EXAMPLE REPORT
SOME GAME TITLES/FINDINGS REDACTED

FIGHTING GENRE
GAME SPACE MAPPING
PREPARED FOR CLIENT 002

August 12th 2020

QUANTIC FOUNDRY

EXECUTIVE SUMMARY

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.

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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%).

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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.

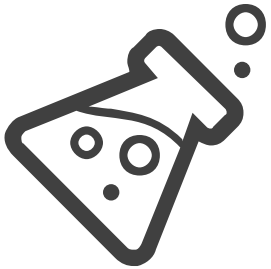
QUANTIC FOUNDRY'S GAMER MOTIVATION MODEL BASED ON DATA FROM OVER 450,000 VIDEO GAMERS REVEALED 6 KEY PAIRS OF MOTIVATIONS






Action "Boom!"	Social "Let's Play Together"	Mastery "Let Me Think"	Achievement "I Want More"	Immersion "Once Upon a Time"	Creativity "What If?"
Destruction Guns. Explosives. Chaos. Mayhem.	Competition Duels. Matches. High on Ranking.	Challenge Practice. High Difficulty. Challenges.	Completion Get All Collectibles. Complete All Missions.	Fantasy Being someone else, somewhere else.	Design Expression. Customization.
Excitement Fast-Paced. Action. Surprises. Thrills.	Community Being on Team. Chatting. Interacting.	Strategy Thinking Ahead. Making Decisions.	Power Powerful Character. Powerful Equipment.	Story Elaborate plots. Interesting characters.	Discovery Explore. Tinker. Experiment.

Find detailed description of each motivation in the appendix at the end of this report.



GAME SPACE MAPPING

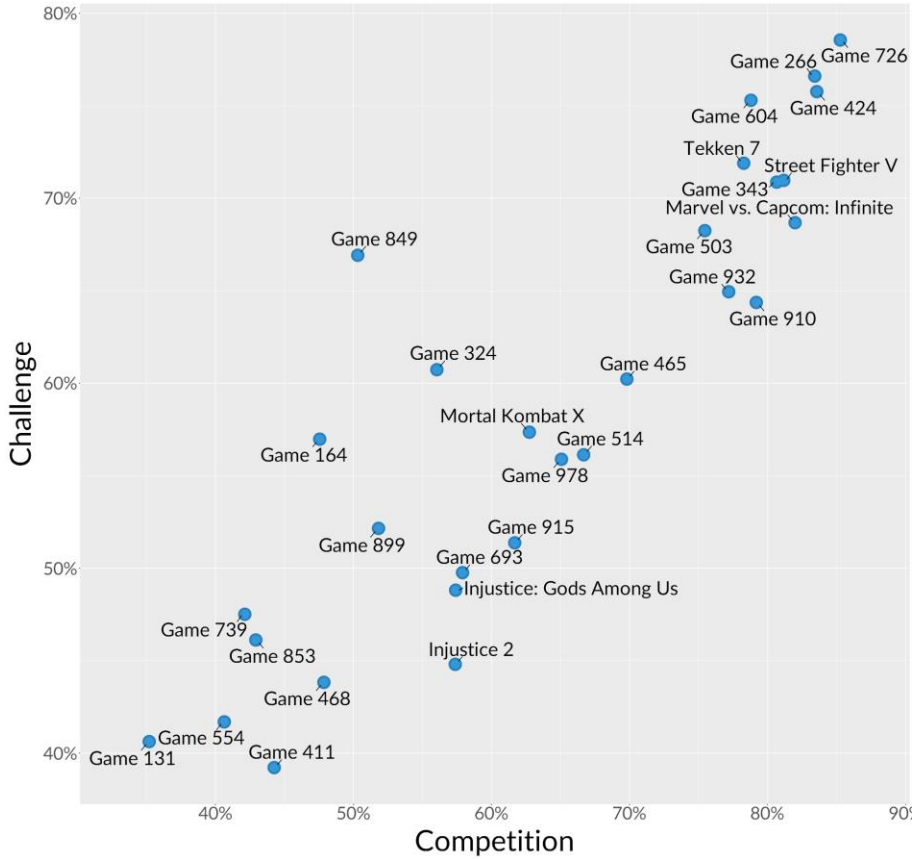
FIGHTING GENRE

GAMES LIST

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.

Starting List Focal Point of Map	Expanded List Games Disproportionately Popular with Starting List	
• 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

A GENTLE INTRODUCTION TO MOTIVATION MAPS



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.

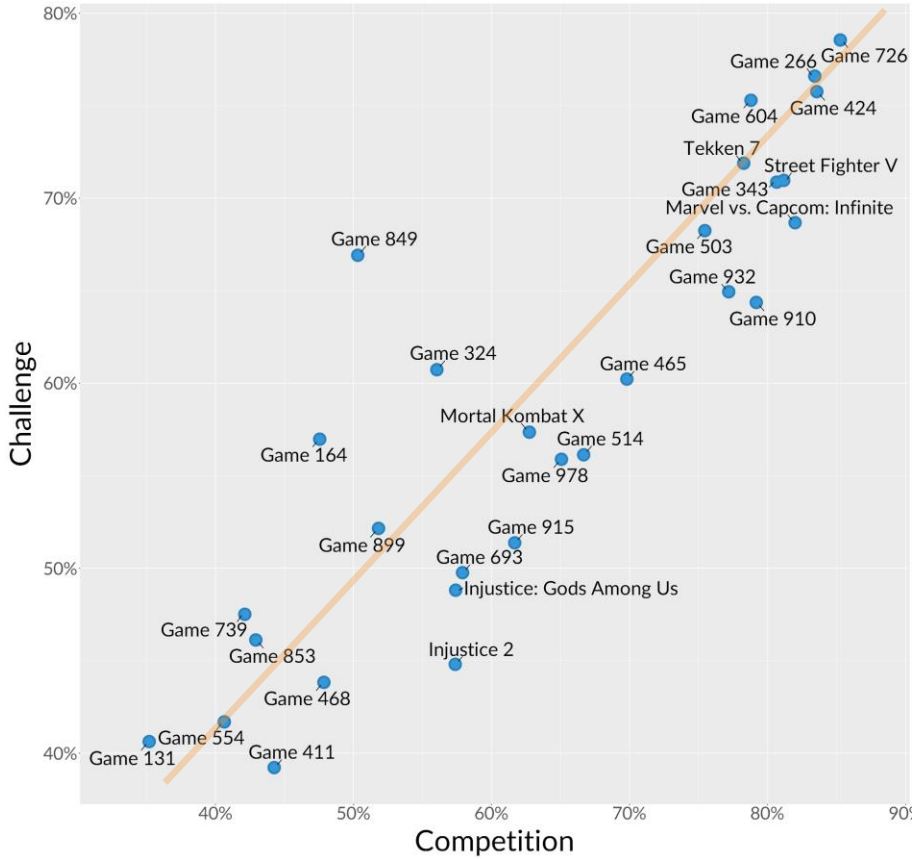
How to Read The Axes

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).

THE PROBLEM WITH PLOTTING 2 MOTIVATIONS AT A TIME



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=.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.

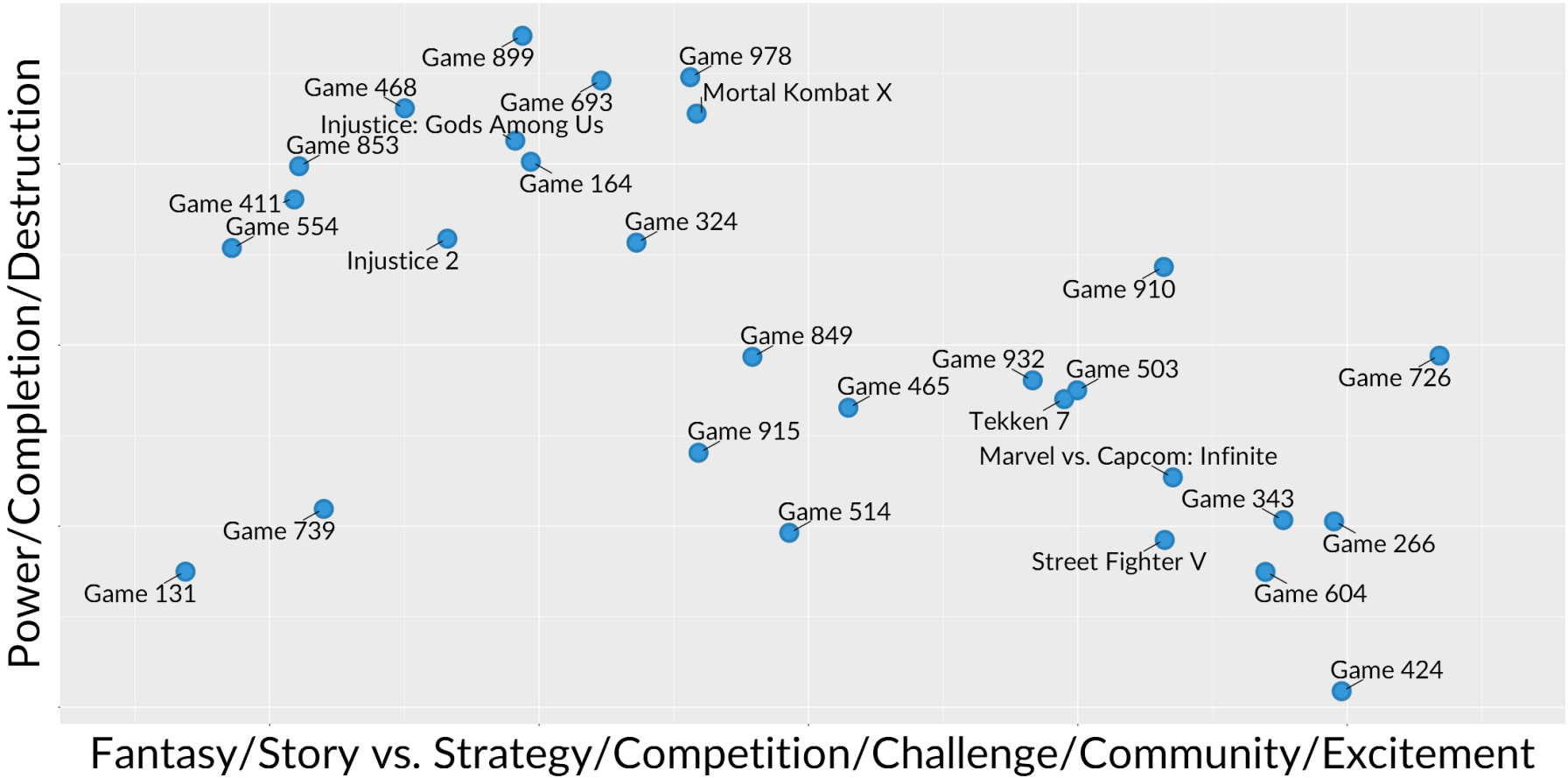
We can automate this searching and axis-combining

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.

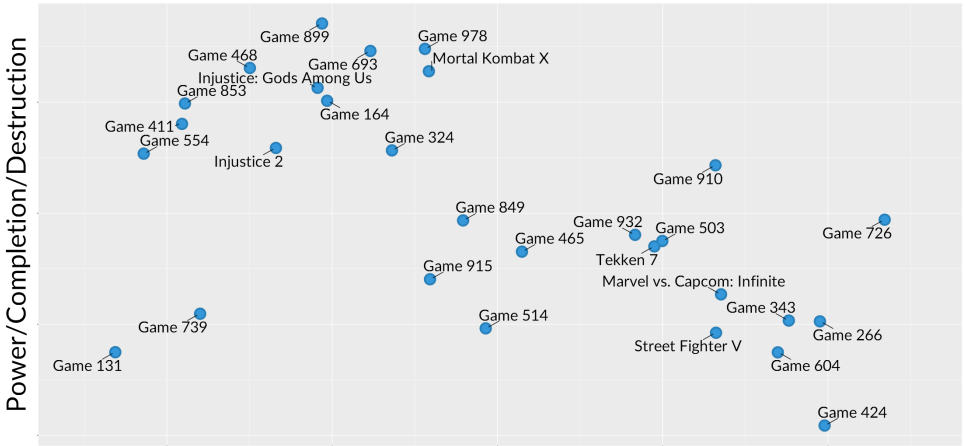
Instead, we can statistically identify the primary motivation axes of the audience in the games list via factor analysis. Factor analysis surfaces the most important axis combinations that best differentiate the game titles.

Or put another way, we statistically flattened the 12 motivations of this audience space into the most interesting 2D graph.

HERE'S THE MAP WE END UP WITH



HORIZONTAL AXIS: IMMERSIVE LORE VS. STRATEGIC ARENA



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),

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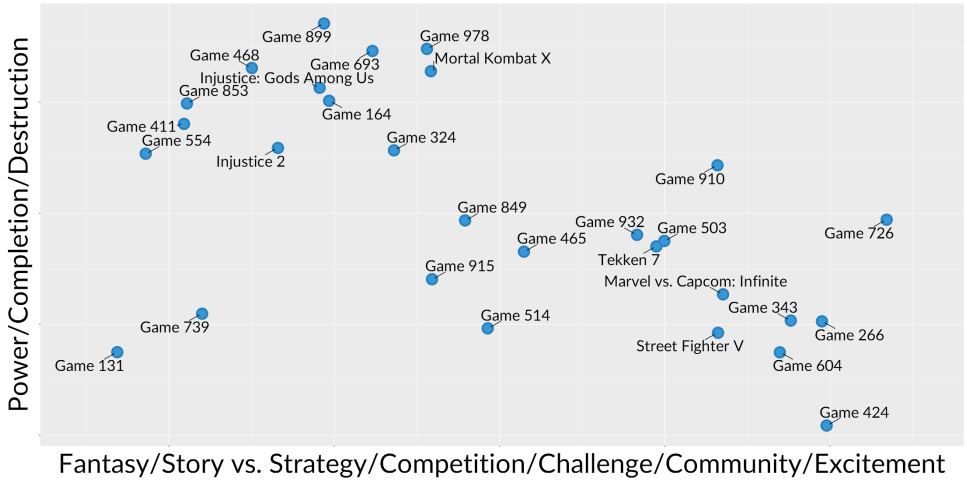
VERTICAL AXIS: POWER/COMPETITION/DESTRUCTION



The Vertical Axis: Power/Completion/Destruction

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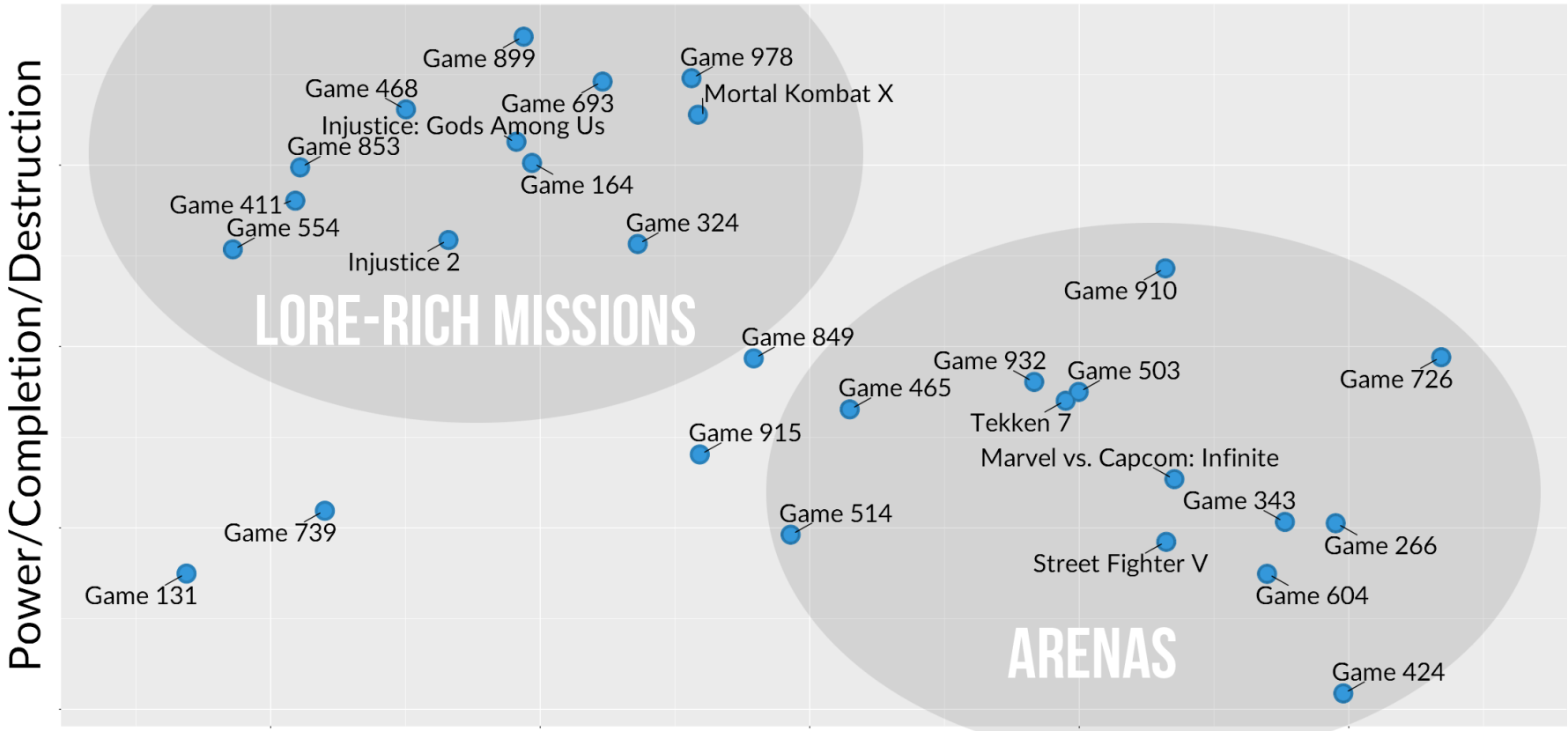
The Chart Proportions Are Deliberate

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



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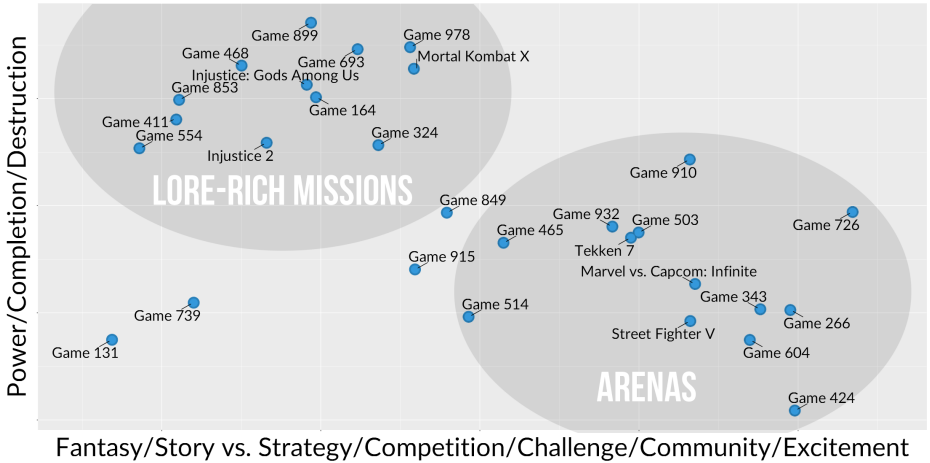
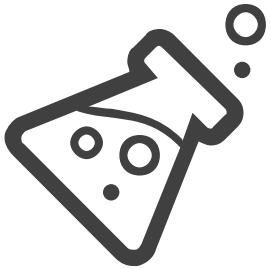


The Two Clusters

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.

Lore-Rich Missions: 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. Pellentesque pellentesque lacus sed nisl venenatis, mollis porttitor nisi facilisis.

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

DEMOGRAPHIC OVERLAYS

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).
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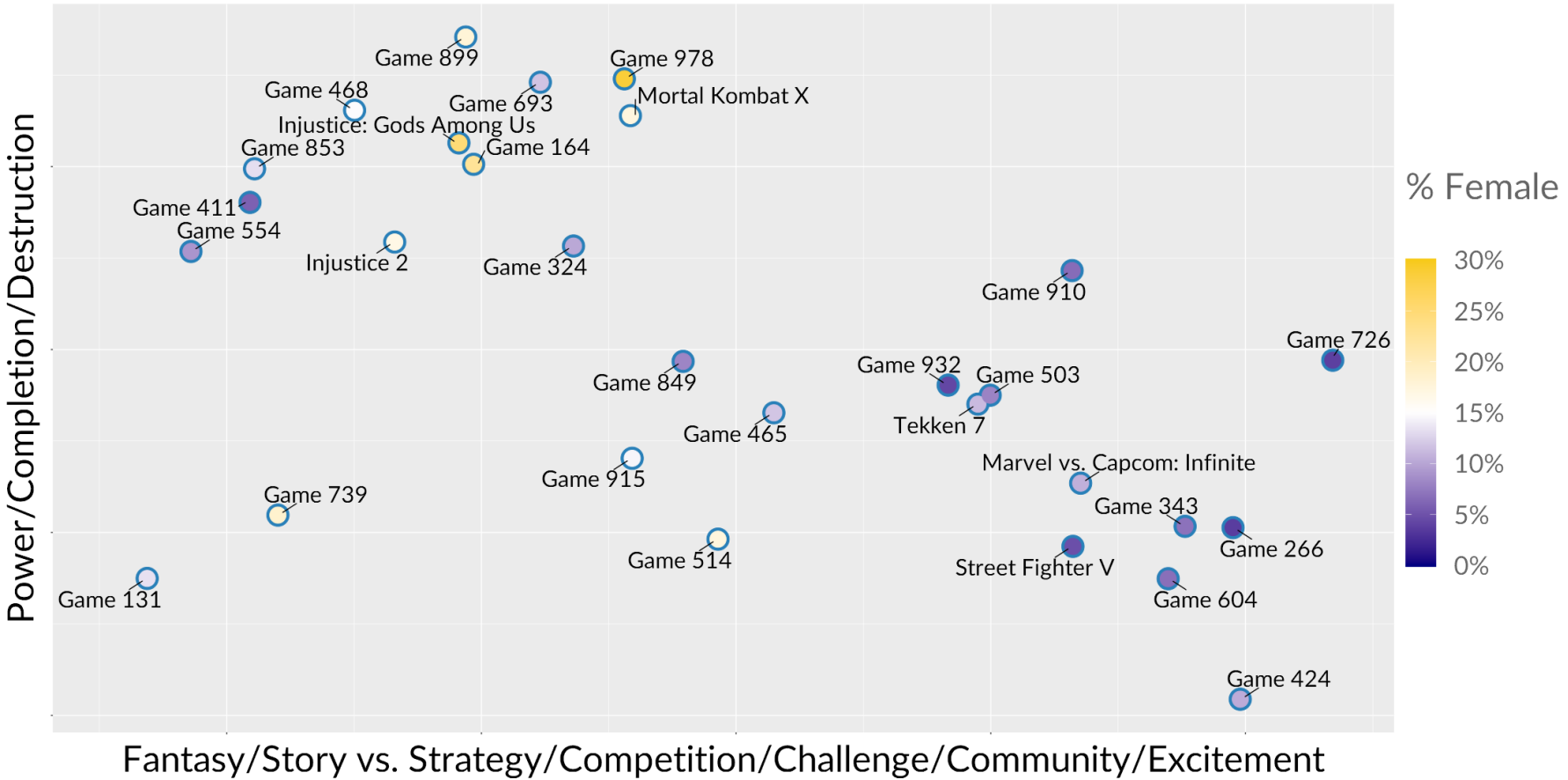
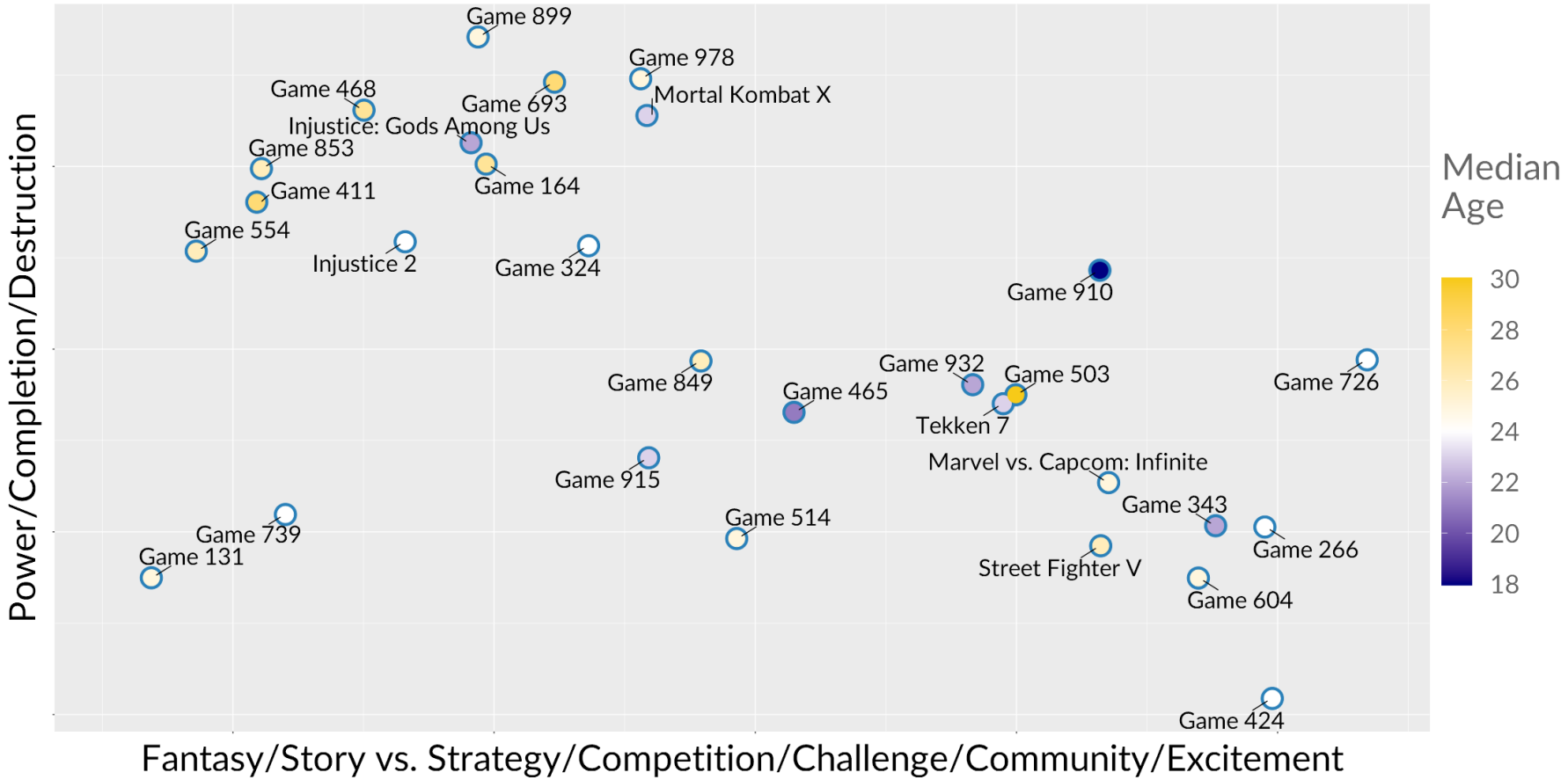
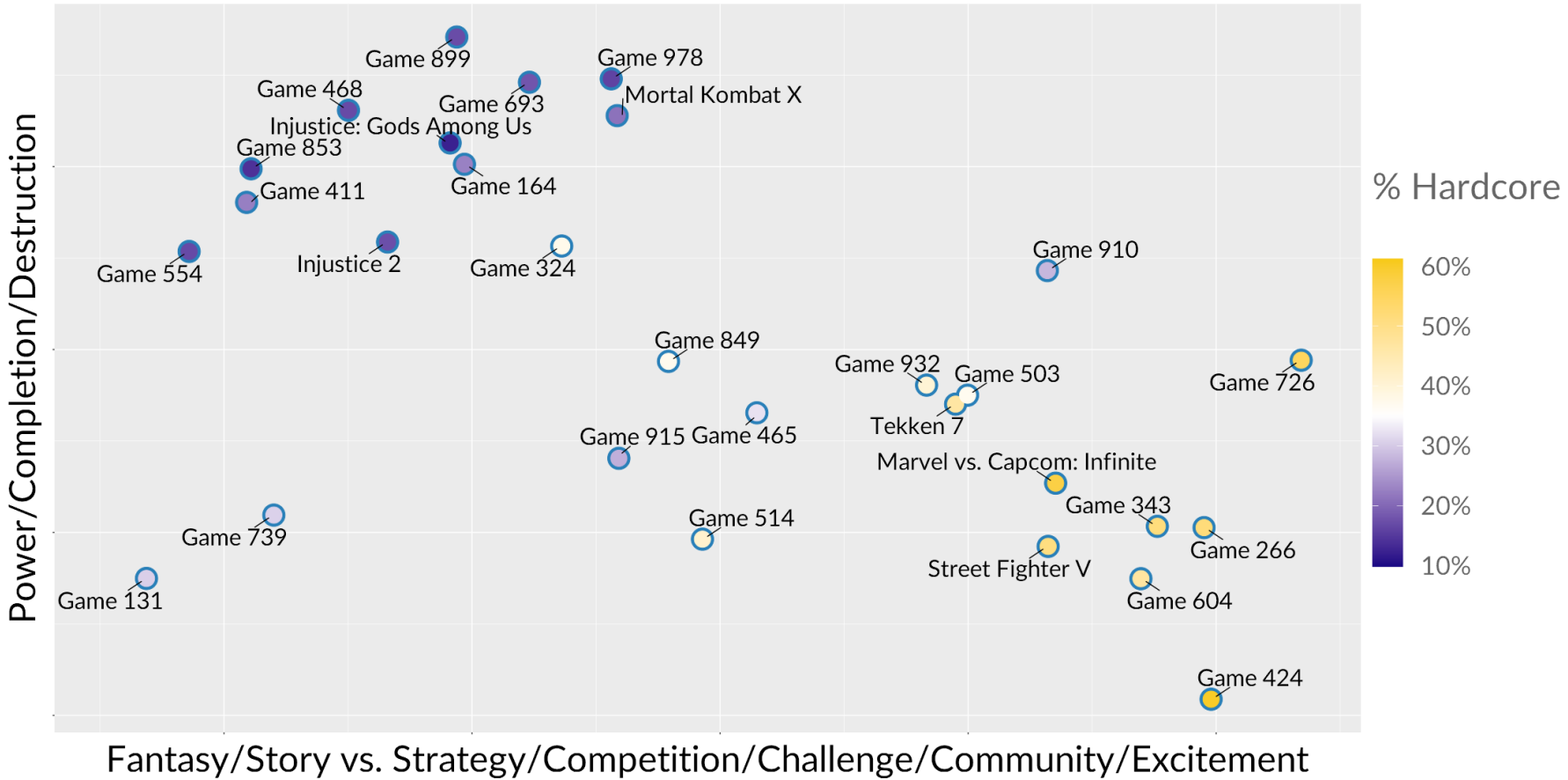
OVERLAY: % OF FEMALE GAMERS



OVERLAY: MEDIAN AGE



OVERLAY: % OF HARDCORE GAMERS



APPENDIX

DETAILS OF MOTIVATIONS

MOTIVATION SPECTRUMS

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

QUANTIC FOUNDRY

Preferences	Games Examples	Motivation	Game Examples	Preferences
Independence Single-player. Soloable quests. Be in full control.	Lego Harry Potter, Hatoful Boyfriend, Farm Heroes Saga	**Community** *Shared Experience*	Destiny, Battlefield, Final Fantasy XIV, Rainbow Six Siege,	**Teamwork** Grouping up. Chatting. Social interaction. Collaboration.
Non-Adversarial Non-competitive. No rankings/duels against human players.	Myst, Gone Home, Dragon Age II, Lego Dimensions	**Competition** *Social Comparison*	League of Legends, DotA 2, Call of Duty, CS:GO	**High Conflict** Adversarial. Arenas. Duels. Matches. Leaderboards. Rankings.
Calm Turn-based. Can be paused. Relaxed. Predictable. Low visual stimulation.	Civilization, Myst, Master of Orion II, Europa Universalis	**Excitement** *Novelty*	CS:GO, Call of Duty, Super Smash Bros. Melee	**Thrilling** Fast-paced. Action-based. Surprising. Adrenaline rush.
Enduring Idyllic. Serene. Evergreen. No weapons/gore. Typically G/PG content.	Professor Layton, Myst, Animal Crossing, Harvest Moon	**Destruction** *Entropy*	Halo, Call of Duty, Destiny 2, Battlefield	**Chaotic** Guns. Explosions. Mayhem. Carnage. Gore. Destructible environments.

MASTERY-ACHIEVEMENT SPECTRUMS

QUANTIC FOUNDRY

Low ⟷ High

Preferences	Games Examples	Motivation	Game Examples	Preferences
Self-Driven Decide what to do myself. Sandbox/open gameplay. Self-directed goals.	RimWorld, Victoria II, Kerbal Space Program, Cities: Skylines	**Completion** *Source of Goals*	Dragon Nest, Aura Kingdom, Lego Dimensions, Final Fantasy	**Task-Oriented** Complete tasks/quests. Collect stars/trophies and collectibles.
Flat Progression Fully-developed characters from the start. Static. Level playing field.	Night in the Woods, The Longest Journey, Ico, 80 Days, Her Story	**Power** *Growth*	World of Warcraft, League of Legends, Diablo III, Summoners War	**Progression-Based** Start weak and grind. Level up character/stats. Upgrade weapons/spells.
Spontaneous Reactive gameplay. Low cognitive load. Short time horizons.	The Sims, Disney Emoji Blitz, Mario Kart Wii, Covet Fashion	**Strategy** *Decision Complexity*	StarCraft II, Crusader Kings II, Europa Universalis IV, Stellaris, Eve Online	**Contemplative** Think. Plan. Complex decisions. Long-term strategies. Consider consequences.
Easy Fun Quick to learn. Low skill barrier. Straightforward mechanics. No skill-based gates.	Oxenfree, Stardew Valley, The Longest Journey, Animal Crossing	**Challenge** *Skill Improvement*	Super Smash Bros. Melee, DotA, osu!, Street Fighter V	**Skill-Based** Steep learning curve. Complex moves/rules. Difficult missions, bosses.

CREATIVITY-IMMERSION SPECTRUMS

QUANTIC FOUNDRY

Low ⟵ ⟶ High

Preferences	Games Examples	Motivation	Game Examples	Preferences
Generic/Abstract Generic or abstract setting. 2D/retro graphics. Minimal world-building/lore.	Counter-Strike, Street Fighter, Candy Crush Saga, World of Tanks	**Fantasy** *Suspending Disbelief*	Mass Effect, Dragon Age, Star Wars: KOTOR, Fallout	**Deep Lore** Rich world lore/history. Compelling alternate world. Visually immersive world.
Open-Ended No overarching narrative. Basic/stock NPCs. Blank canvas to build on.	Factorio, SimCity, Transport Tycoon, Quake III Arena	**Story** *Web of Human Drama*	Mass Effect, Dragon Age, Life is Strange, Persona 4	**Scripted Drama** Elaborate narrative arc. Large cast of characters with motive/personality.
Practical Fully-exposed rulesets. Minimal unknown variables and possible interactions.	FIFA, Call of Duty, Mahjong, Scrabble	**Discovery** *The Unknowns*	The Elder Scrolls, Riven, Fallout, Legend of Zelda	**Curious** Explore world. Find hidden secrets/treasures. Experiment with objects. Tinker.
Curated Fixed, but often highly stylized avatar. None or few customization opportunities.	Braid, Spelunky, Super Meat Boy, Super Mario Galaxy 2	**Design** *Expressing Individuality*	Guild Wars 2, The Sims, The Elder Scrolls Online, Animal Crossing	**Customizable** Express individuality. Customize avatar/house. Lots of skins/accessories.

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).

SAMPLE NOTES

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) …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