

# Designing Friendship

Tools to growing meaningful  
friendships in online games

Link to full talk video: <http://www.gdcvault.com/play/1024955/Game-Design-Patterns-for-Building>

# Daniel Cook

**Game designer** for 20+ years



LOSTGARDEN



SPRYFOX

# Triple Town



SPRYFOX

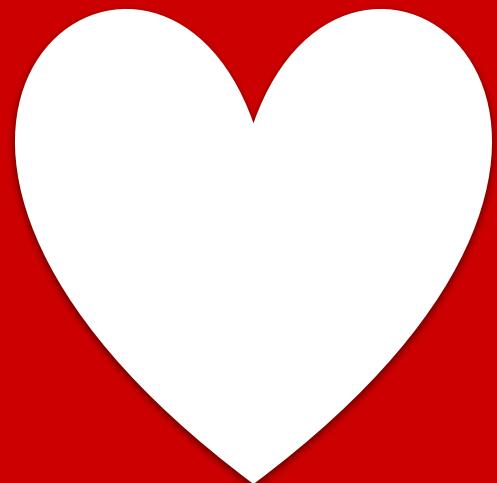
# COZY GROVE







SPRYFOX



# Happiness



A small number of  
**deep friendships** leads to  
greater **happiness** in life



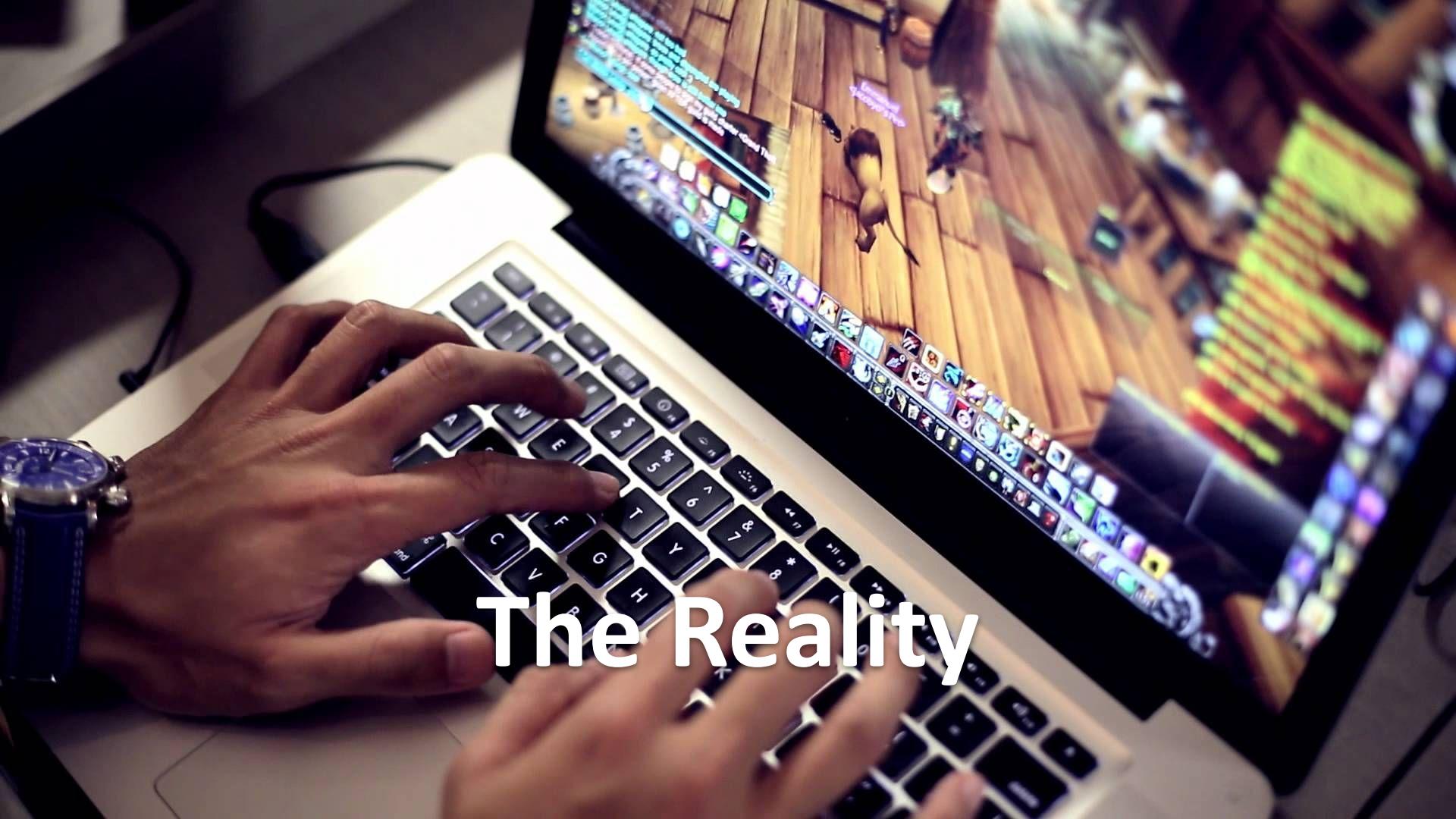
**Large numbers of  
shallow, status-based  
relationships leads to  
increased depression**

“Close Friendship Strength and Broader Peer Group Desirability as Differential Predictors of Adult Mental Health”, Narr, Allen, Tan, Loeb

**So...how can online games create  
meaningful friendships?**

A vintage-style photograph of a group of four people—three men and one woman—gathered around a round wooden table, playing a board game. The woman, wearing a green and white striped shirt, sits at the head of the table, smiling down at the game. The men are dressed in 1960s-style clothing: a dark jacket, a yellow patterned shirt, and a dark sweater. The board game features a grid with various symbols and colors, and several small tokens or pieces are scattered across it. A bottle of beer and a glass are on the table, suggesting a casual social gathering.

# The Fantasy

A close-up, top-down view of a person's hands typing on a white laptop keyboard. The laptop screen displays a video game with a wooden interior, a small character, and a colorful interface. A blue leather watch is visible on the left wrist. The background is dark.

# The Reality



# Match-based systems create throwaway relationships





**Viral systems turn friendship into an  
dehumanized marketing resource**

**+1 Add Friend**

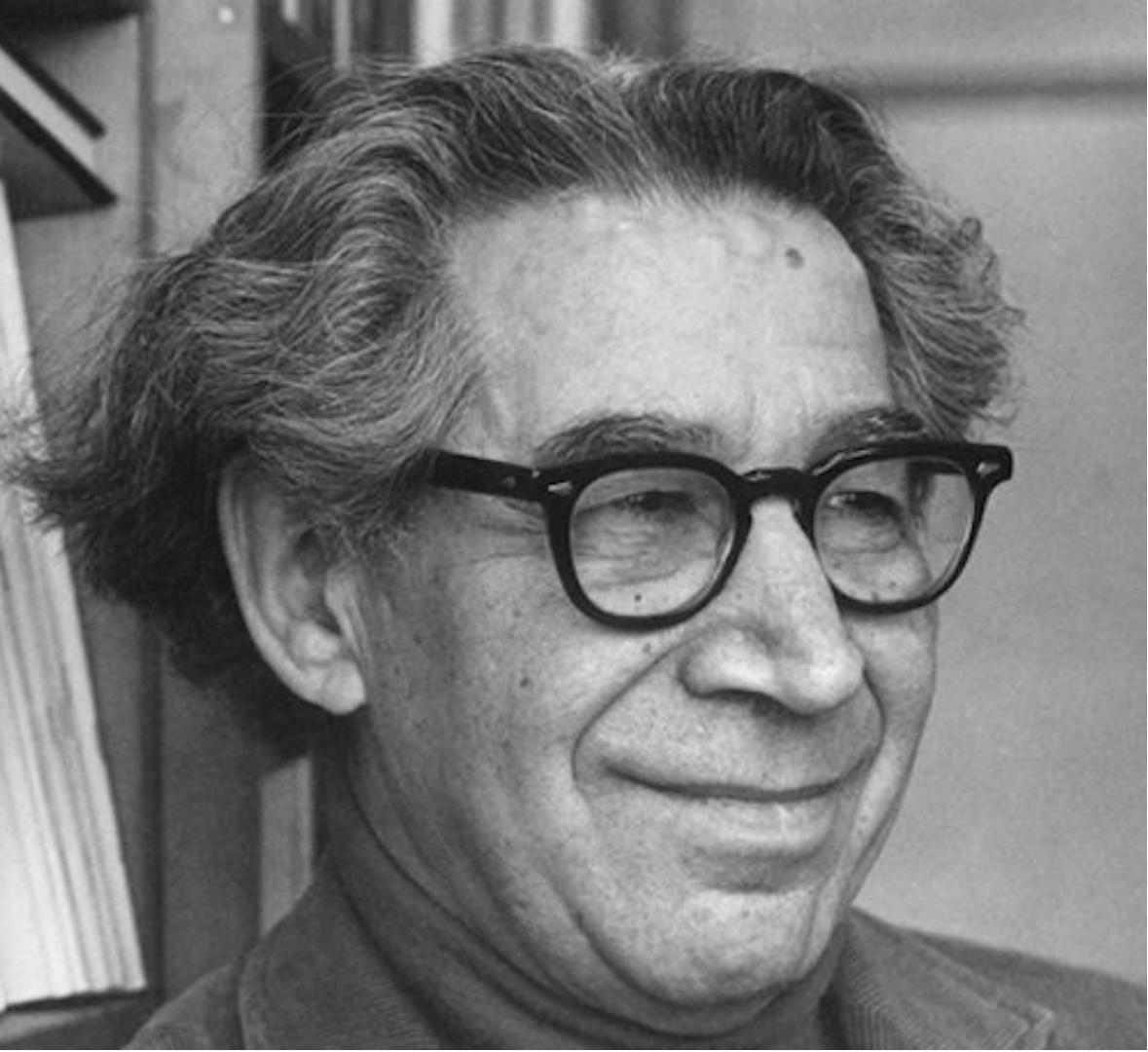


# Restricted or unsafe chats kills deep relationships

Error: You do not have 64x slimeball.  
[Shout] [Empress]^ Onion : Well everyone you have just found the sexists on the server  
[Shout] [VIP]Ori\_Malkin: if women want equality then they should be willing to be drafted and do all the jobs that men do  
[Shout] [Empress]^ Onion : Most women are willing Ori  
[Shout] [Empress]YTM: women do the same jobs as men do  
[Shout] [Default]steponmycubez: yea ur real cute jr  
[Shout] [Empress]YTM: have you never seen a women doing contruction? for exmaple  
[Shout] [Empress]^ Onion : But men don't let women stand up  
[Shout] [Empress]YTM: example?  
[Shout] [Default]steponmycubez: they do wtf  
[Shout] [VIP]Ori\_Malkin: i am a female and I took a construction class for 2 yearls  
[Shout] [Default]simo6956: my mo can construct a sandwictch  
[Shout] [Empress]YTM: thats a lie, we had a female primisiter  
[Shout] [Default]skippersam: there it is  
[Shout] [Default]steponmycubez: there are girls doing

# Can we do better?

Is there a framework for building  
better friendships?



A proven model for  
**friendship formation**

# The Laws of Friendship Formation



Proximity



Similarity



Reciprocity

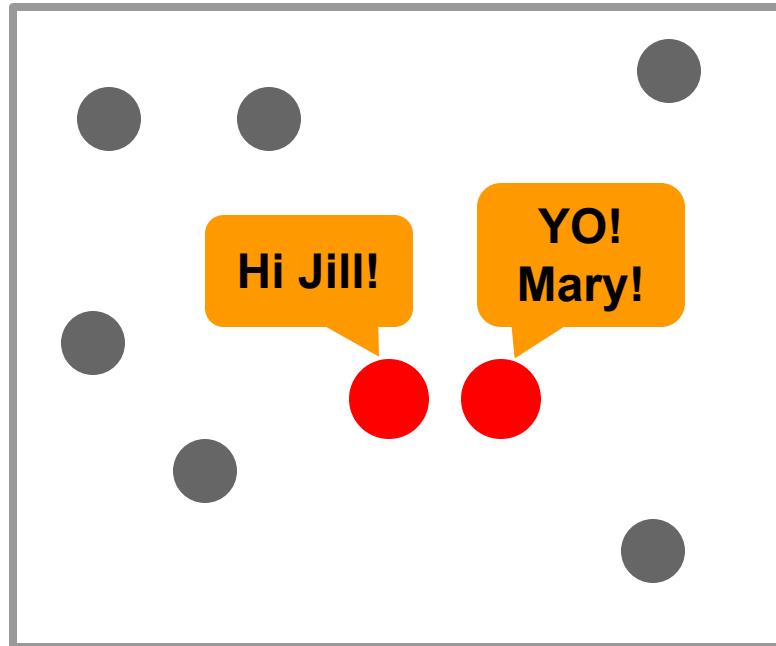


Disclosure

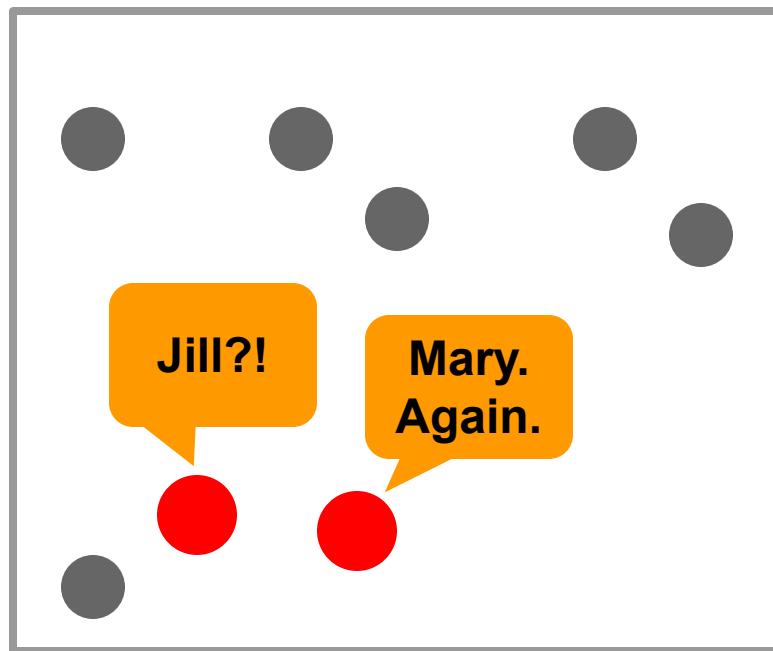
# 1. Proximity

Propinquity: Social distance

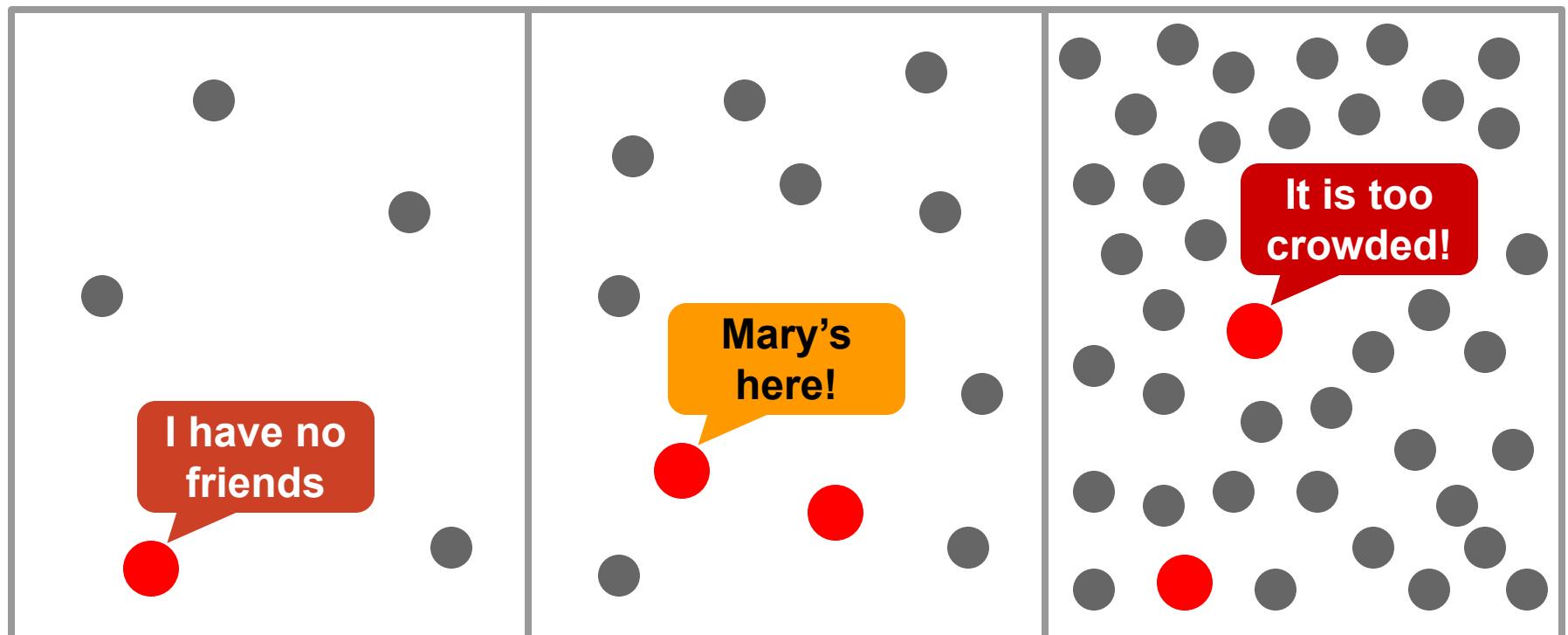
# Repeat, Serendipitous Interactions



# Repeat, Serendipitous Interactions



# Density



This is a  
**Logistics Challenge**

Example of logistics thinking  
**Why not just play with friends?**

# **Concurrency Ratios**

- **MMO:** 10:1
- **Online Console Service** (like Xbox Live): 25:1
- **Individual Console game:** 150:1
- **Web game:** 250:1

# Your Friends Aren't Online

**Concurrency of 25:1 means...**

- if you have 10 friends...
- 33% chance 1 friend is online when you are

# Tapping Friend Networks

**Transfer existing friends to a new social space?**

- Yes! But expensive! Costs social capital
- Need to schedule shared meeting times
- Which costs attention and social capital
- No serendipity.



The insight

**Old friendships rarely transfer to new contexts due to logistics**

Design bomb

**So you need to build up new friends out of strangers. UGH!**

# Design Tools to Maximize Proximity



# **Basic Tools**

- **Persistent Identity:** +Repeat Encounters
- **Events:** +Density
- **Daily Incentives:** +Repeat Encounters
- **Offline Communities:** +Repeat Encounters



# Basic Anti-Patterns

- Anonymous players
- Huge, empty areas
- Many gameplay modes
- Separating player by skill

# The Big Anti-Pattern Matches



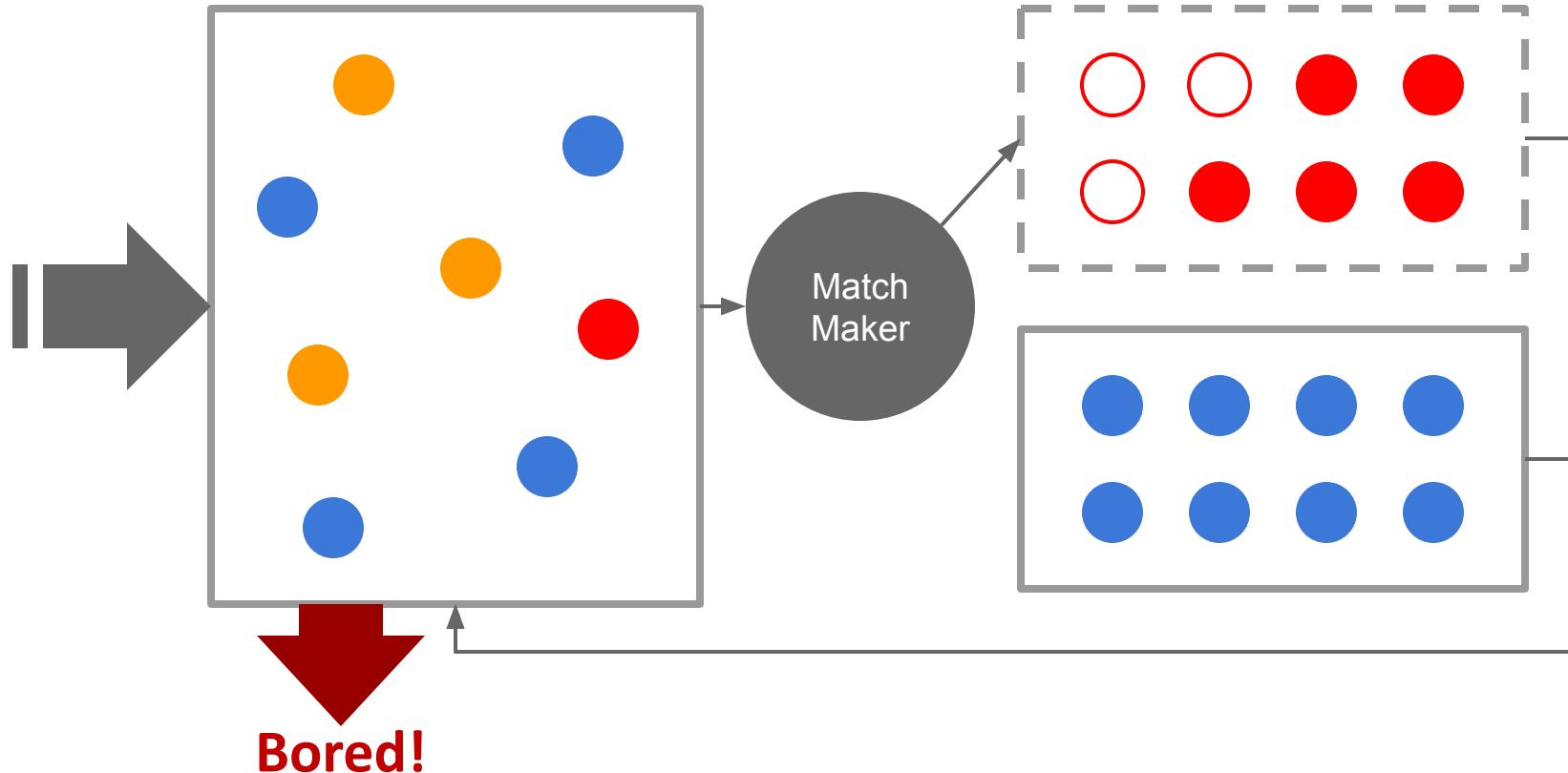


# The Amazing Eternals

*“Unfortunately, the game wasn’t attracting players fast enough to support a viable matchmaking player base with the current game design direction, which is the lifeblood of this type of game”*

– Digital Extremes

# Wait in lobby



# Play match

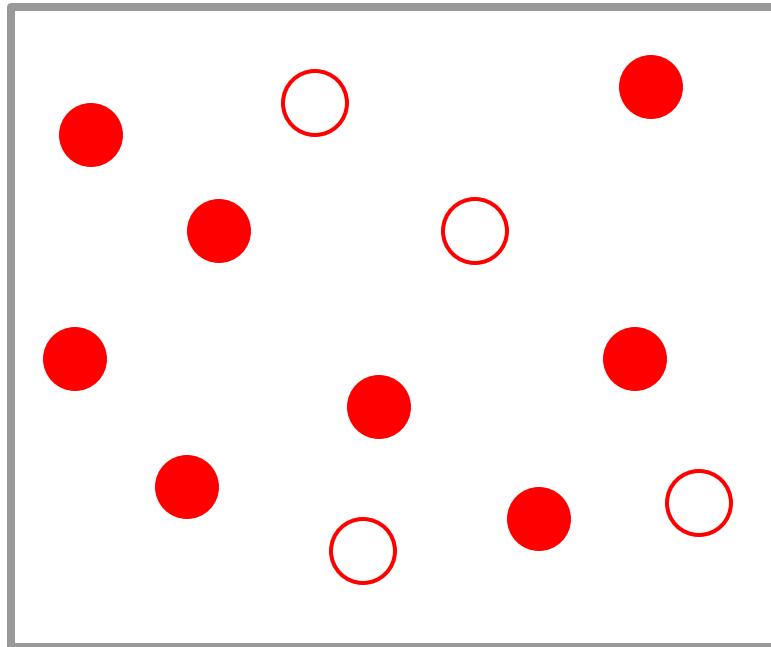


# The cost of this hoary old pattern

- Works only with mega hits
- High **churn** due to matchmaking queues
- Low **repeat** interactions

We can design  
Better

# Pattern: Rooms!

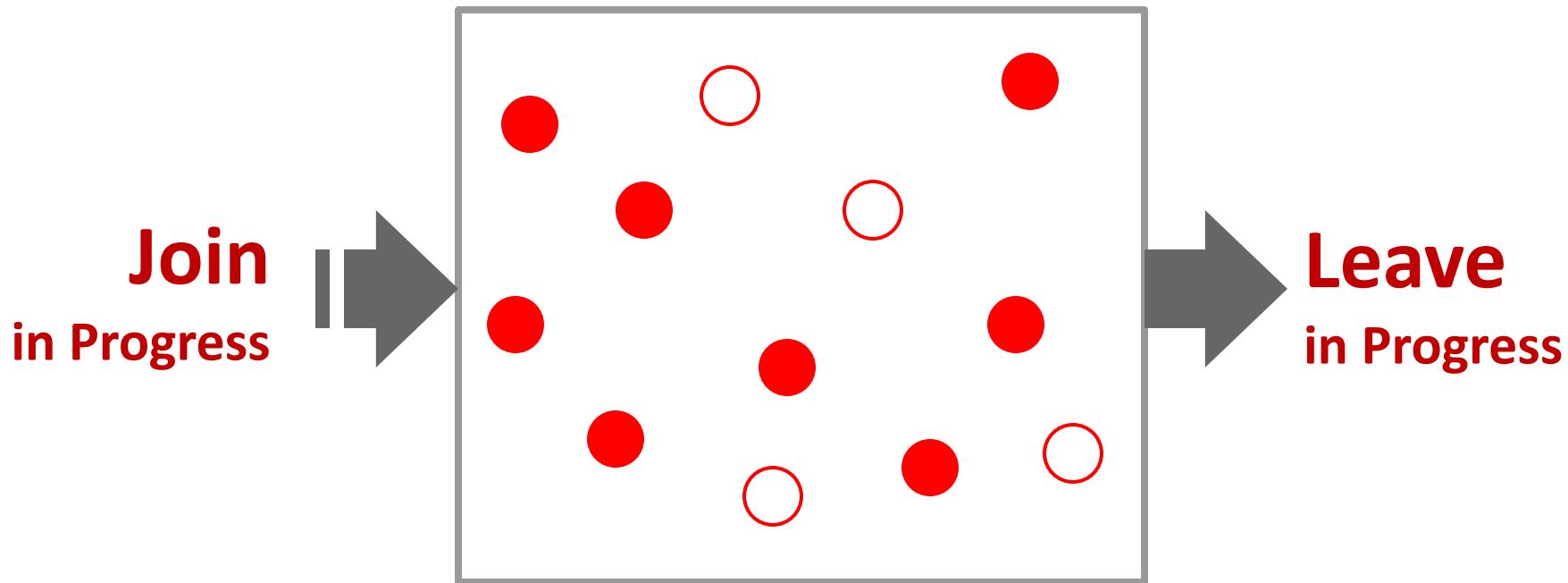


**Density Management**

**Repeat Encounters**

**Low wait times**

**N slots  
in Room**



!!

- steve, today's longest snake  
with a length of 4491

Mancow

#2 Crossfade  
#3 owwie  
#4 Blip  
#5 Rusty  
#6 Zeno's Paradox  
#7 Happy Hardcore  
#8 MaSe  
#9 Amek  
#10 nine

1024.8  
1019.8  
1010.9  
987.9  
976.7  
920.7  
920.3  
897.2  
867.1

Your length: 364

slither.io

# Pattern: Active Waiting Rooms



Help Fisherman Travis and Fisherman Justin (1)

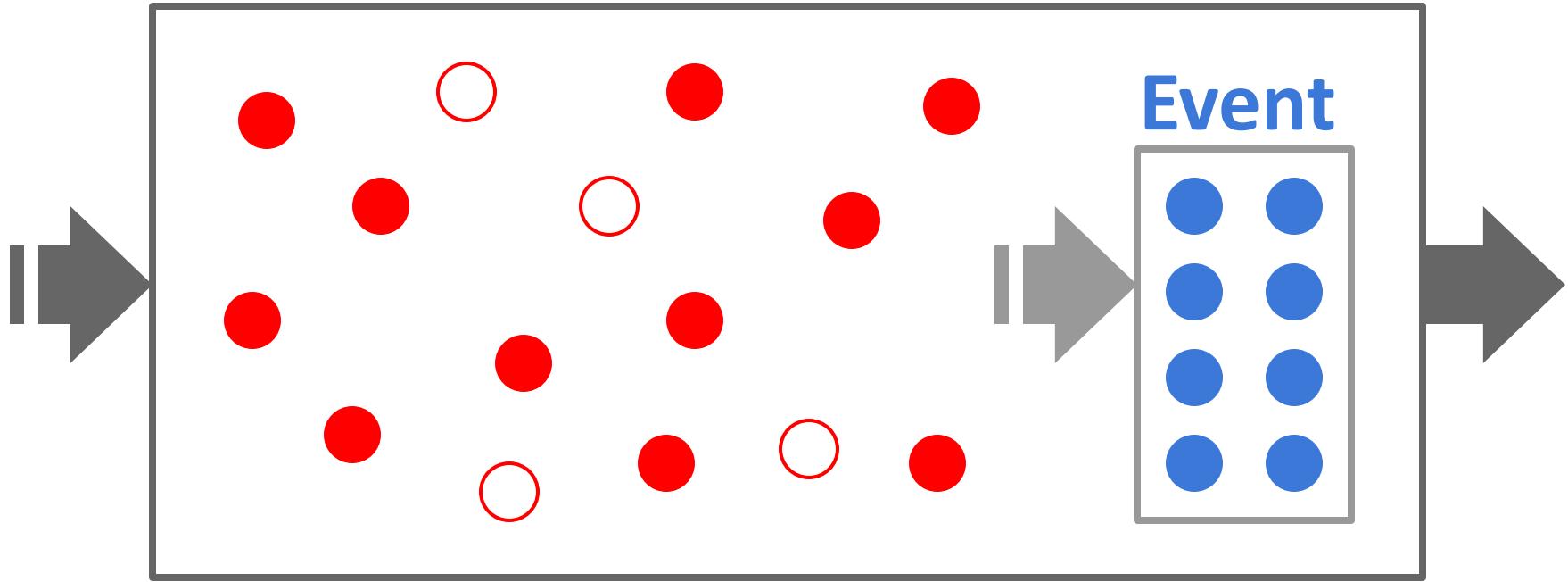
Check traps for hostile creatures.

Kill drakes and scale in the river.

Room with single player quests

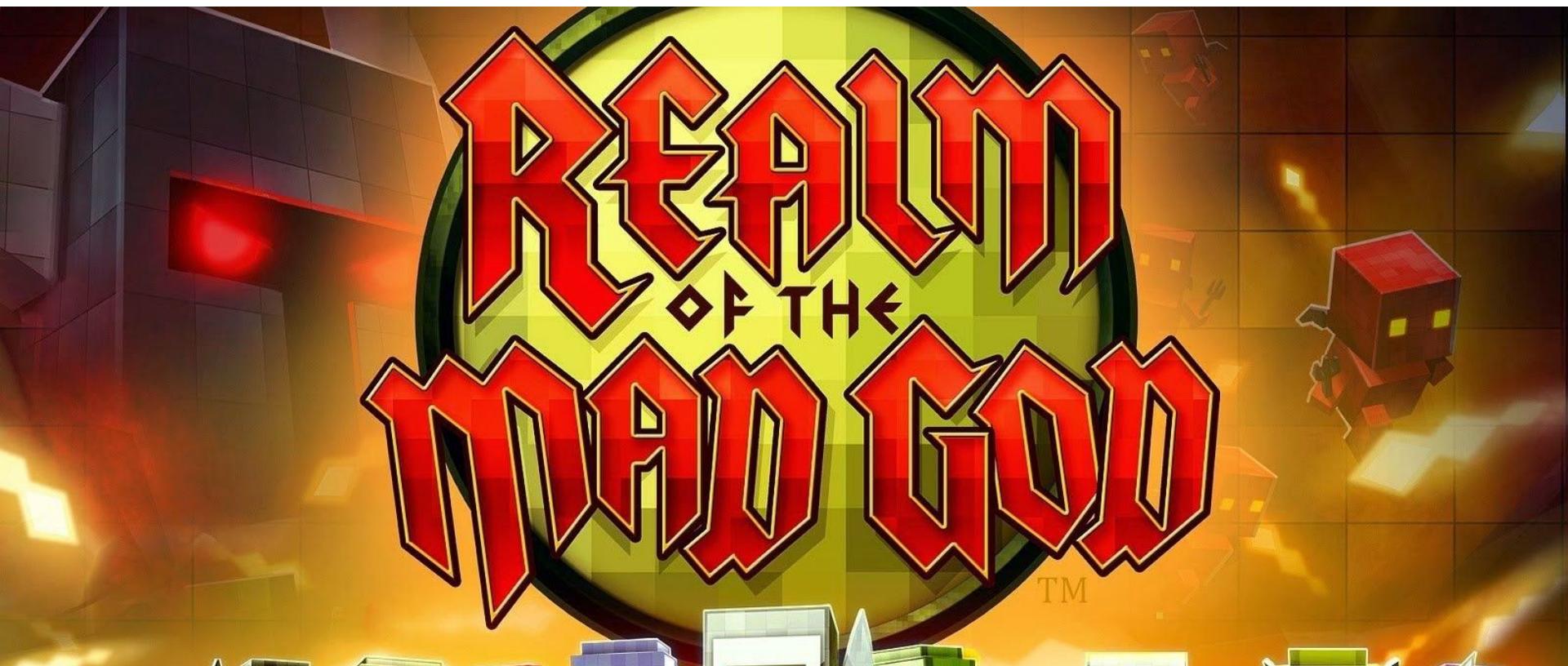
# Public Event





**Prevents premature leaving**  
**Maximizes ideal density (+Serendipity)**

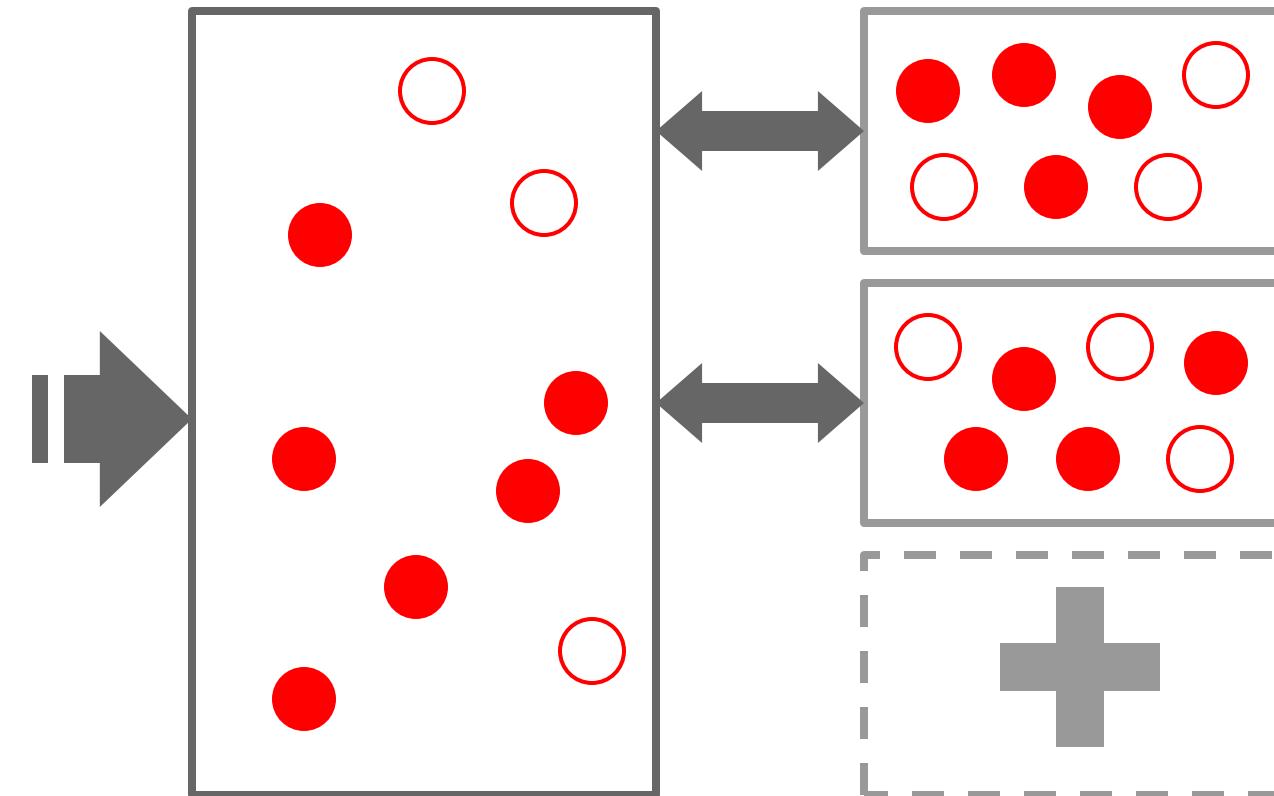
# Pattern: Elastic Instancing of Rooms





# Hub

# Instances



**Ideal Gameplay  
Density  
+Serendipity**

**Social space  
+Serendipity**

$$\# \text{ of Rooms} = \frac{\text{Concurrent Players}}{\text{Ideal Players per Room}}$$

Smarty pants question from the crowd

**What happens when population shrinks?**

# Pattern: Garbage Collection of Instances

## In Realm of the Mad God

- Players ‘beat’ instanced servers
- Those servers go away
- Don’t create new instances

# Pattern: Voluntary Migration



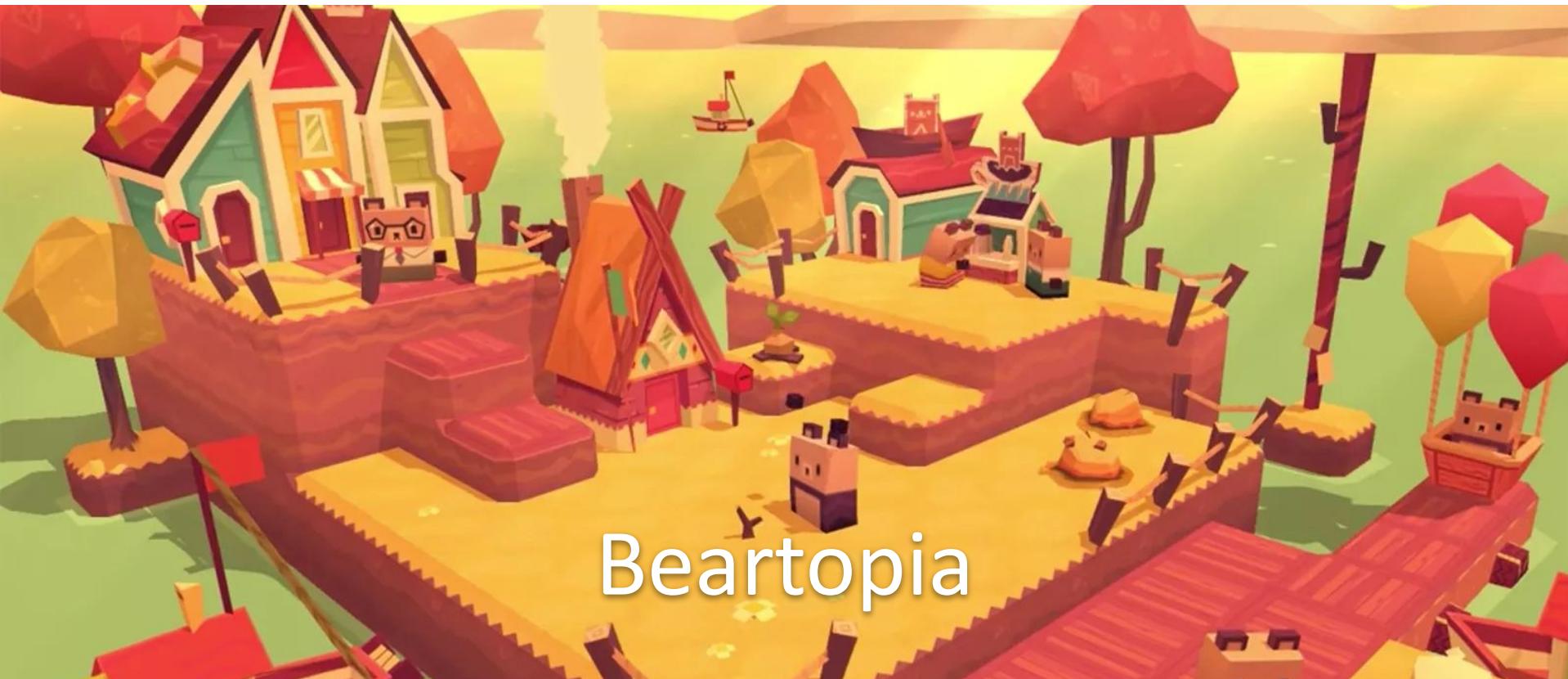
# **Pattern: Involuntary Migration**

## **In Guild Wars 2**

- If you ignore the offers...
- You just get kicked out.

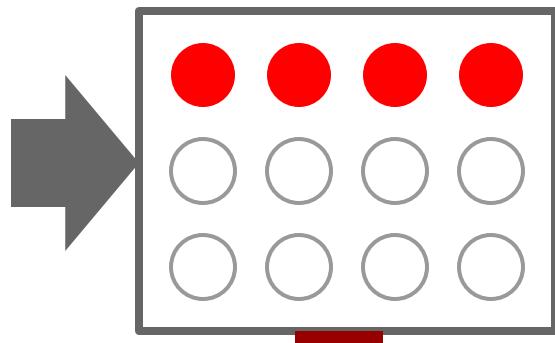
# **Maximizing Repeat Interactions**

# Pattern: Preserve Cohorts



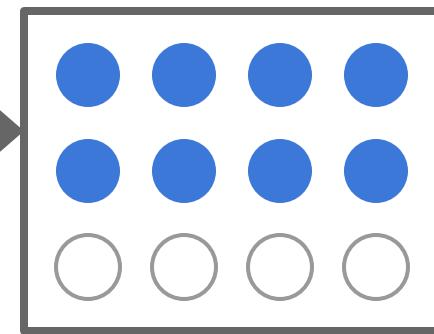
# Failing Village

Backfill  
with new  
players



# Thriving Village

Migrate



Clean up inactive  
players





Key lesson

**To maximize repeat interaction,  
try to keep the cohort together**

# All tools

- **Cohort-based placement:** Keep friend groups together
- **Elastic instancing:** Only create villages that hit max density
- **Garbage Collection:** Villagers and villages ascend
- **Idle detection:** Frees spots if people go idle
- **Backfill** with new or migrating users
- **Voluntary migration:** If low density
- **Forced migration:** If players don't take rewards

# All tools

- **Cohort-based placement:** Keep friend groups together
- **Elastic instancing:** Only create villages that hit max density
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**All Load Balancing patterns!**

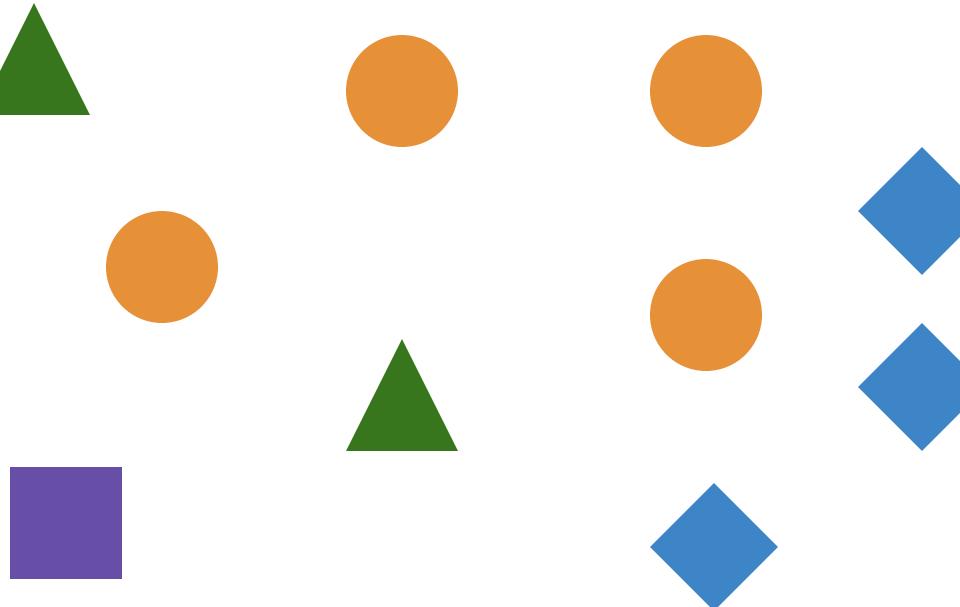
**Think of scaling as social design**



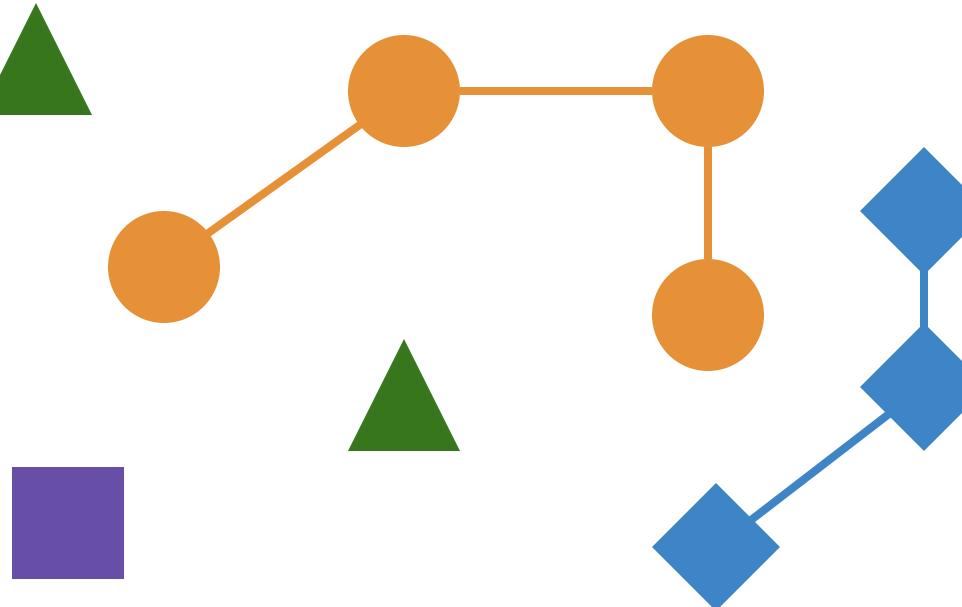
## 2. Similarity

Perception of shared social norms

# 1. People make friends with people like them



# 1. People make friends with people like them



Shared norms lower cost of social negotiation



**2. Similarity is an incredibly strong filter**

# Anti-Pattern: Nationalism

agar.io



# Design Tools to Benefit from Similarity



# Basic Tools

- Putting the player in a **faction**  
(Horde vs Alliance)
- Shared **experiences**
- Shared interests or **goals**

***“An individual’s behavior conforms to their digital self-representation”***

Yee & Bailenson, Proteus Effect

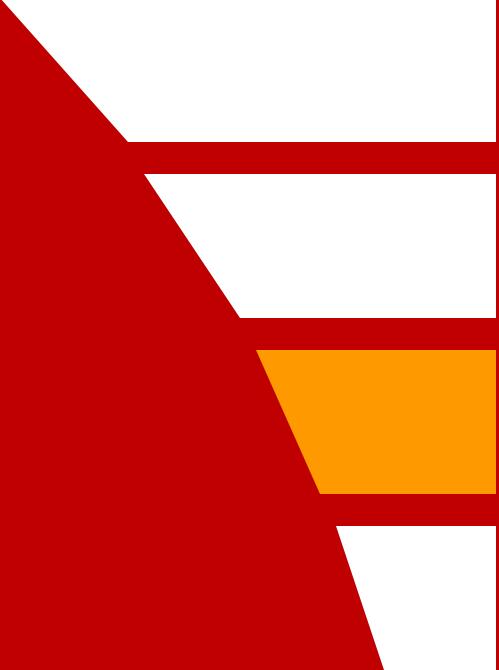
# Pattern: Positive Fictional Identities



Beartopia

# Create...

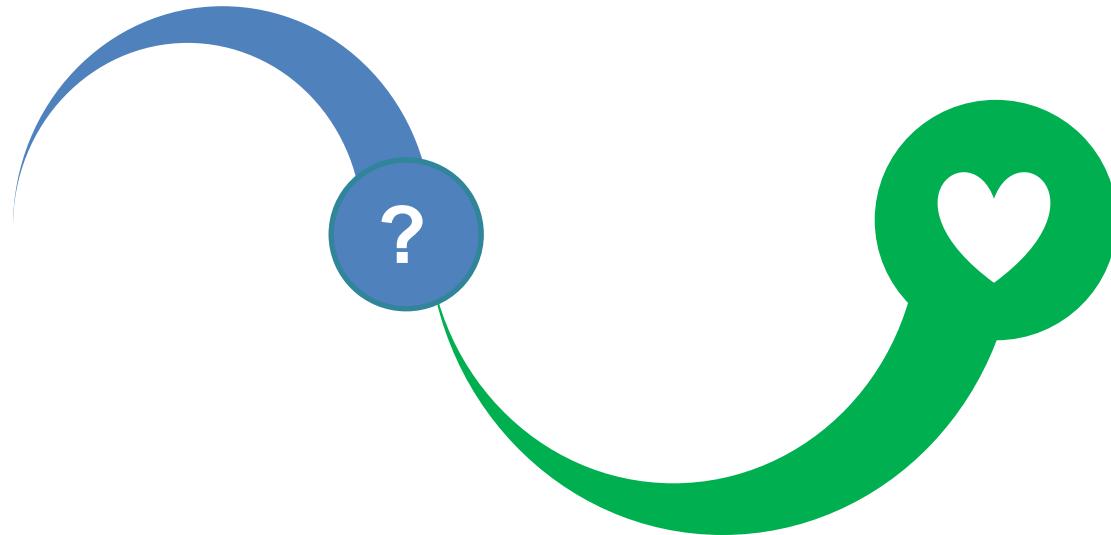
- Pro-social player roles  
Tend & Befriend - Brie Code
- Positive fictional cultures
- That **do not reference the real world directly**
- Make a better world & Assign player to that culture



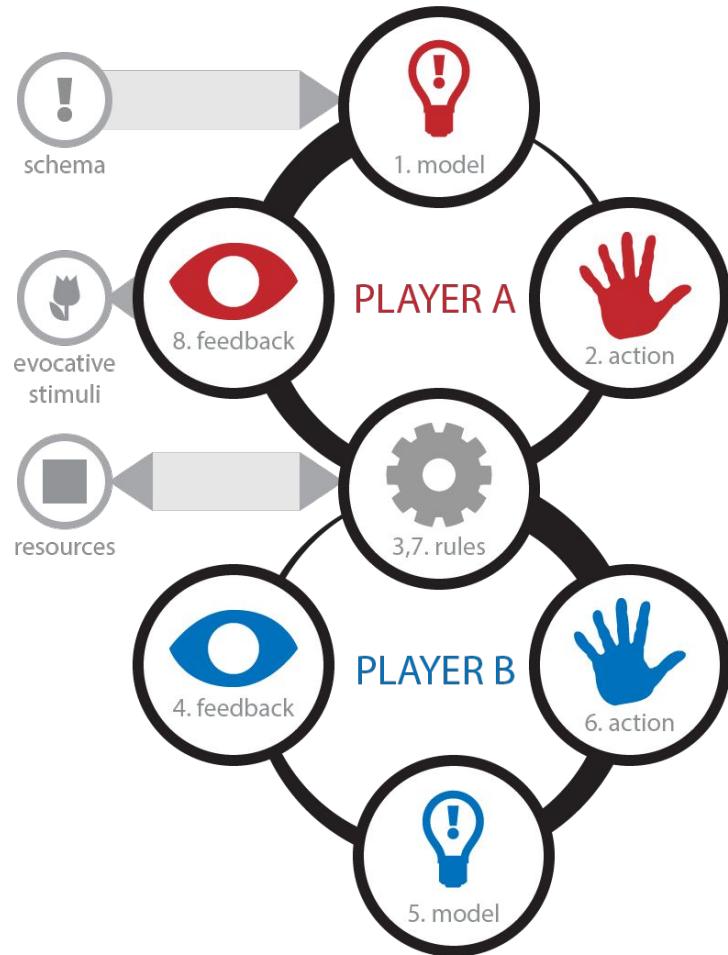
## 3. Reciprocity

Tit for Tat levels up relationships

# 1. Make a friendly **offer**...



...Give a positive **response**

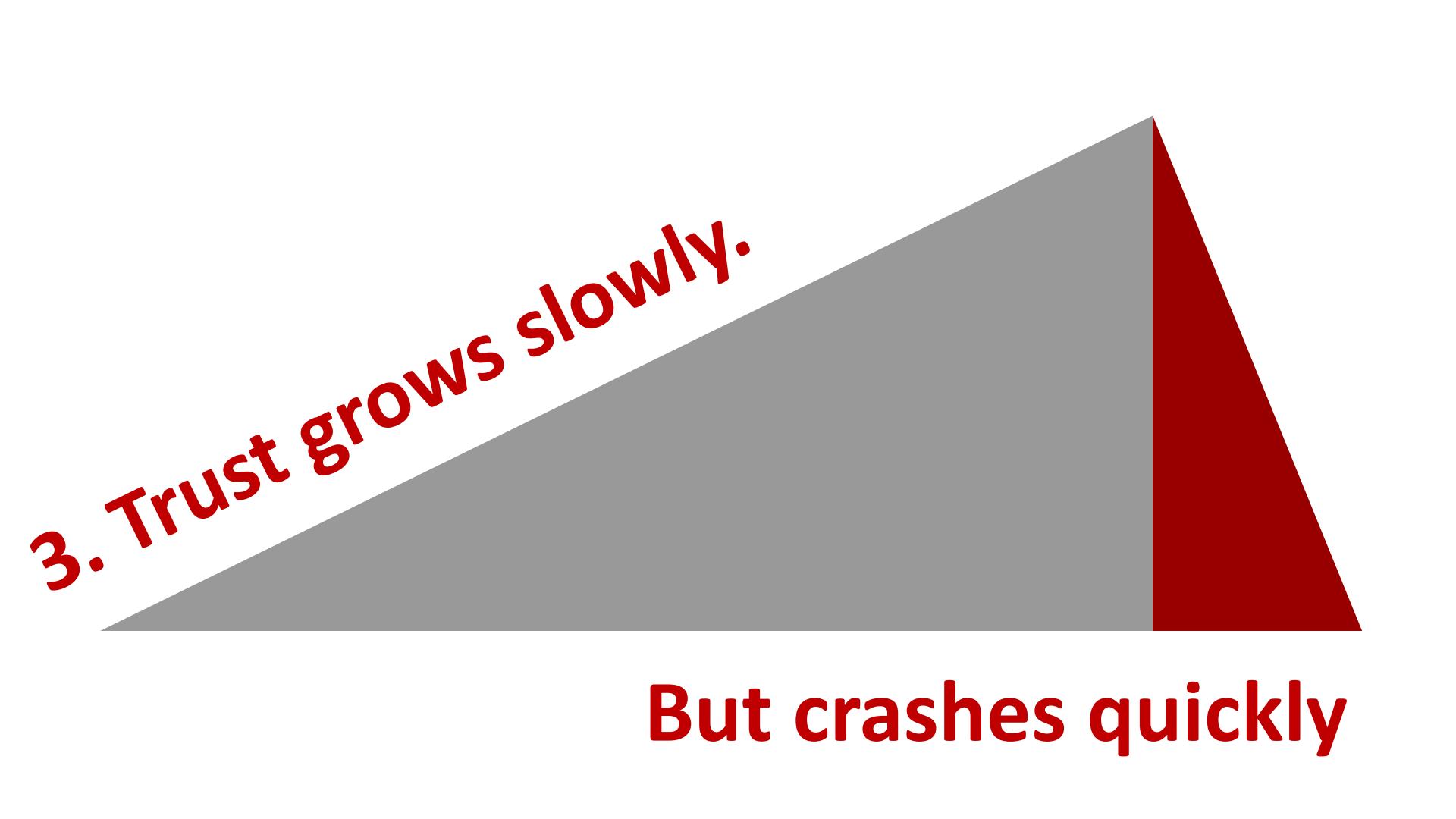


## 2. Each interaction builds Trust



**Trust is another name for  
Shared Social Norms**

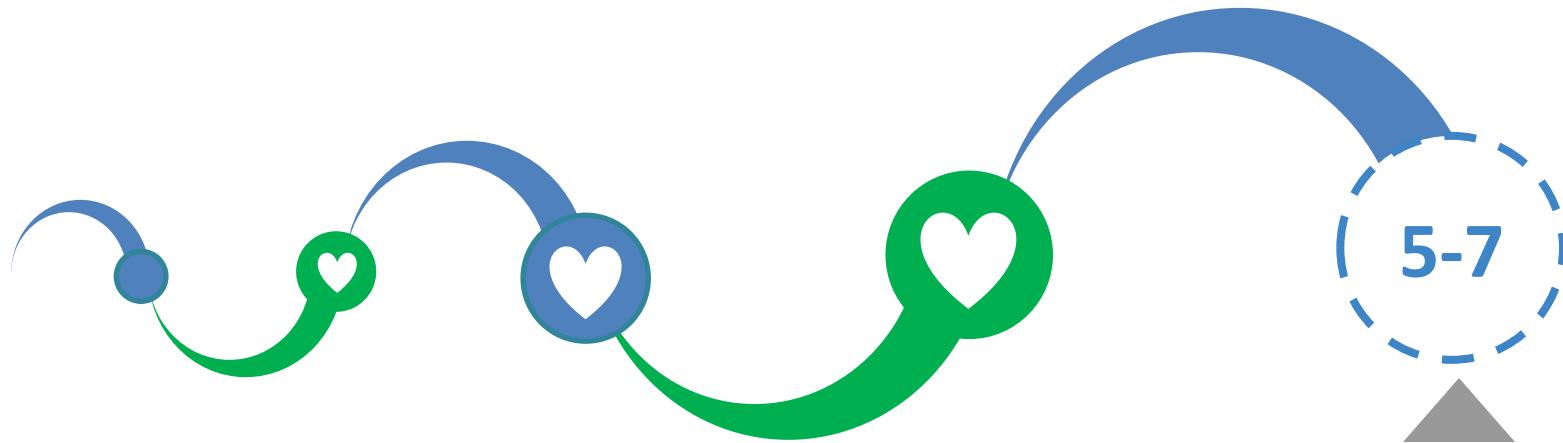
**Predictable behaviors that facilitate  
cooperation and coordination**



3. Trust grows slowly.

But crashes quickly

## 4. Trust allows us to increase stakes of each interaction



Deep friendships  
are expensive

**Groups with trust  
accomplish more than an  
individual**



# People are wired to reciprocate

## ROBERT CIALDINI

---

THE POWER OF  
PERSUASION AND  
INFLUENCE



# Design Tools to Maximize Reciprocity





# Anti Patterns

- Trade scamming / **Deceit**
- **Lack of predictability**
- Extreme **power differentials** (no mutual need)
- Over designing for freeloaders
- High initial **interaction costs**

# The Big Anti-Pattern Early Zero Sum

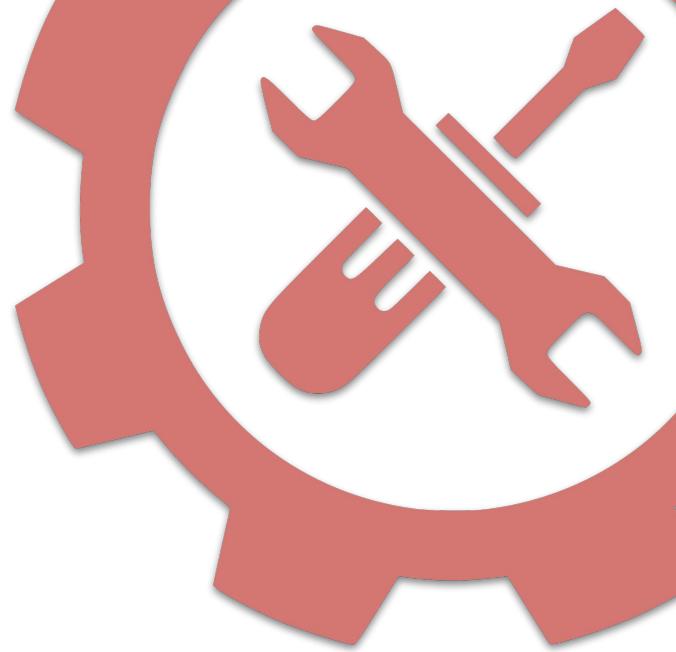


# Naive Tools

- **Chat:** We can reciprocate socially
- **Friend lists:** We acknowledge a relationship
- **Shared Goals:** We each want the same thing
- **Guilds:** Opt-in tribes with shared norms
- **Gifting:** Giving something to someone
- **Trade:** We each have what the other needs

Key lesson

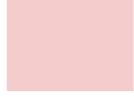
**Design systems that intentionally  
level up Friendship**



# Friendship Levels



**Solitary play** Playing alone



**Parallel play** Playing next to others



**Ambient Coop** We help others without meaning to



**Soft Coop** We intentionally benefit others



**Hard Coop** We must collaborate to progress



**Friends** We spend time together.  
Because we find it intrinsically rewarding.

# Parallel play: Automate Initial Response

October 25, 2017

→ **montonero** is here to kick butt and chew bubblegum. And **montonero** is all out of gum. Last Wednesday at 6:58 AM



**Daniel Cook** Last Wednesday at 9:50 AM

*gives motonero some gum. It is spearmint.*



Message #general

# Soft Coop: Non-zero sum Loot



# MISISON COMPLETE

Defeated Beach Shake



# Pattern: Non-zero sum guild rewards

I call it the “Super Bowl ring” philosophy...when a team wins the Super Bowl...all the players on the field and the first string, second string all get rings...

-M.E. Chung

DESTINY<sup>2</sup>

# Hard Coop: Specialized Roles



# Rigging



# You fail if you don't work together

 **Sailing**

 Command

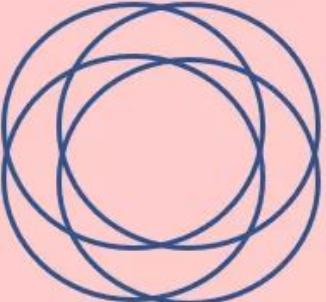
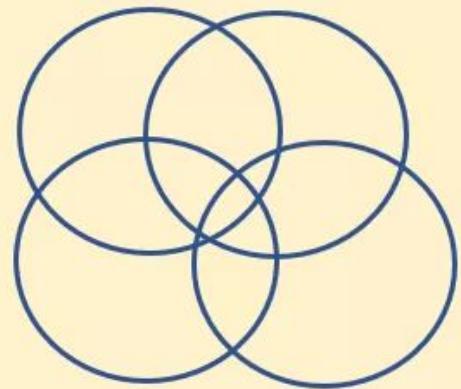
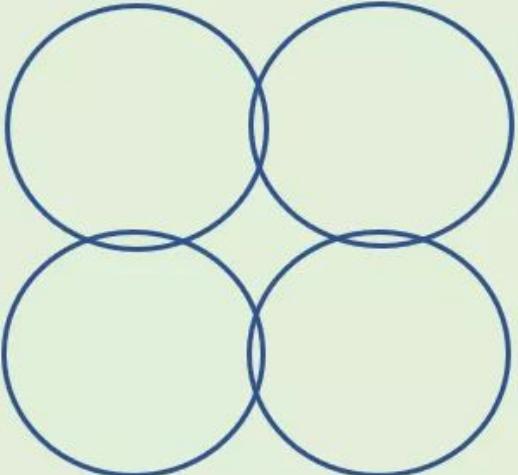
Rigging

Carpentry

Navigation

Gunnery

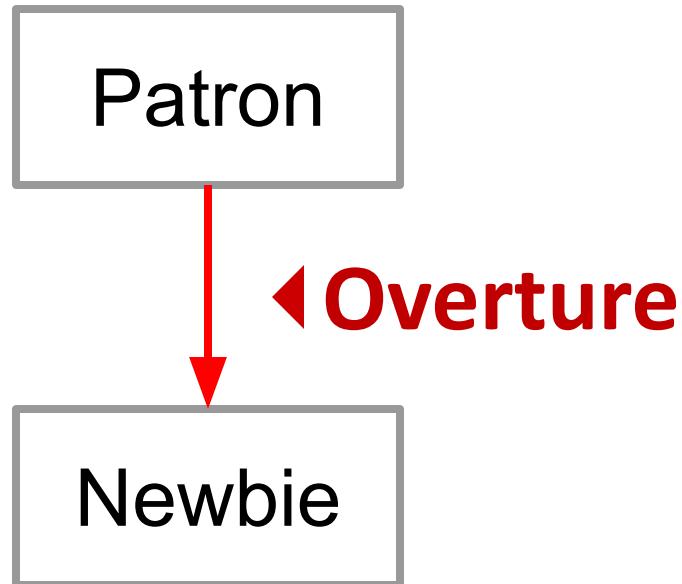
 Bilge Pumping

Low trust	Medium trust	High trust
<p>Players have high overlap in their capabilities. Each player can therefore be pretty independent. Occasionally, a player might be able to do something that others cannot.</p> 	<p>Players have specific, key overlaps. For example, an ability that all players have. But they can specialize otherwise. They may overlap in purpose, but have different tools.</p> 	<p>Players are specialists who require other players to succeed. Role overlaps are minimal.</p> 

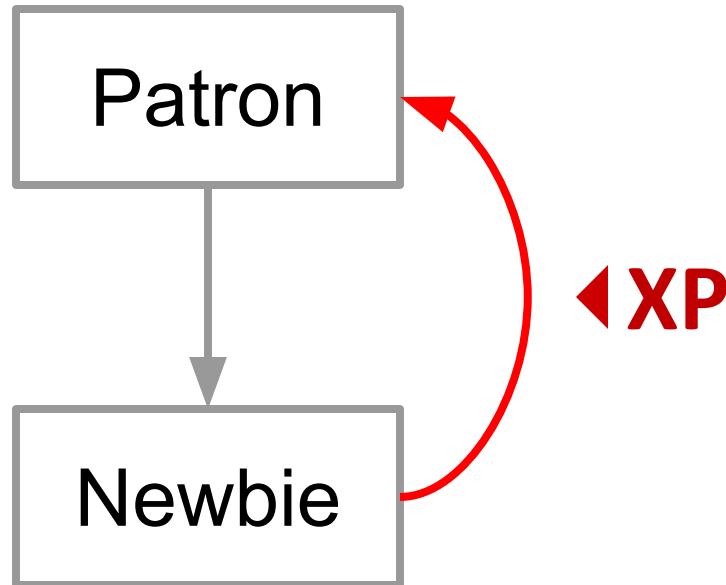
# Official Relationships



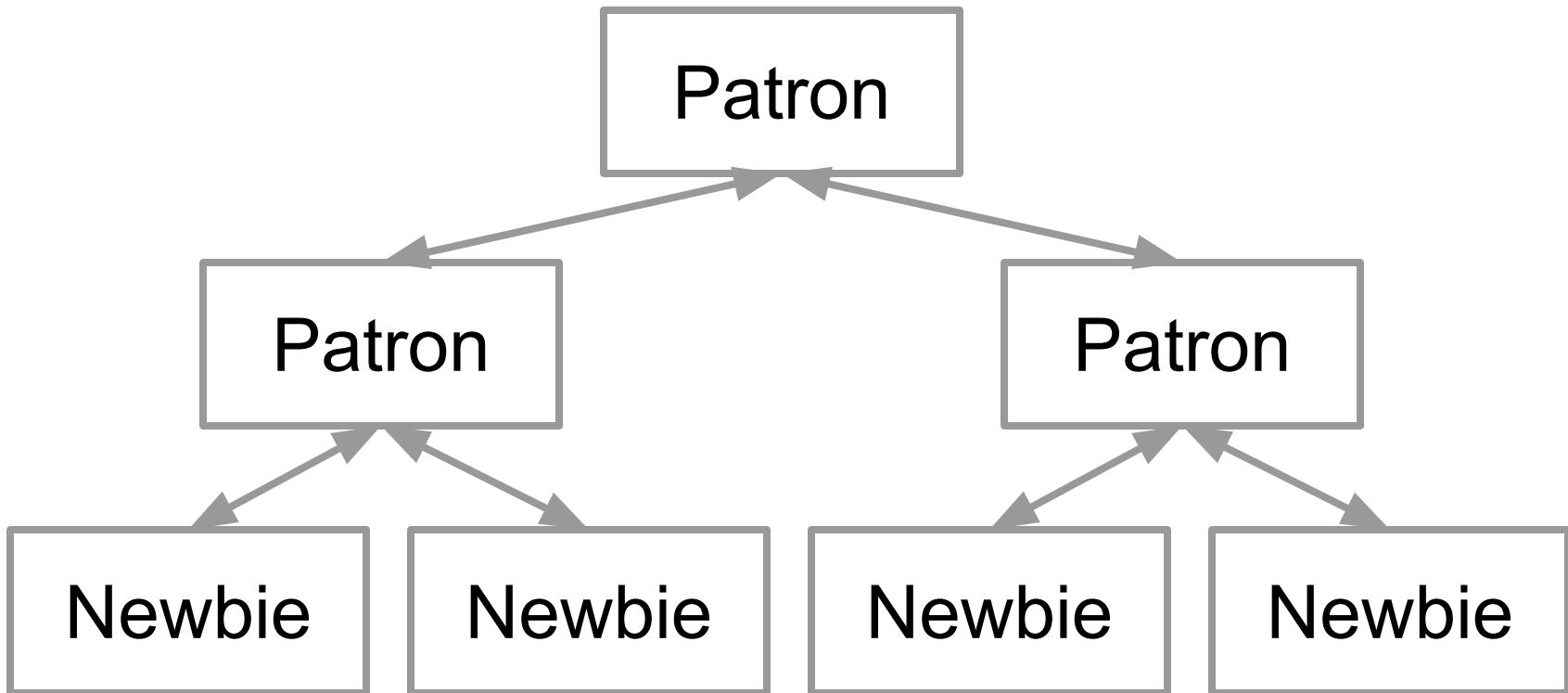
# Patronage



# Patronage



# Patronage





Reveal weakness for  
strongest bonds

## 4. Disclosure

**In deep relationship:** Reciprocation loops change from superficial mirroring to **riskier trust building**

**The key to deep trust:** The ability to disclose risky information to a friend without rejection

# Disclosure is risky



**But the only way to grow**





# Personal info triggers nasty reactions

racism

sexism

ageism

classism

height

religion

nationalism

# Friendship Levels

1. Solitary play

2. Parallel play

3. Ambient Coop



Premature Disclosure

4. Soft Coop

5. Hard Coop

6. Good friends



Opt-in disclosure

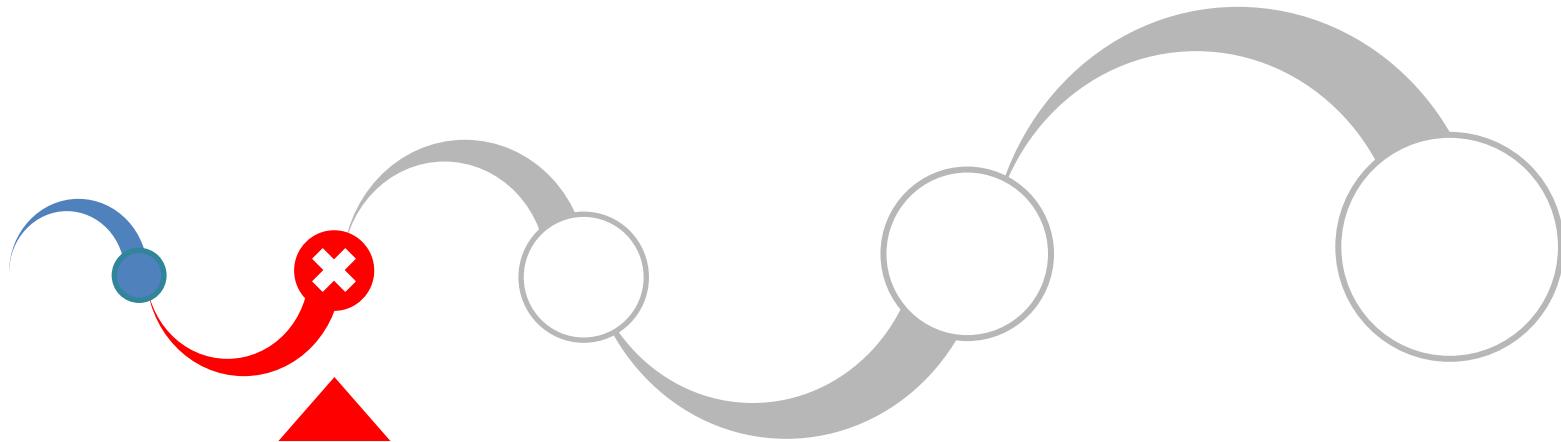


# Overwatch

*“I like to play comp in overwatch but **i can't use the voice chat without getting marriage proposals** etc.*

*Do you guys have any tips on programs that can change my voice to be a lot more masculine?”*

# Premature disclosure kills relationship leveling



Trust is lost

# Anti-Patterns

Don't start with new unsocialized players using

- Real name
- Voice chat
- Real location
- If item was purchased with real money



Key lesson

## **Design a ladder of opt-in intimacy**

“Opt-intimacy” - Lisa Brown, Master Game Designer, 2018



**Solitary play**



**Parallel play** + Expressive Actions



**Ambient Coop** + Emotes



**Soft Coop** + Chat + Blocking

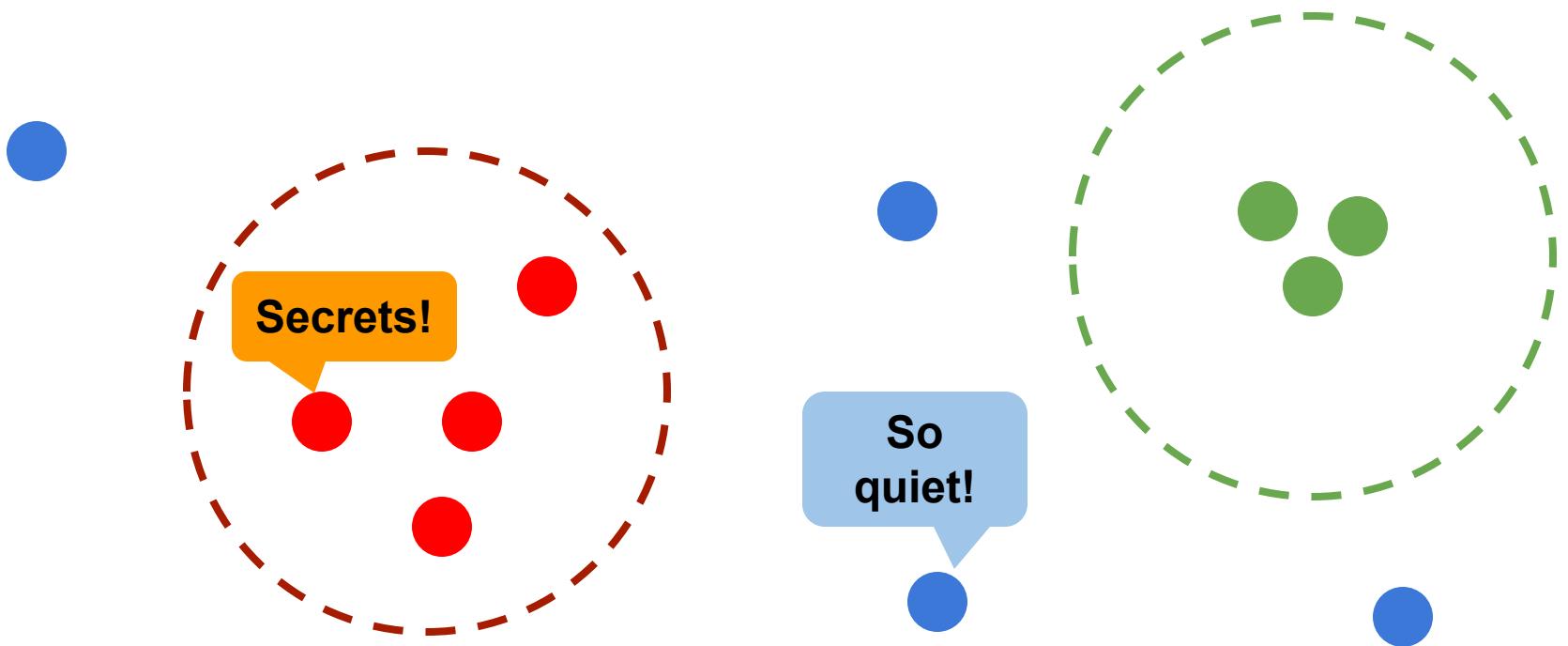


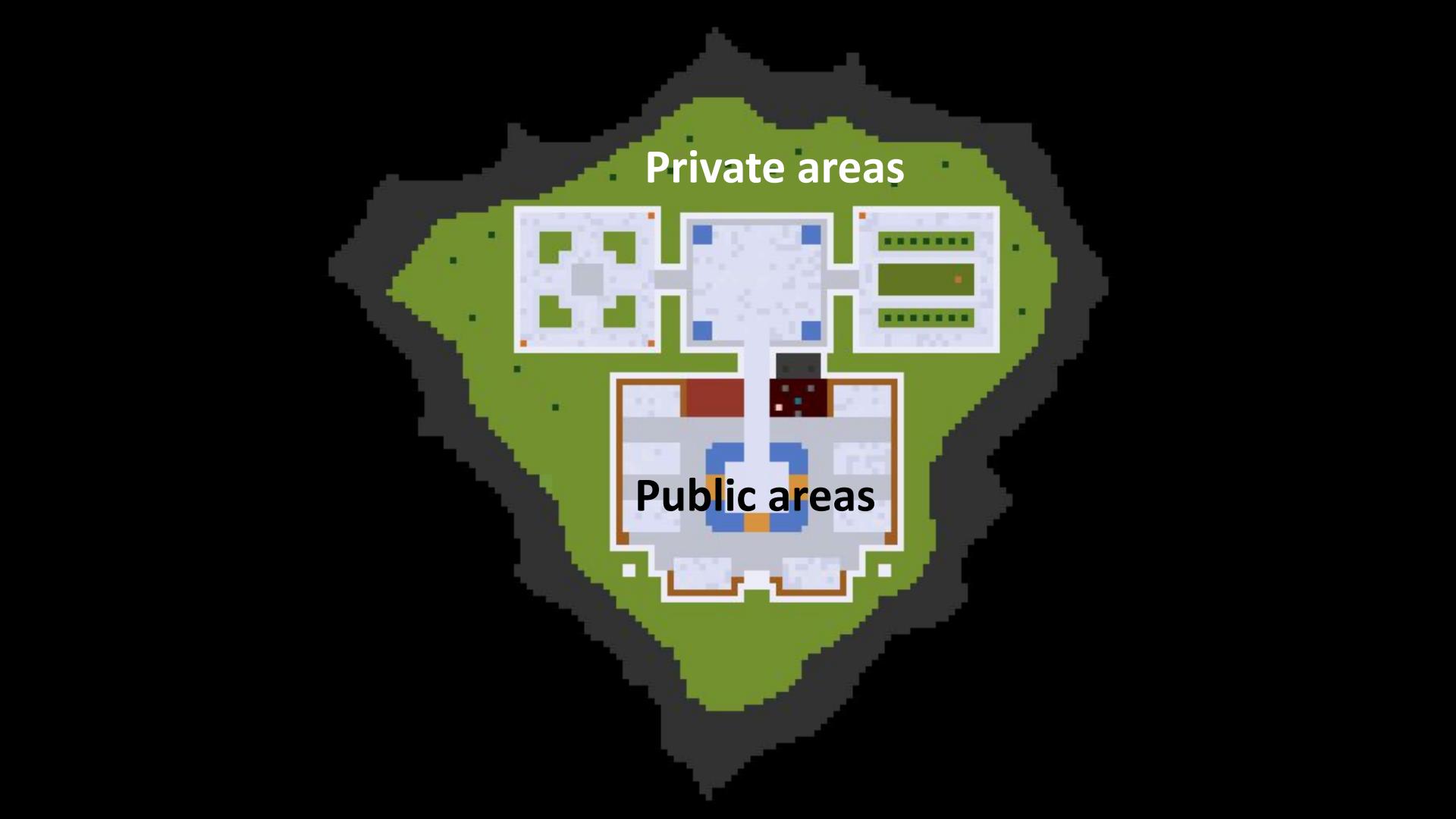
**Hard Coop** + Group Chat



**Friends** + Private Spaces

# Pattern: Cone of Silence





Private areas

Public areas



**Solitary play**



**Parallel play**



**Ambient Coop**



**Soft Coop**



**Hard Coop**



**Friends**



Real friends get to skip  
Friend invites  
Time for privacy  
Shared via private chat



Dunbar's layers

# Limited Social Energy

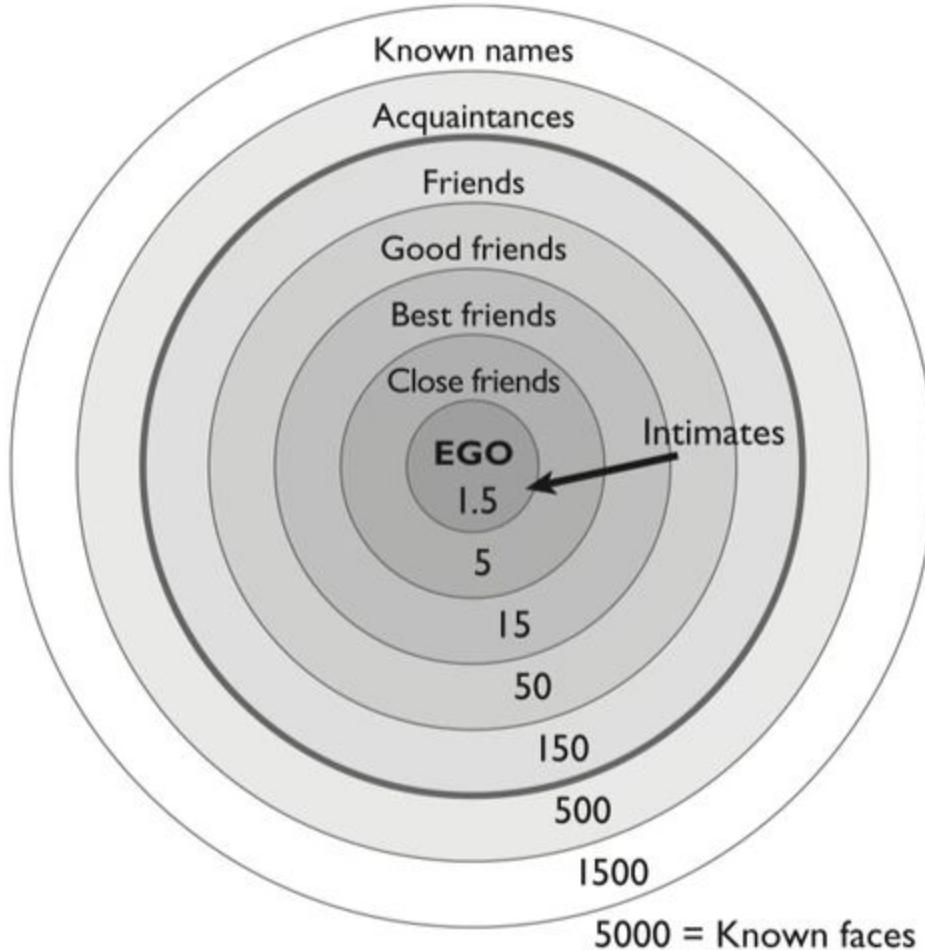
# Social Brain Theory

We have big expensive brains!

Why? We spend a lot of energy modeling the state of other minds.

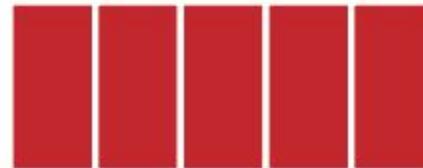
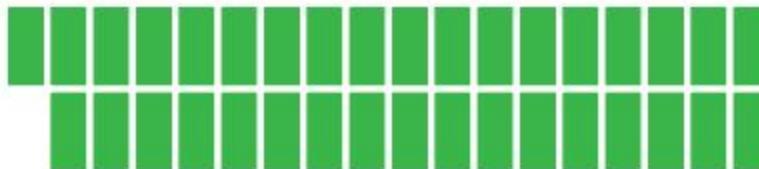
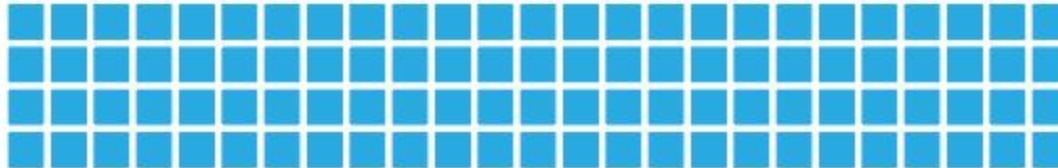
- I know that you know that I know.
- Allows for highly efficient group coordination
- And social learning

**Hard limits on number  
and quality of social  
connection**



## Sympathy Layer

## Support Layer



### Casual Friends

50 hours of bonding time per friend  
100 casual friend slots  
150 total friends at this layer

### Good Friends

100 hours of bonding time per friend  
35 good friend slots  
50 total friends at this layer

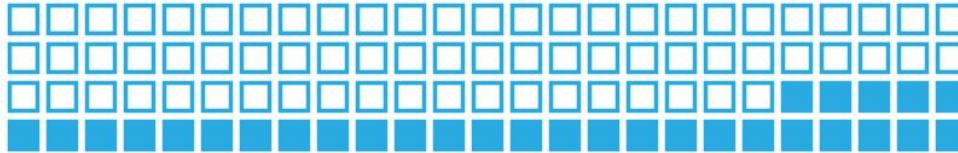
### Best Friends

200 hours of bonding time per friend  
10 best friend slots  
15 total friends at this layer

### Intimate Friends

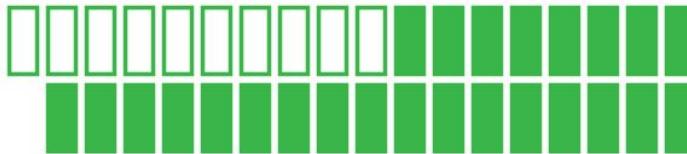
200+ hours of bonding time per friend  
5 intimate friend and family slots

# Loneliness is an empty graph



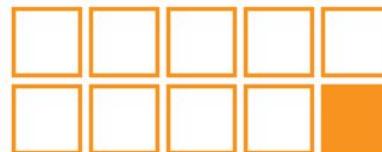
## Casual Friends

50 hours of bonding time per friend  
30 of 100 casual friend slots  
150 total friends at this layer



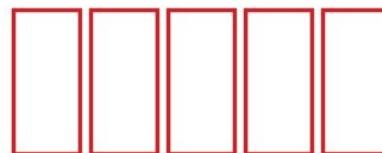
## Good Friends

100 hours of bonding time per friend  
25 of 35 good friend slots  
50 total friends at this layer



## Best Friends

200 hours of bonding time per friend  
1 of 10 best friend slots  
15 total friends at this layer



## Intimate Friends

200+ hours of bonding time per friend  
0 of 5 intimate friend and family slots



## Flood of low quality connections

Social media (following, liking)

Parasocial relationships (Rachel on Friends)

Characterful products (Mr. Clean)

Overtures are not reciprocated meaningfully

Ultimately **parasitic** social energy drains

# Conclusion

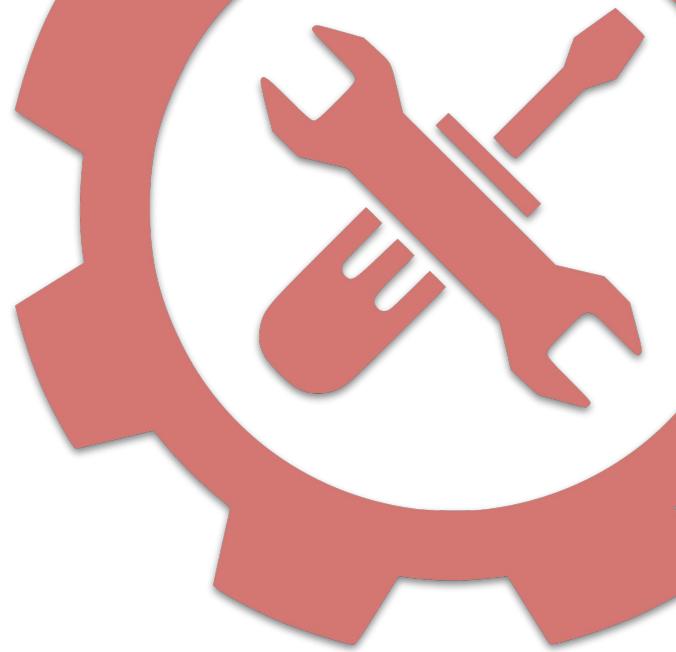
Design for friendship formation

	Proximity	Similarity	Reciprocity	Disclosure
Solitary play	✗			
Parallel play				
Ambient Coop				
Soft Coop				
Hard Coop				
Friends				❤



Anti-Pattern

**Retrofitting a social architecture is hard**



Key lesson

**Design friendship leveling in  
from the start. Make it a design pillar.**

More info

## Game Design Patterns for Building Friendships

<https://www.projecthorseshoe.com/reports/featured/ph16r4.htm>

## Trust Spectrum

<https://www.raphkoster.com/2018/03/16/the-trust-spectrum/>

2-year google project on trust formation using games

## Human-scale Social Systems Design

<https://www.projecthorseshoe.com/reports/featured/ph18r8.htm>

# Questions?

Daniel Cook

twitter: [@danctheduck](https://twitter.com/danctheduck)

design writing: [lostgarden.com](http://lostgarden.com)

company: [spryfox.com](http://spryfox.com)

# **Do games impact real life?**

**Findings:** Indirectly, yes

- General skills: problem solving, creative thinking
- Educational games: Limited direct transfer
- Game violence: No transfer

**Exception:** Direct social connections do transfer

# What friendship transfer to the real world?

- **Activity-based** friendships transfer poorly out of their context
  - Ex: Bowling friends
- **Mateship, Kinship** transfer well
- Deep relationships (support, sympathy) transfer better
- Situations where you can meet **in person** (see one another's gaze!) are more likely to transfer
- If you have to travel more than **20 minutes** to see a person, that friendship will fade.

# **Self Determination Theory**

## **Autonomy**

- You feel you are choosing your path

## **Competence**

- You feel able to pursue your path

## **Relatedness**

- You feel supported in pursuing our path
- You feel you are supporting others