Welcome everyone. It's good to be back at GDC in person.

I'm Richard Rouse, Studio Creative Director at FarBridge, I've been designing games for a long time, and I've been hosting this session for a number of years.

This is the session where we get some of our favorite game designers together to talk about rules that are important to them.

Rules of thumb that they use in making games.

And some the rules I've liked the best from the all these sessions, are the ones that challenge the way I think about design. Even though I've been doing it a long time.

That challenge assumptions.

A great radio show and podcast about challenging assumptions is Hidden Brain. It often discusses the surprising ways people think, the way it affects their work, their lives, their interactions with others, and society itself.

One recent episode was "Out Better Angels" - talked about how people assume that people are completely self-motivated, will try to cheat, will try to get the most for themselves at any cost.

But in fact there's plenty of examples of people behaving well. There's arguably much more people who don't try to get ahead at the expense of others.

But if you are, say, in government, and If you design a system around assuming everyone is a cheat, you punish the people who aren't cheats as well as the ones who are.

Say you are giving out services to help people who are in poverty. If you make the hoops they have to jump through via bureaucracy stringent enough, sure, you will stop some "cheats" from getting what they shouldn't, but you also make it hard for people who DO need the help, who may not have time to put up with all that red tape

And by accusing people of being cheats who aren't, you make them think, why not, everyone is assuming I am anyway. It ends up bringing all of society down.

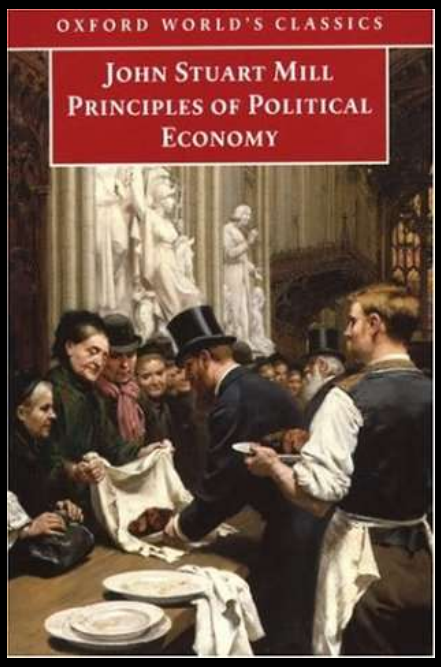
And it's funny, this reminded me of how we think of the players of our games.

Specifically this story reminded me of on The Suffering, a game that was a shooter with a strong narrative, and full of characters that you would meet, and you could decide to help them or not. Or you could kill them. These were choices that would lead to lots of different outcomes in the story, but otherwise didn't impact gameplay.

We on the dev team assumed that the player has a gun (it was a shooter), they would shoot anything that moved. This would mean they'd kill the friendly characters instead of helping them.

But that isn't what happened. Much more players wanted to help people, even though it was more work, even though losing a character might mean you have to restart your game. 2/3rds of the players were getting the "good ending" from the game, which relied on these choices.

What does it say about us as developers that we assumed that if we put a gun or a knife in the player's hand that they were going to kill everything? Players showed us that we assumed wrong.



The episode of Hidden Brain “Our Better Angels” also talked about the concept of “Homo Econimicus”

This was a concept that first took hold among Economists in the 19th century who pushed back on the philosophy of the more progressive John Stuart Mill, who believed in a more balanced interpretation of man to labor.

"HOMO ECONOMICUS"

These other economists rejected Mill and came up the theory of "economic man" or "homo economicus". Their theory was that:

- Everyone is motivated by making as much money as possible.
- Everyone completely understand the cost/benefit of everything
- And thus people act "rationally"

Entire fields have been built on this foundation, and it continues to be very popular today.

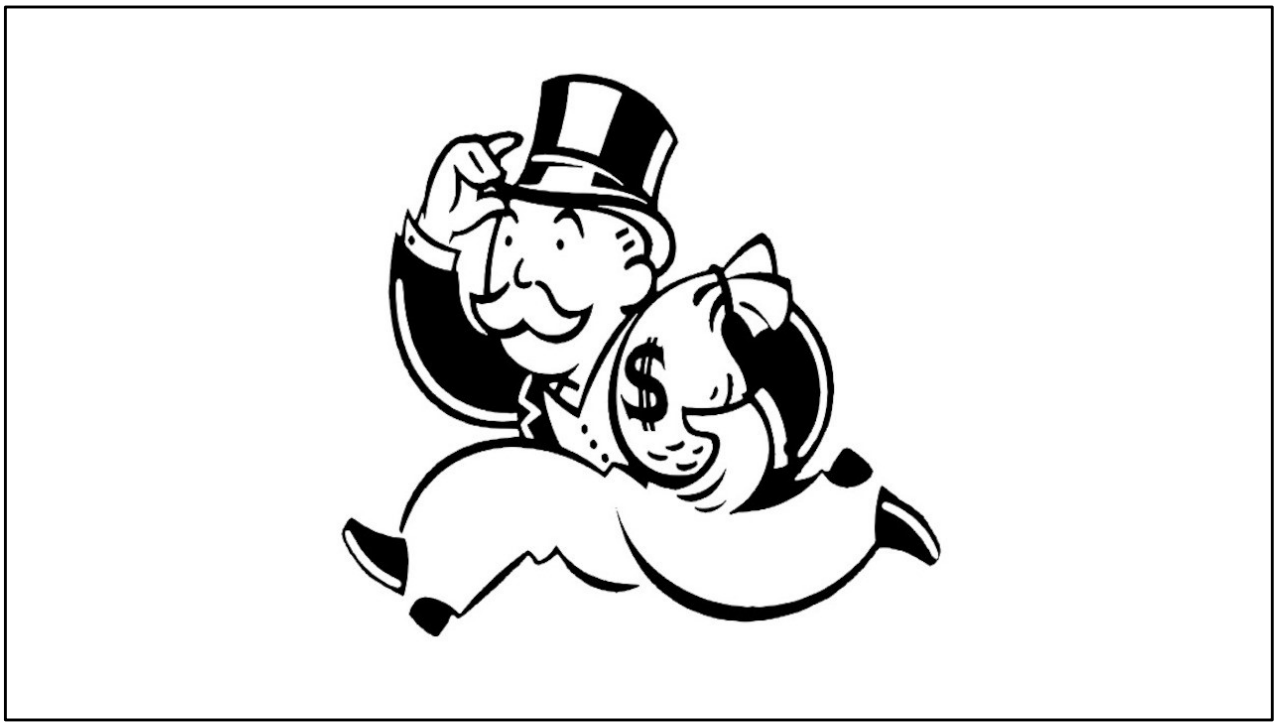
But it's very easily disproven, in tons of ways.

"So given the predominance of Homo economicus… it's interesting that the models have trouble explaining why people do lots of things. And the classic example is that you're on a trip to a foreign country. You go to a restaurant. You have a nice meal. And at the end of the meal, you have to decide whether to tip the waiter. And you're never going to see the waiter again … The rational, self-interested thing to do is to save some of your money. But many of us don't. We decide to tip that waiter anyway. And maybe some of it is habit or maybe it's guilt. Maybe it just makes you feel good. Whatever the reason, there's all this messy human stuff that seems to live outside the model of Homo economicus."

- Shankar Vedantam
Host, *Hidden Brain*

Here's a quote from Hidden Brain host Shankar Vedantam, of an easy disproof of the "Homo Economicus" way of thinking about the world.

Of course there are so many counter-examples to "Homo Economicus", it becomes laughable that anyone takes it seriously. Yet lots of economic research has been built off this fundamentally incorrect assumption.

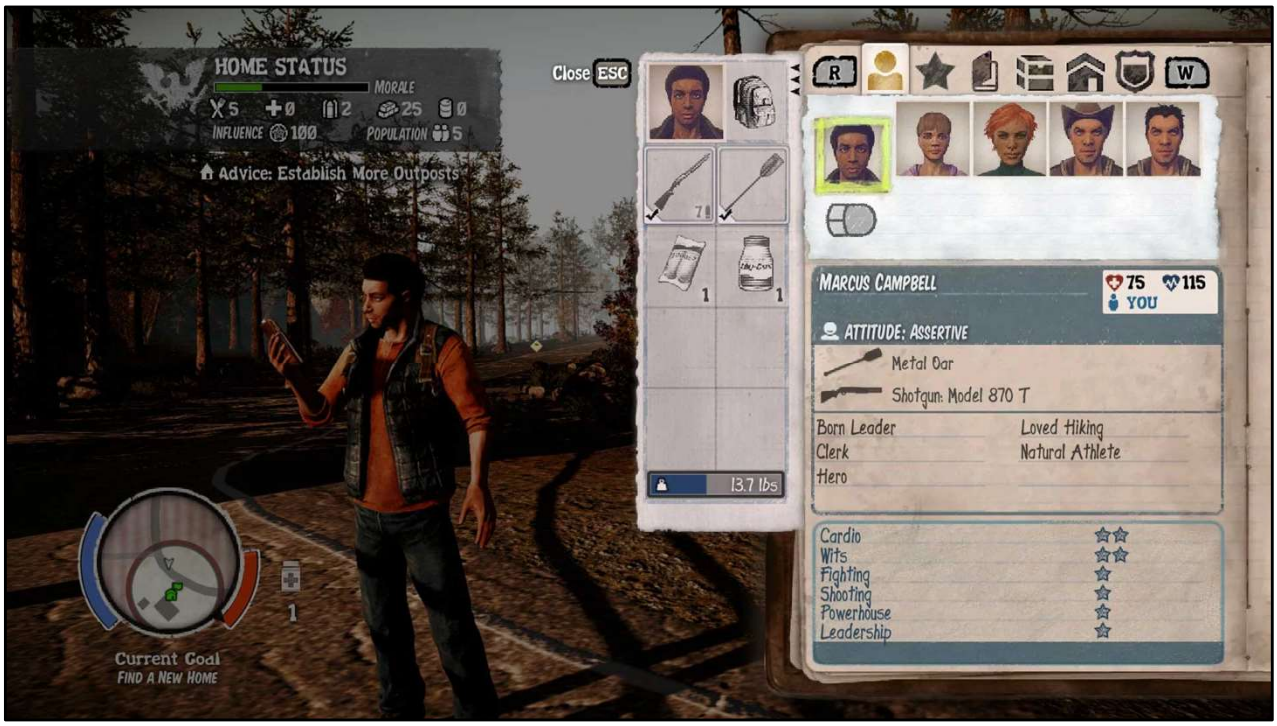


The theory of Homo Economicus is of course driven by people who think about money and profit all day long, so of course they think of humans like this. They've made the same mistake that game designers sometimes also make - assuming all players are like themselves.

And now some of those people have come to gaming. "Wouldn't it be great if you could earn money while playing?" they say. When you hear concepts like "Play to Earn" – you have to realize that these folks assume that is what everyone would want added to their games.

But a lot of game players, when they hear of concepts like "Play to Earn" in their gaming experiences are turned off of it. They have lived through auction houses and gold farming and know that introducing those sort of financial incentives don't make the games they like to play better, in fact they make them worse. Some people may like that, and maybe some games can embrace that, sure. But definitely not everyone, not every game, probably not most games.

The people who are proponents of these theories are just as guilty of assuming everyone is like them.



But I don't want to blame only the economists and investors, I think we game designers can be guilty of this "everyone thinks like me" problem as well.

This reminds me of another example from the game State of Decay, which I got to work on with the good people at Undead Labs.

In State of Decay you are not a single character, but a community. You directly one character at a time, but if they die due to a zombie attack, they perma-die, but you just switch to playing another member of the community. Sure, you lose a little progress, but your community and most of your progress continues on.

What the team didn't expect was how connected people would get to certain characters – specifically Marcus. Marcus is the character you play in the tutorial, and he's not particularly better than the other characters, but because everyone played him in the tutorial, they grow attached to him. And when they die, instead of continuing on like you would do with other characters' death, players would reset their whole game.

They even made memes about it.

Here the team made the mistake of thinking everyone would play the game they would play like a game designer, min-maxing everything, just going for overall success.

But actually players have all sorts of weird reasons for playing the games the way they do. Watch a playtest and see.

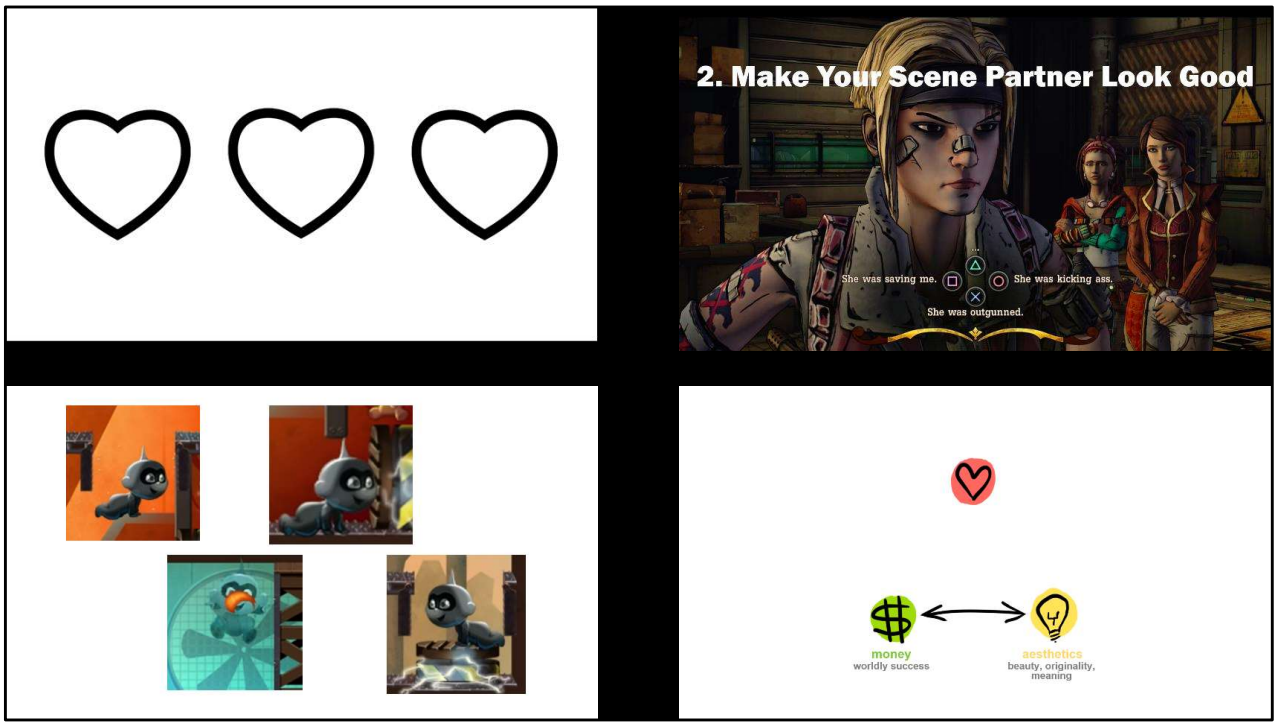
DON'T ASSUME YOUR PLAYERS ARE LIKE YOU

So a lesson from all this is to never assume you know how they are going to think. They're going to do all sorts of surprising things.

Don't assume players are all going to be like you or like anyone on your team

DON’T ASSUME YOU KNOW HOW TO DESIGN GAMES

And for today’s talks, I’m asking everyone to open up to the idea that maybe you don’t know it all.



Of course you know a LOT about designing games or you wouldn't be at this talk, but maybe not everything. And these talks can challenge you to think a bit differently about development.

Today's talks are about challenging your assumptions.

ELEANOR TODD

Founder / Creative Director
Orange Monkey Games
eleanoruniverse@gmail.com

Eleanor Todd is a designer who has worked on big projects everywhere from Maxis to Disney to her own company now at Orange Monkey Games.

We all assume that eliminating risk is one of the most important parts of shipping a game right? Well Eleanor is here to tell us some stories of when risks were eliminated, and how that worked out.

The Biggest Design Risk is No Risk at All

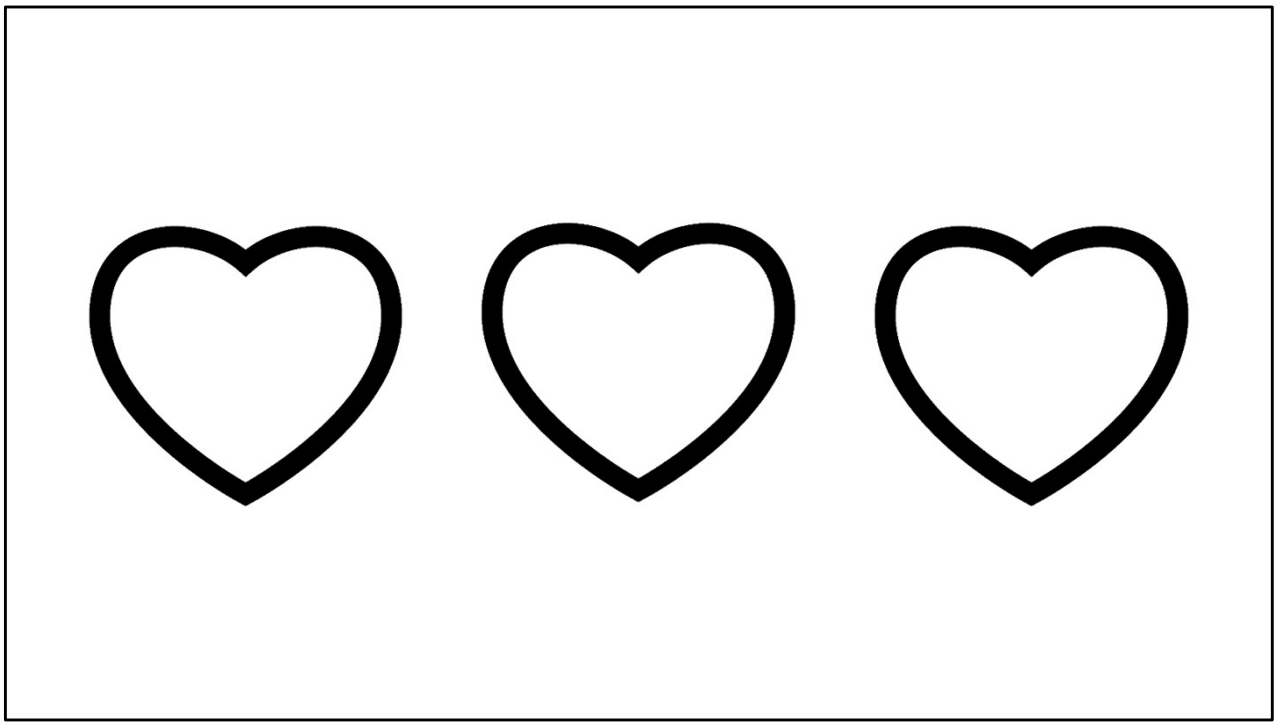
Eleanor Todd

Orange Monkey Games

Hi I'm Eleanor Todd

I’m here today to give you a warning about a

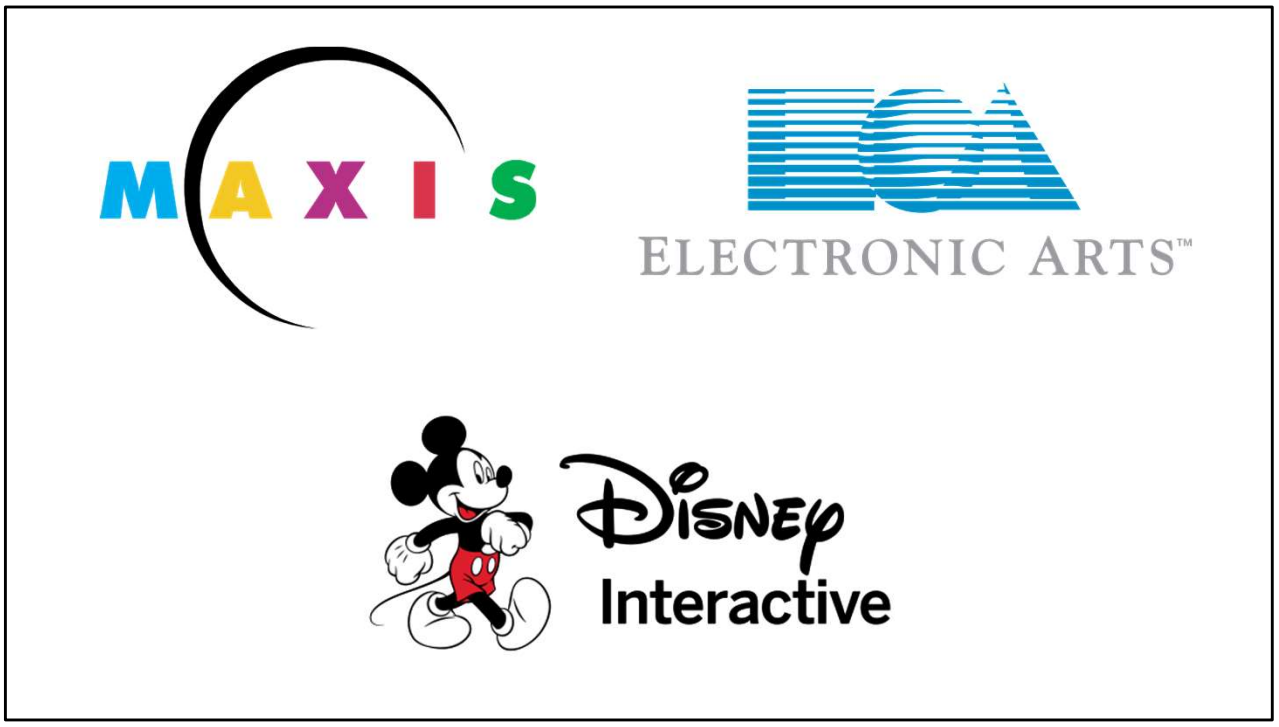
Ubiquitous and Seldom discussed mode of project failure



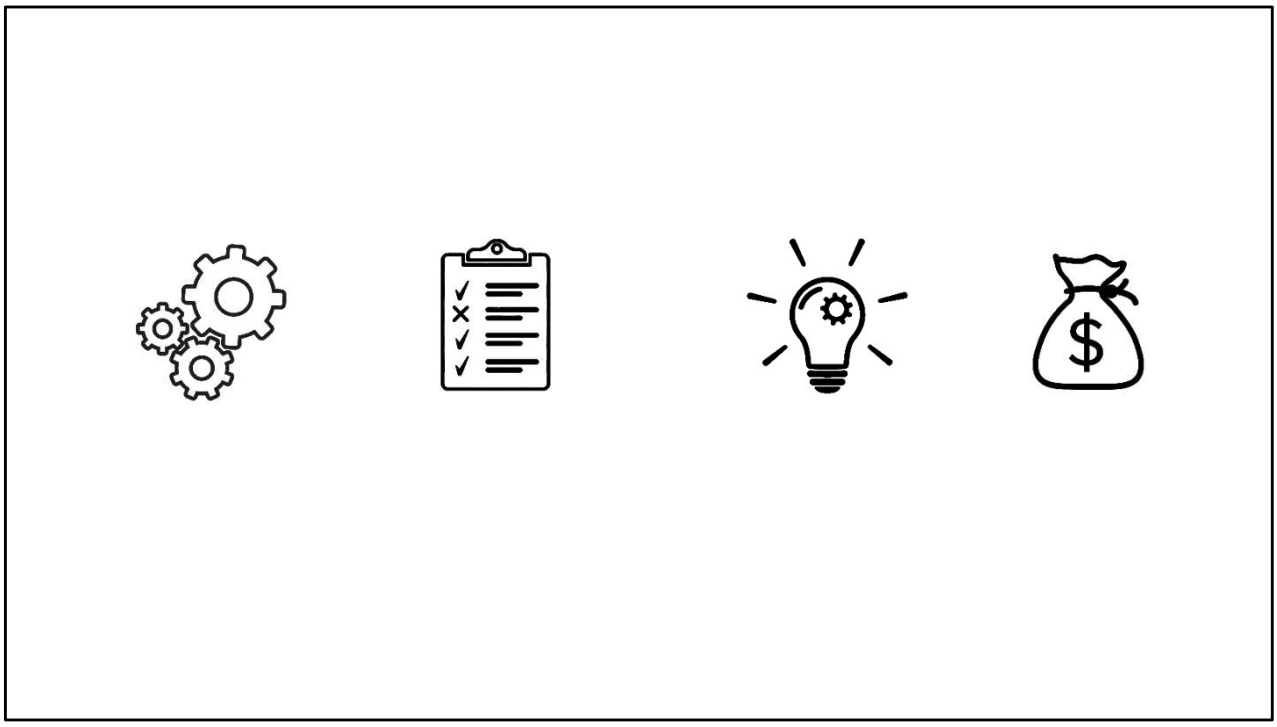
three heart-shaped stories

Why should you take my warnings seriously?

- Worked on a number of games you may have heard of
- And overseen the development of MANY more

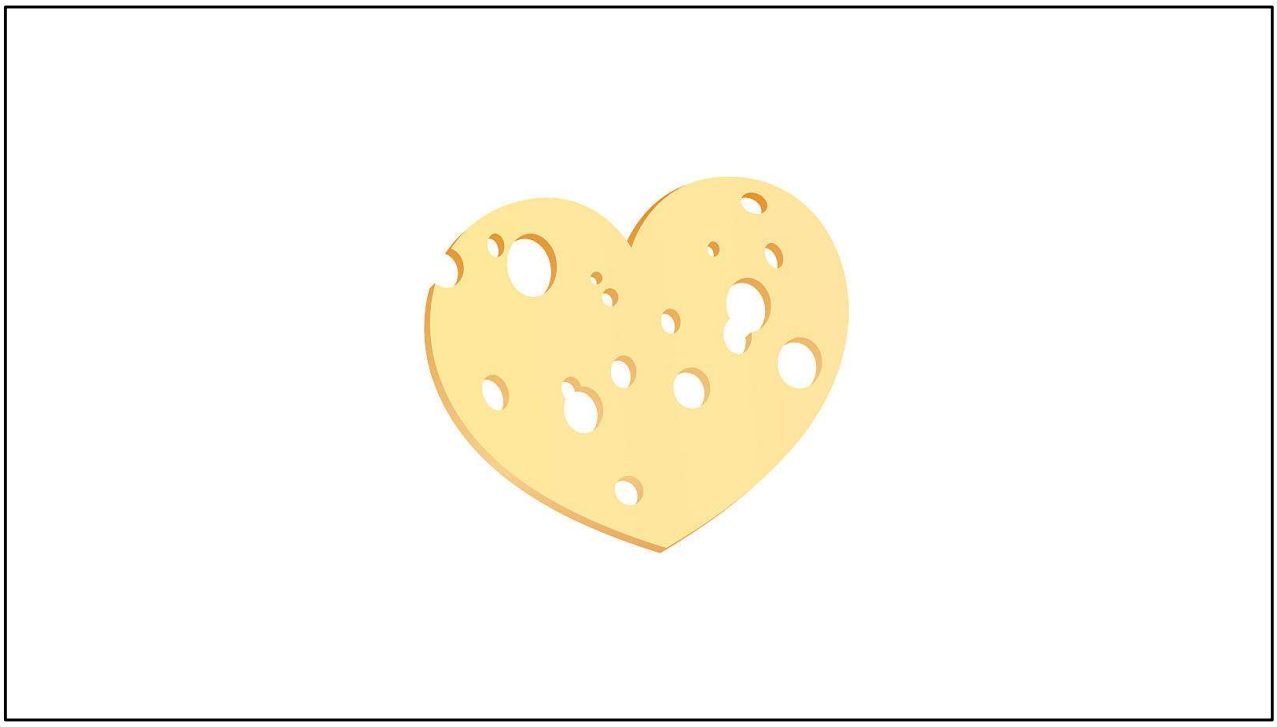


- Maxis = AAA PC a
- Playdom and Disney = Free-to-play Social and Mobile
- Since then, Worked extensively as a Design and management consultant



Worked professionally in many roles
Engineering, Production, Design, Studio leadership

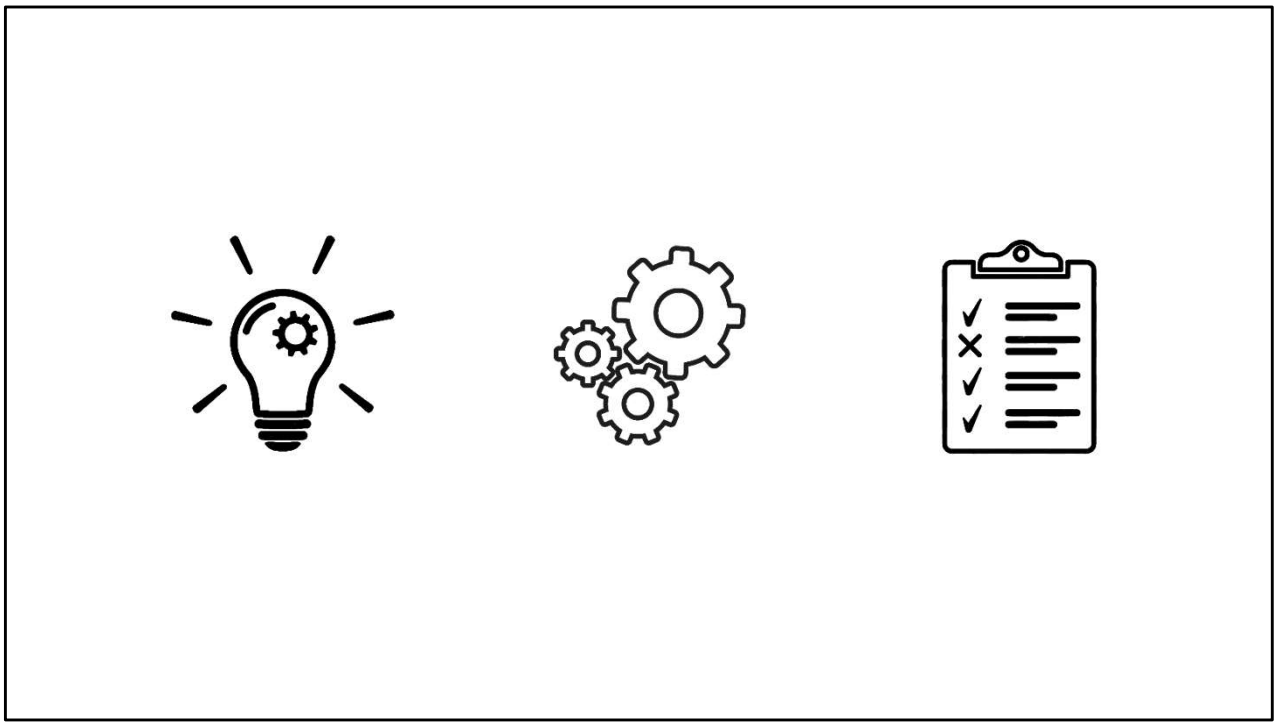
Without further ado, three heart shaped stories



Story 1: the swiss cheese heart

Situation

- Height of the dotcom boom
- Everquest was proving wildly successful,
- The Sims 1 recently released, was a huge hit
- How to do you make The Sims an MMO?



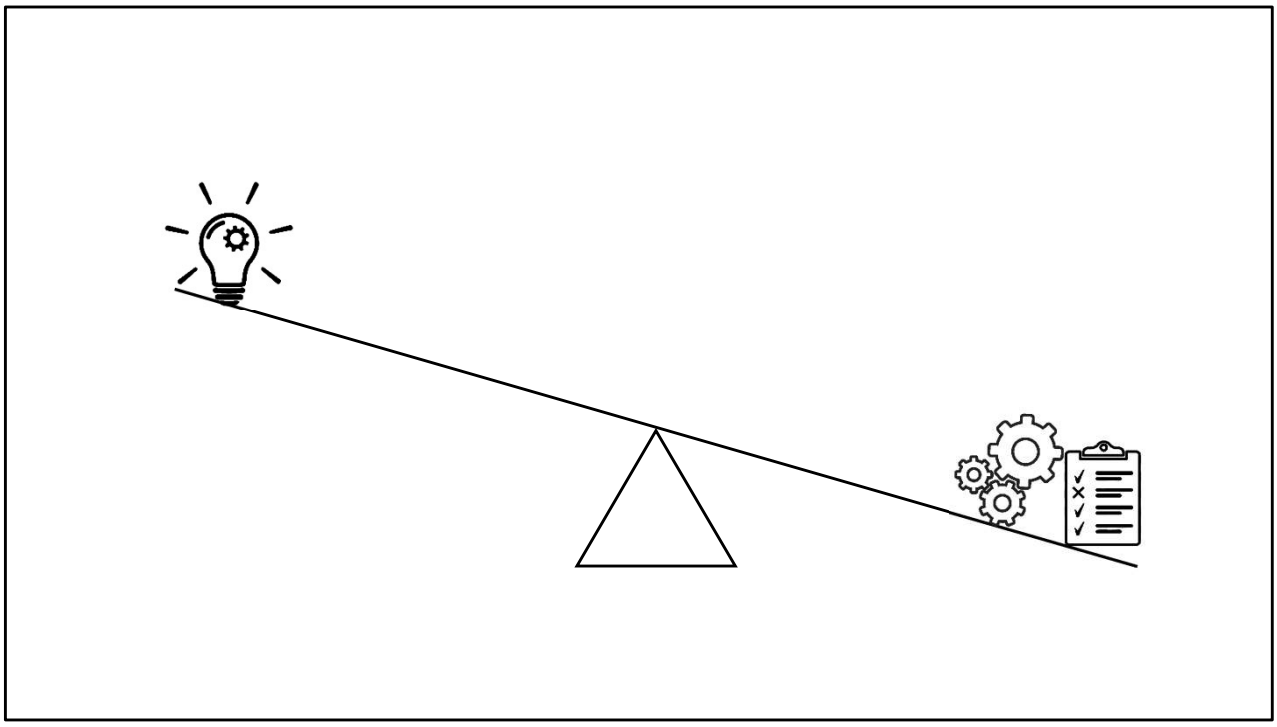
Design risks

- Time flow
- Social interactions
- House construction
- Neighborhood
- Jobs
- Custom content

Other risks

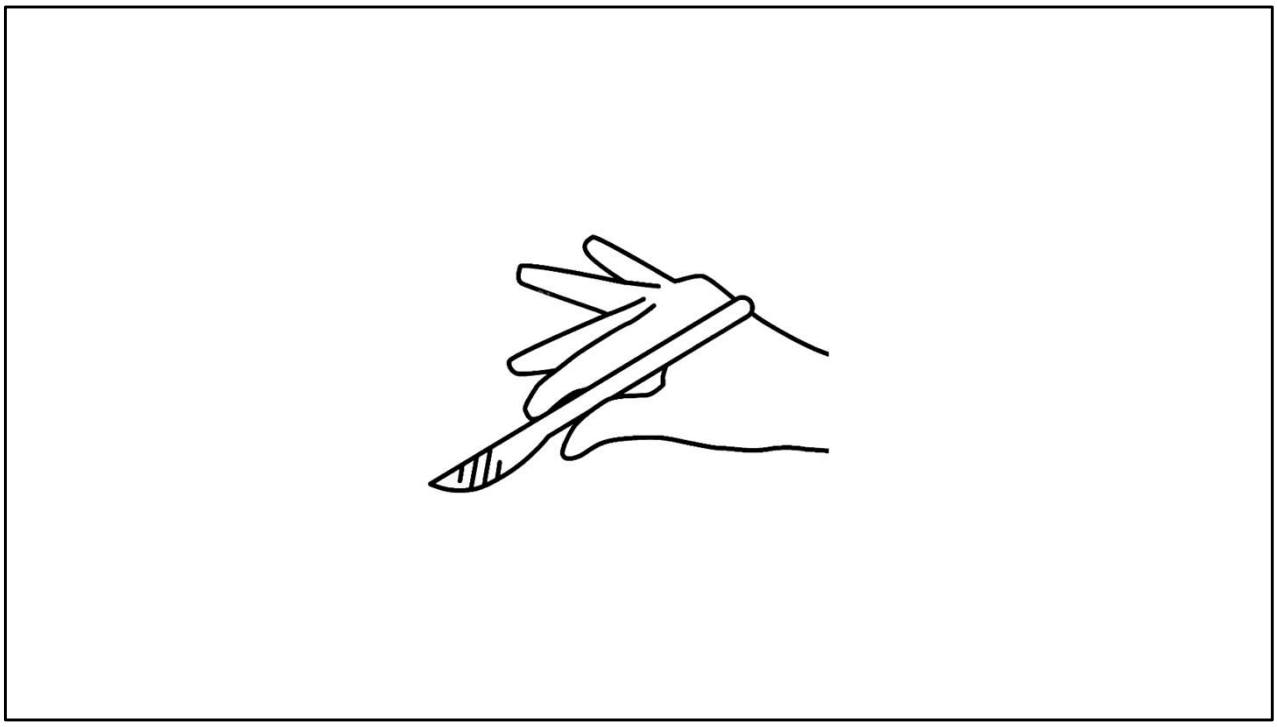
- Little in the way of established online technology
- Studio new to massively multiplayer games

- Brought in experienced MMO developers to help run the project, they painted this picture
- That is, they warned us that a bad launch was unrecoverable
- And implied that a bad design could be fixed after launch



Risk mitigation

- Beliefs: Only get to launch once. Doomed launch = doomed project
- #1 = make it work, #2 = make it fun



Risk mitigation

- Solved time, social, and construction in preproduction
- Paired “jobs” back to a bare minimum – two “job objects”
- Cut nearly all new decorative content
- Cut custom content

- Design team objected strenuously, claiming that weak design was as big a risk as weak engineering

Game “Worked”

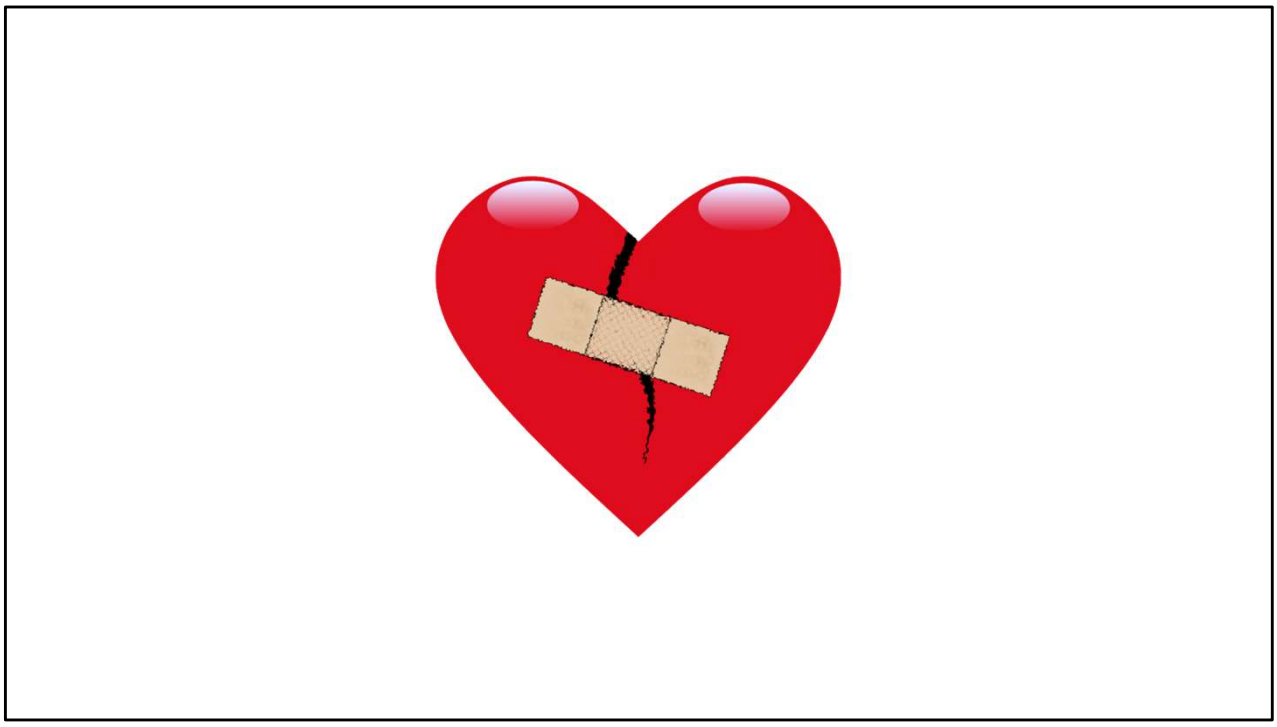
Lacked the kind of fun that was found in the Sims 1

But had very little support for multiplayer interaction

So how did this go?

Outcome / Discussion

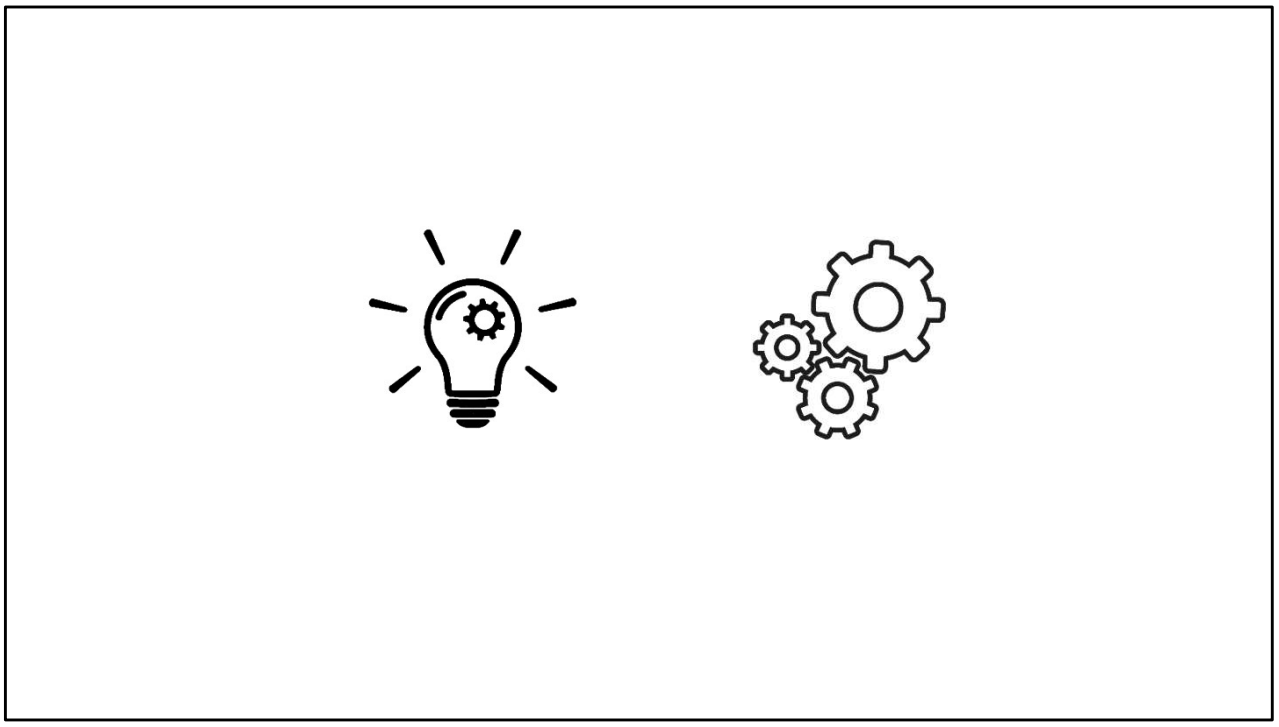
- Technology was rock solid at launch!
- But only sold O(100K) units, peaked at ~60K simultaneous players
- There wasn't enough "there" there.
- Struggled along for a while, shut down a few years later.
- Ultimately, the design team was right:
    - Project can just as easily fail by not being compelling as being broken/buggy



Story 2: “The Cracked Heart”

Situation

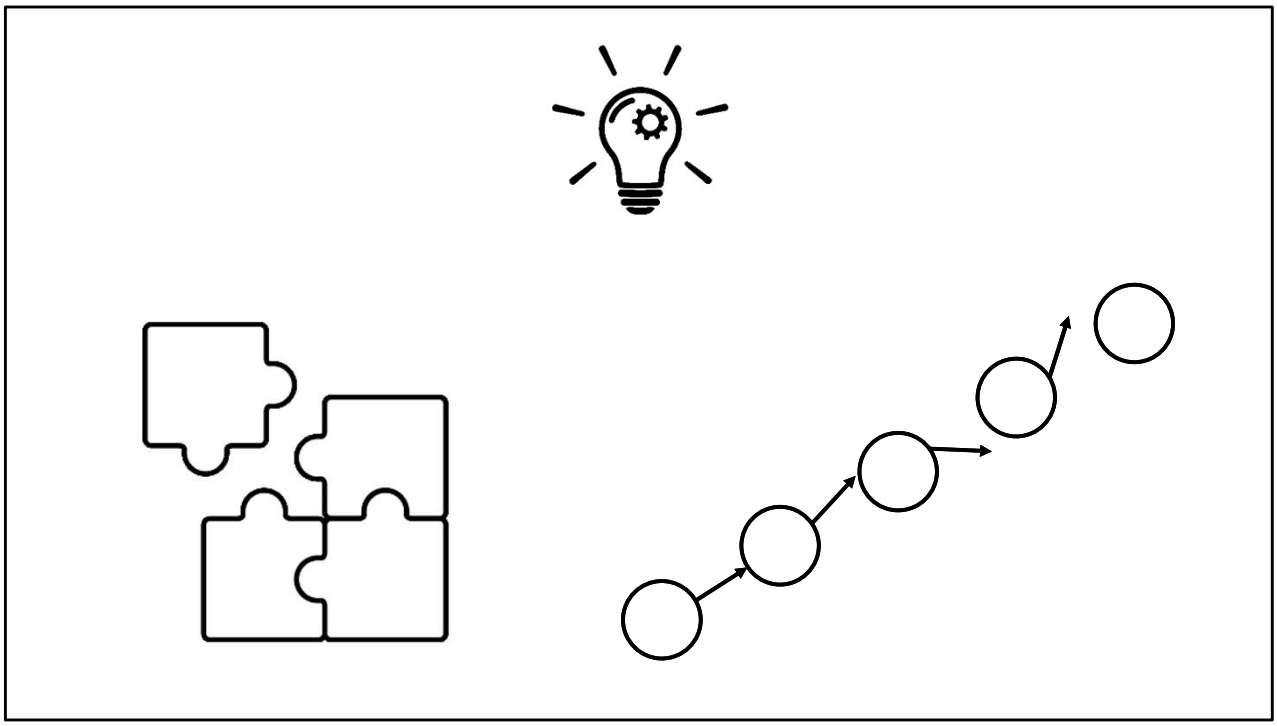
- Post TSO, working on Will's Next Big Game
- Determined as a team to get it right this time!



Absurdly ambitious: play from cell to galaxy spanning civilization, with editors at every stage!

Preproduction

- Massive prototyping effort
- Hit most elements of design, technology and art
- Culminated in a GDC demo that literally made the audience gasp



Design risks

- Game levels didn’t feel like they fit together
- Actions in one level didn’t really affect the others

Ultimately never really solved these problems

Outcome / Discussion

- Generally well received, but flawed. 84 Meta critic
- Moderate sales, but not commensurate to $ spent
- AND YET…
- Still being bought and played 10+ years later
- Generated a certain kind of delight that hasn't been duplicated

In this project we KEPT the design risks,
even though we didn't resolve them in preproduction

Despite never solving these problems,
The game achieved lasting cultural impact

This is the other side of failure coin from TSO:

Kept the heart of the game, made something enduringly worthwhile

Interlude

Situation

- Made late in the Facebook games era, as the dominance of farming games was beginning to wane
- My girlfriend at the time loved hidden object games, and hated FB games, so I figured I'd make a game for her
- Looked for ways to justify this and found that Hidden Object games were HUGE in casual downloadables
- From there, although it was hard work and there were moments of desperation, everything went more or less right

Novel Game Concept
+
Probable Market Fit
+
Executive Support
+
Experienced Team
+
Mature Engine
+
Time to Experiment
+
Skilled Ad Team
+
Experienced Live Ops

- Ultimately played by nearly 100M people
- Made multiple $100 of millions of dollars
- Won a bunch of awards

Novel Game Concept
+
Probable Market Fit
+
Executive Support
+
Experienced Team
+
Mature Engine
+
Time to Experiment
+
Skilled Ad Team
+
Experienced Live Ops

- I say this not to brag about that “one time…” but to illustrate why success can be illusive, especially in free-to-play
- These factors are not additive

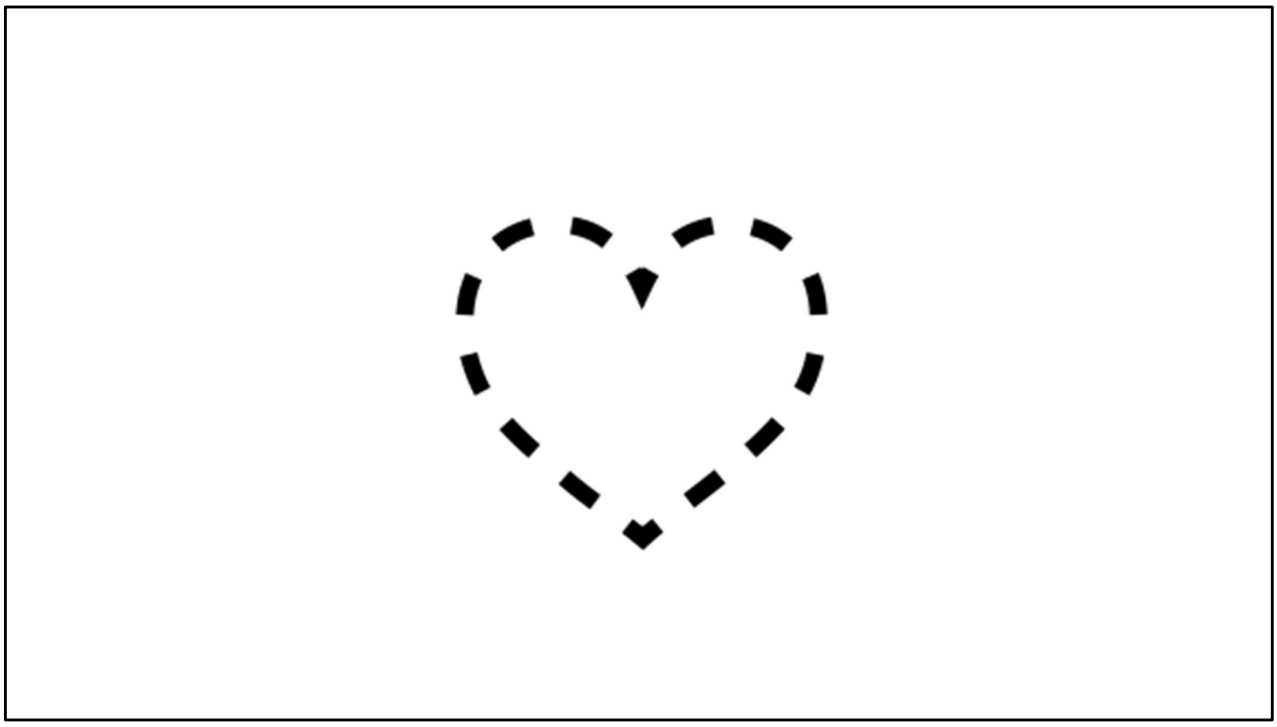
Novel Game Concept
X
Probable Market Fit
X
Executive Support
X
Experienced Team
X
Mature Engine
X
Time to Experiment
X
Skilled Ad Team
X
Experienced Live Ops

They are multiplicative

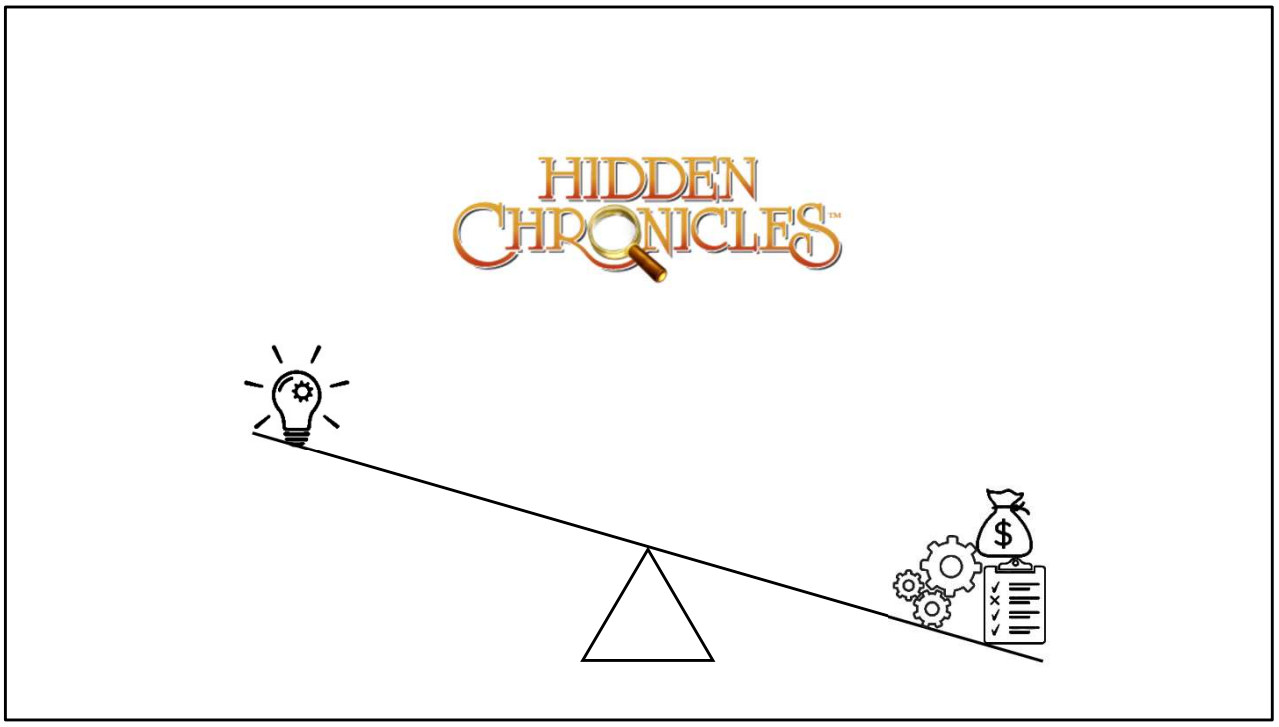
A “Zero” in any of these, can doom or hugely harm your project

This also explains why design risk is so tricky
- Make decisions early
- Don’t know consequences until months or years later

Worse yet, Cutting design makes nearly everything else easier!



Which brings us to Story 3, “The Empty Heart”



- Zynga soon launching “Hidden Chronicles”, likely a direct clone (it was)
- We were worried this would blunt the success of our big hit

We decided to do an experiment

And aggressively clones of our own game!

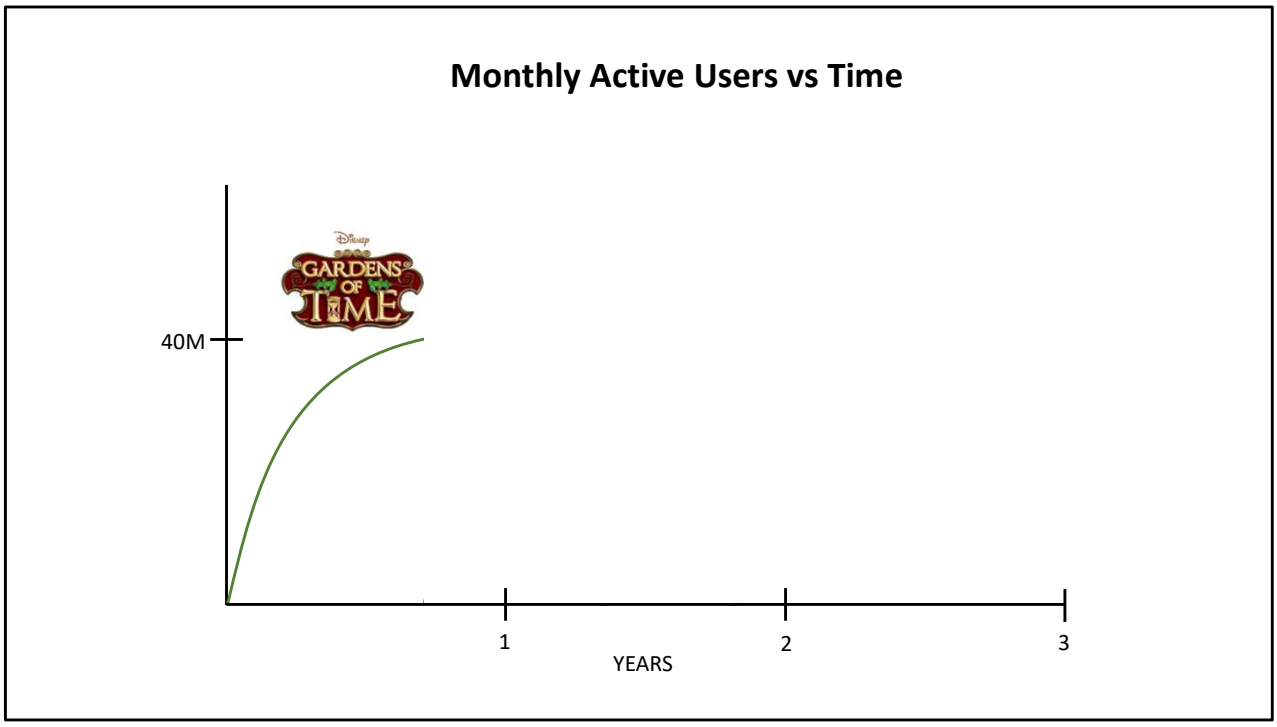
Novel Game Concept
X
Probable Market Fit
X
Executive Support
X
Experienced Team
X
Mature Engine
X
Time to Experiment
X
Skilled Ad Team
X
Experienced Live Ops

We took a game where we knew every factor worked

X
Probable Market Fit
X
Executive Support
X
Experienced Team
X
Mature Engine
X
Time to Experiment
X
Skilled Ad Team
X
Experienced Live Ops

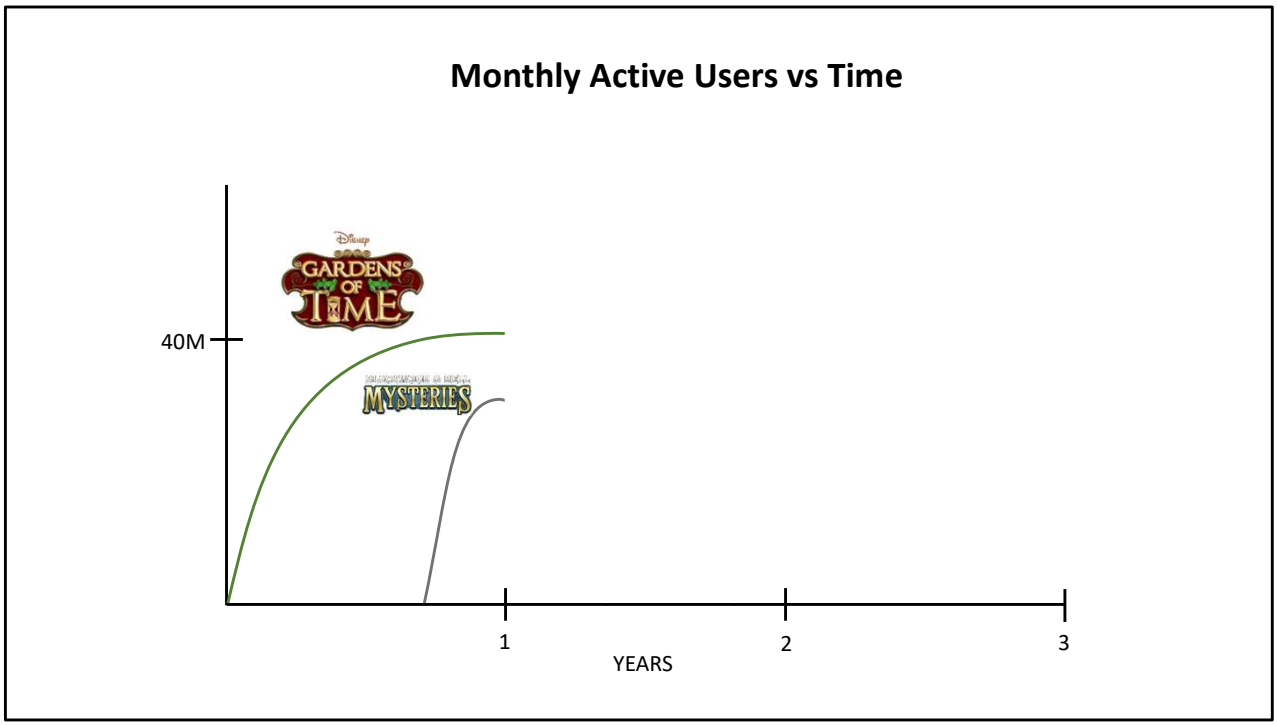
And we replaced the novel concept with a “zero”

(That’s a goose egg, by the way)



This is gardens of time at about 9 months after launch. We were sitting at about 40 million monthly users

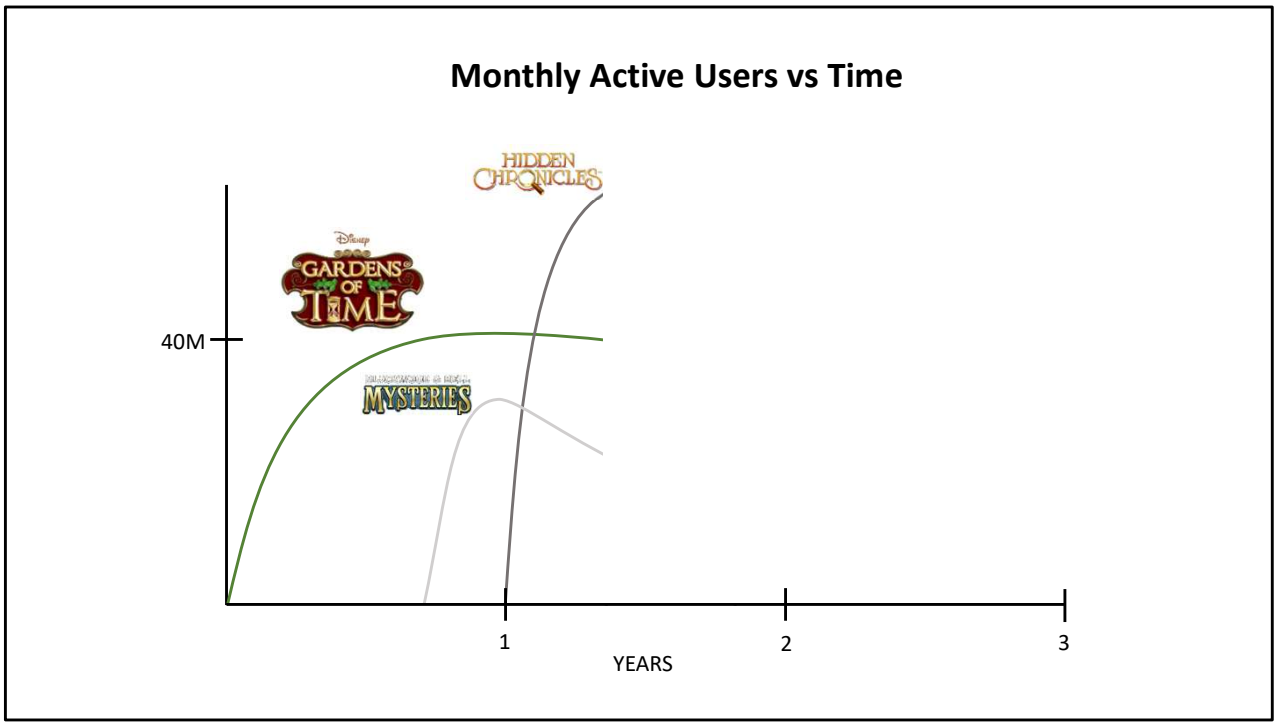
This was when we launched the first of our clones: “Blackwood and Bell”



It climbed quickly, even faster than Gardens, then after a few months leveled off

Gardens during this time ceased to grow, and we wondered whether that was a result of Blackwood and Bell

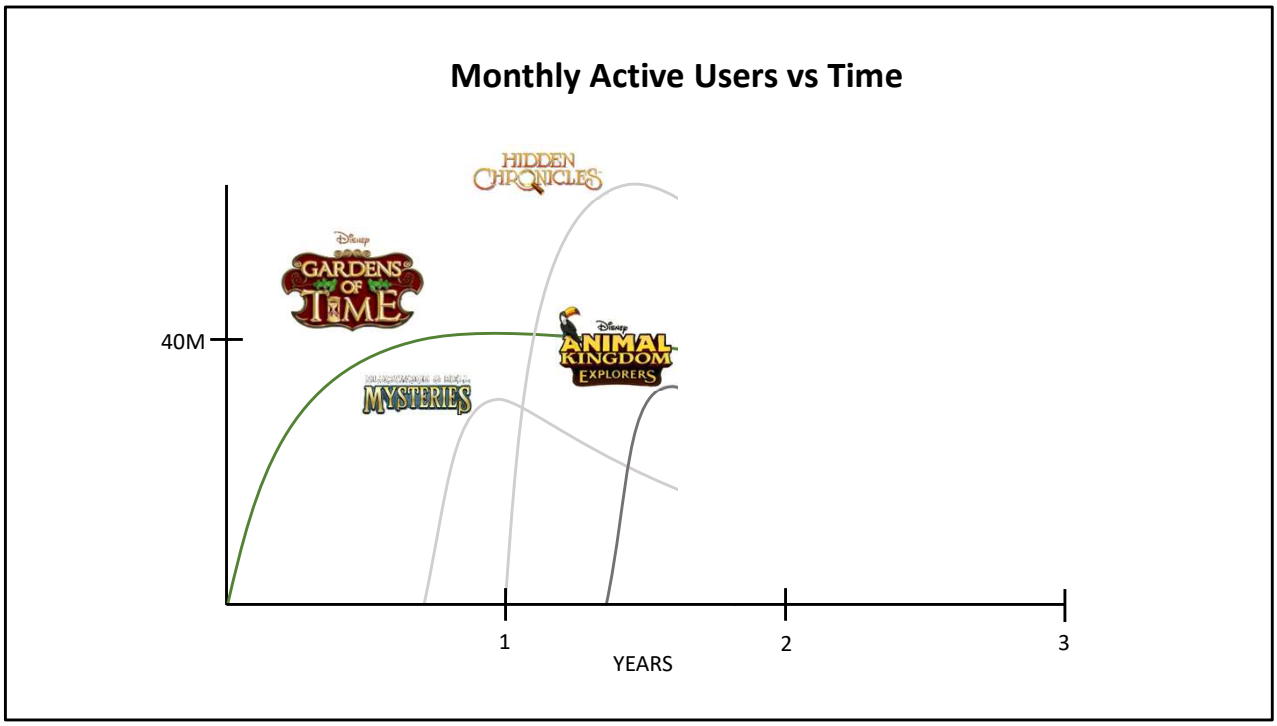
About three months later, Zynga's clone launched



And in just a few months its monthly users outstripped Gardens

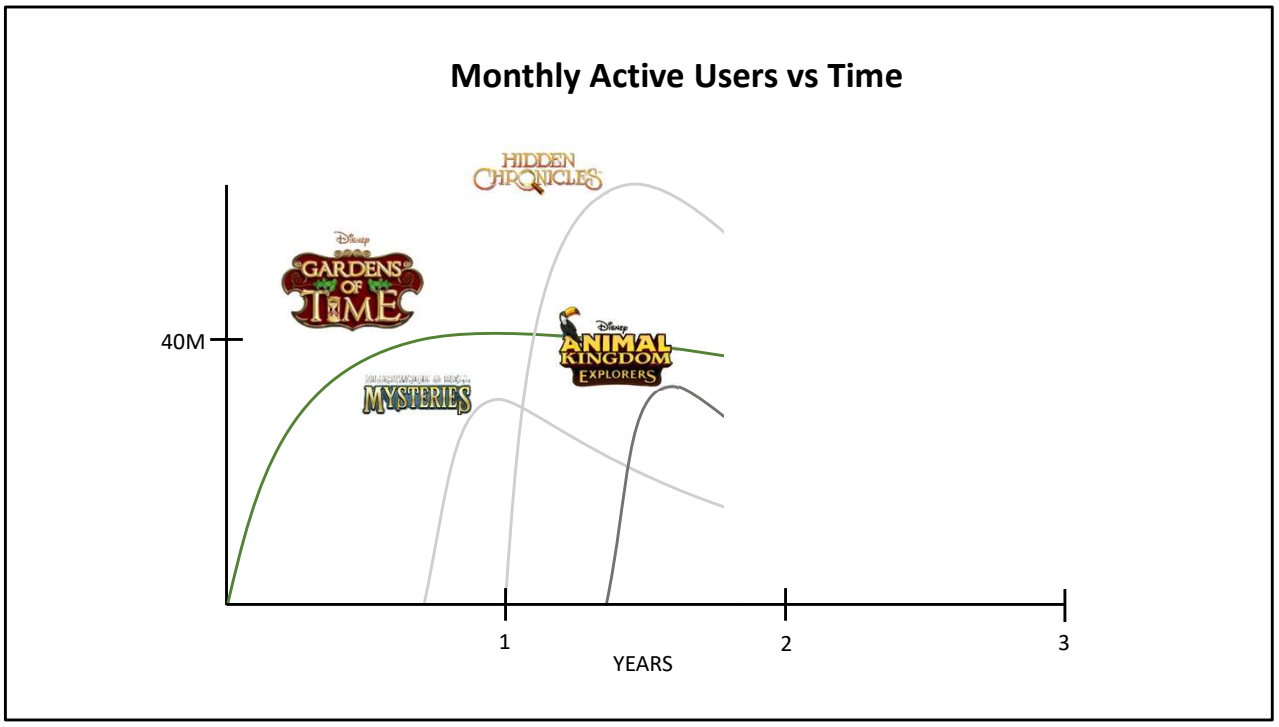
And Blackwood went into a clear decline

It was about then that we launched our second clone “Disney’s Animal Kingdom”

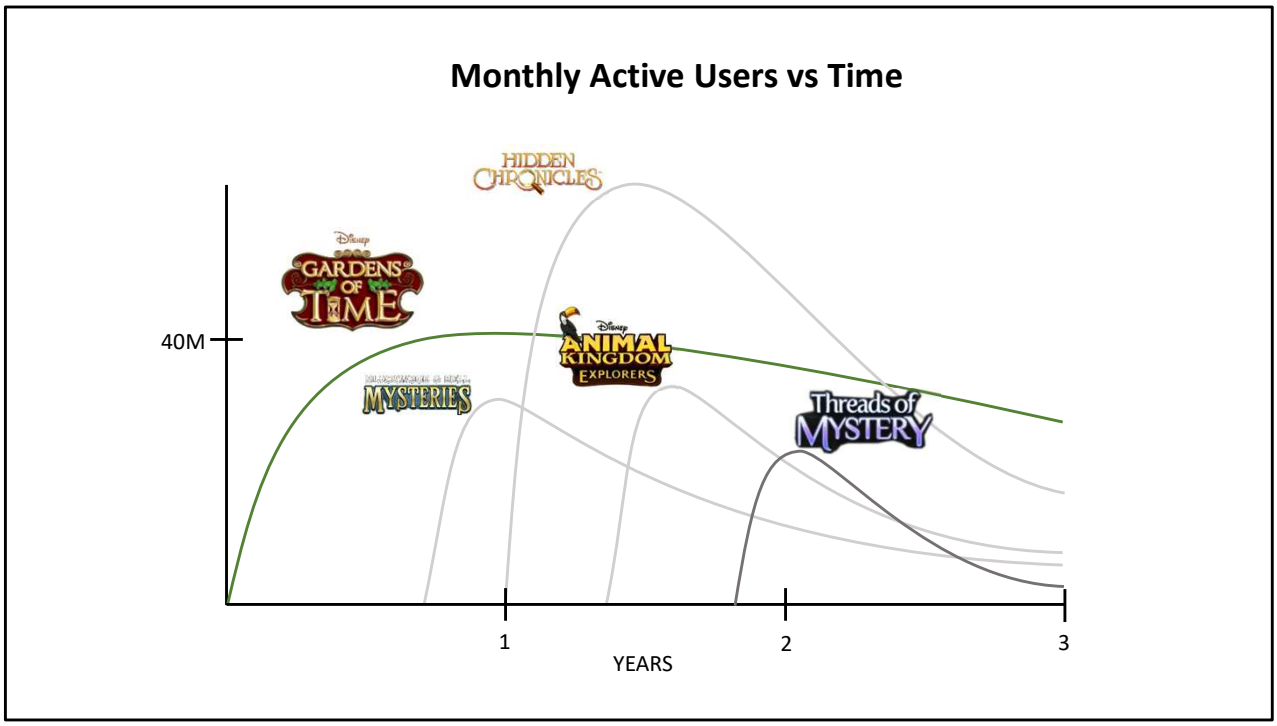


This game grew quickly

And in the same time period, Hidden Chronicles stalled out and started to decline



But over the next few months all of these clones started to decline, and much faster than Gardens



Eventually launched Threads of Mystery, but we had a pretty good idea of what was happening by this point

Seeing the impact of market saturation and a lack of design novelty

During this time, the revenue was hardly impacted

Note: Gardens is still running today!

These dynamics still dominant

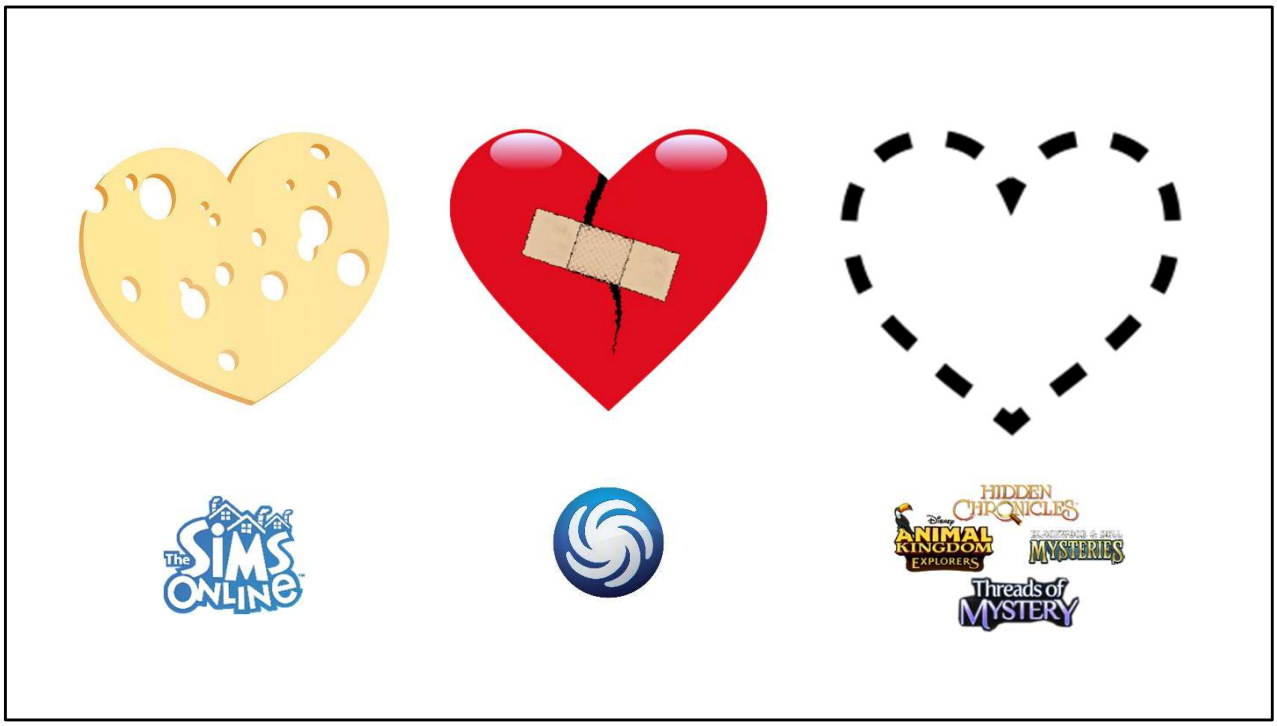
Clone upon clone on every platform

If you don’t believe me, go check out the charts for these three games

These dynamics still dominant

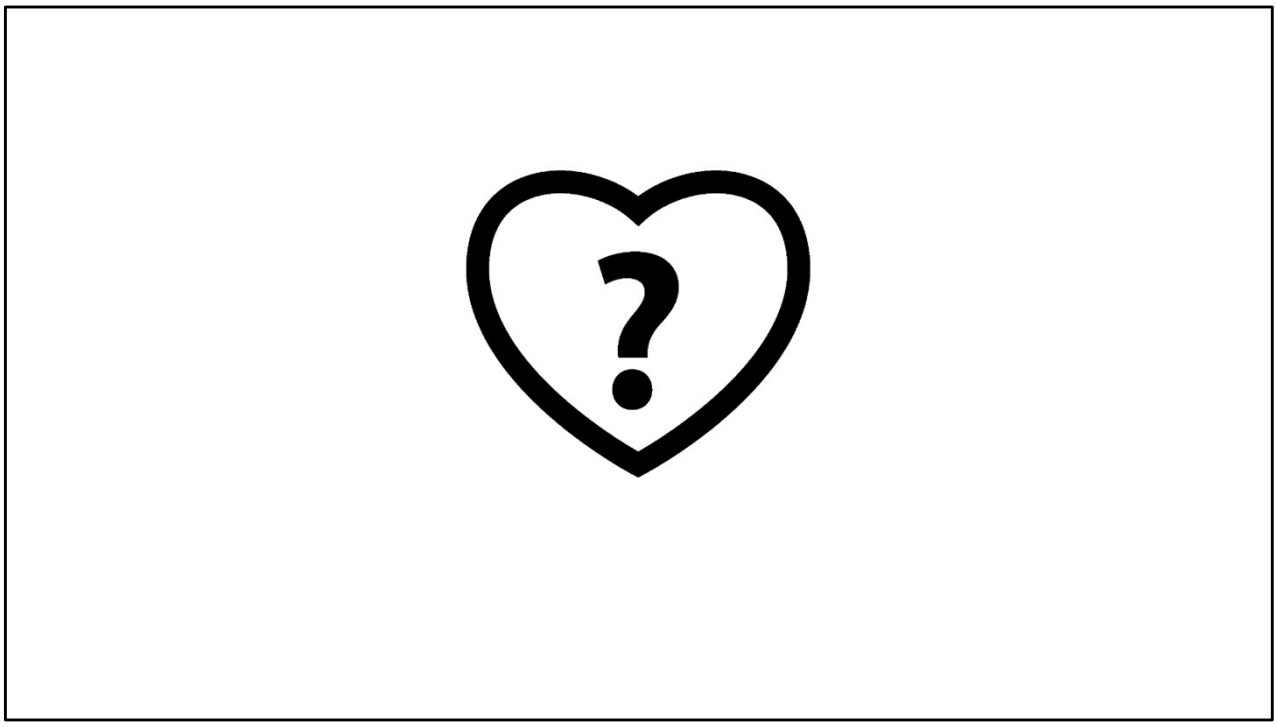
Clone upon clone on every platform

If you don’t believe me, check out the charts for these three games



- Rational to be concerned about get cancelled or launching a broken game
- But one should be as worried about launching a game fails to deliver a worthwhile game.

- The risk of lacking a heart is underestimated because this failure mode is quieter.
- It's not a big explosion or a scathing review… it's a pebble dropping into a tub of oil



Stated positively, how do you deal with this?

Answer the question: Why does your game deserve to exist?

- Find the heart of your game,
- build the team and
- the project around it and
- never, ever give up on it

- If a team member argues to cut the heart out of your game in the name of risk mitigation,
- remind them that

  - **the Biggest Design Risk is No Risk at All.**

Thank you!

Eleanor Todd
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ELEANOR TODD

Founder / Creative Director
Orange Monkey Games
eleanoruniverse@gmail.com

CARRIE PATEL

Game Director
Obsidian Entertainment
@Carrie_Patel

Our next speaker Carrie Patel is a novelist, and also a Game Director and Narrative Designer at Obsidian, where she has worked on everything from Pillars of Eternity, to The Outer Worlds, and she is the director on the forthcoming Avowed.

Sometimes we as writers ASSUME that we can make the drama perfect if we can just pick the perfect lines for our characters to stay. But it may be that what gamers are coming to games not for that perfectly polished scene, but maybe more something they can to participate in, whatever that means. Maybe they want something a bit more improvisational…

I give you Carrie Patel.

- Challenge w/ RPG/action/adventure = feeling of life, surprise, spontaneity in authored content
- How players -> drivers of their experiences / autonomous actors in world WHILE we are dictating the options available to them?
- …Improv -> useful lessons!
- Improv = improvisational theatre / “making it up as you go.”
- In stage/film/TV, rages from shows made up entirely on the fly (Whose Line Is It Anyway) to films and TV shows that begin with a loose premise or script but leave room for actors to improvise their own lines (Curb Your Enthusiasm, Judd Apatow).
- …Improv useful = model for understanding player’s expectations & giving opps to partner w us (devs) in creating a scene

- Four key tips for achieving this…

- Starts with…
- (improv) Platform is the "who, what, and where" of a scene - establish characters, relationships, situation
    - Good scene is grounded specifics – something happening / specific people / place / moment
        - X “Hey you look like an adventurer…”
    - Give the player context & stakes to RP around…
- The most compelling platforms: something instant and immediate that pulls into the scene
    - …threat, argument, challenge, plea, surprise, intrigue
    - (grabs attention, sets up question that demands an answer / challenge that demands a response)
        - Stakes, whether personal or grand – give NPCs & player “skin in the game”
- example – initial meeting with faction heads in Deadfire
    - Impressive palace
    - Middle of an argument over territory (territory the player ALSO has interest in)—establish conflict & stakes
    - …let player start to take their own stance
    - (high-drama moment to intro high-impact characters)

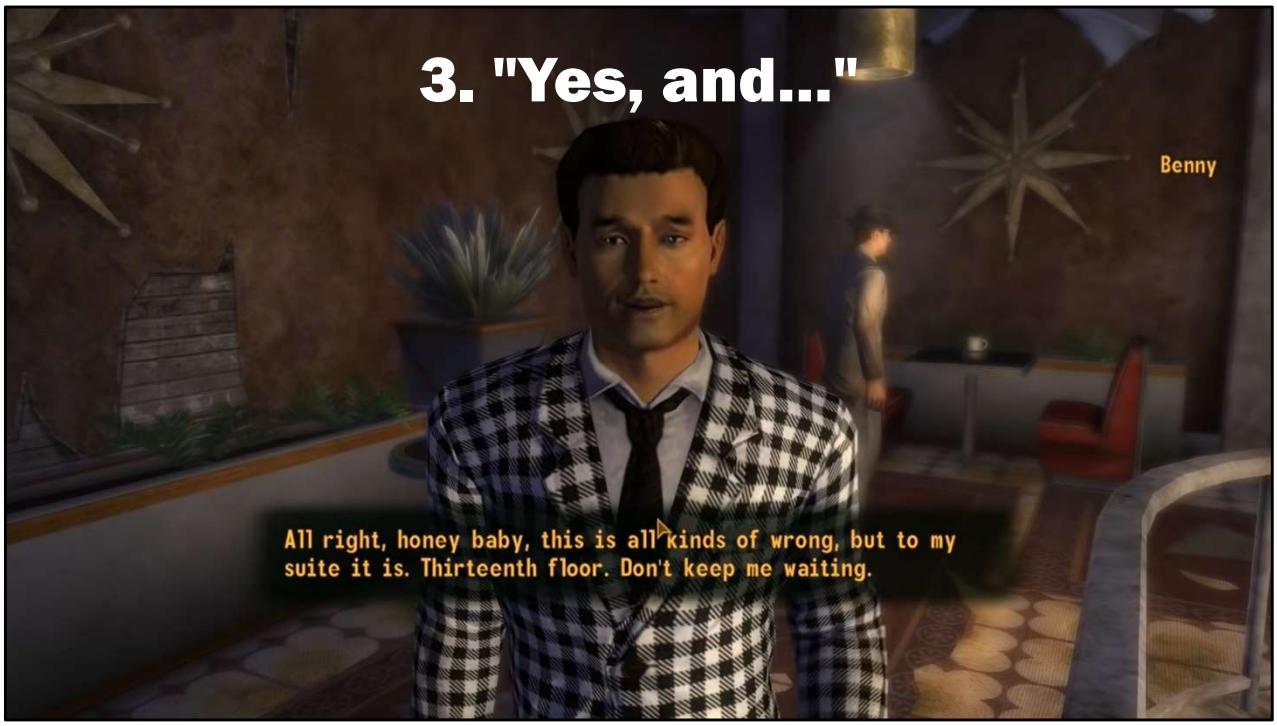
- Not to say that every good “platform” needs to force-start conversation / fate of world
    - …need *immediacy*
    - Ultimately, you want your player to feel like your scene partner, not hostage

- Audience participation is key to both improv and games
    - People play games because they want to participate in the experience (not observe)
    - So how do we keep them involved?
- ***Question gets to the heart of why some game dialogue feels skippable (and how we can avoid this)
    - Skippable dialogue takes player out of role of SCENE PARTNER and makes them SPECTATOR
    - (which isn't what they came to your game for!)
- Happens one of two ways:
    - Dialogue = overly expository, delivering information (not on expressing character, establishing stakes, or escalating tension)
    - Dialogue -> monologue, only character expressing motivation/personality, advancing scene = NPC
- In improv, you wouldn't hog a scene like this

Improv has useful guidelines for how we pass the conversational "baton":

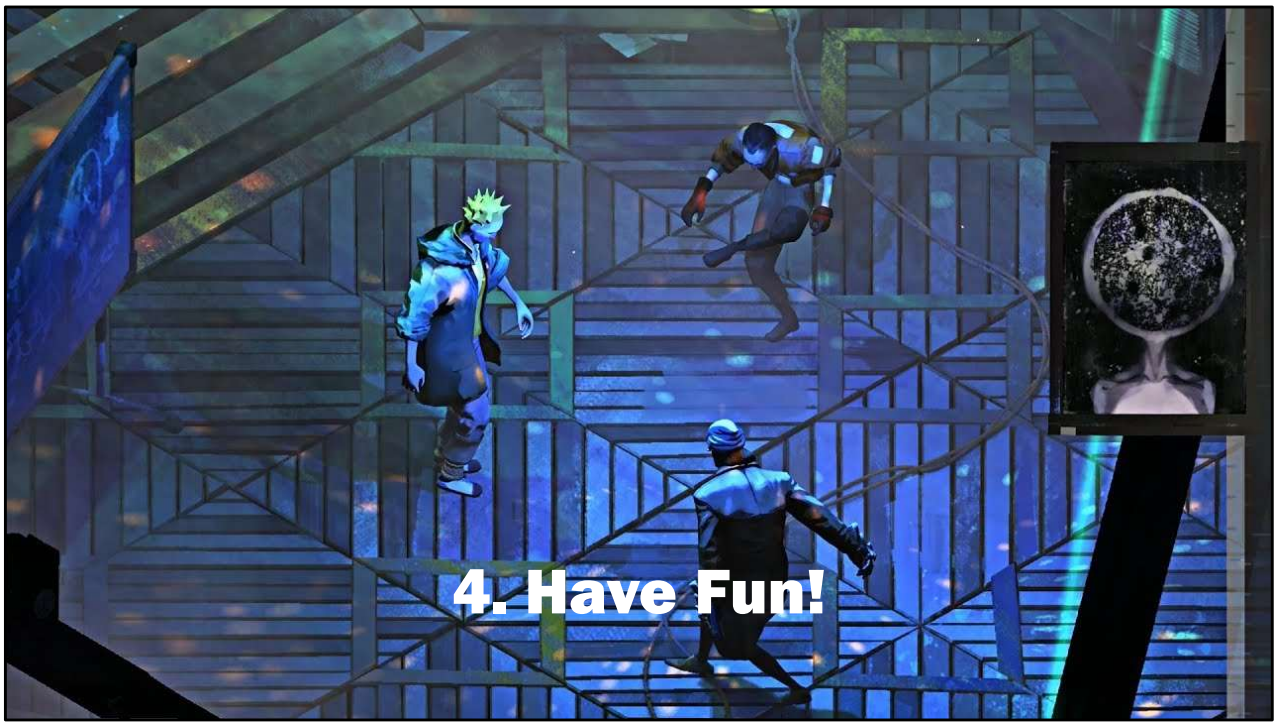
- Ask Leading Questions, not Open Questions
    - (interpret "questions" more broadly as any point in dialogue where we're giving player chance to respond/chime in/advance convo)
    - Leading questions = give partner something to react to & build on

        - Open questions = vague, generic, disconnected from action & tension in-the-moment
            - Improv: How are you? Vs. What happened to your arm?!
            - Games: Shall I tell you more about the history of this region? Vs. We're in the middle of a war! Which side are you on?
        - Leading question can move a scene forward / open questions stall momentum
            - If PRs = “tell me more” “go on” etc. … not giving much to play off!
            - (info-gathering “tell me about…” / “what is…” = getting exposition, not participating in scene)
            - Not engaging!
    - Instead… give player opportunities to say and do things that define their character, express goals/motivations, move scene forward
        - [click: GLASS HIM]
        - …doesn’t have to end in violence, but the player needs opportunities to advance the scene in interesting, meaningful ways
    - …brings us to most important rule…



- "Yes and" = core tenet of improv.
  - Means that whatever your scene partner brings you, you build on it and play along.
  - (how you broke your arm? You come up with a story)
- As devs, -> conscious of choice opportunities we're offering player
  - ...and make sure we're paying those choices off
- Players make choices: build character, RP a dialogue, skills/weapons combat encounter
  - Every turn -> how can we let those choices lead to something interesting/meaningful/fun
  - ->creating opportunities for build/RP choices to be relevant
- Pillars:
  - Disposition, skill, background, culture, paladin/priest order comes up at some point
  - (script searches to make sure everything referenced)
- TOW:
  - Combat/stealth/dialogue solution to most content
  - ...bc players could build character
- Fav ex: Black Widow perk FNV
  - Fem characters -> dlg + damage vs. male chars

        - Seduce Benny / get him alone /...kill him
        - Outside the box, takes promise of BW perk a step further...
        - "what might a player want to do in this scenario?"
- And that's the heart of "yes and"
    - setting player up with opportunities to do interesting things
    - ...interesting outcomes



- Finally… have fun, and let the player have fun, too.
  - Improv and games are both about play!
  - What do I wish I could do/say? (ME: Hang up on the Council)
  - What's something that could have a novel or unexpected outcome? (DE: Get Kim to dance; he's actually great)
  - What would pay off the way I've been playing?
  - ...have other folks play your content, listen for "I wish I could have said/done this."
    - (ex: Deadfire/"All Aboard" quest features a very meticulous dwarf paladin; Brandon Adler—I wanna knock over his stuff; so we let you)

- Before I drop outta here...
- Summarize: goal of improv and gaming (and RP specifically) is to create fun / surprise / novelty with the player's participation
- The more we can do that by...
    - Creating interesting scenarios to RP
    - Opportunities for players to express character / agency
    - Building / responding meaningfully to the way player moves scene forward...
- The more players will trust us with their time, energy, and creativity
- Thank you!

CARRIE PATEL

Game Director
Obsidian Entertainment
@Carrie_Patel

OSAMA DORIAS

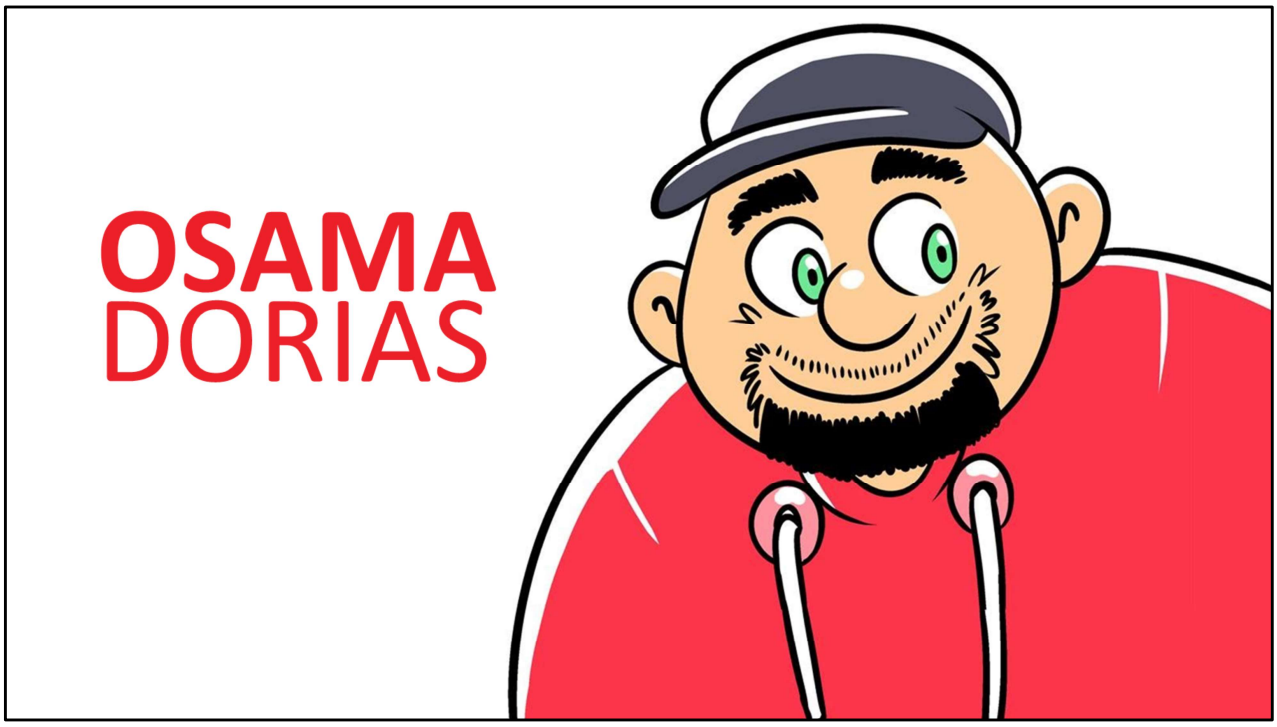
Senior Partner Relations Manager
Unity
@OsamaDorias

You may know our next speaker from his time as a Game Designer everywhere from WB Montreal to Ubisoft to Game Loft, but he's recently started helping developers out in his new position at Unity.

But we suspect we will see him designing again before too long.

And he's going to tell us how there always comes a point in a project where we ASSUME that you are stuck making the same puzzles over and over, using what limited mechanics you have, but he has found a way to get unstuck is to turn to the game designer's best friend, the spreadsheet.

I give you, Osama Dorias.



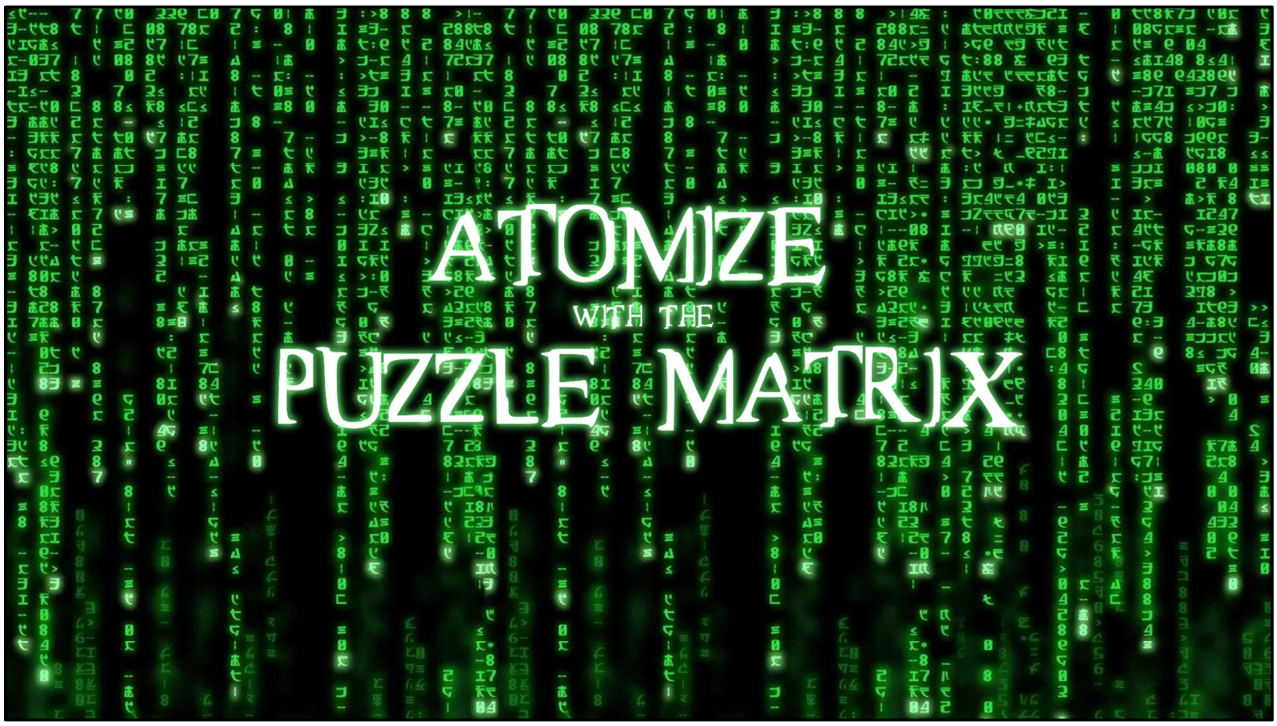
Hello everyone! My name is Osama Dorias

I’m a senior partner relations manager at Unity, a game designer teacher at Dawson College, and one of 3 habibis on the Habibis podcast. I’m also a career game designer with 14 years of experience working at these companies.

And here are some of the projects I've worked on…

… but today I'll be focusing on these two!

As a generalist game designer, I am often thrown at a problem or feature that I have never worked on before. I love the challenge, but sometimes it can be quite daunting. This was especially true the first time I was asked to design puzzles. Where does one start? How do you keep things interesting? How do you not break the bank by crafting set-pieces each time?

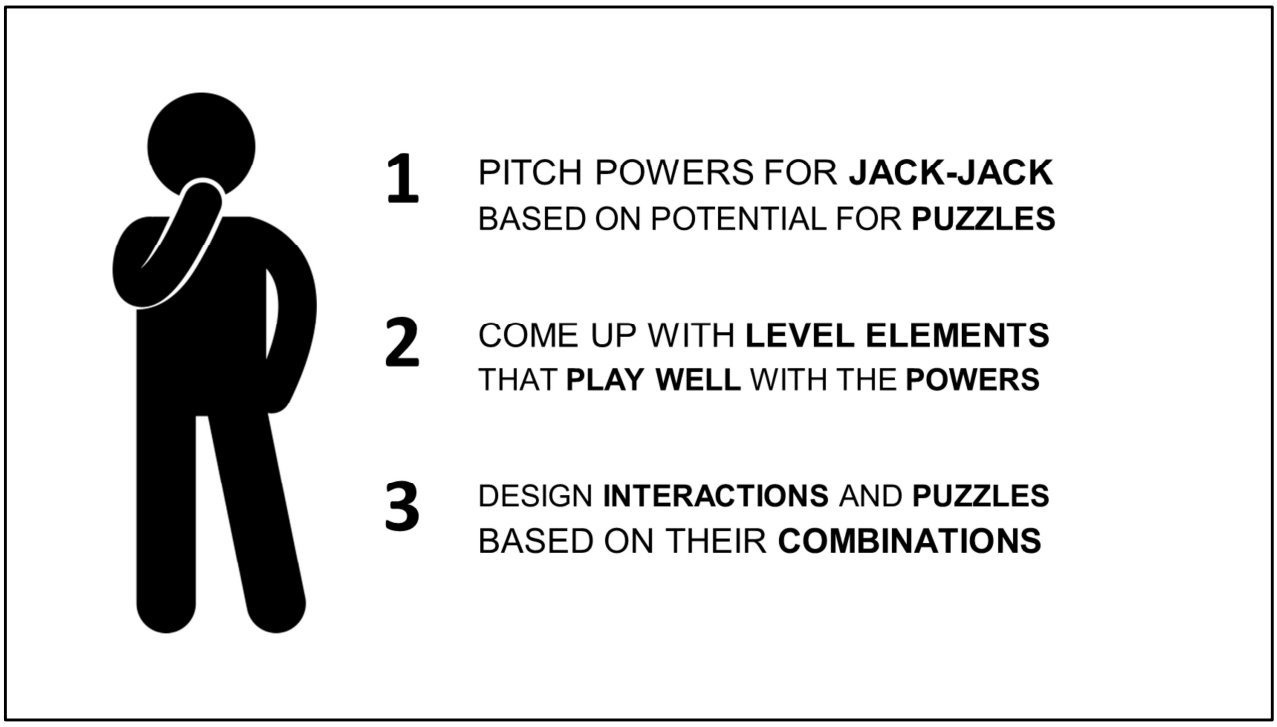


My solution was to Atomize with the Puzzle Matrix!

My first foray into puzzle design came when I was working at a studio called GEE Media. We made inflight entertainment (ie: Games that you play on an airplane). I was the lead game designer, overseeing many different projects. Normally each member of my design team would work on a different project according to their strengths and interests.

Due to life reasons, my team members who would normally take projects that were heavy on puzzle designs could not take up an upcoming, exciting project: Jack-Jack's Escape. A puzzle platformer featuring the lovable super-powered baby from the incredibles.

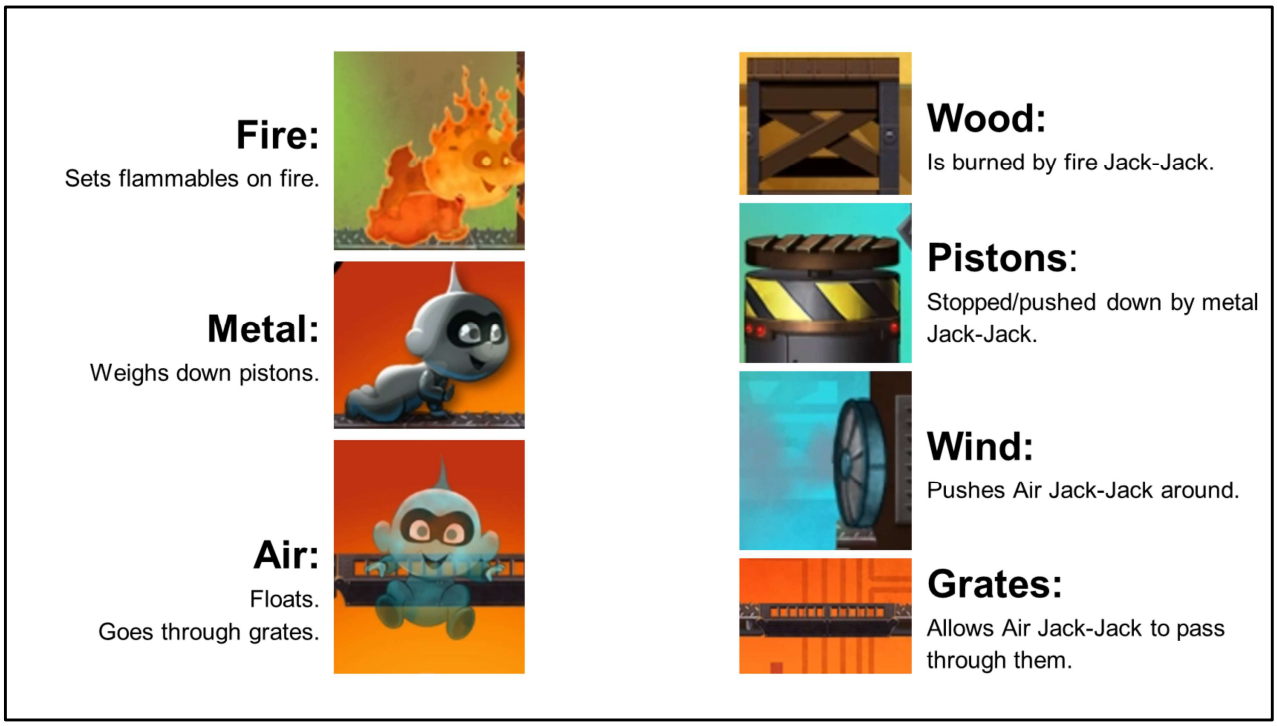
The Incredibles 2 had just been announced, and what we knew from the first Incredibles is that Jack-Jack had many powers. The game we pitched took place directly after the events of the first movie.



As you do when you must approach a challenge that you've never faced before, I started by analysing the situation and coming up with an action plan.

- Step 1: Pitch an assortment of powers for Jack-Jack based on their potential for puzzles.
- Step 2: Come up with a series of level elements that would play well with those powers.
- Step 3: Design interactions and puzzles based on the possible combinations of the above.

Truth is I normally start by brainstorming in a flowchart, by placing all of the items and drawing links between them, but it quickly became unwieldy. That's when I came up with the idea of atomizing all of these elements and putting them into a Matrix. That way each element had an intersection with each other element (and itself), forcing me to come up with an interactions for each intersection, or to conclude that there wouldn't be a useful one.



And so we had to start with some powers:

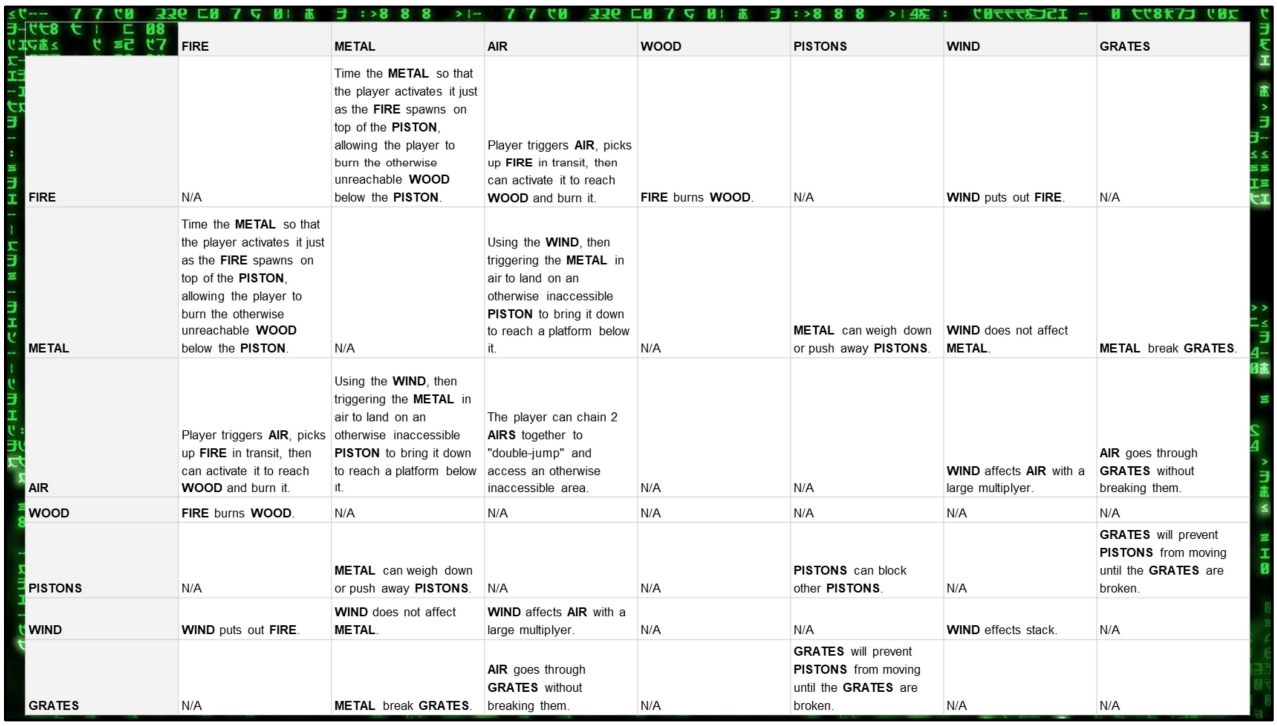
- **Fire:** Jack-Jack catches fire, and sets anything flammable in close proximity on fire.
- **Metal: Jack-Jack** Weighs down platforms/pistons.
- **Air:** Jack-Jack Floats. He can also pass through grates!

The next step was to design level and puzzle elements that would play well with the powers. Though the truth is this is a back and forth process between steps 1 and 2. There's no point in proposing powers that don't interact with the level elements, or vice versa. We don't need to have everything figured out at this stage though, we just need to know enough to make sure that we're not designing ourselves into a hole, or wasting valuable resources.

Wood: Is burned by fire Jack-Jack.
Pistons: are stopped/pushed down by metal Jack-Jack.
Grates: Allows Air Jack-Jack to pass through them.

Wind: Pushes Air Jack-Jack around.

The third step is the heart of the rule: We would atomize all of these powers and level elements and place them into the Matrix, on the both axes of a table, and come up with puzzle/interactions at every intersection. Here you write down ideas and idea fragments. You can vet them for quality later.

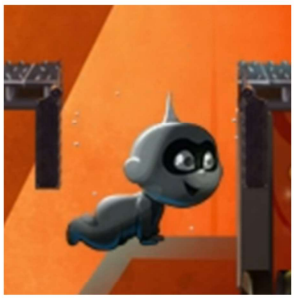


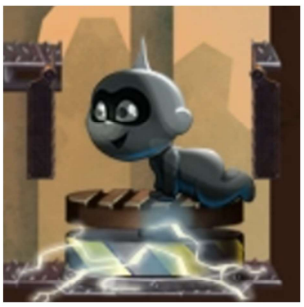
	FIRE	METAL	AIR	WOOD	PISTONS	WIND	GRATES
FIRE	N/A	Time the **METAL** so that the player activates it just as the **FIRE** spawns on top of the **PISTON**, allowing the player to burn the otherwise unreachable **WOOD** below the **PISTON**.	Player triggers **AIR**, picks up **FIRE** in transit, then can activate it to reach **WOOD** and burn it.	**FIRE** burns **WOOD**.	N/A	**WIND** puts out **FIRE**.	N/A
METAL	Time the **METAL** so that the player activates it just as the **FIRE** spawns on top of the **PISTON**, allowing the player to burn the otherwise unreachable **WOOD** below the **PISTON**.	N/A	Using the **WIND**, then triggering the **METAL** in air to land on an otherwise inaccessible **PISTON** to bring it down to reach a platform below it.	N/A	**METAL** can weigh down or push away **PISTONS**.	**WIND** does not affect **METAL**.	**METAL** break **GRATES**.
AIR	Player triggers **AIR**, picks up **FIRE** in transit, then can activate it to reach **WOOD** and burn it.	Using the **WIND**, then triggering the **METAL** in air to land on an otherwise inaccessible **PISTON** to bring it down to reach a platform below it.	The player can chain 2 **AIRS** together to "double-jump" and access an otherwise inaccessible area.	N/A	N/A	**WIND** affects **AIR** with a large multiplyer.	**AIR** goes through **GRATES** without breaking them.
WOOD	**FIRE** burns **WOOD**.	N/A	N/A	N/A	N/A	N/A	N/A
PISTONS	N/A	**METAL** can weigh down or push away **PISTONS**.	N/A	N/A	**PISTONS** can block other **PISTONS**.	N/A	**GRATES** will prevent **PISTONS** from moving until the **GRATES** are broken.
WIND	**WIND** puts out **FIRE**.	**WIND** does not affect **METAL**.	**WIND** affects **AIR** with a large multiplyer.	N/A	N/A	**WIND** effects stack.	N/A
GRATES	N/A	**METAL** break **GRATES**.	**AIR** goes through **GRATES** without breaking them.	N/A	**GRATES** will prevent **PISTONS** from moving until the **GRATES** are broken.	N/A	N/A

This isn't the original puzzle matrix as I no longer have access to that, but it's a facsimile created from memory. The real matrix was much bigger as it included all possible level elements and player actions.

The simple interactions form the first few puzzles, as it's necessary to teach these mechanics to the player anyway.

But the matrix will also help you spot potential that you might have missed otherwise.





For example, it allowed us to designed the ability for Metal Jack-Jack to permanently break open grates, or to push horizontal pistons.

Then we get the interesting puzzles that combine powers, such as using Air Jack-Jack to turn into Fire Jack-Jack at the right moment in order to pick up the Metal power and land on a pitson to weigh it down, accessing a secret path.

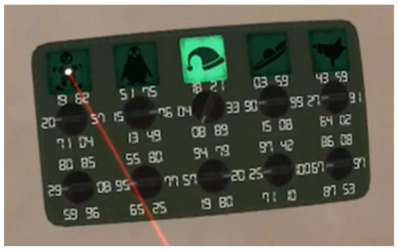
This is what one of the levels looked like!

We delivered the game. Disney was happy. The customers loved it. All in all of this within budget and without any delays!

Fast forward several years. I was working at a company called Minority Media. There was a project in development that lost its lead designer, and I was asked to take over.

The Other Room is Virtual Reality escape room video game with an unsettling narrative.

My predecessors did the best that they knew how to do with the resources they had. They brainstormed puzzles, estimated how long it would take to create each one, took the most interesting ones from those that fit the budget and schedule, and created them. In retrospect that's a reasonable way to approach gamedev content in general.



Dials

Cypher

Lightswitch

Scale

Keypad

Steam machine

However, the end result was 6 unique puzzles, each repeated 5 times with increasing difficulty.

The puzzles were:

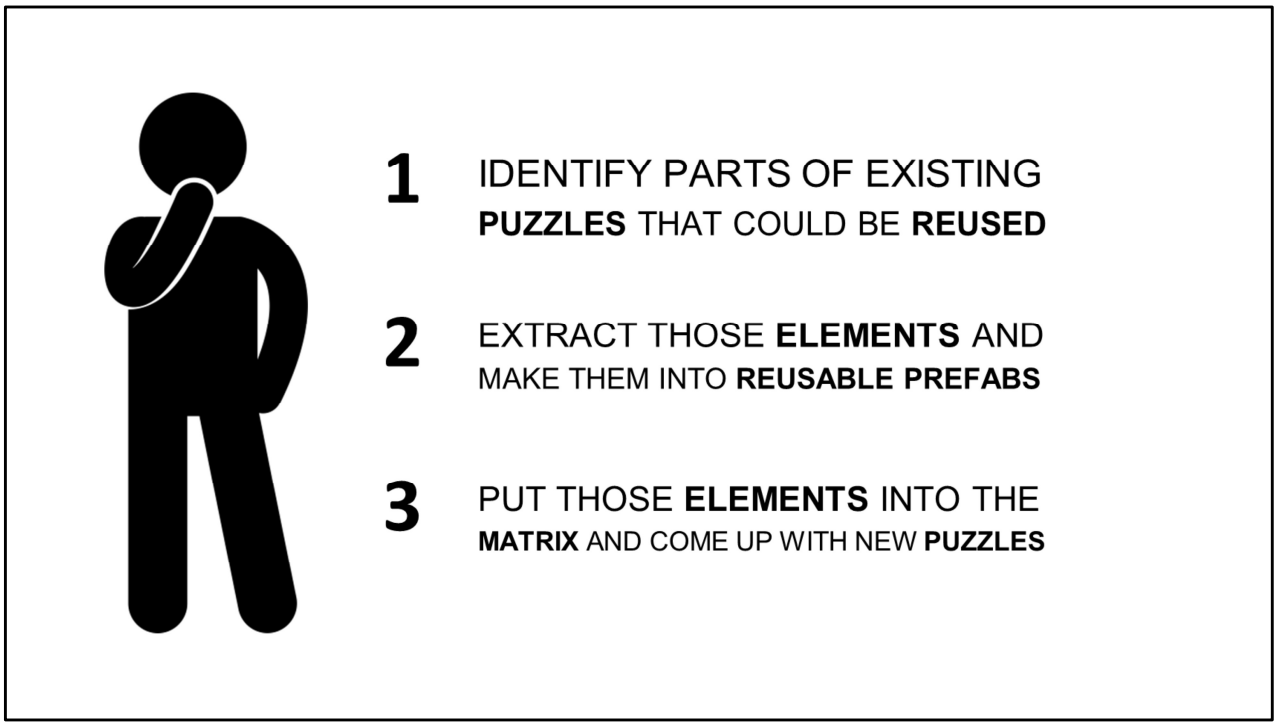
- **Dials:** Find clues to figure out which way to turn the dials.
- **Cypher:** Match symbols with their pairs.
- **Lightswitch:** Turn on switches to make all lights light up at once.
- **Scale:** Put objects on either side of a scale and make it even out.
- **Keypad:** Find numbers or symbols and input them in the right sequence.
- **Steam machine**: A series of interactions allow steam to flow in a specific path to solve the puzzle.

The puzzles themselves were simple, but fun. But they were only fun the first time of course. Playing the same level but having numbers be replaced with abstract symbols does not make it fun. The player has already solved it. The fun was already extracted.

The puzzles were also crafted as standalone set-pieces contained in individual prefabs.

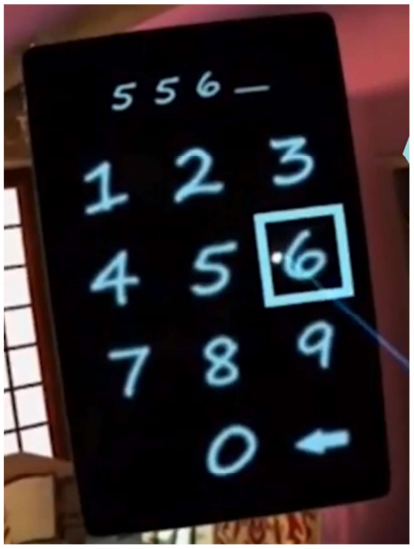
So now I was faced with a different problem. We had an existing game, with a tight schedule, and no real ressources to create something new.

So how did we fix this issue?



Well we atomized with the Matrix of course!

- **Step one:** Identify the different mechanical parts of the existing puzzles that could be broken down and reused.
- **Step two:** I requested that the puzzle be broken down into separate elements instead of having them be in a self contained prefabs. Ex: The scale puzzle has weighted objects, and pressure plates that read weight data.
- **Step three:** Put all of the individual atoms on both axes of the matrix, and put the game and level designers to work creating new puzzles with the existing elements.



After a paper-design approval process, we ended up having dozens of additional puzzles that combined these elements in interesting ways!

For example, we reused the scale from the scale puzzle, and removed the items from the top of it and hid them around the room. A future iteration of this had the player solve the keypad level, except this time they were able to use the keypad as a weighted object on the scale.

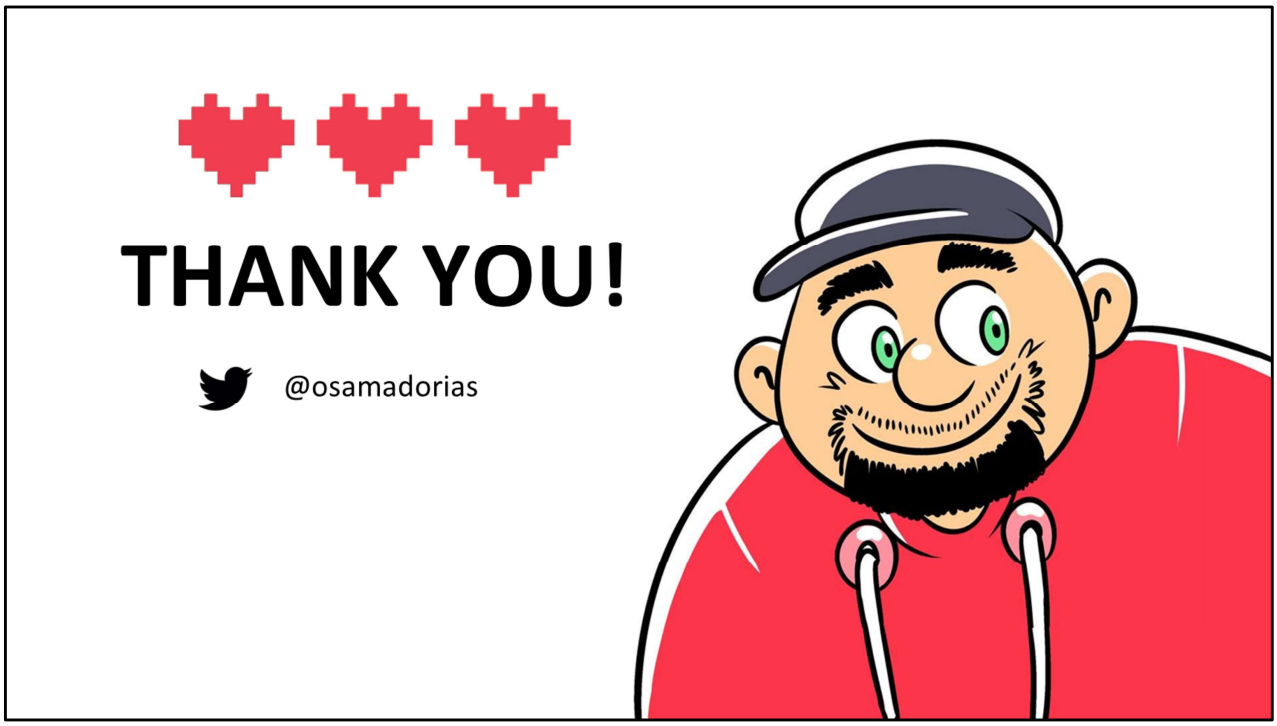
LIMITATIONS

The puzzle matrix will help you maximize the number of interesting puzzles that you can craft with what you already have, and will show you where you can put a little more effort to squeeze even more puzzles out.

It’s not a magic solution for having far too few resources though. Your team still has to be able to add enough interactions and ingredients to allow for a wide enough probability space for the matrix to become effective.

It also can’t guarantee that the puzzles themselves will be fun and interesting. That will have to be playtested as with any other kind of gameplay, and hopefully early enough to allow for a pivot if needed.

And one more aside, on the way to GDC, I found out my Jack Jack game was still featured on the plane.



In conclusion, Atomizing with the Puzzle Matrix is a simple tool for designers to facilitate approaching puzzle designs. It helps you highlight any connections that you might have otherwise missed, and it allows you to maximize the use of your ressources. I hope that this was helpful, thank you for your time!

OSAMA DORIAS

Senior Partner Relations Manager
Unity
@OsamaDorias

Our last speaker is a long time game designer who you may know from games like Drop7 to his dark philosophical clicker game Universal Paperclips. He is also the director of the NYU Game Center. Unfortunately due to life events he couldn't be with us today, but we have this amazing talk here on video.

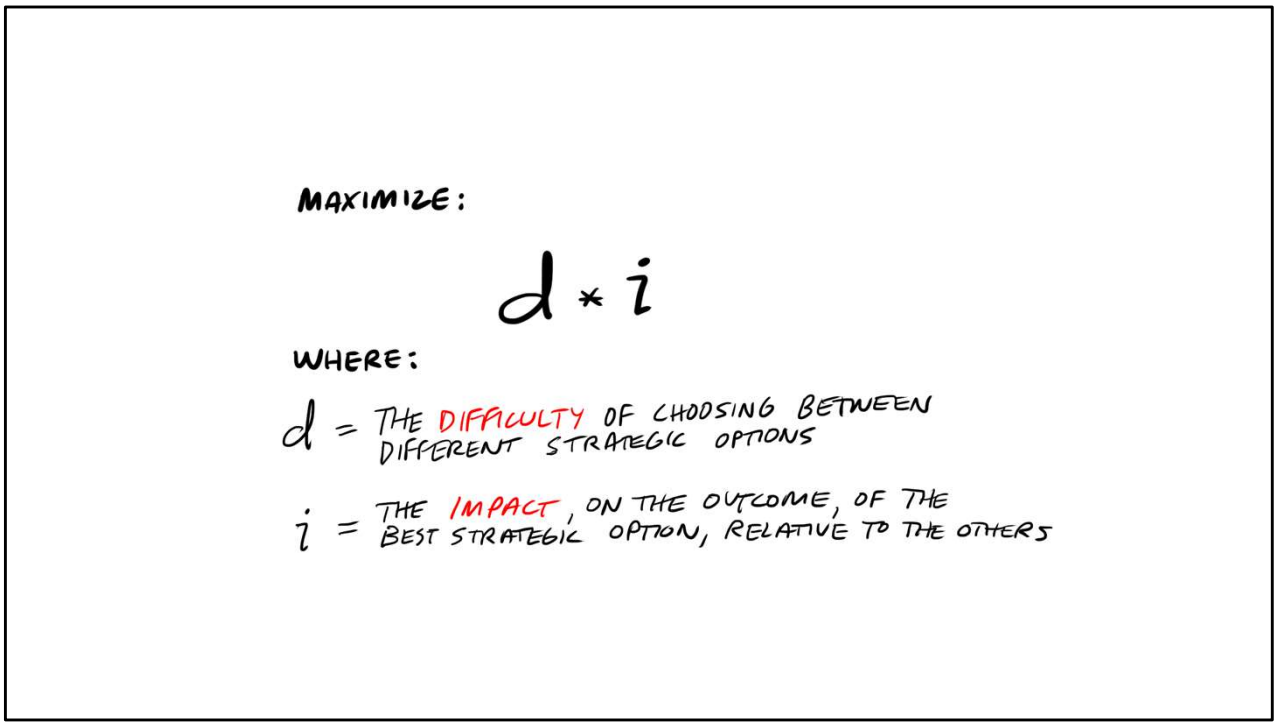
Sometimes we assume that if our game makes a lot of money, we have succeeded. Or that if our game is critical acclaimed we have succeeded. But Frank Lantz is here to say there's another thing even more important for us to consider.

And even though Frank isn't here, let's give him a big round of applause, while I start his video.

Rules of the Game

GDC~~2020 2021~~ 2022

Frank Lantz / NYU / Everybody House Games / Hello Planet
frank.lantz@nyu.edu

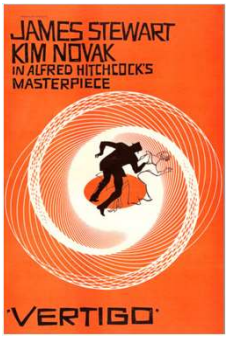


Ok, so, here's what I'm NOT going to talk about. This is a kind of fundamental rule I have about the design of strategy games. I actually don't *really* believe in rules like this. I think this is a perfectly fine principle, as far as it goes, and it does capture something about my state of mind when I'm designing a game, but it's not really a rule in the sense of constraining or arbitrating the design process. Design is just too fluid and creative and surprising to be captured in these kind of stark formalisms.

Instead, I want to talk about a different kind of rule – which is more like a conceptual framework for thinking about design. But it's still a rule, in the sense of being of a useful and important insight into the process of design. Something that, if you're not aware of it, can lead to mistakes and problems.

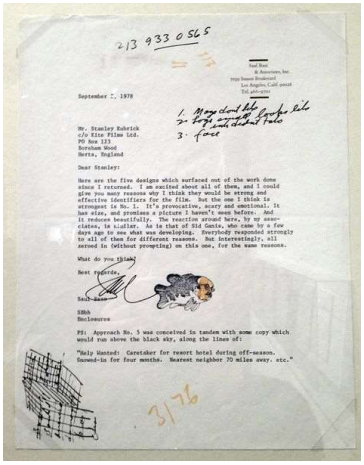
And, in particular, the rule I want to talk about is one that I only just recently started to understand. And it affected how I thought about doing game design and especially how I thought about *teaching* game design.

Saul Bass



Saul Bass

I'm going to start by showing you a short video of Saul Bass, one of the great designers of the 20th century.



September 7, 1978

Mr. Stanley Kubrick
c/o Kite Films Ltd.
PO Box 123
Boreham Wood
Herts, England

Dear Stanley:

Here are the five designs which surfaced out of the work done since I returned. I am excited about all of them, and I could give you many reasons why I think they would be strong and effective identifiers for the film. But the one I think is strongest is No. 1. It's provocative, scary and emotional. It has size, and promises a picture I haven't seen before. And it reduces beautifully. The reaction around here, by my associates, is similar. As is that of Sid Ganis, who came by a few days ago to see what was developing. Everybody responded strongly to all of them for different reasons. But interestingly, all zeroed in (without prompting) on this one, for the same reasons.

What do you think?

Best regards,

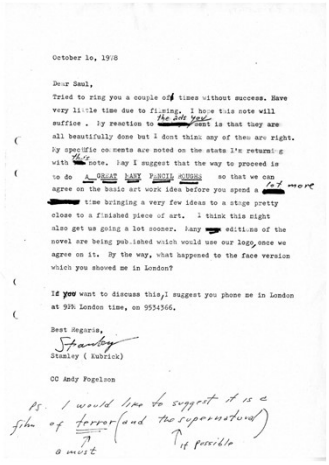
Saul Bass

SBbh
Enclosure

PS: Approach No. 5 was conceived in tandem with some copy which would run above the black sky, along the lines of:

"Help Wanted: Caretaker for resort hotel during off-season. Snowed-in for four months. Nearest neighbor 70 miles away. etc."

3/76



October 1o, 19/8

Dear Saul,

Tried to ring you a couple of times without success. Have very little time due to filming. I hope this note will suffice. My reaction to the five you sent is that they are all beautifully done but I dont think any of them are right. My specific comments are noted on the stats I'm returning with this note. May I suggest that the way to proceed is to do A GREAT MANY PENCIL SKETCHES so that we can agree on the basic art work idea before you spend a lot more time bringing a very few ideas to a stage pretty close to a finished piece of art. I think this might also get us going a lot sooner. Many editions of the novel are being published which would use our logo, once we agree on it. By the way, what happened to the face version which you showed me in London?

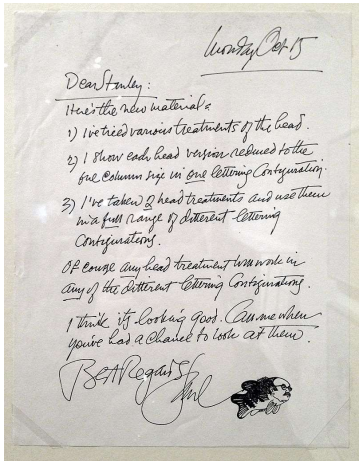
If you want to discuss this, I suggest you phone me in London at 9pm London time, on 9534366.

Best Regards,
Stanley

Stanley (Kubrick)

CC Andy Fogelson

PS. I would like to suggest it is a film of terror (and the supernatural) a must if possible



Dear Stanley:

Here's the new material's

1) I've tried various treatments of the head.

2) I threw each head version reduced to the five Columbus logo on one Lettering Configuration.

3) I've taken 2 head treatments and used them in a full range of different Lettering Configurations.

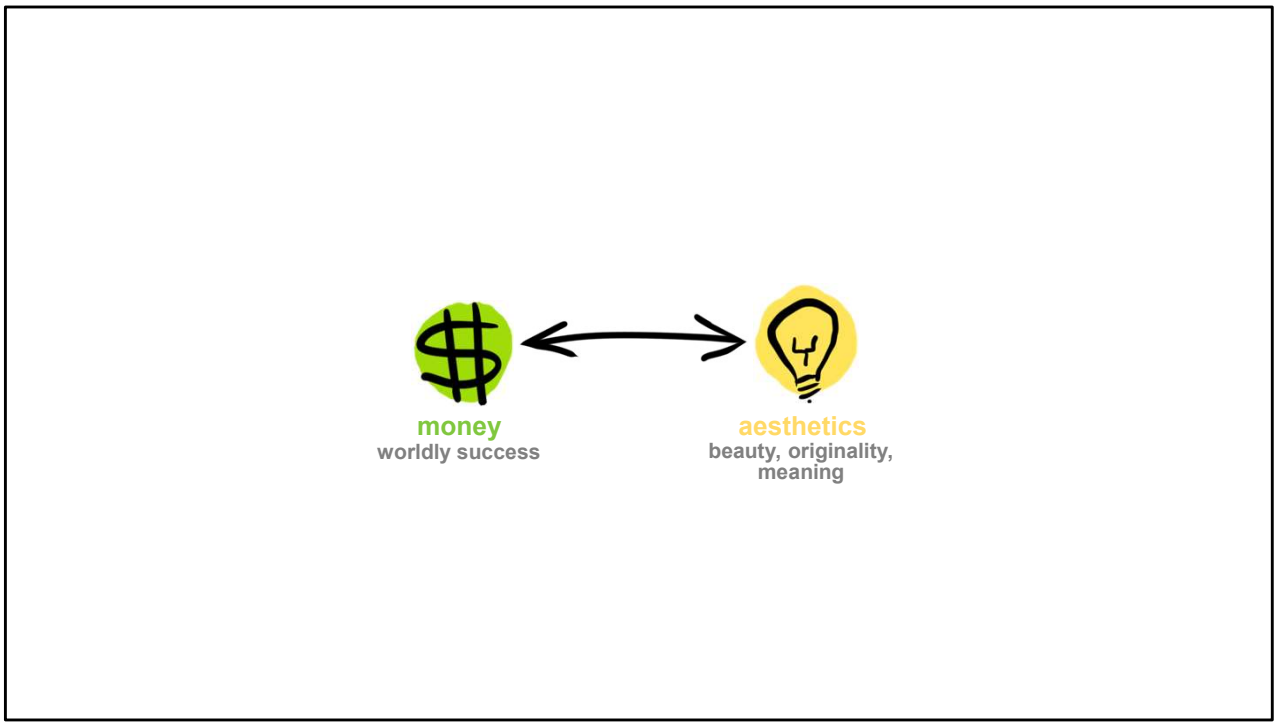
Of course any head treatment can work in any of the different Lettering Configurations.

I think it's looking good. Call me when you've had a chance to look at them.

Best Regards

Saul

(Btw, the correspondence between Bass and Kubrick about the Shining poster is a wonderful bit of design history and well worth digging into.)



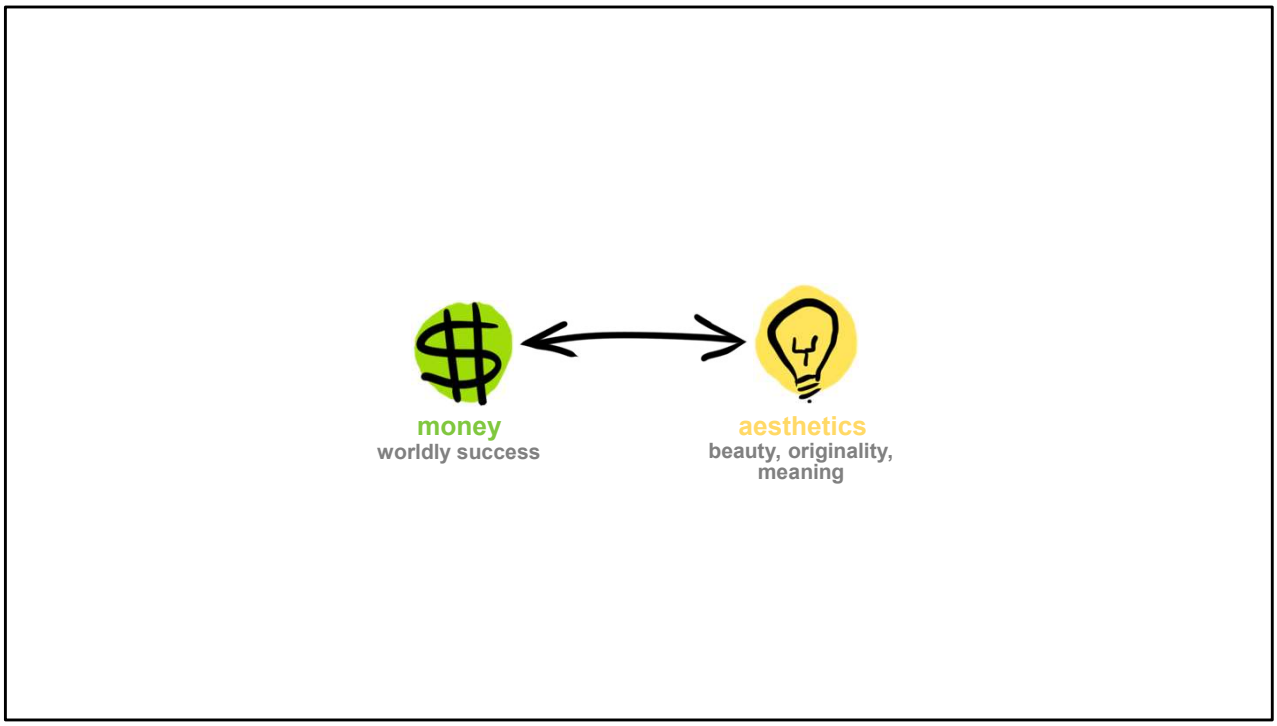
So the rule I want to discuss is a way of thinking about the kind of trade-offs that Bass is talking about. Specifically, to begin with, the trade-off between money and aesthetics.

“Money” is really shorthand for a whole bunch of values related to practical, worldly success – it could be popularity, scale, ”engagement” or any number of different quantifiable measurements success. In the situation Bass is describing it’s simply client approval.

Likewise, “Aesthetics” is shorthand for a whole set of values related to the intrinsic qualities that you, as a creative person are personally motivated by – beauty, originality, meaning, etc…

The point is NOT that these two things are always in conflict, that you must always choose between them.

Often, these things are in perfect harmony – often thinking about how to make something popular or successful is a great way to arrive a the most beautiful and interesting version of it. And vice versa – following your own personal vision about how to make something beautiful and interesting is often the best way to make it successful.



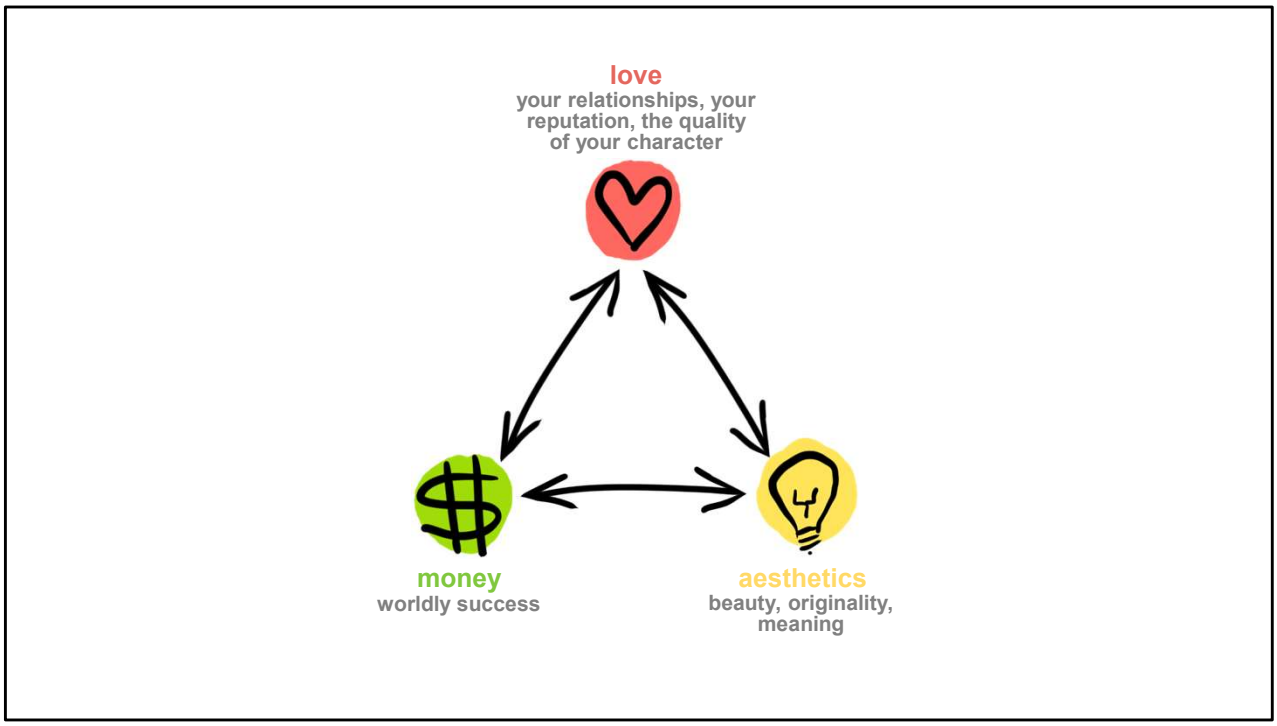
But the point is that *sometimes* these things ARE in conflict. That's just a fact. And when they are in conflict, you have to make trade-offs between them.

And the important thing to realize here is that these are different values, and there is no absolute, universal, objective perspective from which to resolve this tension. That's the point Saul Bass is making about the *personal* nature of the value of aesthetics, for him, as a designer.

If someone says "why should I make the game less popular, or less successful, in order to make it more beautiful." You can't point to any external value, outside of Aesthetics, as a justification. You can't justify one value in terms of the other. For example, you can't say "Oh, actually, by giving up some short-term success right now, you'll actually get even MORE success down the road." (Even though this is often true!) Because that would be denying the conflict, that would be dissolving the difference between these different value systems. And the point is that difference actually does exist.

You have to genuinely prefer beauty to money on some level. You have to genuinely be willing to give up some money for some beauty.

(Tell story about Zynga and Mark Pincus)



Ok, now here is where the rule gets interesting.

Because here's the thing – I thought I understood this. I thought I really had a solid picture of this trade off in my head – this idea of different value systems and how, as a designer, I had a personal investment in aesthetics and I had to find a balance between that and my desire to be successful in the world. And that these were sometimes in harmony but not always, and so on…

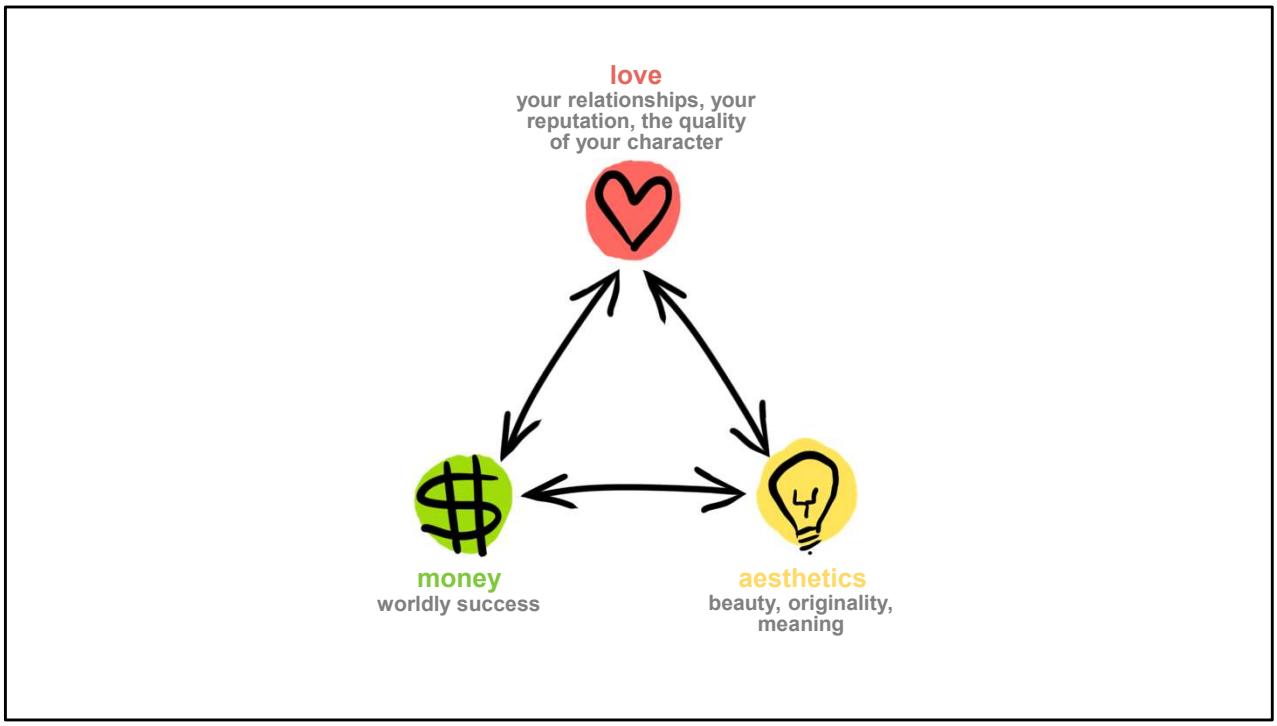
But a couple years ago something happened to me (tell the story about Team Dire)

And I realized there was a third dimension to this set of related value systems. For lack of a better word, I will just call this "Love". But that is really shorthand for a set of values related to your relationships, your reputation, and the moral quality of your character as a person.

And, just like the relationship between Money and Aethetics. The relationship of Love to these other value systems is often in perfect harmony – you find the most beautiful design solutions and achieve the greatest success by being kind and compassionate and trustworthy and supportive – the kind of person other people want to work with and be around.

But not always! These value systems are not identical. And sometimes they WILL be in conflict. And sometimes you should give up some beauty for some love. Not because, secretly, down the road, you think it will lead to even more beauty. But because beauty isn't the ultimate, global, universal, objective value system. Sometimes it's just more important to be nice than to be clever.

And this was a lesson I had failed to teach to my students.



But none of these arrows are one way. The rule isn't that, whenever there's a conflict between Beauty and Love, Love should win. Sometimes beauty should win! Maybe sometimes you should be like Spike Jonez, who shot the entire movie HER with one actress as the voice of the AI and then decided to replace her performance with Scarlett Johansson. I don't think I could ever do that, but maybe that was the right thing for him to do. I don't know!

My rule doesn't tell you how to resolve these conflicts, it's just a framework for recognizing them and realizing that it's your responsibility to navigate them.

It says: this is the situation we find ourselves in, as designers, as creative people. We must learn how to move fluidly between these different value systems. We must always look for ways to bring them together, find harmony between them. But we must also be willing and able to make trade-offs between them, and to understand how and why we are doing that.

And we must do this without having a global, universal, objective perspective that unifies these different value systems – we must do it from the messy, partial, incomplete perspective of real life, where these conflicts are real, and we have to negotiate between them based on the hard work of deciding what is important to us, what we care about, and why.

DON’T ASSUME YOU KNOW HOW TO DESIGN GAMES

DON’T ASSUME YOUR PLAYERS ARE LIKE YOU

DON’T ASSUME

Thanks everyone!