We visualized the Fighting genre with Game Space Mapping.

Using survey data from 450,000+ gamers in Quantic Foundry's data set, we identified the key motivation differentiators among the audiences of Fighting genre titles to create a concise visualization of the genre neighborhood.

This approach shows the similarities and differences among game titles, and surfaces distinct clusters of games.

We found two clusters of games in the Fighting genre.

The Arena cluster emphasizes steep learning curves, practice, mastery, and fast-paced competition, exemplified by games like Street Fighter.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nam volutpat venenatis leo, non tempus odio tristique sed. Vivamus eget nulla vitae tortor aliquam vestibulum. Nullam sollicitudin nibh eros, id commodo risus consectetur ac.

These two clusters differ strongly on gender and % of hardcore gamers.

The Arena cluster has a lower percentage of female gamers (4-10%), whereas the Lore-Rich Missions cluster has a much higher percentage of female gamers (20-30%).

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nam volutpat venenatis leo, non tempus odio tristique sed. Vivamus eget nulla vitae tortor aliquam vestibulum.
WE COMBINED PSYCHOMETRIC METHODS AND A WEB APP TO COLLECT MOTIVATION DATA FROM OVER 450,000 GAMERS

An Empirical Model
Our motivation model (next slide) was developed via established psychometric techniques, such as factor analysis—a statistical method that identifies how variables cluster together.

A Unique Data Set
Over 400,000 gamers worldwide have participated in our Gamer Motivation Profile, providing data on their motivations, demographics, and their favorite games.

Actionable Insights
Our data links game titles/franchises with demographic and motivation variables, allowing us to analyze the motivations of game audiences to produce data-driven insights.

Our Expertise in Gamer Motivation Research
For over a decade, Nick Yee and Nic Ducheneaut have been studying the motivations and behavior of gamers. They have over 40 peer-reviewed papers on gaming and virtual worlds. Nick Yee's paper on the motivations of online gamers has been cited over 1,400 times.
QUANTIC FOUNDRY’S GAMER MOTIVATION MODEL BASED ON DATA FROM OVER 450,000 VIDEO GAMERS REVEALED 6 KEY PAIRS OF MOTIVATIONS

<table>
<thead>
<tr>
<th>Action</th>
<th>Social</th>
<th>Mastery</th>
<th>Achievement</th>
<th>Immersion</th>
<th>Creativity</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Boom!”</td>
<td>“Let’s Play Together”</td>
<td>“Let Me Think”</td>
<td>“I Want More”</td>
<td>“Once Upon a Time”</td>
<td>“What If?”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Destruction</th>
<th>Competition</th>
<th>Challenge</th>
<th>Completion</th>
<th>Fantasy</th>
<th>Design</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Excitement</th>
<th>Community</th>
<th>Strategy</th>
<th>Power</th>
<th>Story</th>
<th>Discovery</th>
</tr>
</thead>
</table>

Find detailed description of each motivation in the appendix at the end of this report.
Starting with a few recent titles among well-known franchises in the Fighting genre, Quantic Foundry identified a larger list of highly-related games based on their data.

<table>
<thead>
<tr>
<th>Starting List</th>
<th>Expanded List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focal Point of Map</td>
<td>Games Disproportionately Popular with Starting List</td>
</tr>
</tbody>
</table>
| - Street Fighter V  
- Game 429  
- Mortal Kombat X  
- Injustice 2 | - Game 266  
- Game 726  
- Marvel vs. Capcom: Infinite  
- Tekken 7  
- Game 152  
- Game 521  
- Game 932  
- Game 915  
- Game 465  
- Game 516  
- Injustice: Gods Among Us  
- Game 978  
- Game 503  
- Game 197 | - Game 482  
- Game 693  
- Game 424  
- Game 164  
- Game 604  
- Game 514  
- Game 554  
- Game 853  
- Game 164  
- Game 899  
- Game 411 |
Let's Start With 2 Motivations

Before we dive into the final version of the map, we've often found it helpful to start with the basics and build an intuition around why the final map is the way it is.

In the chart here, we've plotted all the games along Competition (matches, duels, leaderboard ranking) and Challenge (high skill threshold, practice, difficult missions/bosses). We picked these two motivations because they vary a great deal in this game audience space—i.e., they are good bets at highlighting how audiences in this game space differ.

How to Read The Axes

The axes are percentile ranks. A 50th-%tile is the average in our full data set of 400,000+ gamers. Thus an 80th-%tile means that the game title audience average is higher than 80% of the gamers in our full sample.

Games on the right attract audiences that are highly motivated by Competition (e.g., Street Fighter V), whereas games on the left attract gamers looking for more non-adversarial experiences (e.g., Game 131).

Similarly, games on the top of the map require more skill and practice to succeed and have more skill-based gates (e.g., Game 726), whereas games on the bottom of the map are easier to learn and play with less challenging missions (e.g., Game 411).
When Less is More

Just because two motivations vary a lot among gamers doesn't mean they both contribute useful information. In this chart, note that there is a strong positive correlation ($r=0.89$) between Competition and Challenge (among this set of games). This correlation is so strong that we don't lose much information by simply creating one Competition-Challenge axis (i.e., the orange line). This “data compression” would surface an interesting relationship between Competition and Challenge, and provide a more concise overview of this game space.

We can automate this searching and axis-combining

With 12 motivations, there are 66 possible 2D graphs. It would be tedious to iterate through all 66 graphs, visually inspecting each graph for these relationships between motivations.

Instead, we can statistically identify the primary motivation axes of the audience in the games list via factor analysis. Factor analysis surfaces the most important axis combinations that best differentiate the game titles.

Or put another way, we statistically flattened the 12 motivations of this audience space into the most interesting 2D graph.
The Horizontal Axis: Immersive Lore vs. Strategic Arena

The axes are combinations of highly related motivations (specifically for this audience space).

As we’ve seen in the previous slides, there is a strong positive correlation between Competition and Challenge in this audience space. In the final map, we see them both loading on the horizontal axis along with Strategy (thinking, planning), Community (chatting, teamwork), and Excitement (fast pacing, thrills). These motivations are negatively correlated with Fantasy (being someone else, somewhere else) and Story (elaborate narrative, deep characters).

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nam volutpat venenatis leo, non tempus odio tristique sed. Vivamus eget nulla vitae tortor aliquam vestibulum. Nullam sollicitudin nibh eros, id commodo risus consectetur ac.


Maecenas vestibulum, lorem et varius pulvinar, risus nunc blandit neque, quis ullamcorper est massa sed velit.
The Vertical Axis: Power/Completion/Destruction

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nam volutpat venenatis leo, non tempus odio tristique sed. Vivamus eget nulla vitae tortor aliquam vestibulum. Nullam sollicitudin nibh eros, id commodo risus consectetur ac.


The Chart Proportions Are Deliberate

The shape of the graph isn’t an artifact of fitting the chart into this slide format. The proportions of the chart reflect the relative importance of the two axes. In this case, the horizontal axis explains roughly double the variance in the data than the vertical axis (again within this game audience space).
THE TWO CLUSTERS

LORE-RICH MISSIONS

ARENAS

Power/Completion/Destruction

Fantasy/Story vs. Strategy/Competition/Challenge/Community/Excitement
The Two Clusters

The spread of the game titles across the map suggests that Fighting games bridge into Genre 516 via lore-rich, story-heavy titles like Injustice and Mortal Kombat, via mechanics like XTCA and YTCB. Overall, the games in this genre neighborhood seem to fall broadly into one of two game clusters.


Arenas: In contrast, this cluster of games emphasize steep learning curves, high skill and practice requirements, the need to master strategic concepts, and tend to emphasize competing against other players in frenetic, fast-paced gameplay. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nam volutpat venenatis leo, non tempus odio tristique sed. Vivamus eget nulla vitae tortor aliquam vestibulum. Nullam sollicitudin nibh eros, id commodo risus consectetur ac. Orci varius natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus.
DEMOGRAPHIC OVERLAYS
FIGHTING GENRE
In the next 3 charts, we overlay the game space map with demographic data. 2 trends surface in the overlays:

1) Games in the Arena cluster tend to have a much smaller percentage of female gamers (many in the 4-10% range), whereas games in the Lore-Rich Missions cluster tend to have a higher percentage of female gamers (many in the 20-30% range).

2) Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nam volutpat venenatis leo, non tempus odio tristique sed. Vivamus eget nulla vitae tortor aliquam vestibulum. Nullam sollicitudin nibh eros, id commodo risus consectetur ac.
APPENDIX
DETAILS OF MOTIVATIONS
The motivation factors in our model are spectrums. In the same way that Introverts don’t have “less personality” than Extraverts, scoring low on a motivation doesn’t necessarily mean these gamers don’t have equally strong preferences.

The following charts provide additional details on each motivation:

• What does scoring low on each motivation mean?
• What are the anchors on both ends of each motivation spectrum?
• What are examples of games that have high and low scores for each motivation?
# ACTION-SOCIAL SPECTRUMS

<table>
<thead>
<tr>
<th>Preferences</th>
<th>Games Examples</th>
<th>Motivation</th>
<th>Game Examples</th>
<th>Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independence</strong></td>
<td>Lego Harry Potter,</td>
<td><strong>Community</strong></td>
<td>Destiny, Battlefield,</td>
<td><strong>Teamwork</strong></td>
</tr>
<tr>
<td></td>
<td>Farm Heroes Saga</td>
<td></td>
<td>Rainbow Six Siege,</td>
<td>Social interaction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Collaboration.</td>
</tr>
<tr>
<td><strong>Non-Adversarial</strong></td>
<td>Myst, Gone Home,</td>
<td><strong>Competition</strong></td>
<td>League of Legends,</td>
<td><strong>High Conflict</strong></td>
</tr>
<tr>
<td></td>
<td>Dragon Age II,</td>
<td><em>Social Comparison</em></td>
<td>DotA 2, Call of Duty,</td>
<td>Adversarial.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Matches.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Leaderboards.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Rankings.</td>
</tr>
<tr>
<td><strong>Calm</strong></td>
<td>Civilization, Myst,</td>
<td><strong>Excitement</strong></td>
<td>CS:GO, Call of Duty,</td>
<td><strong>Thrilling</strong></td>
</tr>
<tr>
<td></td>
<td>Europa Universalis</td>
<td></td>
<td></td>
<td>Action-based.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Surprising.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Adrenaline rush.</td>
</tr>
<tr>
<td><strong>Enduring</strong></td>
<td>Professor Layton,</td>
<td><strong>Destruction</strong></td>
<td>Halo, Call of Duty,</td>
<td><strong>Chaotic</strong></td>
</tr>
<tr>
<td></td>
<td>Harvest Moon</td>
<td></td>
<td></td>
<td>Mayhem.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Carnage. Gore.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Destructible</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>environments.</td>
</tr>
</tbody>
</table>

- **Independence**: Single-player. Soloable quests. Be in full control.
- **Non-Adversarial**: Non-competitive. No rankings/duels against human players.
### MASTERY-Achievement SPECTRUMS

<table>
<thead>
<tr>
<th>Preferences</th>
<th>Games Examples</th>
<th>Motivation</th>
<th>Game Examples</th>
<th>Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-Driven</strong></td>
<td>RimWorld, Victoria II, Kerbal Space Program, Cities: Skylines</td>
<td><strong>Completion</strong></td>
<td>Dragon Nest, Aura Kingdom, Lego Dimensions, Final Fantasy</td>
<td><strong>Task-Oriented</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Source of Goals</em></td>
<td></td>
<td><em>Complete tasks/quests. Collect stars/trophies and collectibles.</em></td>
</tr>
<tr>
<td><strong>Flat Progression</strong></td>
<td>Night in the Woods, The Longest Journey, Ico, 80 Days, Her Story</td>
<td><strong>Power</strong></td>
<td>World of Warcraft, League of Legends, Diablo III, Summoners War</td>
<td><strong>Progression-Based</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Growth</em></td>
<td></td>
<td><em>Start weak and grind. Level up character/stats. Upgrade weapons/spells.</em></td>
</tr>
<tr>
<td><strong>Spontaneous</strong></td>
<td>The Sims, Disney Emoji Blitz, Mario Kart Wii, Covet Fashion</td>
<td><strong>Strategy</strong></td>
<td>StarCraft II, Crusader Kings II, Europa Universalis IV, Stellaris, Eve Online</td>
<td><strong>Contemplative</strong></td>
</tr>
<tr>
<td><strong>Easy Fun</strong></td>
<td>Oxenfree, Stardew Valley, The Longest Journey, Animal Crossing</td>
<td><strong>Challenge</strong></td>
<td>Super Smash Bros. Melee, DotA, osu!, Street Fighter V</td>
<td><strong>Skill-Based</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Skill Improvement</em></td>
<td></td>
<td><em>Steep learning curve. Complex moves/rules. Difficult missions, bosses.</em></td>
</tr>
</tbody>
</table>

- **Self-Driven**: Decide what to do myself. Sandbox/open gameplay. Self-directed goals.
- **Flat Progression**: Fully-developed characters from the start. Static. Level playing field.
- **Spontaneous**: Reactive gameplay. Low cognitive load. Short time horizons.
- **Easy Fun**: Quick to learn. Low skill barrier. Straightforward mechanics. No skill-based gates.
## Creativity-Immersion Spectrums

<table>
<thead>
<tr>
<th>Preferences</th>
<th>Games Examples</th>
<th>Motivation</th>
<th>Game Examples</th>
<th>Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Generic/Abstract</strong></td>
<td>Counter-Strike, Street Fighter, Candy Crush Saga,</td>
<td><strong>Fantasy</strong></td>
<td>Mass Effect, Dragon Age, Star Wars:</td>
<td><strong>Deep Lore</strong></td>
</tr>
<tr>
<td></td>
<td>World of Tanks</td>
<td><strong>Suspending Disbelief</strong></td>
<td>KOTOR, Fallout</td>
<td></td>
</tr>
<tr>
<td><strong>Open-Ended</strong></td>
<td>Factorio, SimCity, Transport Tycoon, Quake III Arena</td>
<td><strong>Story</strong></td>
<td>Mass Effect, Dragon Age, Life is</td>
<td><strong>Scripted Drama</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Web of Human Drama</strong></td>
<td>Strange, Persona 4</td>
<td></td>
</tr>
<tr>
<td><strong>Practical</strong></td>
<td>FIFA, Call of Duty, Mahjong, Scrabble</td>
<td><strong>Discovery</strong></td>
<td>The Elder Scrolls, Riven, Fall Out,</td>
<td><strong>Curious</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>The Unknowns</strong></td>
<td>Legend of Zelda</td>
<td></td>
</tr>
<tr>
<td><strong>Curated</strong></td>
<td>Braid, Spelunkus, Super Meat Boy, Super Mario Galaxy 2</td>
<td><strong>Design</strong></td>
<td>Guild Wars 2, The Sims, The Elder</td>
<td><strong>Customizable</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Expressing Individuality</strong></td>
<td>Scrolls Online, Animal Crossing</td>
<td></td>
</tr>
</tbody>
</table>

---

**Generic or abstract setting.** 2D/retro graphics. Minimal world-building/lore.

**Open-Ended**

No overarching narrative. Basic/stock NPCs. Blank canvas to build on.

**Practical**

Fully-exposed rule sets. Minimal unknown variables and possible interactions.

**Curated**

Fixed, but often highly stylized avatar. None or few customization opportunities.
HOW WE CREATED THE MOTIVATION MODEL

**Literature Review**
Underlying inventory items were generated based on a literature review of models and frameworks used in academia and industry. These include:
- Intuition/Observational models (e.g., Bartle’s Player Types)
- Theory-driven models (e.g., PENS based on Self-Determination Theory)
- Factor analytic models (e.g., Sherry’s Uses & Gratifications Model).

**Factor Analysis**
Factor analysis provides an empirical method for understanding how gaming preferences cluster together—which motivations are related and which motivations are relatively independent.

**Data Collection & Model Iteration**
We created an online app that allows gamers to take a 5-minute survey and receive a personalized motivation profile. We used factor analysis to iterate on inventory items until stable factors emerged and multiple high-loading inventory items were identified for each factor.

**Validity**
The assessment tool used for these motivations has high internal reliability (Cronbach’s Alpha of .75 or higher), high test-retest reliability ($r = .73$), and correlates moderately well with theoretically-aligned personality traits on the Big 5 (a standardized personality assessment model used broadly in psychology research).
450,000+ gamers (unique IP addresses)
- Gender: 80% Male / 19% Female / 1% Non-Binary
- Age: Median = 25, Range = 13-80
- Gamer Type: Casual 11% / Core 68% / Hardcore 21%

Gamers recruited via Gamer Motivation Profile
- Participants took a 5-minute survey to receive a customized report of their gaming motivations, and then could share their profile via social media.
- No other incentive (financial or otherwise) was provided to respondents.
- ~80% of our gamers were recruited via social media sharing of the gaming motivation profiles.

Geographic distribution
- United States (125k), Canada (14.8k), United Kingdom (13.9k), Brazil (9.4k), Australia (8.5k), Italy (7.2k), Poland (6.8k), Indonesia (6.6k), Denmark (5.8k), Philippines (5k), Germany (4.9k), Sweden (4.4k), France (3.6k), Singapore (3.6k), Netherlands (3.1k), Spain (2.4k), Turkey (2.3k), Malaysia (2.2k), Russia (2.2k), Chile (2.0k), Norway (1.9k) …