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The Content Business and Its Externalities: A Ripple Effect Model

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Background and Objectives

In recent years people have been becoming more and more aware of the content business ever since 2000. While content can be defined to include motion pictures, broadcast programs, newspaper articles, novels, and video games, etc., many of these already existed before the content business came to be as well as well known as it is. However, the mainstream used to regard each kind of content and its platform as a single medium, for instance films and cinema, broadcast programs and broadcasting, etc., and seldom had the idea of content as we know it today. Today, thanks to progress in the spread of digital and networking technologies, different media now carry the same content. For example, a film that has been distributed on DVD, cable TV, the Internet, etc. Thus, we now have content and the media that carry that very content as two different entities and therefore hold content as a single category of economic goods as well as a single sector of industry[1].

Still, compared to other industries, such as mechanics, chemicals, and foods, etc., content sales in the content business are largely affected by consumer preferences, which are difficult to predict at best. Demand in the content industry is therefore uncertain and the business is considered to involve a great deal of risk[2]. Meanwhile, popular contents are believed to turn an enormous profit since manufacturing in the content business means simple reproduction and the marginal cost of this process is close to zero. There are many business models in the content industry, with the central one being the multiple use of a single content entity. In addition, some externalities around the content business affect the sales of products related to those particular contents. Externalities, such as content's cultural facet and influence on youth, are some of the features of content that are not shared by material goods. Such features even include an influence of a nation's image by a particular content, which is considered to be a source of that particular nation's strength in so-called soft power[3]. Thus, a single content is involved in a very large area of business operations with much complexity and can also affect society in many different ways.

In the content business today, large corporations that have a great diversity of able personnel are somehow making good use of their contents according to

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their employees' tacit knowledge, while smaller firms, with fewer staff often have to make do with inefficient business operations in order to promote their content products. Even the largest of the corporations have to depend on trial-and-error methodology as they attempt to expand their content business, since their employees' intellectual ability often cannot keep pace with the accelerated diversification of the content business in general. In terms of the value they provide to society, contents are involved in a wide variety of fields, such as entertainment, culture, education and information requisite for living, etc. Therefore, the value of contents far exceeds the realm of economic value, providing cultural value and affecting the psyche and behavior of consumers. In all these senses, contents are goods that are closely connected to the externalities surrounding them.

It is for this reason, that national governments have an interest in the promotion of the content industry for it is an issue that extends far beyond the reaches of the industry itself. National governments hold the expectation the industry should spread ripple effects to other industries, influence the nation's culture as well as education and create sources of soft power to influence other countries, while also needing to regulate contents that can possibly have an adverse influence on that nation's society. Therefore, governments need to take a greater variety of effective measures with regard to the content industry more than with regard to other industries involved in material commodity markets. As governments formulate policies for the content industry and determine the effects of such policies, administrative officials need to consider the ripple effects from the content industry to others, not only how such policies affect the content industry itself. Moreover, these actions must be evaluated within a new method based on a criteria of political effectiveness. However, we are only just beginning to see, the development of academic research and discussion on such effects. This new discourse is establishing a new system to evaluate political effectiveness. At the moment, the research we see only theorizes on the part of the individual content and business operations. One has yet to see any comprehensive study of the issues unique to the content business which cover the whole application of content forms. This includes distribution on multiple forms of media as well as its externalities. One reason for this is that, many studies of the content business have focused on a specific medium, such studies are unable to address the multi-channel development of today's more complex content business. Yet another reason is that the content business itself is very complicated and difficult to analyze.

The study described in this paper is intended to evaluate those issues peculiar to the content business, not shared by businesses involved in other goods. The ripple effect model which is established completely from the beginning in this research intends to present a fundamental theory of how to make the most effective use of content, by covering all these applications together with their externalities and by systematizing them. Up until now, there has been no previous work to totally explain utilized forms of content. Firstly, this composition will focus on primary forms of content, with which the whole business begins to develop thereafter and secondly considers how each business model makes use of the value that such prior forms of content have. In addition, this author endeavors to develop a systematic and cohesive theory of the externalities that arise from such manifestations. Those externalities include, in addition to complementary goods to original contents and other external effects, cultural value and other influences that contents can have on countries, regions and people; aspects which should not be viewed from our usual perspective of economic value. The author will categorize the myriad ways of developing the business of content and will develop a logical foundation in order to enable content business to follow readily available knowledge rather than tacit knowledge. This work also surveys the categories of externalities that arise from the content business as well as creates a systematized theory of how such categories relate to those influenced by original content. In addition to the methods of this study, the author has used documents as well as interviews[4].

The next section of this paper entitled, Great Diversity of the Content Business and its Externalities, describes how the content business is conducted, focusing particularly on what business categories exist and what externalities arise out of these categories. The following section, Systematizing Content Business and its Externalities: A Model of Ripple Effects, considers all the business operations and their externalities described in the preceding section as transformations of the original content's value. This transformation of value is also considered as a ripple effect. From this perspective, this author presents an unprecedented model of ripple effects that integrates and systematizes all the business operations and their externalities including original forms of content. The next section, Analysis of Using the Ripple Effect Model: The Case of Pocket Monster, surveys the business models actually employed in the content industry and compares them with the aforementioned model of ripple effects. The last section, Limitations of and Future Tasks for the Ripple Effect Model discusses issues for further study on the limitations of and future tasks regarding the model of ripple effects. As for the definition of "*content*", the author follows: "*what can be digitized and is an end in itself.*[5]"

Great Diversity of the Content Business and its Externalities

Utilization of the Bandwagon Effect[6]

The bandwagon effect, in which the popularity of the content amplifies the sales of the content itself, is employed in advertising by utilizing rankings. Film producers make effective use of the initial sales level and ranking as promotion because popularity influences popularity as a whole. As is in the case of film, book publishers strategically attempt to create bestseller results when a title is released. This fact indicates that some factors such as the recognition and popularity of the content, not the product quality, strongly affect probability of consumer's behavior. We can assume that two major factors are at work here. One is that many people want to follow the general trend and simply fit in. The other is that many depend on other people's choice as they determine what content to consume because the content cannot be known before purchase as it is an experience good. In the bandwagon effect, we see that such value turns itself into recognition and popularity while that of the plot of the content itself, remains unchanged. Another factor of the bandwagon effect is the externality of the network, which improves the benefit of each successive consumer due to the increased number of consumers, as is observed in video games.

It is also important to note that, this characteristic can work negatively as well, i.e., it can further depress the sales of an unpopular product. For this reason, the content business is often called a 'hit business.' This bandwagon effect also influences what is known as the "secondary uses of content."

Secondary Uses of Content

Businesses that make secondary use of content are thriving, which takes advantage of the characteristic that content reproduction is basically all it takes to produce a stock of content which is also found in virtually none of the industries dealing in material goods. These businesses can develop different markets based on the original content, thus allowing their growth. That the marginal cost is almost zero, a characteristic observed by Varian (1998), was presented in a study of windowing and versioning of information goods, which take advantage of this very notion. Considering windowing and versioning as effective ways to utilize information goods, including content, Uchida (2004) also discussed the derivative strategy as a secondary use, unique to contents.

With the first strategy, windowing tries to develop a new market by selling the same content on different platforms, for instance, selling DVDs of a film released in theaters. At almost no cost, this strategy transforms the value of the original content and since the two uses serve different user situations, they do not seriously compete against each other. With the emergence of DVDs, Hollywood executives were instilled with the fear that they might lose a significant portion of their income due to the new medium. This was largely due in part to the easily affordable prices that are attractive to many film enthusiasts. In fact, it turned out that DVDs attracted more people to the cinema and tripled box-office sales. The total sales from secondary uses, including DVDs, network as well as cable TV broadcasting, doubled box-office sales[7]. From this scenario, we attribute the over all increase in sales to the bandwagon effect on different windows.

Next, versioning refers to partial quality modification of the original content and/or its platform. Although these modified versions are aimed at the same user situation as the original is, they are differentiated in pricing and therefore marketed towards at different demographics of consumers. Further, the content producer develops new market sectors. In the case of versioning, the differentiation of content keeps consumers of the original content from using the revised form produced by secondary use. Again, the secondary utilization requires nearly no production cost. One outstanding example of versioning is selling a lower-priced paperback edition as well as a hardcopy edition of the same novel. Furthermore, many firms utilizing windowing actually use time-differentiated versioning, by releasing different 'windows' of the same content at different times.

The last strategy, the derivative strategy[8] refers to selling new goods that carry part of the original content's value. There are three types of this strategy. The first is typified by selling a music CD that has been used in a TV drama. The disc extracts part of the original content as well as produces and sells new content from the extracted part. This takes advantage of the original content's popularity and recognition, as well as becoming a part of it. Also, this kind of derivative strategy partly overlaps with windowing, since part of the original content on a different platform earns revenue.

A second kind of derivative strategy creates, rather than simply duplicates, a new content related to the original. An example of this is a film based on a novel, or vice versa. This strategy involves the creation and development of new content and therefore requires more production cost of the aforementioned kind.

Depending on the timing of creation and sale, two different patterns of effects exist. In one pattern, two different yet similar contents are released simultaneously to a synergetic effect. In the other pattern, the sale of the later produced content, benefits from the popularity of the previously successful one. As a prime example of this, in 1984 Kadokawa Shoten released a film and novel versions of the same content at the same time, with the catch phrase in the advert saying: "*Would you rather see it first and then read it? Or read it first and then see it?*" This strategy was engineered to tempt those customers who bought one of the two versions to try the other, while intending to expand the content's recognition by promoting both of the channels. Indeed, this strategy paid off. One way to utilize the derivative strategy is to create a synergy by producing and selling two contents related to each other at the same time, as this example demonstrates. The alternative way is a secondary use that takes advantage of an original form of content that had became a hot seller.

A third kind of derivative strategy creates new material products and services from a part of the original content. A well-known example of this is character items taken from an animated TV cartoon series. The majority of products resulting from this strategy are material goods, which do not have much to do with the original form of content itself, yet still transform its value[9]. A smaller portion of these results are in the form of services. Generally, this kind of strategy relies on only a limited part of the original content. Part of the content is transformed into physical commodities and services that enhance the satisfaction and the consumers who own them. Such secondary use of content form does not increase the utility of such items nor the services themselves. Rather, this kind of strategy takes advantage of the original content's popularity and recognition in order to improve the value of items not actually related to the prior form of the content.

While windowing and versioning modify the price, quality, time and place of use, of an original content, the modified versions are sold to those consumers who did not purchase the original, therefore increasing their customer base. Thus, the derivative strategy intends to sell a new product to consumers, including those who bought the original content, taking advantage of the original content's prior recognition and popularity.

In considering the secondary uses of content, based on some specific examples. We can see windowing and derivative strategy in play. In this paper, Table 1 shows the business operations and sales of two contents, simply called "A" and "B" which were two cases of successful secondary uses of a novel after the year 2000. In both of these exemplified cases, a novel was made into a film, which was then distributed on DVD format. Additionally, CDs of the music from those two films, as well as books related to the novel and film, were released. Then, the novel was further broadcasted as a TV drama, of which also a DVD and related character items went on sale. In the case of A, the novel first sold a million copies and was then later made into a film, which became a blockbuster. This film's success boosted sales of the novel synergistically to more than 3 million copies. Further, the novel was made into a TV drama as well as a theater play. In the case of B, the novel was also made into a film, which became a bestseller. Then B was turned into a Manga and then into a TV drama. The original content of A, the novel, sold more than 3 million copies and collected nearly 4.5 billion yen. The novel of B sold about 1 million copies and earned close to 1.5 billion yen in sales. The secondary uses of the two novels resulted in sales 5.8 times and 9.5 times more than those of the novels, respectively. Since the rights to air a TV drama of this kind is fixed at around 540 million yen, the income from such rights was the identical for the two novels despite the content's success. Especially significant are the sales of DVDs, which comprised of about 50% of the total sales for both A and B, if the sales of the film, TV drama and DVDs are combined. From the business point of view, TV is not just a source of income from the rights to air, but seems to play a vital role as an advertising medium and contributes considerably to the promotion of DVD sales. In the cases of both A and B, the related books, music CDs and character items contributed a small share of the total revenue. As described so far, businesses have actually already been carrying out the window and derivative strategies. Though there are some different patterns followed by those businesses, such business operations are still led by company officials experienced in the field, according to their tacit knowledge. Furthermore, many content businesses start to consider what steps to take to expand sales after they see an original content selling well. These enterprises seldom set up a business plan before the release of the original content.

Table 1 Secondary Uses of Novels and their Sales (In million yen)

	Novel		Film		Film DVD		CD		Books		TV drama		Drama DVD		Character items		Total	
	Sales	Share	Sales	Share	Sales	Share	Sales	Share	Sales	Share	Sales	Share	Sales	Share	Sales	Share	Sales	Share
A	4,494	17%	8,350	32%	5,880	23%	12.5	0.0%	50	0.2%	540	2.0%	6,488	25%	2	0.0%	25,767	100%
B	1,500	11%	4,800	34%	5,880	41%	12.5	0.1%	30	0.2%	540	4.0%	1,461	10%	1	0.0%	14,195	100%
Total	5,994	15%	13,150	33%	11,760	29%	25.0	0.1%	80	0.2%	1,080	3.0%	7,949	20%	3	0.0%	39,962	100%

Source: Prepared by the author, based on an interview[4]

The Externalities of Contents

Here, we consider externalities of contents, that is, how they affect those other than the businesses dealing in forms of content. Such externalities are utilized in many ways: for instance to promote sales of other goods, promote export, improve a nation's soft power, etc.

External Effects

Some of these externalities have economic effects on goods other than the content itself. These external effects can be divided into two types, according to the strength of their relationship with the content. In one type, goods already in existence strengthen a relationship with content and gain some effect from that content. In the other, some goods sharing the same environment with the content gain some effect from it as well, although they are not directly correlated to it.

The first kind of external effect is, above all, typified by the effects of the sales of the platform that carries the content. Shy (2003) stated that music CDs and CD players are two kinds of goods that are complementary to each other. As illustrated, contents and their platforms complement each other, that is to watch a TV program, you need a TV set and to play a video game, you need a game console - content is never usable alone. As sales of content increase, the corresponding platforms tend to sell more, as an external effect of the content proliferation.

In particular, game machines, in which specifications are not standardized with their contents like TV sets and radios are, have serious external effects from game software. A game machine for which there is a great deal of attractive software games available has a major competitive advantage in sales. For this reason, game machine manufacturers are trying to internalize game software, that is, the game companies are providing production assistance and sales guarantees to game software developers. Shintaku et al. (2003) surveyed the software strategies of two major manufacturers of game machines, Nintendo and Sony Computer Entertainment (SCE) and concluded both of these manufacturers recognize the importance of video game software to their business and are involved in strategic partnerships with a number of software companies. SCE, in particular, serves as the primary wholesaler that licenses the software games produced by its partner software companies. The game machine manufacturer shares with its partners the risks involved in sales and expenses of game development, to promote the development of software games designed for its machines. While SCE is strategically taking advantage of the positive external effects of game software, Nintendo is watchful of its negative effects as well. Before the Atari Shock[10], Atari, a U.S. game machine manufacturer at the time, produced bestsellers and correspondingly, countless software games appeared in the market. Many of those games, however, were defective and/or of poor quality and led consumers to lose confidence in the video game industry as a whole. Even sales of game machines and once-best-selling software declined. Learning a lesson from this experience, Nintendo has established an approval system for software games to be played with its machines, in order to prevent poor quality games from running on them as well as to protect the company's reputation.

It is also important to note that the external effects some existing goods can gain from a new relationship with content can go beyond the effect on platforms. Occasionally external effects can affect sales of goods related to the impression or information of the content. For example, the filming location of a blockbuster film attracts many tourists while food that has appeared in a TV program sells better. A survey conducted by the New Zealand Tourist Board in 2003 showed that 9% of interested tourists who visited the nation in or around 2003 were motivated to visit the country by the film *Lord of the Rings*. Content related to a place improves recognition and impressions of the place, while the content's value and popularity interest more people in visiting the concerned place. This effect is commonly used under the term "film commission." When food appears in a TV cooking program, that food's sales are boosted. Usually, there is no deal or capital relationship between the TV station and the food product producer - this is an external effect. On the contrary, this external effect can also bring down the sales of some goods related to the content, if the content ruins the impression of those goods. When existing goods gain some relationship with the content, some external effects arise. Because this is due to the notion that such a relationship between the content and the goods affected by it is clear-cut in such a case, internalizing such external effects can lead to expansion of the business.

Let us consider external effects for which such a relationship is unclear. In the

1920s, the U.S. government successfully promoted the nation's general export of products by allowing film exports take the lead, under the slogan: "Trade follows the films." What films showed or communicated had nothing to do with products being exported. Instead, exported films made moviegoers outside the U.S. develop a closer intimacy with and attraction to the U.S. The end result was an increased number of people abroad buying products from the U.S. In this case, the individual contents had a partial effect on exports. Such partial effects accumulated to create a positive impression of the U.S., which in turn promoted sales of America made products. In another example, the Korean Tourism Organization said that the nation's income from tourism from Japan exceeded 240 billion won[11] from January to September 2004 because of "Kan-ryu.[12]"

As described so far, external effects of contents can be divided into two types, according to the strength of the relationship between a commodity and content. In one type, goods already in existence strengthen their relationship with the content and gain some effects from it. In the other type, some goods sharing the content's environment gain some effects from it, although they are not directly correlated to it.

Non-economic Externalities

To conclude this section, we consider non-economic externalities affecting the content's environment and entities accompanying these. According to the Ministry of Economy, Trade and Industry of Japan (2003), in Asian nations, people who are exposed to Japanese pop culture have better feelings about Japan than do those who are not. Also, Nye (2004) views culture as a source of a nation's soft power and notes that Japan has many rich sources of soft power evident in its TV games, animated cartoons and films. Externalities of contents are not limited to only the economic sphere. Some externalities also affect people's lifestyles and ways of thinking, as well as diplomatic relationships between countries. Therefore, such externalities can even affect the relationship between society and nations.

There are even cases of some content externalities working negatively, for instance promoting crime and as a result adversely influencing youth. The national governments are playing a greater role in promoting or suppressing these externalities. Some negative externalities can do serious harm to society and are subject to certain legal regulations. In Japan, broadcast contents are under the control of the Ministry of Internal Affairs and Communications. By and large, newspapers and magazines that are slanderous to a society's morals are restricted from being freely published. Anything that can have an unjustified and undesirable influence on a particular individual can be a reason for compensation for damages caused by a violation of his/her privacy and/or defamation. On the other hand, some positive externalities that can assist a nation improve its culture receive assistance from the government. Japan's Ministry of Education, Culture, Sports, Science and Technology provides assistance to some forms of culture, primarily films, because these are considered to be artistically valuable. The Ministry of Foreign Affairs has been strengthened by utilizing content forms in its cultural diplomacy since 2000. The Japanese government believes that spreading more cultural content from the nation to the rest of the world will let people abroad better understand Japan as well as have a better sense of affinity. Uchida (2005) investigated how contents were used in FY2003 at 32 diplomatic establishments in 12 countries as part of cultural missions. Of the 1,298 operations of cultural missions, 35.8% employed some form of content.

As described so far, in this section we have organized our understanding of how contents and their externalities are used. As discussed, contents can serve a much greater variety of uses and purposes than most material goods do.

Systematizing Content Business and Its Externalities: A Model of Ripple Effects

Across all the forms of use of contents discussed in the prior section, what is common is that the value of original content can be transformed for secondary uses at very low production cost. Generally, intangible goods are available at an affordable cost and are valued for their recognition and popularity. In this section, we will focus on the different uses of an original content that morph the value of the original into a great variety of forms. In considering these transformations as ripple effects, we have systematized the uses of content forms. All the secondary uses described in the previous section can be classified into different levels of strength in the relationship between the original content, the goods and the environments that utilize the prior form and are therefore subject to the ripple effects originating from it. Here, the author defines six levels of such strength, with a larger level number indicating less strength – a negative correlation.

Firstly, the kind of economic effects discussed in the section, Utilization of the Bandwagon Effect, those that contents have on themselves, are given the Level 0, since at this level the ripple effect from an original content affects the sales of only the content itself. There is no doubt this is the strongest kind of relationship. Considering these effects, when the sales of the content expand (or decline), its popularity accordingly expands (or declines), which in turn boosts (or diminishes) sales further. With this kind of ripple effect, the value of the original content is affected and alters its recognition and popularity.

Next, we classify Level 1 as those economic effects created by secondary uses that maintain the original content as it is and only change its platform, namely those effects described in the subsection, Secondary Use of Content. This level covers windowing as well as some versioning that changes the platform.

Level 2 economic effects can be categorized as those secondary uses of contents considered in the subsection, Secondary Uses of Content, which are not of Level 1. In short, Level 2 economic effects are generated when part of the content is extracted and then made into new products. While the value of the original content is used mostly as it is at Level 1, the value is used partially at Level 2. Level 2 covers the derivative strategy as well as some versioning that modifies the original content. A CD containing the soundtrack of a film is part of the film's value, while the character items utilize only part of the value of that character, which is the original content in this case. Stationary, bags, and other material goods featuring imagery of a character, carry part of the character's value. Likewise, a novel based on a film utilizes part of the film's value, since the images, sounds, etc. are removed, while adding some new value to it in the form of the novel's text. The value of the film's popularity and recognition, however, are utilized. A novel based on a film takes full advantage of the film's popularity and character items carry most of the character popularity is from the original content. Additionally, at Level 2 there is an advertising method known as "product placement," which features a particular product in the content to boost that product's sales. Further, all of the A and B businesses in Table 1 are covered by Level 1 and 2. Transformed DVDs from both films and TV dramas are Level 1, while the other business formations are Level 2.

Level 3 refers to, among those external effects discussed in the subsection, External Effects, economic effects with which there is a clear relationship between the original content and the goods receiving the ripple effect from it. Level 4 covers the remaining external effects of the subsection, External Effects, in other words, those economic effects that goods receive from content sharing the same environment. In Level 3, these are observed as external effects. With Level 4 effects, however, the relationship between the original content and the goods affected by it is unclear and usually at this level, multiple contents of the same kind need to be gathered to promote sales. Therefore, compared to Level 3, it is more difficult for the beneficiary to internalize the contents. As long as the content provider sees a good opportunity for making some profit from the content, the provider will produce and sell the content as far as the market mechanism allows. If, however, the provider's content expenses exceed its private profits, it might not be willing to produce the content. This is a case of market failure. In such a case, if a society's benefits from the content exceed the production expense including its external effects, and are greater than the production expense, the content should still be produced. Some assistance from the government, etc. should be provided.

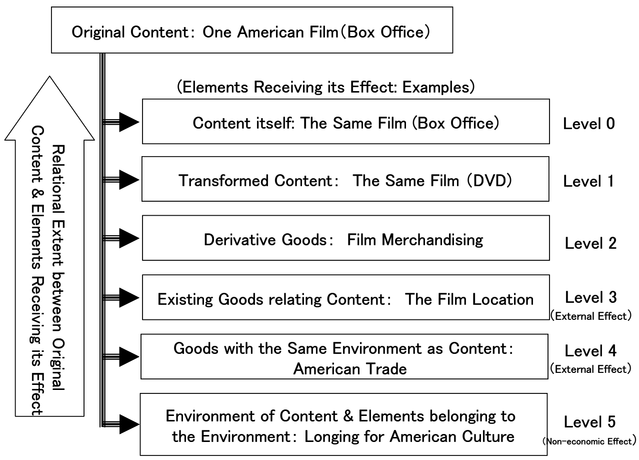
Since 2000, the Japanese government has been working hard to promote the content industry. In addition to expanding the scale of the industry itself, the government also hopes to produce some positive ripple effects on to other industries in order to achieve Level 3 and 4 effects.

Finally, Level 5 refers to those non-economic externalities considered in the section, Non-economic Externalities. These are categorized non-economic effects that affect the content's environment as well as entities accompanying it and a benefit to society as a whole. From the business point of view, as the Level numbers rise from 0 to 2, the content owner's profit margin generally declines. Since the relationship with the original content has become weakened. Levels 3 through 5 cover the externalities of contents that are outside the content business.

In this model, all of the business developed forms with the exception of its original content is considered to be secondary uses. All contents with exception to comics are considered to be secondary uses, for example, when TV animation is produced from comics and thereafter onto DVD or as character goods are derived from the TV animation. Another analysis on the TV animation as an original content is required, to clarify the order of logical composition. Yet this model considers all those operations except the original content itself as secondary uses. This is sufficient in the phase of determining what business operations will be carried.

As described so far, observing the large variety of uses of contents discussed in the section, Great Diversity of the Content Business and its Externalities, from the perspective of the ripple effect, we can integrate those uses in a system of six levels. This ripple effect model established in this research is completely original. Figure 1 summarizes this model of ripple effects classification, using U.S. films as an example.

Figure 1 Levels and Examples of Ripple Effect Model



Source: Prepared by the author

Analysis of Using the Ripple Effect Model: The Case of Pocket Monster

The ripple effect model is designed from investigations of real content utilizations because previously, there was no directly related work on this dynamic topic. As mentioned before, windowing, versioning and derivative strategy are correspondent to this model and the A and B business models in Table 1 also refers to this model. Furthermore, it was mentioned in the former sections that content externalities including the influences of located places and trade from a nation's exported content etc. are incorporated into this model.

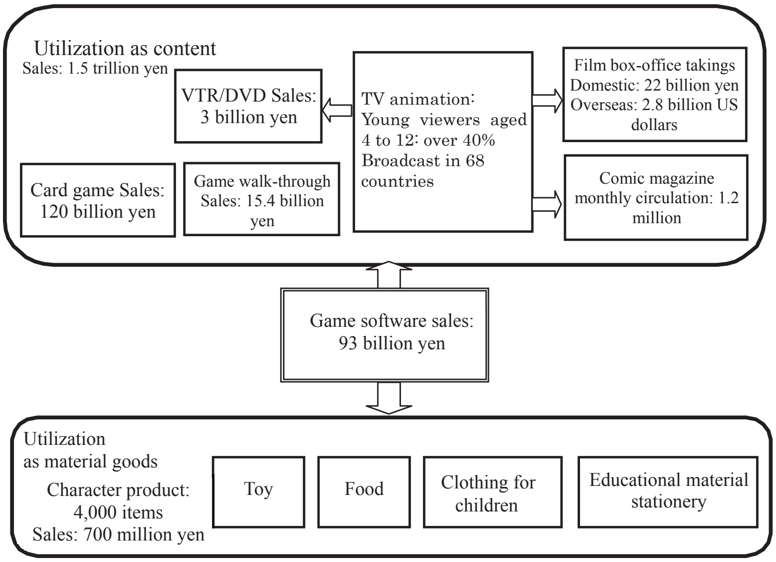
In this section, the effectiveness of the ripple effect model is examined with correspondence to the reality of the content business, adequately exemplified with the Pocket Monster business which diversified into one of the most complex content businesses and from which empirical data can be obtained. The Pocket Monster, also known as Pokemon, brought forth the motivation of Japanese government officials to promote the Japanese content industry because of the huge success as well as the variety of the ripple effect[13]. We can understand that this model is specifically useful, if all applications of the diversified Pokemon business corresponded to our ripple effect model.

Pokemon was originally produced in 1996 as a video game software and has now developed into a wide variety of business sectors. Pokemon then gave rise to a wide variety of derivative commodities and contents, including a card game, an animated TV cartoon, comics and many more. According to an estimate by the Ministry of Economy, Trade and Industry (2003), its economic effects amounted to some ¥2.4 trillion (yen), as shown in Figure 2. This is more than twenty times the sales of the original content, (the video game software,) which amounted to 93 billion yen. Hatayama et al. (2002a, 2002b) surveyed the details of this mega-hit and found that, as of the end of January 2002, the Pokemon video game software had sold 72 million copies worldwide, while the related software games had sold 42 million copies and the card game 13 billion copies. The TV animated series was translated into 25 languages and broadcast in 68 countries. The first and second Pokemon films were released in 40 countries while the third film in 29. The related video game consoles sold 12.28 million units. One main feature of the Pokemon business strategy was that it intended to create a synergy of multiple uses of the original content in order to boost Pokemon's recognition and popularity as well as to produce various commodities in order to increase the Pokemon goods' sales as a whole. Simultaneously with the release of the game, the companies which held the rights made Pokemon appear in a comic book format as a regular series in order to increase the sales of both the comic as well as the game. This collaboration with the comic let the game software reach sales of 600 thousand copies, a major hit in the video gaming industry. On top of this success, they released a card game sharing the same rules as the software version, however, requiring no game machine. While this card game was a great success due to its video counterpart's recognition and legion of existing users, the huge sales of this card game in turn made the bestselling video game even more popular. Moreover, the sales of the comic featuring Pokemon exploded, which in turn expanded sales of the games even further. One Pokemon commodity after another appeared, from a TV animated series, films, videos and DVDs to watches, character goods, a game strategy book and more - all creating a synergetic effect. After this record success in Japan, the producers exported Pokemon into the U.S. where it was met with great success. When the companies began to export, they released the same content at the same time on both sides of the Pacific. With the varied range of these products, the Pokemon business intended to attract consumers' attention to each and every Pokemon product with the hope of establishing recognition among them, rather than simply adding more content related products to increase sales.

Table 2 shows the major events that utilized the Pokemon content based on Hatayama et al. (2002b) and the level of the ripple effect corresponding to each event. Looking at the time intervals between different business operations in Table 2, although the game and the comic book were released at almost the same time, the card game appeared 8 months later and, the TV animation series 14 months later. A year and 4 months later the first Pokemon event took place, and the export abroad 2 years and 7 months later. It is important to note that the cultural exchange began 4 years after the first game release. Although the business intentionally incorporated a synergetic approach among different products in its strategy, with the exception of the comic (which was part of the strategy from the very beginning), the business was unable to predict that Pokemon would grow into such a diversified phenomenon. Thus, the resulting business operations proceeded gradually, learning by experience. Many of the business operations were not planned in advance. Needless to say, in the high-risk content business, it is impossible to plan everything from the beginning because a content business has to evaluate what happens and take corresponding actions thereafter. For instance, there are some obvious facts such as Level 5 effects, which are out of the control of the business alone, which take some time to be realized. One can collect such facts and learn from them to define a business operation plan, arranged in accordance with the different levels of the ripple effect that can also predict the time intervals necessary between different operations. This can help optimize the business plan.

Table 3 summarizes the business operations from the events on Table 2 for each of the six levels of the ripple effect. At Level 1, the game software is modified for other game machines as well as for export. Further, at Level 2, the Pokemon business carried out a great variety of operations including card games, magazines, game strategy books, TV animated series, films, music CDs, DVDs, a Manga series, character items, Pokemon aircraft, Pokemon events as well as stamp rally. Exporting Pokemon to many countries around the world to expand its market and familiarize the worldwide recognition of Pokemon. As a result of Level 1 and 2 effects, the companies made full use of the Level 0 effects. Due to Level 3 effects, a central player of the whole Pokemon business, Nintendo, a video game machine manufacturer, earned huge profits from the frantic sales of its game machines. In addition, Japan's Ministry of Foreign Affairs noted this worldwide Pokemon craze and used it in its cultural diplomacy. This is an example of the non-economic effects of Level 5. Although we have yet to confirm this in terms of specific facts, we can speculate that the worldwide Pokemon fever had some Level 4 effects as well, for instance attracting more foreigners to purchase Japanese products and to visit the country.

Figure 2 Sale results of the Pokemon business



Source: Prepared by the author based on the Ministry of Economy, Trade and Industry (2003)

Table 2 History of the Pokemon business and the corresponding levels of ripple effect

Level	Year	Month	Business operation (sales result)
0	1996	February	Game Boy software, Pocket Monster: Red and Pocket Monster: Green released
2		March	A comic named Bessatsu (Additional) Coro Coro Comic began running the comic series Pocket Monster
2		May	The first merchandised good, Pokemon Club released
3		July	Game Boy Pocket released
1		October	Pocket Monster Blue released through the magazine (Sold 600 thousand copies)
2		October	The Pocket Monster card game released
2	1997	April	TV animation series Pocket Monster went on air
1		April	Game Boy Light released
2		April	Nagatanien released Pokemon Curry (Sold 40 million servings)
1		June	Pocket Monster: Blue went on sale through the magazine and LAWSON stores (Sold 700 thousand copies)
2		June	A tournament of the Pokemon card game held
2		June	CD went on sale of the theme song of the Pokemon TV animation (Sold 1.85 million copies)
2		July	Tomy released Tenohira Pikachu (Pikachu in your palm) (Sold 2.2 million units)
2		August	JR East held Pocket Monster Stamp Rally
2		October	Tomy achieved its target in sales of Pokemon items, ¥10 billion
2		November	Video rental service began of the TV animation series
3		December	A health problem arose with the TV animation broadcast
2	1998	March	Pocket-sized game machine, Pocket Pikachu went on sale, functioning as a pedometer as well
2		July	ANA flew a Pokemon jet aircraft
2		July	Two Pokemon films released, collecting ¥4.2 billion in distribution income, the 7th largest in the history of films made in Japan
2		July	JR East and West jointly held the second Pocket Monster Stamp Rally
2		September	Pokemon TV animation series went on air from 111 stations in the US
2		October	Post Offices released Pokemon Card Set
2		November	5,000 Kentucky Fried Chicken shops all over the US ran a Pokemon campaign
2		November	Pokemon TV animation series went on air in Taiwan and Hong Kong
1		December	Game software for NINTENDO64 Pikachu Genkidechu (Pikachu is doing fine) was released
2		December	Pokemon TV animation series went on air in Hesheng and Shanghai
2	1999	January	Pokemon TV animation series went on air in Beijing
2		February	Pokemon TV animation series went on air from Kids Warner Brothers Network channel
1		March	Game software for NINTENDO64 Pokemon Snap released
1		April	Game software for Game Boy Pokemon Pinball released
1		April	Game software for NINTENDO64 Pokemon Stadium 2 released
2		July	The second Pokemon film won 4.9 million viewers and collected ¥3.5 billion in distribution income, the 8th largest in the history of films made in Japan
2		September	Pokemon TV animation series went on air in Germany, France, the Netherlands, Belgium, Austria, and Greece
5	2000	February	Foreign Public Relations Planning Dept. of Japan's Ministry of Foreign Affairs held Pokemon Lecture in San Francisco
2		July	The second Pokemon film released
2		September	More than a dozen papers all over the US began to run Pokemon cartoon series
2		September	Live Show, Pokemon on Stage held
5		September	Simultaneously with Sydney Olympic, the University of Sydney held a Pokemon event on its campus

Source: Prepared by the author based on Hatayama et al. (2002b)

Table 3 Pokemon business operations and their Levels of ripple effects

Level	Product / Event
1	Game software (Export), Game software (The game made applicable to other game machines)
2	Game software (The same game partially modified), Card game, Magazine, Books instructing video game users how to win, TV animation series, Films, Music CD, DVDs, Manga series, Character items (Food, Toy), Pokemon aircraft, Events, Stamp rally
3	Game machines, Sensory problem with watching TV screen
5	Lecture in International Relations, Event in a university campus for International Cultural Fellowship

Source: Prepared by the author based on Hatayama et al. (2002b)

The author shows that all ripple effects of Pokemon correspond to this model. The Pokemon business is believed to be the most complex business and in fact, set precedence for future business applications in the content industry. Indeed, inferring that this Ripple Effect model is convincing. Further analysis with more factual data is desired to enhance this model and its limitations as well as its future development which is explained in the last section.

Limitations of and Future Tasks for the Ripple Effect Model

Our model has enabled a systematic explanation of the increasingly complex content business and the externalities generated. The author hopes that this new model will provide a theoretical foundation for studies on the diversity of values and externalities unique to content. To enrich the model and make it of greater support to the content business and those involved, further analyses, based on more empirical research and factual data, are necessary. When a content business produces content and plans to apply the utilization strategy, it demands a way to clarify in what business field the content is expected to be most successful. To this end, a more accomplished tool is required which can more clearly show the business operations and externalities that are most promising for the content.

In addition, we need to incorporate chronological factors in our future model. Intuitively, this is easy to see since the effects of a higher level are less directly related to the original content as we have seen in Table 2. One can see that the higher the level was, the longer it took for the ripple effect to emerge. Still, we need to conduct more detailed research in order to formulate a comprehensive theory.

Another future task is that the study of content evaluation depends on different kinds of contents such as films, animations, video games, etc. We can speculate that, depending on the kind of contents, there are considerable differences in the ripple effects at each level. For instance, concerning Level 1, while a film can easily run across many different media, game software is limited in terms of such cross-media operations. Regarding Level 2, while an animated cartoon very often improves the value of other products, namely character goods related to it, a novel is not as efficient with such a strategy. If we can clearly classify the characteristics of different content types in terms of the levels of ripple effects they generate, we might be able to use our model as a tool in order to choose the right content for each purpose - for instance, what is good for regional promotion (Level 3) and what is effective in terms of cultural diplomacy (Level 5). Although this fact is commonly known from experience, our model can turn tacit knowledge into explicit knowledge and provide an effective criteria on which people can qualitatively clarify the different kinds of contents.

The author believes that the study described in this paper has provided a basic theory to help the content businesses of the future. Furthermore, in closing the author also hopes to conduct further research in order to refine the fundamental theory into a more accomplished and helpful one.

NOTES

1. The content industry scale of Japan is 13, 681,100 million yen, Media and Content Industry Division, Commerce and Information Policy Bureau, METI (2006), p.24.
2. Shintaku et al. (2003), about high risk of video game business.
3. Refers to "the ability to achieve goals through attraction rather than coercion" coined by Nye (1990).
4. Interviewee: Yasuyuki Tanaka, Media Rights Promotion (multiple use), Rights & Contents Center, Programming Department, TBS (Tokyo Broadcasting System) TV. Date the interview was held: June 13th, 2006.
5. Uchida (2004), p.319.
6. Leibenstein (1950).
7. Vogel (2004), p.68.
8. Uchida (2004), pp. 320-321.
9. An example of an exception to this is Sanrio's "*Hello Kitty,*" which was originally developed into character items.
10. The video game crash of 1983, affected whole industry.
11. Some 26.4 billion yen, if currency set at 1 won = 0.11 yen.
12. A boom of things Korean caused by Korean Content.
13. Hatayama (2005), pp.90-93.

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