

What Makes Online Collectible Card Games Fun to Play?

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ABSTRACT

Online Collectible Card Games is a relatively new genre of games that allow the players to collect cards, combine them into decks, and play the decks against opponents through the Internet. Players get engaged in all these three levels of the game, and we relate these levels to the theories of what makes a computer game fun to play. The Eye of Judgment (EoJ) is taken as an example of such a game, and we compare the theoretical study to the results of interviews with former EoJ players to validate the models.

INTRODUCTION

The Collectible Card Games (CCGs) genre is more than 100 years old, starting with base ball card games (of which the first one dates back as early as 1904) [1]. In 1993, the first set of cards for *Magic: The Gathering* set a new standard for the genre and as a consequence in the mid 90's there were a lot of new CCGs released [14]. Although many of them did not survive the competition and have been discontinued, some of them are still releasing new sets of cards.

So, how does this relate to computer games? In 1997, the first Online CCGs (OCCGs) were released, — *Chron X*, and *Sanctum* in which you play with virtual cards on your computer. These games are still being maintained, with servers running and new editions being released and since 2002, *Magic: the Gathering* also has an online version [11].

Three levels of the game

A CCG can be seen as a three level game:

- At the *collection level*, you buy, sell and trade cards to get the collection of cards that you want.
- At the *deck building level*, based on what cards you have, you construct decks (i.e. a limited subset of your cards) that you use for playing the game.
- At the *match level*, you play one of your decks in a game against an opponent.

Outline

We will first go through two models for enjoyment in games: Malone's and Sweetster and Wyeth's. Then we apply these models in theory to the OCCG genre,

and make a qualitative investigation of how they apply to the OCCG The Eye of Judgment. We finish off by discussing the applicability of the models to OCCGs, and draw conclusions and line out future work.

ENJOY THE GAME!

Several previous attempts have been made to identify why players enjoy a certain game, i.e. what is the *fun* part in a game. This study will neither cover them all (a short, but yet informative survey of ways to model player satisfaction is given by e.g. Yannakakis [17]). Nor will it consider the *design* perspective in the sense of e.g. Hunicke et al. [15], Fabricatore et al [7], Church [4] or Björk et al. [3]. Instead, we will focus on two influential theories for *evaluating* the enjoyment of games: Malone's principles of intrinsic qualitative factors for engaging game play [12; 13], and Sweetster and Wyeth's theory of *GameFlow* [16]. The former because of its combined simplicity and ability to catch the key factors, and the latter for its attempt to make a quantitative weighted measure of the game qualities.

Malone's view

According to Malone, there are three categories of characteristics that are essential in good computer games:

- *Challenge* — it must provide a goal whose attainment is uncertain.
- *Fantasy* — it should show or evoke images of physical objects or social situations not actually present.
- *Curiosity* — it should provide the motivation to learn, independent of any goal-seeking or fantasy-fulfillment.

Challenge The *goal* of the game is central here. All goals may not be equally good; studies have shown that visual effects, and performance feedback are important factors in order for the players to apprehend the game as appealing.

In addition, the outcome of the game should be *uncertain*. If the player is certain to either win or lose, the game play usually gets boring. The uncertainty could be achieved through either variable difficulty levels, or

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multiple level goals. It could also be uncertain through having elements of hidden information, or randomness.

The impact on the player's *self-esteem* is also an important factor. Challenges that engage the self-esteem of a person, tend to be more captivating than those not, even when the success is the result of a pure random element of the game.

Fantasy Malone differs between two kinds of fantasies in games: *Extrinsic fantasy*, and *Intrinsic fantasy*. Both of these relate to the skill of the player. In the case of the former, the extrinsic fantasy depends on the skill of the player, but not the other way around. A simple example of this is *Hangman*, where the fantasy (i.e. the man being hung or not) depends on your skill in guessing the word, although your skill is not effected through the outcome of the hanging. An intrinsic fantasy is one where the skill being learned and the fantasy depend on each other.

According to Malone, intrinsic fantasies in games are more interesting and more instructional than extrinsic ones. The reason is that there is a closer relation between the domain being learned, and the fantasy, thus players may exploit their existing knowledge.

Curiosity There are, according to Malone, two types of curiosities. *Sensory curiosity*, which increases as patterns in the media changes (e.g. light, or sound). This can in turn be used in several ways: To *decorate* a game, to *enhance the fantasy*, as a *reward*, or as a *representation system*.

The other type of curiosity is *Cognitive curiosity* which is the desire to better structure the knowledge about the game in terms of completeness, consistency and parsimony. If you provide the player with enough information to make their existing knowledge incomplete, inconsistent or unparsimonious, the players' curiosity will make her more motivated to learn more, which will make their cognitive structures better formed.

Sweetster an Wyeth

Sweetster and Wyeth bring with their *GameFlow model* a more precise, but also more complex way to describe player enjoyment. The model consists of eight elements: *Concentration*, *Challenge*, *Skills*, *Control*, *Clear Goals*, *Feedback*, *Immersion* and *Social Interaction*. The GameFlow model builds on Csikszentmihalyi's *Flow* model for enjoying experiences [5]. Each and one of the elements in the GameFlow model below, are then further defined by a number of criteria that are used in the model to evaluate the game from a player enjoyment perspective.

1. *Concentration* Games should, according to Sweetster and Wyeth, "... require concentration and the player should be able to concentrate on the game."
2. *Challenge* The games should match the skill level of the player in a way that make them sufficiently challenging.
3. *Skills* A game have to support player skill development and mastery, e.g. learning to master the game should be a fun part of the game.
4. *Control* The players of the game have to feel that

they have a sense of control over their actions in the game.

5. *Clear Goals* The games should provide the players with clear goals.
6. *Feedback* The players must get feedback on their progress in the game.
7. *Immersion* The players should experience deep but effortless involvement in the game [16].
8. *Social Interaction* The players of the game should be able to communicate, build communities, etc. supported by the game.

THE APPLICABILITY OF ENJOYMENT MODELS TO CCGS

Is it at all relevant to use the described models of enjoyment at all three levels of the game for CCGs in general and OCCGs in particular? The answer to that question is not obvious.

Malone's model

CCGs may be challenging at all three levels of the game. The collecting part involves, e.g. buying cards, and often these are packaged in *boosters*, i.e. closed packages of around 10 cards that are not revealed until you open them. You simply get a random set of cards in each booster so in order to get a complete collection, you will have to either buy lots of boosters, or trade for individual cards. The fantasy category is far-fetched, but the idea of having a complete collection where you are able to build all possible decks and thus being able to construct the best counter deck for each and one of the opponent's decks is of course appealing. The cognitive curiosity though is embodied in the completeness of the collection, and the sensory curiosity is fulfilled, especially in OCCGs, in e.g. animated sequences involving the cards.

At the deck building level, the challenge is to build a deck that will help you win matches. The fantasy element is present in the deck building in the way that different card combinations are built on the characteristic(s) of the cards. It increases the enjoyment to build decks where the effects of the cards co-operate to defeat an imagined opponent set of creatures, compared to building decks if the cards (although having the same game mechanics) would just contain symbols. Curiosity is at this level dominated by the cognitive aspects. How will the deck manage in the environment of competing decks it is assumed to face? What are the winning combinations of cards? What combination of cards are the hardest to counter for an opponent?

When it comes to the actual play, the challenge is of course to defeat the opponent. There are often random elements in the games (e.g. decided through dice or coin flipping or through drawing cards) which increase the uncertainty. From a fantasy perspective, the players are commanders, sending in their troops to fight down the enemies and in the end one of them will be defeated. The player skill and the game are connected in the way that the outcome of the game depends on the skill, but also that the game forces the player to improve its tactics. The games trigger the sensory, as well as the cognitive curiosity.

Table 1: The enjoyment in OCCGs using the GameFlow model.

	Collection	Deck build	Matches
Concentration	No	No	Yes
Challenge	Yes	Possibly	Possibly
Skills	Possibly	Yes	Yes
Control	Yes	Yes	Yes
Clear Goals	Yes	Yes	Yes
Feedback	Yes	Possibly	Yes
Immersion	Yes	Yes	Yes
Social Interact.	Yes	Yes	Yes

The Model of Sweetster and Wyeth

The GameFlow elements are well tuned to fit to model the enjoyment of many modern computer games. The collector level of an OCCGs is not a typical such game. One example of that is that the element of concentration is rare in the collector, and deck building parts of the game which are typically done off line without any specific opponents.¹ In Table 1 we present a short version of a general analysis the enjoyment of OCCGs. Although most of the elements may be fulfilled in one way or another, some of them are worth an extra comment.

- The *challenge* at the collector level is studied. By letting the rarity of the cards vary, the less ambitious collectors could aim for a cheap, but basic collection, whereas others try to get their collections complete. At the deck building or match level it is by no means clear that you will face sufficiently challenging opponents, especially if you play online against randomly chosen players.
- Building a collection may in many OCCGs be achieved by monetary means rather than building the skill needed for it, thus it is not necessary to develop any skill at all at this level.
- Although the feedback in the case of the collecting and match playing is direct, it does not have to be so in the case of deck building. The decks you build may e.g. neither come in play, nor be revealed to be seen by others.

A CASE STUDY: THE EYE OF JUDGMENT

The Eye of Judgment (EoJ) is an OCCG played online where you use physical cards. A camera (the PLAYSTATION EYE)² is used to identify the cards through their printed bar codes and to see their orientation on the game board (see Figs 1–2). The goal of the game is to either:

1. conquer five out of nine fields at the 3x3 fields board, or
2. deck out the opponent (i.e. to make the opponent run out of cards to draw from the library).

¹The possible exception is the bidding in auctions selling cards.

²PLAYSTATION EYE is a registered trademark by Sony Computer Entertainment.



Figure 1: The EoJ equipment: cards, a Playstation3 with a screen and a PLAYSTATION EYE.

The game starts by letting each player draw five cards from their libraries (of initial 30 cards) to their hands. The first player then starts the game by receiving two mana points. The mana points are used in the game to put cards in play. The player then either play some cards, or end the turn. In each turn thereafter, the player draws a card from the library to the hand and receives two extra mana points. The player may then summon at most one new creature at an empty field on the board. As you summon it, you also activate its attack according to its attack pattern printed on the card, and if any opponent creature is within the pattern it carries out the attack. Creatures whose hit points are reduced to ≤ 0 are removed from the board and put in the graveyard. Unless there are cards in play that remove the effect, each creature card that is removed returns one mana to the player.

There has been three releases of cards, Set 1, 2 and 3, of 110, 100, and 101 cards respectively that each have an unique combination of properties such as attack and defence patterns, costs for summoning, attacking and turning, attack strength, hit points, blind spots, element type, race and affiliation. There are both creature cards and spell cards. The game is also rich of special abilities, such as protection, magic protection, invisibility, possession, summoning, or activation cost manipulation, mana steal, discard abilities, and manipulations of your own, or the opponents library, hand and graveyard.

Interviews with (former) EoJ Players

We have, through the two communities EoJManager [6], and LBShooters [10], got in contact with a number of players with whom we held structured inter-



Figure 2: Callous Gaiakhan, one of the stronger Set 3 cards in EoJ

views through e-mail about their experiences from the game (see Appendix A). When applicable, quotes from these interviews will be included in the description of the history below in order to put them into the right context. The persons are numbered $P_1 \dots P_5$. The interviewed players have been active for at least half a year, have (with exception of P_2) had complete collections (at the time when they quit), and played a total of more 2000 matches.

The history of EoJ so far

The game was released in late October 2007 at the same time as the PLAYSTATION EYE and they were sold bundled.

Set 1 The first set of cards was released at the same time as the game itself. Players describe it as:

"... it was fairly balanced, but rather bland." — P_1

, or

"perfectly balanced." — P_3

There was however an issue concerning the online play. If a player disconnected its Internet connection before the end of a game, the game did not get registered in the online honour scores. A trick that some players then pulled was to play the match and if they won, fine, but if they were about to lose the match, they disconnected just before doing so. Thus there were players with a perfect score, having 0 losses and only wins (but a lot of disconnects). Players in the community found this very annoying, or as one player put it, it

"... drove me insane." — P_1

This glitch was repaired in the release of Set 2 where disconnecters were punished by getting negative scores for disconnecting a game.

Set 2 The release of the 2nd set was bit problematic. Since the game is played more or less entirely online, often with randomly selected opponents from all over the world, the timing of the releases of new editions of the game is crucial. In the case of Set 2, the European and Japanese markets got the new Set 2 cards in the end of March 2008, about one month before they reached the North American market. This was of course not satisfactory at any level of the game. The collectors had to wait for the cards, the deck builders could of course build virtual decks, at least off line, but they were never able to test them and calibrate them, and at the match level, the North American Set 1 players were beaten by players that had access to the new cards.

Set 3 Since the release of Set 2, the game had now switched manufacturer of the cards from Wizards of the Coast to Upper Deck. The players were hopeful for things to improve concerning the global release, but got their hopes crushed as it turned out to be even worse than the problems of the release of Set 2. Europe and Japan were again first out with the cards being released in mid October. Once more, North America had to wait, first until the beginning of November, then another delay until the middle of December. Although the competitive advantage of the new cards was probably less compared to the situation when Set 2 was released, it still upset a lot of players.

There has so far (March 2009) not been any updates of the Set 3 cards, although there is especially one card that is considered to be too strong. Many players do however think that this update has brought new life to the game, providing a large variety of new key cards that strengthen alternative deck types that were not competitive before.

"set 3 brings more decks to choose from. balanced overall." — P_3

REVISITING MALONE

We will now look at how our example relate to the perspectives of the models of enjoyment.

The collector level

The main problem at this level initially concerned players who were cheating. It turned out that the camera was not at all very sensitive to the authenticity of the cards; meaning that you could easily print your own cards based on pictures of the cards downloaded from the Internet. There were even successful experiments made showing that you could create your own cards using a black felt tip marker (for the bar codes), and green and yellow highlighters (for the green triangles). The growing communities of EoJ players all more or less worked against the use of fake cards in general, and banned them from use in events arranged by them in particular. Although this trick in the short run could save players a lot of money (a full Set1 collection costed about \$300 at the time), there was a common understanding that

in the long run, new sets of cards were less likely to be developed, if the players did not pay for them.

Lately, two issues at the collector level has concerned the access to certain cards. First *Dioskuri* which is a creature that cannot be summoned directly, but has to be created through the combination of two other cards in play. It is therefore more or less useless in deck building, and was therefore released as a promo card only, which made it very rare as it was not available in the ordinary booster packages. This in turn made collectors value it very high, over \$500, especially before the North American release. The ones that had a few *Dioskuri* cards to sell at that time made a decent profit at the cost of eager collectors. Second, one of the Ultra Rare (UR) cards³, the *Mandragora Triplet* was not restricted to one per deck (as all other URs), but three. This increased the value of the card about five times, since the collectors of *Master sets*⁴ try to collect three of these.

All of the interviewed players (except one, who had a Master Set 1–3 collection) quit playing before the release of Set 3, so none of them experienced any of these issues as a problem.

Why is collecting EoJ cards fun? Do then players enjoy the game at this level? Relating to Malone, there indeed is a challenge in getting a complete collection of cards. You have the element of randomness in the result, since a large part of the cards are only available in booster packs. Although there is no direct feedback in the game that shows, e.g. to other players, the state of your collection, some communities offer this. LBSshooters have used medals to award players that have completed collections of full sets of cards and EoJManager shows the players' collections in their card collection area.

As for the element of fantasy, the collection game is a purely extrinsic fantasy. The state of the collection is to some extent a result of the player's skill in trading cards (but mostly a result of putting money into buying and trading cards). There is no way that the collection as such effects the skill of the player at this level.

Last but not least, we have the Curiosity factor. There are elements of *sensory curiosity* expressed as the graphical representation of a card, both at the card as such, and the way the card is represented in the game, e.g. when a creature attacks or defends itself. There is of course also an element of *cognitive curiosity* in terms of the quest to build a complete and consistent collection using as little resources as possible.

What happens when a player gets a complete collection? One player expressed that he was:

"Feeling the relief and accomplishment of owning every card." — P₁

Well, obviously, this part of the game may get less interesting, since there are no more challenges for the player; the fantasy of a complete collection has become reality, and the curiosity decay. This may even be one reason for some players to lose interest in the whole game. It may possibly be one reason why Upper deck, who released the Set 3 cards, have been quite sparse with pro-

³There are four levels of rarity of the cards: Common, Uncommon, Rare and Ultra rare.

⁴A Master Set is one out of which you can build every possible deck.

viding the communities with promotion cards. The lack of *Dioskuri* and *Mandragora Triplet* cards will keep players from getting complete collections, and possibly keep them interested in collecting the cards for a longer time in the game.

The deck building level

The deck building trends of EoJ is interesting to study. Before the release of Set 2, the game was considered to be

"perfectly balanced." — P₃

or

"Extremely well balanced." — P₄

. There was no single dominating deck type, although in the latter part of this period, a Mana control deck known as *the Polish deck* gained popularity as a well working all round deck.

At the release of Set 2, a new card type, *Zealots*, was introduced and it quickly became the state of the art in deck building to construct decks based on the maximum number of these cards. Players describe this period as

"A disgusting and frustrating time to be an EoJ player." — P₁

or

"When I first heard about those cards being broken and everyone using them, I, like many others refused to play ranked until something was done to balance it." — P₂

Other players regarded the criticism to be unfair:

"Personally I felt the balance was nowhere near as bad as others did. Despite not really playing the game I was able to build a deck that wasn't specifically anti-Zealot but had a VERY high win% against Zealot decks.." — P₅

However, most of the players found the *Zealots* to be too strong and in the end of May 2008, an update was released that restricted the use of *Zealots* (and a few other cards) and some of their effects as well as making a number of adjustments and clarifications to the textual descriptions in the game.

After the 2.01 update, a new kind of deck saw the light of the day. By repetitively, and with good timing, cleaning the board using heavy magic attacks, and at the same time use cards that returned used cards from the graveyard to the library, you could delay the game to the point where you could win by library defeat (LD)⁵. Those LD decks quickly became the most popular deck among the highest ranked players, and remained in use among the them until the release of Set 3, despite that many players found them very predictable and boring to play against. (Through the update...)

"balance was restored in the game, only problem was attrition playstyle was born." — P₃

The best counter strategies against LD decks were not very successful against most other types of decks and these other types were in general beaten by the LD decks.

Why is EoJ deck building fun? Building new decks in the game is not hard, but building successful decks is. The collection of the player restricts what decks you can build in theory, and the predicted type of decks your opponents will bring to play make set the environment in

⁵Aka the *attrition* strategy.

which they will be evaluated through the games you use it in. Deck building is thus highly connected to the other levels of the game. Even though there are no random elements in the deck building as such, being able to predict the strategy, even of a single opponent, is challenging and so is the task of creating a good counter deck.

As a player, you are of course curious (in the cognitive sense) about if your deck will work as you thought or not. Often, a lot of testing and tuning is needed before your deck is competitive, but when it is, it also returns a lot of positive feedback. The players answers to what they thought was their best experience from a deck building perspective was e.g.:

"Building a sweet deck that was also fun to play." — P_2 and

"Pride of building a very successful decktype." — P_1

. Experiencing their deck working as designed in play is a kick:

"Looking at my Corseo family stealing lots of mana everytime one of my creatures dodged an attack was the best moment ever." — P_4

The match level

There are three major types of matches:

1. *Against the computer.* The game AI of EoJ is not very successful against good players; it has problems to utilise the card combination bonuses in the same way skilled players always try to do.
2. *Custom games.* These games are against another player that you invite through internet (or play against at home). This type of game is used in community tournaments where you have to face a certain player, but it does not affect your online ranking.
3. *Ranked games.* This type of game is played online only, where you face another player waiting for a ranked game (or you set up a room where you can wait for someone to join). Standard rules apply with the standard board setup, 3 minutes per turn, and the player to start the game is decided randomly.

The ranking system consists of two parts: the *honour*, which is a measure of your experience, and the *rank* which tells how successful the player has been recently. The higher rank you got, the less rank points will you earn against a lower ranked opponent (and the more you will risk to lose). Although it is more complex with two measures, it is an improvement:

"A bit messed up, and highly addictive." — P_1

One player was not satisfied with any of the rankings: *"Honour was pointless so I wont talk about that. Rank was good BUT there needed to be some sort of filters. There is no reason that myself as one of the top 20 players anywhere should be forced to play a horrible player that has no shot at beating me. It's a waste of both our time."* — P_5

Why are EoJ matches fun? In the actual matches, the challenge is to be able to make the best possible out of the state of the game, given the cards in your hand within a certain time; a task that you share with your opponent. The game triggers extrinsic, as well as intrinsic

fantasies while you watch the game develop, learn about the strategy of the opponent, and try to counter it in the best possible way. There is visual, as well as audio feedback (especially if the game animations are turned on) contributing to the sensory curiosity; however, since the animations are deterministic, at the same time as they boost the sensory curiosity, they also make the game more repetitive. Although it does not decrease the cognitive curiosity, it is unchallenging. Many top players therefore turn off the animations in order to escape them and save some time. It may even be considered to be bad manner to have them turned on in official tournaments in some communities.

REVISITING GAMEFLOW

Following the GameFlow model, we compare the three levels of EoJ. This is done through evaluating a number of criteria relating to each and one of the elements (see Sweetster and Wyeth for a the details [16]). The results of this evaluation is presented in Table 2. We can see that the match level (denoted M in the table) of EoJ reaches the highest score in this model, followed by the deck building, and the card collecting. There are also large differences in the different elements, e.g. Concentration and Social Interaction. Especially the social interaction outside the game has been important for EoJ. There are more than ten Internet-based communities for EoJ, many of them arranging tournaments, and helping new players to get into the game.

"The community I joined in was great. People were friendly, informative and was considered my second family." — P_3

Even though the game as such does not provide very much help at the strategic level, the communities play an important role here:

"I also met my mentor through the LBShooters. It was really something to have a great player teach me the ins and outs his playing style and it was nice to tell him my victory stories using the deck he taught me with my own little variations. We had some great conversations about how to assess certain situations given what we have in our deck.." — P_2

Ok, but if EoJ is fun, why do players quit?

There are a number of reasons why people quit:

"Internet problems, needing to own every card and spending more than \$400 per set." — P_1

"Money and time. I'm working towards my Bachelor's degree ... Since EoJ was costing me the most at the time, it was a clear choice as to which game I had to cut." — P_2

"Too much money to spend on cards ... Too much time needed to play it ... Too much space needed to keep the cards, to set the mat and camera." — P_4

The cost of the game is indeed an issue for the top level players. A complete Master set covering all cards is valued more than \$1000, well above the price of the PS3 console itself [2]. Other aspects such as time, technical problems, or space problems were also contributing.

Since the game does not have a clear one player storyline with a clear goal (other than at the collector level), the bore that may arise through finishing the last boss at the last level does not come. The investments made by the players in their card collections also seem to have a preservative effect; players do not sell their cards (unless they need the money) if they get bored of EoJ. Instead, there are several examples of players who got back to the game to find that the deck flora has changed, giving the deck building level a new challenge.

DISCUSSION

Finding former players of EoJ to interview was not easy. Two of the larger EoJ communities were searched for posts where members sold out their entire collections of cards. In total 29 such members were asked to participate through mails forwarded through the site administrators. Those interested contacted us and were sent a questionnaire. There is of course a risk that the five answers we got in the end were biased, since former players who are fed up with a game also may be less interested in investing even more time in EoJ by answering a questionnaire. The reason for choosing former (experienced) players is that they have both enjoyed the game, and for some reason left it, i.e. they were expected to have a balanced view of it.

The Gameflow evaluation was also bordered with issues. How do you e.g. evaluate if the environment is distracting or not at the collector's level? Or what is the reward in deck building as such? Often, these evaluations include inter-level dependencies, such as having to test the newly constructed deck in a number of matches. The joy (or lack thereof) you then may feel, is it because of

- the match as such,
- the indication that your deck holds certain properties, or
- the satisfaction of being able to play the cards at all (since they are part of your collection)?

The social aspects of games such as EoJ is very important. The in-game support is limited to text and voice chat with your opponents, and the ability to send invitations for, and replays of, matches to other players. However, the vast Internet-based support make up for this, especially at the deck building and collector levels, (e.g. special format tournaments with restrictions on the deck building). These aspects are of course not covered at all by Malone, and get bundled in a way that is not adapted to OCCGs in the GameFlow model.

One may of course also question the three level concept. Why think of OCCGs in terms of three layers? There are three natural target player types. Some of them are interested in collecting cards, others in just playing matches (maybe using the starter deck they got as they purchased the game). A third group of players spend more time discussing decks and testing new types of decks, e.g. in custom matches or against the game AI, than actually playing serious matches. This last *meta level* is sometimes described as a Rock-Paper-Scissors game, where skilled deck builders try to lie ahead of the rest (e.g. when a large part of the community play "Rock" decks, you construct "Paper" decks).

Now, of course the three levels are connected. In order to use a card in a deck, you will need to have it in your collection, and the use of a deck in a match presume that you have built it (as well as formed a working strategy for the use of it, if you want it to succeed in your matches). Playing matches will also improve your knowledge about how to use the cards, which will help you understand how to build better decks. These decks will create a demand for certain cards in your collection. Although you might focus on one of the levels, all three of them are inter-dependant.

CONCLUSIONS AND FUTURE WORK

Although OCCGs are games that need computers in order to be playable, neither Malone's, nor the GameFlow model are very well suited to cover all levels of these games. The reason is primarily that the games consist of several inter-dependant levels, of which not all of them fit into the classical computer game template. More research is needed to find out both how these levels are related (in terms of enjoyment), and to integrate support for such an analysis in the existing models of enjoyment in computer games. Another possible trail is to extend the study to other models of enjoyment, e.g. the ones by Klimmt [8] and Lazarro [9].

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- (g) The balance of the game after the 2.01 update.
- (h) The honour/rank point system.
- (i) The official EoJ world championships arranged at PSN.
After the release of Set 3:
- (j) The balance of the game after the release of Set 3.
- (k) The card delivery problems related to the worldwide release of Set 3.
- (l) The Dioskuri promotion card.
6. What were the primary reasons for quit playing EoJ?
7. What is your best experience from this game?
- (a) At the community level
- (b) At the card collection level
- (c) At the deck building level
- (d) At the match level

APPENDIX A: THE QUESTIONNAIRE

1. When did you start playing Eye of Judgment?
2. When did you decide to stop playing (if you have stopped)?
3. What was the size of your collection at the most (in terms of unique cards)?
4. Approximately how many games did you play in total
 - (a) in ranked?
 - (b) in custom mode against other community members (e.g. in tournaments and leagues)?
5. I would now like you to comment on the following (if you have an opinion about it):
 - (a) The communities of this game (please list the ones that you were most active within).
Before the release of Set 2:
 - (b) The balance of the game
 - (c) The disconnection problem
 - (d) The honour points system
After the release of Set 2, but before the release of Set 3:
 - (e) The card delivery problems related to the worldwide release of Set 2.
 - (f) The balance of the game after the release of Set 2, but before the 2.01 software update (known as the Battleship/Zealot nerf).

Table 2: EoJ
Gameflow evaluation

	Criteria	C	D	M
Concentration	Provide stimuli from different sources	1	2	4
	Provide stimuli worth attending to	1	1	3
	Grab players' attention and maintain it throughout the game	2	2	4
	Spare the player unimportant tasks	3	3	4
	High, but appropriate workload	1	1	2
	Non-distracting environment	5	5	3
		2.2	2.3	3.3
Challenge	Challenges match the players' skill levels	4	3	3
	Provides different levels for different players	4	5	3
	Level of challenge follow players' skill progress	2	3	4
	New challenges at an appropriate pace	3	3	4
		3.2	3.5	3.5
Player skills	Players should be able to start playing without a manual	5	3	2
	Learning the game should be fun	2	4	5
	Game should include in-game online help	2	4	4
	In-game tutorials	1	2	2
	Increase player skills at an appropriate pace	2	2	5
	Players should be rewarded appropriately	3	2	5
Easy to learn interface and game mechanics	5	4	3	
		2.9	3.4	3.7
Control	Players should feel in control over their units and their interactions	4	5	5
	Players should feel in control over the game interface	4	5	4
	Players should feel in control over the game shell	4	4	3
	Players should be able to recover from errors	3	5	3
	Players should have an impact on the game world	2	4	5
	Players should feel in control over their actions and strategies	4	4	3
		3.5	4.5	3.8
Clear Goals	Over-riding goals should be clear and presented early	5	5	5
	Intermediate goals should be clear and presented when appropriate	3	NA	NA
		4	5	5
Feedback	Players should receive feedback on their progress toward their goals	4	3	5
	Players should receive immediate feedback on their actions	3	3	5
	Players should always know their status or score	3	2	5
		3.3	2.7	5
Immersion	Players should become less aware of their surroundings	2	2	4
	Players should become less self-aware and less worried about everyday life or self	2	2	4
	Players should feel emotionally involved in the game	3	3	4
	Players should feel viscerally involved in the game	2	1	2
		2.2	2.0	3.5
Social Interaction	Games should support competition and co-operation between players	4	4	5
	Games should support social interaction between players	4	4	5
	Games should support social communities inside and outside the game	4	4	4
		4.0	4.0	4.7
	Overall	3.03	3.29	3.85