

Collection, Creation and Community: A Discussion on Collectible Card Games

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Abstract: Collectible or Trading Card Games (CCGs or TCGs) are enormously popular. They achieve numbers of players normally associated with online digital games. Yet they are sparsely researched and rarely utilized in the growing field of games and learning. This paper aims to present the motivational and powerful aspects CCGs and start a discussion on what these games can potentially bring to a learning ecology. While doing so we will also present preliminary results from a mixed method survey study with a multiplayer CCG, Vampire the Eternal Struggle (V:TES).

Introduction

A trading card game, customizable card game, or collectible card game (CCG) combines collection of trading cards with strategic deck building and gameplay. The invention of trading cards goes back to the 19th century thanks to competition among tobacco companies (Blum, 1995). Over time, these cards evolved into the collectible phenomenon now known as the trading card game (TCG) (Lenarcic & Mackay-Scollay, 2005, p. 65). The first known game to fit the definition of a CCG was *The Base Ball Card Game* produced by The Allegheny Card Co. and registered on April 5, 1904 (David-Marshall, van Dreunen & Wang, 2010). The CCG concept as we are familiar today came much later. In 1993, Richard Garfield introduced *Magic the Gathering*, a collectible card game (CCG), to the world. By 1996, it had grown to the point where it had high-stakes tournaments. As of 2009, Wizards of the Coast, the publisher of the game, estimated a 6 million global player base. As *Magic's* popularity grew, numerous other CCG's have spawned over almost two decades with player-bases ranging from tens of thousands to millions. In this paper, we will be using CCG and TCG interchangeably.

The worldwide market for CCGs is above \$2.1 billion and sales are estimated to be around \$800 million for 2008 in North America (David-Marshall, van Dreunen & Wang, 2010). The number of CCGs increases every year thanks to their low production cost and being add-ons to virtual worlds or massively multiplayer online games such as World of Warcraft. Please refer to David-Marshall et al. (2010)'s white paper on TCG industry for a comprehensive overview.

Despite the popularity of CCGs, there are very few examples of thought pieces or experimental studies with CCGs. In today's world of a thousand activities for both children and adults, educators need to investigate alternate paths for learning. CCGs are one such path: One which has received little attention from educators so far. This paper delves into various questions including types of CCGs, what makes them unique, and their possible educational merits. In addition, we will present preliminary results from an online survey study with V:TES players (N=290). Participants were asked about their motivation to play the game and their strategies to build decks in 5-point and 7-point Likert scale questions and open-ended questions. We will present quotes from open-ended questions from the study throughout the paper.

Background

What aspects of CCGs make them so popular that people will spend years playing them and buying expansions? A quick look at this question reveals two interlocked features in all CCGs. First, they're collectible. Most CCGs involve random collection through a "booster pack" system while some games you simply buy non-random packs to obtain cards. The second feature is customization. Once players have collected enough cards, they choose which of those cards they will use in their decks. This lends a sense of ownership to the game, as players have the opportunity to demonstrate their skills, as players *and* as creators. Even between relatively similar deck designs, individual tastes and choices can be seen.

The popularity of *Pokémon* and *Yugioh* among school age children, despite their complexity, intrigued many academics. For instance, *Pokémon's* metanarrative of the acquisition, training, and competing of hundreds of "pocket monsters," each with its own unique statistics and evolutionary potential, demands a mastery of complex knowledge and active interaction on the part of its intended

audience(s) that is unique for a line of children's toys (Tobin, 2004). Ito (2005)'s ethnographic studies on *Yugioh* illustrated how various mechanics of the game contributed to its market penetration of Japanese youth.

Most CCGs are played by two players. Multiplayer CCGs bring different dynamics into game play, marrying the need for social interaction to achieve players' goals with effective deck construction. *Vampire the Eternal Struggle* may be the best balanced multiplayer CCG on the market. It allows multiple strategies, from politics to pure combat but in most cases requires a player to negotiate his/her goals by making deals and strategic planning.

Next, we will talk about collection, creation and community aspect of CCGs in a bit more detail.

Collection

Why are they *collectible* card games? That answer is the same as why people collect anything: coins, stamps, models of famous buildings. The CCG taps into the same collecting instinct that exists in many of us. Most involve random collection through a "booster pack" system while some games you simply buy non-random packs to obtain cards. In the case of random boosters, the lure of rarer cards can provide incentive to collect. With pretty art, and varying rarity, it is easy to capture our attention. The ongoing production of successive expansion sets will keep us coming back for more tapping into player curiosity and challenge to get cards they need. Collection of the cards is basically a pre-cursor in order to have enough cards to be able to create a deck and play the game. As players acquire booster packs to find whatever they need, they also accumulate cards that they don't need. This has created a second market for CCGs. Many players sell individual cards or their collections if they decide to quit or they need cash.

Collection seems to be the least motivating for players among three aspects. Specifically, 36% of the V:TES players indicated that they like the collection aspect of the game to a moderate or large extent. This may mean that players still buy cards or trade them but it is not one of the main driving reasons that they play the game.

Creation

"...often some interesting side-piece that I added just to try it out works better than the original idea itself and the deck slowly melds into a different concept." - V:TES, Female, 20.

Once you've got some cards, what do you do with them? A player can't use all of her/his cards in a single deck; most games have rules about maximum deck size. Plus, due to probability distributions, larger decks perform less reliably than smaller ones. The number of "perfect hands" in any given deck is comparatively small, while the permutations of lower quality hands balloons quickly as the number of cards increases. The player "... is also a designer (bringing a deck of their own construction to the table), a mechanic (re-working their own and other's ideas), a coach and a student..." (Lenarcic & Mackay-Scollay 2005, p. 68)

The possibilities are vast when considering all the combinations of cards players can put into a deck. What avenues players choose to pursue can allow them to try many different themes. Alternately, they can often try variations on the same theme. As many CCGs followed Magic: The Gathering's lead, printing card backs the same from the beginning of their release, players can put cards from any expansion into their play decks. This decision and creation process allows players to take ownership of the game far more than many other types of game. Players, as they get more experienced in the CCG, prefer tinkering with different cards and building their own decks rather than playing other players' decks. Figure 1 shows V:TES players' practices regarding how they build decks. Deck building and social aspect can go hand-in-hand as other players often give feedback on adding or removing different cards in order to make the deck more effective at its goal.

Deck building seems to be one of the aspects V:TES players really like about the game. Specifically, 73% of participants in the survey indicated that they like the deck building aspect of the game moderate to large extent. The creation and deck building aspect is an iterative process and oftentimes the idea or theme of the deck can turn into something completely different after iterations. Also, based on whom the player plays with, the deck may perform differently. This shows more in the multiplayer games but we would say it is a general fact about CCG decks.

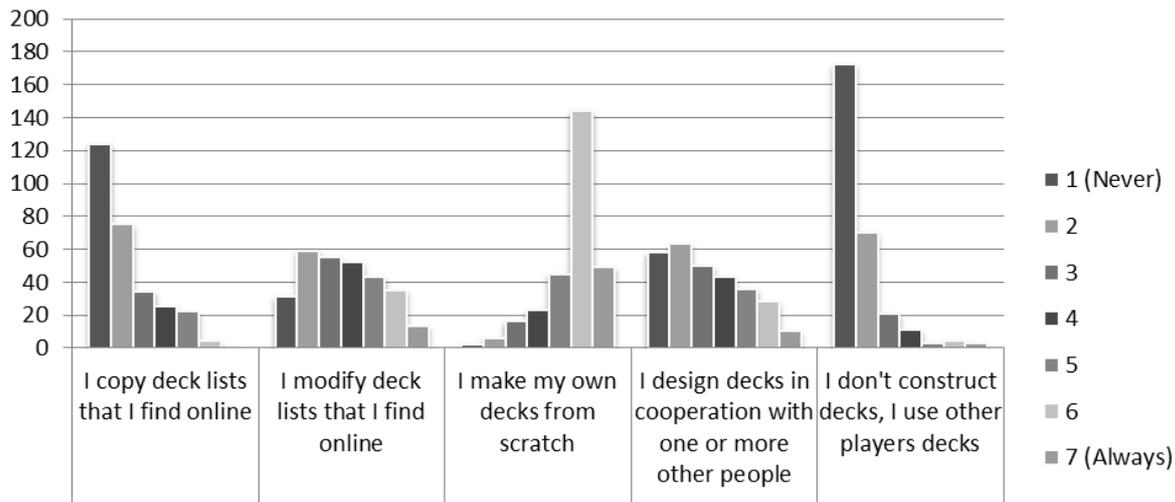


Figure 1. Participants answers about their common practice on building decks.

Community

"It's a mean game that I can play with friends I love. It's nice to not have to be nice all the time." -V:TES player, Female, 19.

Most CCGs involve conflict of some kind. So, they require two or more players at a time. While the players may be enemies during play, they may be friends, mentors, or collaborators in the broader context of the play community.

Most of the existing literature on CCG's includes material about the social aspects of games and community. This is true for several reasons. First, CCG's are among the most popular face to face games. This makes them prime candidates for comparison to digital games, which, while some have social aspects, still have a geographic separation. Second, CCG's are often part of larger "media mixes" (Ito, 2005) including television, comics, digital games, and CCG's. This greater saturation has allowed many games greater penetration into various social groups.

If we are to divide the social aspect into two, it would be at the game play level and at the larger social interaction level such as discussions at social networking sites or game forums. At the game play level, it can be competitive; expectation of drawing the card needed just in time is one of the exciting moments of CCGs.

The community aspect of V:TES seems to be the most fun and motivating for players. 76% of the V:TES players in the survey indicated that they like the community aspect of the game to a moderate to large extent. Many players travel to play tournaments, or, when visiting another city, they look up V:TES players to play with. For instance, both authors of the paper are active V:TES players and when they visited Madison-Wisconsin for the GLS conference they contacted local players to have a few game with them. This seems to be a common theme among other V:TES players. As a male player states: "...I've never seen any other game, or non-religious community where you can call someone you've never met and sleep at his place in the evening." The game as the common denominator has made the players a big family around the world.

Fans contribute significantly to CCG communities. For example, Bisz (2009) talks about how fans of Middle-earth CCG, a CCG based on J.R.R. Tolkein's Middle-Earth, continue to keep the game alive in any way they can, such as creating game art and organizing tournaments, and participating in discussion forums.

Game play aspect of CCGs can be challenging. In Lazzaro (2004)'s classification of fun of playing games, CCGs mostly fall under hard fun. Players invest a lot into games, from collection to deck building to game play. For example, in V:TES a game session can go up to 2 hours, and tournaments can take up to 8 hours. The amount of thinking, strategizing, making deals and trying to win while every other player is also trying to win is surely hard fun. However, V:TES players seem to really like this kind of fun as 88% of them said they liked the game-play aspect of the game to a moderate to large extent.

"Multi-player interaction requires a different skill set from just math and algorithms. But math is important too, which is why I don't win every game (hah)..." - V:TES player, Male, 45.

Dynamics

A CCG is generally made up of several components such as the rules governing the game, cards, Intellectual Property (the theme, or content), and sometimes: Beads/counters, dice or other secondary paraphernalia (David-Marshall, van Dreunen & Wang, 2010)

In their play, CCG's share several elements or regions. Each player has a deck of cards not yet drawn, a hand of cards, a play area where a player plays his cards, a discard of cards that have left play.

There is also a shared battle area in many CCGs, where players' sides come into conflict. CCGs require at least two players to play. Many were designed for two players such as Pokemon or Magic the Gathering. Others, such as Shadow Fist or V:TES were designed for more than two players. Based on the rules and the number of players in the game, the table dynamics change. Figure 2 shows the dynamics of attack, defense, and possible cooperation in two different CCG's. As you can see, the relationships in a two player game are symmetric. In V:TES, which uses a predator-prey system, the attack and defense relations are asymmetric. There may also be cooperation between cross-table players due to self interest against a mutual enemy.

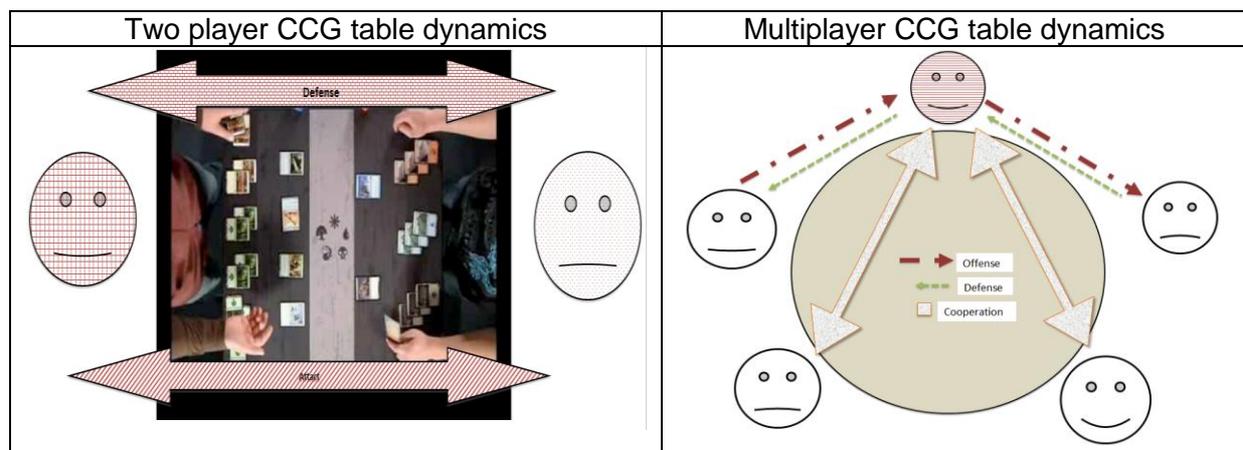


Figure 2. Magic the Gathering table dynamic (left) and V:TES table dynamic (right)

CCGs and Learning

Can CCGs with educational themes or content be financially sustainable, while maintaining their effectiveness as educational tools? What benefits can CCGs without traditional educational content offer learners?

Strengths

The possible benefits inherent in CCGs have been speculated on, and in some cases programs have been implemented based on this (Lenarcic & Mackay-Scollay, 2005, p. 67). The genre, as a whole, requires its players to develop the following in varying degrees: analytic thinking, empathy, social manipulation and communication.

Learning Aspect 1: Motivation

Malone (1980) identified three aspects of games that make them motivating to players: fantasy, challenge and curiosity. While examining the collection, creation and community aspects of CCGs, we can see that each of these stages can be motivational in themselves based on Malone (1980)'s model.

Using the motivational aspect as a learning aspect may take two different paths. One might be to create CCGs with some kind of educational content. This would aim to take advantage of the fact that large numbers of students are familiar with CCGs, either by playing them or by observing others play. Therefore, it is likely that if the game is well-designed, they will play the game and learn. Another is that CCGs can be used as reward systems at schools (Chen, Kuo, Chang, & Heh, 2009). Students may be provided with certain types of cards as a result of their academic progress or behavior. They may then play these cards with others. If we assume the motivational aspect of collection and creation, students will do their best to acquire more cards to compete with their friends.

Learning Aspect 2: Social

Experienced players share insights into game mechanics with less experienced players. Concrete examples allow less experienced player to see principles in practice. The following social behaviors are often practiced or developed by players:

- Cognitive apprenticeship
- Negotiation and persuasion
- Cooperation through mutual self interest
- Creative socializing

Possible uses for learning are improving communication and negotiation skills.

Learning Aspect 3: Play dynamics and mechanics

Notable properties of CCG game systems include:

- Pithy representation of information via symbols and keywords
- Resource management

Possible uses for learning would be practice of estimation skills and basic statistics, as well as strategy development and increased metacognitive awareness. Scientific representations might be used as symbols on cards. At the survey 57% of the participants reported that when they make a mistake they try to remember in the future how to avoid it. Training of such skills might be useful for school aged children both when they solve school subject related problems and when they proceed into their outside lives.

Learning Aspect 4: External/Non-Play Mechanics

As we discussed previously, CCG's generally include:

- Collection of cards
- Iterative creation and testing (deck building)

Possible uses for learning would be iterative design, or possibly including an educational payload in cards "flavor text" (usually a quote or otherwise thematic bit of text to place the card in a narrative context) and including important historical figures as art.

Game based learning has never been this popular. Using digital games for learning or gamifying education are topics we come across in mass media and academic papers. When comparing with design and development of digital games, designing a custom CCG has lower requirements for teachers. It may require paper, computer and printers. For example, Steinman and Blastos (2002) developed a card game which was reminiscent of CCGs but without card collection and deck creation. They basically used the card design of CCGs such as art (e.g., Hepatitis B virus), picture of the target organ (e.g., liver), what the effect of the card is, what the restrictions are so on and so forth. Basically, they were able to achieve pithy representation of information by using symbols and keywords. Authors found that the card game was effective to teach basic facts and concepts about host defense to adolescents. Students also found the cards very informative. Learning symbols on cards is similar to the concept of learning and using icons on computers.

As we mentioned, the popularity of *Pokémon* and *Yugioh* among school age children is vast. Using this popularity, educational institutions may partner with CCG companies to make expansions on science or history topics. One example to this was the partnership between NASA and Pokémon. NASA's Center for Distance Learning and the Pokémon Trading Card Game developed an in-school program that incorporated science, technology, engineering, and mathematics (STEM) themes into activity units for K-6 students. Specifically, activities aimed to help students learn the science behind DNA and other topics. (Land, Anderer & Nelson, 2005).

An example of CCG that started keeping learning aspect in mind is Phylo game (phylogame, 2011) which is described as "a card game that makes use of the wonderful, complex, and inspiring things that inform the notion of biodiversity" on the website. It is a community project which can be contributed by anyone and can be played by printing cards. The website contains any information from rules to example card decks to be able to play the game.

Digital CCGs

With the advancements in Internet technologies, online CCGs have become common in recent years. While they have tremendous potential, they lack the rigorous design of some better CCGs. Some games implemented hybrid aspect where players can use cards offline and online. Johansson (2009) reports that some players of the Eye of Judgment could cheat because the camera

used by the game system was not sensitive enough to identify photocopy cards from original cards. Other games, such as Chaotic, feature physical cards that have a unique code and therefore can be uploaded online by using this code. The latter system may work better as it is less likely that players may cheat to use rare cards.

Digital CCGs improve a weakness of CCGs where you need someone to play the game. On the other hand, games like V:TES may suffer when put into an online presence as a game session is long and players may feel less responsible with their turns. In fact, the current online system for V:TES is a fan created site called JOL. Players indicated that they like the accessibility so that they can try out new deck ideas and play with people anywhere in the world, but they dislike not being able to see other players and the fact that game sessions take a long time. Also, since the game often requires negotiations and making deals, it may be quite impractical to pursue certain strategies.

"...playing on JOL, I often can't be bothered to make a deal because it takes too much typing to come to an agreement" – V:TES, Male, 37.

When we talk about educational uses, the strategy of Chaotic may work, as students not only would get physical cards but they would access them through their computers if they want to play with their friends. This may even make the games more motivating for them to play.

Discussion: Misconceptions

There seem to be a few common misconceptions about CCGs. One regards what actually constitutes a CCG. Steinman & Blastos (2002) designed, researched and published a paper on "A trading-card game teaching about host defence[sic]." The game described was *not*, in fact, a trading card game. It *was* a card game, with symbols similar to those used in many TCGs. However, there was no *trading*, nor collection, nor deck construction. Indeed, both players used cards from the same deck. This is not an isolated case.

There is also sometimes incomplete understanding of a game's rules. For example, talking of Magic: The Gathering: "...like most games the first person to act has a slight advantage..." (Lenarcic & Mackay-Scollay, 2005, p.68). This is partially true. Many systems of games favor the person who plays first. CCGs are among the most self-aware of this fact, and many have rules which penalize the first player to help balance matters. In some games, like Magic, the penalty (the first player does not draw a card on their first turn) is outweighed by the advantage. In others, like Vampire: The Eternal Struggle, the penalty is more keenly felt; the first player only gets one "transfer" to start bringing vampires into play, while second, third, and fourth players get successively more.

Some feel the need to justify the study of play. "Within the animal kingdom, a satisfactory evolutionary rationale for play's emergence has been mired by the paradox of its association with amusement." (Burkhardt, 2005 in Lenarcic & Mackay-Scollay, 2005) We think that this is an unnecessary defense. One need merely look at sexual reproduction to see that association with amusement is in no way a paradox for evolutionary emergence. In fact, in that case evolution has given amusement as an incentive for a necessary activity. We make no claim either way about play as a necessity.

Lastly, there is a misconception shared by some designers and researchers: that rarer is better. To clarify, they believe that rare cards should be more powerful than uncommon or common cards. Instinctively this feels right, but it is a pitfall that most good CCG's have learned to avoid (some from painful experience). Let's look at why. Assume you play a CCG. Your friend, Timmy, expresses interest in learning how to play. You lend him a deck, and he plays a few games. He enjoys it. "This is great! How much would it cost for me to get started?" You now have two answers. If the CCG is following the "rarer is better" philosophy, you will have to inform Timmy that he'll need to buy a few hundred dollars-worth of packs just to get enough rares to make a decent deck that won't lose all the time.

What's the other option? The designers want players to covet rares (so they'll keep buying cards), so if they're not going to make them more powerful, they need to use some ingenuity and make them more *interesting*. Rares need to allow more options to a player, without making them incredibly powerful (or if they are powerful, design them so that players only want one or two, not a whole bunch). Wizards of the Coast learned that lesson fairly well after their initial printings of Magic. White Wolf has been quite good about it with VTES.

Conclusion

CCGs are engaging, social, community building games. Millions of people collect the cards, build decks with them, talk with their friends about them, and play with them. Not only that, but they are portable, and require little equipment, which puts them ahead of even mobile applications in terms

of accessibility. Finally, from a design point of view, they are simpler and cheaper than digital games, as they cut out one third of the digital production trifecta: designer, artist, coder.

Given all these factors, add to them this: CCGs already have some learning built in to them. They are built on analytical processes, and they require assimilation and interpretation of symbols. With all these things in favor, it seems odd that there has been little interest in researching them, or licensing existing games to produce expansions flavored for the material that they want to prime students for. We're certainly interested in seeing this happen in the near future.

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