

Action, Play, and Agency in RTS

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CMS.998 Fall 2007

December 18, 2007

Abstract

This paper presents a novel framework with which RTS players can be analyzed and characterized. First, the concept of an “action” is defined to be a player’s input that is intended to create meaningful play. This work proposes that play in an RTS game lies on a spectrum ranging from *mimicry* to *agon*. Two particular classes of agency in RTS are described, and it can be shown that their combination can measure a player’s placement on the mimicry-agon spectrum. Analysis of material constraints shows that certain games afford particular types of agency, thus affording communities of certain types of play styles on the spectrum. This suggests that developers can target particular audiences, or broaden their target audience, by adjusting the game’s material constraints appropriately. This work can also be generalized to other genres; other games with similar action/play/agency relationships can also be analyzed within this framework.

1 Introduction

The modern Real-Time Strategy (RTS) gaming community is a broad one thanks to the wide-ranging diversity of commercial RTS games on the market today. Since the inception of the genre, a series of influential games have contributed to its development by introducing new strategic gameplay elements, user interface features, and objectives (Co, 2007). While these enhancements may be regarded as advancement of the RTS genre as a whole, it is interesting to note that there still are distinct sub-communities of RTS players, each with different reasons for liking particular games. In South Korea, *Starcraft* “has become practically the national sport” and has televised professional leagues (Schiesel, 2007), despite the game’s age (nearly a decade old); in this particular sub-community, the players do not seem to care that other games have newer gameplay elements or user interface features. There may be sub-communities that are divided about a particular game as well: in this paper, the focus is mostly on the different sub-communities in *Lord of the Rings: The Battle for Middle Earth II* (BFME2).

This paper attempts to characterize these communities by analyzing how the games are played. First, the concept of an “action” is defined (Section 3). Interpretation of these actions leads to different views on play (Section 4) and agency (Section 5) which can be used to analyze and characterize players and communities. A case study is provided in Section 5.4 to show that this framework can be used to explain the dichotomy of player opinions about leaving a game. Game developers can use this knowledge (Section 6) to tweak their games to target particular audiences or broaden their targets. Finally, this paper proposes an extension of this framework to genres other than RTS (Section 6.2) by characterizing the games that have close relationships between action, play, and agency.

2 Background

2.1 Games and Players

Caillois (1962) proposed four distinct “fundamental categories” of games:

- **Agon** Competitive games, where rivalry hinges on a particular skill or quality
- **Alea** Chance-based play, which negates skills and experience
- **Mimicry** Role-playing and imagination-based play, including spectacles
- **Ilinx** Pursuit of vertigo

Of these four, the categories relevant to RTS are agon and mimicry. In the agon view, competition in such games depends strongly on the player’s knowledge of the game’s mechanics, and the ability to plan and execute strategies. This is not the only way to view RTS: in the mimicry view, the player takes on a role of a commander, immersing himself in the game world. Both of these viewpoints are valid and players experience both aspects of the game simultaneously. Players differ, however, in the ways they experience agon and mimicry. Some players may tend to prefer certain aspects of the game over others. Sometimes, these differences are not reflected in physical actions: that is, two very different types of players may be physically performing the same exact keystrokes and mouse movements, but the aspects of the game they are paying attention to (either agon or mimicry) may differ. Section 3 describes the differences between these players and presents observations of these players from online communities.

2.2 Narrative and Agency

RTS players construct narratives throughout the course of the game. This is applicable to multi-player modes as well as single-player campaign modes. In single-player campaigns, there is an overarching storyline the player is taken through, which could lead to the development of characters and plot. In competitive multi-player games, on the other hand, there is no greater story, but the game can be viewed as a narrative being constructed by both players simultaneously. In such a narrative, the players are *competing* to construct it in their favor.

Mateas and Stern (2005) define agency in an interactive narrative to be the “feeling of empowerment that comes from being able to take actions in the world whose effects relate to the player’s intention.” They argue that mere user-interface interactions cannot alone provide agency, and that the player’s intention must match the effect the game provides on his experience. The notion of an “action” is thus central to any discussion about agency.

3 Meaningful Play and Action

It is instructive to think about actions in terms of Salen and Zimmerman’s (2006) concept of meaningful play. According to them, the two key qualities of meaningful play are *discernibility* and *integration*. *Discernibility* in play means that a player is able to perceive the important elements of the game and the results of doing certain things in the game world. Meaningful play also requires the *integration* of these elements into the overall play experience and not have only immediate significance. Combining these two requirements, we can define an *action* to be any input that the player gives to the game, as long as it intended to create meaningful play.

There is an important distinction between the creation of meaningful play and the *intent* to create meaningful play. For the former case, Salen and Zimmerman assert that discernibility and integration are prerequisites for the creation of meaningful play. In order to for a player to *intend* to create meaningful play, he must have some kind of expectation of the outcomes of his actions. Consider a badly-designed game, where all of the outputs are counter-intuitive to new players: because the actions lack discernibility and integration, there cannot be meaningful play. However, we would still consider the player's input to be *actions* because there was an intent to create meaningful play: despite the player's expectations being incorrect, it is important to consider that the player had expectations to begin with.

3.1 Actions Specific to RTS

Inputs to most RTS games (such as BFME2) are typically limited to keystrokes and mouse clicks. Inputs that directly affect the progress of a game, such as moving units or constructing buildings would generally be considered to be actions. There are some actions which, on the surface, may not seem to affect the outcome or progress of the game, but do in fact count as actions. Selecting a unit but not giving it any orders, for example, could be an action: a player may have wanted to check the status of the unit before making a decision about what to do next. In this case, the player had used a keystroke or mouse click to select the unit (i.e., provided input) and also had some expectation (i.e., seeing the status of the unit) of what would happen. An example of a non-action is clicking on an empty part of the screen which does not select anything.

The idea of meaningful play is a useful tool for deciding whether a player's input is an

action. In order to have any expectation about the result of an input, the player must have some criteria for discernibility and integration. Therefore, a player who repeatedly presses a hotkey for the sake of simply pressing it¹ is not performing any actions because he does not care about the discernibility and integration of his keypresses. Although sometimes the player might have a justified purpose for doing this (e.g., to keep his fingers “warmed up”), their intent is external to the game (i.e., not related to meaningful play), and therefore is not an action by this definition. As a result, we can conclude that actions are not defined solely by physical movements, but also by player intent within the game.

4 Play in RTS: The Mimicry-Agon Spectrum

RTS games can deliver different types of play depending on what the player is doing. Some players posting their opinions on a popular BFME2 discussion board² expressed that an important part of their gaming experience is visual:

The game was made for firstly the lotr³ fans ... I hope there is gonna be [a game where you] can realize the enormous hordes and battlefields we saw and have read about in the [books and movies]... (age 18)

I love the eye candy! ... I also like being able to have a fun battle where I wont have to think nearly at all, I can leave the keyboard for several seconds at a time...

¹Actions Per Minute (APM) is a speed benchmark used by many RTS gaming communities and can sometimes be approximately computed from a game’s replay file by counting the number of keystrokes. Some players seek to artificially increase their perceived APM by rapidly hitting hotkeys.

²<http://www.gamereplays.org>

³LOTR = *Lord of the Rings*.

and still pull through alright. It may end up as a loss but at least it will be a fun loss. (age unknown)

The first player's main desire in the game is for him to be able to re-enact the large-scale battles from the *Lord of the Rings* storyline. The second player greatly enjoys simply watching in-game battles take place, especially if no user intervention is required. Both players take pleasure in identifying themselves as the commander of an army in BFME2. They make no mention of strategic brilliance or technical skill as a requirement to play the game; their favorite parts of their game experience are those that Caillois (1962) would categorize as *mimicry*.

Some players, on the other hand, prize technical skill and clever strategies above all else, and contend that the game cannot simply have good or realistic graphics, but must require some kind of technical skill:

Bfme2 IS pretty micro⁴ intensive imo, you can have the best strat... but by just clicking attack you won't win. (age 15)

bfme2 requires no micro and basically no strategy... The only thing that was "hard" about bfme2 micro is the idiotic laggy server... just a horrible job from ea⁵ (age 21)

The first player notes that micromanagement is paramount: in order to achieve the primary goal (winning a game), one cannot simply click on a single "attack" button, but must actively control units. The second player, despite his disagreement about the requirement of micromanagement in BFME2, also believes that a good game must require technical skills from the

⁴The term "micro" is short for "micromanagement" and generally refers to precise control of individual units during a battle to optimize its outcome.

⁵The game was developed by Electronic Arts (EA).

player, stressing that the game should be “hard”: he would clearly not consider watching a battle without touching the keyboard to be “hard.” As these kinds of players value particular skills in the game, the parts of the game they enjoy are those that Caillois categorizes as *agon*.

The two categories of players described above are not mutually exclusive. There certainly are many players who enjoy both the audio-visual aspects of the game and the more abstract strategic and technical aspects. This provides an indication that play in RTS games lies on a *mimicry-agon spectrum* characterized by the style of play involved. Note, however, that although these are examples of two particular styles of play which favor different particular aspects (audio-visual elements vs. technical skills) of the game, they are not the distinguishing factors that determine placement on the mimicry-agon spectrum because these two aspects do not exhaustively describe every RTS. While the diversity of favored game elements across the community provides an *indication* that play lies on a spectrum, the following section proposes that the way in which the player achieves agency determines placement on this spectrum.

5 Agency in RTS

A player feels agency when he feels he can affect the game world in a way that relates to his intentions (Mateas and Stern, 2005). There are multiple possible sources of agency in an RTS game. These sources of agency are not mutually exclusive: depending on how players choose to interact with the game, they can experience agency from various combinations of sources. Described below are two distinct categories of agency in RTS games, and how their combination reflects a player’s position on the mimicry-agon spectrum.

5.1 High-level agency

High-level agency is experienced when a player feels an overall sense of fulfillment of his role in the game. This type of agency can exist both in single-player modes, where a storyline and the player's particular role are generally made clear to him, as well as in competitive multi-player modes where the goal is simply to destroy his opponent (or satisfy some other predetermined victory conditions). In both cases, the player is constructing a narrative (as described in Section 2.2) and would therefore seek agency. Players who experience high-level agency concern themselves with the "big picture" throughout the course of their game experience in that they are fulfilling their role as the person tasked to accomplish the overarching goals needed to complete the mission.

Let us relate this type of agency to Mateas and Stern's introduction of the concept. According to them, there are two prerequisites for agency of any kind: (1) the player's expectation must agree with the actual outcome, giving him a sense of empowerment, and (2) the player must have intent. Consider a situation in BFME2 where a player notices that his opponent has built a large army of cavalry units. Knowing the game mechanics, the player chooses to build spear-wielding infantry units to counter the opponent. Up until now the game has given the player intent: at some point, the player had learned from the game that spearmen counter cavalry and he is intent on using that fact. The player's expectation is that this property continues to hold. In this scenario, the player achieves agency upon confirmation that his spearmen did indeed do significant damage to the opponent's forces. Strategic decisions such as this are considered to be a part of high-level agency because they directly affect the player's overall goal in the narrative he is constructing.

5.2 Low-level agency

Low-level agency, as the name suggests, is experienced on a lower level and over much shorter periods of time. It, too, is the sense of empowerment and control over the narrative, but on a technical level involving individual *actions* (see Section 3). In order to experience low-level agency, a player's expectation about what a mouse click or keystroke will do must match the game's response to the action. In many games, for instance, selecting a unit and right-clicking on an empty area will make the unit begin to move in that direction; a player can feel low-level agency if the outcome of the action (moving in that direction) is the same as the player's expectation.

It is important to stress that these scenarios are ones in which experiencing low-level agency is a *possibility* and not a requirement. As video games are programs, a player will eventually learn the expected behavior of the program's responses to actions. This does not mean that all players will eventually learn to experience low-level agency. Rather, it simply suggests that novice players will have a difficult time achieving low-level agency, and more knowledgeable players have the capability to achieve it. Some experienced players may know the expected result of certain actions, but may not care or pay any attention to that fact: in this case, despite the player's knowledge of the game's expected behavior, he is not experiencing low-level agency. Additionally, a game can fail to provide low-level agency if its responses to actions are inconsistent or buggy.

5.3 Agency and the Mimicry-Agon Spectrum of Play

Given the descriptions of these two types of agency and the different styles of play mentioned in the previous section, it is straightforward to map the agency types onto the mimicry-agon spectrum: the relative amounts of high- and low-level agency experienced by a player determines placement on the spectrum. Those players on the “mimicry” end of the spectrum play the game to experience only high-level agency, while those on the “agon” side play to experience only low-level agency. Players that fall in between experience some combination of high- and low-level agency.

5.4 Case Study: Leaving a Game

Given the above definition, we can analyze the behavior of players in a game and place them on the mimicry-agon spectrum. In many RTS gaming communities, it is considered good etiquette for a person in a losing situation to leave the game if it is known he will lose, so that neither player wastes time and can quickly start the next game (we will call these players Type 1):

[B]etter leaving than just hiding their buildings wherever they can and [you have] to search a too long time for them (age unknown)

[I]t's usually done by ppl who are less skilled and u can beat them finally, it's like accepting their defeat. I see no problem with that... (age unknown)

In BFME2, the victory condition in multi-player games is to destroy all of the opponent's unit-producing buildings. A game can be extended by simply hiding unit-producing buildings in

obscure locations on the map, but in competitive games it is generally not possible to recover from such a losing position. These two players both feel that it is proper for the person in the losing position to leave the game at this point rather than forcing the longer (and inevitable) outcome. Contrast this attitude with that of the following players (Type 2):

I just hate it when someone just leaves in the middle of the game! just because they are losing... (age 17)

It ... bugs me when I'm raising an army for a final assault and the other guy quits just before my final onslaught reaches his base. (age 21)

These players are not concerned with their opponents wasting their time, and in fact get frustrated at people who leave games early thinking that it is good etiquette to do so.

There is a clear difference between these two kinds of players, and we can make the distinction using the mimicry-agon framework given above. Type 2 players, despite knowing that victory is a certainty, feel that something is lost when their opponent quits before they are able to deal the final blow; they are annoyed by the lack of a proper resolution. Thus, we can say that their source of agency is high-level agency: even though they won, they are disappointed that the ability to experience agency was taken away from them. They were not able to see to the end their role as the commander of the army (given the task to destroy the opponent) because the game ended sooner than expected. As a result, Type 2 players play on the “mimicry” side of the spectrum.

By similar logic, the Type 1 players described above play on the “agon” side of the spectrum. With their low-level agency already satisfied, it is sufficient for the game to end if it is already known which side will win. This holds true whether the “agon” player is winning

or losing, because in either case the player has been performing and seeing the outcomes of his actions. This does *not* imply that Type 2 players do not care about the outcome of the game: our claim is simply that such players receive their agency through actions, and as a result, fall on the “agon” side of the play spectrum.

6 Discussion

6.1 Implications for Game Design

Game-specific elements can be tweaked by designers to cater to the desires of specific groups of gamers. The difficulty, however, is choosing which elements to tweak, because it is usually difficult to predict how communities respond to certain features of games. To address this, the play-agency framework described in Section 4 can be used to help designers target certain types of players. In particular, designers can impose material constraints so as to afford one type of agency over another, thus preferring the development of certain kinds of gaming communities over others.

Starcraft is a game which, despite being nearly a decade old, remains very popular in South Korea and is played at a very competitive level (Schiesel, 2007). The game’s interface speaks of its age: no more than 12 units can be selected at once, and only one building at a time can be selected. Military units naively attack the first thing they see and require careful micromanagement to maximize their effectiveness. When giving orders to units, they respond immediately with no delay. These kinds of game features tend to reward players that can execute actions the fastest. Thus, those looking for high-level agency have a difficult time

playing *Starcraft* in the competitive arena. As a result, we can say that the game’s design largely affords communities of “agon” players.⁶

BFME2 can be seen as a game whose design affords the development of communities of “mimicry” players. When military units are created, many of them come out in groups of 15 rather than as individual units; such a group moves and fights together, and selecting one of the units selects the entire group, making it impossible to micromanage attacks at a fine scale. Effectively, the group can be thought of as a single unit rendered on-screen as 15 small units; drawing it as 15 small units helps to give the appearance of large, epic battles. Additionally, there is no limit on the number of units that can be selected at once, and there are many options that can be given to units to allow them to act on their own (they can be set to an “aggressive” mode where they chase enemy units, or a “passive” mode where they only attack when under fire). These game features afford high-level agency because emphasis is taken away from actions and given more to the enactment of large-scale development and battles. Indeed, the developers of BFME2 have said that they intended to target a *Lord of the Rings*-specific audience rather than the competitive RTS community (Moe), so the game can be considered a success in that respect.

6.2 Extensions to Other Genres

It is conceivable for this play-agency framework to be extended to genres other than RTS.

In general, real-time games that reward individual actions can open the possibility for low-

⁶It is interesting to note that there are many “mimicry” players who still play *Starcraft*. Many communities have user-imposed rules, such as “no rushing” or using custom maps that reduce the necessity of so many actions, allowing for high-level agency to be achieved more easily. The game’s ability to be modified to suit these other types of agency is a testament to its widespread success.

level agency. The possibility for high-level agency is opened when actions (or groups of actions) are discernible and integrated into a larger context, such as a plot or set of underlying objectives. Consider the following examples of non-RTS games that may be interpreted with this framework:

Trauma Center. This is a medical simulation game where the player takes the role of a surgeon. The missions often require the player to move extremely quickly and accurately using a fixed set of tools, giving the possibility for low-level agency: switching between tools and using them on the patients has predictable effects. At the same time, the game provides a plot describing interactions with the patients as well as an overarching story, and a specific set of objectives per stage, allowing for high-level agency.

Guitar Hero. The controls in this game reward accurate and fast strumming of notes (each strum can be considered to be one action), while the unique guitar-shaped controller can give the player a sense of actually performing the song on a real guitar.

Tetris. Low-level agency can come from individual piece placement (each piece rotated or placed is one action). This game shows that narrative is not necessary for high-level agency: here, the player can achieve high-level agency in choosing a strategy for clearing lines (e.g., clearing individual lines greedily vs. waiting to clear many lines at once), as it is immediately obvious to the player, visually, whether their strategy is bringing them closer to achieving their goals (clearing lines).

Interestingly, all of the games described above have a difficulty slider, allowing for broader audiences. At lower difficulties, the games are slower: fewer wounds to attend to, fewer notes

to play, more time to drop a piece. These easier modes remove emphasis from fast actions – likely to bore an “agon” player while successfully entertaining a “mimicry” player. This is because high-level agency is easier to achieve (easier to accomplish the game’s goals), while the amount of low-level agency is reduced (more actions would lead to more low-level agency). At the same time, difficult modes could frustrate “mimicry” players who are unable to finish a stage, while the “agon” player can perform more actions.

For these games, it is not the difficulty slider *per se* that makes these games analyzable with this framework, but rather that there is a dichotomy of agency that determines what kind of play is being experienced by the player. This dichotomy is defined by the game’s design of actions: by rewarding or requiring a focus on individual actions, a game affords low-level agency; by rewarding a focus on a more complex underlying goal, the game affords high-level agency. This action/play/agency relationship defines a class of games—not limited to RTS—that can be analyzed with this framework, and thus may be used as a tool to help developers target particular audiences. Clearly, the most broad-reaching games are those that create the possibility for both kinds of agency simultaneously.

7 Conclusion

This paper proposed a framework with which to analyze and characterize RTS players. Play in RTS lies on a *mimicry-agon spectrum*, and we can measure the placement of players on this spectrum by seeing their sources of agency. There is a sub-categorization of agency (high-level and low-level), and the combination of these two types of agency impact a player’s style. Analysis of the material constraints of a game can help developers tweak the game

to target particular gaming audiences by giving more emphasis to either high- or low-level agency, or broadening a game's reach by providing possibilities for both. With further work, this framework can be generalized to other genres so that players of other types of games can be characterized in this manner, giving even more game designers insight into their audiences.

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