From Generative to Conventional Play: MOBA and *League of Legends*

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ABSTRACT
Despite its vast enthusiast community and influence on contemporary game designers, the MOBA (multiplayer online battle arena) remains under-explored by academics. This paper considers many meanings of "well played" reflected in the design, community, and aesthetics of the genre's most popular member, *League of Legends*.

Originating as modifications of commercial RTS (real-time strategy) games, MOBAs present a rare study of the "rhetoric of the imaginary" in play theory applied to popular game design. The genre's reification in commercial forms such as *League* show how the attitudes of distributed design projects manifest themselves as values of play.

A close reading of the phases in a match of *League of Legends* exposes one possible aesthetic framework for the consideration of eSports. Greg Costikyan's theory of uncertainty in play serves here as a backbone for the study of conventions, tension, strategy, and tactics in a team-based competitive videogame.

Keywords
League of Legends, eSports, aesthetics, well-played, play theory, rhetoric, community

INTRODUCTION
League of Legends is a team-based, competitive eSport played in teams of five. Its genre characteristics are a mix of real-time strategy, tower defense, and computer roleplaying game (Walbridge 2008). NPC armies march down three lanes from one enemy base to another, and the ten human players must "push" these army lines forward through opponents and their defensive towers. Players—who are grouped together from a pool of many millions—must coordinate strategies, tactical maneuvers, reconnaissance missions, itemization synergies, and resource sharing amongst each other. Matches typically last over 40 minutes, but a game that is going poorly for one team at the 20 minute mark may be abandoned with a majority "/surrender" vote (called a "GG" or "good game").

In the first section, we explore how *League of Legends* emerged from a community of player-modders engaged in a form of creative play. The MOBA provides a unique study of play attitudes and the kinds of design knowledge that work together to form a new genre, while reclaiming a rhetoric of play normally reserved for the labor of artists and

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the free experimentation of children. We discuss the universal spatial design of the MOBA genre, the influence of roleplaying on competitive videogame-play, and the necessity of cooperation and study in sporting activity.

In the second section, we highlight the rules and community conventions that lend structure to a match of *League of Legends*. Each major phase of the game provides a glimpse at the power of a different kind of uncertainty at work in a team-based competitive game of performative expertise and information management. Greg Costikyan's foundational work in *Uncertainty in Games* (2013) provides a potential aesthetic framework for the appreciation of eSport by players and spectators. This breakdown of a typical match will hopefully serve as a complete introduction to the MOBA genre, and *League of Legends* in particular, for those unfamiliar with its distinct quirks and pleasures.

THE WELL PLAYED MOBA

League of Legends belongs to the upstart genre of "MOBA" (multiplayer online battle arena) games. In order to understand what it means to be a good sport within a MOBA, it pays to look at how this form evolved from a distributed design activity to a popular play community. In Brian Sutton-Smith's exploration of the many rhetorics of play, he describes the "rhetoric of the imaginary" as a conflation of art and play:

> What develops in the twentieth century is a complex of ideas in which the child's play and art are brought together with ideas about the imagination, about the child as a primitive, an innocent, an original, and, in effect, the true romantic... (133).

The rhetoric of the imaginary is not as easily applicable to the design and play of contemporary videogames as are the rhetorics of power, identity, and the self. However, we will explore in the proceeding section what happened when a community of young modders (players who make modifications to commercial software) imagined, and then realized, their ideal kind of game.

In their research on the design of playful computational agents, Zook et al. develop a framework for play based upon the concepts of varied knowledge, action, and intention (2011, 44). The matrix created by the intersection of knowledge and intention provides the most fruitful examples for the study of *League of Legends*. Two fundamental intentions in this framework are egocentric and exocentric attitudes: "Ego-centric players evaluate trajectories with respect to desired personal play experiences, while exo-centric players aim for group experiences" (44-45). Further, knowledge can be:

> *pre-conventional*, where all the rules aren't known beforehand by players,
>
> *conventional*, where the rules are known and static, or
>
> *post-conventional*, where rules can be modified (43-44).

For Zook et al., the combination of exocentric intentions and post-conventional knowledge tends toward "generative" actions by the players—players add rules and change the particularities of game states in order to improve the play experience for the group as a whole (2011, 45). Like Sutton-Smith, these scholars identify generative action with theories of children's play, while somewhat hastily aligning sport with conventional

knowledge and egocentric intentions. The early development of the MOBA genre shows how these types of play actions and attitudes may feed into each other and overlap.

MOBA and imaginary play

Some games become wildly popular eSports via a combination of design ingenuity and historical contingency. We might point to the outgrowth of fighting games such as *Street Fighter II* (Capcom 1991) from local arcade culture and friendly competition between the U.S. and Japan. Others, like *Quake* (id Software 1996), were the earliest and most flamboyant to capitalize upon the craze for 3D rendering and infrastructures for rudimentary networked play (King and Borland 2003). And then we have *StarCraft* (Blizzard Entertainment 1998), which became a national sport of South Korea due to a complex confluence of interest in procedural literacy, cultural protection against Japanese entertainment, broadband saturation, public play in cafes, new advertising models, and a millennial search for an international identity (Jin 2010).

Those that are most interesting in relation to notions of generative or imaginative play, though, arose through interactions between two groups of people:

1) developers willing to open up the tools necessary to modify their games

2) a play community intent on exploiting those tools to the fullest

The two major examples of this kind of game would be *Counter-Strike* (Le and Cliffe 1999) and *Defense of the Ancients* (Eul 2003). *Counter-Strike* began as a player mod of *Half-Life* (Valve Corporation 1998), which was then purchased by Valve and went on to become the premiere competitive FPS for nearly a decade. It served as the template for future team-based eSports, establishing a constant of five players per team and various tournament formats (Kane 2009, 47). While notable for these reasons and more, it nevertheless emerged from and reinforced an existing genre—it typifies the conventional knowledge and the "modification" actions that make up much of the work of popular game design according to Zook et al.'s framework.

Defense of the Ancients (or *DotA*) is a mod of *Warcraft 3* inspired by the lesser-known "Aeon of Strife" custom map for *StarCraft.* These maps rely upon the introduction of "hero" characters to competitive RTS play. The number of contributors to the design of *DotA* is significant—by one account, it is in the thousands (Feak 2009, 5). While some of these amateur designers found jobs at Blizzard and Valve, others were among the core developers at the smaller studios that produced *Heroes of Newerth* and *League of Legends*. The "holy trinity" of *DotA*'s core design are the modders called Eul, Steve "Guinsoo" Feak, and IceFrog (Dean 2011).

Warcraft 3 provided a new focus on special, powerful characters alongside the more traditional fare of real-time strategy games (building a base, harvesting minerals, developing weapons and armor). It also includes special activities and foci for these hero characters, including the ability to farm "neutral creeps" (AI-controlled denizens of the game world separate from the machinations of the two competing human players) for experience points. Thus, *Warcraft 3* was an injection of the computer RPG into the RTS genre. MOBAs then remove the tasks of building a base, researching technologies, and harvesting natural resources from the traditional RTS model altogether.

Instead, the game would be about two teams of five heroes, each with different roles and

abilities, farming creeps and engaging in complex machinations and formations against their opponents. These player-modders were identifying aspects of a computer game they enjoyed and isolating them. They then cultivated these design aspects along the lines of their own notions of agonistic fairness and intrinsic pleasure. The number of playable characters exploded, highlighting heavily the profound and all-reaching influence of mimicry play or roleplaying on even the most "pure" competitive games.

MOBA may represent the first videogame genre co-created entirely by a play community (at least since the development of the top-down shooter by MIT's Hingham Institute). After Eul released the first version of *DotA*, a number of competitors sprung up with their own casts of player characters, map features, and mechanics. Feak became the primary face of *DotA Allstars* from versions 2.0 to 6.01, a "best of" mod that drew character designs from the broader community, implemented an item combination system for hero upgrades, and introduced the Roshan map objective (Feak, 2009, 1). After Feak's stewardship, the reclusive IceFrog refined this model as interest in the game exploded. In the terminology of Zook et al., we can characterize Feak's design style as generative, while recognizing IceFrog's genius as modificatory.

Most MOBAs only have one arena that players can compete upon—this is in contrast to fighting games, wherein the varied spaces are usually empty except for graphical components, and shooting games, wherein the ideal of a good map is balanced asymmetry and variety (Nitsche 2008, 184). This map is nearly identical in all of the popular MOBAs. It is based upon the basic elements of a *Warcraft 3* level, simplified and streamlined. A river runs through the middle of the space. Three pathways, guarded by towers, traverse the river from one team's base to the other. Cross-sectioned by the river and the pathways is a jungle, divided into four parts. It is as an obvious choice for a genre created by players who were not formally trained in environmental art or level design.

This space, universal to the genre, can be appreciated for its symmetry and its coherence; each instance of the space becomes instantly comprehensible to someone who understands the blueprint (see Figure 1 below for an example). Further, it is a sort of spatial enforcement of the idea of play as "free movement within a more rigid structure" (Salen and Zimmerman 2004, 304). Three players on each team are asked to stay on assigned pathways. If they don't, their towers will be destroyed and the way to their base be exposed. Each player must make complex decisions about when it is proper to enter the "lane" of another in order to assist her, when to return to base to buy supplies and restore health, or when to cross the river toward the territory controlled by opponents.

Cooperation becomes extraordinary important in MOBA performance, because of the compound cost of making a bad play. As in many mental or mathematical sports, "snowballing" rules built into the genre punish the underdog with negative feedback. Dying grants large quantities of gold to one's opponents; making hasty or aggressive decisions without the coordination of the team leads to a situation where the numerical statistics of the hero characters are unbalanced in favor of the opposing team (Lantz 2013). Although MOBAs are popularly known for their caustic player-bases, constant iterations on the infrastructures supporting play, such as *League of Legends*'s "Summoner's Code," attempt to progressively improve sportspersonship (Riot Games 2010). One practice, borrowed from Korean eSport, is typing "good luck have fun" at the beginning of a match and "good game, well played" at the end, regardless of the outcome.

The complexity of MOBA also lends itself to frequent examples of Consalvo's "gaming

capital" in the encompassing community, or "being knowledgeable about game releases and secrets, and passing that information on to others" (2009, 18). Most players are expected to have watched professional players, read a how-to "build" guide, or practiced against AI enemies before playing a new character in a match against other humans. Unlike in solo digital play experiences, where reading and watching these things would be considered spoiling or maybe even cheating at the game, it is here considered a necessity (Consalvo 2009, 43). In short, it is like a fully realized model of a traditional team sport, where regular practice and study are required to participate.

To summarize, the development and play of the MOBA provides many examples of the rhetoric of the imaginary, highlighting the powerful combination of post-conventional knowledge and exocentric play attitudes. Beginning from the basic design of *Warcraft III*, these were some of the generative actions made in designing the MOBA:

1) remove base building and resource management,

2) establish 5v5 human play as the standard, instead of the RTS's 1v1 format,

3) simplify and universalize the many maps of RTS games into a single arena,

4) increase the number of playable heroes and itemization possibilities, and

5) replace harvesting nodes with other map objectives to force inter-team conflict.

Below we will see how these generative design decisions give rise to more formal, conventional play communities in games like *League of Legends*, and we explore how the basic rules of a MOBA create informational uncertainties that demand coordination and exocentric attitudes from its players.

CONVENTIONS OF *LEAGUE OF LEGENDS*

League of Legends is the most popular videogame in the world as of this writing. Last year, it was played for over one billion hours each month by tens of millions of players (Merrill 2012). It has also fostered a community of professional players who bring in winnings and ad revenue sufficient to place them solidly in a tech-savvy middle class. It even sparked a new kind of eSporting scandal, when professional *Starcraft II* players in South Korea were caught sneaking out of their team dormitories to practice *League* instead (Cho 2012).

The development team at Riot Games combines an entrepreneurial spirit with veterans from the *DotA Allstars* modding group, including Steve "Guinsoo" Feak and Steve "Pendragon" Mescon. The game is free-to-play, providing ten hand-picked player characters *gratis* each week, but it also offers permanent champion unlocks and customizations via real-money microtransactions. Through a complex internal testing process, Riot Games introduces and markets new playable champions on a relatively fixed schedule. Then, over the next few months, data from the millions of daily matches of *League* provide clues to how a new champion has disrupted the overall equilibrium of the game. Constant patches and hot-fixes to the *League of Legends* client integrate new champions and items while molding gameplay toward desired diversity and complexity.

League's business model introduces the first form of uncertainty in this study, an extreme version of what Greg Costikyan calls "development anticipation" (2013, 98). In the early

decades of game development, Costikyan reminds us, "the game itself was a single, unchanging entity, fixed in a tangible medium, whether a set of components in a box or data on a cart or disc" (2013, 98). This constant addition and balancing of champions makes the MOBA quite distinct from the eSports of other genres, wherein major changes typically only occur at the introduction of a major expansion. While the ever-increasing champion pool was a major source of imaginary or creative play in the MOBA's early days, it is now primarily business-driven and post-conventional in Zook's framework.

The evolution and formalization of *League of Legends* intensifies the direction that *DotA Allstars* took under Feak's stewardship, in three important ways:

1) a steady expansion and balancing of the champion pool,

2) the use of item combination mechanics to drive character builds, strategies, and the progressive modification of metagame theory-crafting, and, most importantly,

3) a focus on map objectives following Feak's introduction of the Roshan "boss" NPC to *DotA*—the blue and red aura buff creeps, the dragon (a massive gold reward), and Baron Nashor (*League*'s version of Roshan).

The game's strong emphasis on claiming map objectives serves to stratify MOBA play, making it possible to easily identify distinct roles and phases in a typical match of *League of Legends*. Now we will examine the major strategic turns in a *League* match while identifying the dominant forms of uncertainty at work, characterizing team-based eSport as a form of conventional, exocentric play.

Draft phase

For the purposes of this analysis, we will only be referring to the official competitive mode of *League* tournament play: 5v5, draft pick, on the map called Summoner's Rift. The pre-game lobby is host to the first major phase of the game: champion drafting. During this phase, each team is assigned a temporary "captain"; this is the player with the highest Elo rating (prior to season three this rating was visible, but now it is somewhat occluded by the "league point" system). The captain of each team chooses three champions to ban completely from the match, meaning that neither team can select this champion. This selection process goes back and forth between each captain until all six bans are complete.

After the banning phase, the first captain selects one champion for her team. Then, the second team gets to select two champions before returning selection control back to their opponents. This asymmetrical draft allows the second team to make up for the advantage lost in going second in the selection process; it also allows for meaningful counterplay between the two teams, as it always insures that one player will be drafting for a team role that isn't currently present in the pool of selected champions. In order to be eligible for drafted play, a player must own 16 champions (to account for the total number of six bans and ten drafts).

This is the most conventional assignment of roles during a draft:

1) a bruiser champion with a mix of defense and offense, typically the top laner

2) a caster champion specializing in ranged burst spells, typically the mid laner

3) an auto-attack focused champion called the "attack damage carry," typically assigned to the bottom lane with a support to help it through the slow early game

4) a support, who may focus on tanking or healing depending on the rest of the team

5) a jungler, who navigates the space in between lanes and maintains timers

A common observation of disgruntled players and analytical commentators is that a game can be won or lost in the drafting phase. While this is, at best, accurate only in hindsight and, at worst, simply the frustrated exaggeration of a sore loser, the drafting phase remains one of the main strategic elements of play and a major shaper of the proceeding match's aesthetics. In public ladder play, strangers must quickly agree upon team roles and a general distribution of itemization duties. Many players follow what are known as regional "metas", common heuristics for deciding what type of champion should occupy each of the game's three lanes and the jungle (as in the example list above).

Uncertainty in the draft

In a section on "hidden information," Greg Costikyan relates the idea of information opacity to the "known unknown": "in a game of Poker, you may not know what cards the other players hold, but you know the range of possibility" (92). What makes the *League* draft so interesting is the semi-transparency of information. At all times, everyone knows which champions have been selected, and one can make reasonable assumptions about the intended roles of those characters. Bans also provide clues to team fears and plans. But players also select "masteries" and "runes," a tuning set-up similar to that of a racing car, which provide role fluidity and early-game power; these cannot be seen by one's opponents. Also, the intra-team discussions during the draft are separate and closed.

Different team compositions confer varying strengths and weaknesses—some groups of champions excel at 5v5 battles, some at guerrilla-style "ganks" (targeted assassinations), some at early game aggression, and some at playing defensively until 30 minutes or more have elapsed. Knowledge of these particularities in composition lend tension to a match for players and spectators. In a typical sport, an optimal level of tension might be produced by maintaining a fairly even score until only a few minutes remain on the clock (or the final stages of a discrete sport like *Baseball*). Yet in just one example of different types of match-ups in a MOBA, we can see that constant uncertainty pervades a match-up between a "late-game" composition and one that needs to score kills early in the game.

In competitive play, bans strategically target the preferred champions of known players; this practice is known as a "respect ban" (one respects the skills of an opponent enough to target his or her favorite characters—sometimes to such a degree that a team will exhaust all three bans against a single player). However, in ranked ladder play it is more common to simply ban the newest champions, because they haven't been sufficiently balanced into the overall champion ecology, and champions with "global" ultimate abilities, meaning they can influence skirmishes from far away and create constant uncertainty as to the relative strength of each assemblage of players in a particular location.

Opening phase

The opening phase in *League of Legends* lasts only two minutes, which makes it by far the briefest phase. Essentially, it ends when the first wave of allied minion NPCs from both teams meet in the center of their lanes. They begin spawning from each base's nexus one minute and thirty seconds after the match begins, taking roughly 30 seconds to reach

the initial battle line. If players have not completed their opening phase abilities by the the two-minute mark, they will begin losing valuable CS, or "creep score," to enemy minions (explained in the next section). Every opening phase begins with initial purchases, which might focus on offense, defense, sustainability (how long one can remain in lane before returning to restore health and mana), or utility (such as vision wards to carve space out of the fog of war).

After purchasing their initial kit, which most players can accomplish in a matter of seconds, each team decides whether to focus on defending its own jungle or invading the opponent's half of the map. Defense is obviously the more conservative option; usually it implies posting one player in the bushes at each entrance to the jungle (as seen in Figure 1 below); sight wards placed in the river accomplish the same task. Once one minute and forty seconds have elapsed, the defense is effectively over. Depending on where the team's jungler wants to start, she will ask for a "leash" (or help in taking down the monster camps in that part of the jungle) from the laners assigned to that half of the map.

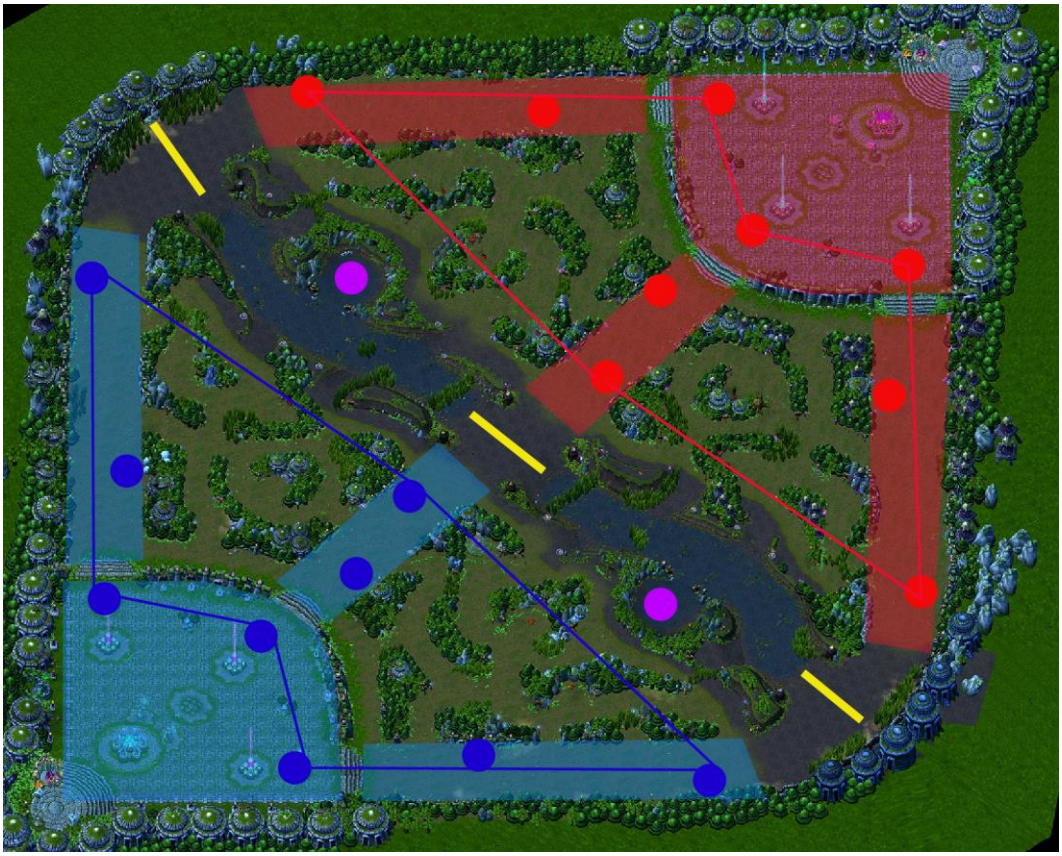

Figure 1: In this map overlay, the red and blue dots represent lane turrets at the start of a match. Minions march down the highlighted blue and red stripes to meet at the yellow line. Purple dots stand for neutral map objectives (Baron at top, dragon at bottom). The thin lines show map/jungle control at a rough equilibrium.

On the other hand, choosing to invade is a high risk, high reward strategy with the goal of

securing a slight initial advantage. One goal might be to nab a kill against an isolated opposing player while she guards the entrance to her team's jungle; the "first blood" gold bonus for this kill gives any player a non-trivial advantage in the next phase of the match. Another goal of the invade might be to steal the opposing jungle's red bluff or blue bluff (which add additional attack power or mana regeneration, respectively). Finally, the safest and most advanced goal of an invade is to place wards throughout the opposing jungle, so as to keep constant track of that team's jungler throughout the early laning phase.

Uncertainty in the opening

Analytic complexity comes into play whenever one must "parse a complicated decision tree" (Costikyan 2013, 86). Costikyan admits that most contemporary videogame designers will never be able to match the analytic complexity of classical tabletop games, but "brute force is one approach—creating a game with such complex rules that players find them hard to master completely" (87). In the case of a MOBA like *League of Legends*, the introduction of analytic complexity into the model combines a bit of both approaches to increasing complexity—the game was designed over a long period of time by many players and designers, and there are so many systems at play as to generate an impossibly dense decision tree.

In the opening phase, the possibilities for analytic complexity are at their greatest. While champions typically occupy lanes against opponents with roughly the same role and range of abilities, every character has different timings, development potential, and ability to influence other parts of the map. As Costikyan explains, "the moment a degree of asymmetry is introduced, players come to value the actions available to them differently" (2013, 89). When a player enters her lane, she sees her opponent's first few purchases, giving hints to the other team's itemization strategy and goals.

Knowledge of one's lane opponents and the items at play produces a variety of questions about how to proceed: Should I aggressively push my lane forward, or stay within the safety of my tower's range? Do I need to build items to sustain my health through constant attacks, and will my mana run out before my opponent's does? What warnings should I provide about my lane opponent to shape the plans of my teammates? Expert players put great care into the design and sharing of champion item "build" guides, the most complex of which explain exactly what stats to build given specific lane opponents, available gold, and elapsed time in the match. Adapting and coordinating these builds provides the surest way to navigate the game's analytic complexity.

Laning phase

During the laning phase, teams separate into their assigned zones of map influence. Each lane needs at least one player to guard turrets from opposing minions and champions. This leaves two players, the jungler and the support. Supports generally do not farm gold; their abilities scale well into the late game without strong items, and they mostly focus on providing vision and succor to their teammates. Junglers attack the monster camps inside their jungles, establishing a route for maximizing their gold farming and providing optional support for lanes. Junglers keep timers for map objectives, and they also have optimal timings for exerting lane influence, which are unique to every champion.

In lane, the primary objective is to accumulate creep score. Waves of minions spawn every 30 seconds from both bases, marching to the current battle line in each lane. These minions default to attacking each other, and they will essentially cancel themselves out if

left to their own devices. Players gain experience simply by being within the proximity of a minion's death, but they only gain gold if they score the “last hit” against a given minion (Erdelack 2013). Gold passively increases over time, but this trickle pales in comparison to the gold accrued through last hitting. Whenever a player score a last hit, the game logs it as their creep score, which is visible to everyone in the match.

Throughout their time in lane, players must also decide whether or not to engage in dueling (Figure 2 below). In the time between last hitting minions, players “harass” at each other with attacks and abilities. Over time, the damage taken from harassment can overwhelm a player's passive health regeneration and supply of health potions. At a threshold unique to each match-up, a confident player may go “all-in” against her weakened opponent. Dueling tends to involve all of a champion's active abilities; players attempt to juke each other's “skillshots” (unidirectional or AOE spells), lock each other in place for attack combinations, mitigate damage through shielding, or retreat to the refuge of bushes and turrets. Because of the wide range of abilities and basic motor decisions to be made, the outcome of a duel is almost never certain.

Figure 2: Orianna (left) and Ezrael (right) engage in a midlane duel. The yellow line represents the current battle line for the purple and blue team minions. The blue arrow indicates how blue minions march into lane. Orianna has crossed that line and will now take aggro (attacks) from the NPCs, making this somewhat risky.

While dueling might dominate the laning phase for new players, most kills in lane come from coordinated attacks by a team's jungler. The bushes that hedge the entrances to most

lanes provide stealth to champions within them. Players must place vision wards within and around those bushes in order to predict surprise attacks from the jungle, yet this safety precaution requires careful cost-benefit analysis—in the early game, wards cost a significant portion of one's gold. An effective jungle gank takes into account the known wards in play, the "cooldown" times on the targeted player's abilities, and the current equilibrium of the minion battle line.

Uncertainty in the lane

Just as "actions per minute" is one of the best ways to gauge the efficiency of a *Starcraft* player, creep score provides a general idea of how well a player is performing in lane. When a player starts playing a new MOBA, figuring out how to optimize creep score is her most basic and difficult goal. Killing other players (and, in turn, getting killed by them) is relatively simple: you constantly poke at them with your attacks and burst them down with your spells. On the other hand, maximizing creep score requires intense focus, timing, and input mastery (Erdelack 2013). One must wait until the last second to auto-attack a near-death minion, just before the damage from one's own allied minions would do the deed instead.

Every creep wave presents something of a puzzle, the ultimate goal in lane being to harvest 100% of the potential gold represented by opposing minions. Costikyan describes the tension in puzzle games as a kind of "solver's uncertainty," wherein players cannot always be sure of their mental ability to find a solution (2013, 25). This type of uncertainty typifies physical media-based puzzles and graphical adventure games, which can be arcane in their solutions and a bore to return to after being solved. But Costikyan highlights the fact that "almost any multivariable strategy game creates puzzles, but these puzzles, unlike those of explicit puzzle games, emerge from the complexity of the mechanics of the game itself" (2013, 77).

One's own allied minions have rudimentary decision logics for attacking the opposing minions; thus, the rate at which minions lose health varies wildly. Obtaining optimal creep score isn't reliant on basic input skill so much as it is about gauging the rate of each minion's comparative rate of decay and thinking out the proper order of attack. Spamming attacks and powerful abilities increase this rate of decay, but accelerating "clear time" takes a toll on legibility and precision.

Uncertainty of the map

The "fog of war" of the RTS and MOBA genres is a type of hidden information that "fosters experimentation" and "increases uncertainty to a tension-inducing level" (Costikyan, 2013, 93). *League* players constantly make "map calls" or locational pings to point teammates toward objects of interest or concern. Players may have a basic idea of where an opponent might be, but they are expected to declare a blindspot or confusion whenever they encounter one. The jungler is often tasked with reconnaissance into the opponent's territory, in order to gauge the state of the other team and communicate back to others. There is also a targeting system for coordinating group battle activity.

Yet the major type of uncertainty at play from the laning phase onward is "player unpredictability." Costikyan explains that, whenever games allow their players to directly attack each other, "players must always work to increase their offensive and defensive powers, and they must try to determine the likelihood of attack and the effectiveness of an opponent's attack" (2013, 78). The hidden information of the map's fog combines with the unpredictability of players to create a shifting and somewhat intangible array of forces

on the arena. This is most obvious in the event of taking an opposing team's tower, robbing them of zones of safety and constant vision (as illustrated in Figure 3 below). Teams must coordinate to predict when and where an opponent might emerge to exert influence.

In the most common metagame strategy, the top lane acts relatively independently from the rest of the map. The major map objective in the top half of the map is Baron Nashor, an incredibly powerful monster who confers the game's strongest aura buff (adding attack power, ability power, and regeneration to every member of the team who kills him). Because a successful kill of Baron Nashor typically requires the presence of many team members, all of whom have a one or two major items built already, there is little reason for the other laners to migrate toward the top of the map during the laning phase.

The middle lane, on the other hand, must be slightly more flexible. In the early phases of the game, the "caster" or "nuker" type characters who commonly occupy the middle lane possess the highest damage potentials on their respective teams. Unlike the top and bottom laners—who want to keep their battle lines of AI minions at roughly the center of their lanes—a typical mid laner's goal is to push her lane equilibrium toward the opposing outer turret. With this pushing maneuver, the mid laner frees herself up to "roam" for roughly one minute. During this time, a mid player might grab a blue buff from the jungle, farm smaller monster camps, exert pressure in other lanes, or group up to contest the Dragon map objective.

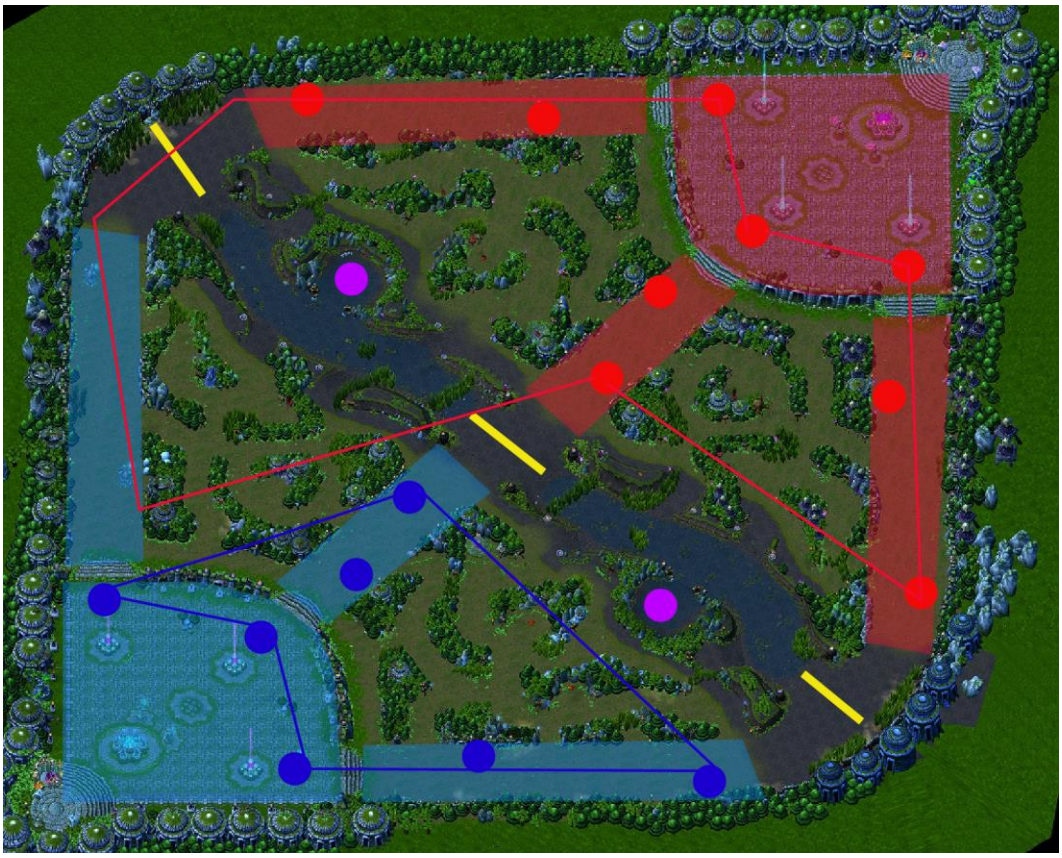

Figure 3: This overlay approximates how map control shifts if blue team loses its top lane towers. At this point, the red team exerts greater force against blue's upper jungle and the river surrounding the Baron (purple dot).

Teamfight phase

A truism of MOBA play is that winning one's lane is the easiest way to win a match. The gains in gold during the lane phase become the relative strength levels of each character when it comes to all-out teamfighting. The laning phase lasts fifteen minutes on average, though its exact duration is context-dependent. One heuristic for recognizing the end of laning is the completion of the first “big item” by a team's carry. Whichever team reaches this point in its carry's itemization strategy first gains an advantage in teamfighting ability. The transition from laning to teamfighting is one of the most difficult strategic turns for players to understand, and committing to a full team skirmish without the proper itemization parity can have catastrophic results.

To a naïve observer, the teamfight phase may look identical to laning. Minions still spawn from both bases, and players still need to keep them from pushing too far toward their remaining turrets. Jungle minions still spawn at regular intervals, and someone should be there to farm them. The major difference between the two phases is that no player really “owns” a lane at this point. Groups come together to claim map objectives or invade the opposing jungle, exerting increased pressure on different lanes, then they dissipate when it's time to resume farming. True to this phase's name, it is at this point that large group fights become much more likely.

In a full teamfight, the main objective is to eliminate the opposing carry and caster champions, because they dole out the most damage and typically possess the fewest defensive items. Late in a game, a carry player left to her own devices can easily pick off every member of the opposing team by herself. Bruiser-type champions need to get close to enemy damage dealers and lock them in place for their own offensive teammates. At the same time, tank and support champions want to "peel" for their carries—soaking up damage or literally pushing opponents out of their effective ranges. Sometimes one devastating teamfight loss is enough to initiate an endgame scenario, though thrilling chase situations and unexpected reversals are common.

Uncertainty of the teamfight

Teamfights are when gold imbalances and itemization strategies finally combine to unravel the analytic complexity of match. It is at this point that pure motor skill and "performative uncertainty" take over. Costikyan describes this kind of uncertainty as one's varying ability "to master the skills of hand-eye coordination demanded by the game and apply them to overcome its challenges" (2013, 20). The relative location or "zoning" of each player now becomes important, as well as the ability to identify and deal with the potential threats represented by each opponent. The statistically weakest team must now identify those members of the opposing team who are most "fed" (the wealthiest, with the best items) and eliminate them early. These are by far the "twitchiest" moments provided by the genre, demanding intense concentration and timing.

The decision-making process and skill-based performance of an individual teamfight is best illustrated via an example from a specific champion. Poppy, a bruiser-type hero played most often by top laners, excels as an "anti-carry" in a full team skirmish. Her ultimate spell isolates one opponent, making it so Poppy and that target can only damage each other for a short time. She also has a strong "gap-closer" that allows her to dash through other enemies and push her target backward, as well as a built-in shield for added durability. In a teamfight, a Poppy essentially exists only to nullify a single opponent with a higher overall damage potential, after which she can happily perish. A clever team must "bait" or "crowd-control" Poppy into a zone where she cannot reach that target.

Endgame

The ultimate goal of a teamfight is to kill as many of the opposing teams champions as possible while minimizing losses. When the dust from a melee clears, the victors have a few moments of free time within which to pressure lanes and take map objectives. Exactly how much the survivors can accomplish within that time depends on how much health they have left over and the location of the fight. The team that is economically ahead is in the driver's seat here, as it were, as they are best able to initiate fights on their own terms and in desired areas of the map. If they choose to fight a weaker team hiding in the shadow of a lane turret, they can easily take that turret down when the fight is over.

The endgame occurs whenever one team's base becomes directly threatened. Once a team brings down the outer and inner turrets of one of its opponent's lanes, a "siege" situation occurs. One final tower guards the "inhibitor" of each lane. When an opponent's inhibitor falls, one's team gains "super" minions for that lane. These NPCs grant constant map pressure to a given lane, forcing one's opponents to overcompensate on defense and providing extra time to tackle other lanes or the Baron Nashor objective. After one of a team's inhibitors falls, their nexus becomes vulnerable. Destroying that nexus ends a match, usually following a final battle that leaves the defending team helpless in an extended respawn clock.

Uncertainty of the endgame

In a match wherein one team is clearly winning, the decision-making process on where and when to initiate the final battles of a match takes on an almost clinical feeling. The leading team hopes to initiate fights on it own terms and to steadily conquer objectives and towers. They become risk-averse and conservative, leading to "poking" scenarios wherein both teams mill about, unwilling to traverse the meagre number of pixels separating safety from danger. On the other hand, the losing team wants to introduce as much uncertainty into the state of play as possible. If they can catch one member of the leading team out of position or apply map pressure in an unexpected place, they may be able to regain the advantage.

One of the most curious types of uncertainty discussed by Costikyan, especially when used as a measure of pure competitive games, is "narrative anticipation." This is the understanding that every performance has a narrative arc of some sort, though these often diverge wildly from classical dramatic standards. Costikyan describes the narrative effect of snowballing in *Chess*, though it applies equally if not more so to *League of Legends*: "games that have positive reinforcement cycle, in which success begets greater strength, suffer from endgames lacking narrative tension" (2013, 95-96). The spectatorial or matchmaking ideal of *League* might be a nail-biting and virtuoso display of teamfighting ability by two teams with rough gold and itemization parity, but it most often ends in one-sided shows of force.

While playing an eSport like *League* is obviously a kind of experience that is intrinsically enjoyable and built upon the creative exploration of a possibility space, it is also difficult to understand, from within a game, what the arc of the session might look like as a dramatic narrative. In sport, the magic circle is almost always disrupted by the figure of spectators and commentators who view and seek to explain the play narrative. Any match in *League*, ranked or unranked, can be viewed by any other player. Also, it is common to see them streamed online at sites like TwitchTV with commentary by players or third parties. Riot itself employees a number of "shoutcasters" who provide professional, in-depth commentating for official tournaments.

CONCLUSION

The MOBA genre makes a strong argument that the community-based imaginative play of testers and a handful of modders can create a framework for play experiences featuring deep analytical complexity. The team-based games that emerged from this community, including *League of Legends*, mirror the exocentric attitudes of their forebears in the demand for cooperation in the face of extreme informational uncertainty. Conventions form to fill in the gaps created by the rules and spatial structure of the MOBAs multi-laned arena. Players come together in matches and on forums to formulate best practices, codes of conduct, how-to guides, and theory-crafted heuristics for navigating a dense decision tree.

This introductory study of *League of Legends* opens into a number of promising avenues for research into eSport and online communities, including:

1) how the play attitudes of designers are adopted or adapted by their players,

2) how folk games become reified by corporations and expert performers,

3) the production of build guides/strategies by theory-crafting communities,

4) the most efficient ways to convey analytic complexity to spectators, and

5) the intricacies of balancing a competitive game featuring layered uncertainty.

It is my hope that other scholars will be inspired by the above discussion to leap into playing and studying MOBAs, despite the significant time commitment they represent.

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