

Game Design, Trading Markets, and Playing Practices

- What did *Lineage* do for enchanting Korean players?

Huhh, Jun Sok

Lecturer, School of Economics, Seoul National University

Samsung Reamian105-1001, Yangpyoung-dong 2 ga,
Youngdeungpo-gu, Seoul, Republic of Korea

82-16-232-9881

anarinsk@gmail.com

Park, Sang Woo

Researcher, Game Industry Institute

Gangbyun Samsung Reamian 302-503, Dangsang-dong,
Youngdeungpo-gu, Seoul, Republic of Korea

82-17-722-2917

sugy@madordead.com

ABSTRACT

This study tries to investigate hidden key factors that have brought a huge success to a Korean game called *Lineage*. The game has been thoroughly overlooked by western critics for its toiling nature of gameplay. But, the game design suitable for beginners, forming of item trading markets which gave economic incentives as well as fun motives, and unique playing practices that made it possible for players to stay longer are closely interwoven with each other. The first part of the paper is the theoretical review of trading markets which played a special role in the overall process, and the second part is the illustration of main historical moments of *Lineage* in Korea in the application of theoretical discussions.

Categories and Subject Descriptors

K.8.0 [Personal Computing]: General-games

General Terms

Design, Economics, Human Factors, Theory

Keywords

Lineage, MMORPG, trading markets, PC-Bang, endgames, siege warfare

1. INTRODUCTION

An MMORPG¹ called *Lineage* is the one of the most successful game in the world. It has been serviced in Korea since 1998, and by 2000 the number of subscribers reached four million. NC Soft, the servicing company became the most brilliant and fastest growing firm in Korea, and its value in the stock market is nearly two billion dollar in 2005.

It has also brought lots of social issues, for example 'real world' violence resulted from 'virtual world' conflicts, huge markets in which items of the game are traded, and so on.

It looks even strange that it didn't get a smallest window of opportunity in western regions while *Lineage* series² are one of prosperous MMORPGs in Asia markets such as Korea, Japan, and China. Words on *Lineage* in western gaming community were so harsh that many game experts denounced it as a piece of crap easily.³ It was not only professional or game-geeks' prejudice. The number of subscribers in U.S. was really disappointing compared to the one in Asian markets.

Many western game critics said playing *Lineage* was far from enjoying virtual world, but much more like toiling in real world. It requires tedious hunting and endless gathering. Especially so called 'player killing(PK)', i.e. PvP(Players v Players) without consent for snatching other players' items, was the main source of hatred. They saw that such a behavior was basically due to the fact *Lineage* doesn't provide any room or device for rich interactions among players. It is no surprise for them that *Lineage* looked really coarse or ugly compared with popular games in western world like *Everquest*, *Ultima Online*. That is one of main reasons why *Lineage* has gotten so little attention of the academic world

We suggest *Lineage* should not be regarded as just an evidence for backwardness in Korean gaming culture. There are critical facts and lessons overlooked by western researchers. It is time for serious studies of the really successful and exceptionally ignored game. We are not to defend *Lineage* against so many critics. As a matter of fact, our focus is not the quality or goodness of the game design itself. Instead, we'll keep our eyes on one burning question. How could the game enchant so many Korean players?

People say it was for money. Players could earn an amount of money in playing *Lineage*. They played to get items of the virtual world, which were sold in the real world. Trading markets were really hot especially in the early 2000s, and still not cooled down.

Many had taken the scent of the fact that item trading of large scale was the most important secret in the huge success. But, arguments on this issue was just journalistic or sometimes seven

¹ It is an abbreviation for "Massively Multi-players Online Role Playing Game."

² The sequel of the game launched at Oct. 2003. According to NC Soft's official announcement, the number of subscribers in 2004 amounts to two million only in Korea.

³ See the review of a well-known game web-zine [1].

landerous. To our regret, its mechanism has not been properly examined yet.

We do believe that the forming of the trading markets is not just a simple and natural process by the economic law of supply and demand.⁴ Supposing that the game system helps or even encourages player to trade his items or characters, It is reasonable to say that there are some benefits for the company.

You should first pay attention to the fact that *Lineage* has been popular for an extraordinarily long period. Even after every sides of the game had been out of date, lots of players still adhere to *Lineage*. We are to discuss special features of the game design interwoven with trading markets and it has something to do with lasting popularity of the *Lineage*. On that account, the success of *Lineage* is not a chance. We suggest that there has been close relationships among MMORPG game design, trading markets, and playing experience. Our aim is to highlight such key factors functioning in the game, *Lineage*.

The organization of the paper is following. Section 2 lists five theoretical points in understanding trading markets. Section 3 summarizes briefly features of *Lineage* in its game design. In Section 4, we track down historical moment of the game the way how trading markets have been entangled with game itself. Section 5 deals with another role of trading markets in inventing devices for keeping up players' interests to the game.

2. Making Sense of Trading Markets⁵

In this section, we propose some theoretical and analytical cornerstones for understanding trading markets.

2.1 Two Motives for Fun

Fun seeking motive; players play videogames for fun. Especially in role-playing games, gamers get two kind of motives in a intermittent manner. For a level-up, players have to spend specified time, and get some fun during this time. When reach the next level, they also gain another kind of fun from the level-up.

Simple expressions which show the process of realizing these two kinds of fun motive are following.

$$\text{If } t^i < \bar{t}^i, F^i = F_p^i(t^i),$$

$$\text{If } t^i \geq \bar{t}^i, F^i = F_p^i(t^i) + F_r^i$$

⁴ On this issues, we had done critical review on previous approaches to trading markets. [2][3]

⁵ As matter of fact, the terms 'trading markets' is a little bit tricky. We can imagine many types of traded items of a game such as weapons, armory, or even characters themselves. Trading markets around MMORPGs tend to be organized by their units of calculation, i.e. currencies of games. So, as Castronova[4] pointed out, exchange rate between money in the game and real world currency can be come into being. Actually, large proportion of item trading in Korea has been realized on this basis. In spite of plural form of the word, we'll consider it as a market. Using concept like a representative price which is inclusive of all of these markets, therefore, is not so absurd.

F^i is the total amount of fun at i 'th level. If a player consume less than time \bar{t}^i specified by game designers, she can get only F_p^i , which is generated by gameplay itself. If she consume more than \bar{t}^i , she get additional fun F_r^i which is generated by climbing up next level. As F_p^i is brought by gameplay itself, we assume that F_p^i is determined by playing time (t^i) solely.

The Fun resulted from simple playing logic gives player diminishing marginal satisfaction, so we'll assume that the increased amount of additional fun continues to drop as he is playing. On the other hand, F_r^i that is pleasure from level-up has a constant value regardless of consuming times.

If it were not for level-up factor, player would stop playing as soon as F_p^i turns into negative value. But with level-up factor, players would not quit playing though they do not enjoy gameplay itself anymore. If F_r^i is large enough to compensate for toiling, players have incentives to hold on gameplay.⁶

What if there be some detours to avoid toiling requirement? As F_r^i is fixed, his strategy would be minimizing playing time beyond which is not enjoyable anymore. In stand-alone games, so-called 'cheatings' or 'trainers' do good in shortening boring or torturing playing time. In MMORPG, there are also many hacking tools. But game companies prohibit them strictly for they spoil the balances and fairness between players.

Then what remains? Is there an alternative that players can choose? Of course, yes. Item trading or character transferring is a irresistible temptation to totally worn out players. In games like *Lineage*, even low level players can equip high-powered items. With this reinforcement, they can lessen their boring playing time for level- up. But it is very difficult for low level players to get such items. The probability of obtaining powerful items tends to increase according to the level of a player. The only possible way to get them is receiving from high level players

Unfortunately, it is hard to make out incentives for higher level players to give their precious to the lower. Is it possible to expect some primitive community-level gift-exchange circulating system of economy? We don't think so. These kinds of charities have not been generalized in any MMORPG. Easy way to realize transfer is just trading items for real world money or money-like stuff. Players can buy items with money of real world, or can buy higher level itself by transferring of characters.

In conclusion, it is player's strategy to shorten toiling that motivates trading items or characters. As a result, incentives of low level players constitute the demand side of the trading markets.

⁶ Every game designer might want to set the time for level-up before F_p^i turns into negative. Most of MMORPGs, especially the first generation of them, often used to fail this fine tuning of game design.

2.2 Between Leisure and Work

Videogames are for leisure. Playing games is an activity for fun or just killing times. But, in MMORPG, videogames as pure leisure activity can be sometimes transformed into work.

There exist fun and sense of achievement in every videogames. Stand-alone games, however, provide little meaningful remains or material compensation after end of games. On the other hand, time spent in MMORPG is not gone away as long as the game continues to be in service; Items are the very representative form of gamers' achievement which could be used for themselves or handed over to other players.

Suppose there are some players who want to turn these fruits of hard work into more practical form, i.e money of the real world, then supply side of trading market comes into exist. In this view, trading markets, at their other side, are places for exchanging playing times for real world money.

Once these trading markets are set, they have a counter influence over players' choice of playing times. Let's look into this in two ways.

Real world financial condition can be a predictor of the player's position in trading markets. The rich want to lessen toiling time and increase pure fun by paying real world income,⁷ while the poor willingly sell assets of virtual world to improve their financial condition. Without trading markets, players' decision for joining virtual world would be made on mainly inner game consideration. Outer game condition does not have much influence. But with trading markets, economic calculation in real world can really affect players' decision. Of course, there are gains from trade. Both supply and demand side of players would be beneficiary by softening their constraints on time choosing problem with trading markets.

But this reasoning has a weakness, for it doesn't reflect the level structure in game. Most MMORPGs have the logic of growth in characters' levels and skills. The higher the level of a player gets, the superior the abilities of him in collecting or producing valuable items become. In a word, time for obtaining a specific item is different by players' level. Players of higher level or with superior skills can accumulate precious items more rapidly.

Now, we can see the other direction of trading; the level structure. High level players have abilities to sell precious items to low level ones. For it is easier for the former to get such items while more difficult for the latter. In short, the level of a player is another predictor for her position in trading markets.

2.3 Conditions for Active Markets

The first and prior condition for active markets is the policy of the servicing company. What if item trading is strictly prohibited at first? What if the game design of MMORPG does not allow any

⁷ Two distinctive effects are working in their decision. The rich are more likely to get higher wage, so their toiling hours for level-up are more expensive than the poor. On the other hand, if your pocket is deep enough, you just want to avoid such a kind of unpleasant experiences.

kind of trading? In this sense, working of trading markets might be on the company's hand at its final stage.⁸

On two previous subsections, we've discussed demand and supply sides of trading markets. So, what are the conditions for a market working properly?

Table 1. Population map for trading

	High-level	Low-level
Rich	P1	P2
Poor	P3	P4

Table 1 shows the population map for trading. We assume that the poor are more inclined to sell and the high-level be more proficient in getting items.

The proportion of each population affects prices of trading markets. If P2 prevails, demand of markets increases and the price goes up. As we said, they are main forces of demand in forming trading markets. For without players who are willingly paying money for items, nobody sees he can make real money in virtual world. If P3 gets larger, supply of market expands and price goes down. P1, however, have relatively smaller impact on trading markets. They are potential demand side but have no need to buy because they already have abilities to stand by their own.

How about P4? The effect of this population on trading markets is somewhat vague. Low level tends to consist of new comers. If their motive for joining be pure pursuit of fun, they would do little impact on markets. But if their motive be economic calculation for money, P4 could be as active as P2 in buying items. After completing level-up periods, formerly P4 who have moved to P2 position become vigorous sellers.⁹

2.4 Trading Markets for the Company

In Korea, many gamers and experts believe that forming of trading markets was the key moment for the success of *Lineage*. There are many rumors or unidentified guesses on the effort of NC Soft to boost trading markets. What is the exact linkage between servicing company's profit and trading markets?

Actually, pricing policy of the most of MMORPGs including *Lineage* is a fixed monthly fee. There is no direct way to increase firm's profit from trading markets except that the company runs those markets by their own hands.

⁸ From time to time, NC Soft says that they are firmly against item or character trading. Ironically, their actions have never been so resolute as their lip services. Maybe, none other than NC Soft can be more thankful for trading markets. We'll discuss more detail on this account in following sections.

⁹ We believe that dynamic changes of trading markets can be analyzed by this map with data that have been collected by trade mediating companies like eBay. But, attaining those data is so hard that we cannot go on further concrete analysis.

Suppose there are well established trading markets that players can access easily. In this case, real monthly fee can be expressed as following.

$$\rho = MF - w(t_p - t_b)$$

MF is the monthly fee for joining MMORPG. w is a representative equilibrium wage on playing time in trading markets, t_p is the playing time of a player, and t_b is the buying time for items in trading markets.¹⁰

If a player's choice of time decision is as $t_p < t_b$, she is a buyer or demand side in trading markets and pays more than the monthly fee by the policy. If the above inequality is reversed ($t_p > t_b$), she is a seller or supply side and pays less than the nominal fee.

As a result, trading markets give the company price discrimination mechanism. In a sense, this is not price discrimination in a traditional way, because the cost of a game is as flat as ever. But economic decision of players is affected by trading markets, and the consequence of their decision on the company takes the same effect with price discrimination.

Economists say that price discrimination is a powerful way to increase firm's profit. Discrimination does mean that a firm can identify potential customers in a more sophisticated way. Customers who would not join the game for the cost now willingly join thanks to the trading markets. With the help of trading markets, they feel the cost of the game cheaper. On the other hand, customers who would never join the game for they can't endure the toiling gameplay are now eager to join. With trading market, they can play easily with powerful items. As a result, owing to trading markets, the number of subscribers expands and the company gets higher profit.

This effect of expansion has a special meaning for the business like MMORPG services. There is a specific moment when the number of subscribers increases in a drastic manner. It is called as 'network externalities' or 'snowball effect'. It means expansion calls another expansion. If the number of players increases, joy from playing the game also grows. For the fun of MMORPG has everything to do with other players. Even the most fantastic system of MMORPG is useless without others to play with.

Considering this network effect, the concept of critical mass is a decisive one. This is a kind of threshold a firm should pass over to get a juicy profit. By harnessing trading markets, firm can level down this threshold and go to the explosive stage of user population more easily. The increase of customers induced by trading markets is not just flat sources of revenue, but important triggering devices for big leap in the number of players.

¹⁰ There is some technical issues on interpretation of this equation. Are all of times that a player consumes going to trading markets? If he doesn't sell any of this time, the assumption of $t_p = t_b$ will do. If he want to sell or buy some of play times, t_p is different from t_b .

2.5 Demographic Dilemma and Endgames

Above discussions are appropriate for growing term, not for mature term of a game.

As Bartle[5] noted, in all MMORPGs the time comes when they get to the stage of aging period that population of the game shrink gradually. As time pass by, most players in the game become more and more proficient with fewer new. What is the result from this aging course of a game?

This is a clear threat or danger to economic balances of a game. What if most players already have enough abilities for level-ups or other purposes for reinforcing? Resources collected by players of end level are not consumed away but accumulated gradually.

In some manner, this is a kind of situation called 'inflation in virtual world economy. If a game is at its growing age, newly joining members buy items or resources from trading markets and it gives a solution to this problem. But at its mature age where the number of new players is reducing, tendency to accumulation of excessive resources is inevitable.

Accordingly, to have a longer life cycle, a game should provide players with mechanism or playgrounds to exhaust their excessive resources. We'll call these ways to consume away 'endgames.' This word means that if players arrive at its supreme level and cannot enjoy level-up contents anymore, some other contents must be prepared to make them remain in the game. In short, endgames are contents to linger the life-cycle of a game.

As Endgames is focused on resources consuming, trading markets have a role in intensifying this process. Image that the motive for endgames be so strong that even high level players who have enough abilities cannot help visiting trading markets for buying some items to prepare for endgames. With addictive endgame, even supreme level players might often want to buy kind of exhaustive items like healing portion. Endgames combined with trading markets do a nice job for preventing inflationary consequence of aging games.

3. Design Features of Lineage

As we've discussed, tedious and repetitive gameplay of *Lineage* has been a main cause of criticism. However, one-sided opinions are not helpful in understanding the spectacular success of *Lineage* in Korea. Although we could explain the mechanism of the trading markets in its own right, the explanation be never completed without understanding the linkage between trading markets and game design. So, the analysis on the game design of *Lineage* is the starting point in understanding the game and the peculiarity of Korean gaming situation.

3.1 The Tradition of Roguelike RPG

Lineage is the typical 'hack-and-slash' game where most of interactivities concentrate on the relationship with monster. Fighting monsters, obtaining experience points, and leveling up are at its core. In this sense, it might be off target that the game is short of the complex vision of world and design qualities that are to be found in other typical RPGs. This aspect of *Lineage* have hardly been found in other general western MMORPGs, to say nothing of special MMORPGs which have the ambition to create a whole new virtual world.

Even though MMORPGs created in the west have taken over lots of cultural tradition, the most important tradition is the design rules of RPG. As *Ultima online* is the successor of *Ultima* series with legitimacy, MMORPGs has been recreating systems of growth and visions of world originated from stand-alone RPGs in the network environment. So most creators of MMORPGs have thought it necessary to make game world as fine as stand-alone RPGs.

Before 1998 when *Lineage* appeared before the gamers for the first time, RPG was the most popular genre of videogames in Korea. Many creators had been engaging in making their own stand-alone RPGs. So, it was somewhat mysterious that the developer of *Lineage* had little concern with many western RPGs or Japanese RPGs like *Final Fantasy*, *Dragon Quest*. Instead of it, they were fascinated with a Roguelike RPG called *NetHack*.

What is the roguelike RPG? It is also definitely in RPG tradition, for players experience the growth of their characters in that game. But, unlike other kind of RPG, the roguelike has no detail consideration of the world where players live. Instead, the roguelike does focus entirely on the survival and the progress in ever changing environment. On the system of gameplay, the roguelike is the simplest of all kinds of RPG. The very simplicity that forces players to focus on level-up could sometimes bring an strong immersion or addiction.

The developing team of *Lineage* found out the addictive attraction of roguelike style RPG. They were trying to combine this game with massive multi-user playing environment. They changed the plain text letter which was the representation of monsters in game to the gorgeous and realistic graphics. The random actions of other gamers substituted for the tension of the endless dungeons of the original. The save system of stand-alone roguelike games does not allow the repetition of exact same situation. The save system in real time multi-user condition doesn't it, either. Creators of *Lineage* anticipated that fun factors in the roguelike were to be perfectly renewed with multi-players' gaming situations.¹¹

3.2 MMORPG for Beginners

Lineage as roguelike-style MMORPG provided its users with obvious goals and the intuitive system to be learned easily. It, however, was too simple and tedious game in its nutshell. At first time, both RPG gamers and developers in Korea who had been familiar with many kinds of stand-alone RPGs looked the game down. If so, who the hell had joined the game?

Lineage came to the world at 1998, when Korean economy had collapsed down suddenly by financial crisis that swept away Asian countries. Lots of business firm could have no choice but to restructuring, and a massive wave of unemployment had hit Korean society. Young adults who are to enter their first professions also had to stand still until they could get some

¹¹ The *Mu*, another smash hit MMORPG in Korea, was made by nearly imitating *Diablo* series. Thus, we can say most leading MMORPGs of Korea have been formed under the influence of roguelike tradition. Also, It is easily understand why famous western MMORPGs like *Ultima Online*, *Dark Age of Camelot* were doomed to have disastrous failures in Korea.

regular jobs.¹² It was not a coincidence that around 1998 the existing internet café called as "PC-Bang" ("Bang" means a café or a space in Korean language) underwent a deep change of its use into dedicated and special places for games. Since 1995, Korea government took policy initiatives for the information technology innovation at national wide, and as a part of this government supported PC-Bang to make people use internet more frequently. At first, customers visiting internet café were mostly stock market investors and business persons. After economic crisis, however, the unemployed and the male young adults waiting for their jobs were gathering around PC-Bang in which they could get a lot of job searching information with small costs. Around 1998, the demand of PC-Bang had grown explosively. Starting PC-Bang was one of the brightest business item of that time. Anyway, many boring people who were gathered in PC-Bang were trying to find their ways to kill times, so videogames based on PC were a natural choice. Actually, The success of *Lineage* had been owed a lot to them.

They were mostly male, and their age was twenties or thirties. Most of them had been far from dedicated game players. They might have experiences in playing games once or twice, but most of them had a feeling that videogames were too difficult to joy. But two games were coming into their eyes. They were *Starcraft*¹³ and *Lineage*.

As discussed previously, the game system of *Lineage* was so easy to understand that people did not hesitate to walk into the game. Never having any taste about other RPGs which were available in internet cafés, they choose *Lineage* for it was the easiest for all. Just hack and slash a hoard of monster and raise your character to upper levels. If you spend time sufficiently, you will be a king of the virtual world. This simple but obvious goal supported by the easy game system attracted many ordinary people. They willingly jumped into *Lineage* for expecting senses of achievement.¹⁴

In the west, MMORPGs have been formed and developed by long and rich traditions of RPG in general. But, *Lineage* did start from scratch, and made its own market without any help from

¹² According to official statistics, unemployment rate in 1998 surged up to 7.0% from 2.6% in 1997. the enormous wave of restructuring had deprived many of their works. The employment condition for young adults was even worse. Unemployment rate for this people might be over 20% according to some economists.

¹³ In Korea, people thought *Starcraft* as a digital version of chess or something like from the beginning. The age distribution of gamers who enjoy this game are so wide that *Starcraft* seems to be not just a videogame but a sport or an amusement. *Starcraft* in Korea had replaced Billiards or other stuff for fun fastly. *Starcraft* has made an industry by itself. There are a professional *Starcraft* leagues for the enthusiastic fans for watching games, a book publishing related with the game, and so on.

¹⁴ It is ironical that the bad case for Korean economy gave players a frantic enthusiasm of *Lineage*.

traditional game worlds.¹⁵ In 1997, the estimated population of enjoying videogames in Korea was around 800,000. After just two or three years, the number expanded to more than four million. In this expansion, *Lineage* acted a decisive role. *Lineage* jumped into mass market at just one leap, and this success was realized by huge inflow of newcomers who were outside of traditional gaming world before. *Lineage* was the first MMORPG in Korea that had succeeded in capturing mass market.

4. Lineage with Money Pledge¹⁶

Following two sections are based on our personal experiences in *Lineage* and interview and discussion with many others who have known the game very well. We are trying to get some meaningful data to prove our theoretical propositions, but data around trading markets are hard to obtain. Both developers and item trading mediators feel the release of data extremely uneasy. We are planning to construct data set from players directly. Until this scheme is completed, we'll put aside more empirical oriented research for the near future.

4.1 Level-free Items

We have said that the core logic of *Lineage* is 'hunting monsters as many as possible.' The only concern of gamers is what they should do for efficient hunting. Contrary to other MMORPGs which had the strategic variety, *Lineage*'s only solution was achieving level-up. It makes a kind of inter-reflexive situation. The efficiency of hunting is set by his level, and a players' level is determined by the number of monsters he has hunted conversely. The rich-get-richer and the poor-get-poorer. The poorer might be away from the game. For solving the problem, the development team of *Lineage* made a unique item system.

Generally, items are the basic part of every RPGs and can be used to attack, heal, reinforce in games. So gamers want to get more items. The probability of getting items depends on players' level. The higher players' level becomes, the bigger the odds is. So, players want to get items by any means. Most RPGs, however, have many kinds of restriction in using or putting on items for the balance of game or keeping the difficulty of game under developer's control.

As said above, *Lineage* has a inter-reflexive situation, and their simple design feature couldn't give the solution to the tendency of tedious and repetitive hunting. It might be a hard obstacle for some to join. If he had not enough time to invest, he could not elicit fun from playing. The developer's new solution to this problem was to get rid items of level restrictions. Items with high-powered efficacy can be equipped to the novice. NC Soft's original intention might be encouraging people helping each other, which is noble ideal for MMORPG, or a kind of reconciliation with technical limitations at that time. Anyway, designing item without level restriction made a strong opportunity for players to trade.

¹⁵ Even in Korea, longtime players who had been enjoying videogames laughed at gamers playing *Lineage*. Actually, criticism pouring from western gamers was not new.

¹⁶ The word "money pledge" is the working title of a documentary film by a Korean director named Il-an Kim

4.2 A New Way of Marketing

From its birth, MMORPGs in Korea could not be separated from internet cafés, PC-Bangs. One of leading cash cow of MMORPG developers came from it. A player who logs in at their home or private PC should pay a fee to the servicing company. But if he plays at internet café, there is no additional cost except a charge of using computer. Instead, developers or publishers charge PC-Bang owners by hours of usage in their games. The proportion of players who are playing MMORPG only in internet café has been more than 30% up to recently.

Previously discussed, PC-Bangs provided lots of the male in their twenties or thirties with nice escape from harsh realities. With this, The PC-Bang business grew up rapidly. After it had gone over the peak in 2001, competition was getting so fierce that just an ordinary price reduction was not enough to allure game players. Some of PC-Bang which had known the importance of items in playing *Lineage* started to give away free items to customers. At the first stage, this free gift was feasible because it matched with the interests of game servicing companies. Free item distribution by the company helped the game to be noticed. Also, PC-Bangs with a free item giving option were perfect places for MMORPG gamers. This joint but covert marketing move had brought a satisfactory result to both.¹⁷

PC-Bangs demanded developers to give off more. But, developers who were afraid the balance of games could be broken down suddenly stopped providing free items. Owners of PC-Bangs, however, could not stop using this marketing device. Some of them bought items from insiders of the company illegally¹⁸, and some other tried to find a solution of their own. At first, owners of PC-Bangs hired some part time workers to take full charge of collecting items of games for their shop. In the course of this, they were starting to purchasing items of ordinary players by market places or some bulletins set in internet community services. The origin of any market is needs of agents acting in demand and supply. In *Lineage* case, principal moment for trading markets was given by owners of PC-Bangs.

Meanwhile, initial free offering of item had made players learn to see the special importance of item in *Lineage*, and shown them advantages of getting stuff outside the game. At first, many players felt these advantages as just consumers of items, but PC-Bang's vigorous buying activities turned their view the other side around. Actually, subscription fee of *Lineage* was a little expensive to many youth without jobs.¹⁹

¹⁷ Of course, there were no official or definite evidences for proving inter-relationship or inter-dependence between developers and owners of internet cafes. But, we've heard lots of episodes on this secretive connection of the business from diverse sources.

¹⁸ Around 2002, there were some articles of newspapers on illegal item outflow by the staff of NC Soft.

¹⁹ Compared with other western MMORPG of \$10 monthly fee, the subscription fee of *Lineage*(around \$30) was high. This difference is felt even bigger when the price of a stand-alone game sold by \$50 in U.S. was just \$30 in Korea. Of course, real costs in playing online games were by far lower in Korea, because of its cheap usage fee of broadband connection.

Some of them started to take part in selling items of *Lineage* to continue their being in this virtual world. To begin with, it began as marketing device for alluring players, and with the help of item dependent game design and competitive marketing of PC-Bang, it had finally evolved into strange but lively markets.²⁰

Once players had plunged into the world where fantasy is mixed with money, *Lineage* was easily looked as not just game for leisure but also good workshop for income. Most of players who entered into *Lineage* after trading markets had established took it for granted that their achievement during playing should have appropriate monetary equivalence.²¹

4.3 Player Killing for Plundering

The establishment of trading markets also took a deep impact on the game itself. Bartle[5] had categorized traits of players by achiever, killer, socializer, and explorer. As *Lineage* has been focusing on leveling up, according to this, players in the game tends to become achievers. As *Lineage* have little contents to be found through players' interaction of variety or little room for inducing collaboration of depth, it is not probable that significant proportions of other playing types could be stabilized.

In addition to this design quality of the game, trading markets brought another meaning to be achievers. They were enjoying secondary compensation of money as well as primary joy of playing. As achievers in *Lineage* had another good reason to play, they were eager to obtain valuable items as many as they could. What was their next step? In a natural mood, they were trying attacking some weak points *Lineage* had for getting more items and more money.

Finally, Achievers had found the one that was perfectly matched with their worldly earning. That was "players killing(PK)", PvP without consent. At first, the developer of *Lineage* allowed players to fight and kill each other without any limitation.²²

²⁰ The size of trading markets around games is surprisingly large in Korea. According to an estimation by ItemBay, the leading item mediating company in Korea, transaction size in Korea amounts to 500 or 600 million dollar as of 2004! There might be some underestimation because this number was measured excluding trading between players to players without mediation. Changes in the growth rate of ItemBay are also impressive. Total transaction money in 2002 was around forty million dollar, 180 million in 2003, and 270 million in 2004.

²¹ We had the chance to interview some of *Lineage* players. One of the most interesting is their memories of playing. Almost every interviewee said most exciting moments was intense wars to capture other's castle, victories that had been shared with fellows or so. But, their last words were always on the money they've earned during the play. We didn't know clearly what was like their feelings, but it might not be possible that touching feelings of playing *Lineage* be separated from monetary calculation.

²² This feature of *Lineage* has been one of the hottest issues around the game. There have been many cases that players who had been murdered in virtual world did their revenge in real world. Some parent groups and social activists has denounced

The original form of PK in *Lineage* might looks weird. If a player is killed by attack of the other, he is instantly stripped of his equipments at the battlefield. This is a winner-takes-it-all as the literal meaning. As usual, the motive for PK is viewed as traits to harass others. The players enjoying PvP belongs to killers in Bartle's categories. In this view, killers are somewhat exceptional in that they have no interests in game design or contents.

But, this categorization does not meet the case of *Lineage*. Assume that a player kills a monster. It gives away just one or two items. How about killing a player? He might leave expensive items with his dead body. From the point of hunting efficiency, hunting players is by far better choice than hitting monsters. If an achiever is to play *Lineage*, what could be his rational choice other than to be a killer? As we've seen above, the logic of playing *Lineage* was tuned for achievers. By the advent of trading markets, achievers turned themselves into killers.²³

4.4 A Second Tide in Trading Markets

As PK had prevailed, this transformed trading markets once again.²⁴ PC-Bang had played a role of a trigger in forming trading markets, the spread of PK made trading markets be as more integral part of the game.

First of all, the demand for item expanded beyond marketing gimmicks of PC-Bangs. Many player who had learned about the powerful efficacy of good items, could not resist a temptation to get powerful easily. The problem was money to buy. Actually, the number of gamers had exceeded a critical mass, players who had an enough income to be equipped with considerable items in advance also appeared.²⁵ They consisted of a good proportion of demand side. But, as we said the poor also desperately needed to buy items without regard to their money. A way to meet their expenses was to alternate their positions in markets between demand and supply.

This is a form of investment considering efficiency in hunting by level-up or better status that is realized by bought items. Playing strategy might be following. At first, Buy powerful items and hack and slash monsters diligently, finally sell out items that have little personal uses but good values in trading markets. This, however, was still not so easy, because considerable play time was still necessary to raise their characters to the next level. But, PK between players did another fixing. Players could recover

that this feature is the most evil part of the game. At now, PK is not allowed in an old fashion.

²³ So called 'grief play' has been considered to appear outside of MMORPG design. Chek Yang Foo and Koivisto[6] found out that grief plays experienced by victims could be generated by achievers. *Lineage* was the case with this.

²⁴ Some players who had joined *Lineage* from the beginning exited the game with blaming PK-stricken game world. After this exodus, playing motives of *Lineage* became more homogenous.

²⁵ A middle age player who had become fond of *Lineage* by that time said that he paid around \$500 dollar for purchasing items in the beginning not to be killed by younger players. This amounted to more than ten times larger than monthly fee.

their investment by hunting a few players instead of monster hunting. If they had some luck, they might gain from these man-hunts. In a word, it increased demand of trading markets additionally that burdens to recovery investment got lighter.

The spread of PK had created two kind of new demand in trading markets. The first was due to competition in equipment between players. As item blundering from other players by PK get popular, equipment superior to the others' was key factor. Buying powerful items from trading markets was thought as a bet on the table to get an even larger amount of money. The second came from the defensive demand. It was common that higher level players were occasionally killing lower level players. Lower level players or newcomers could not continue their play without enough items to protect themselves. Purchasing items was not an option but a requirement or a unavoidable door fee.

But, at this, someone would ask really simple question. Why did people keep playing such an unpleasant game? If people quitted the game, it would wither out naturally. It was emotional effect of grief play that should be noted on this account. Players feel a kind of resentment from grief play inflicted, simply wanted to pay back in the same way. Yesterday' s victims turn into today' s killers by the help of the sword from trading markets.²⁶

Demand from ordinary gamers had made trading markets for *Lineage* stand on themselves. Even after marketing strategy of PC-Bangs had been gone away, the growth rate of markets did not decline. Deeply involved with trading markets, players were even more stuck with *Lineage*. In *Lineage*, devotion to the game was not just loyalty toward virtual world. The money he invested, the profit he expected to crop also were decisive lock-in factor of gamer to keep staying in *Lineage*.

5. Moment of Renewal by Endgames

5.1. Problem of MMORPG for Mature Term

As a game goes by its growing term that new comers are flowing in, it gets into mature term that the number of newcomers is stagnated. By this time, the population structure of level distribution also tends to be skewed toward the higher. The biggest problem from this stagnation is that there is no more interesting motive to keep them playing. It is troublesome situation for the game like *Lineage* focused on level-up. As we discussed, endgame is an indispensable factor if a game are to survive for a long period. *Lineage* that reached at its mature also had the same problem. The measure to count the problem was creating special quests for supreme level players. The developer intended to mitigate the problem to provide extremely hard to beat quests, but this is merely temporary remedy.

As the proportion of population in a game is under a bias toward high-level players, the productivity of a game rises gradually.

²⁶ Some Korean game experts said that PK was just a fun factor of the game. This behavior has almost nothing to do with serious emotional injuries. But, most of people who would buy items for the first time had an occasion that they had been murdered by some other players. Especially, PK by younger players tends to raise older victim' s anger. This had special meaning for trading markets because older players tend to be richer than the younger.

Items or other anything that are obtainable might be hoarded out. This over-production or accumulation without any use tends to infringe on motives for playing. As *Lineage* has a special linkage to trading markets, this hoarding of resources could be even more fatal. Without trading markets, accumulated items or resources of game are just a bunch of electronic data in virtual world. But, excessive accumulation also means that supply in trading markets tends to increase, and cause prices of markets to fall down. Somewhat strange, it is actually same to inflation watched in economies of real world, namely general depreciation of currency in a nation.²⁷

This inflation leads to reduction in income from trading items. Considering the stagnated number of newcomers in mature MMORPG, inflation is a trend, not a temporary disturbance. In worse cases, the expectation of enduring inflation could make some of players sell out all of items and exit out. Prices of items would fall suddenly and a virtual world could be endangered at its root.

If things are not following this gloomiest outlook, as far as joy of playing *Lineage* is entangled with earning income, reduced money income from trading markets bring about definite reduction in fun of the game.

5.2 Siege Warfare as Inflation Terminator

Entering mature term, *Lineage* had introduced new war systems called " siege warfare." This is a massive combat among guilds of players to possess ownership of a castle or a province. Actually, this was a tiny twist that existing warfare of guilds was turned into competition over a specific castle or province. But, siege warfare was a decisive moment to suck in high level players getting tired of the game.

Typical playing practices of siege warfare are following. Some of High-level players or representatives of a guild propose a target to attack. As many as 300 or 500 players are needed in engaging this warfare for just one time. Leaders hire some of PC-Bangs for the day, where some of fellow warriors are physically invited to wage war. Items of attrition through warfare are prepared in advance, the cost of which usually amounts to more than \$5,000. Total costs including other expenses such as costs for rental, transportations, foods(of course, used in real world) or so are around \$6,000. Summing up two camps, the money paid for a typical siege war is as much as \$12,000! One single surprising fact is that biggest part of the money is spent on buying items of attrition.²⁸

²⁷ The meaning of inflation in virtual world is not so clear. There is no possibility to be inflation or deflation in virtual world, because developers can adjust value of resource in a game at their will. But, inflation or deflation could be experienced among players during play. When the same sword is not so powerful as before, they are going through inflation. With trading markets, this kind of economic phenomena is vividly expressed by money term of real world.

²⁸ Some might be wondering why guilds that have considerable number of high-level players need additional items bought from trading markets. In a sense, this shows that siege warfare is extreme war of attrition. If competing guilds have similar amounts of ability and resources, conclusive factor that

Accompanied by such a massive money outlet, siege warfare has much more meaning than a naïve motive for achievement. Most prominent effect of siege warfare is that it can terminate problem resulted from accumulated items or resources of the game within a short period. Destructive inflation previously described is simply gone away. Also, a new demand on items created by siege wars can give trading markets another life. The spread of siege warfare made the tedious nature of the game even more unbearable. Newcomers who were eager to taste the sensation of siege wars could not help paying more in trading markets to get the necessary level to join a guild. Strong endgames not only attracted new subscribers, but also created additional demand in trading.

So, what causes players to wage this kind of warfare voluntarily? First of all, siege warfare provides players a new kind of fun in MMORPG. MMORPG is massively enjoyed contents by its word. But, this gathering is just approved in online networks virtually. But, combats of siege war are necessarily done by offline interactions with colleagues. This coming out from virtual world is not just for having more fun, but also for organizing more efficient direction of players to win a victory. Warriors are divided into some units by each role to perform. Usually each leader of combat units does not participate in the war, but direct orders to his teams with his real voice and action. This strategy of war makes it possible to fight in perfect order that could never be achieved with any online network communication.

Playing MMORPG under the breath of my teams could be a whole new experience. During waging siege war that has a lot more tension and excitement than ordinary group contents of MMORPG, their band of brothers are to be strengthened. Regardless of final result, they are sharing joy and sorrow each other. This is just a little change in normal endgame contents of MMORPG, but the meaning of siege war is a very fresh one to *Lineage* players.

5.3 Money in the Castle

Though there is new kind of joy, the extreme popularity of siege warfare can not be totally understood just by playing motivation.²⁹ On this account, it is necessary to review the economic consequences in capturing a castle.

A lord of a castle can levy taxes on every online transactions or exchanges at a certain rate.³⁰ Of course, tax revue in Arden always can be exchanged into real world Korean currency. Because of this advantage, the castle itself is often to be sold. By its qualities or other conditions, the value of a castle amounts to between \$50,000 and \$30,000. This is approximately calculated considering future income stream of a castle, so we can guess economic value that a castle in *Lineage* has.

determines the result of a fight might be additional resources supplied from trading markets.

²⁹ After introduced first by *Lineage*, siege warfare has been basic or core contents for most of MMORPGs in Korea. But, such a deep and strong impact made in *Lineage* has not been repeated yet.

³⁰ Considering that every offline contracts must be fulfilled in online too, the size of virtual trading in a castle is not so small.

Previously, we said that the total cost of waging war is around \$6,000. If a guild could take the castle in target, money compensation of warfare might be more than five times larger than costs in total. In most of cases, siege wars are taken by a guild or alliances among guilds. The cost of war tends to be split among its members admitting that the lord's charge is bigger than the others. Of course, economic fruits after victory should be shared among its brothers.³¹

The broad appeal of siege warfare in *Lineage* does come from income of real world as well as its fun motive of playing endgames. As we noted, firstly PK gave players a margin of windfall acquisition of items. After PK of this kind had been prohibited by the company, siege warfare provided another chance to big fortunes.

6. Conclusion

Having investigated the peculiarity of Korean online gaming culture, we realized the researches of western game academics were almost of no use. Many western game critics used to say about the ideal type of MMORPG, but we could not find it in *Lineage*. Nevertheless it made a huge big success in Korea and also in other Asian countries. Naturally we must ask one curious question to ourselves. How can *Lineage* do it?

Before *Lineage*, Korean gaming markets were as good as nothing. For around just ten years after the game, an industry around games becomes one of promising sectors in Korean economy. Its significance in world gaming markets also get so grown up that many people around online game industry keep their attention to Korea. There, however, has been almost no attempt to analyze it in an academic way.

Our direction to study might be a natural choice under following unique gaming situation of Korea; Players who are hanging on the game over one hundred hours per week but have little experience over any other types of videogame, large scale trading markets that fulfill the prime motive to play for most gamers, increasing cyber crime related deeply with MMORPG, and so on. We do not believe that the peculiarity of Korean gaming can be understood by cultural differences or real-world personalities of players participating in games.³² We've suggested that a lot of features in the game stem from its factors of game design or related social situations. It is for this reason that *Lineage* deserve to be observed more carefully.

Lineage has lots of interesting research subject that has been thoroughly overlooked. The game shows the dramatic process of revolutionizing an industry by a simple turnover of ideas, consequences of player's feedback to the game design itself, and social impacts of a game that are not imaginable before.

³¹ Ironically, such a strong band of brothers is occasionally broken by mundane greed. Frauds done by selfish lords are not so exceptional in the game.

³² We are strongly against a psychological study about *Lineage* players. [7] it links personality of a player with his online behavior. But, this point of view totally overlooks the design factor of a game. It neutralizes the innate nature of game design, and so releases game developers from any responsibility for moral and social aspects of their games.

Above all, the importance of trading markets in *Lineage* is the critical point for theorizing players' commercial activities in games. As we've showed by analysis of *Lineage*, commercializing tendencies of objects in games are not a result of the natural penetration process of economic forces which are outside games. In industries such as MMORPG where network effect has a deterministic role, any policy to increase the number of user would be desperately taken. Considering role of trading markets on this account provides a useful point in understanding business strategies of game companies.

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