denied creeps now give less experience” - a clear sign that they want to weaken this feature by rewarding players less for focusing on creep denial. However, instead of ripping it out, they are making small changes around the edges.

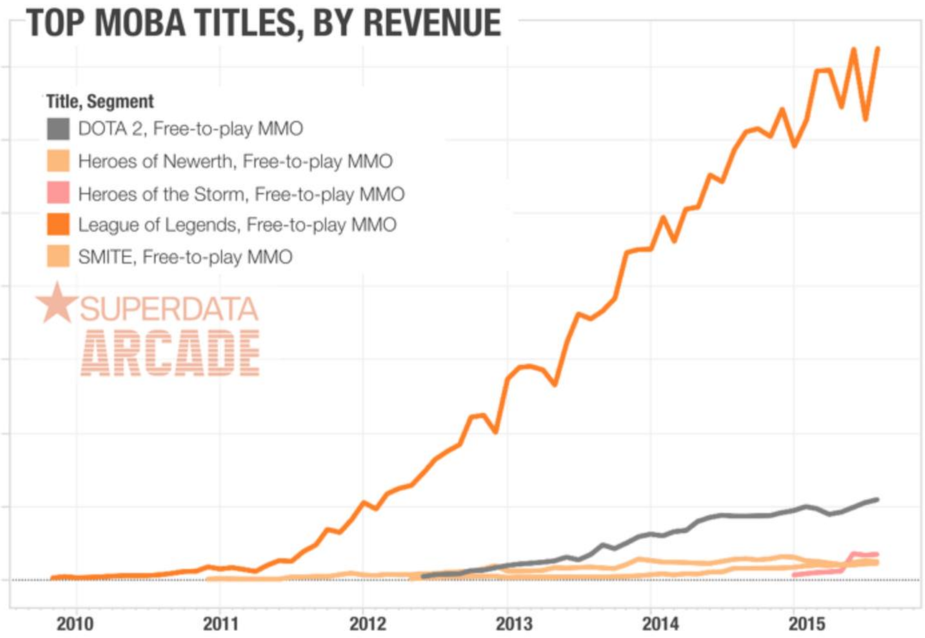
(They switched to Dota2 between 6.44 and 6.78.)



Version	Description
7.06	• Lane creeps now give 70% experience when killed by neutral creeps or when denied by allies, instead of 50%. • Denying lane creeps now grants the denying team 30% of the experience bounty.
7.00	• Lane creeps now give 50% experience when killed by neutral creeps, instead of 35%. [?]
6.88c	• Lane creeps now give 35% experience
6.88b	• Lane creeps now give 20% experience
6.82	• Denied creeps now give less experienc • Tower bounty gold for destroying Tier 1 (denied is 50%).
6.79	• Ranged heroes now get the same deni
6.78	• Deny XP and Bonus XP/gold AoE is no
6.44	• You have to be below 25% health for ar denied of course).
6.38	• Melee heroes get denied less XP than
6.36b	• Lowered the recent XP deny change a
6.36	• Denied units now give off minor experie while back, unrelated to the recent foru

Basically, they are doing what baseball did when they patched the dropped third-strike rule by making it not apply in certain circumstances instead of just getting rid of the dumb rule itself.

Remember my questions on the value of creep denial? Does the core gameplay survive without the feature? Is the feature unintuitive, making the game harder to understand or to pick up? Is there a better way for the players to be spending their time than on this feature? Running this exercise with the dropped third-strike rule gets us to the same place - that it’s bad, accidental design that is ultimately hurting baseball.

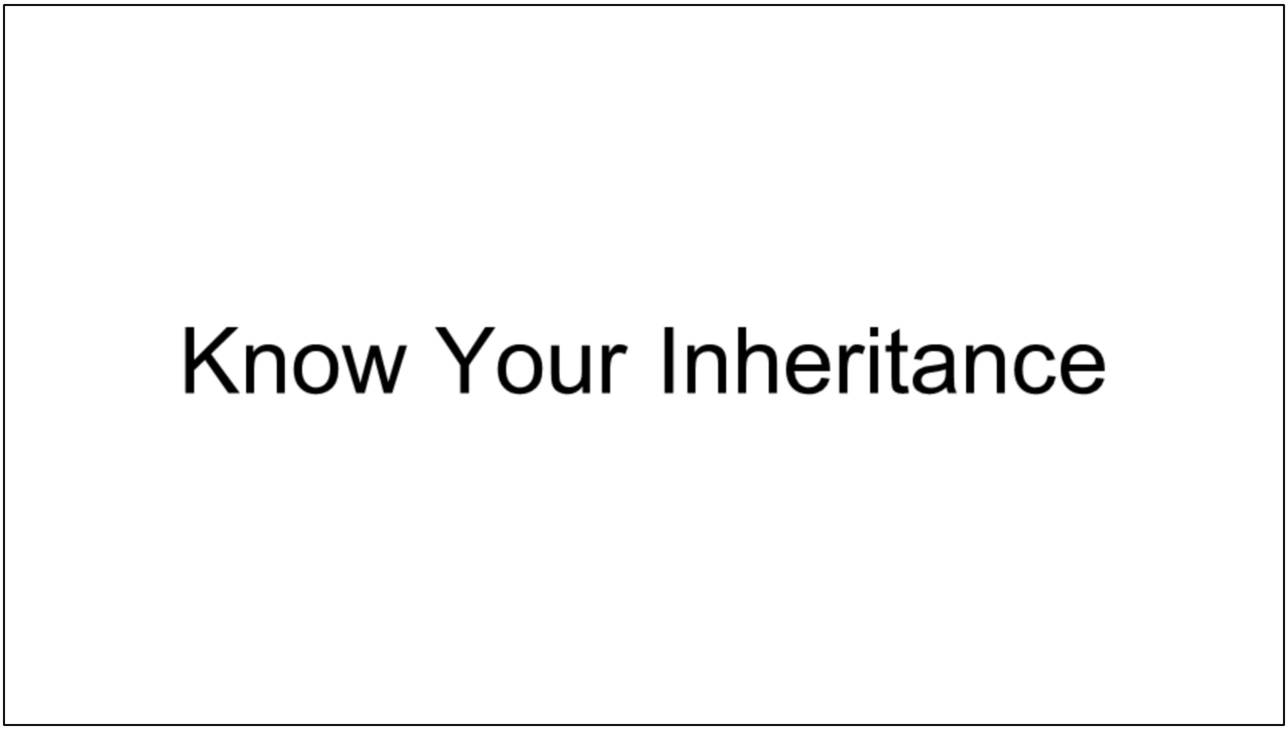


Now, here’s a comparison of the two games, and some other MOBAs. There are many reasons why League outpaces Dota2 by an order of magnitude - an almost three year head start is a pretty big one - but I also believe that Riot’s philosophy of re-examining their inheritance from the original Dota mod, which extends well beyond just removing creep denial, is a very important piece.

I Have Thoughts About Last Hitting

DOTA 2
LEAGUE OF LEGENDS
HEROES OF THE STORM

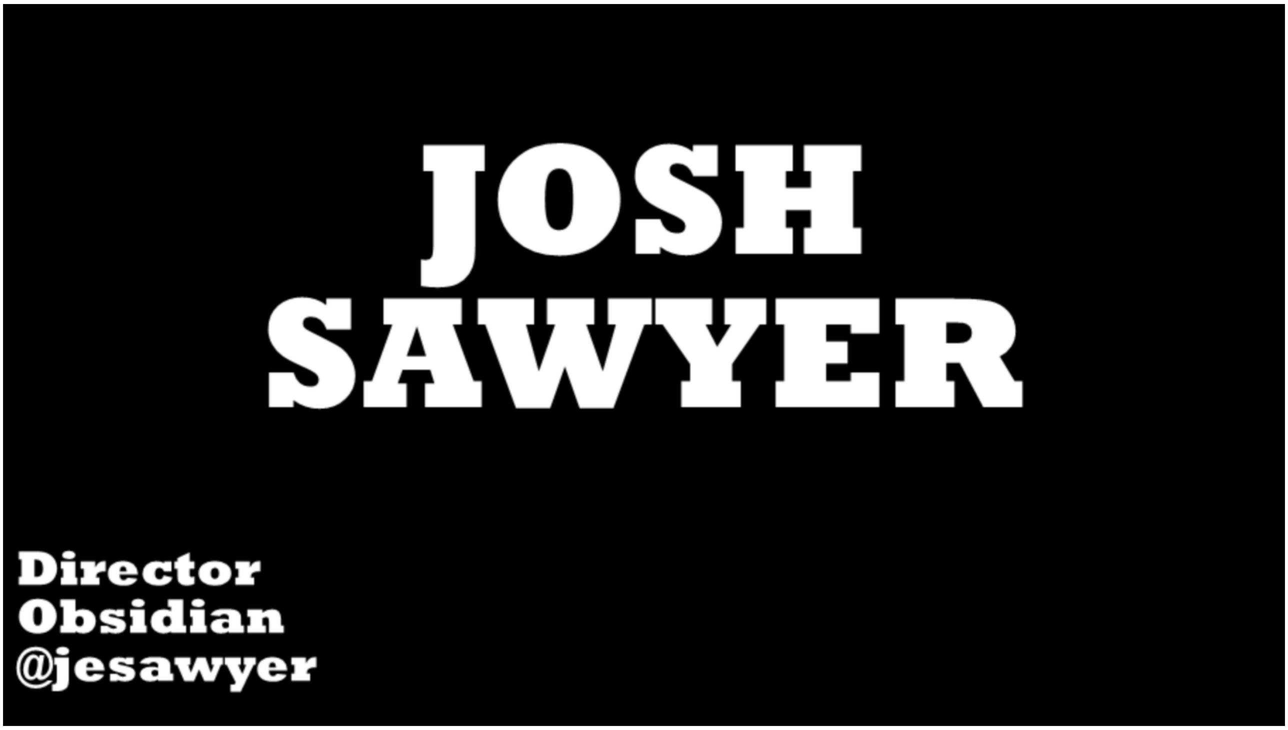
Now, I also have thoughts about last hitting, but fortunately, I don’t have time for that. I say fortunately because, Heroes of the Storm, which is the only one of these three to drop last hitting, is less successful than Dota2, let alone League. Thus, I can’t really make an argument that the market has proven that last hitting is bad design. Further, I don’t think it would be reasonable to expect Riot to experiment with dropping last hitting at this point; it’s just too late; League is one of the world’s most popular games. Indeed, they are lucky that they dropped creep denial so early in their development before doing so might have split community opinion.



Know Your Inheritance

We don’t always have the luxury of looking at the market to prove out our decisions, which is why re-examining a game’s inheritance is such a difficult and important issue.

Choosing to erase your inheritance takes real bravery. Sometimes, you have to trust your own rational design process if you see a problem. Sometimes, you have to go with your gut. Ultimately, you must be willing to see your history, know how it led you to where you are today, and then have the courage to drop the past.



JOSH SAWYER

Director
Obsidian
@jesawyer

Josh Sawyer has been making RPGs for quite some time, going back to working at Black Isle Studios on Icewind Dale.

After a stint working near me on a Gauntlet game that we don’t need to speak about,

Josh moved to Obsidian, working on titles like Fallout New Vegas and the Pillars or Eternity series, with Pillars of Eternity II Deadfire shipping soon.

Always Give 50%

or

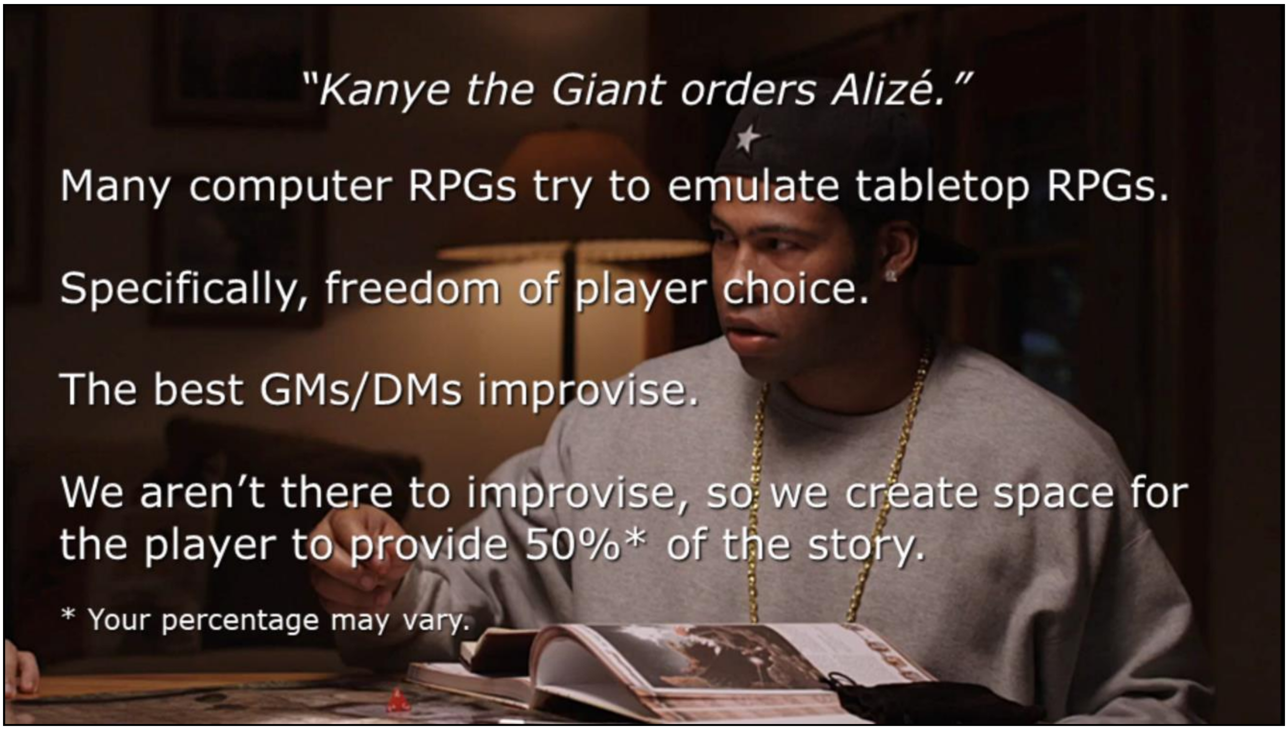
How I Learned
When To Stop Telling a Story
and Let the Player Tell Theirs

Always Give 50%

Many CRPGs try to recreate the tabletop experience.

The best DMs and GMs adapt to what their players give them.

Giving 50% is about establishing a gameplay environment that allows the player to contribute half of the story, half of the experience.



"Kanye the Giant orders Alizé."

Many computer RPGs try to emulate tabletop RPGs.

Specifically, freedom of player choice.

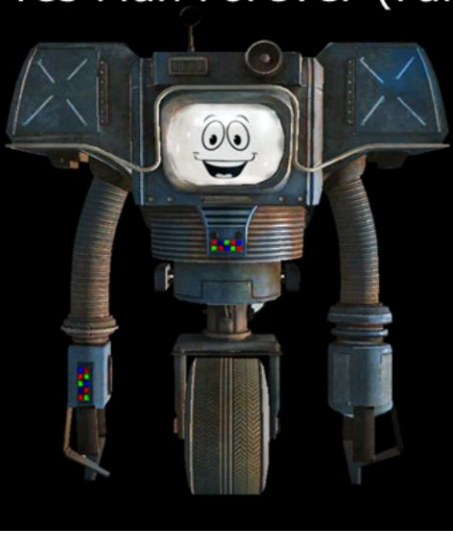
The best GMs/DMs improvise.

We aren't there to improvise, so we create space for the player to provide 50%* of the story.

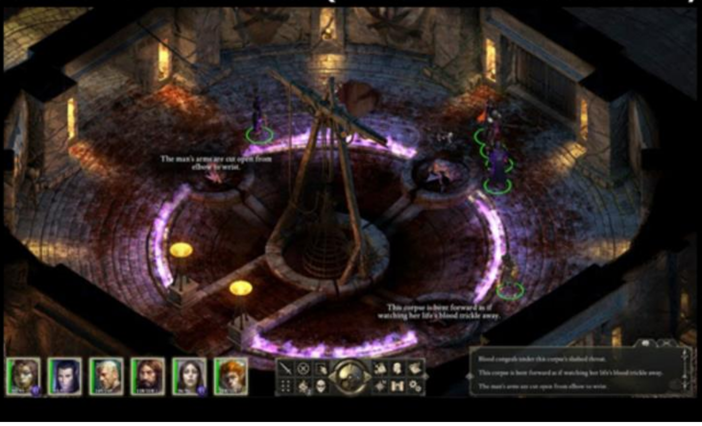
* Your percentage may vary.

End Critical Characters - Kill Everyone

Yes Man Forever (Fallout: New Vegas)



The Blood Pool (Pillars of Eternity)



The man's arms are cut open from elbow to wrist.

This corpse is bent forward as if watching her life's blood trickle away.

Blood congeals under this corpse's slashed throat.

This corpse is bent forward as if watching her life's blood trickle away.

The man's arms are cut open from elbow to wrist.

Account for the Weird and the Funny
(especially both)

The Corpse Checker (Icewind Dale II)

The Psycho Squad (Fallout: New Vegas)

The Know-It-All Nihilist (Pillars of Eternity)

Pudu, captain of the guard

Why Ask Why?

(Because it makes players ask themselves why.)

The Animancy Trial (Pillars of Eternity)

Arcade's Challenge (Fallout: New Vegas)

The Sacrifices With this Madness

It’s a Lot of Work

RIP, My Dear and Precious Hero’s Journey

Scale and Scope of Impact

Scope of Player Voice, Motive, Identity

You Can’t Account for Everything (Consistency)

STONE LIBRANDE

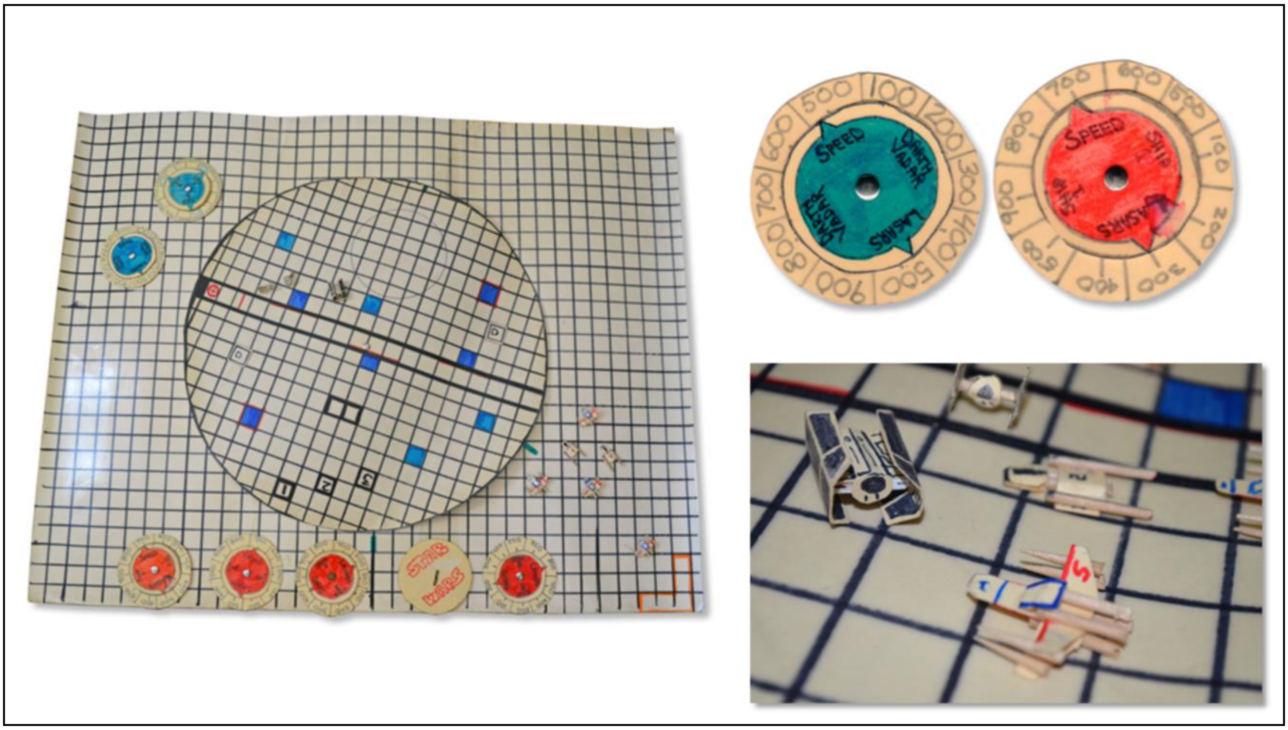
Lead Designer
Riot Games
@StoneLibrande

Stone Librande’s professional career goes back to work on Spore and Sim City while at Maxis

He also teaches classes with Carnegie Mellon and is now a lead designer at Riot Games

But as we’re about to find out, his background making games – specifically board games– goes back much farther than that.

Stone Librande!

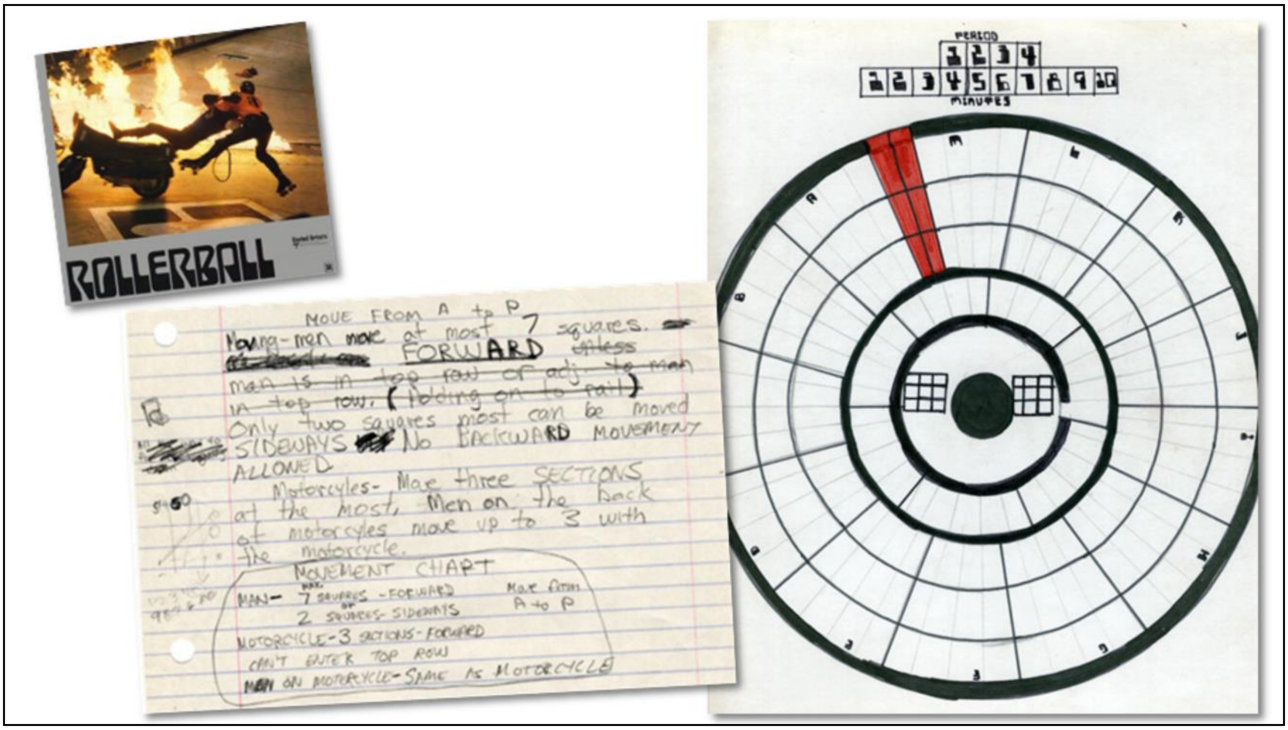


Intro – Star Wars board game

Ever since I was a kid I have been making paper games.

Here’s an “attack the Death Star” game that I made shortly after seeing Star Wars for the first time.

The Rebels control X-Wings and Y-Wings and are trying to destroy the Death Star before it blows up the Rebel base.



MOVE FROM A to P
Moving-men move at most 7 squares. FORWARD ~~unless~~ ~~man is in top row of adj. to man in top row. (holding on to rail)~~ Only two squares most can be moved SIDEWAYS No BACKWARD MOVEMENT ALLOWED

Motorcyles- Move three SECTIONS at the most, Men on the back of motorcyles move up to 3 with the motorcycle.

MOVEMENT CHART
MAN- 7 SQUARES -FORWARD MAX. OF 2 SQUARES- SIDEWAYS
Move from A to P
MOTORCYCLE-3 SECTIONS-FORWARD
CAN'T ENTER TOP ROW
MAN ON MOTORCYCLE-SAME AS MOTORCYCLE

Intro – Rollerball board game

I was too young to see the R-Rated movie Rollerball when it came out, but I was fascinated by its futuristic death sport.

Building paper simulation and interacting with the rules and pieces was my way of thoroughly understanding a system and its relationships.

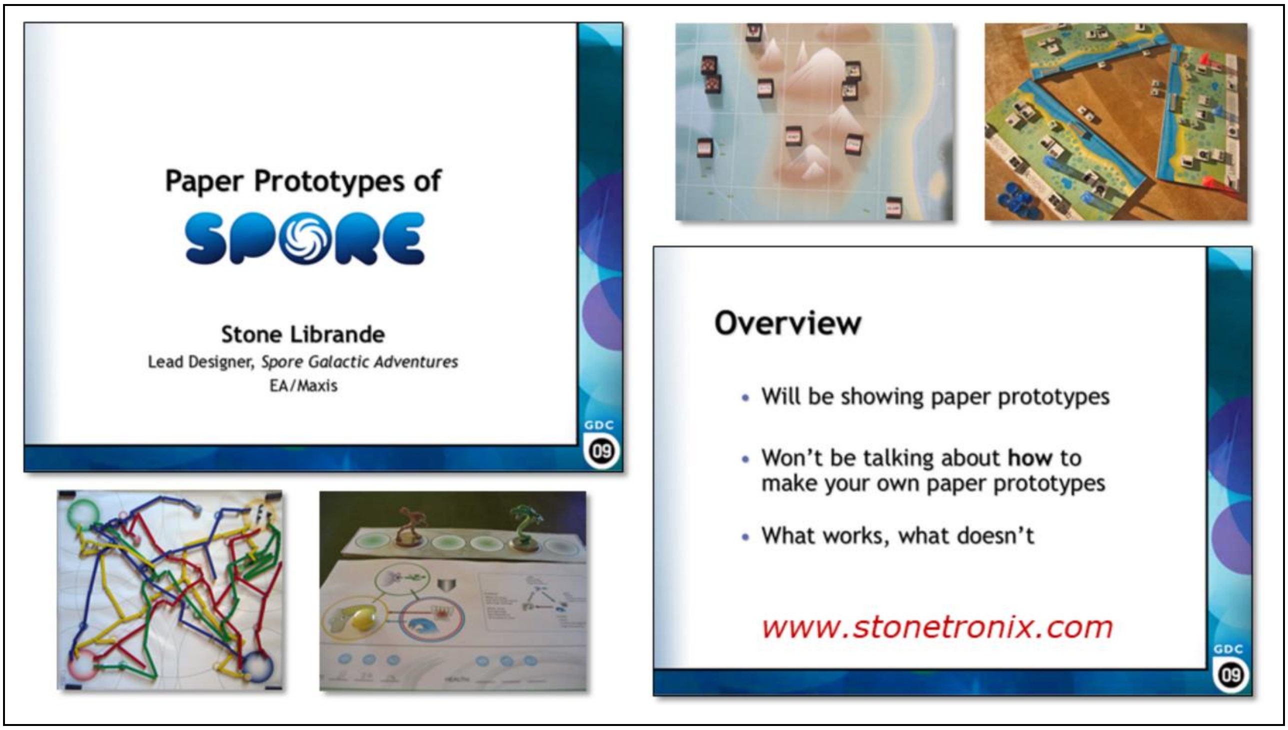
I continue to make paper games for the same reasons to this day. So it shouldn't be a surprise that my game design rule is…

Design Rule:

Play It On Paper

Title – Play it on Paper

…"Play it on Paper".



Paper Prototypes of

SPORE

Stone Librande

Lead Designer, *Spore Galactic Adventures*

EA/Maxis

Overview

- Will be showing paper prototypes
- Won't be talking about **how** to make your own paper prototypes
- What works, what doesn't

www.stonetronix.com

Paper Prototypes of Spore

9 years ago I gave my first GDC talk about the paper prototypes that were created for Spore.

In that talk I didn't have time to talk about how to make your own paper prototypes, so I'd like to address that today.

(The talk is not available on the GDC Vault, but you can download the slides from my website: http://www.stonetronix.com)

What not to do

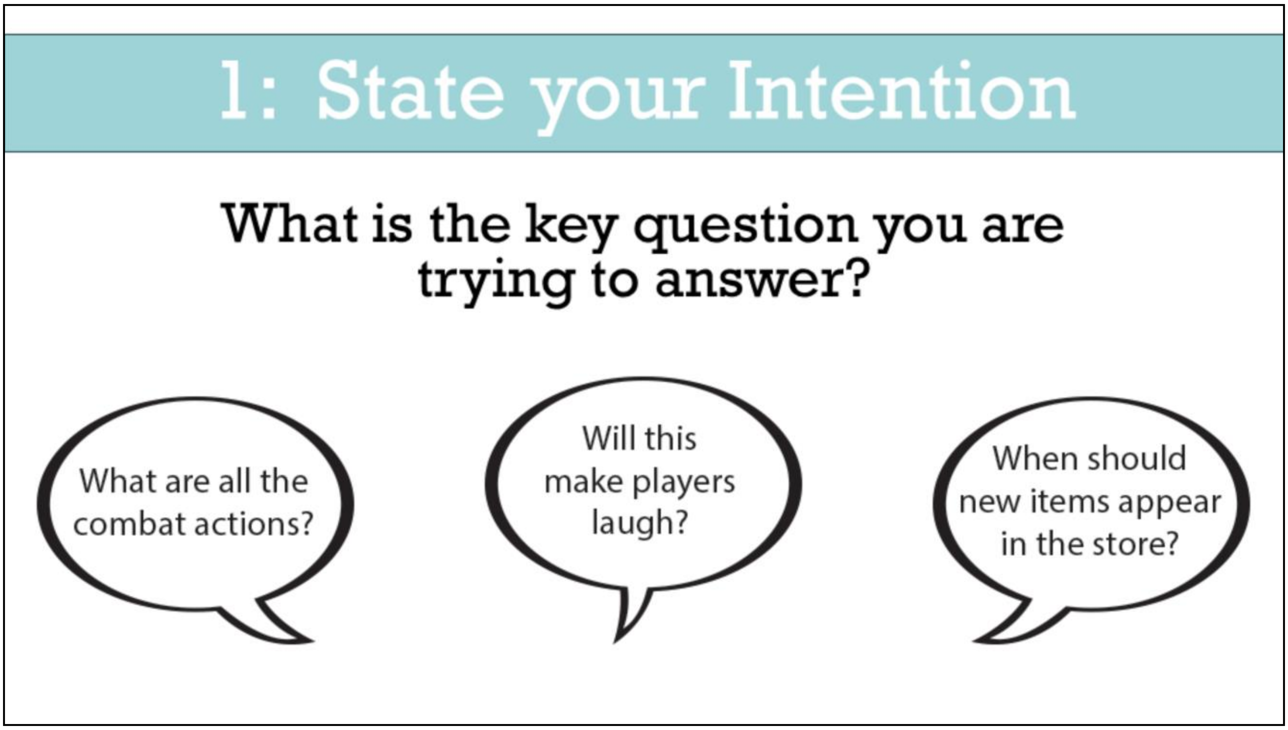
Before I talk about what you should do, I want to give a warning about what not to do:

Don’t try to duplicate the entire game!

Your paper prototype doesn’t need to cover every facet of your game from beginning to end.

Instead, you should narrow your scope and focus on specific, targeted questions.

Here are four things to consider…



1: State your Intention

What is the key question you are trying to answer?

What are all the combat actions?

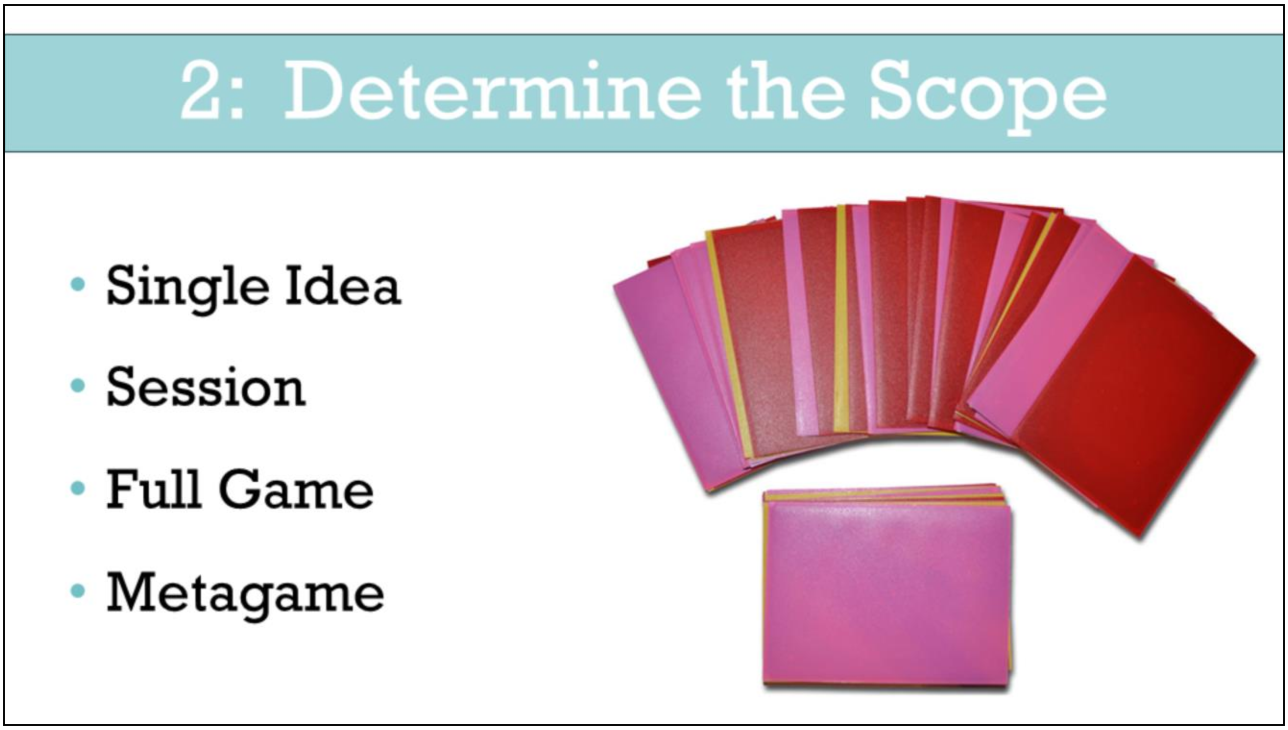
Will this make players laugh?

When should new items appear in the store?

State your Intention

The first thing I recommend doing is to determine the question you are trying to answer.

This may a question that people on the team are asking, but it might be too early in development to answer it in the game.



2: Determine the Scope

- Single Idea
- Session
- Full Game
- Metagame

Scope

How much of the game will you be prototyping?

Single Idea

When you are trying to answer a specific question.

“Which potions will players buy in the store? How much should they cost?”

Session

Observing the type of decisions a player might make during a small portion of the game.

“How will players develop their farm for the season? What resources will be needed?”

Full Game

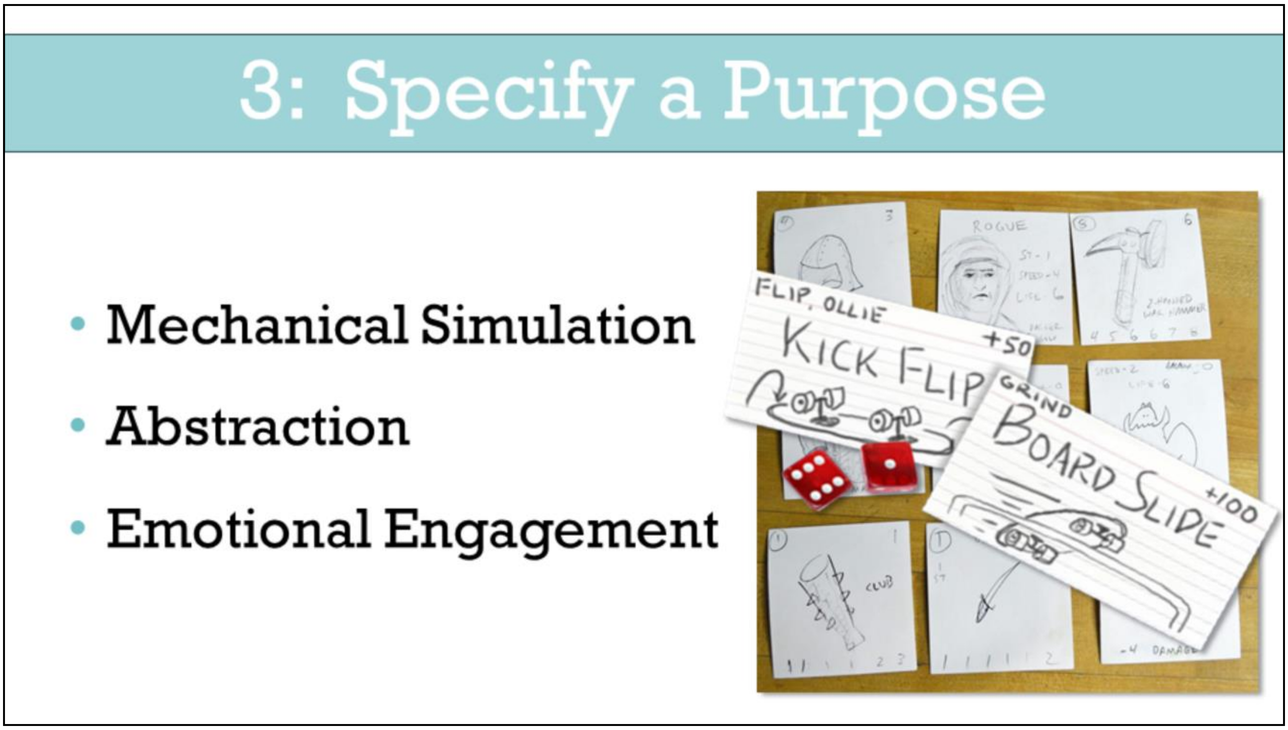
I warned you that it can be a mistake to try to duplicate the entire game. But it can be useful to select one system in your game and prototype how it plays out from the beginning to the end.

“What paths can the player take as new skills become available? How will they use those skills to overcome the challenges they will face?”

Metagame

Determining the reward structures for long term engagement.

“Which bonuses will players choose? How do their options change as new mechanics are unlocked?”



3: Specify a Purpose

- Mechanical Simulation
- Abstraction
- Emotional Engagement

ROGUE
FLIP, OLLIE
KICK FLIP
+50
GRIND
BOARD SLIDE
+100
CLUB

Purpose

What is the purpose of the prototype?

Mechanical Simulation

Cause and effect relationships

Order of operations

Movement speed, distance, range

Warning: Computers are really good at this. Why are you simulating it on paper?

Abstract Concept

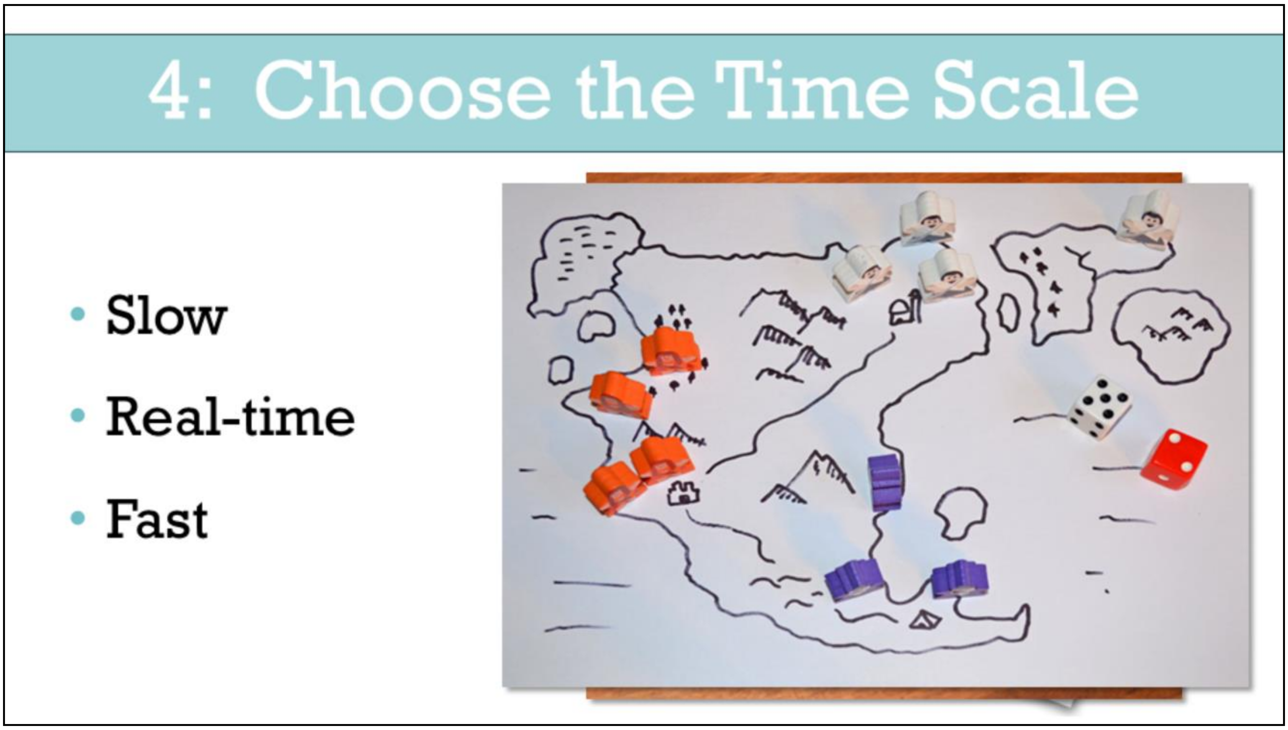
Ideas or components of the game, but not representative of actual gameplay

What type of monsters will players encounter? What makes each one special?

Emotional Engagement

The "feel" of the game (pressure, excitement, surprise, humor, relationship, etc.)

"Rock Band" as a paper prototype



4: Choose the Time Scale

- Slow
- Real-time
- Fast

Time Scale

Slow

The paper prototype takes longer to play than the computer version. (This is common.)

Players have more time to make decisions

Good for analyzing decision making processes

Example: A card game that simulates combat choices in a FPS.

Real-time

The paper prototype takes the same amount of time as the computer version.

Good for analyzing player reaction and interaction possibilities

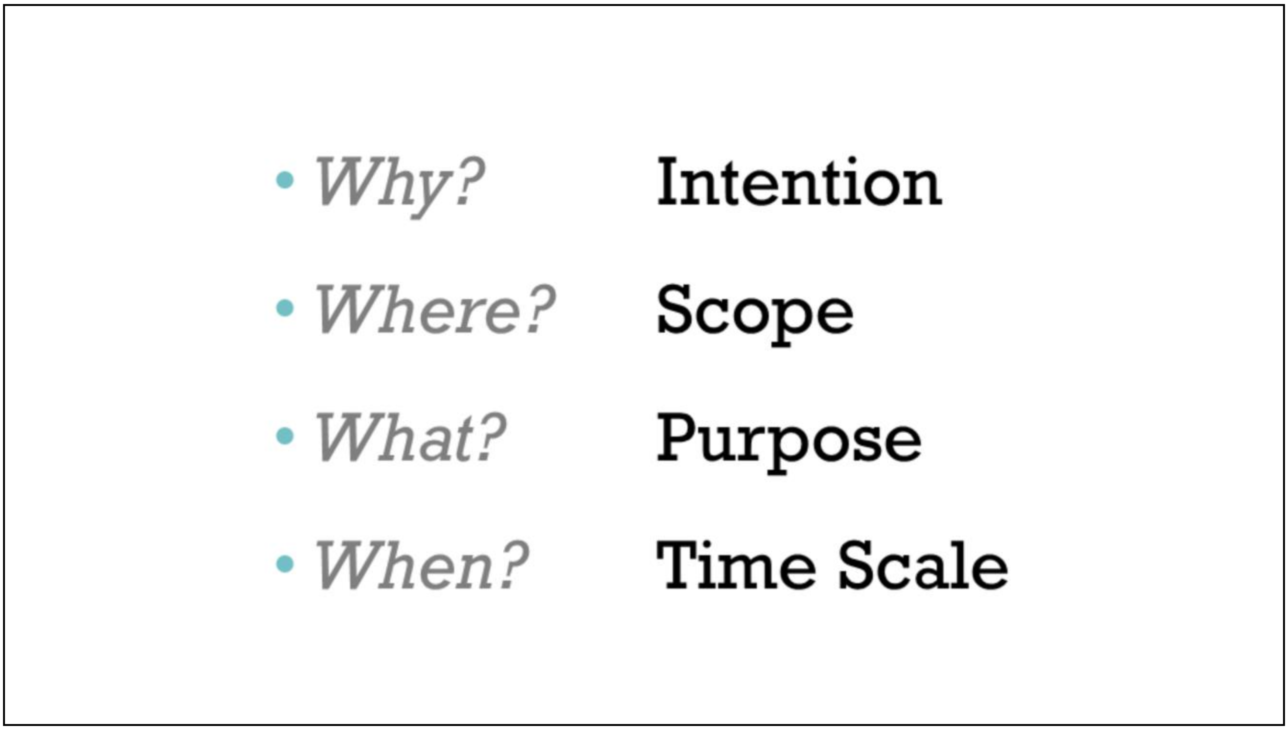
Example: A matching game that uses a timer.

Fast

The paper prototype takes less time to play than the computer version.

Good for quickly simulating processes that may take many sessions.

Example: A boardgame with armies moving across a continent.



• *Why?*	Intention
• *Where?*	Scope
• *What?*	Purpose
• *When?*	Time Scale

Summary

Why are you making the prototype?
Where in the game does your prototype apply?
What is the purpose of the prototype?
When does the action take place?

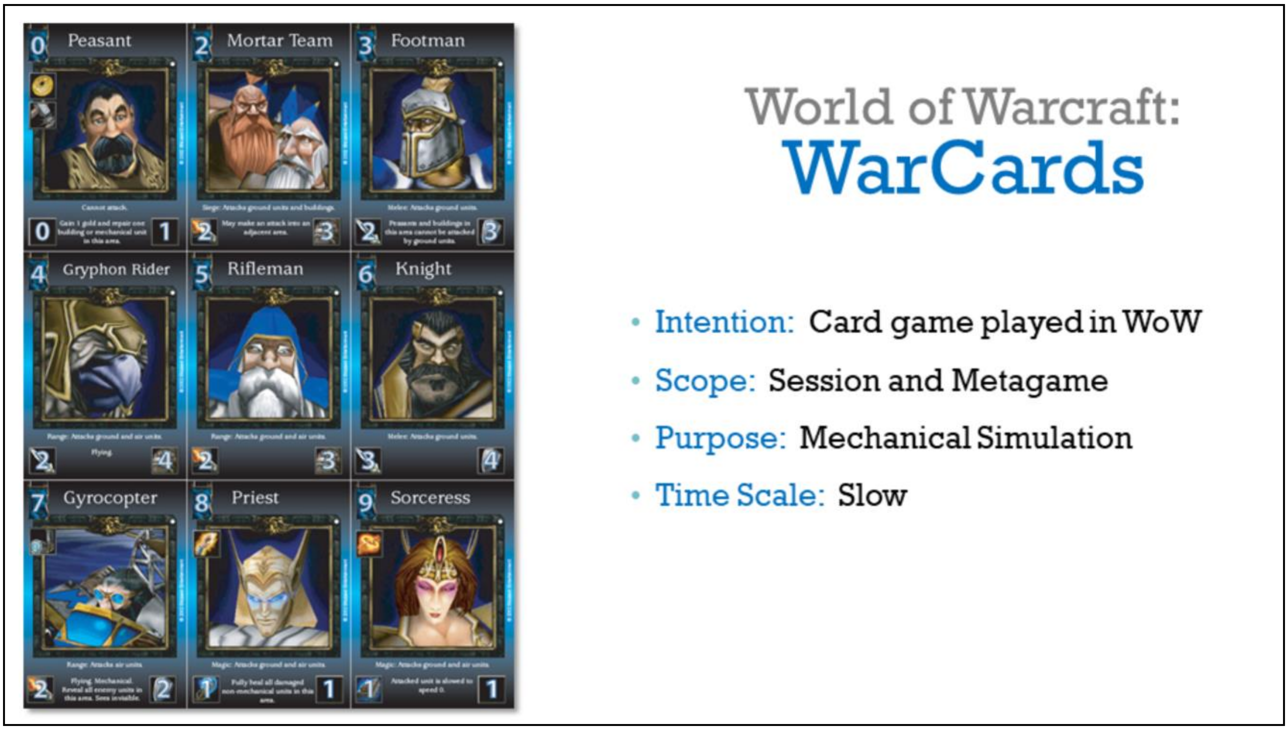
WarCards

This is a card game I made a Blizzard North that was being considered for inclusion into World of Warcraft.

Scope: Session and Metagame

Focus: Mechanical simulation. (Also happened to show us emotional engagement.)

Time Scale: Slow. Players had to keep track of life points, shuffle cards, etc.


0 Peasant
Cannot attack.
0 Gain 1 gold and repair one building or mechanical unit in this area. 1
2 Mortar Team
Siege: Attacks ground units and buildings.
2 May make an attack into an adjacent area. 3
3 Footman
Melee: Attacks ground units.
2 Peasants and buildings in this area cannot be attacked by ground units. 3
4 Gryphon Rider
Range: Attacks ground and air units.
2 Flying. 4
5 Rifleman
Range: Attacks ground and air units.
2 3
6 Knight
Melee: Attacks ground units.
3 4
7 Gyrocopter
Range: Attacks air units.
2 Flying. Mechanical. Reveal all enemy units in this area. Sees invisible. 2
8 Priest
Magic: Attacks ground and air units.
1 Fully heal all damaged non-mechanical units in this area. 1
9 Sorceress
Magic: Attacks ground and air units.
1 Attacked unit is slowed to speed 0. 1

World of Warcraft: WarCards

- Intention: Card game played in WoW
- Scope: Session and Metagame
- Purpose: Mechanical Simulation
- Time Scale: Slow

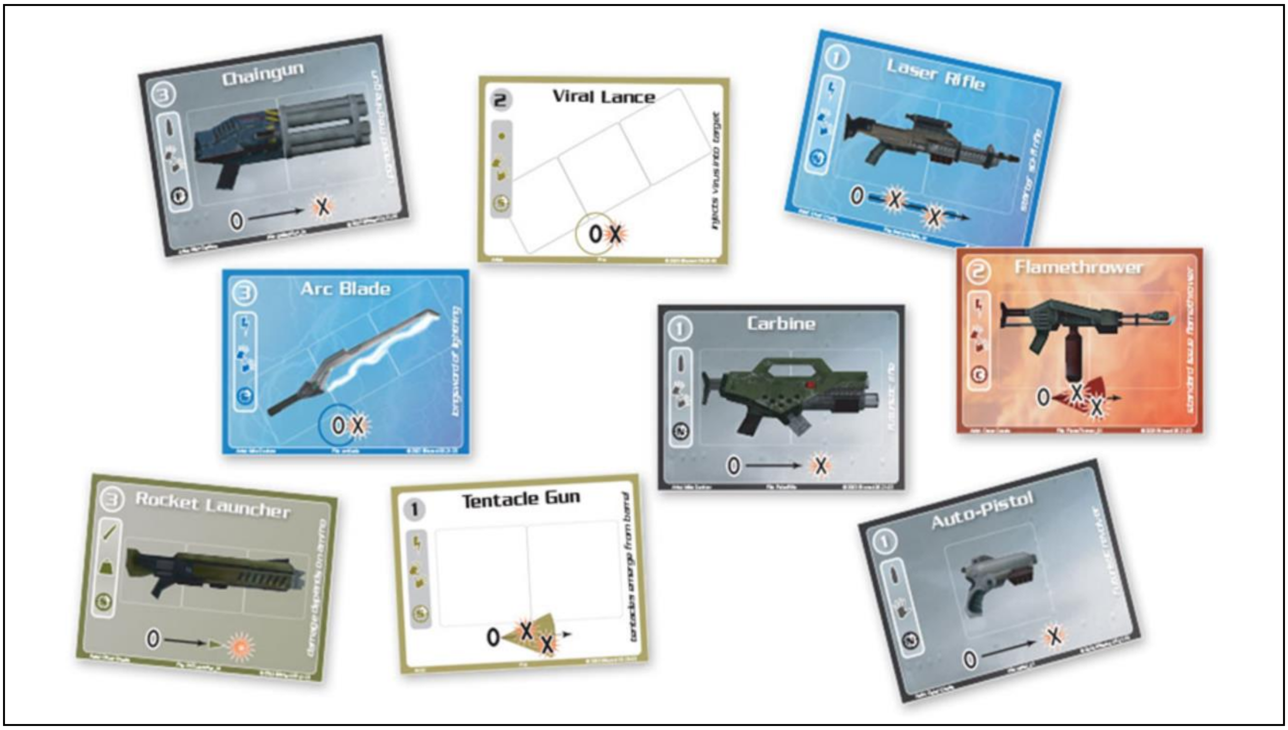
WarCards

This is a card game I made a Blizzard North that was being considered for inclusion into World of Warcraft.

Scope: Session and Metagame

Focus: Mechanical simulation. (Also happened to show us emotional engagement.)

Time Scale: Slow. Players had to keep track of life points, shuffle cards, etc.



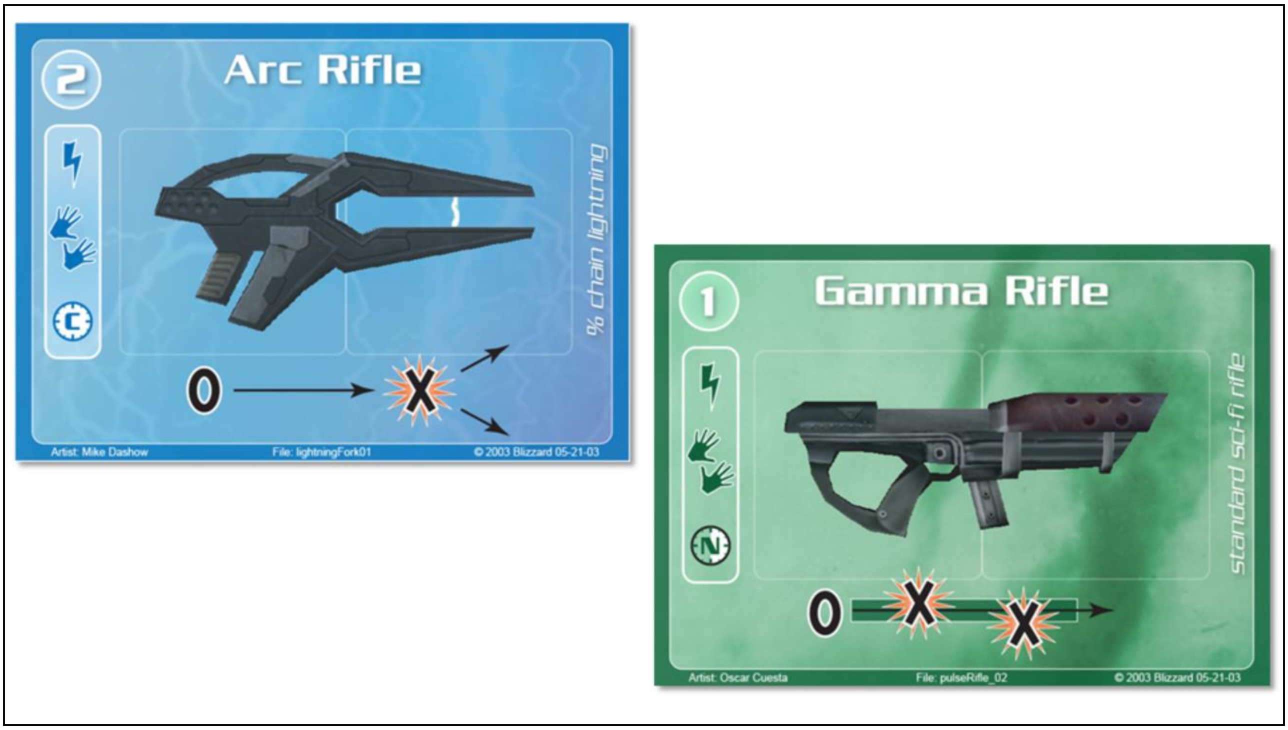
Starblo

These trading cards were created to help get a feel for the weapon sets that would be in Starcraft/Diablo hybrid game.

Scope: Single Concept

Focus: Abstract Concept

Time Scale: None



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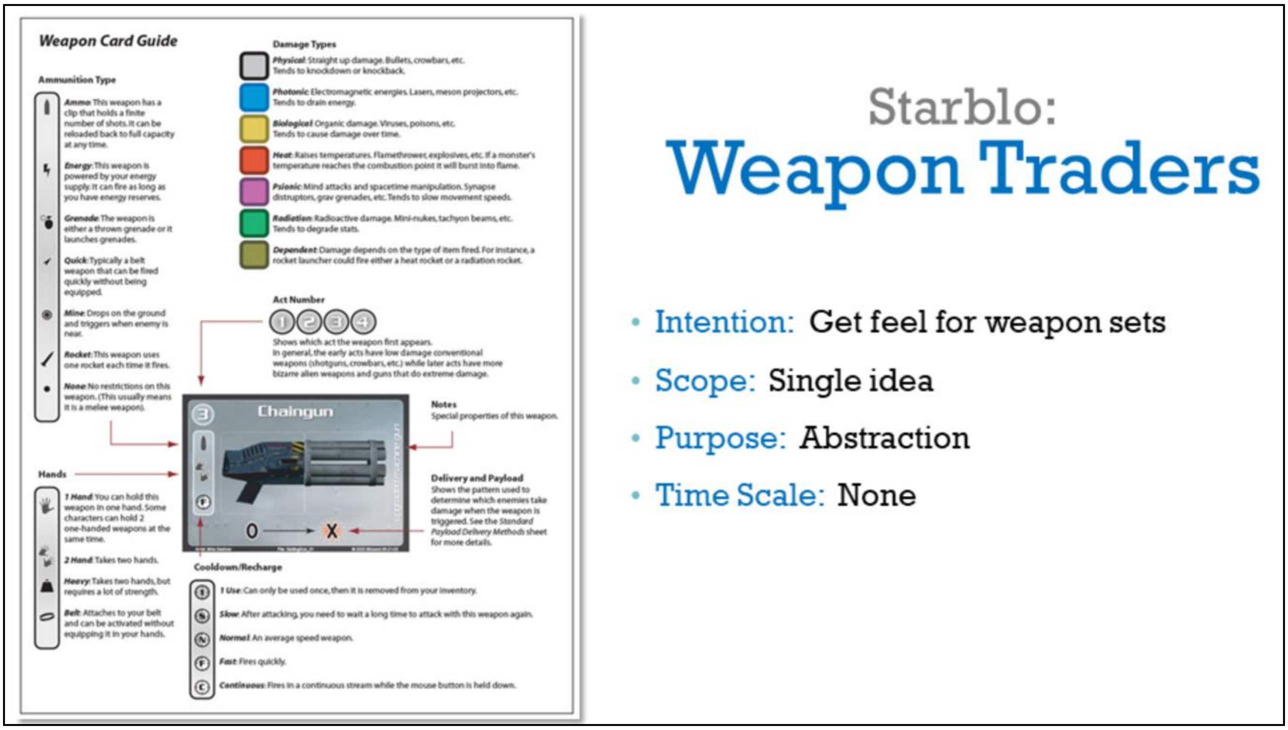


Weapon Card Guide

Ammunition Type

- ***Ammo***: This weapon has a clip that holds a finite number of shots. It can be reloaded back to full capacity at any time.
- ***Energy***: This weapon is powered by your energy supply. It can fire as long as you have energy reserves.
- ***Grenade***: The weapon is either a thrown grenade or it launches grenades.
- ***Quick***: Typically a belt weapon that can be fired quickly without being equipped.
- ***Mine***: Drops on the ground and triggers when enemy is near.
- ***Rocket***: This weapon uses one rocket each time it fires.
- ***None***: No restrictions on this weapon. (This usually means it is a melee weapon).

Hands

- ***1 Hand***: You can hold this weapon in one hand. Some characters can hold 2 one-handed weapons at the same time.
- ***2 Hand***: Takes two hands.
- ***Heavy***: Takes two hands, but requires a lot of strength.
- ***Belt***: Attaches to your belt and can be activated without equipping it in your hands.

Damage Types

- ⬜ ***Physical***: Straight up damage. Bullets, crowbars, etc. Tends to knockdown or knockback.
- 🟦 ***Photonic***: Electromagnetic energies. Lasers, meson projectors, etc. Tends to drain energy.
- 🟨 ***Biological***: Organic damage. Viruses, poisons, etc. Tends to cause damage over time.
- 🟥 ***Heat***: Raises temperatures. Flamethrower, explosives, etc. If a monster's temperature reaches the combustion point it will burst into flame.
- 🟪 ***Psionic***: Mind attacks and spacetime manipulation. Synapse distruptors, grav grenades, etc. Tends to slow movement speeds.
- 🟩 ***Radiation***: Radioactive damage. Mini-nukes, tachyon beams, etc. Tends to degrade stats.
- 🟫 ***Dependent***: Damage depends on the type of item fired. For instance, a rocket launcher could fire either a heat rocket or a radiation rocket.

Act Number

① ② ③ ④

Shows which act the weapon first appears.
In general, the early acts have low damage conventional weapons (shotguns, crowbars, etc.) while later acts have more bizarre alien weapons and guns that do extreme damage.

Notes
Special properties of this weapon.

Delivery and Payload
Shows the pattern used to determine which enemies take damage when the weapon is triggered. See the *Standard Payload Delivery Methods* sheet for more details.

Cooldown/Recharge

- ***1 Use***: Can only be used once, then it is removed from your inventory.
- ***Slow***: After attacking, you need to wait a long time to attack with this weapon again.
- ***Normal***: An average speed weapon.
- ***Fast***: Fires quickly.
- ***Continuous***: Fires in a continuous stream while the mouse button is held down.

Starblo:
Weapon Traders

- Intention: Get feel for weapon sets
- Scope: Single idea
- Purpose: Abstraction
- Time Scale: None

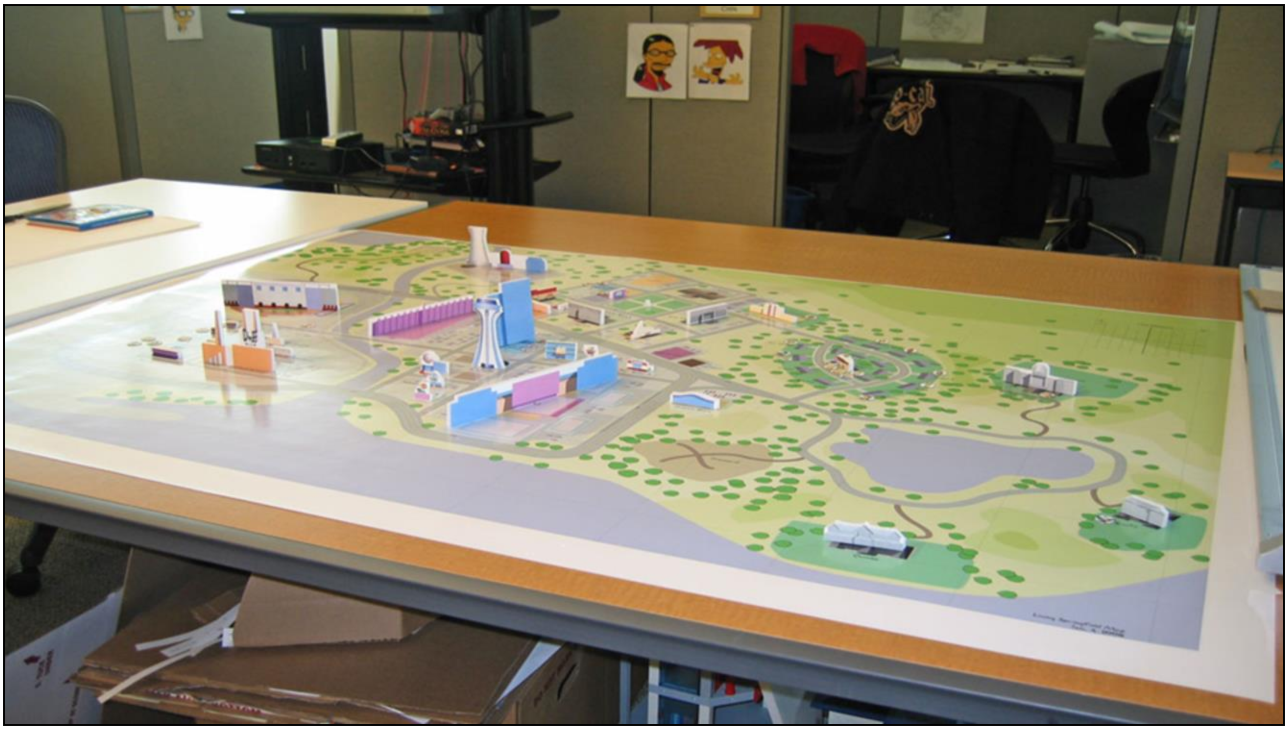
Starblo

These trading cards were created to help get a feel for the weapon sets that would be in Starcraft/Diablo hybrid game.

Scope: Single Concept

Focus: Abstract Concept

Time Scale: None



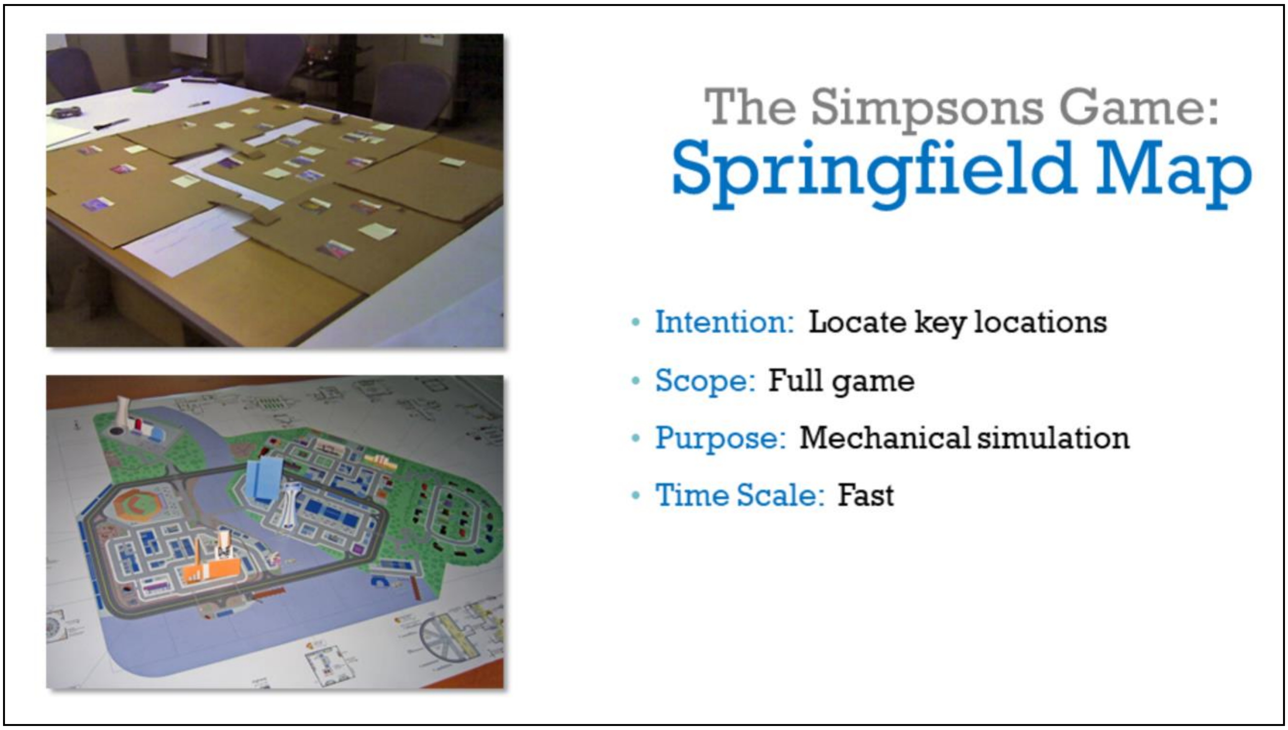
Springfield

This a scale map of Springfield from “The Simpsons Game”. It was used to locate various key points in the game.

Scope: Full game

Focus: Mechanical Simulation

Time Scale: Fast



The Simpsons Game:

Springfield Map

- Intention: Locate key locations
- Scope: Full game
- Purpose: Mechanical simulation
- Time Scale: Fast

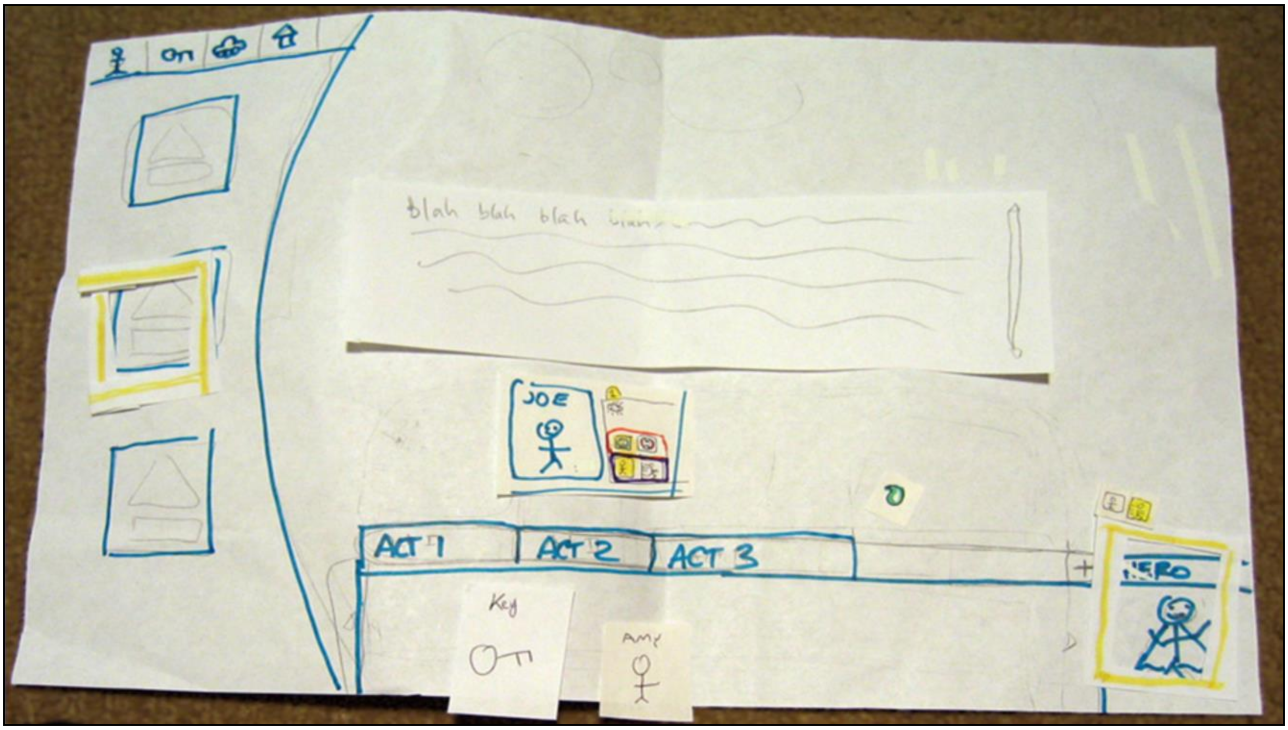
Springfield

This a scale map of Springfield from “The Simpsons Game”. It was used to locate various key points in the game.

Scope: Full game

Focus: Mechanical Simulation

Time Scale: Fast



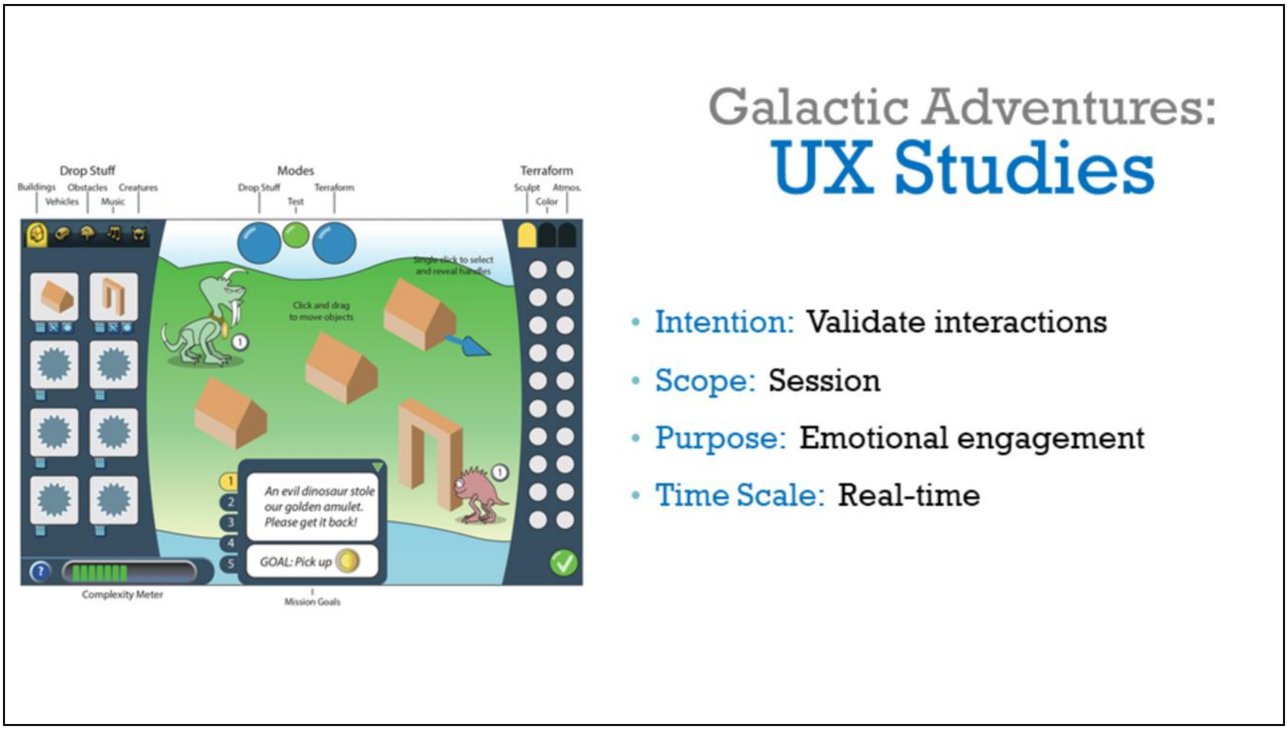
Spore Galactic Adventures

Interactive UI mockup showing player interactions while building missions

Scope: Session

Focus: Emotional Engagement

Time Scale: Real-time



Galactic Adventures: UX Studies

- Intention: Validate interactions
- Scope: Session
- Purpose: Emotional engagement
- Time Scale: Real-time

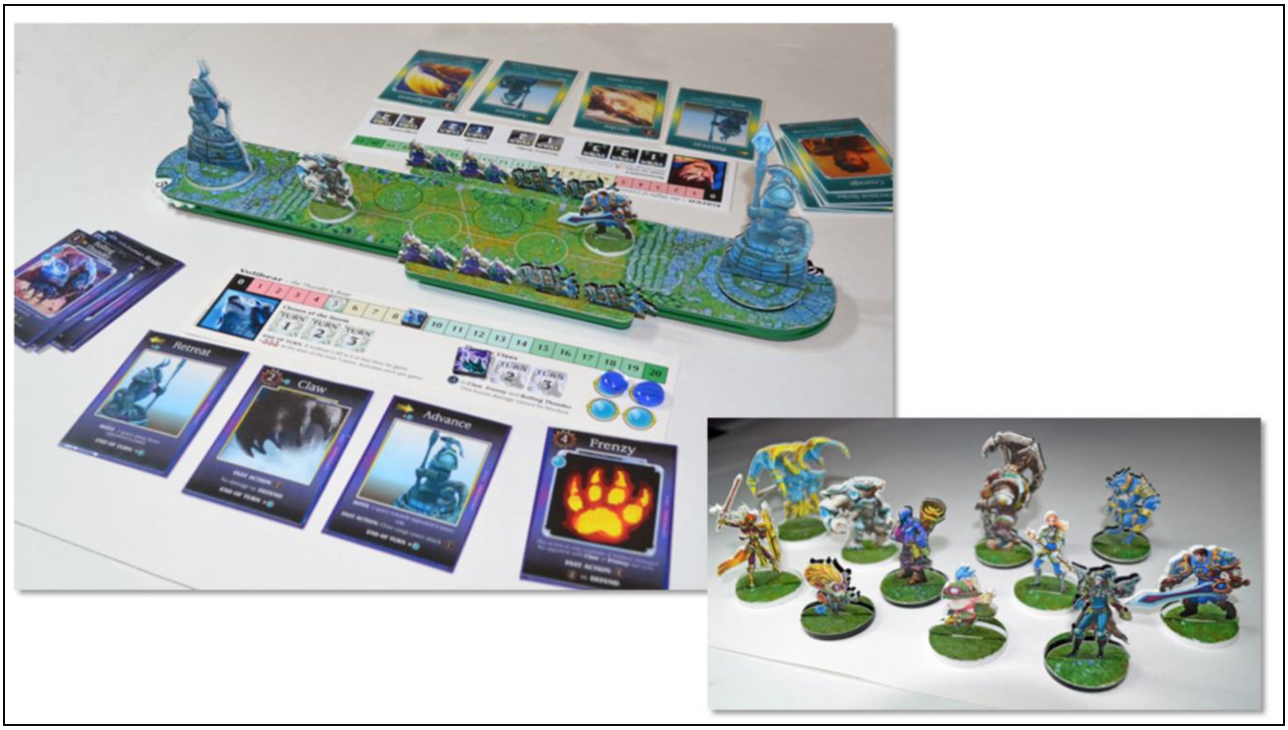
Spore Galactic Adventures

Interactive UI mockup showing player interactions while building missions

Scope: Session

Focus: Emotional Engagement

Time Scale: Real-time



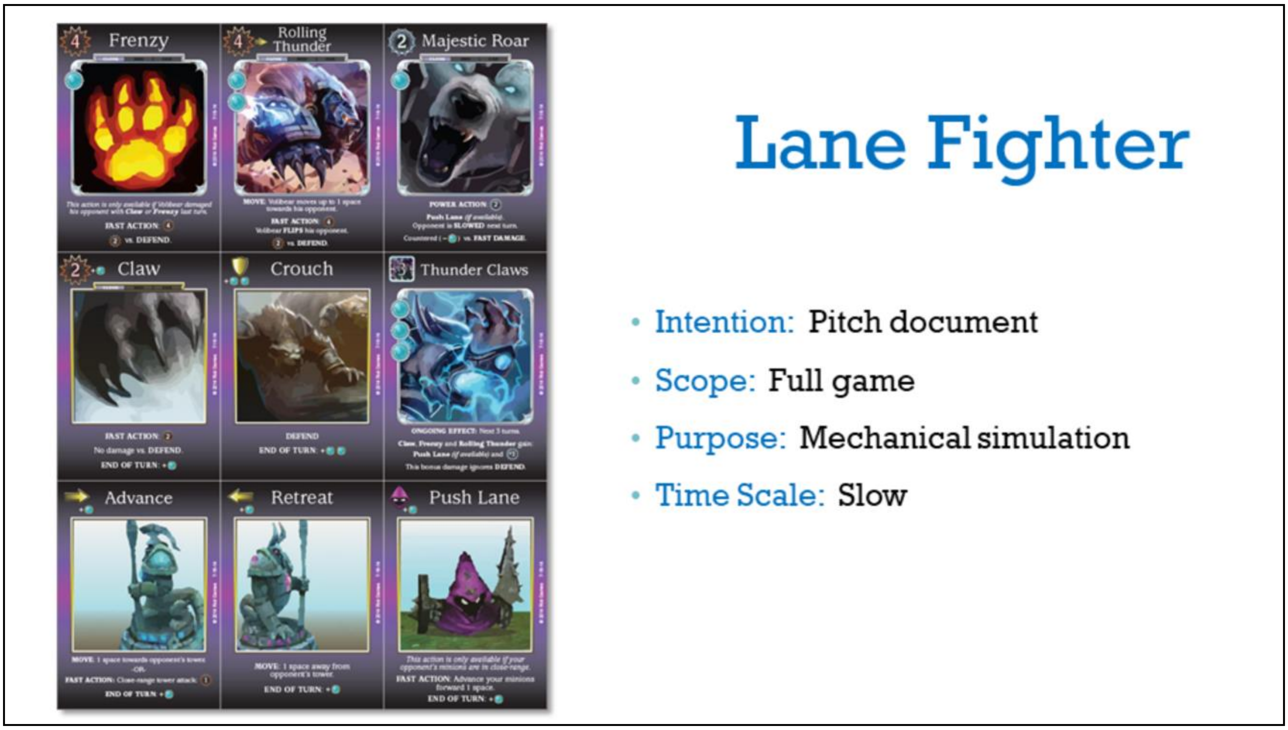
Lane Fighter

Proposal for a tactical mini-game that simulates two “League of Legends” champions fighting for control of a lane.

Scope: Full game

Focus: Mechanical Simulation

Time Scale: Slow. Players had to do a lot of bookkeeping. (The paper prototype took about 30 minutes to play. The computer version ended up taking about 3 minutes.)



Lane Fighter

- Intention: Pitch document
- Scope: Full game
- Purpose: Mechanical simulation
- Time Scale: Slow

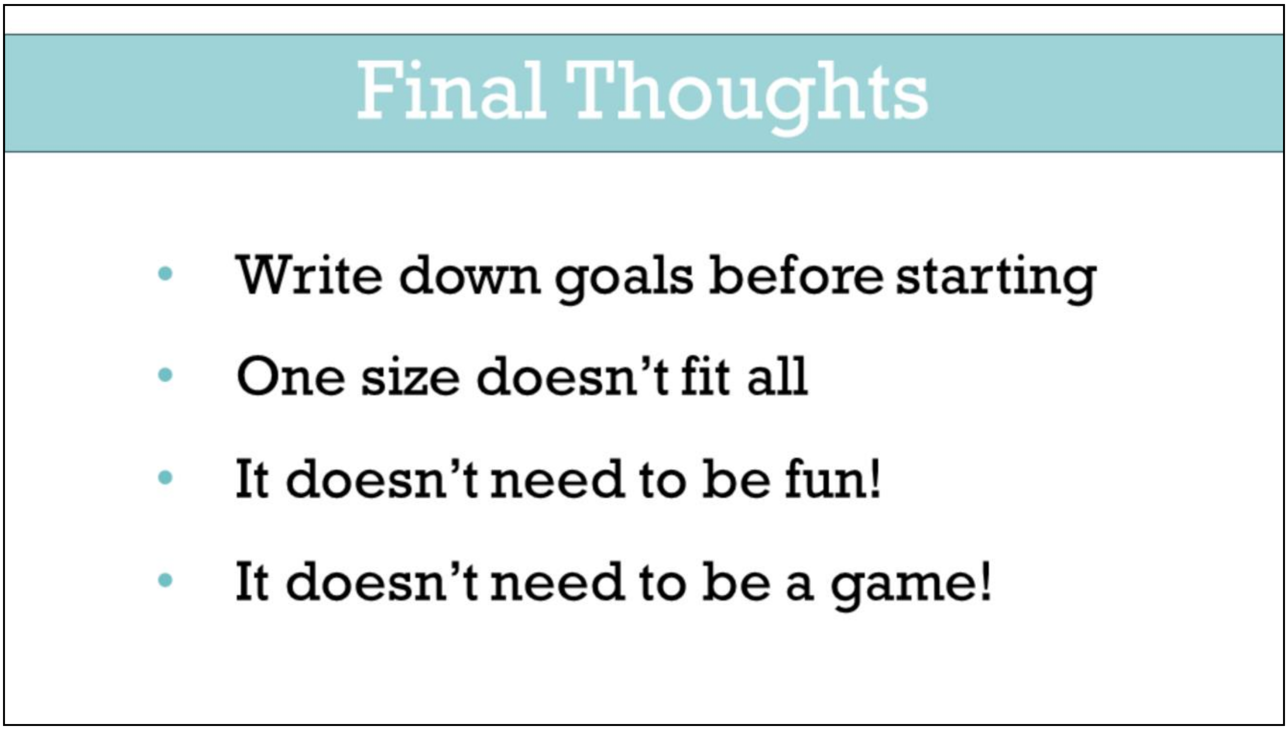
Lane Fighter

Proposal for a tactical mini-game that simulates two “League of Legends” champions fighting for control of a lane.

Scope: Full game

Focus: Mechanical Simulation

Time Scale: Slow. Players had to do a lot of bookkeeping. (The paper prototype took about 30 minutes to play. The computer version ended up taking about 3 minutes.)



Final Thoughts

- Write down goals before starting
- One size doesn’t fit all
- It doesn’t need to be fun!
- It doesn’t need to be a game!

Conclusion

Specify intent before proceeding

Make sure you understand your categories. Write it down.

Who is the audience that will be playing the prototype? (Typically other designers)

What is the necessary quality level (pencil and index cards, or polished art and components)?

One size doesn’t fit all

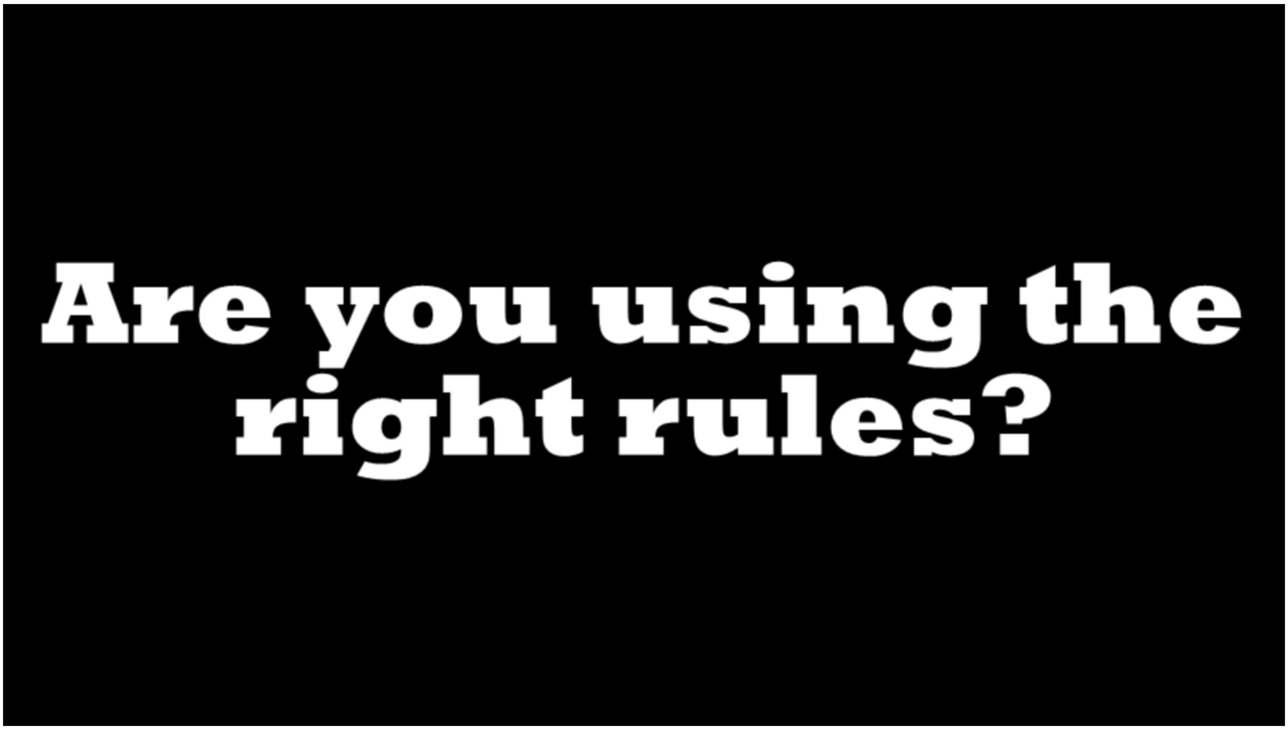
Every project is different. A paper prototype of an iPhone app will be different than a AAA game.

It doesn’t need to be fun

You aren’t trying to sell it to Hasbro

You aren’t making a full game; you are solving a problem or answering a question

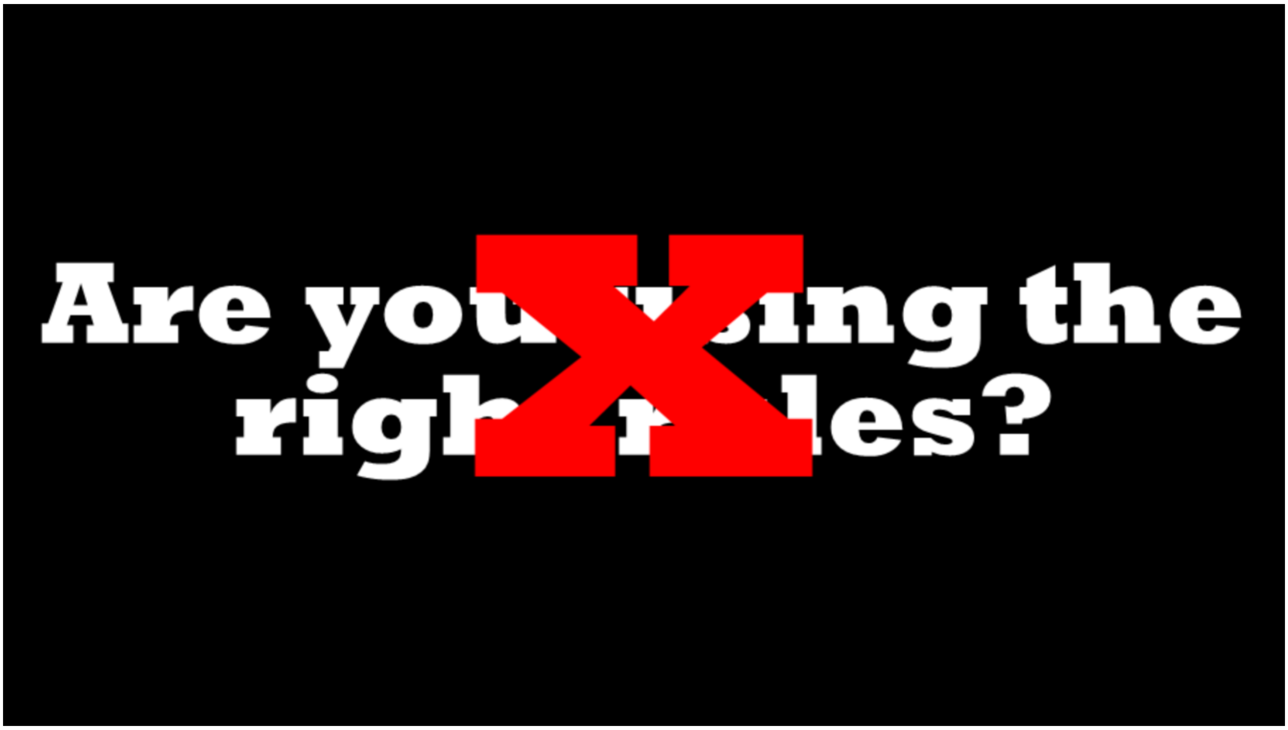
Resist the urge to add extraneous features that make it a better game, but stray from the stated purpose.



Are you using the right rules?

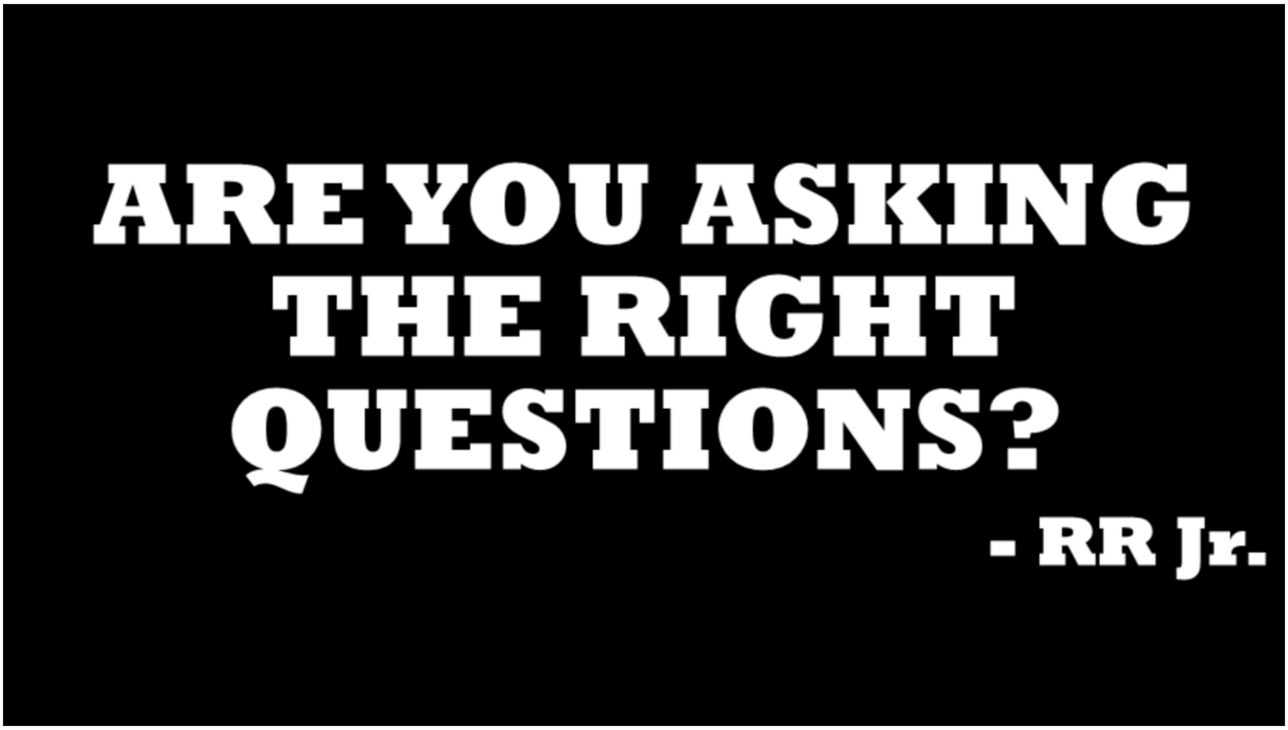
I hope these rules have proved useful to you.

And I want to remind you



Are you using the right rules?

It’s not so much “Are you using the right rules?”

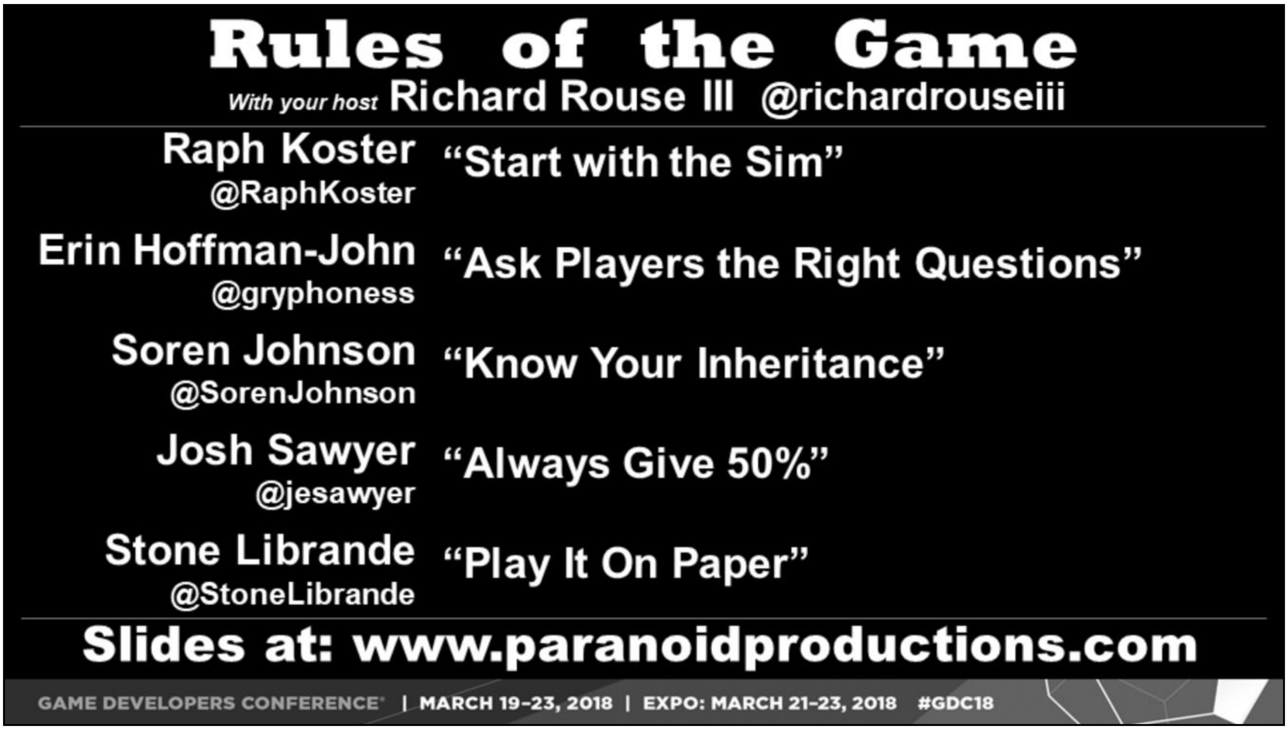


ARE YOU ASKING THE RIGHT QUESTIONS?

- RR Jr.

But to instead use these to help reframe your thoughts and change your perspective

And think about if you are asking the right questions.



Rules of the Game

With your host Richard Rouse III @richardrouseiii

Raph Koster @RaphKoster	"Start with the Sim"
Erin Hoffman-John @gryphoness	"Ask Players the Right Questions"
Soren Johnson @SorenJohnson	"Know Your Inheritance"
Josh Sawyer @jesawyer	"Always Give 50%"
Stone Librande @StoneLibrande	"Play It On Paper"

Slides at: www.paranoidproductions.com

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Thanks!