Rules of the Game
Five Unique Techniques from Distinguished Designers

Your host
Richard Rouse III @richardrouseiii

with

Kate Compton @GalaxyKate
Celia Hodent @CeliaHodent
Brian Moriarty
Brenda Romero @br
Lauren Scott @Lauren_E_Scott

GAME DEVELOPERS CONFERENCE | July 19–23, 2021

Welcome

Rules of the Game 2015
With your host Richard Rouse III @richardrouseiii

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

Rules of the Game 2016
With your host Richard Rouse III @richardrouseiii

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

Rules of the Game 2017
With your host Richard Rouse III @richardrouseiii

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

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

Rules of the Game 2018
With your host Richard Rouse III @richardrouseiii

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

Rules of the Game 2019
With your host Richard Rouse III @richardrouseiii

Deborah Hendersen	"Tell Players What Winning Is"
Daniel Cook @danctheduck	"Use Real Humans to Drive Your Experience"
Brian Upton @bbupton	"Design Moments of Stillness"
Lisa Brown @wertle	"Manage Your Gameplay Pie"
Jesse Schell @JesseSchell	"Obey the Story Stack"

Each year we have designers get up and talk about rules they use in their practice, whether we agree or disagree, we hope they are interesting.

But we missed last year... Compared to the many other horrors of the last year, skipping this talk was minor. And we were fortunate. As game developers, we both made something which people consumed at home and which we could make at home. We were very fortunate. Just ask our friends who are musicians, or theater actors, or filmmakers. They had a much harder time.

But still, our development was changed in many ways. Some of us missed the collaboration in person, but maybe also valued working at home allowing us to focus on tasks better than in a loud office.   But whatever form change takes,, it can be nice to know there are some rules to fall back on. Hopefully the rules from this session can provide some of that.
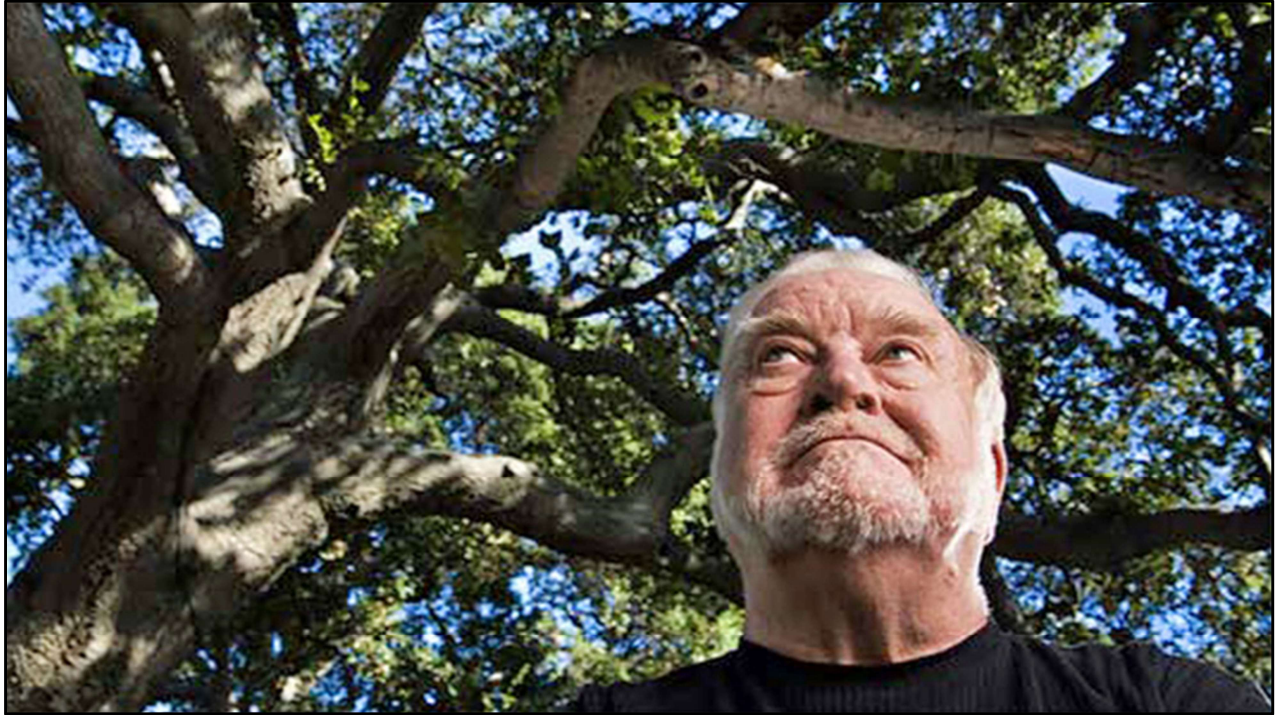
Let's talk for a minute about Flow, the concept pioneered by Mihaly Csikszentmihalyi.

His theory was that if people have the right skills, but are pushed with the right challenge, they can enter a flow state where they are fully immersed in their work

We often talk about flow for our players - how if we teach them the right things, and provide them with the right challenge, we can keep players in that flow state - and keep them playing. You can debate if that's what you want for your game or not.
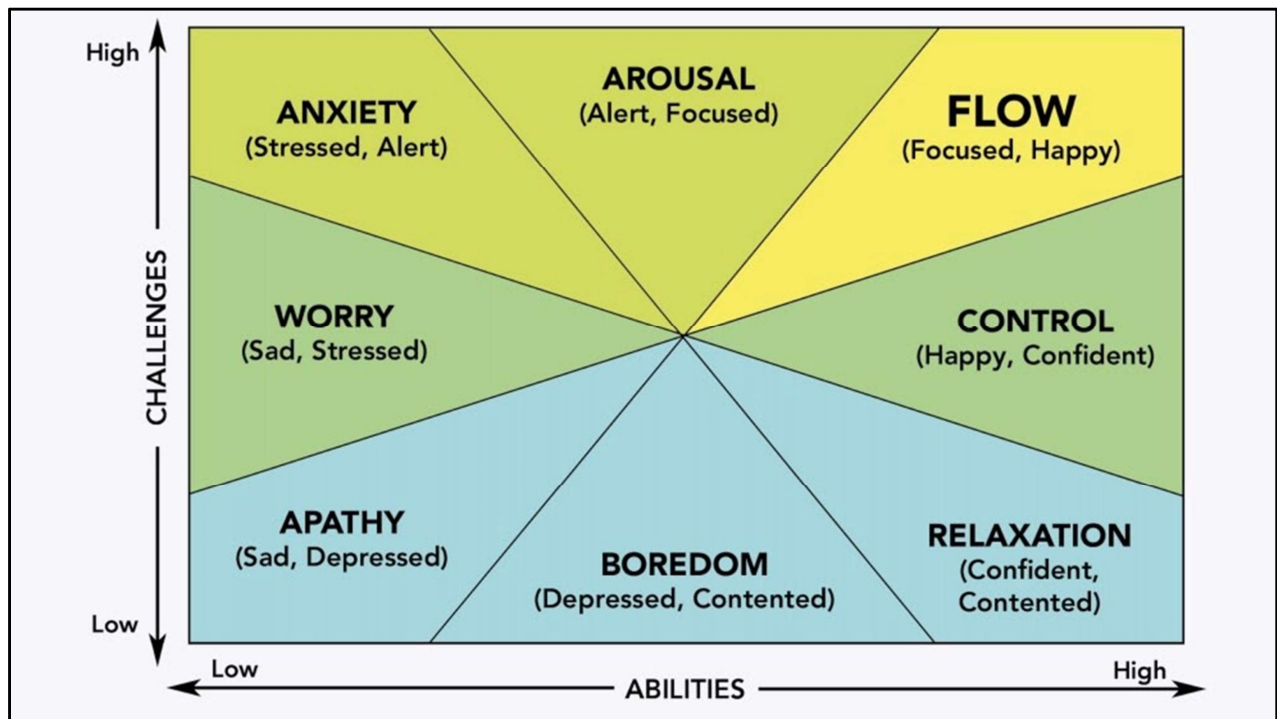
But Csikszentmihalyi's work was actually originally about creative people - whether authors or musicians or creators of any kind - and how if they are good enough, the moment can come where the world falls away, and they are blissed out doing the work they love and how they can often do their best work then.

And the way I think about the "Rules" in this session is that they can be a key part of this - having a set of rules to fall back on means that even when the world is turned upside down, you still know how to design a game.

But our first speaker Brenda Romero barely needs an introduction. She's worked on everything from Wizardry to Jagged Alliance to her stunning medium is the message series including Train.

Her most recent game is Empire of Sin and she's going to tell us how she always starts her game projects.

Set the Systems

Place the Player

Brenda Romero @br / brenda@romero.com

When we're talking about new games and what they will be about, I often hear the term 'wish fulfilment.' That we want TO BE something or play as a character in a certain role…

As in… I want to be a bad ass biker…

Or a soldier...

Or someone like, say, Al Capone, who's in my latest game, Empire of Sin.

And, like, obviously, all of these are good places to start, and you don't even have to be a human-like character, per sae. You can be something like a dinosaur or something completely make believe or an omniscient figure. I mean, you can WISH to be anything. But for me, that's not where it starts.

Chicago

1920

Prohibition
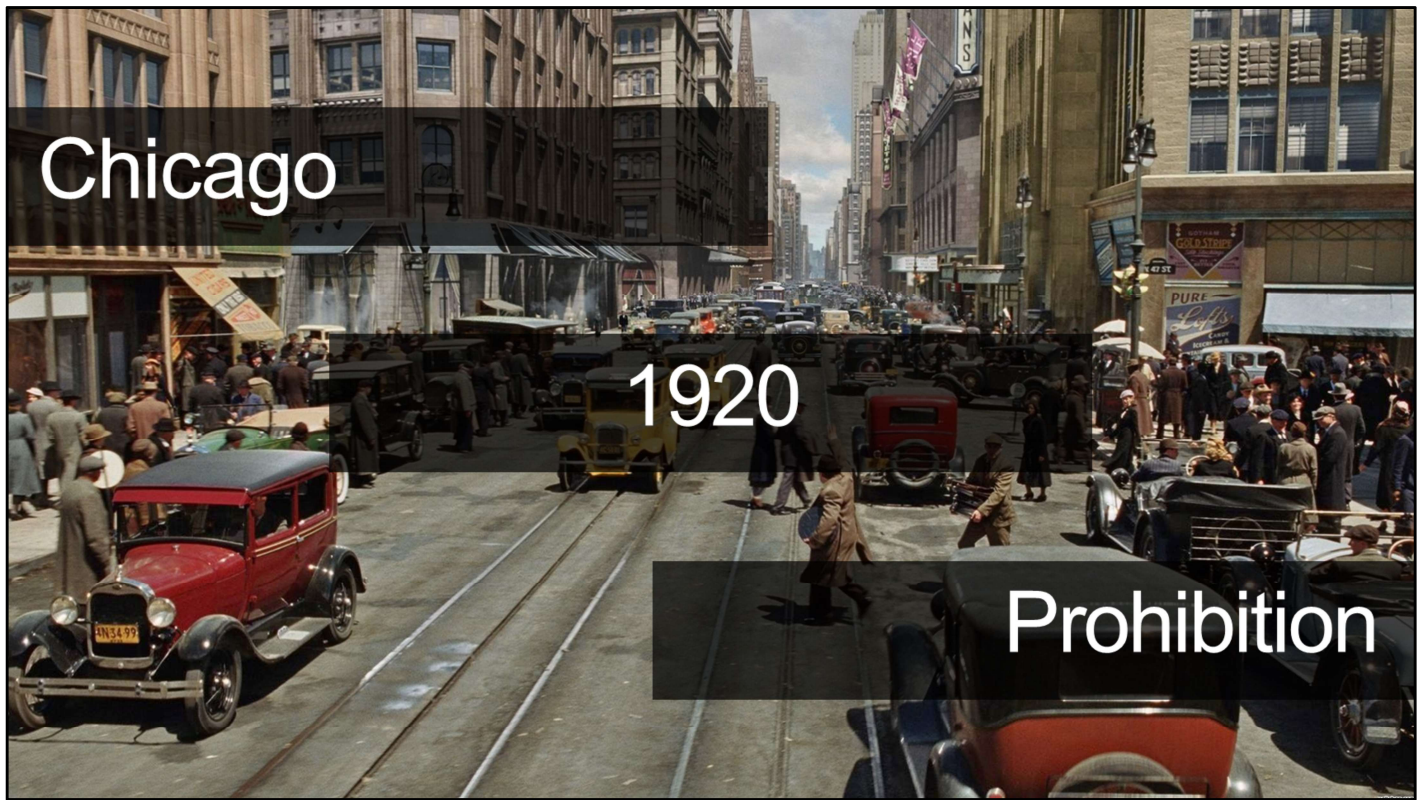
I tend to start at a different point altogether. I start with place or time or era. Something I am fascinated in.
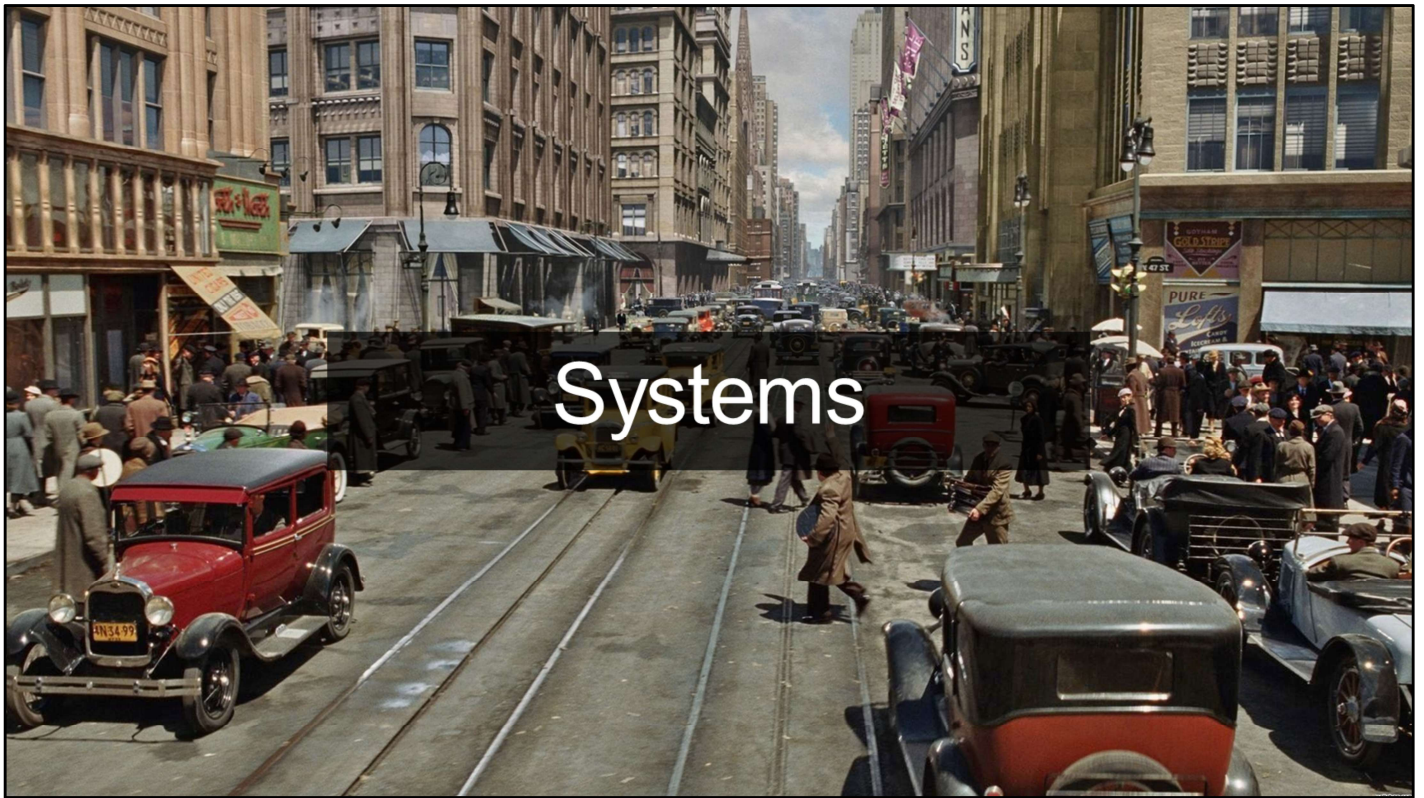
Systems

And then I study the systems completely apart from any game idea I might have. I find this works especially well for historical simulations or games which have any basis in history. At this point, I've made seven historical games, most recently, Empire of Sin.

With Empire of Sin, I was — and had been — completely fascinated with the prohibition era. That was all I had. I didn't know what I wanted to do. And this leaves some key questions unanswered or, at the very least flexible, for this point.

Like the who, what, where and even *when* are up for grabs. While Prohibition happened in 1920, the systems that made it work could exist (and in fact do exist) in the present and likely the future.
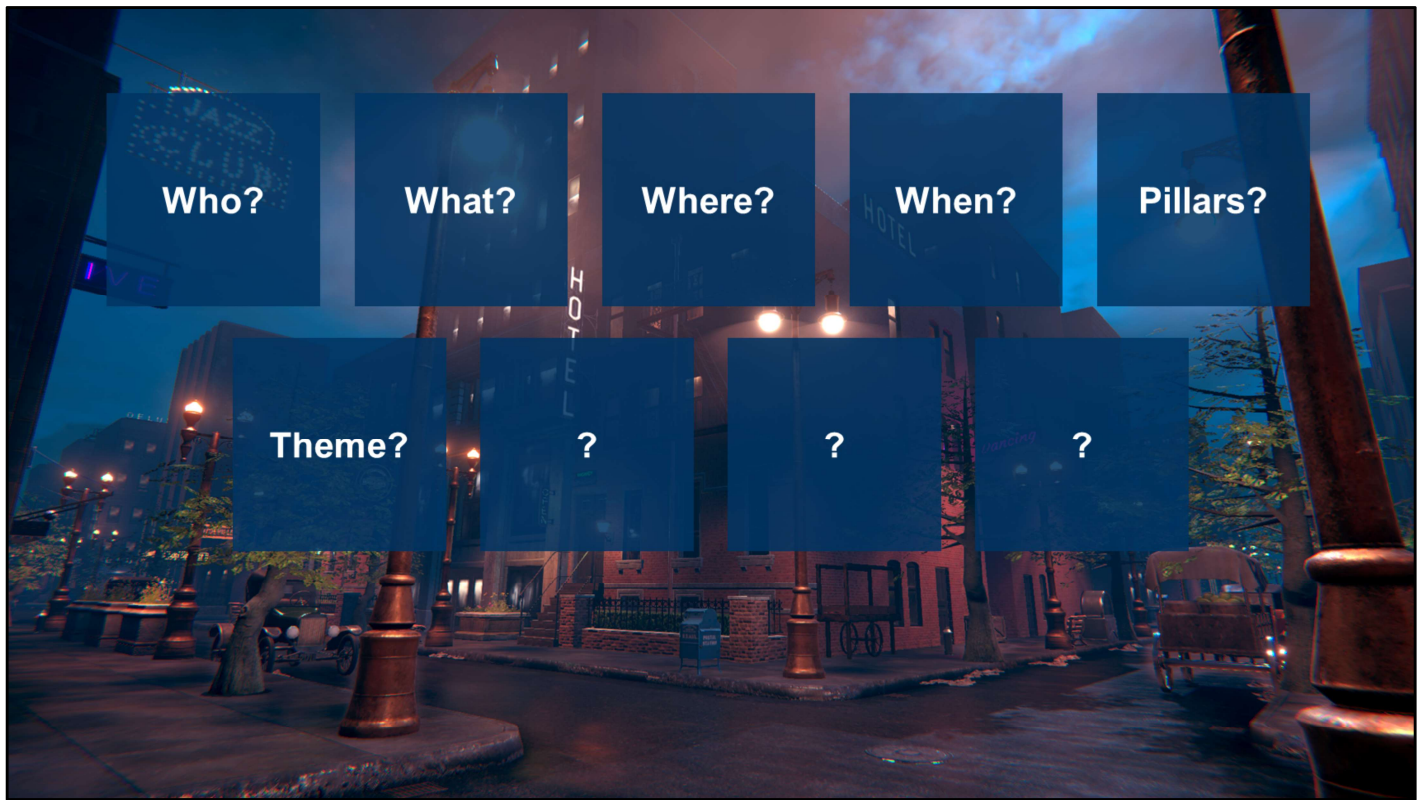
Questions of game's pillars and theme are absent.

I'm not concerned with art style, genre or the player's view into the world.

Systems

I'm just concerned with the systems.

Alcohol
- Making
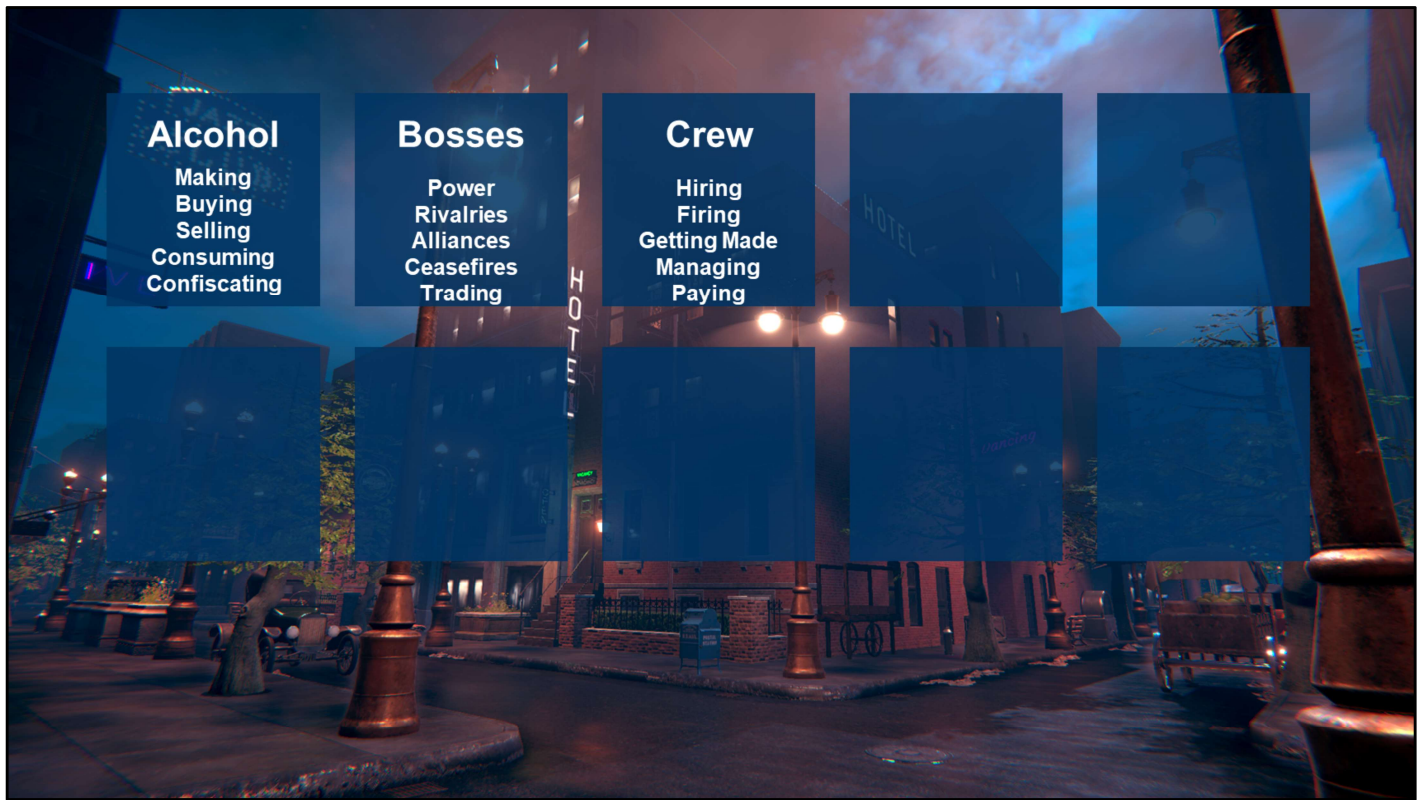- Buying
- Selling
- Consuming
- Confiscating

So, I start trying to list them out, usually on a very messy whiteboard. During this era, we had several things in play. First of all, there's alcohol. Who makes it, buys it, sells it, consumes it, confiscates or steals it…
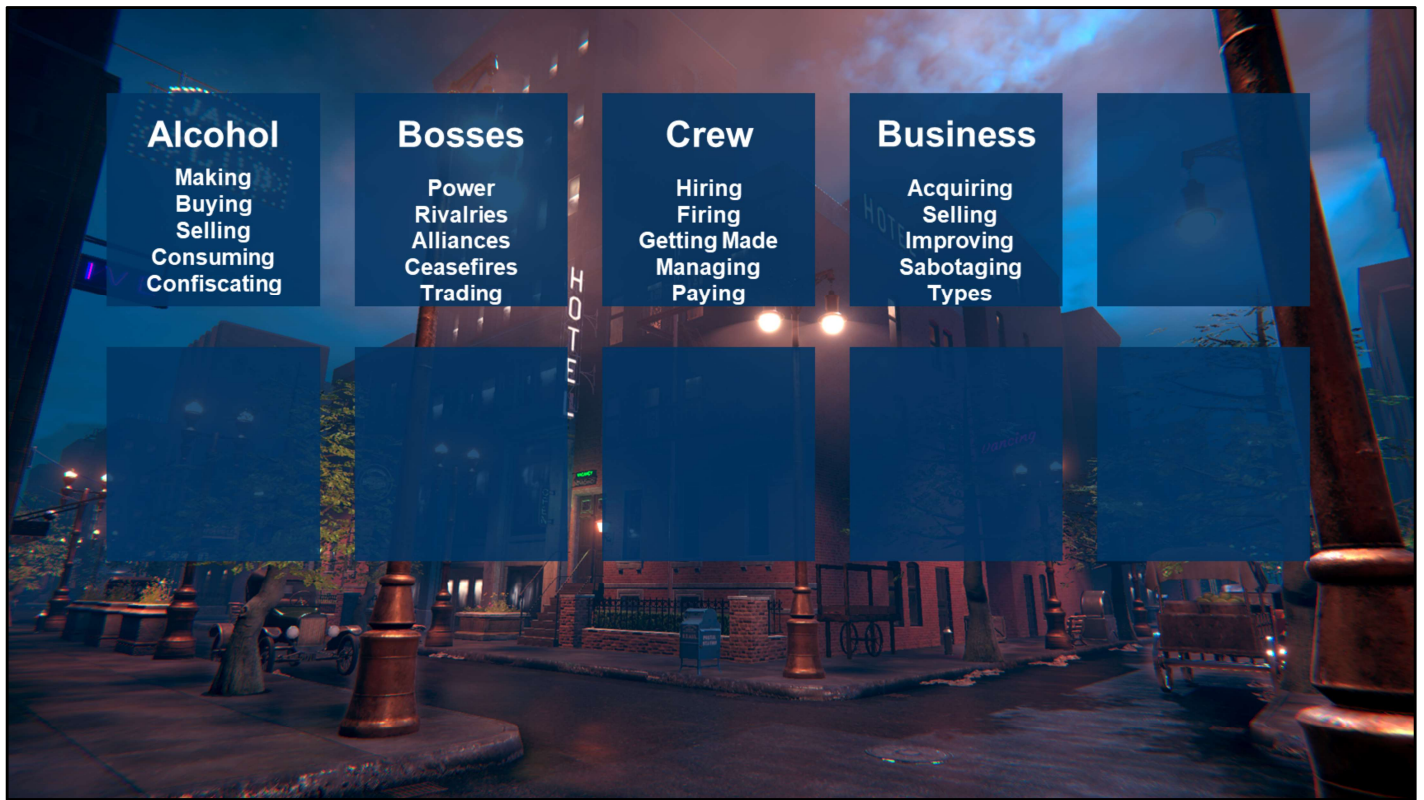
Alcohol
Making
Buying
Selling
Consuming
Confiscating

Bosses
Power
Rivalries
Alliances
Ceasefires
Trading

There's the bosses, whether historical or invented and all the interplay between them.

| Alcohol	Bosses	Crew
Making	Power	Hiring
Buying	Rivalries	Firing
Selling	Alliances	Getting Made
Consuming	Ceasefires	Managing
Confiscating	Trading	Paying

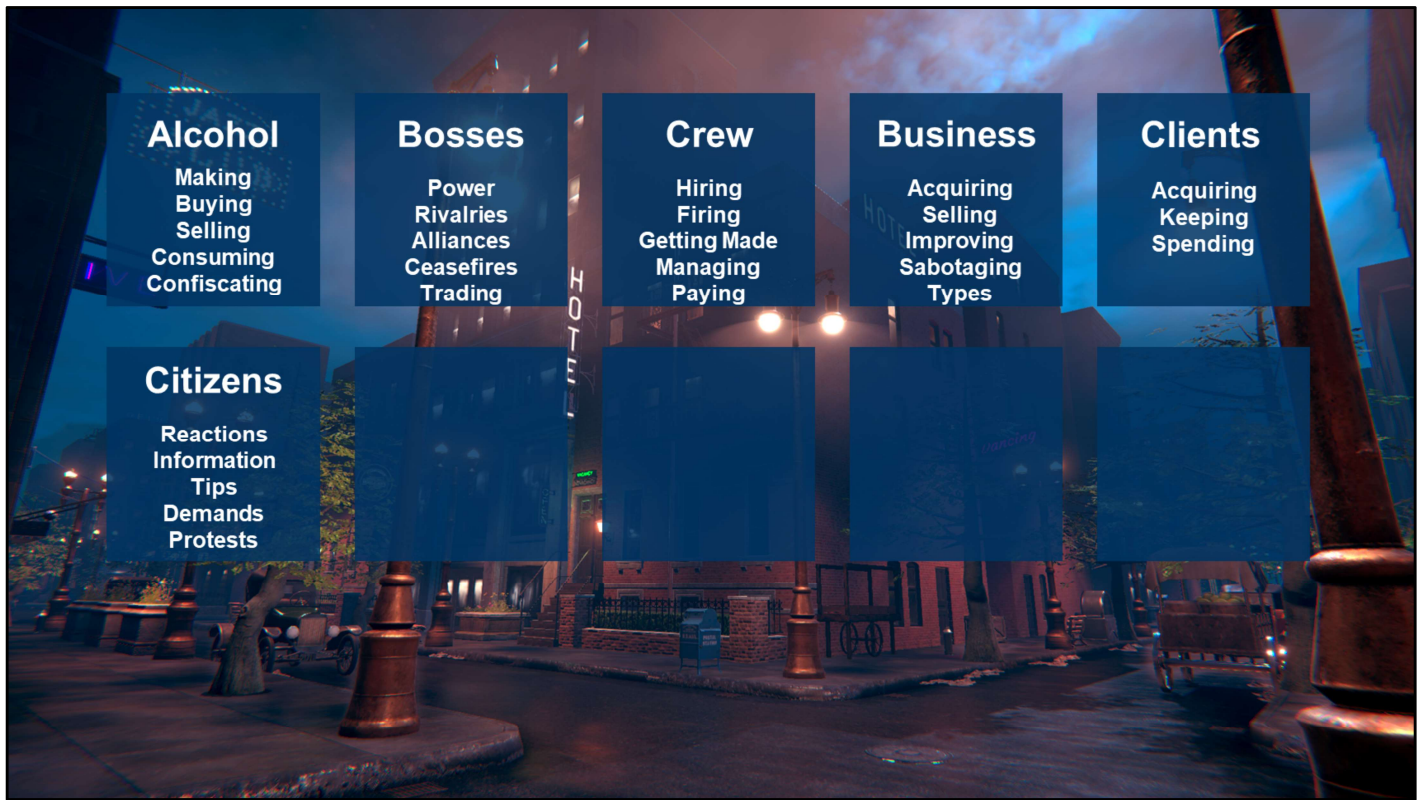And they can't do it alone. So, there's the whole system of hiring gangsters.

Businesses… and what type are these? Are they clandestine illegal businesses or fronts? Or are they engaged in legal stuff to throw off the cops?
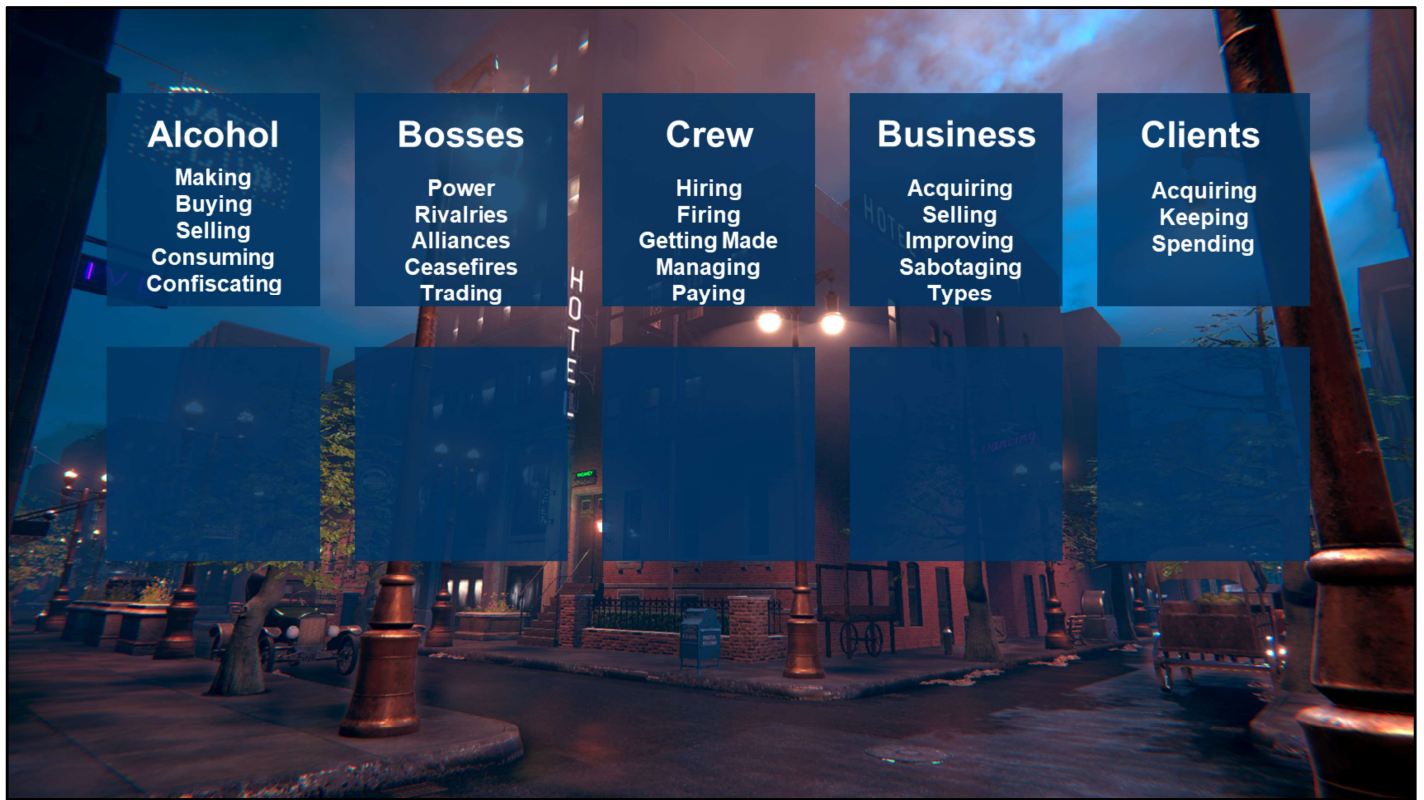
Those businesses, of course, have clients that the bosses need to acquire and keep, particularly with competition. How much do they spend? And here, obviously, we also see a connection not only to businesses, but to alcohol or whatever other illicit things a boss might be selling. Are customers sensitive to crime in the area? Do businesses near each other cause conflict or draw more clients overall?

Alcohol
Making
Buying
Selling
Consuming
Confiscating

Bosses
Power
Rivalries
Alliances
Ceasefires
Trading

Crew
Hiring
Firing
Getting Made
Managing
Paying

Business
Acquiring
Selling
Improving
Sabotaging
Types

Clients
Acquiring
Keeping
Spending

Citizens
Reactions
Information
Tips
Demands
Protests

There are the citizens of Chicago and how they might react to a criminal empire being built around them. The Temperance movement was active at the time, first demanding and then getting Prohibition passed.
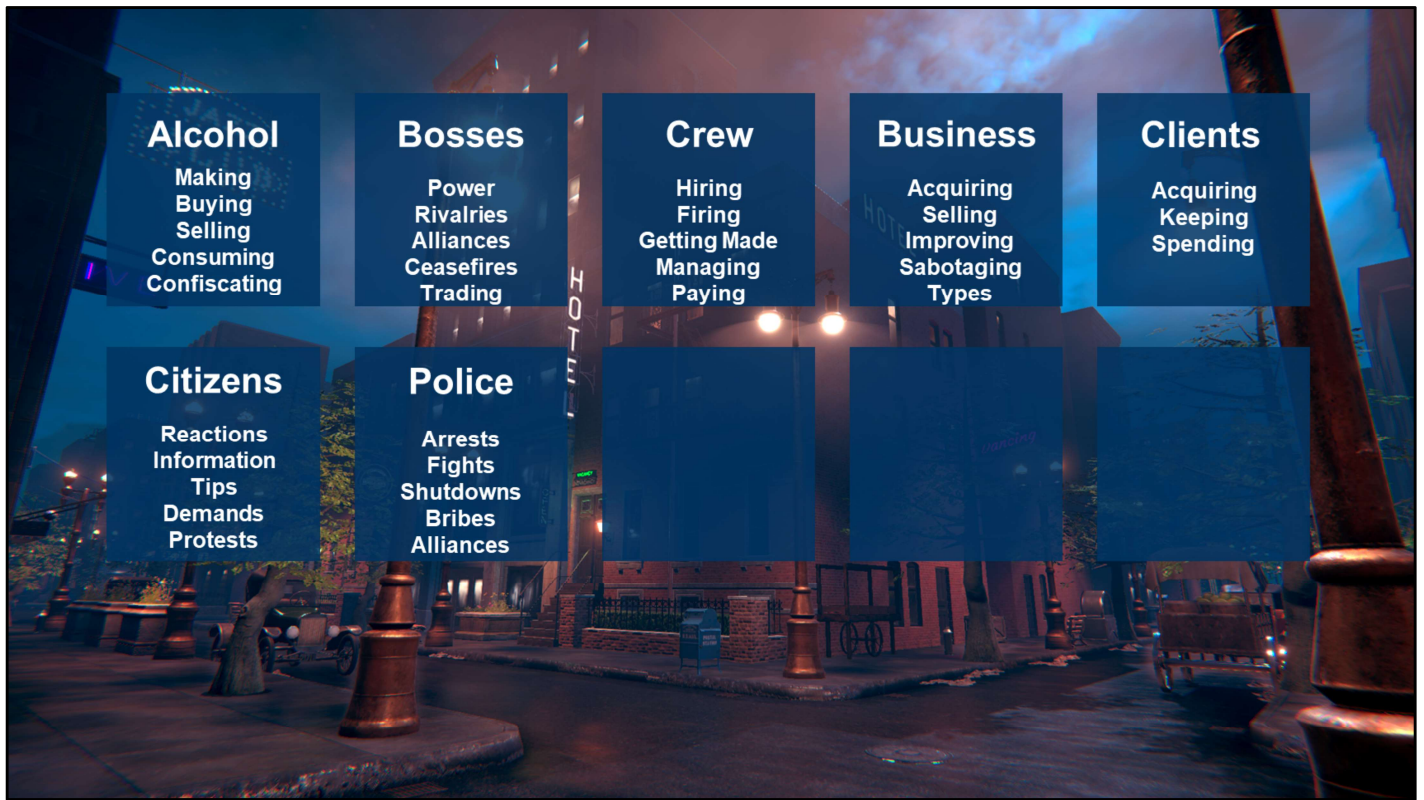
There was Chicago's law enforcement who, of course, arrested and fought with the crew and bosses, and worked to shut down their businesses. Police were also notoriously on the take and willing to look the other way and even form alliances.

The feds are a component of this, of course. Now, sticking to prohibition, they were 'Untouchable,' but there was more than one tale of blackmail against the feds and even against J Edgar Hoover.
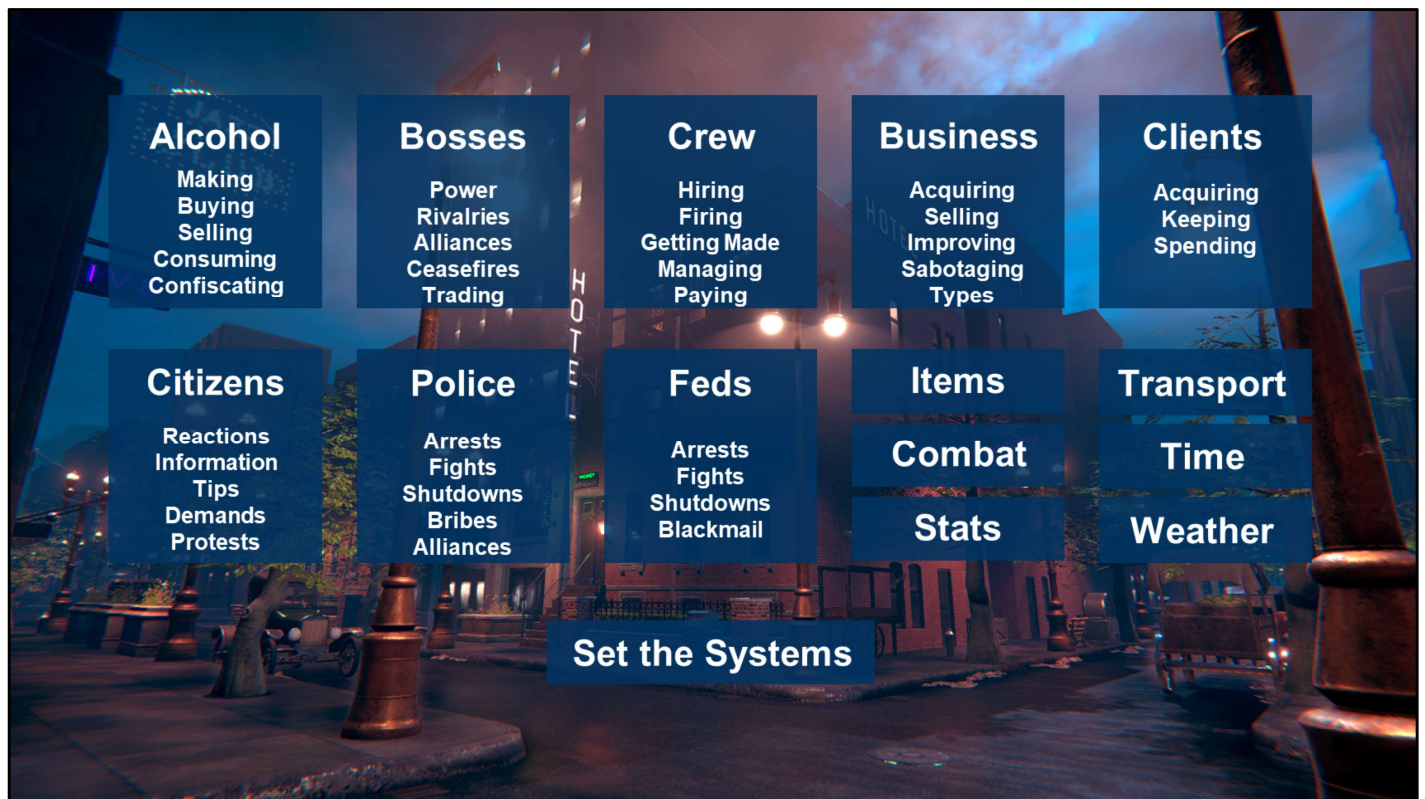
And then there are the necessary things which fall at the intersection of these things. The items they have, how they move around, the collisions of conflict. [3:48] And with this, I feel like I've set the systems for the game.

All of these systems, to me, make up my world before I even put a player in it. And I think this is important. It gives me a critical idea of how things connect with one another and where those interesting connections are. It shows me the tension and conflict — **and if there's enough of it** — and sometimes makes me consider things from angles I would not otherwise have seen.
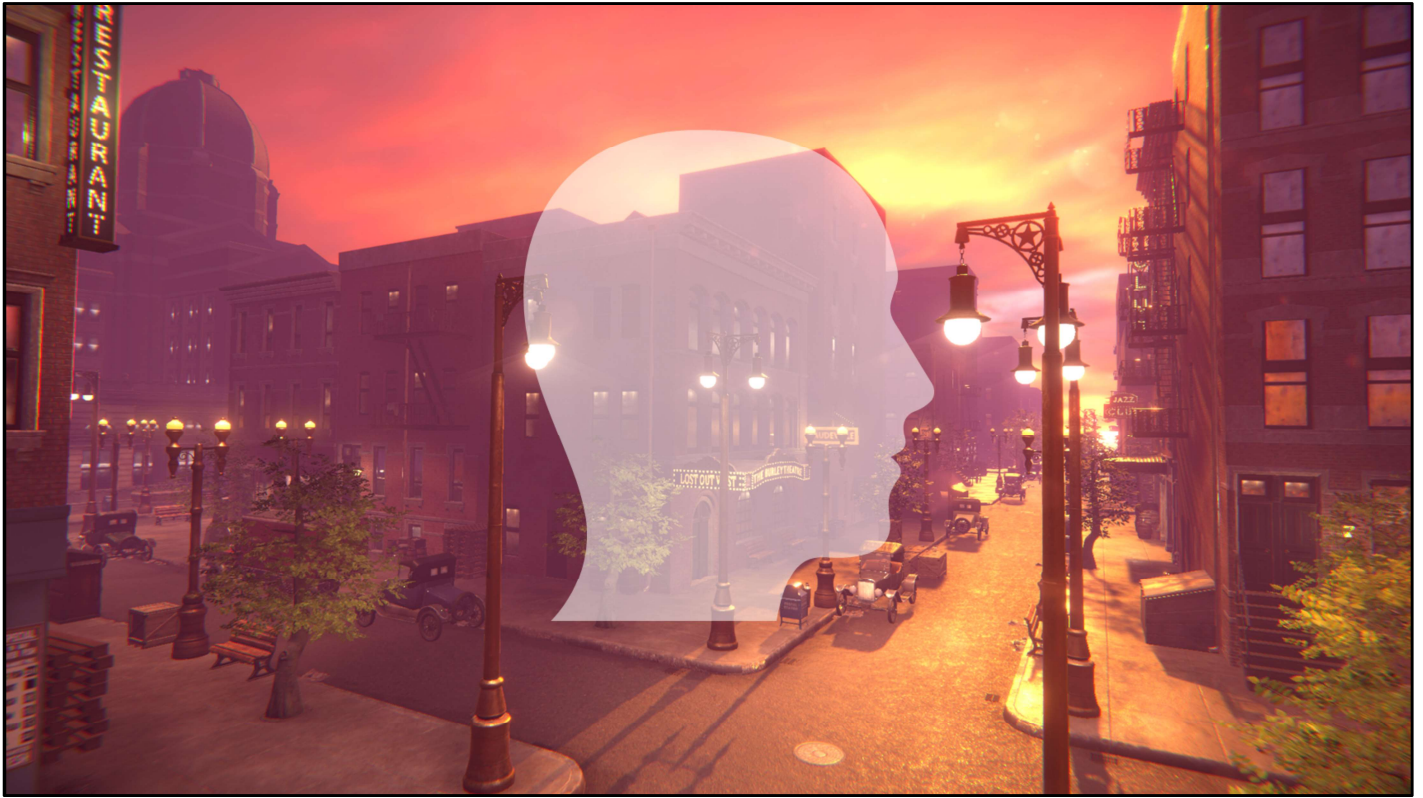
Instead of looking at a **character** or a **wish** that has a prescribed set of actions already baked into them, possibly even inspired by or derivative of another game, I am looking at a whole possibility space, the potential for something **brand new** where where lots of different games can occur.

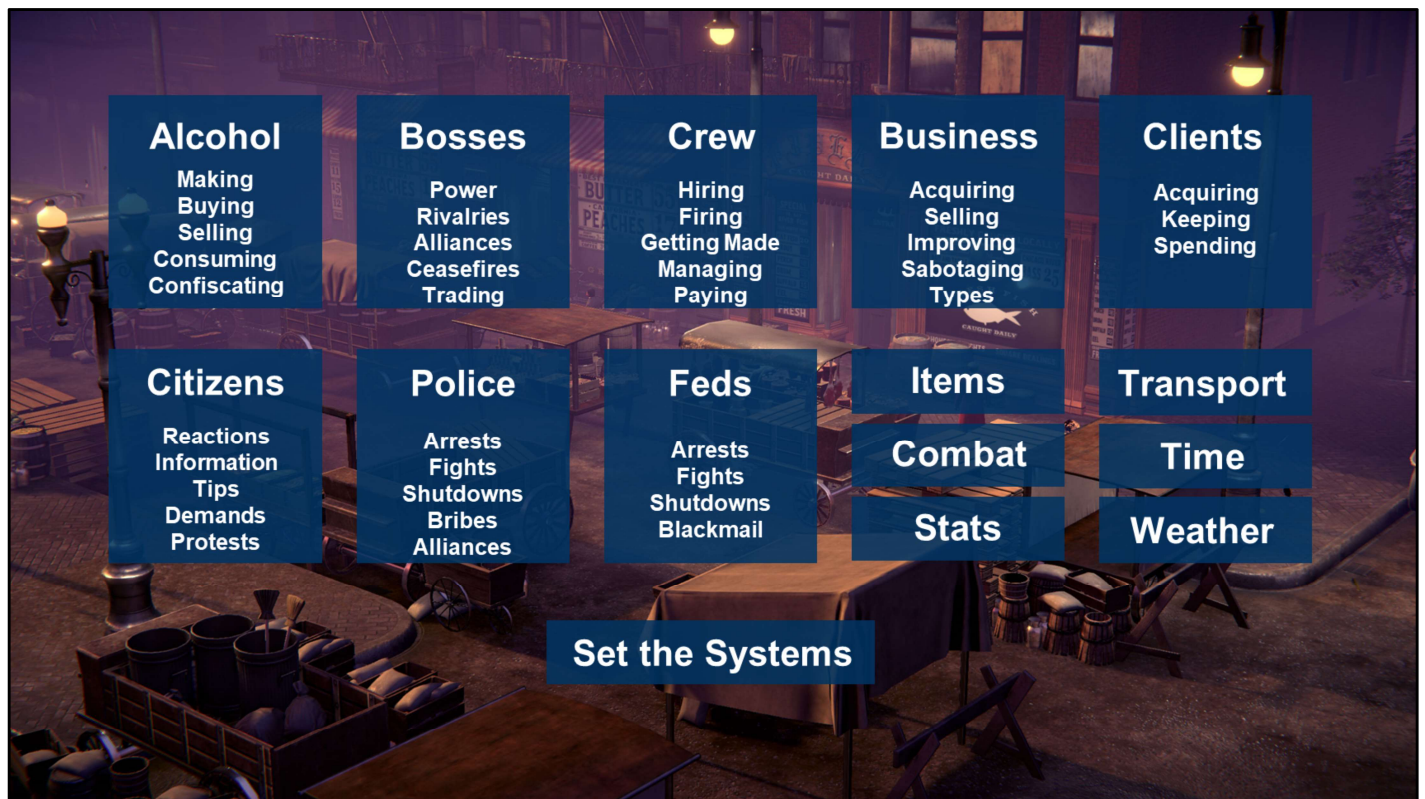My goal is to figure out where I put the player in the world.

And there is very rarely one way to do this or one role for a player to play.

And so this is when I start thinking about the who, what, where, when. I try all these things onto this prospective game like a paper doll. There are so many different ways for a prohibition era game to go, obviously. It could be an FPS, an adventure game, a puzzle game... lots of different things.

Alcohol	Bosses	Crew	Business	Clients
Making	Power	Hiring	Acquiring	Acquiring
Buying	Rivalries	Firing	Selling	Keeping
Selling	Alliances	Getting Made	Improving	Spending
Consuming	Ceasefires	Managing	Sabotaging	
Confiscating	Trading	Paying	Types	

Citizens	Police	Feds	Items	Transport
Reactions	Arrests	Arrests	Combat	Time
Information	Fights	Fights		
Tips	Shutdowns	Shutdowns	Stats	Weather
Demands	Bribes	Blackmail		
Protests	Alliances			

Set the Systems

And I could emphasize one system over another to give priority to it, thus changing the nature of the game. If combat is at the fore that's a very different game than if it's about purely building your empire. And there's even a strong possibility for a pure RPG. Setting the systems helps me to find the most exciting role and game for the player to play.

What if I wanted to play as the Feds — The Untouchables, but a seriously corrupt group of Untouchables? I have a rough idea of the systems, and I can see how that might work, but because I know the systems, I can see that the Feds provide an important counterpoint to the Bosses, and having both in the game doing the same thing makes the conflict weaker. And critically, because I am setting the systems that I plan to use, these questions and answers aren't happening in a void. I get how the world works, at least in theory, and it helps me to decide where to say 'yes' to an idea and where to say 'no.'

The player could be a ton of different things in this world, some ridiculous, and some interesting, and setting the systems has given me an opportunity to explore. And I could change the world to be not 1920 but 2120 and perhaps all the same systems would apply, but with different resources.
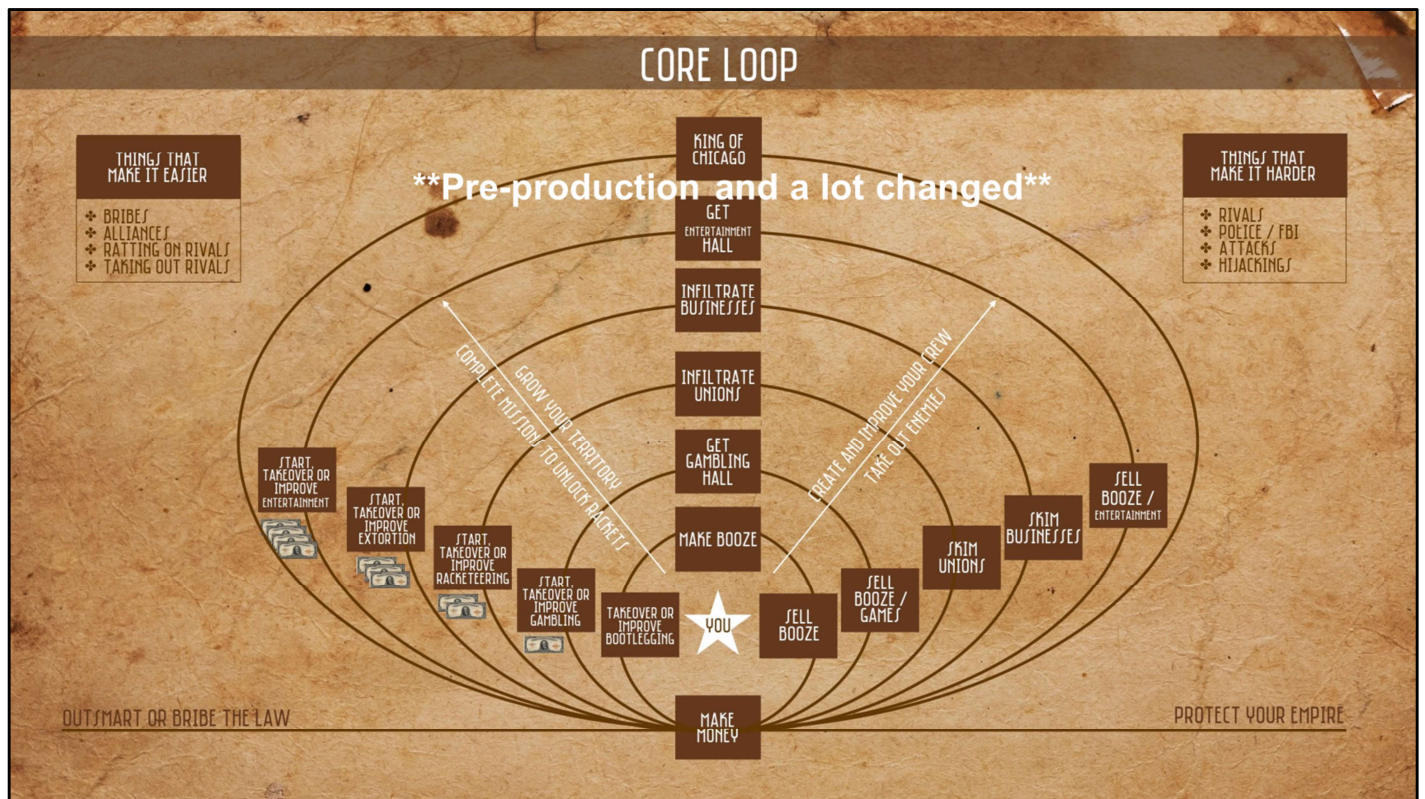
And I could change the world to be not 1920 but 2120, 99 years from today, and perhaps all the same systems would apply, but with different resources and different protagonists and antagonists, **but keep the systemic connections between them in tact**. Or I could change the place from Chicago to New York …. Or a zoo.

In the end, if I didn't use this process, I don't think I'd come out with the same games that I make because through this process, I attempt to see the whole possibilities space afforded by the systems. I see new opportunities, and that's what I'm always looking for — to do something that hasn't been done. I know the world and its possibility space — before deciding HOW I want to place the player in it. There's not another advantage - setting the systems, really knowing how they work together, helps to address collisions and answer questions of 'How would we do that?' This is particularly true for historical simulations where there is an answer.

CORE LOOP

Pre-production and a lot changed

THINGS THAT MAKE IT EASIER
- BRIBES
- ALLIANCES
- RATTING ON RIVALS
- TAKING OUT RIVALS

THINGS THAT MAKE IT HARDER
- RIVALS
- POLICE / FBI
- ATTACKS
- HIJACKINGS

KING OF CHICAGO

GET ENTERTAINMENT HALL

INFILTRATE BUSINESSES

INFILTRATE UNIONS

GET GAMBLING HALL

MAKE BOOZE

START, TAKEOVER OR IMPROVE ENTERTAINMENT

START, TAKEOVER OR IMPROVE EXTORTION

START, TAKEOVER OR IMPROVE RACKETEERING

START, TAKEOVER OR IMPROVE GAMBLING

TAKEOVER OR IMPROVE BOOTLEGGING

YOU

SELL BOOZE

SELL BOOZE / GAMES

SKIM UNIONS

SKIM BUSINESSES

SELL BOOZE / ENTERTAINMENT

COMPLETE MISSIONS TO UNLOCK RACKETS

GROW YOUR TERRITORY

CREATE AND IMPROVE YOUR CREW

TAKE OUT ENEMIES

MAKE MONEY

OUTSMART OR BRIBE THE LAW

PROTECT YOUR EMPIRE

Once I set the systems and place the player, I take a shot at the core loop of the game. This was the core loop that came from my setting the systems for Empire of Sin even before it was Empire of Sin, when it was just me seeing how all these things worked together and what they might do. At this point, the game hadn't even been picked up, and I still didn't really know who "YOU" were.

I did the same thing with my analog piece Train. Once I had the systems set, I could determine what aspect of those systems I wanted the piece to be about. In the case of Train, I focused on the central question of the piece — and that question was complicity. Will people blindly follow the rules? — and then determined how the system would best let me ask that question.

My game Siochan Leat is about the Cromwellian Invasion of Ireland. Setting the systems for this game brought me to an interesting conclusion: the player could not win, and so the game begins where two players compete to figure out who loses the least.

Unlike books or movies, games are systems.
Systems involve the player.

And I think the approach to setting the systems is putting what is truly unique about games first. Systems involve the player and bring them in to create the experience.

Systems educate the player.

They educate the player in how they work through trial and error (and, I suppose, tutorial)…

Systems create agency in the outcome.

…and let the player author their own story.

Brenda Romero @br / brenda@romero.com

LAUREN SCOTT

Senior Systems Designer
Double Fine
@Lauren_E_Scott

Our next speaker is a senior systems designer who previously worked on design and economies everywhere from Hangar 13 with Mafia III to Double Fine where she is currently working on Psychonauts 2. Lauren Scott!

Derive your Economy from the Fun

Lauren Scott
Senior Systems Designer
Double Fine
@lauren_e_scott

Level up

Level	93 ⇒	94
Hollowing	24 ⇒	24
Souls	54982 ⇒	2301
Required souls		53901

Attributes

Vigor	28 ⇒	29
Attunement	6 ⇒	6
Endurance	40 ⇒	40
Vitality	25 ⇒	25
Strength	45 ⇒	45
Dexterity	10 ⇒	10
Intelligence	8 ⇒	8
Faith	9 ⇒	9
Luck	11 ⇒	11

Confirm

Base power

HP	1019	⇒	1038
FP	72	⇒	72
Stamina	160	⇒	160
Equip Load	65.0	⇒	65.0
Poise	14.88	⇒	14.88
Item Discovery	111	⇒	111

Attack power

R Weapon 1	198	⇒	198
R Weapon 2	109	⇒	109
R Weapon 3	109	⇒	109
L Weapon 1	109	⇒	109
L Weapon 2	124	⇒	124
L Weapon 3	109	⇒	109

Defense

Physical	152	⇒	152
VS strike	152	⇒	152
VS slash	152	⇒	152
VS thrust	152	⇒	152
Magic	117	⇒	117
Fire	159	⇒	159
Lightning	151	⇒	151
Dark	117	⇒	117

Resistances

Bleed	279	⇒	280
Poison	209	⇒	210
Frost	240	⇒	241
Curse	199	⇒	200
Attunement Slots	0	⇒	0

Spend souls and level up
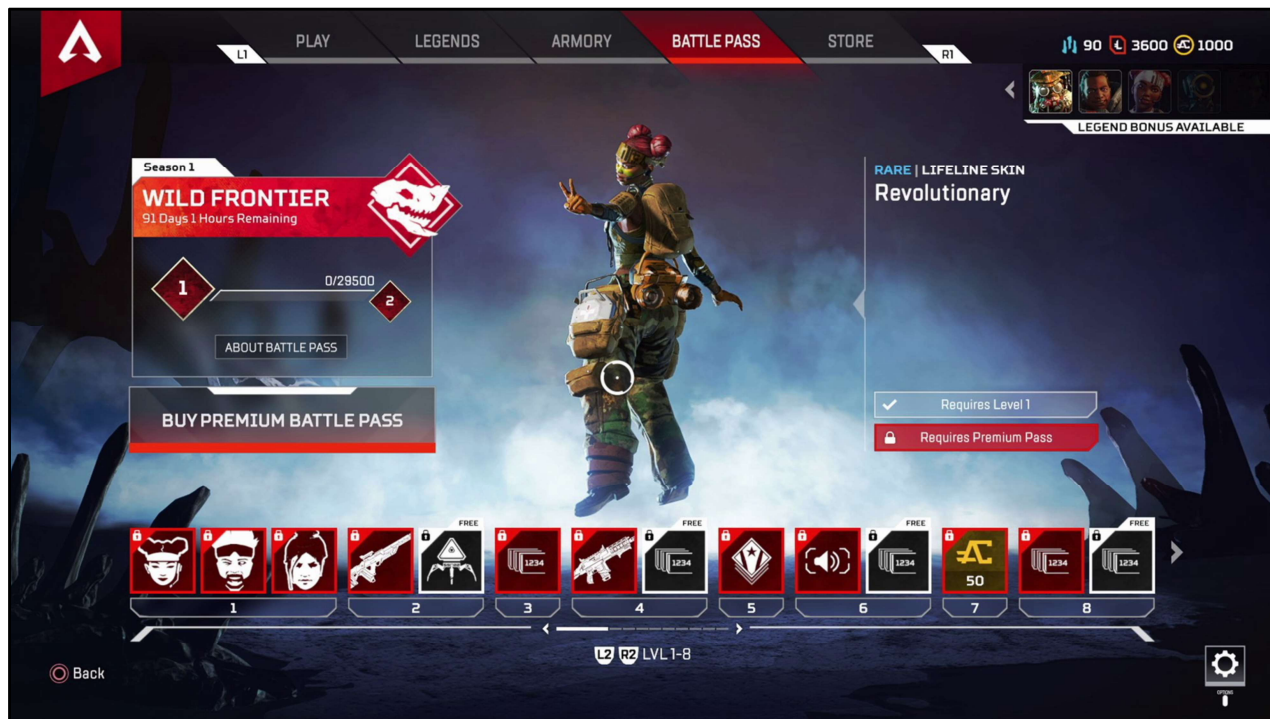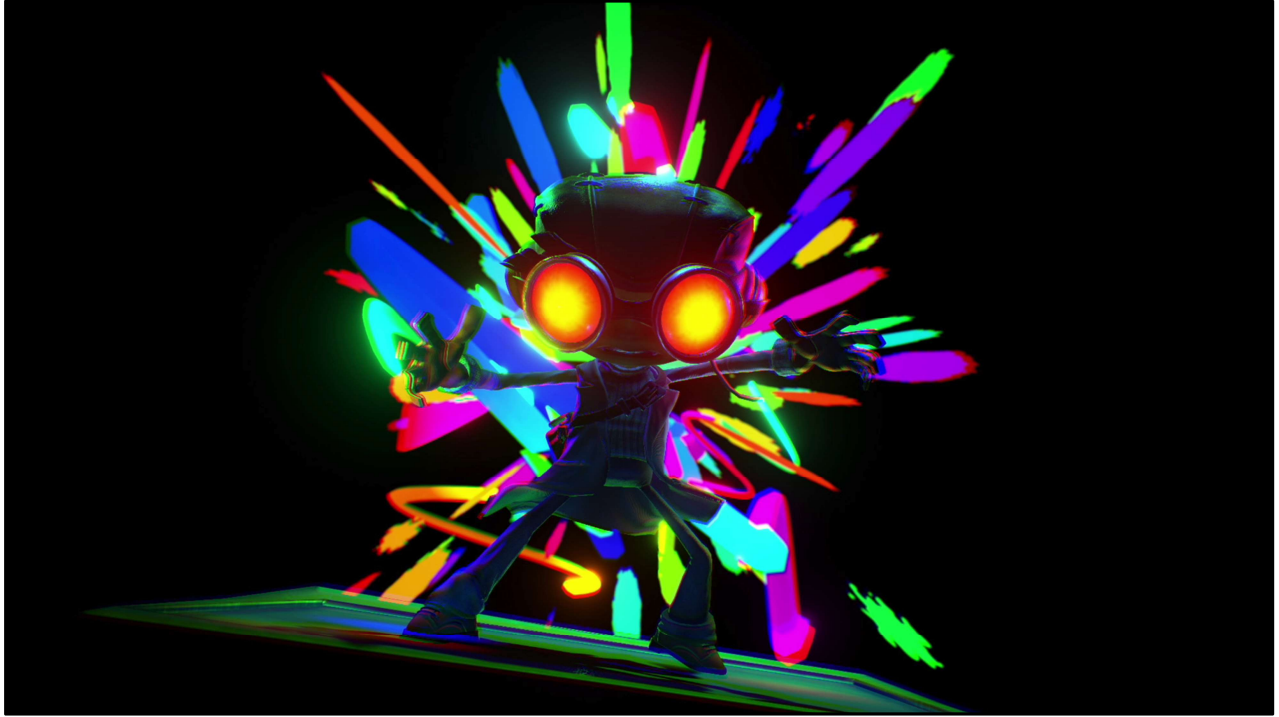
What Fun Does This Game Want to Create?

- Exploration of beautiful environments and interesting worlds

- Cool psychic-agent fantasy

- Great storyline and characters

- Challenging platforming

- Mid-to-long game length, multiple levels, with a connecting hub space
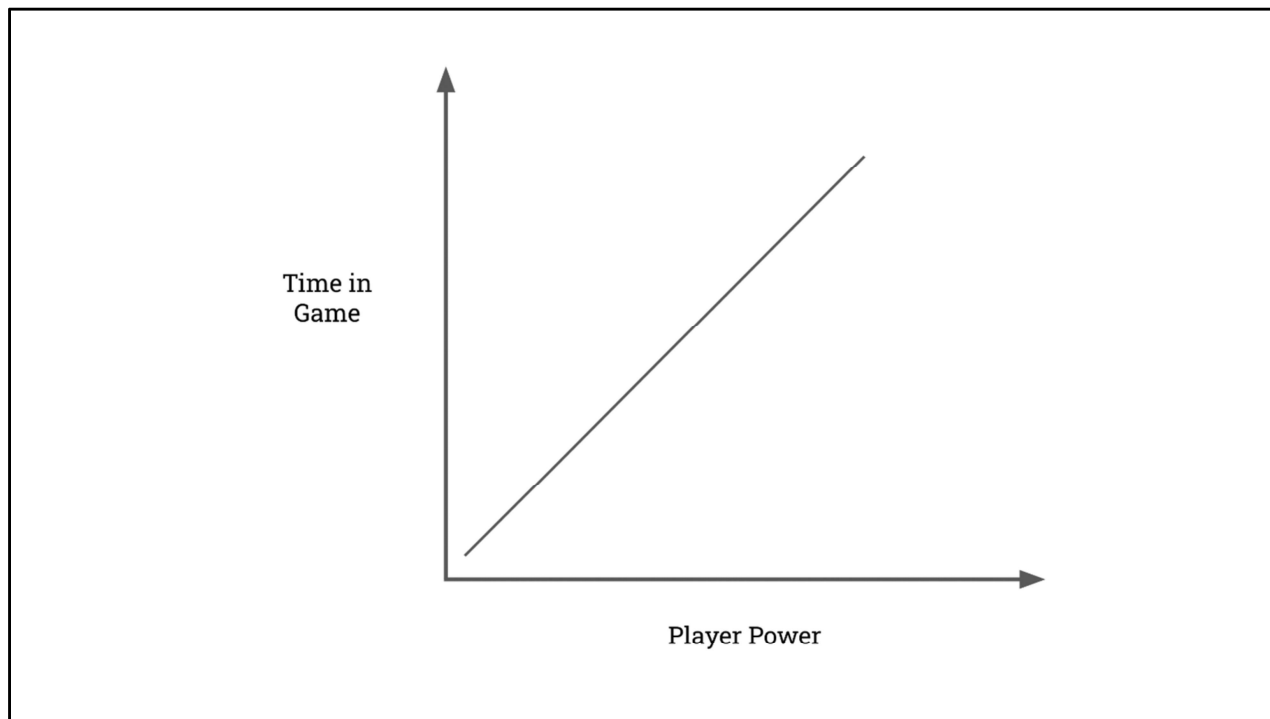
Economy Hypotheses

- **Beautiful environments and interesting worlds are going to be a key strength in the game, so** we want to place collectibles liberally in all areas, to encourage exploration behaviors that will lead them to viewing every inch of our lovingly crafted environments.

- **The game is going to take place across multiple levels, with interstitial hub experiences throughout;** we should support this medium-to-long length of gameplay with a satisfying progression curve that makes the player feel like they are living the dream of being a kid psychic.

Economy Hypotheses

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My Game's Economy

Level	Starting Rank	STUFF HAPPENS					Ending Rank
1	1						
2							
3							
4							
5							
6							
7							
8							
9							
10							100

My Game's Economy

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	A	B	C	D	E	F	G	H
1	**Level**	**Starting Rank**	**Collectible 1**				**Conversion to Rank**	**Ending Rank**
2	1	1						
3	2							
4	3							
5	4							
6	5							50
7	6							
8	7							
9	8							
10	9							
11	10							100

Key	
Entered Value	
Computed Value	
Target Value	

My Game's Economy ☆ 🗀 ☁

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K25

	Level	Starting Rank	Collectible 1	Collectible 2	OTHER STUFF		Conversion to Rank	Ending Rank
1	Level	Starting Rank	Collectible 1	Collectible 2	OTHER STUFF		Conversion to Rank	Ending Rank
2	1	1						
3	2							
4	3							
5	4							
6	5							50
7	6							
8	7							
9	8							
10	9							
11	10							100

Key	
Entered Value	
Computed Value	
Target Value	

My Game's Economy

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G2 — ASSIGN VALUE TO COLLECTIBLES

	Level	Starting Rank	Collectible 1	Collectible 2	OTHER STUFF		Conversion to Rank	Ending Rank
1	Level	Starting Rank	Collectible 1	Collectible 2	OTHER STUFF		Conversion to Rank	Ending Rank
2	1	1	100	5			ASSIGN VALUE TO COLLECTIBLES	
3	2							
4	3							
5	4							
6	5							50
7	6							
8	7							
9	8							
10	9							
11	10							100
12				Key				
13				Entered Value				
14				Computed Value				
15				Target Value				

64

My Game's Economy ☆

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G2   =(C2*F14)+(D2*F15)

	Level	Starting Rank	Collectible 1	Collectible 2	OTHER STUFF		Conversion to Rank	Ending Rank
1								
2	1	1	100	5			3.5	
3	2							
4	3							
5	4							
6	5							50
7	6							
8	7							
9	8							
10	9							
11	10							100

12		Key	
13		Entered Value	
14		Computed Value	
15		Target Value	

	Important Values	
	Collectible	% of 1 Rank
	Collectible 1	0.01
	Collectible 2	0.5

My Game's Economy ☆ 🗔 ☁

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	A	B	C	D	E	F	G	H
1	**Level**	**Starting Rank**	**Collectible 1**	**Collectible 2**	**OTHER STUFF**		**Conversion to Rank**	**Ending Rank**
2	1	1	100	5			3.5	4.5
3	2							
4	3							
5	4							
6	5							50
7	6							
8	7							
9	8							
10	9							
11	10							100

	Key	
Entered Value		
Computed Value		
Target Value		

	Important Values	
Collectible	% of 1 Rank	
Collectible 1	0.01	
Collectible 2	0.5	

My Game's Economy

B3   =H2

	A	B	C	D	E	F	G	H
1	Level	Starting Rank	Collectible 1	Collectible 2	OTHER STUFF		Conversion to Rank	Ending Rank
2	1	1	100	5			3.5	4.5
3	2	=H2						
4	3							
5	4							
6	5							50
7	6							
8	7							
9	8							
10	9							
11	10							100
12		Key			Important Values			
13		Entered Value			Collectible	% of 1 Rank		
14		Computed Value			Collectible 1	0.01		
15		Target Value			Collectible 2	0.5		

68

My Game's Economy

☆ ▣ ☁

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	A	B	C	D	E	F	G	H
1	**Level**	**Starting Rank**	**Collectible 1**	**Collectible 2**	**OTHER STUFF**		**Conversion to Rank**	**Ending Rank**
2	1	1	100	5			3.5	4.5
3	2	4.5						
4	3							
5	4							
6	5							50
7	6							
8	7							
9	8							
10	9							
11	10							100

Key	
Entered Value	
Computed Value	
Target Value	

Important Values	
Collectible	% of 1 Rank
Collectible 1	0.01
Collectible 2	0.5

69

My Game's Economy ☆ ▣ ☁

File   Edit   View   Insert   Format   Data   Tools   Add-ons   Help   Last edit was seconds ago

G2   =(C2*F14)+(D2*F15)

	A	B	C	D	E	F	G	H
1	Level	Starting Rank	Collectible 1	Collectible 2	OTHER STUFF		...rsion to Rank	Ending Rank
2	1		1	100	5		3.5 ×	=(C2*F14)+(D2*F15)	
3	2							
4	3							
5	4							
6	5							50
7	6							
8	7							
9	8							
10	9							
11	10							100
12		Key			Important Values			
13		Entered Value			Collectible	% of 1 Rank		
14		Computed Value			Collectible 1	0.01		
15		Target Value			Collectible 2	0.5		
16								

My Game's Economy ☆ ▣ ☁

File Edit View Insert Format Data Tools Add-ons Help   Last edit was seconds ago

H2   =B2+G2

	A	B	C	D	E	F	G	H
1	Level	Starting Rank	Collectible 1	Collectible 2	OTHER STUFF		Conversion to Rank	4.5 × ng Rank
2	1	1	100	5			3.5	=B2+G2
3	2							
4	3							
5	4							
6	5							50
7	6							
8	7							
9	8							
10	9							
11	10							100
12		Key			Important Values			
13		Entered Value			Collectible	% of 1 Rank		
14		Computed Value			Collectible 1	0.01		
15		Target Value			Collectible 2	0.5		
16								

My Game's Economy

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	A	B	C	D	E	F	G	H
1	Level	Starting Rank	Collectible 1	Collectible 2	OTHER STUFF		Conversion to Rank	Ending Rank
2	1	1	100	5			3.5	4.5
3	2	4.5	100	5			3.5	8
4	3	8	100	5			3.5	11.5
5	4	11.5	100	5			3.5	15
6	5							50
7	6							
8	7							
9	8							
10	9							
11	10							100
12		Key			Important Values			
13		Entered Value			Collectible	% of 1 Rank		
14		Computed Value			Collectible 1	0.01		
15		Target Value			Collectible 2	0.5		

73

My Game's Economy ☆ ⊡ ☁

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K22

	A	B	C	D	E	F	G	H
1	**Level**	**Starting Rank**	**Collectible 1**	**Collectible 2**	**OTHER STUFF**		**Conversion to Rank**	**Ending Rank**
2	1	1	100	20			11	12
3	2	12	100	20			11	23
4	3	23	100	20			11	34
5	4	34	100	20			11	45
6	5							50
7	6							
8	7							
9	8							
10	9							
11	10							100
12		**Key**			**Important Values**			
13		Entered Value			Collectible	% of 1 Rank		
14		Computed Value			Collectible 1	0.01		
15		Target Value			Collectible 2	0.5		

My Game's Economy

File   Edit   View   Insert   Format   Data   Tools   Add-ons   Help   Last edit was seconds ago

K21

	Level	Starting Rank	Collectible 1	Collectible 2	OTHER		Conversion to Rank	Ending Rank
2	1	1	100	10			11	12
3	2	12	100	10			11	23
4	3	23	100	10			11	34
5	4	34	100	10			11	45
6	5	45	100	10			11	56
7	6	56	100	10			11	67
8	7	67	100	10			11	78
9	8	78	100	10			11	89
10	9	89	100	10			11	100
11	10	100	100	10			11	111

Key	
Entered Value	
Computed Value	
Target Value	

Important Values	
Collectible	% of 1 Rank
Collectible 1	0.01
Collectible 2	1

My Game's Economy ☆ 🗂 ☁

File   Edit   View   Insert   Format   Data   Tools   Add-ons   Help   Last edit was seconds ago

	A	B	C	D	E	F	G	H
1	**Level**	**Starting Rank**	**Collectible 1**	**Collectible 2**	**OTHER**		**Conversion to Rank**	**Ending Rank**
2	1	1	100	10			11	12
3	2	12	100	8			9	21
4	3	21	100	10			11	32
5	4	32	100	8			9	41
6	5	41	0	10			10	51
7	6	51	100	8			9	60
8	7	60	100	10			11	71
9	8	71	100	8			9	80
10	9	80	100	10			11	91
11	10	91	100	8			9	100
12		**Key**			**Important Values**			
13		Entered Value			Collectible	% of 1 Rank		
14		Computed Value			Collectible 1	0.01		
15		Target Value			Collectible 2	1		

My Game's Economy

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	Level	Starting Cash	Source 1	Source 2	Sink 1	Sink 2	Net Gain/Loss	Ending Cash
1	Level	Starting Cash	Source 1	Source 2	Sink 1	Sink 2	Net Gain/Loss	Ending Cash
2	1	0	100	100	200	0	0	0
3	2	0	200	100	200	100	0	0
4	3	0	300	100	200	100	100	100
5	4	100	400	100	200	100	300	400
6	5	400	500	100	200	500	300	700
7	6	700	600	100	200	500	700	1400
8	7	1400	700	100	200	2000	0	1400
9	8	1400	800	100	200	2000	100	1500
10	9	1500	900	100	200	2000	300	1800
11	10	1800	1000	100	200	2000	700	2500

Key	
Entered Value	
Computed Value	
Target Value	

Shop	
Item 1	100
Item 2	500
Item 3	1000

Derive your Economy from the Fun

Lauren Scott
Senior Systems Designer
Double Fine
@lauren_e_scott

KATE COMPTON

**Professor of Instruction
Northwestern University
@GalaxyKate**

Our next speaker is a generative designer and artist who has worked on everything from big games like Spore to her own language Tracery to all manner of chat bots. She is also now a professor at Northwestern University, I give you Kate Compton

Leave Room For Creativity

Kate Compton @galaxykate
Professor of Instruction, Northwestern University

I used to work on a game called Spore

It was a game about **evolution**...

We thought that spore was going to be a game about evolution

I used to work on a game called Spore

It was a game about ~~evolution~~...**creativity!**

Sporepedia

Home | Browse | S

The Sporepedia is the place to browse, find, download, comment o
players in the world of Spore and Spore Galactic Adventures.

Creation Counter
190,947,668
creations to date

...morph
...orm

Med Bay Tabl
08899

Creation

Horus
By alcamie

Type: Spaceship
See all of alcamie's
Creations

DOB: 5/25/2021

Add Comment:
You must be logged in to leave comments.

Comments
alcamie commented: Wed May 26, 2021
The eye of Horus was often considered to be a protective
symbol in Ancient Egypt, after Set gouged out Horus's
eye during the Contendings.

But it really ended up being a game about creativity instead We
got handwritten notes from people saying "id written myself off
creatively, but now I feel like i can be creative again"

I used to work on a game called Spore

It was a game about ~~evolution~~...**creativity!**

We had a lot of editors. The creature editor was our crown jewel
You could make creature that looked like anything
You could also make buildings and spaceships, which mostly looked like buildings and spaceships, but if you were tricky, you could make them into other shapes
You could make spaceships too, which had some good possibilities
We also release an expansion that allowed you to make minigames and planets

I used to work on a game called Spore

It was a game about ~~evolution~~...**creativity!**

Some editors felt great

You were powerful and playful, success was effortless

Others felt like work

Everything you made was broken and couldn't be fixed

...So I went to get a PhD and find the answer

What we know about creativity

Creativity is …famous artists?

Creativity is …a lot of different things

Creativity is a whole field of study (or several....in psychology, sociology, business, etc)

Creativity can mean

- Virtuosic or historical creativity
- Professional creativity
- Situational creativity
- Expressive creativity

Kaufman, James C., and Ronald A. Beghetto. "Beyond big and little: The four c model of creativity."

Boden, Margaret A. The creative mind: Myths and mechanisms.

Simonton, Dean Keith. "What is a creative idea? Little-c versus Big-C creativity"

Creativity is ...a lot of different things

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- **Expressive creativity**

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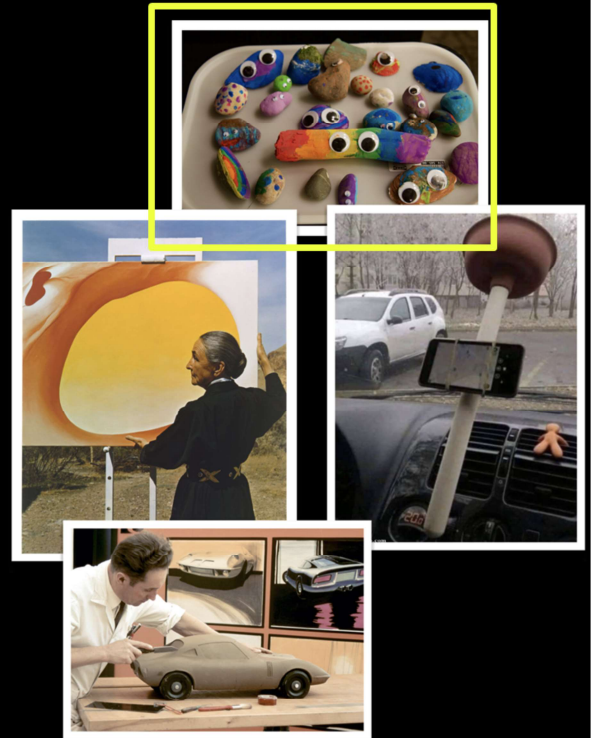
This is the one where you feel good making art Its about the autotelic pleasure of the experience, not the end product, just like games

We know what <u>prevents</u> creativity

- Being undirected
- Being trained to come up with the "right" answer
- Being afraid of negative judgement
- Running out of ideas
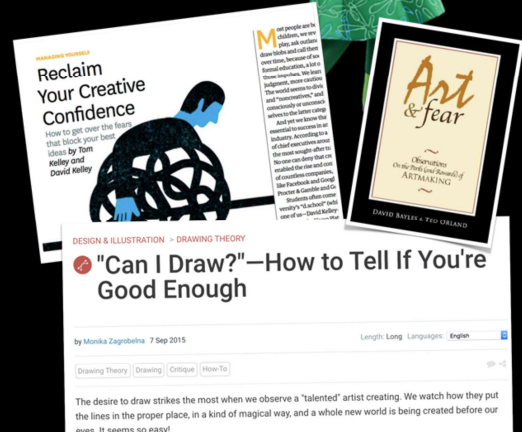
We know what <u>prevents</u> creativity

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We also know how to **fix** these (or at least momentarily suppress them)

We need techniques that give us permission to be creative

We know what <u>prevents</u> creativity

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- Being afraid of negative judgement
- Running out of ideas

We also know how to **fix** these (or at least momentarily suppress them)

We need techniques that give us permission to be creative

Prompts

Constraints

Games

Rituals

Themes

Fill-in-the-blank

Props

Magic Circle

Masks

We know what <u>prevents</u> creativity

- Being undirected
- Being trained to come up with the "right" answer
- Being afraid of negative judgement
- Running out of ideas

We also know how to **fix** these (or at least momentarily suppress them)

We need techniques that give us permission to be creative…. Or systems that give us permission!

"Ah! I know what to do here"

It turns out computers are great at this!

Procedural content techniques make a safe and powerful place to play

- You make a move
- The system says "yes-and", turns your gesture into something bigger and cooler than you could've made by yourself
- You're in control of **some** things, but not others. You and the system are collaborating….sometimes it surprises you!
- The system applauds and tells you you're great at this

I call these systems **"Casual Creators"**
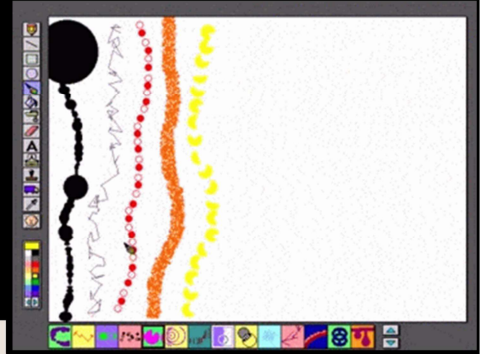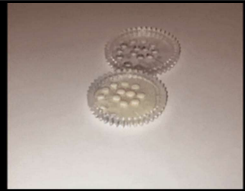
This is the answer to the Spore question!

Casual creators need to balance **control**, **safety**, and **surprise**

- No control: you don't feel creative
- No safety: "everything I make is terrible"
- No surprise: system feels empty and lifeless

The easiest way to do this is to have a **generative system**, in a **constrained possibility space**, that interprets the user's moves into an **interesting but usually-good solution**
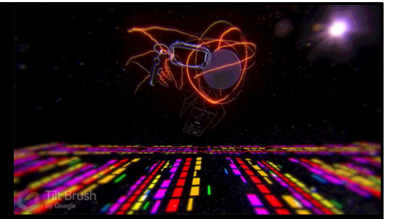
This is the answer to the Spore question!

You **can** build complex generative systems that create surprising and always-good content

…but

Even simple surprises like juxtaposition add enough surprise to be interesting

Even simple safety mechanisms like prompts and constraints give you psychological permission to take creative risks

Casual creators

- **autotelic creativity tools**
- with control, safety, and surprise
- a constrained possibility space
- usually some generativity (or juxtaposition)
- a collaboration between you and a system
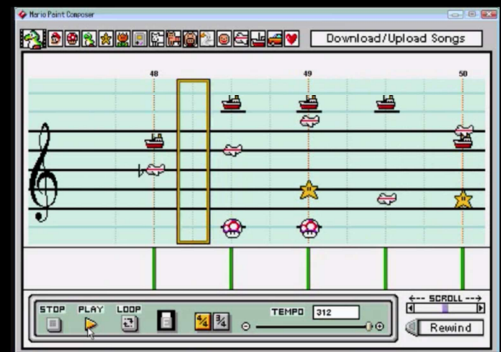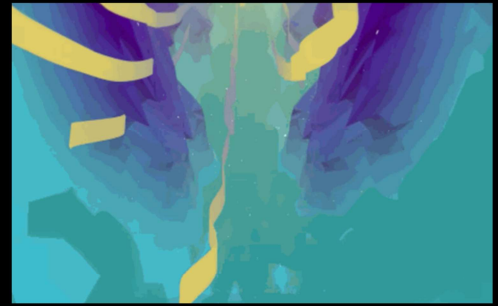
Adding Casual Creators to your games
(aka "the Pictionary principle")

So can casual creators be games?

Sometimes!

Because a casual creator balances the **user's control** with **generativity and surprise and constraint**, they are great at leveling a competitive playing field

Like Mario Kart rubberbanding for artistic ability!

what is it?

i hurt my back raking
banjo lessons
night farmer
digging with a banjo
lil autumn boy
magic janitor

You were asked to draw snake

You drew this, and the neural net didn't recognize it.
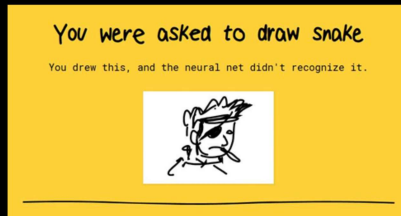
So are these games?

But often they are **part** of games

- Character creators
- Room decorators
- Moments of creativity

Casual creator moments!

Miitopia (@Nakios_), Animal Crossing (B4SSOON)

How do you design a casual creator moment?

"Hey player, its time to make a thing…. If you want 😏

"yes-and": take the player's actions and add something, an animation, symmetry, a nice frame, or AI commentary. Witness it, make it ✨special✨

sharing: automatically create a shareable gif or link (bonus if its also a link to or loadable in your game)

constraint: don't try to make a blank page. Give prompts, amusingly impossible tasks, funny uncontrollable tools

How do you design a casual creator moment?

"Hey player, its time to make a thing.... If you want 😌

"yes-and": take the player's actions and add something, an animation, symmetry, a nice frame, or AI commentary. Witness it, make it ✦⋄special✦⋄

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How do you design a casual creator moment?

"Hey player, its time to make a thing…. If you want 😊

"yes-and": take the player's actions and add something, an animation, symmetry, a nice frame, or AI commentary. Witness it, make it ✦special✦

sharing: automatically create a shareable gif or link (bonus if its also a link to or loadable in your game)

constraint: don't try to make a blank page. Give prompts, amusingly impossible tasks, funny uncontrollable tools

13.03% SIMILAR

Lesson 6: Learning from the greats

If you do it right

Users will start communicating with each other

They will promote themselves with your game (the Minecraft phenomena, now Roblox)

They may communicate and curate content on alternate channels: Twitter, Discord, backchannels that you don't control
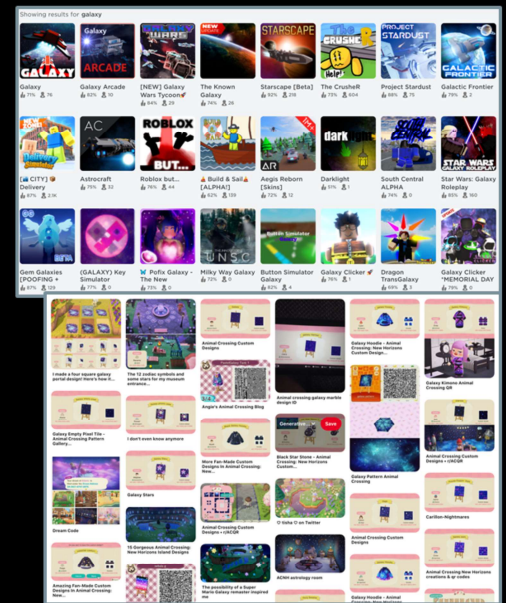
One rule: Leave room for creativity

We are all creative, but creativity is scary!

Casual creators are systems that give us permission to be creative by using generative algorithms to:

- turn user's input into something bigger and more celebrated ("yes-and")

- limit the possibility space to only good solutions

- constrain possibilities so that uses don't feel paralyzed by indecision, or punished for not being good artists

- feel delightful and surprising and alive

- help us create with friends in a social space

Thanks!

Kate Compton @galaxykate

CELIA HODENT

Game UX Consultant
@CeliaHodent

I had the good fortune of working with our next speaker on a game that is best not discussed, after that she went on to work at LucasArts and Epic and you should check out her books about the psychology behind video games. I give you Celia Hodent

Rules of the Game:
Forget Your Opinion, It's Biased

Celia Hodent, PhD.
Game UX Consultant

@CeliaHodent
celiahodent.com

www.chapornea.com

A bat and a ball cost $11 total.

The bat costs $10 more than the ball.

How much does the ball cost?

= $0.50 (50 cents)

System 1
Fast
Automatic
Effortless

DANGER
bias

THINKING, FAST AND SLOW

DANIEL KAHNEMAN
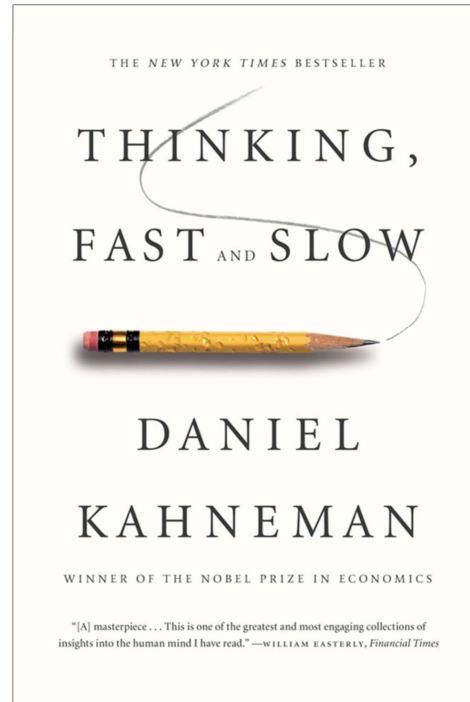
System 2
Slow
Controlled
Effortful
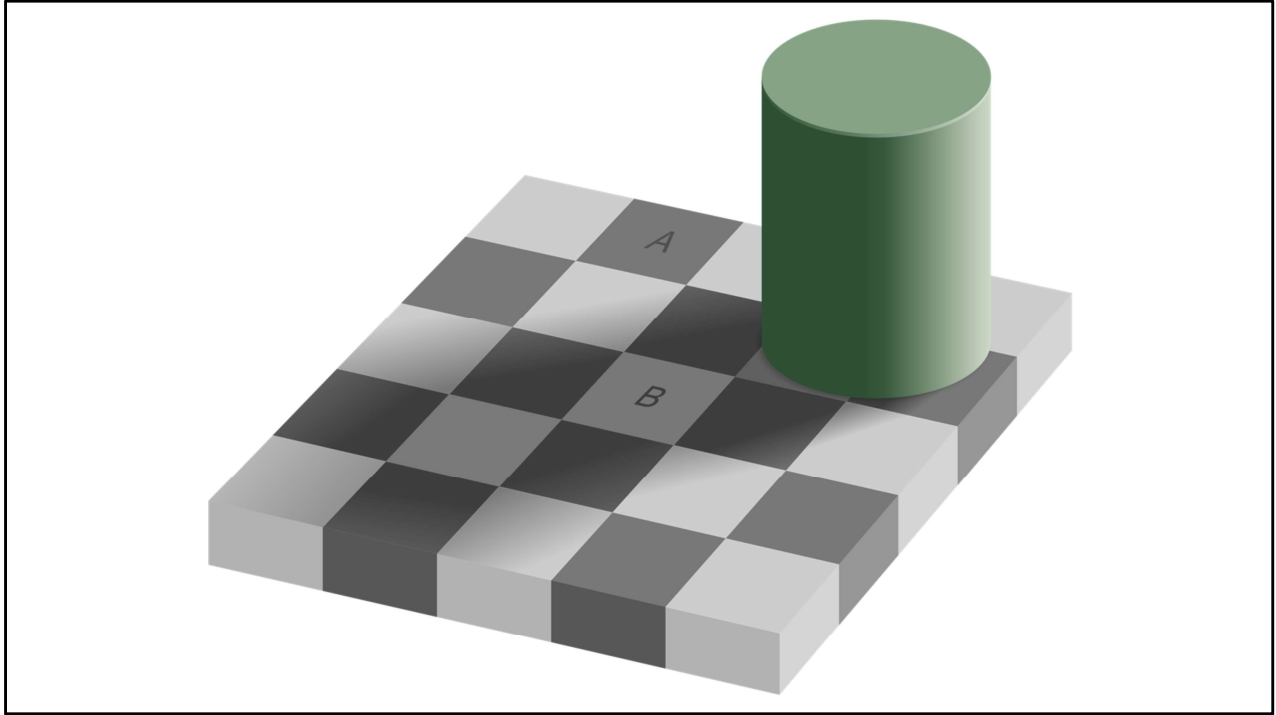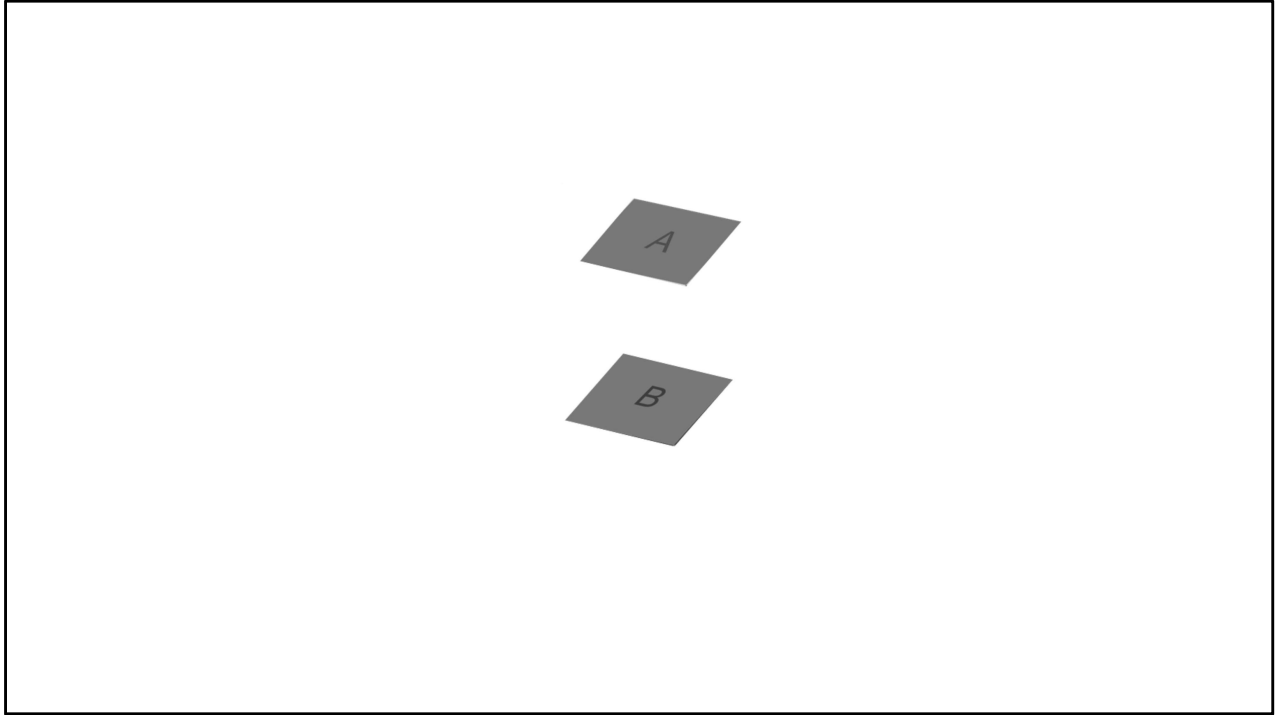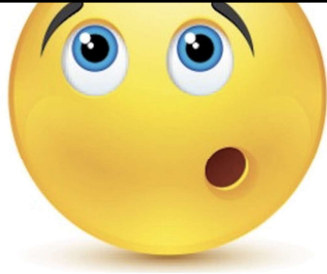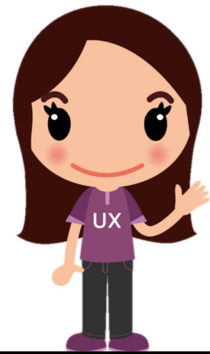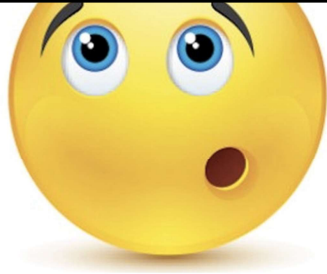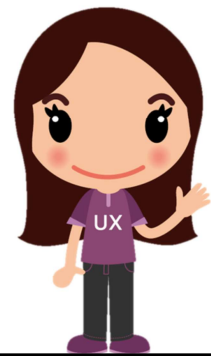
EGOCENTRIC BIAS

Tendency to rely too heavily on our own perspective
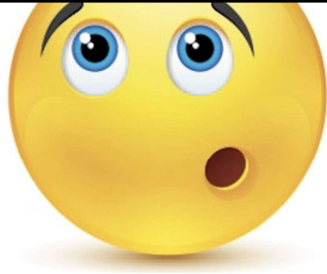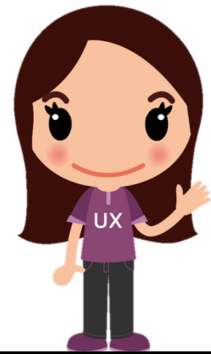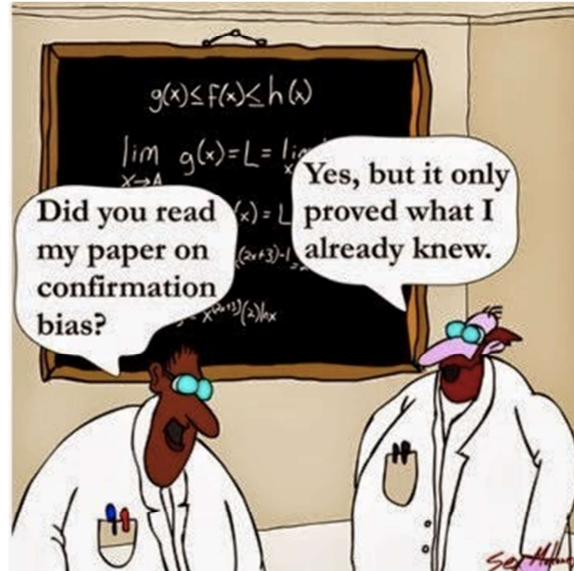
Tendency to search, focus, and remember information that validates our preconceptions.
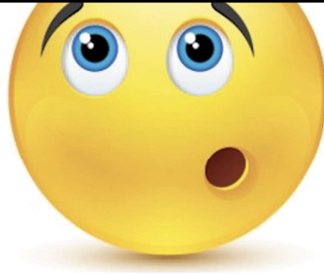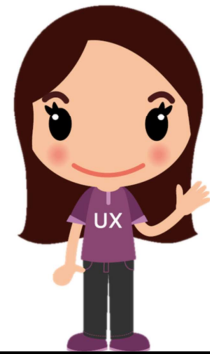
FUNDAMENTAL ATTRIBUTION ERROR

Tendency to over-emphasize personality-based explanations for something positive happening to us and under-emphasize situational explanations for something negative happening to someone else. Vice-versa.
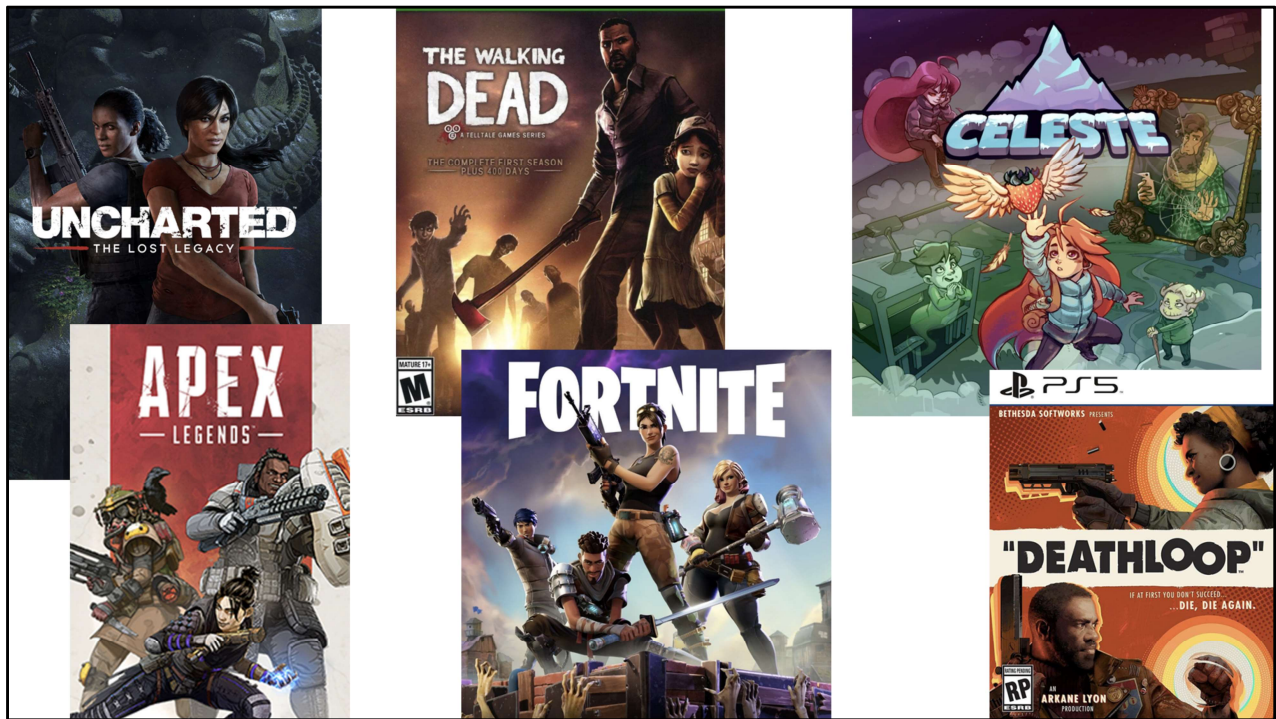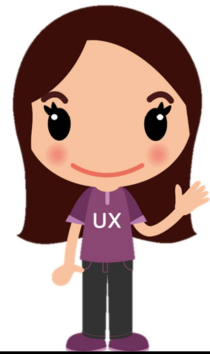
IN-GROUP BIAS

Tendency to give preferential treatment to others we perceive as belonging to our own group.
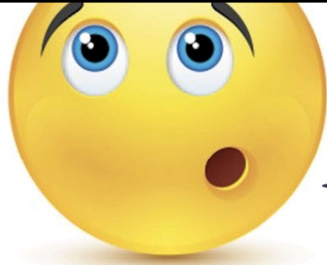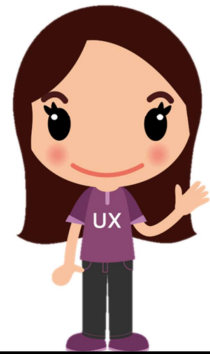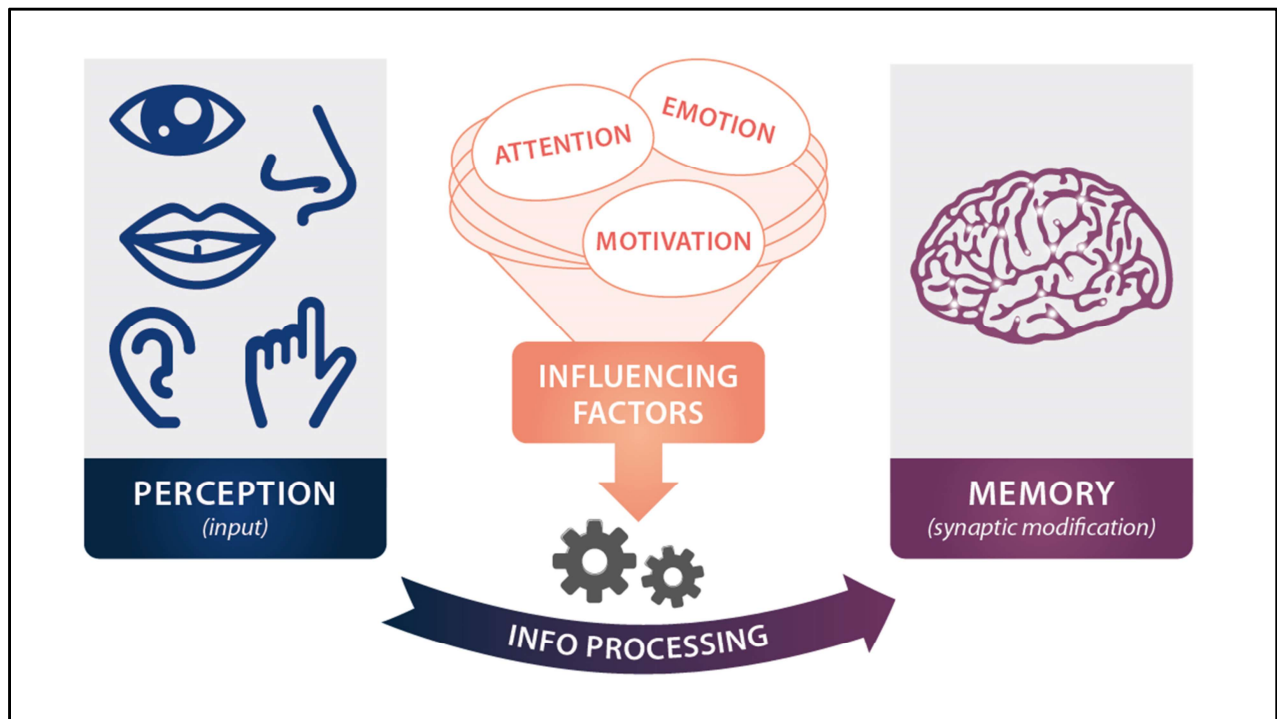
COGNITIVE DISSONANCE

Situation involving conflicting attitudes, beliefs, or behaviors.

Produces a feeling of mental discomfort leading to an alteration in one of the attitudes, beliefs, or discomfort to reduce the discomfort and restore balance.

Illustrated by the Aesop fable the fox and the grapes

PERCEPTION
(input)

ATTENTION
EMOTION
MOTIVATION

INFLUENCING FACTORS

INFO PROCESSING

MEMORY
(synaptic modification)

PERCEPTION = SUBJECTIVE

ATTENTION = SCARCE

MEMORY = FALLIBLE

THECOGNITIVEBIASCODEX

What Should We Remember?

We store memories differently based on how they were experienced

We reduce events and lists to their key elements

We discard specifics to form generalities

We edit and reinforce some memories after the fact

We favor simple-looking options and complete information over complex, ambiguous options

To avoid mistakes, we aim to preserve autonomy and group status, and avoid irreversible decisions

To get things done, we tend to complete things we've invested time and energy in

To stay focused, we favor the immediate, relatable thing in front of us

To act, we must be confident we can make an impact and feel what we do is important

Need To Act Fast

We project our current mindset and assumptions onto the past and future

We think we know what other people are thinking

We simplify probabilities and numbers to make them easier to think about

We imagine things and people we're familiar with or fond of as better

Not Enough Meaning

We fill in characteristics from stereotypes, generalities, and prior histories

We tend to find stories and patterns even when looking at sparse data

We notice flaws in others more easily than we notice flaws in ourselves

We are drawn to details that confirm our own existing beliefs

We notice when something has changed

Too Much Information

Bizarre, funny, visually striking, or anthropomorphic things stick out more than non-bizarre/unfunny things

We notice things already primed in memory or repeated often

Our biases feed AI, by the way …
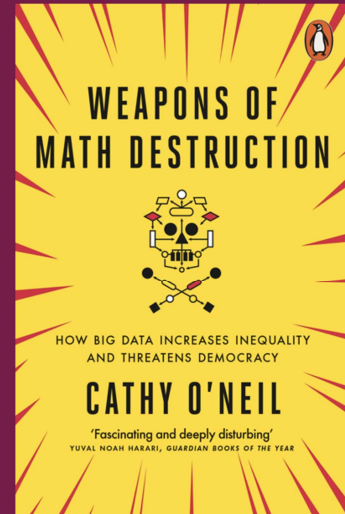
The overconfidence bias is the tendency to overestimate our abilities.

JUMPING TO CONCLUSIONS

THANKS!

The Gamer's Brain
How Neuroscience and UX Can Impact Video Game Design

Celia Hodent

Foreword by Brenda Romero

CRC Press
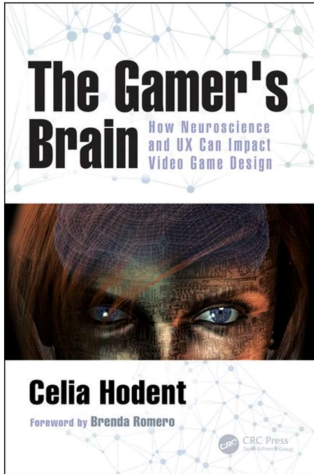
Also in **Japanese**, **Korean**, & **French**
(soon **Russian & Mandarin**)
thegamersbrain.com

@CeliaHodent

Masterclasses & Resources:
celiahodent.com
EthicalGames.Org

celia hodent

the psychology of
VIDEO GAMES

THE PSYCHOLOGY OF **EVERYTHING**

R

BRIAN MORIARTY

Professor of Practice
Worcester Polytechnic Institute

And for our final speaker.... he made the Infocom classic Trinity that very early in the industry showed that we could take on the most serious of subject matter, he made Loom, one of my favorite games. But also, for those of you who have been to this conference know there are many great GDC speakers, but I can assure you there is only one Brian Moriarty.
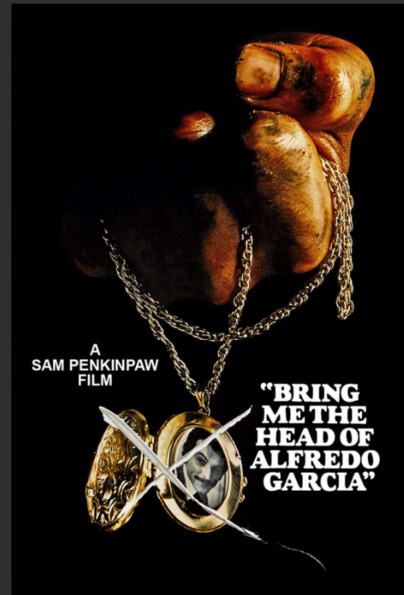
FIND AN ENDING

or

SOMETHING GIVES

Primacy Effect

Anchoring

Serial Position
Effect

Serial Position
Effect

Recency Bias

Peak-End
Rule

Rules of the Game 2021
With your host **Richard Rouse III @richardrouseiii**

Brenda Romero @br	**"Set the Systems, Place the Player"**
Lauren Scott @Lauren_E_Scott	**"Derive Your Economy from the Fun"**
Kate Compton @GalaxyKate	**"Leave Room for Creativity"**
Celia Hodent @CeliaHodent	**"Forget Your Opinion, It's Biased"**
Brian Moriarty	**"Find an Ending"** or **"Something Gives"**

Slides at: www.paranoidproductions.com

GAME DEVELOPERS CONFERENCE | July 19–23, 2021

Those are our rules for this weird year of 2021. I hope you've enjoyed our new take on this session, and I hope you got something from some of these rules, some you liked, some you disagreed with, and go back to you design rule books and update them, or keep them the same. Whatever your rules, I hope they will help keep you sane, allow you to get into a creative flow state, and so that no matter what happens in the world, we can still design games.

Thank you.