

# Rules of the Game

## Uncommon Techniques from Insightful Designers

*Your host*  
Richard Rouse III

*with*  
Chandana Ekanayake  
Carla Engelbrecht  
Noah Falstein  
Harvey Smith  
Alisha Thayer



**GDC**

MARCH 17-21, 2025  
SAN FRANCISCO, CA

#GDC2025

Welcome to Rules of the Game 2025

My name's Richard Rouse, Creative Director at FarBridge

And we have a lot to get through today so we're going to dive in

# **This is a session where we get 5 designers to speak for 10 minutes**

Each speaker talks about a rule they use in their game design –  
a technique, a trick of the trade, a way they think about games –  
that they've found useful in making great games

You may agree or disagree with some of these rules, but that's fine, it helps sharpen your own process as game designers

# **We've been doing this session since 2015**

We've been doing this session since 2015, hey that's 10 years ago

We skipped a few years in there, such as last year, but we are so very glad to be back

I did want to go all the way back to that first session

# Rules of the Game 2015



Make Emotional Connections

Laralyn McWilliams (@laralyn)  
Chief Creative Officer, The Workshop Entertainment

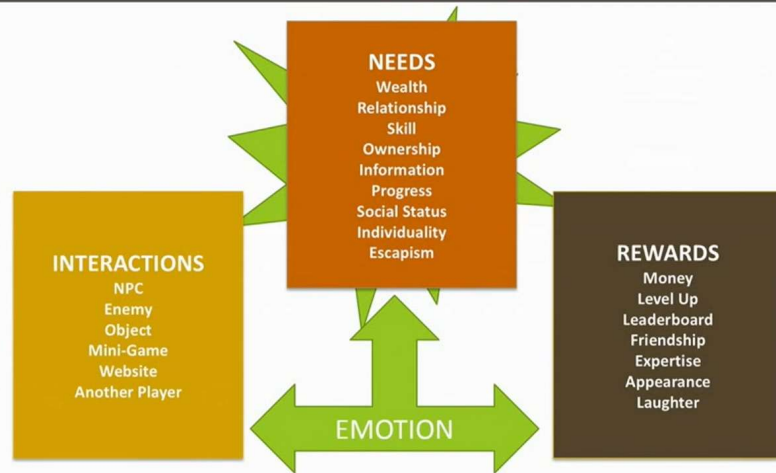
Laralyn McWilliams “Make Emotional Connections”  
@laralyn

The very first speaker at our very first installment was Laralyn McWilliams.

Who sadly passed away last year

Laralyn was a veteran game designer who led the design on everything from Full Spectrum Warrior to Free Realms

Laralyn McWilliams “Make Emotional Connections”  
@laralyn



Her talk that year set the tone for what a great Rules of the Game talk can be – she discussed how as designers we should think about connections to our players between the type of emotional connections players make to our games, and how we should think about our rewards in terms of the type of emotions we want players to experience, and in playtesting or post-launch observe and listen to how players play our games and then tune our games to reinforce the emotions we want them to have.

It was a great talk, and really set the tone for what this session has become



But beyond talking about the intricacies of game design, Laralyn was known for how public she was talking about game development culture and the right and wrong ways game studios function. All this happened through her blogging or posting on her Twitter or later Bluesky accounts.

And in those places she was also very open about the incurable cancer she was facing, which led to her doing this talk about staying creative in difficult times.

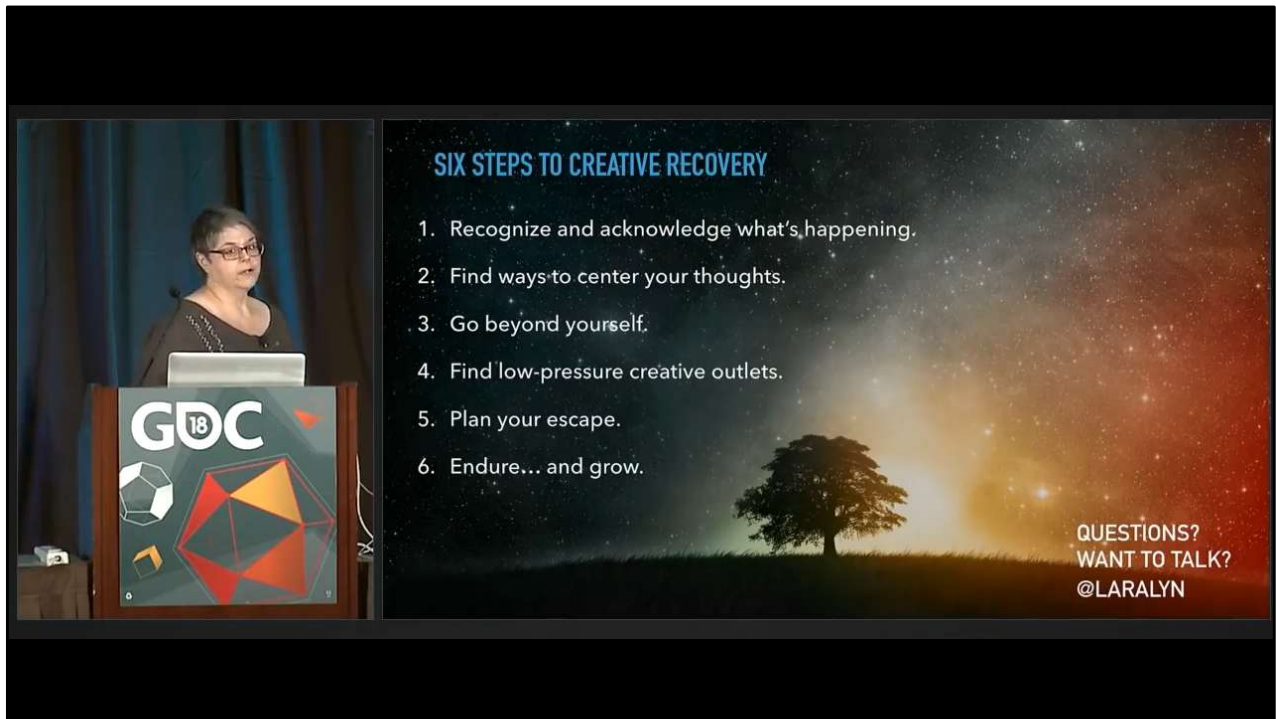
Though she framed that talk around her own health struggles, she said this could apply to anyone trying to stay creative as a game designer in difficult times of any kind.



And it's not going to surprise anyone here to say that we live in very difficult times – the game industry has had an incredibly rough few years. Many studios have been shut down, many people are unemployed, some of you right now in this room are probably unemployed. Some studios who made games I really loved got shut down, and you can see some of those games behind me.

Never mind what's going on in the rest of the world right now.

So it's easy to get stuck creatively. I think many of us have asked ourselves "What am I even doing with my silly little video games?" And we can get blocked.



But Laralyn's talk specifically went through staying creative in difficult times. She talked staying effective in the thing you know how to do – design games - even when horrible things may be happening in other parts of your life.

**“I’m a game developer just like you are. And I went through some shit, everyone goes through some shit, it’s really not special. I endured. And I grew and I changed, and so will you. And I learned that no matter what was going on, I wasn’t broken. I’m not broken. None of you are broken. No matter what’s happening to you, you’re not broken, you’re growing. All of us are growing.”**

**- Laralyn McWilliams**

Here’s a quote from that talk that I really loved.

So here’s to you Laralyn, for showing us all how to persevere at our craft when everything seems terrible. And showing us how to do this Rules of the Game session.

# **“Make Emotional Connections”**

from “Rules of the Game” 2015

On [GDCVault.com](http://GDCVault.com)

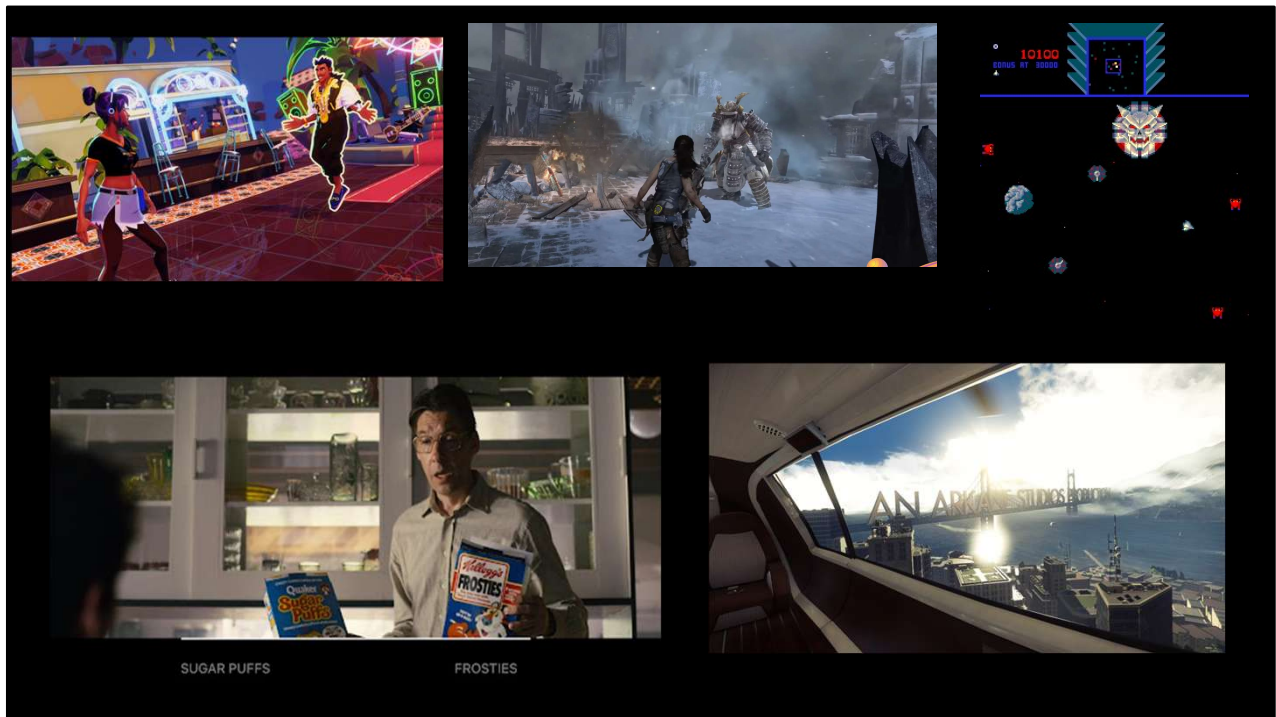
Search “Laralyn” look for 2015 (No login required)

# **“You’re Not Broken: Finding Your Creative Way Through Difficult Times”**

On [GDCVault.com](http://GDCVault.com) or YouTube

Search “You’re Not Broken Laralyn”

Here’s where you can find Laralyn’s talks if you want to check them out – I highly encourage you to do so.



But today we're going to hear from some game designers new to this session. A little bit later we're going to hear from...  
Alisha Thayer about technical design and how to embrace the one off  
Noah Falstein is going to tell us about how simple we should make our games  
Carla Engelbrecht is going to tell us about Ruthless Prioritizing our games  
And lastly Harvey Smith is going to tell us about design layering.

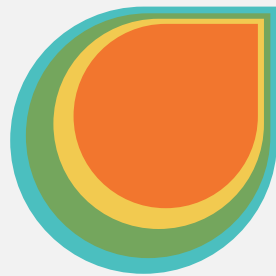
But first...

# CHANDANA EKANAYAKE

**Creative Director  
Outerloop Games**

... our first speaker is the Studio Director at Outerloop Games, where last year he shipped dating/skateboarding/cooking mash up game Thirsty Suitors. He has a long career going back through Monday Night Combat all the way back to Elder Scrolls Morrowind. He even did some art for my indie game, for which I will be forever indebted.

Chandana Ekanayake!



**CREATE  
INTENTIONAL FRICTION  
TO BUILD  
EMOTIONAL RESONANCE**

Chandana Ekanayake  
Outerloop Games

Let's talk about creating intentional friction to build emotional resonance for specific player experiences. Lets all get on the same page and define what some of these terms mean.



## Friction can be

Difficulty

Scarcity

Unconventional controls

Save System

Time

Durability

Narrative Tension

Bucking Trends

Texture — doesn't have to be negative

Friction can be about overcoming difficulty

Limited Items like heals

Unconventional control schemes

The ability to save in only certain spots or limited number of saves

Time, can't do everything in a game due to a running clock

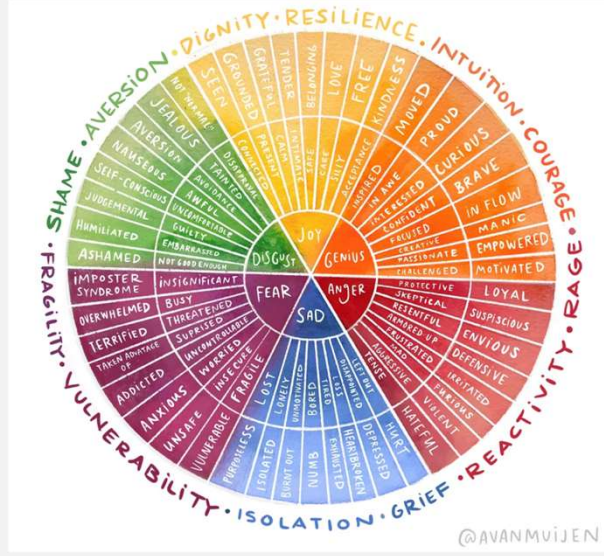
Weapon durability, player durability

Theme

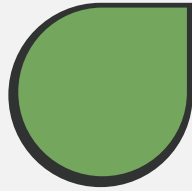
going away from current market and genre expectations



# What's an emotion?



Illicit a response from the player



**RESONANCE** is  
when game mechanics enhance  
themes and emotions



# Getting Over It



# Papers, Please



In Papers, Please you play a border control guard, shuffling paper, checking documents

# Death Stranding



Limited fast travel



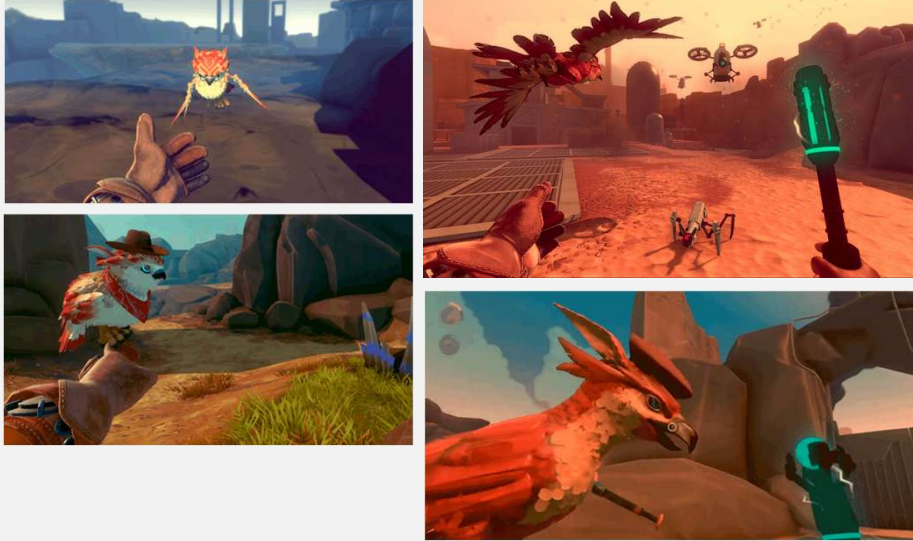
**We make narrative games**

**Start with themes and emotions**

**Iterate on mechanics to fit theme and emotions**

**Real world mapping of emotions and experiences**

## Falcon Age



Falcon Age is a game about raising a falcon and fighting colonizers and reclaiming your land.

# Thirsty Suitors



Thirsty Suitors is a game about fighting your exes, and disappointing your parents. Turn-based combat was a mechanical result for a need to convey two people having an intense argument about their messy past and we show it through fantastical battles with dialogue in turns

## Connecting through Cooking



Jala and her parents haven't talked in years and cooking is a way to reconnect

Initially we focused more on the dishes and steps and it worked better to focus on the emotional beats of Jala and her parent's relationship issues

Try to complement your mom but its random chance wheel

Dad is much more chill and gives better feedback

# Parental Approval



Jala and her parents haven't talked in years and cooking is a way to reconnect

Initially we focused more on the dishes and steps and it worked better to focus on the emotional beats of Jala and her parent's relationship issues

Try to complement your mom but its random chance wheel

Dad is much more chill and gives better feedback

## Subverting RPG systems



End battle against Jala's grandma isn't about using power

It comes down to emotional damage as a mechanic and confronting generational trauma

# Generational Trauma



End battle against Jala's grandma isn't about using power

It comes down to emotional damage as a mechanic and confronting generational trauma

# Project Dosa



Project Dosa is an RPG game about two sisters and their food truck mech trying to save their community from their bad sister all themed around food and cooking. Alignment of game mechanics and RPG tropes of one of your party members declining in health. How do we map that to leveling and RPG systems. How do we make it meaningful. This is something we're trying to figure it out right now. Our approach is to look at our own experiences with loved ones, health, and death. There's tension in talking about it making sure we're respectful and making sure we earn the player's trust and it feels authentic.

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**THANK YOU**



Chandana Ekanayake  
Outerloop Games

# **CHANDANA EKANAYAKE**

**Creative Director  
Outerloop Games**

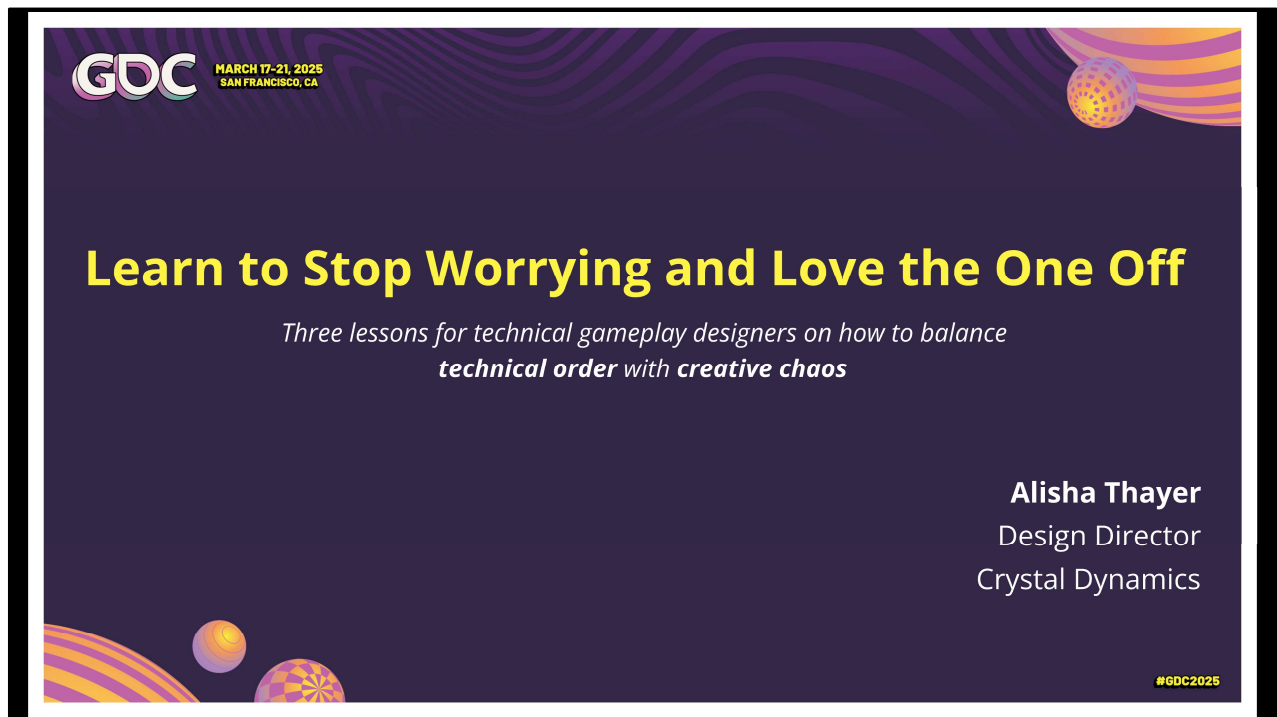
# ALISHA THAYER

**Design Director  
Crystal Dynamics**

Our next speaker is a design director at Crystal Dynamics, but came up through the ranks focused on technical design on games from Red Dead Redemption to Tomb Raider to the Avengers, and says she loves working with game design teams, probably because designers are so incredibly willing to agree on things and it's always super easy.

Alisha Thayer!

Alisha Thayer (she/her) is a Design Director at Crystal Dynamics where she oversees a multidisciplinary gameplay and gameplay systems team. She has been a key contributor to technical design career development, mentorship, assessment, and departmental standards at Crystal over the past decade. Over her career she has worked on the Tomb Raider franchise, Red Dead Redemption, Max Payne 3, and Marvel's Avengers as a scripter and technical game designer. Alisha has a passionate interest in meaningful systemic interactions and narrative/systemic cohesion. She often finds herself working with small teams to explore early game prototypes, develop new workflows/content authoring patterns, and expand the boundaries of existing technology and tools. She considers herself to be a lifelong learner and takes great joy in collaboratively solving complex problems.



Though I'm now contributing at Crystal Dynamics as a Design Director, I've spent fourteen years of my career working as a technical design individual contributor and lead on large, AAA projects.

So today, for my *Uncommon Techniques*, I'd like to pass on **three lessons** to my fellow technical designers (or to those who work with technical designers!) about balancing a need for technical order with an acceptance of creative chaos.

Or, in other words, how to **Learn to Stop Worrying and Love the One-Off**.

## TECHNICAL DESIGN

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Before we get into the meat of this talk, I want to make sure that we're aligned on the definition of technical design, as this is something I've seen vary from studio-to-studio.

For today's purposes, I'm speaking to technical design as the following:

## TECHNICAL DESIGN

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Design **specialization** that sits **between engineering and design.**



A sub-discipline, or specialization of design that is often a hybridization of engineering and game design.

## TECHNICAL DESIGN

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Design **specialization** that sits **between engineering and design.**

Technical Designers are often **liaisons between designers and engineers.**

A type of designer that often serves as a liaison between engineering and design, improving communication between the two disciplines.

## TECHNICAL DESIGN

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Design **specialization** that sits **between engineering and design**.

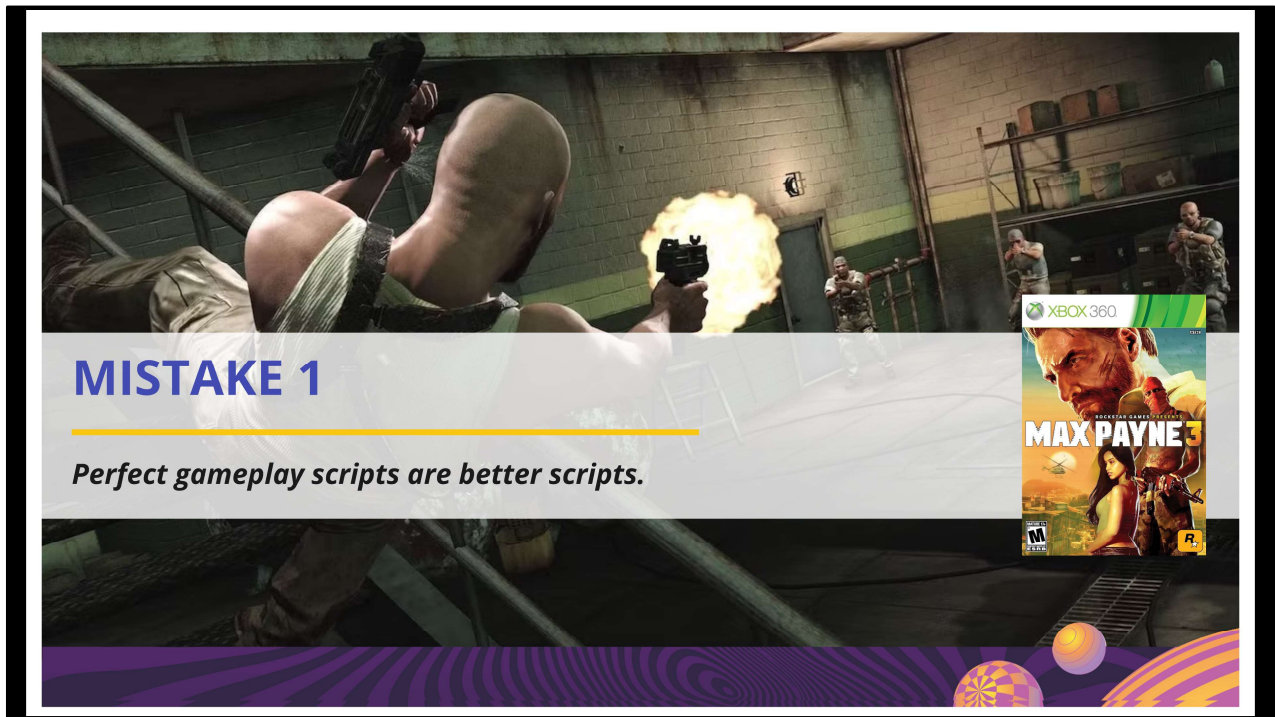
Technical Designers are often **liaisons between designers and engineers**.

Technical Designers are **advocates for designers** and **fast, stable content creation**.

And lastly, designers that are advocates for both their fellow content designers and the fast creation of stable, compelling content.

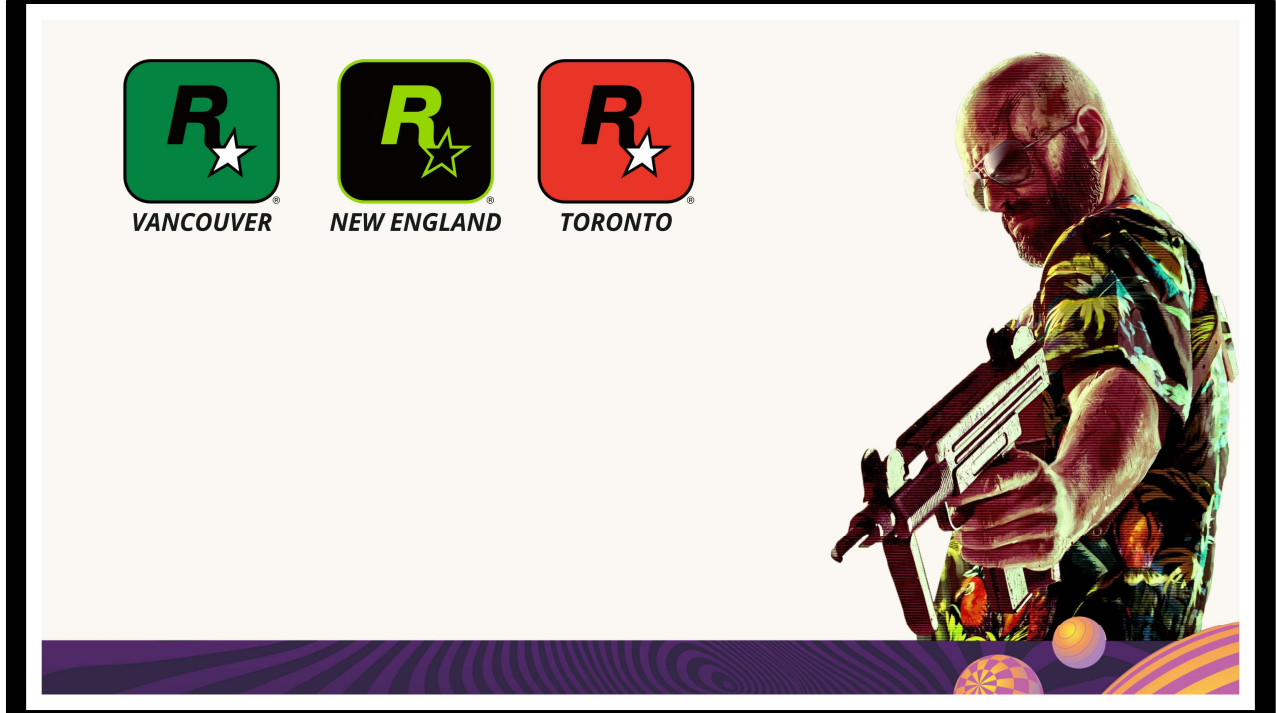
As technical designers sit in a sometimes nebulous space between design and engineering, they have to oscillate between decisions that favor the on-screen experience versus the extensibility of the underlying code, and it can be really tricky to decide which of these to favor.

Today's lessons are from mistakes I've made in my own career where I've been over-zealous about my commitment to order, which is a mistake I see technical designers make time and time again as they grow into their roles.

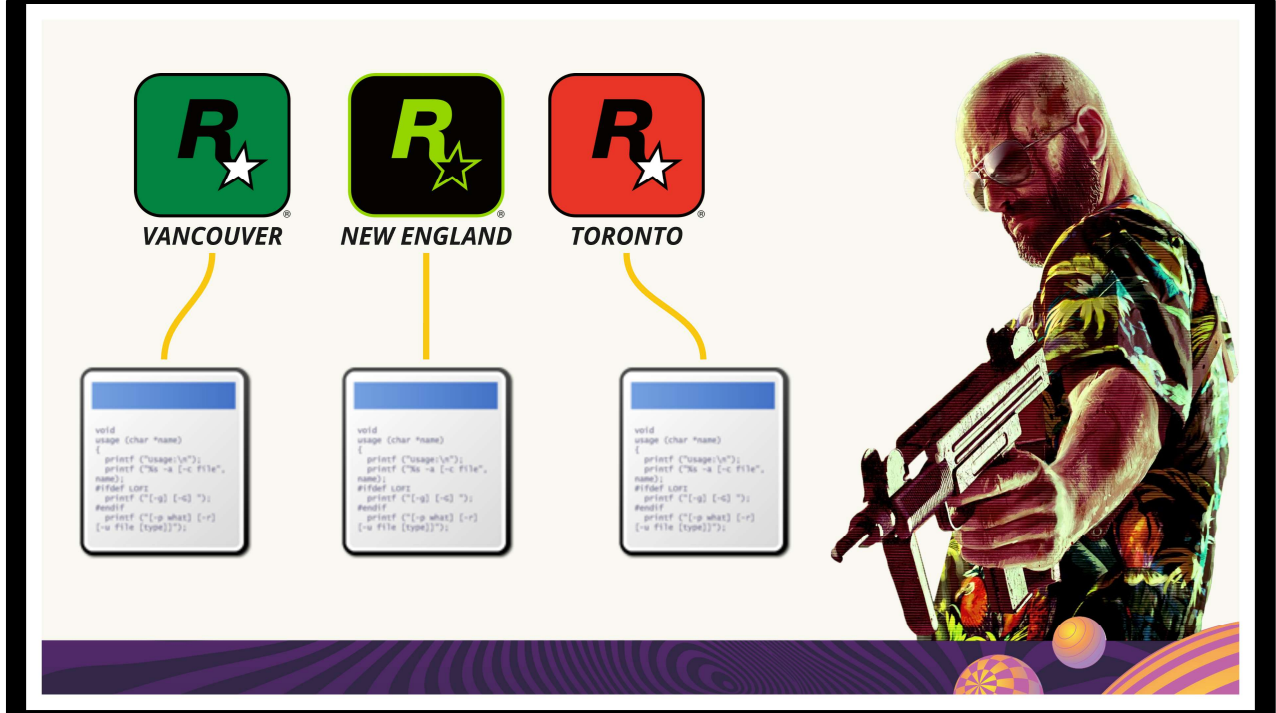


I spent what I like to call my "game dev formative years" at Rockstar Games working on *Red Dead Redemption* and *Max Payne 3*.

On *Payne*, I learned from this mistake: **assuming that perfect gameplay scripts are better scripts.**



*Payne* was a collaboration between three Rockstar studios: Vancouver, New England, and Toronto.

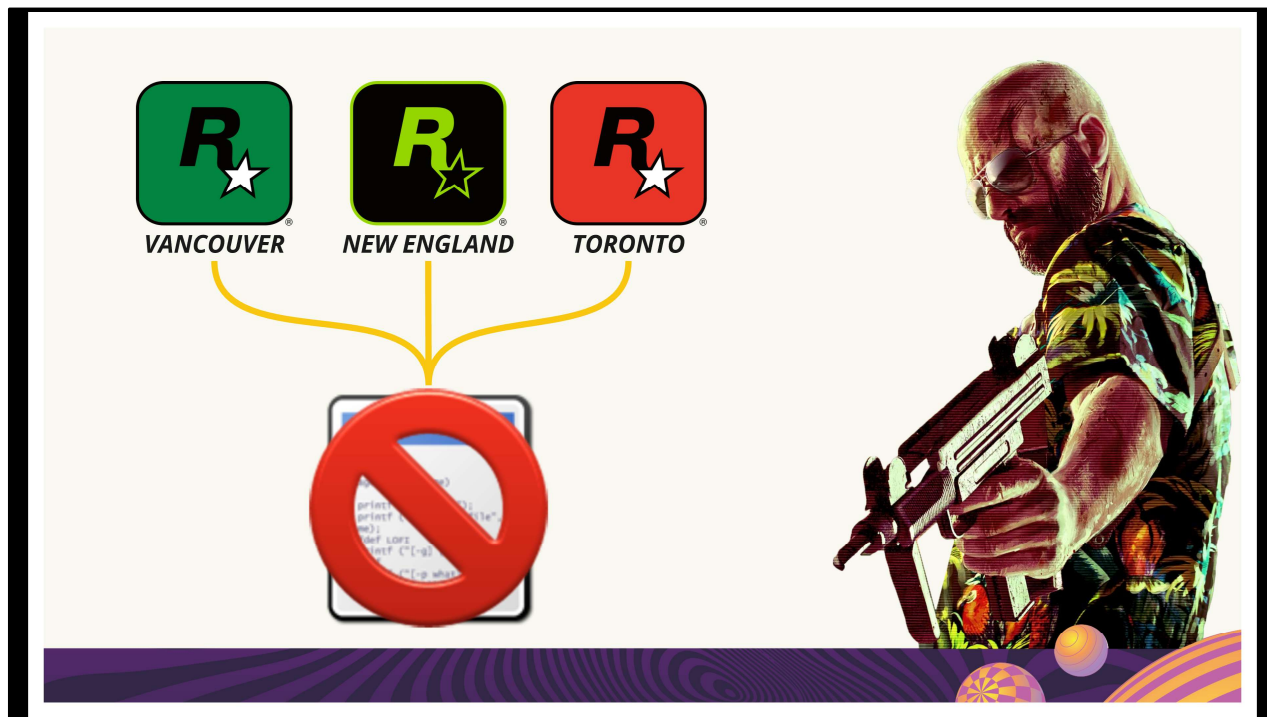


Around Alpha, the three studios started swapping ownership of levels to increase velocity. But each studio used its own wildly different scripting style, which put a massive cognitive load on developers, increasing opportunity for bugs.



We all banded together to propose a unification of our scripting standards, requiring a complete refactor of well over half of the game's scripts.

As a young, enthusiastic technical designer, I was a passionate advocate for this effort. I was spending countless cycles studying unfamiliar scripts before making surgical fixes or adding new beats. The thought of so much lost time was a source of anxiety for both me and my team.



We were overruled by our studio manager, who argued

**“That is too much time for no on-screen benefit.”**

I was dismayed. I was angry! Didn't he see how much time we were losing? But our studio manager was 100% correct.

Young in my career as I was, I really didn't see **time** as a factor in the decision, and it was just too late. Remember, it was alpha. One-off scripting patterns were slowing us down, but at the point of the project that we were in, it was important to focus on delivering the best experience we could with what we had. It just wasn't the time to be chasing perfection.

## LESSON 1

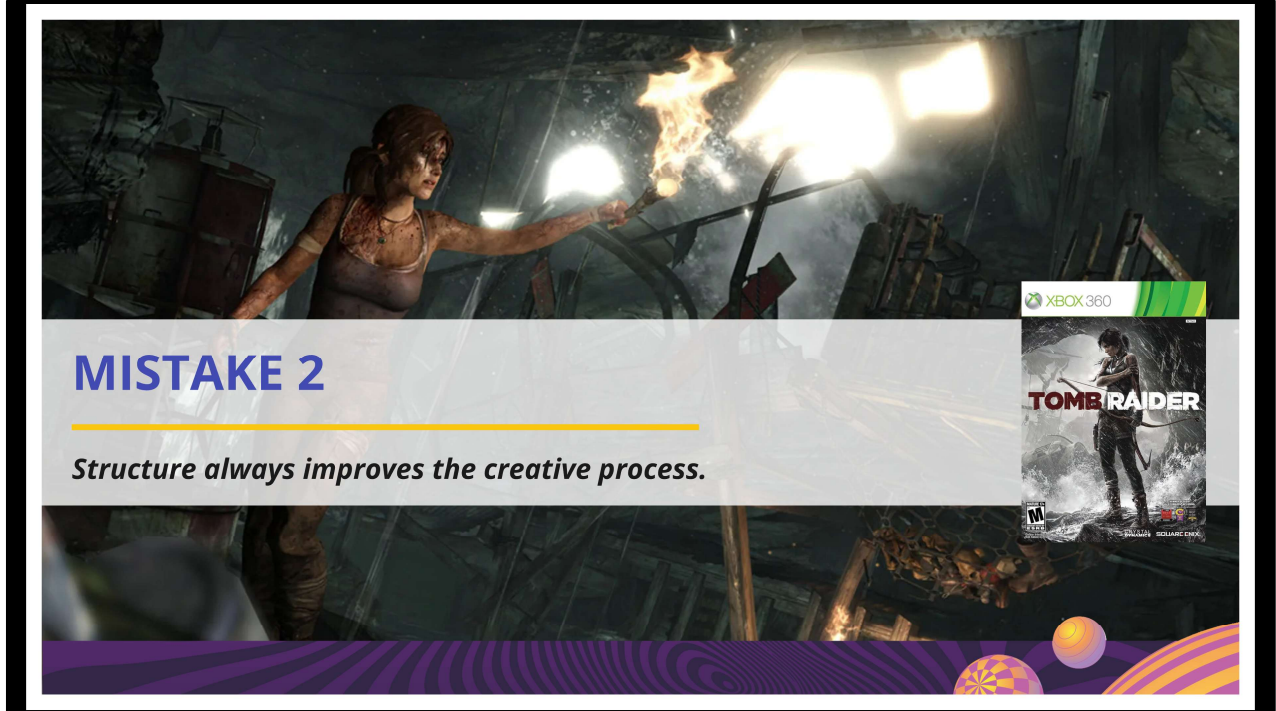
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Players won't remember your beautiful, orderly code; they'll remember how the **game made them feel**.

And that brings me to the first lesson.

Players won't remember your beautiful, orderly code; they'll remember how the game made them feel.

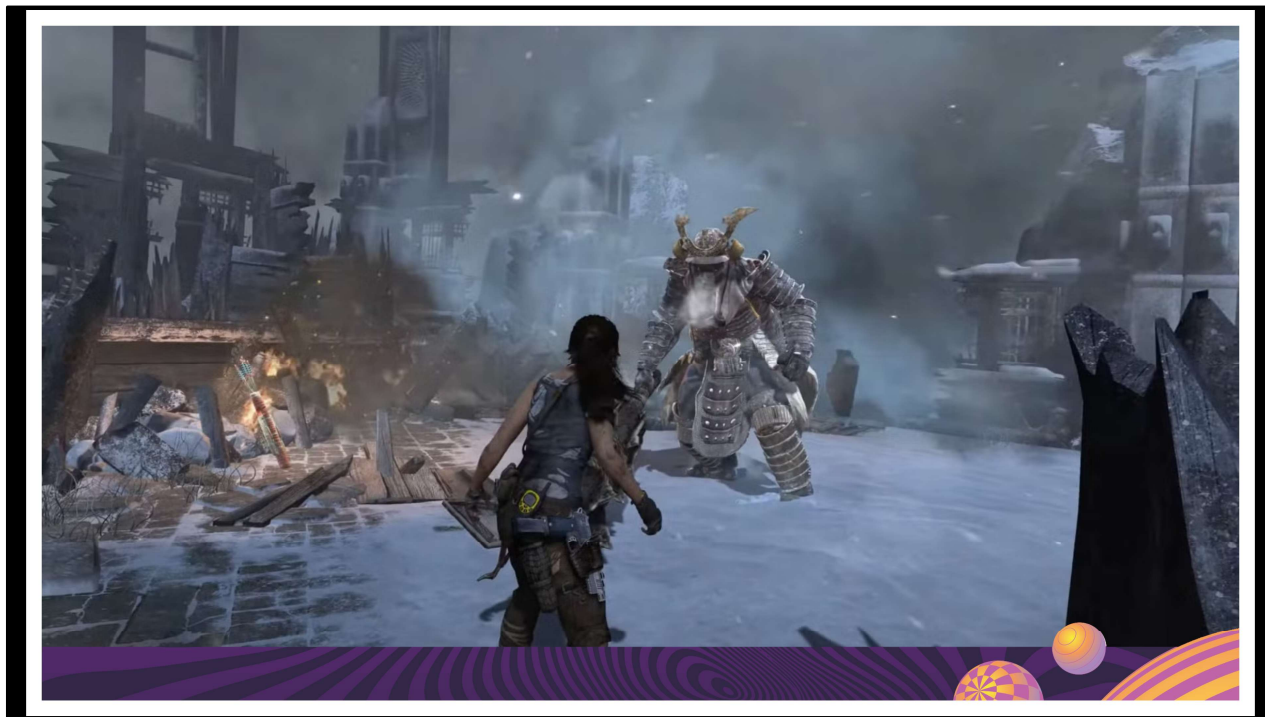
So, when you have to make a choice between order and chaos, really consider the phase your project is in, and the cost vs. value of a decision that could destabilize the experience the player receives.



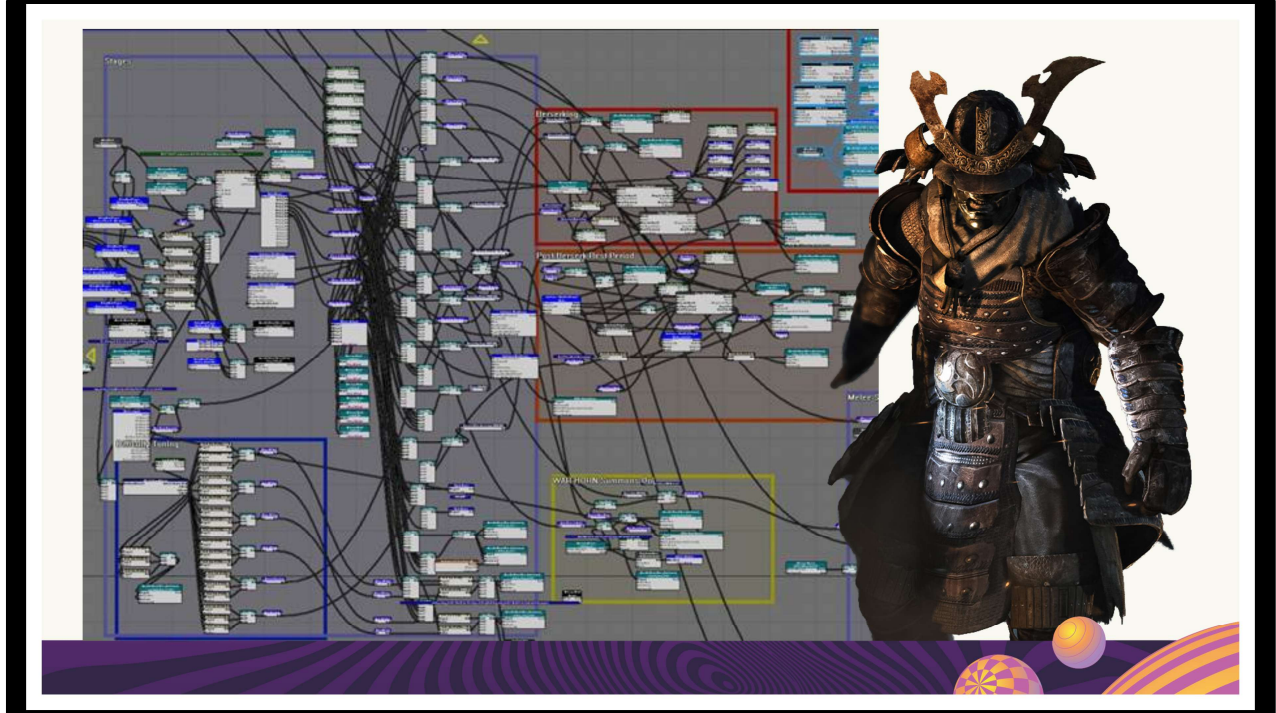
I had the pleasure of helping Crystal Dynamics close out production on Tomb Raider 2013, which was my first exposure to visual scripting.

Remember, I had Max Payne on the brain! New studio! A chance to champion order and structure so we don't lose those cycles late in production! A chance to start anew!

I could use **structure to IMPROVE the creative process!**

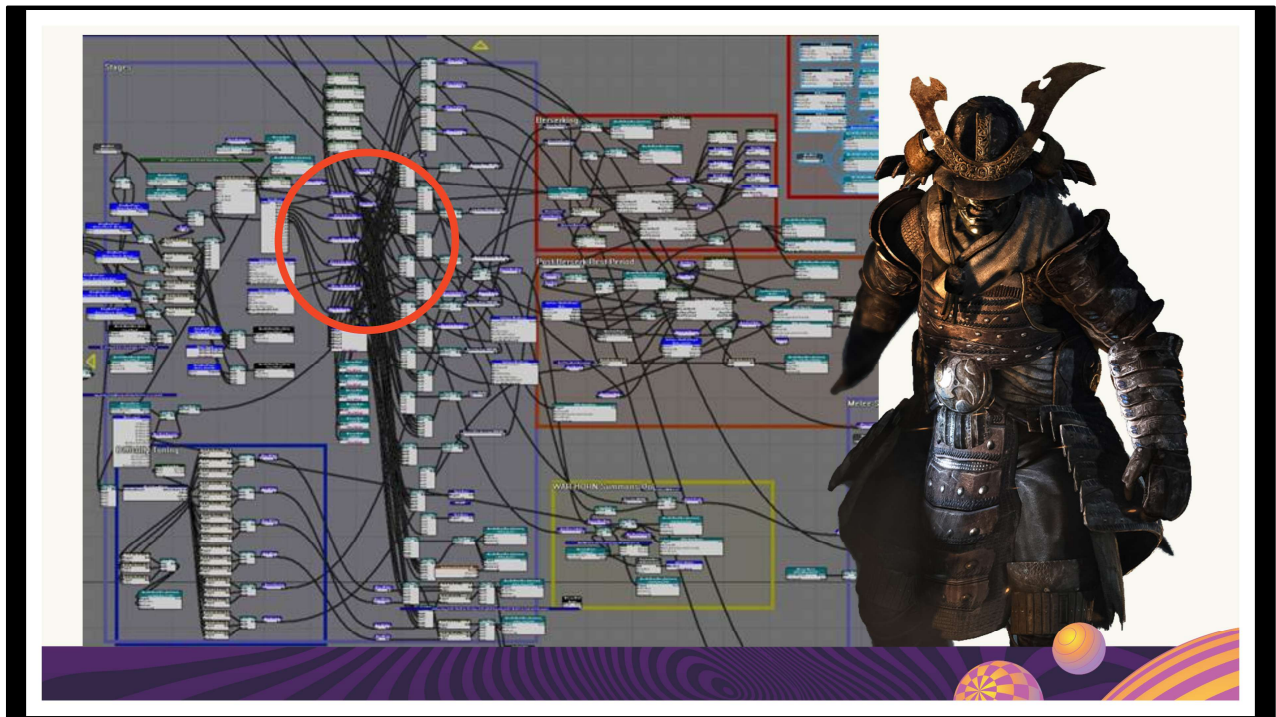


Just before you hit the final boss fight in Tomb Raider 2013, you fight this guy -- the Oni Stalker. It's a really cool fight, and it's considered by fans to be one of the cooler fights in the series.



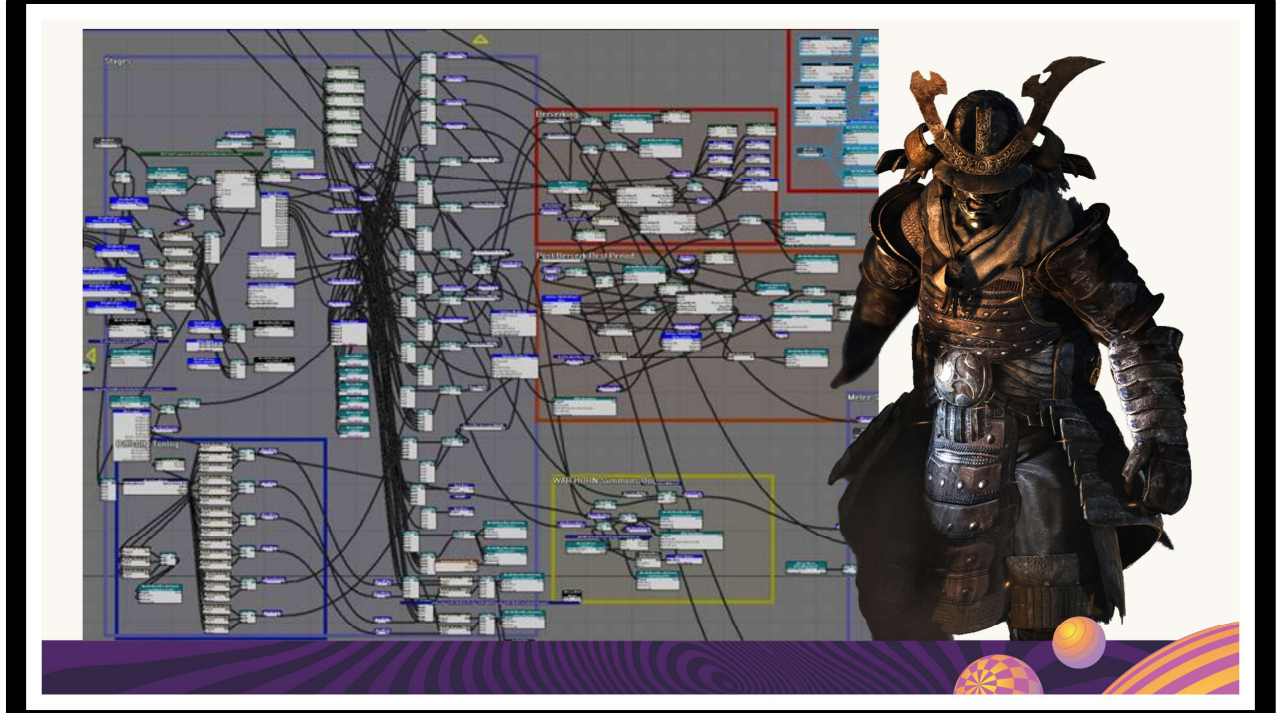
This is what Mr. Oni Stalker looks like under the hood, and I kept this screenshot because I used to send it to new technical designers at the studio as a plea -- "Please, please help us avoid this in the future!"

I'm sure most of you are familiar with *Blueprints from Hell*, and most of you who are familiar with visual scripting languages know this is one of the big pitfalls of trying to represent delicate gameplay timings in what is essentially a flowchart.



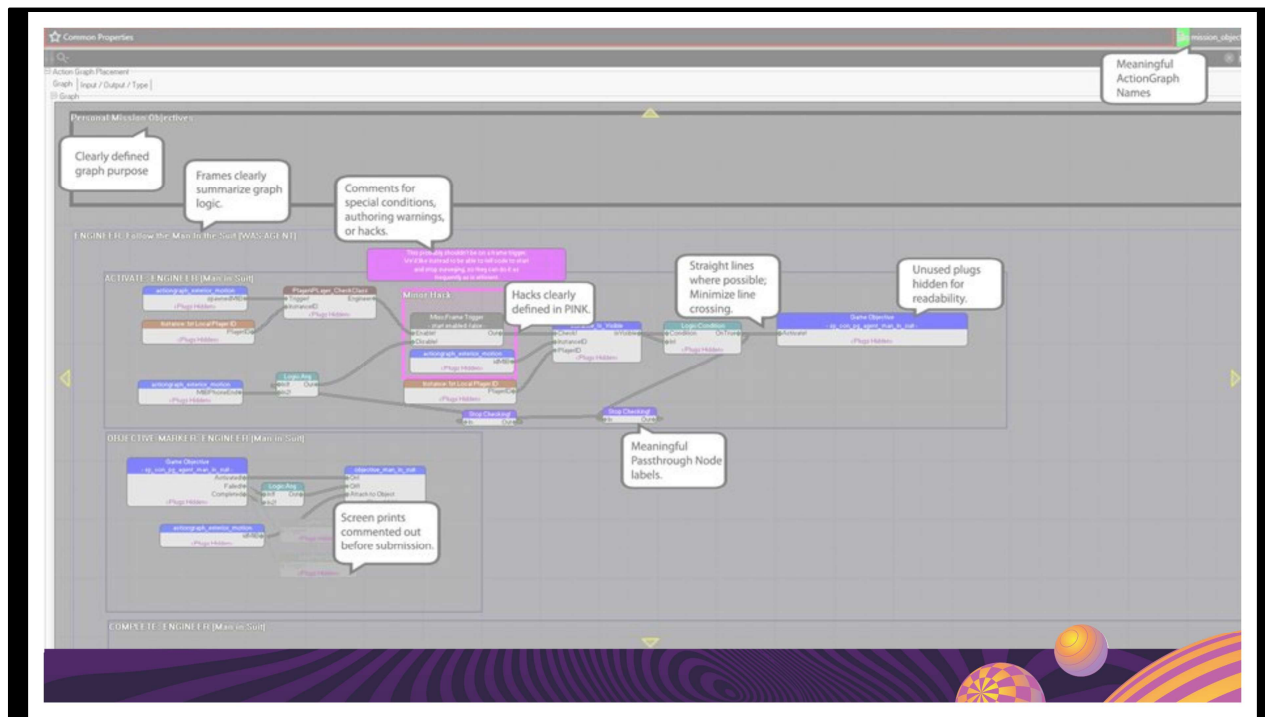
You can even see here our poor renderer just kind of ... giving up. We used to perform what we called the "jiggle test" on these types of scripts just to discern what connected to what.

These graphs were bug factories: Pulling on a single connection could cause a whole sequence to stop working for unknown reasons!

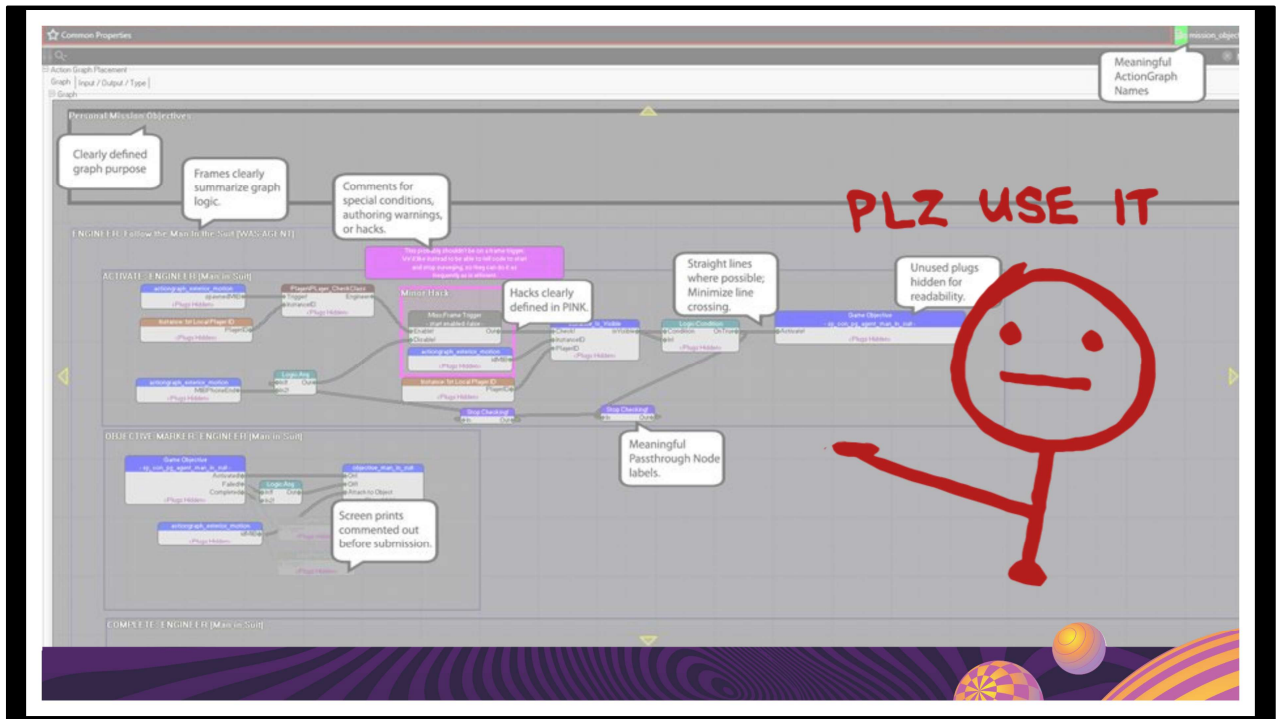


It took me a really long time to understand why and how these kinds of scripts kept happening -- and they did! We had them in *Rise of the Tomb Raider*, and we had them in *Shadow of the Tomb Raider* too! And, more often than not, they popped up in highly scripted sequences with delicate timings like this Oni Stalker.

But it was because of **exactly** that -- these highly scripted sequences with delicate timings took **countless** iterations to get just right. Designers were iterating at lightning speed to find the right balance of music, visuals, haptics, voice over, pacing, and challenge. Milliseconds mattered. Maximizing iteration cycles had far more value to the experience than adhering to rigorous scripting standards. Did I wish they used them? Oh, heck yes. But at the expense of the experience and iteration speed? No!



So, this was a place where our tools kind of failed them, because we did try, in the wake of Tomb Raider 2013, to encourage more rigorous scripting patterns ...



... but standards consistently clashed with iteration speed. And since *Blueprints from Hell* is still around, I'd bet that none of us have fully cracked the code on perfect tooling just yet.

## LESSON 2

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**Iteration is messy**, and mess is part of the process of realizing great gameplay.

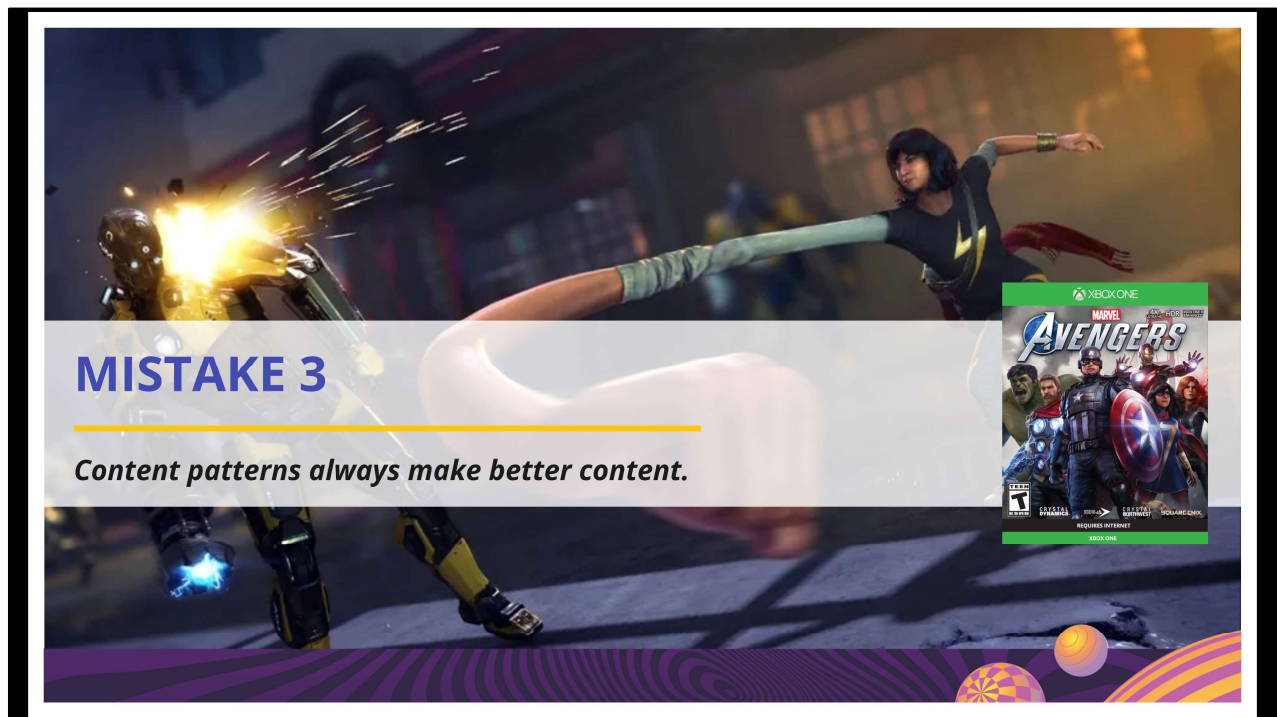
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The lesson here is that iteration is just messy, no matter how good your tools are. So, find ways for it to be okay to be messy, experimental, and wild in development. Embrace the chaos.

Plan stabilization passes and codification passes or ...

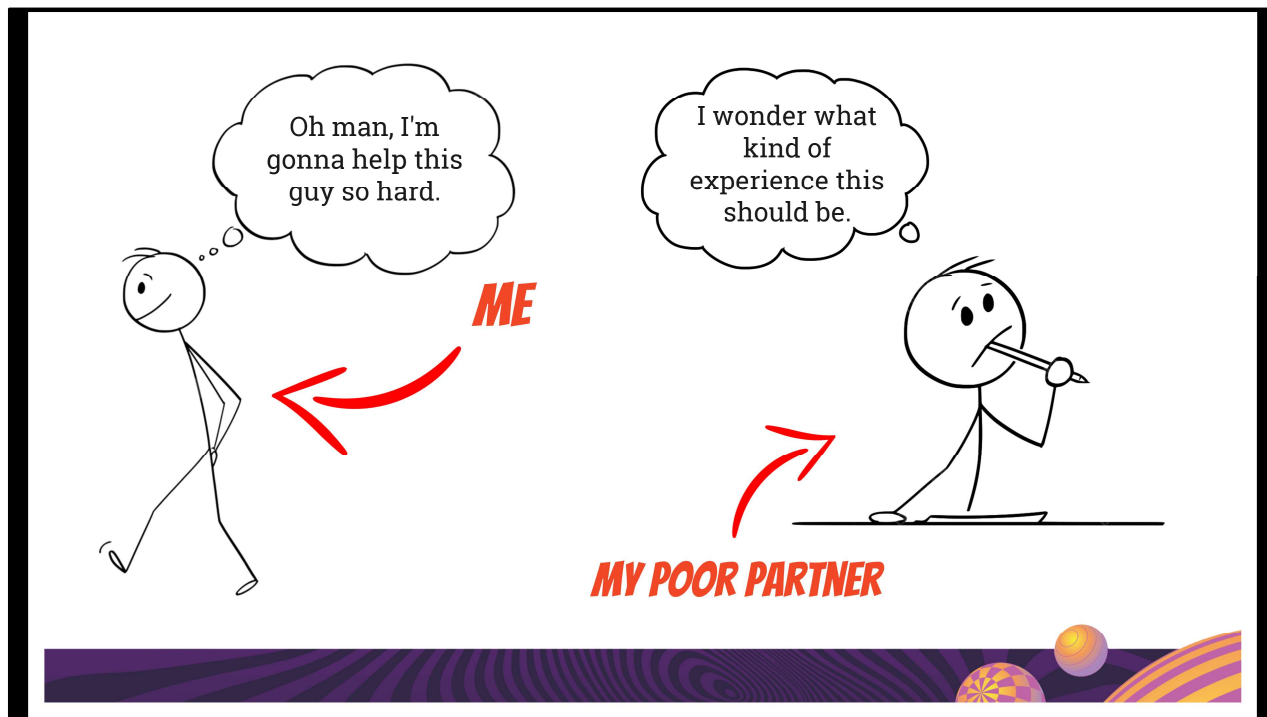
... just let sleeping dogs lie. If the content is doing its job and it's a one-off, let it be!



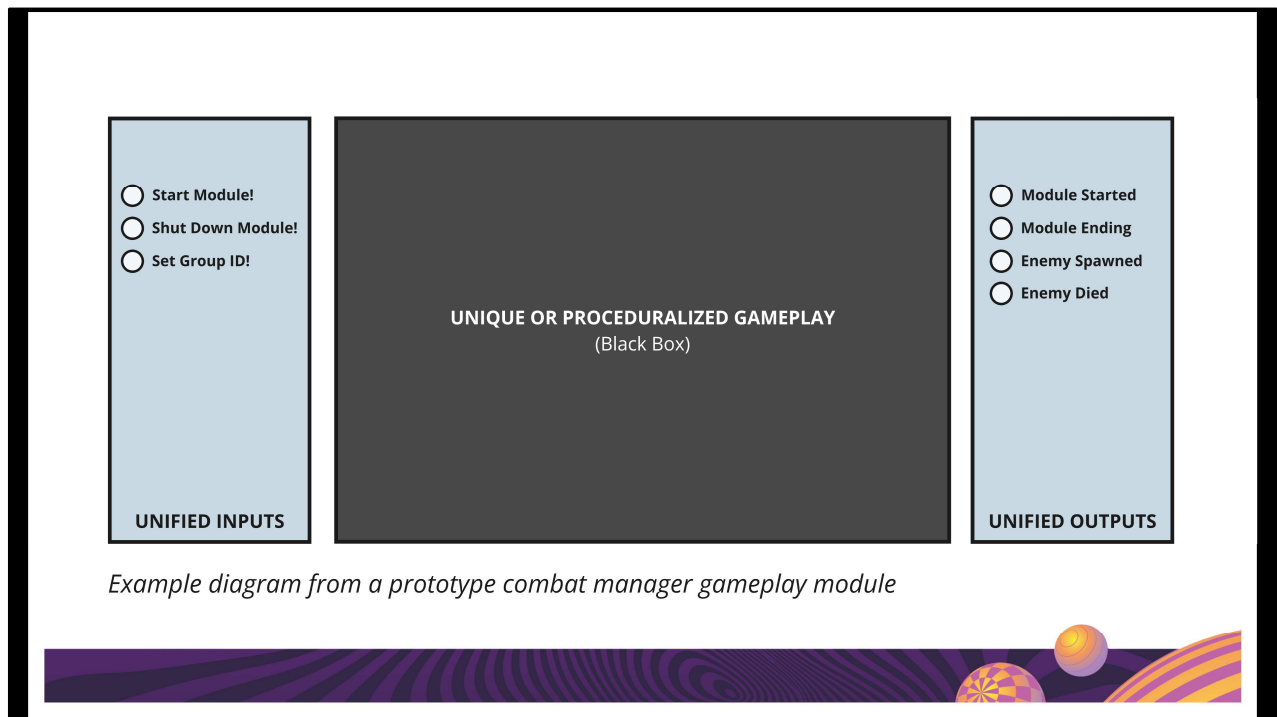
My enthusiasm for finding ways to prevent the Oni Stalker script from happening again gave me the reputation of being the Scripting Standards Lady on the team.

I was particularly interested in using content patterns to increase team velocity while reducing the risk that scripts like the Oni Stalker had due to their fragility. I wanted to see if I could tame that chaos earlier in a project.

And this is how I started my work on Marvels Avengers.



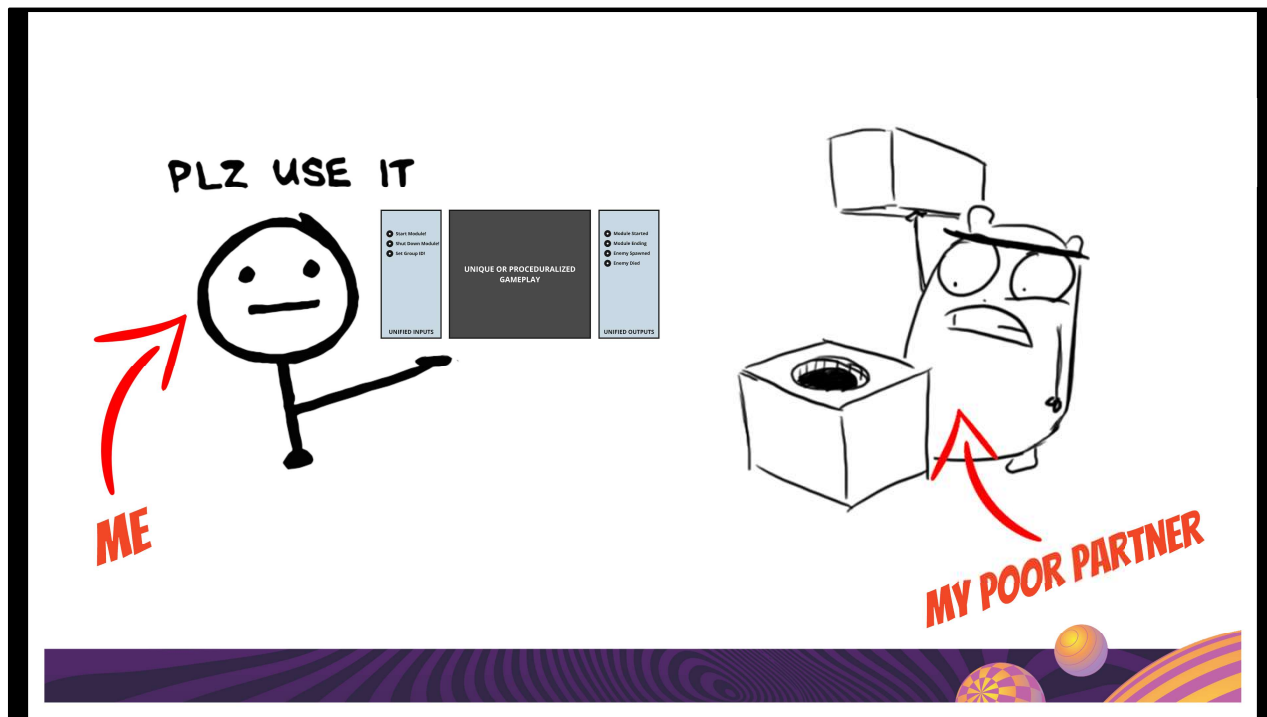
Very early in in the project, I was paired with a level designer to work on some experimental multiplayer content. This was a brilliant designer who had done some great work for us on Shadow of the Tomb Raider. He was (and still is!) very, very experientially minded. And he wanted to sketch and iterate fast, like the designer who created the Oni Stalker. And I wanted to see if could patternize things for him to make his life easier.



*Example diagram from a prototype combat manager gameplay module*

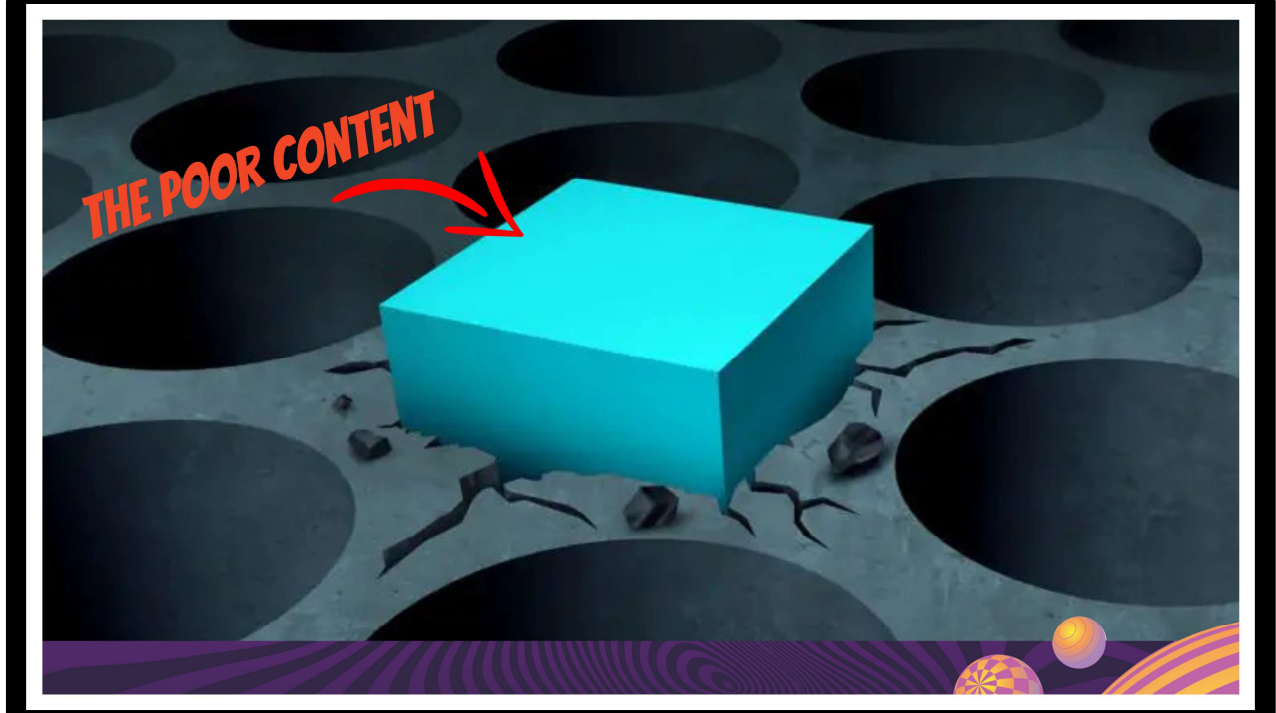
In these early days, we were trying to find ways to make it easier to prototype multiplayer content in an engine that was still developing multiplayer content workflows. To help this, I had created networked gameplay modules to chain meaningful gameplay chunks together. It's a pretty classic idea; nothing terribly revolutionary. At this time in development, lot of the onus was on scripting to curate when data was synchronized and how. I wanted to take that burden off my creative partner.

Ultimately, though, all I did was give him a rigid framework to work within, and the black box concept made it far too hard for him to get those fine iteration cycles that I showed in the Oni example.



Content patterns and modules are great for stability and scalability, but they're rarely for good sketching out an experience before you know what it is. A lot of technical designers learn this the hard way, and I am no exception.

In my enthusiasm to make my partner's life easier, I'd failed to make sure I knew what he was trying to achieve. This resulted in wasted time, stifled creativity, and frustration between us. Not only had I skipped the critical step of asking "What are we trying to achieve together?", I'd also given him wholly the wrong set of tools to create with.



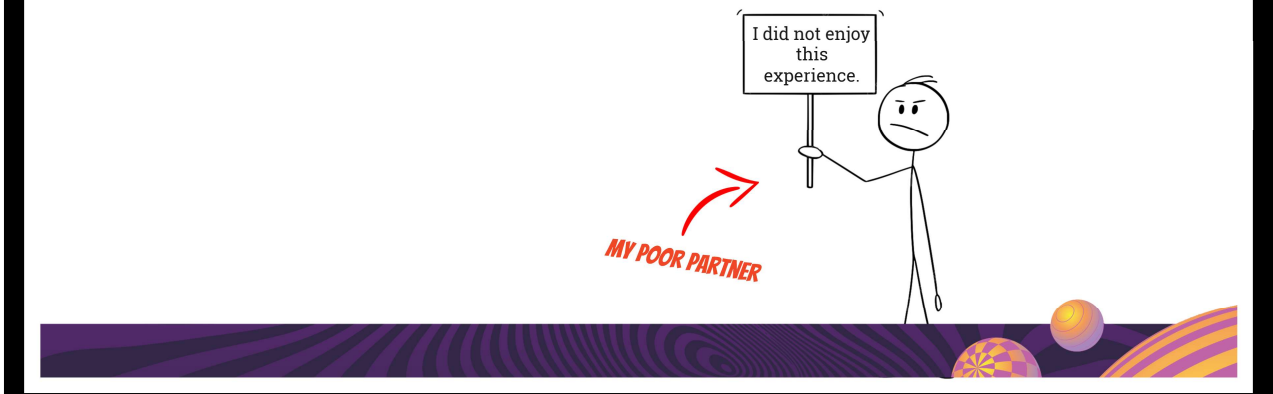
Worse, we kept trying to use the bad patterns, rather than taking a step back and going, "Well hold on, should we try something different?"

And it showed in the content we created back in those early days. It took too long to make, it didn't hit right, and we struggled to get something really compelling on screen. We fought the patterns more than we used them.

## LESSON 3

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If your patterns make realizing the experience harder, **they are bad patterns.**



Content patterns absolutely rock when they're used properly. They can reduce risk when fixing bugs, they can speed up content creation velocity, and they can make it easier to onboard new developers when production is in full swing.

But, it's important to resist the urge to lock down patterns too quickly. Doing so before your game really knows what it is risks fighting against them. Patterns are powerful, but they are most effective when they crystalize naturally as the game forms its identity.



To quickly review the three lessons:

<CLICK> LESSON 1: Players won't remember your beautiful, orderly code; they'll remember how the game made them feel.

**Absolutely champion your project's technical needs, but stay aware of your game's experiential goals and your remaining timeline.**

<CLICK> LESSON 2: **Iteration is messy**, and mess is part of the process of realizing great gameplay.

**Set aside time to be messy, and set aside time to tidy up. Don't try to do them at the same time.**


<CLICK> LESSON 3: If your patterns make realizing the experience harder, **they are bad patterns.**

**Remember to spend time collaborating with your partners on their problem, and avoid imposing structure too soon if the problem itself isn't clear yet.**

# THANK YOU!

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*Now stop worrying and go forth and make great gameplay!*

 @alishathayer.bsky.social

So, my fellow technical designers, and friends of technical designers: stop worrying. Pay attention to the place you are in your project. Listen to your clients. Chaos and order will ebb and flow, and that's game development.

Thank you!

# **ALISHA THAYER**

**Design Director  
Crystal Dynamics**

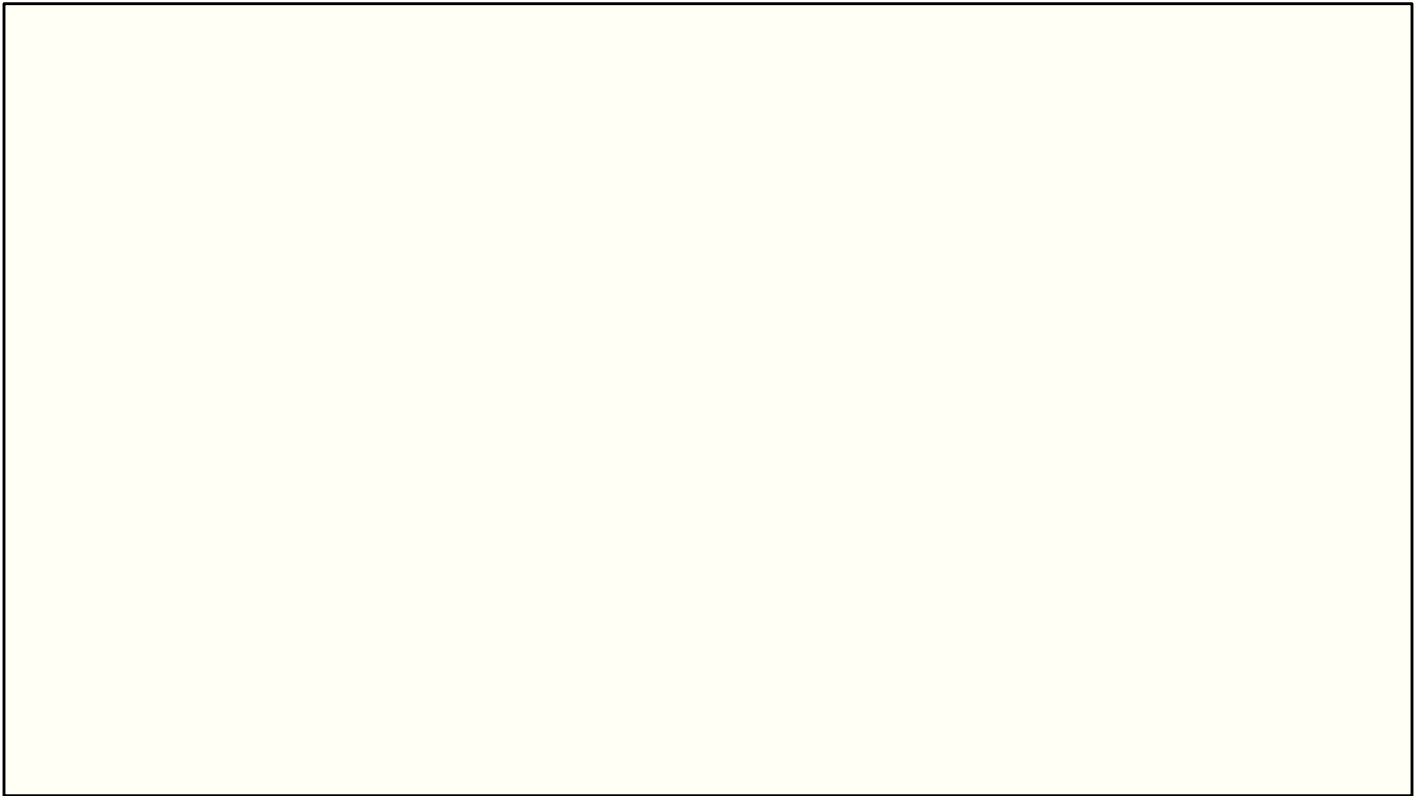
# NOAH FALSTEIN

**Founder  
The Inspiracy**

Our next speaker started off in coin-op with games like Sinistar before going to LucasArts and working on games like Indiana Jones and Fate of Atlantis to his recent work in VR/AR at Google and extensive work in the health care field.

But I wanted to do a shoutout to a series of talks he did with Hal Barwood called “4 of the Four Hundred” where they would talk about the “400 or so” game design rules that they thought existed, and which was an inspiration for this session.

Noah Falstein!



[First screen intentionally left blank]

I will start by walking to the podium and if we are introducing ourselves, say "I am Noah Falstein, professional game designer since 1980." 5 seconds

# **Make Everything as Simple as Possible...**

“Here is my rule.” (wait a few seconds for it to sink in)

“Thank you!” (turn as if to exit podium, Richard looks alarmed, waves, me back)

“Ah, sorry, I forgot the second part of the rule”

(15 seconds for this including stage business)

# **Make Everything as Simple as Possible... But No Simpler**

“Ah, sorry, I forgot the second part of the rule”

“Damn, for a moment I thought I might break a GDC record for shortest talk.”

“Let me explain why those last three words are so important.”

(10 seconds)

# Simply Unanimous



Sir Isaac  
Newton



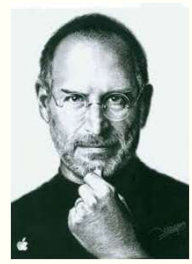
Leonardo da  
Vinci



Henry  
Wadsworth  
Longfellow



Frédéric  
Chopin



Steve Jobs

All have great quotes advocating simplicity

A lot of people much smarter than I am have championed simplicity. They come from many different professions - Science, Art, Writing, Music, Engineering - but all of them are believers in simplicity as a key virtue. If you google any of these folks with the phrase "simplicity quote" you'll get their own individual takes on this. 20 seconds

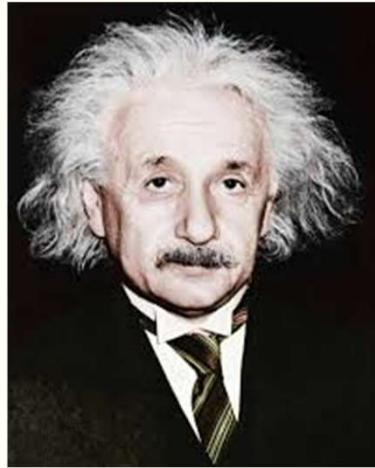
# Simplest Simplicity Quotes



K.I.S.S



Less is  
More



Everything  
should be as  
simple as  
possible, but no  
simpler

My favorite three quotes are in themselves very simple. Kelly Johnson was an aeronautical engineer at Lockheed's Skunk Works, and helped create the U2 and SR-71 spy planes. His phrase, "Keep It Simple, Stupid" is pithy, and it is even shorter as an acronym.

Mies van der Rohe was an architect, responsible for a lot of the steel and glass trends of skyscrapers in the 1960s. His phrase, "Less is More" is one word shorter than Johnson's, and is arguably the most popular simplicity quote.

But my favorite quote is this one attributed to Einstein. "Everything should be as simple as possible but no simpler". That last clause is critical, because it implies an algorithm we can apply to game design. If you just go for simplicity, you end up with my initial ten-second talk, and you won't learn HOW to simplify, or when you've

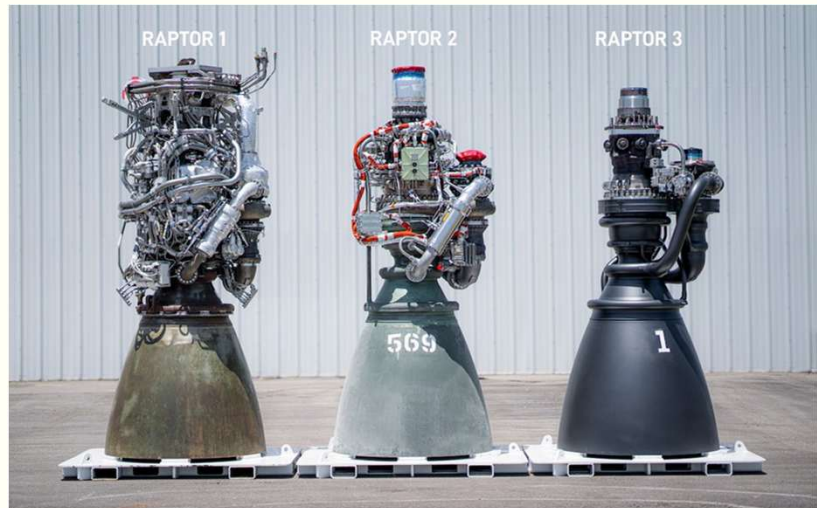
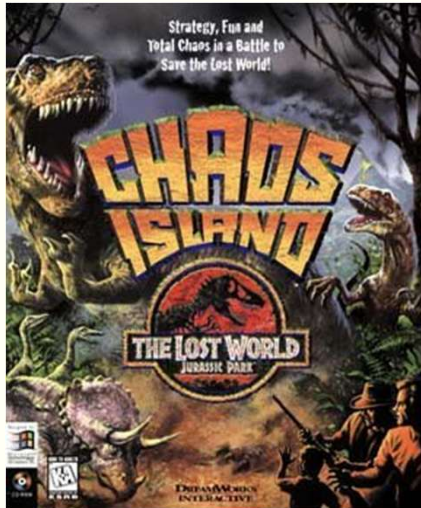
gone too far. 60 seconds

# Learning through mistakes



Before I learned to follow the wisdom of others, I had to screw up on my own. My first published game, the arcade game Sinistar, came out in 1983. I was the project leader and co-designer, and wrote the enemy AI as my major coding contribution. We had a 1 megahertz 6809 processor, and at its peak there were as many as two dozen enemy ships, many asteroids and crystals and shots flying, and the boss enemy Sinistar all carrying out a variety of missions. I was very proud of that AI, it was complex, detailed, and efficient - but it took a long time to create and a lot of our precious RAM to function, and most importantly was nearly invisible to the player. From then on when I found myself tempted to make a complex solution to a design problem, I looked for ways to simplify it. But it was Einstein who provided the best - and simplest - approach. 60 seconds

# Applying Einstein



That's because he says it's not enough to simplify - at some point you can simplify too much and it breaks down. I took his advice by looking at game mechanics and their interactions and cutting them back over and over - until the game suddenly stops being fun because it's too simple. Then you step back one revision and add back what you deleted.

I applied this in the development of Chaos Island, an RTS for kids from Dreamworks Interactive. This was a game where you collected dinosaur eggs while dodging both the dinosaurs and hunters out to stop you. In my first pass I thought of applying a similar structure to the one I'd used in Sinistar. But I remembered the rule, and cut out most of the sophistication, ending up with a very straightforward fight-or-flight algorithm based on dinosaur types reacting to their environment. But eventually I went to far, and their behavior was

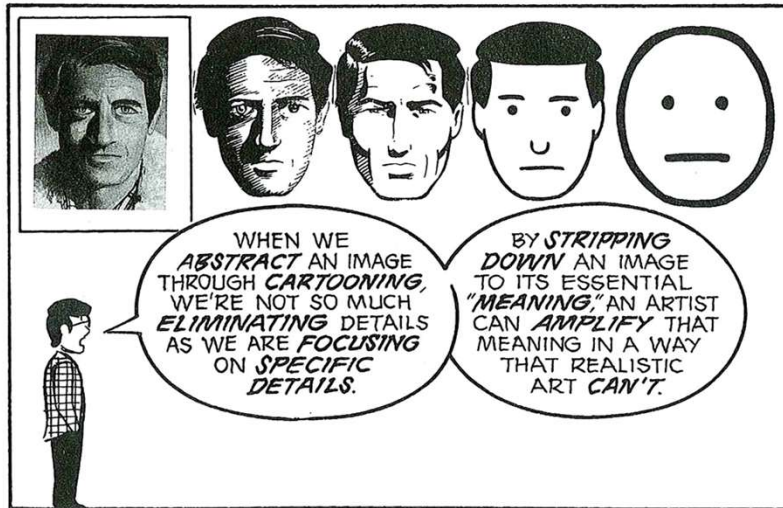
missing the fun of occasional surprise and novelty. So what I added back was a tiny bit of randomness in the otherwise very simple and predictable behavior of the dinosaurs. Players noticed the dinosaurs doing occasionally unexpected things and always attributed it to them behaving like wild animals, rationalizing patterns out of the random behaviors.

I've learned that a similar process was used in making the rocket engines shown here. Specifically their method was, "Delete any part or process that you can. You may have to add them back later. In fact, if you don't end up adding back at least 10 percent of them, then you didn't delete enough."

So it's not just good game design, it's Rocket Science. But don't apply this to any thing you can't afford to blow up while testing! Like, for instance, a government...

120 seconds

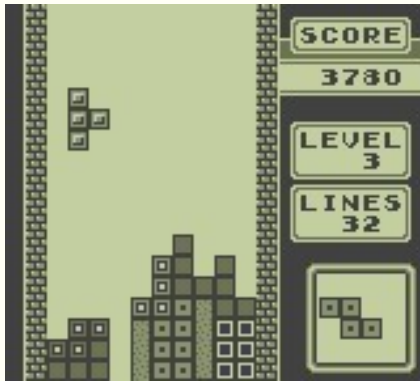
# Why is simple not so simple?



At GDC 2002 Scott McCloud and Will Wright had a presentation about McCloud's ideas in his book, "Understanding Comics". Anyone here present for that talk? One of the eye-opening moments was when Scott showed this image and explained (and I'm paraphrasing here) that a near-photorealistic image is hard for people to personally identify with, so it's good to simplify it - but if you go too far you end up with basically an emoji that has no personality at all. So you use the Einstein rule and step back up in complexity a bit to where it works for your purpose. But what's going on beneath the surface here? Simplicity is a great virtue, but are depth of play, and variety. When a game gets too simple and repetitive it can become boring. Finding ways to make a game simple to understand but deep and varied over time is challenging, but not impossible. Here's one of the best methods:

60 sec

# Emergent Complexity



Tetris is a classic example of a game that succeeded with elegant simplicity and was a huge hit. But is it too simple, just increasing speed to add difficulty? There have been many successor versions that tried to add 2 players or other complexities, but they never exceeded the original game's popularity. By contrast, there was Bejeweled that helped establish the elegantly simple match-3 mechanic, but it took Candy Crush Saga to make it fun throughout thousands of levels, by gradually introducing new rules, objectives and mechanics that interact in various ways with previous rules. That creates emergent complexity, where complex behaviors and patterns arise spontaneously from the interactions of simple components, resulting in a whole that is more than the sum of its parts

60 sec

# When Simplicity Succeeds



Two classic examples of games that have kept players interested over many lifetimes with emergent complexity are Chess and Go. They share the concept of simple boards and simple rules, and also share the quality of being multiplayer. In video games multiplayer can complicate development, but it means that with human opponents you have almost infinite variety of possible strategies. They also both have emergent complexity, where the simple rules and boards have room for billions of different configurations that can play out, providing depth without adding complex rules or unit types. These qualities have kept them popular for thousands of years.

30 sec

# Simple Conclusion

- 1) Find the fun**
- 2) Add improvements**
- 3) Simplify until it breaks**
- 4) Restore the last subtraction**
- 5) Repeat from 2 until you're satisfied (or broke!)**
- 6) Bonus: Emergent complexity FTW**

So to sum up - Simplicity as virtue in games as well as other endeavors has been widely praised throughout human history. But it can go too far, with excessive simplicity making a game boring or repetitive. An effective approach is to simplify until you reach a point where the game is no longer working or fun, and to add back the last element you removed. But keeping aware of what you can lose through excessive simplification - for example novelty, variety, and depth - and finding simple ways to add them can result in games that can last for centuries. So remember to keep it as simple as possible - but no simpler!

40 sec

# **NOAH FALSTEIN**

**Founder  
The Inspiracy**

# **CARLA ENGELBRECHT**

**CEO & Founder  
Betweened**

Our next speaker is the CEO of Betweened, which helps parents navigate the digital world and gets kids to develop good media habits. She was head of the interactive storytelling department at Netflix, and wrote the book “Designing Games for Children”

I give you, Carla Engelbrecht!

----

Dr. Carla Engelbrecht is an internationally recognized

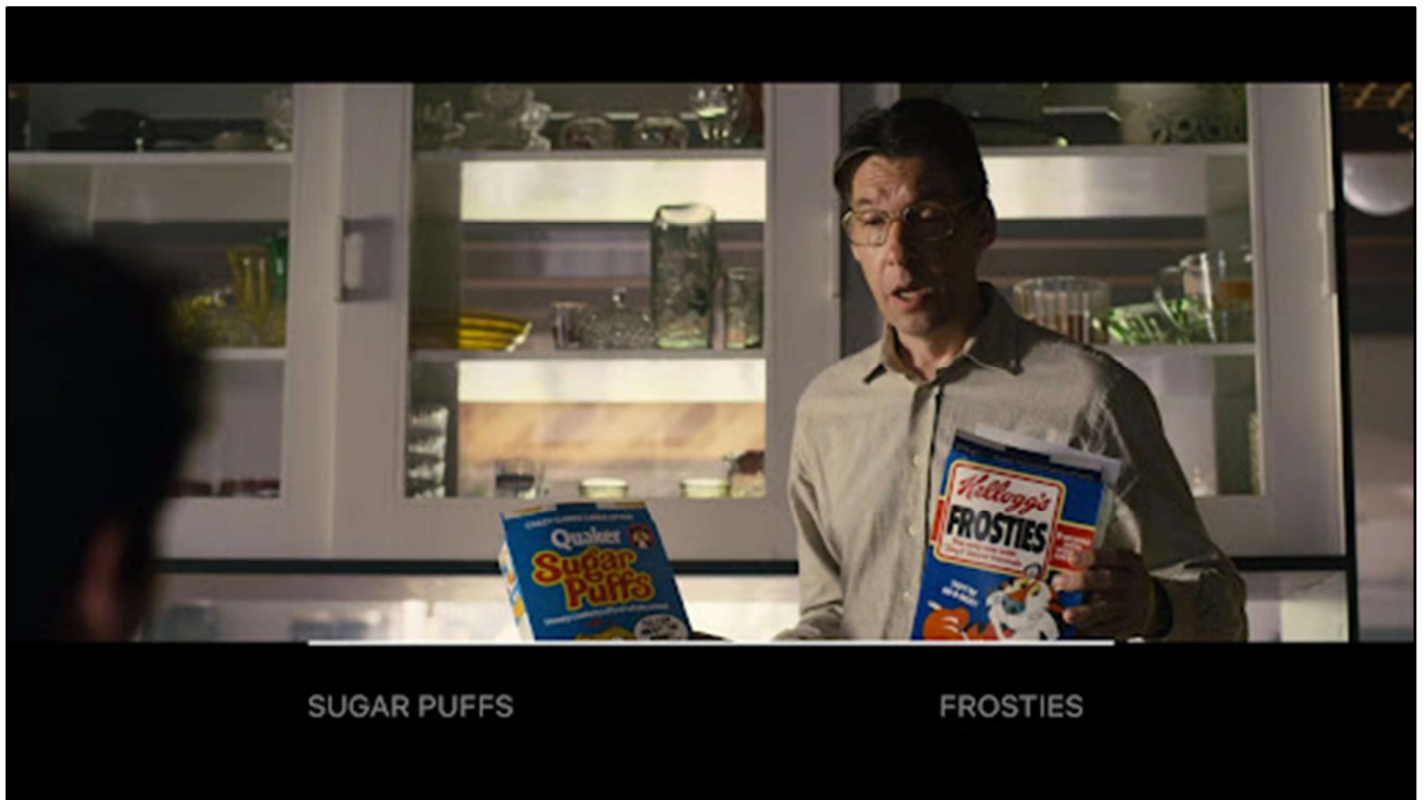
expert in developing interactive and educational media and games. She is CEO & Founder of Betweened, helping parents navigate the digital world and kids develop mindful media habits for life. She led the interactive storytelling division at Netflix, which includes Emmy-awards winning *Black Mirror: Bandersnatch* and *You vs Wild* with Bear Grylls. Previously, she founded the game design firm No Crusts Interactive and worked for Highlights for Children, PBS KIDS, and Sesame Workshop.

She is the author of *Designing Games for Children: Developmental, Usability, and Design Considerations for Making Games for Kids* (Focal Press 2014) and holds a doctorate in instructional technology and media from Columbia University as well as a master's degree in media studies from the New School University. In her free time, she performs improv comedy with ComedySportz San Jose, makes all sorts of jam from her fruit trees, and has been known to make balloon animals and hats, which no longer amuses her teen daughter.



**Ruthlessly Prioritize  
Your Wildest Imaginations**

*Carla Engelbrecht*  
*carla@btwnd.com*



SUGAR PUFFS

FROSTIES



A NETFLIX INTERACTIVE FILM

# BLACK MIRROR BANDERSNATCH

▶ Play

More Info

In 1984, a young programmer begins to question reality as he adapts a dark fantasy novel into a video game. A mind-bending tale with multiple endings.



## Popular on Netflix










### Children Playing Wii Boxing

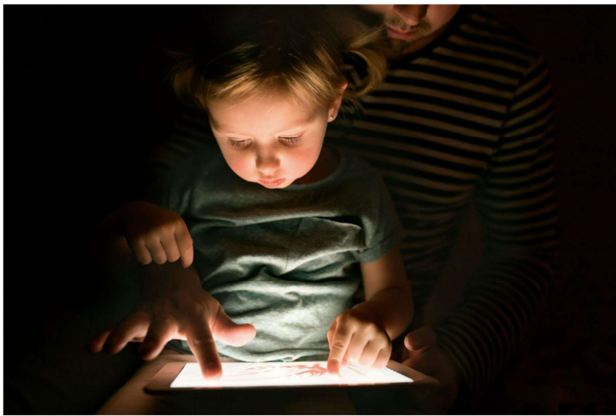
23K views · 14 years ago

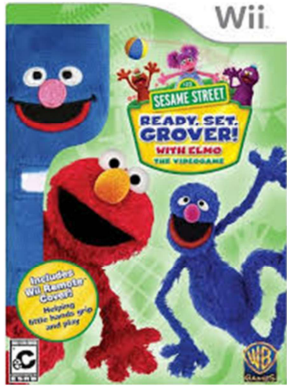
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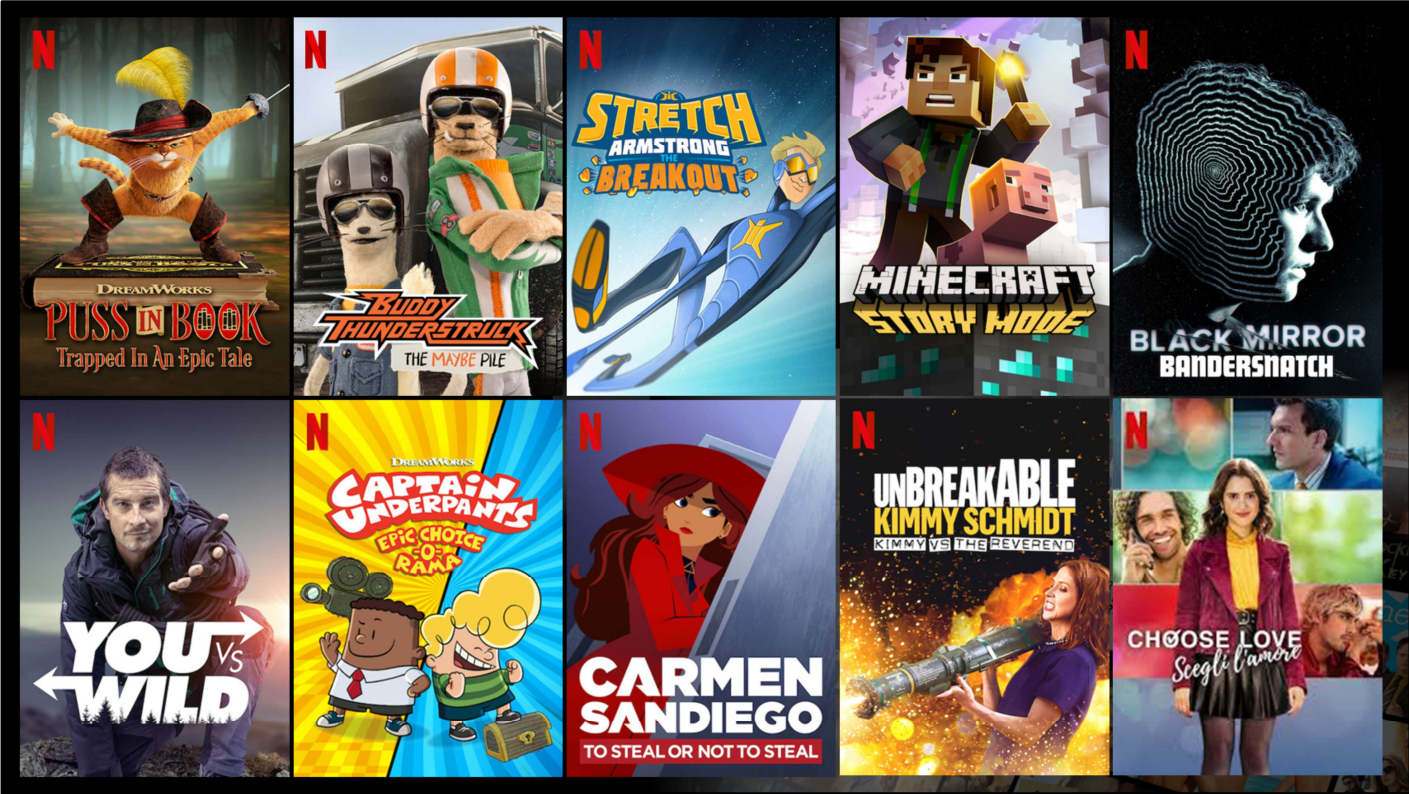
My children were really getting into the Wii boxing video game.







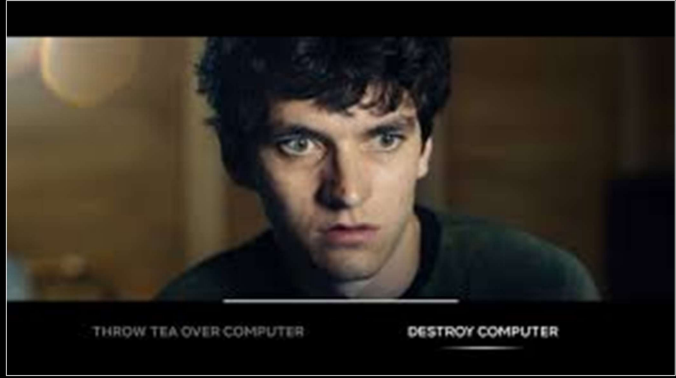


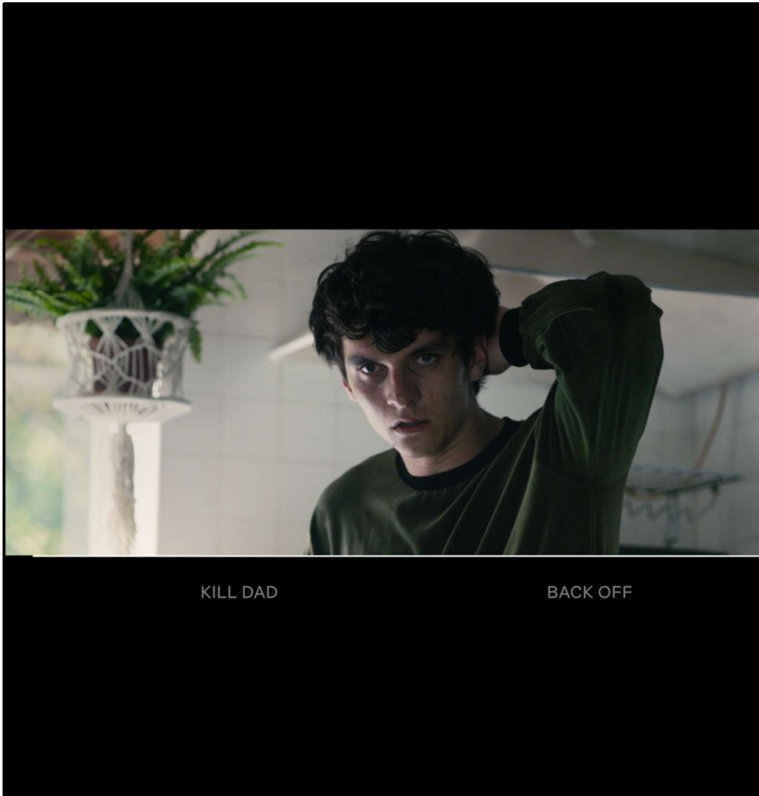


## Constraints

1. Must work on majority of devices
2. Must be seamless for most streaming conditions
3. Majority of viewers must make choices







KILL DAD

BACK OFF

# BANDERSNATCH

POSSIBLE ENDINGS

By @tkbrinkCoke







**Ruthlessly Prioritize  
Your Wildest Imaginations**

*Carla Engelbrecht*  
*carla@btwnd.com*

# **CARLA ENGELBRECHT**

**CEO & Founder  
Betweened**

# HARVEY SMITH

**CEO / Creative Director**  
**<unannounced>**

Our last speaker has led the design on everything from Deus Ex to Dishonored, and I am looking forward to his next immersive sim. He's warned me he may go a little long so let's get going with....

Harvey Smith!

# Design for Layered Depth

*short, simple talk*

*thoughtful interconnection*

**game systems, level design, and narrative**

creative play and player improvisation

***deep memorable experiences***

Hi, this is a short, simple talk about the thoughtful interconnection of **game systems, level design, and narrative.**

And how you can support *creative* play, leading to deep, memorable experiences.



I'm Harvey smith.

I'm best know for the **Deus Ex** and **Dishonored** games.

There have been highs and lows across my 31 years in games.  
***But the high points have involved games made with the 'decision-rich' approach covered in this talk.***



I think my strongest influences are **immersive 'you are there' simulation games and D&D.**

***Developers with different creative roots will come to different conclusions.***

**But we have limited time, so let's go.**

## Decision-rich Game Design

### 1. **Nonlinear, explorable space**

2. *Finite resources*

### 3. **Reactive physics**

4. *Sensory-based AI*

5. *Tactical space*

### 6. **Embedded narrative**

The Core Idea is to layer your game space with **decision-rich game design**.

And, importantly, we want these techniques applied to thematically-curated game elements.

Not just 'player freedom,' and lots of player decision making, but ***player freedom within a curated space***.

This is not an exhaustive list.

During this short, 10-minute talk, we'll cover some of these, fly through others, and ***expanded notes*** will be available online.



As with this Dishonored 2 GIF, ideally a game's **level design space and its systems** feature all these elements, almost all the time.

You know, *the player is faced with a locked door, but gets distracted and wants to see what is scrawled on wall, but has to move a barrel aside, which rolls and makes sound, attracting a nearby enemy, who has the key to the door on their belt...*and so on.

The player as agent, with systems and rules interacting around them.

*Sort of chaotic, and it asks more of the player, but fun if done right.*

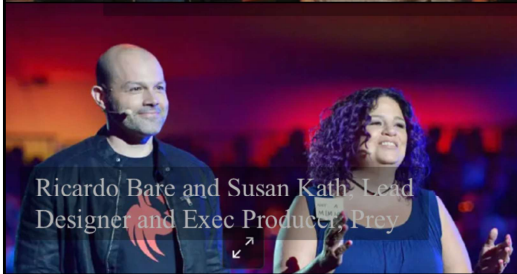


I'm going to use **PREY (2017)** for this, because i love it. It's practically the *poster child* for this kind of layered design approach.



**PREY (2017)** is a game by the late, great Arkane Austin, and yet it's a game *I DID NOT WORK ON*, which makes it a pleasure for me to look at.

## Prey Creative Leads (and Producer)



1. **Nonlinear, explorable space**
2. *Finite resources*
3. **Reactive physics**
4. *Sensory-based AI*
5. *Tactical space*
6. **Embedded narrative**

For this talk, I chatted with the creative/design leads of Prey, **Raphael Colantonio and Ricardo Bare.**

And the Producer, **Susan Kath**, getting quotes from each of them.

## 1. Nonlinear, explorable space



Prey is full of interconnected, circular space, where you can often see different points of interest from where you are standing. What is the impact on gameplay?

This approach lets the player 'read' their immediate surroundings, and pick a direction; to **pick things to care about**.

Not *infinite* directions, but a set of ***carefully curated and presented areas***.

Instead of 'run forward toward obstacle or prize,' you have a deeper level of engagement.

I am a big believer in this idea: ***When the player makes decisions, they become more invested in the work.***

The commitment to their decisions and style of play becomes an expression of that person.



## 1. *Nonlinear, explorable space*



In some games, open space is not very densely populated. It's just space.

In *Prey*, each area has challenges, resources, new narrative bits, and its own ***character***.

There are options:

*Engage directly.*

*Engage indirectly through stealth, distraction, or other trickery.*

*Or do not engage at all.*

## 1. Nonlinear, explorable space



At any given point aboard Talos I, do I open up the locked room I've found because I see something valuable inside?

Do I first secure the area, setting up security systems to deal with the hostiles?

Instead, maybe I just try to get to someplace that looks challenging to reach.

Every step of movement through space like this becomes more meaningful because I can see multiple options.

I have to decide where to go and what to act upon, which builds *my* investment.

I begin to own this experience.

## 2. Finite resources



There's nothing wrong with infinite ammo or recharging shields, if that suits your creative vision.

But...

In Prey, the decision-making around how to spend finite resources has consequences, and **encourages measured, creative thinking.**

There are food and health items, various forms of ammo, resources for repair and technical manipulation, etc.

And the player is given both a crafting system and novel ways to convert resources from one type to another.

Another core belief of mine is that **any time you can get the player switching from one pleasurable type of gameplay to another, the game feels 'deeper', less one-note.**

Resource management challenges and pleasures another part of the player-brain.

## 2. Finite, manageable resources



Another angle, from level design: Often resource placement draws players off the beaten path.

You can pull players toward interesting spots in the world. (Or, if you make heatmaps of playthroughs, toward under-explored parts of the world.)

Here we see multiple wondrous game design elements on display. (Explain animation.)

The player is often seeking resources, spending resources along the way, and in this case converting less meaningful objects to more meaningful objects.

*(lol, bye mimics, hello ammo.)*

This is another form of player creative control, resulting in player

ownership of the experience.

### 3. Reactive physics



Let's talk about the role of physics, both incidental and player-manipulated, in creating gameplay opportunities.

Physics interactions are some of the most dynamic elements in games.

In Prey, we're not just talking about crates and barrels and ragdolls, but about hardening foam that can be used for navigation/climbing, defensive barriers (both erected by the player and by the level designer to be broken down by the player), enemies that bump into physics objects, but also become physics objects, making you wonder what is real and what is not.

### 3. Reactive physics



Wendy White was the engineer who dedicated years of her life to the gloo gun, and here we see a player just making a new path, ***meaningfully spending finite resources to manipulate physics.*** These elements continue to layer. It's hard in Prey to talk about just one thing without it spilling into something else. Here we are talking about physics, but also exploration of nonlinear space, because the player is going vertical, and doing so in a way that consumes precious resources.

Again, minute to minute decisions are required of the player, building ownership and investment. The player can say, ***I did that. Your solution was different than mine.***

And also again, switching from one pleasurable type of problem solving to another, providing a deeper experience.

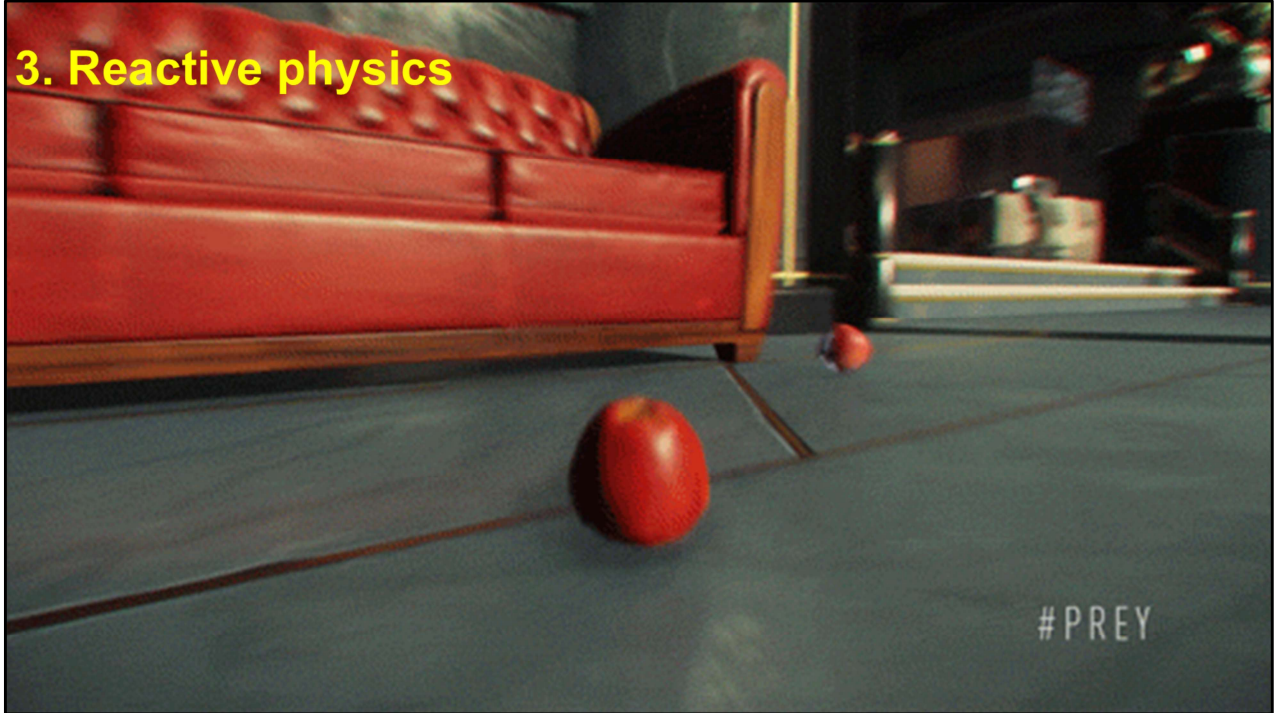
**Raphael Colantonio**  
**Creative Director, Prey (2017)**

*One of the things I love in our games is when people go, "Oh shit, that worked?!" It's important to tell the story through the player's actions, not through cinematics. Breaking the glass near the start [of Prey] was powerful because it happened through player action, at the player's pace. And for that to work, you have to have an environment full of narrative-rich gameplay interactions.*

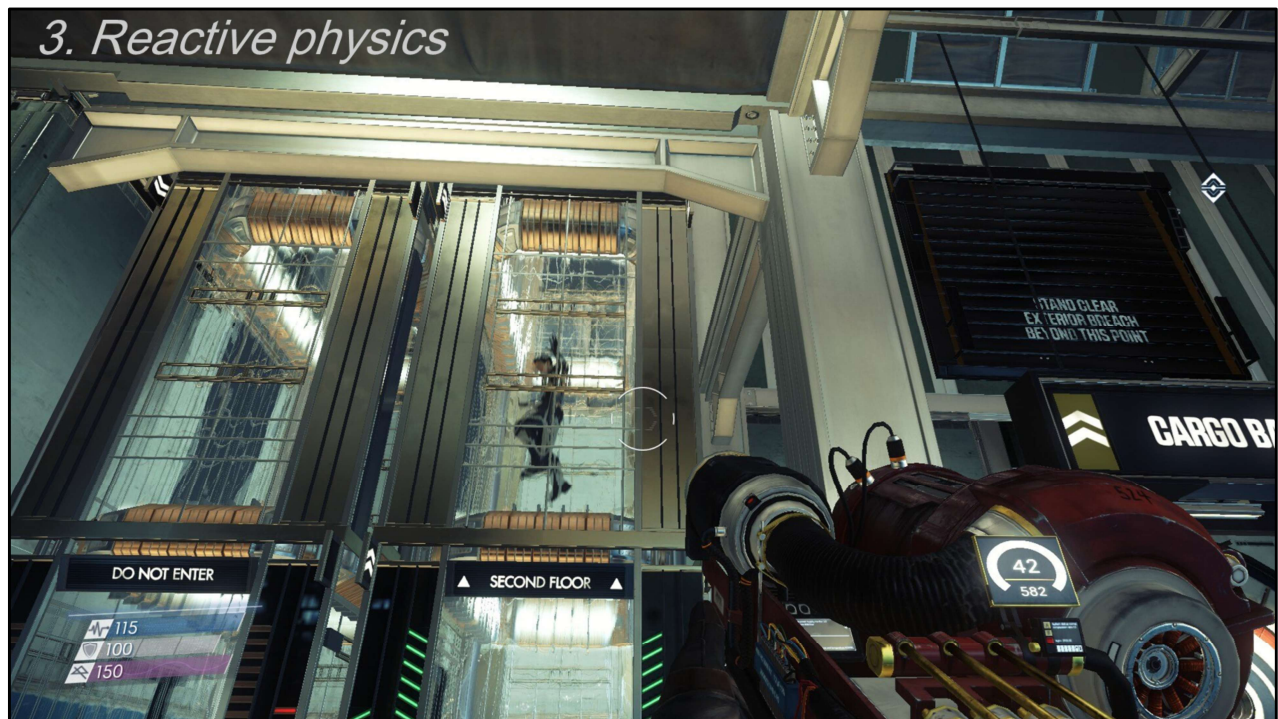
I go to coffee or dinner with Raf about once a week.  
Chatting with him on the topic, he said this:

*One of the things I love in our games is when people go, "Oh shit, that worked?!"  
TO US, it's important to tell a story through the player's actions, not through  
cinematics.  
Breaking the glass near the start [of Prey] was powerful because it happened  
through player realization and action, at the player's pace. And for that to work, you  
have to have an environment full of narrative-rich gameplay interactions.*

### 3. Reactive physics



Here, a player with mimic powers has become an apple, rolling and bumping into another apple, or is it a mimic pretending to be an apple?



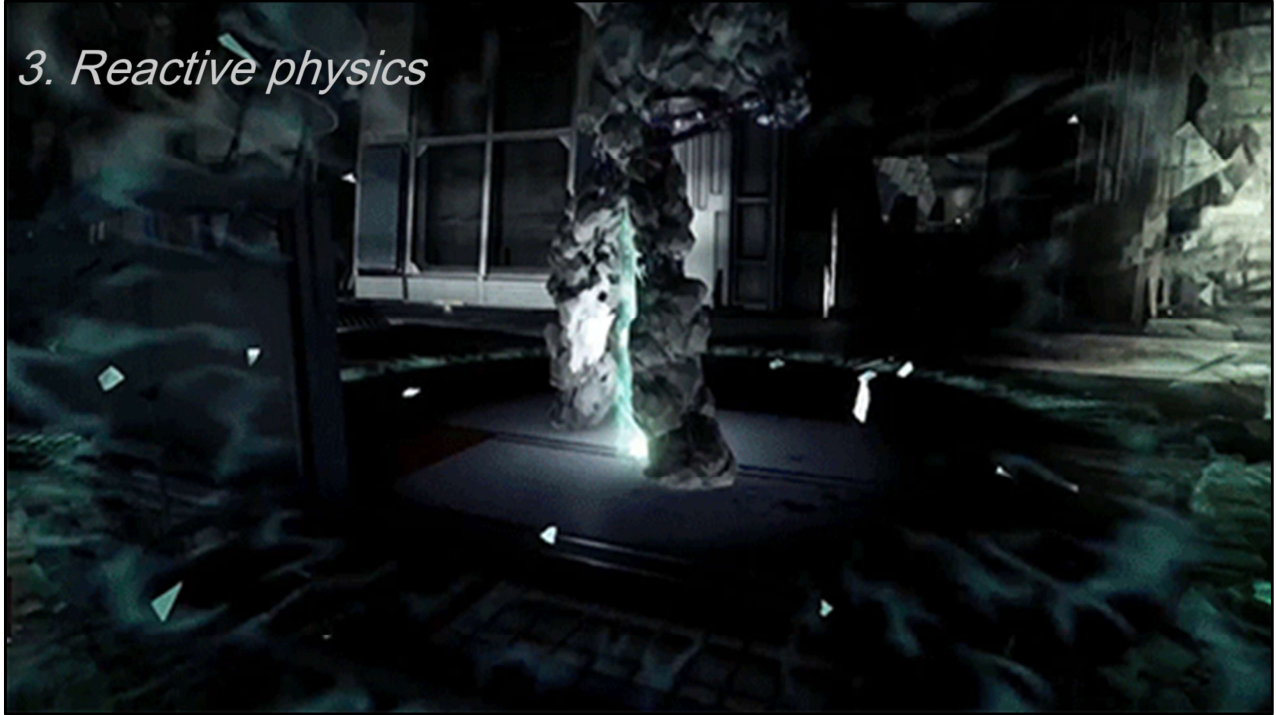
I've mentioned this is not just a "simulate everything" approach, but carefully curating what matters and what is modeled, according to setting, aesthetics, thematics, and so on.

Narratively, as a space station game, gravity is important in Prey. (Thus 'grav lifts.')

But ofc with a simulation approach, these lifts interact with objects and enemies, not just the player.

Another potentially useful decision/action. Another moment the player owns.

### *3. Reactive physics*



Someone got glooed up, then sent flying.

## 4. Sensory-based AI



Another highly dynamic element: Analogue, sensory AI.

This is not just 'enemies that attack based on rules,' but entities that add depth to the experience through their ability to ***see, listen, and be distracted.***

And in the case of Prey, enemies like these mimics are tightly wound together with physics objects.

Because they can 'become things' and it's a bit of KIM'S GAME to remember whether that chair was really there before the fight, they engage the ***player's*** ability to see, listen, and be distracted.

**Susan Kath**  
**Exec Producer, Prey (2017)**

*I always remember the mimics LIVING the Arkane design philosophy of improvisation, with their AI. When I saw the dev team being surprised over and over by the mimics, I knew we had something special.*

I got a quote on this from Susan Kath, Producer, because it's ofc critical that the producer be **on board** with the creative goals:  
*I always remember the mimics LIVING the Arkane design philosophy of improvisation, with their AI. When I saw the dev team being surprised over and over by the mimics, I knew we had something special.*



Here I think the player has set a trap, which distracts the mimic, so that it comes to investigate, setting off the trap. Deeper engagement.

## 5. *Tactically advantageous space*



Level design and world building that takes into account tactical considerations just feels right.

That's because we exploit it intuitively, at our most ***'we are still kids playing hide and seek'***.

And that is just modern game designer code for ***'we evolved as tasty animals being hunted by hungry, larger animals.'***

This kind of planning for architecture and object placement allows the player to make even more pivotal decisions, utilizing high points, cover areas, exploiting explosive objects more effectively, and offering vantages for observation and plan formulation, and offering routes for escape.

(Step one is coming into an area and feeling relatively safe; giving the player a chance to read the environment. Not constant action.)

## 5. *Tactically advantageous space*



Hazards are part of this.

In Prey, pipes work for 1) navigate, providing signposting, 2) they grant the player a pathway above the ground, and 3) they can release fire and other substances.

Prey uses objects in clear, consistent ways, by rigorously controlling when and how these objects are placed. These are not just “art assets,” they are an important part of the gameplay vocabulary, aiding the game systems in talking to the player.

Fire jetting from a pipe can be a hazard, or it can be exploited tactically against passing enemies.

## 6. Embedded narrative



Narrative is too large to cover in a few slides, but **so are all these topics, and *this is a 10 minute talk, so let's goooo.***

It's a classic, but ***as a game developer*** you can engage players by **letting them interpret the location.**

You can **react narratively to their choices, changing outcomes.** (See, Dishonored also.)

The narrative elements help curate the game, aligning the player's problem-solving options and decisions with the game's themes. **You** are making choices, as a narrative designer, that help **the player** see what choices they can make; to see the narrative possibility space.

To understand what this game is about; ***where its soul resides.***

## 6. Embedded narrative



As a narrative designer, you are enabling players to ***infer and interpret*** story (plot, character, setting, and thematic), instead of spoon feeding them.

You are enabling them to ***glean and puzzle over details from the environment***, enhancing their engagement because they are actively involved in the process.

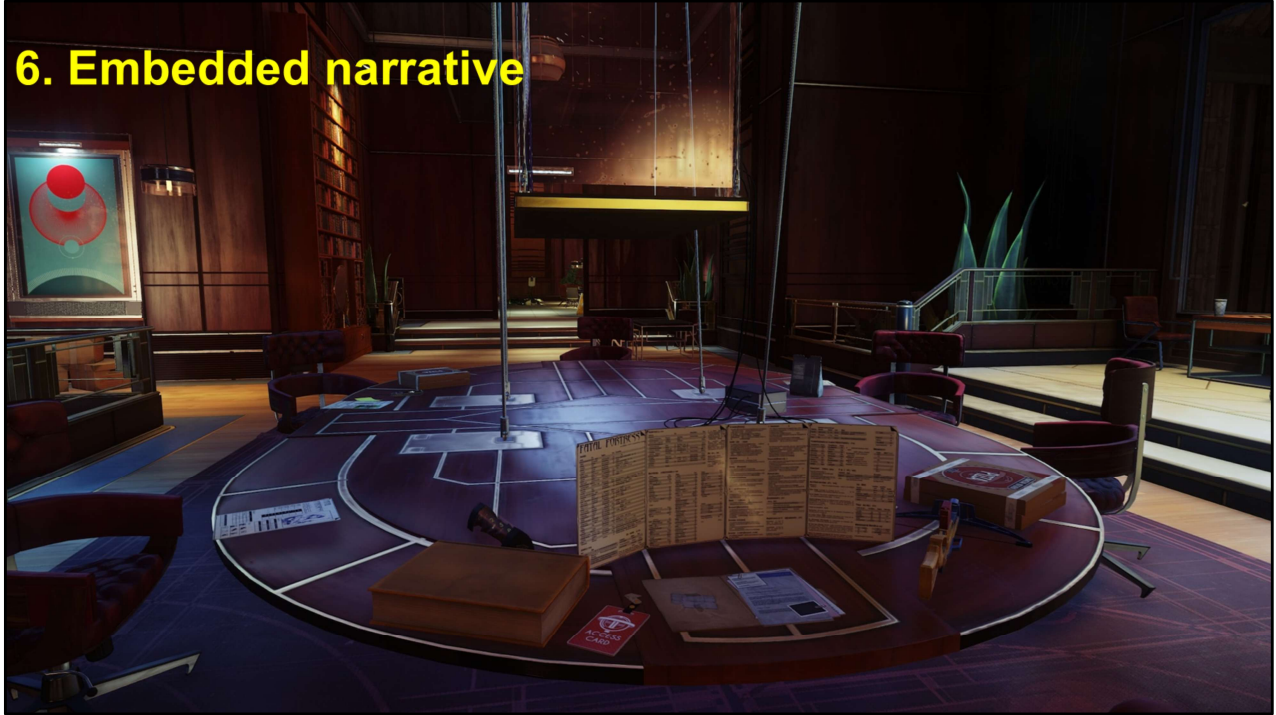
**Ricardo Bare**  
**Lead Designer, Prey (2017)**

*Everything around you has been considered so that it has a purpose and a reason for being there. It's specific, not generic. From broad design stuff, like "how do they recycle food and water here?" to local details like, "why is the furniture in disarray in this room?" As an exercise, our level design team answered the question, "What were the people in this space doing during the last hour of their lives?" and then we populated the space with details to support that story.*

When prompted about this, Ricardo said:

*Everything around you has been considered so that it has a purpose and a reason for being there. It's specific, not generic. From broad design stuff, like "how do they recycle food and water here?" to local details like, "why is the furniture in disarray in this room?" As an exercise, our level design team answered the question, "What were the people in this space doing during the last hour of their lives?" and then we populated the space with details to support that story.*

## 6. Embedded narrative



This is about environmental inference. What were the people living here like?

Did they play role-playing games on company time?  
And importantly, was it 5e or OSR 1<sup>st</sup> Edition?

## 6. Embedded narrative



The props and object placement in Prey are constantly reinforcing the game's subject matter and themes.

*Technology at the cost of humanity. Invasive dark science.*

*Technocratic control.*

*How people find relief from all this darkness and oppression.*

*Identity. What is something, what is it not?*

*Empathy. Who has it and is it even valued?*

## Decision-rich Game Design

- 1. Nonlinear, explorable space**
- 2. Finite resources*
- 3. Reactive physics**
- 4. Sensory-based AI*
- 5. Tactical space*
- 6. Embedded narrative**

(Again, not an exhaustive list.)

This is, to be clear, not just a "kitchen sink" approach, where you throw in everything.

It's about making sure a space invites the creative, expressive thinking and problem solving that arise from objects and spaces having **multiple harmonious uses, or meanings.**

The Core Idea is to let the player clearly read, understand, and interact with the following (non-exhaustive) techniques.

But importantly, they relate to thematically curated game elements. Not just 'player freedom,' but player freedom within a curated space.



## Conclusion: Impact on Player Experience

This design approach, where you **layer your game with decision-rich elements**, can evoke feelings of expression, discovery, mastery, ownership, and increased emotional and cognitive investment through **learning via gameplay**.

These types of game spaces allow players to toy with things, to experiment, and to fail or succeed because of knowable, consistent rules of interaction.

This layered design approach, composed of **decision-rich elements**, evokes powerful feelings in players.

Feelings of expression, discovery, mastery, ownership, and increased emotional and cognitive investment through learning via gameplay. It allows players to toy with things, to experiment, and to fail or succeed because of knowable, consistent interaction rules.

All video games touch on some or all of these feelings, but we should take a very deliberate approach here, thinking about our use and arrangement of these layered design elements, and their significance when working together.

This is a way to create a space that feels rich and deep, and begs for player-paced exploration and toy-like experimentation. To do so is another way to design for player investment and

engagement. The goal is making games that stay with players for years, maybe even after you're gone.

# **HARVEY SMITH**

**CEO / Creative Director**  
**<unannounced>**

# **KEEP DESIGNING GAMES**

Remember everyone, you're not broken

No matter what's going on in the world, if being creative to you matters

Keep designing games

# Rules of the Game 2025

With your host **Richard Rouse III** @richardrouse.bsky.social

**Chandana Ekanayake**  
@ekanaut.bsky.social

**“Create Intentional Friction to Build Emotional Resonance”**

**Alisha Thayer**  
@alishathayer.bsky.social

**“Learn to Stop Worrying and Love the One Off”**

**Noah Falstein**  
@nfallstein.bsky.social

**“Make Everything as Simple as Possible... But No Simpler”**

**Carla Engelbrecht**  
@carlaeng.bsky.social

**“Ruthlessly Prioritize Your Wildest Imaginations”**

**Harvey Smith**  
@harvey1966.bsky.social

**“Design for Layered Depth”**

**Slides at: [www.paranoidproductions.com](http://www.paranoidproductions.com)**

**GDC**

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SAN FRANCISCO, CA

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Thanks for reading!