

Koo, Hyunmo; Kim, Seongcheol

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Here comes the new challenger in Korean MCN industry :
The evolution of Korean MCN's actor-network

Hyunmo, Koo^a, Seongcheol, Kim^b

Abstract

This study analyzes how Korean MCN (Multi-Channel Network) industry has evolved within the context of the actor-network theory. The findings of this study were obtained through in-depth interviews with 10 key-experts. There are four stages according to the actor-network theory. According to the interviews, Korean MCNs are now in the enrollment stage. YouTube was found to be a focal actor who initiated the network, and MCNs actively enrolled other actors such as internet video platforms, OTT service providers, and consumer goods companies. This study found out that more companies would enter this MCN's actor-network in the name of investors or advertisers to catch young millennial audiences. The ability to create mobile contents was identified as a key for MCNs not to lose the power in the network.

Keywords : MCN, Multi-Channel Network, Actor-network, Mobile contents

^a Student in Master's degree, School of Media and Communication, Korea University, Media Hall, 145, Anam-ro, Seongbuk-gu, Seoul 136-701, Republic of Korea

^b Professor, School of Media and Communication, Korea University, Media Hall, 145, Anam-ro, Seongbuk-gu, Seoul 136-701, Republic of Korea

1. Introduction

No matter how AlphaGo, an artificial intelligence made by Google, becomes intelligent, there is a job that cannot be replaced by an artificial intelligence. It is a content creator. A content creator is a job which creates video contents on the video platform. It is highly expected as a prosperous job in the future. Korea Employment Information Service (KEIS) selected a content creator that should be supported by the government because it predicted a content creator could create lots of national wealth (Korea Employment Information Service, 2016). As content creators developed their contents as a business, the demand for managing creators grew.

YouTube, a video platform used by the majority of contents creators, defined a Multi-Channel Network (MCN) as an organization that cooperates with content creators to offer services including audience development, content programming, monetization and sales (YouTube, 2017). A MCN partners with content creators to produce a variety of contents and to perform marketing via the channel where contents are released (Gardner & Lehnart, 2016).

MCN is a rapidly growing business. As digital video advertising spending in the US is expected to increase to 9 billion dollars, the importance of MCN increases (Strategy, 2014).

Advertisers in the US invested 2.18 billion dollars in 2015. The total amount of advertising in 2016 is expected to be 3.84 billion dollars (Samsung Securities, 2016). As the video advertising market becomes bigger and bigger, more companies joined or created MCN to promote marketing, to create original content and to develop a new audience. Indeed, Disney purchased Maker Studio for 500 million dollars, Warner Bros. acquired Machinima and DreamWorks bought for 33 million dollars.

Contrary to the growing importance of MCN, few researchers studied the ecosystem of MCN because it is a relatively recent concept. Even, previous research usually focused on the business model, strategic actions of legacy companies. Notably, researchers pay little attention to Korean MCN industry even though MCN companies in Korea lead content

trend in South East Asia. As a result, a research on the development of MCN industry network is still in its early stage.

Thus, it is meaningful to look into the prospect of Korean MCN ecosystem. This study aims to identify main players of Korean MCN industry and discover how Korean MCN has evolved within the context of the actor-network theory. The ultimate goal of this paper is to define who will win the focal position in Korean MCN industry as it develops.

In this paper, Section 2 provides an overview of MCN including the definition, background information and the state of the Korean MCN market. Theoretical framework and research questions and the methodology are explained in section 3 and 4. In section 5, in-depth interviews and surveys are presented. Conclusions including analysis of MCN within the actor network and discussions with interviewees and implications will be summarized in section 6.

2. MCN overview

2.1. Definition

MCN is a difficult concept to analyze because it is a relatively recent concept. However, in fact, the history and the definition of MCN are aligned with the development of YouTube because the term "Multi-Channel Network" was originally created by YouTube (2017).

YouTube was instituted in 2005. At that time, users created contents and uploaded them on YouTube for free. As Google acquired YouTube and made revenues via advertisement, YouTube considered how to create well-made contents. YouTube decided to share its benefit with creators on the platform. A Multi-Channel Network was established among these discussions. As YouTube started Partner Program which is a service to monetize creators' contents and share profits via advertising on its platform in 2007, there was growing demand about managing contents and creators and sales. A lot of famous

MCNs including Machinima, AwesomenessTV, Maker Studio were established since YouTube's Partner Program launched (KISDI, 2016).

A Multi-Channel Network was defined as a corporation affiliating with content creators to offer services including audience development, content programming, monetization and sales (YouTube, 2017). Muller (2014) defined MCNs as a mediating company between creators and advertisers. It means that MCNs serve a role to attract more users and advertisers to monetize contents. Usually, the goal of MCN is focused on the management. In this sense, MCN is usually compared to entertainment management business (Koh & Youn, 2016).

2.2. MCN Market

The importance and the profitability of MCNs have been raised since global online video advertising spending grew. According to Statista (2016a), the total amount of online video advertisement spending was about 17.7 billion dollars. As YouTube is the most dominant player whose market share in the online video market is about 77.6% (Statista, 2016b) and it absorbs video advertisement in the web, MCN is expected to grow faster and higher than ever. (Strategy&, 2014). Samsung Securities (2016) also reported that the total amount of advertisement spending on MCN in U.S is expected to be 3.84 billion dollars. It is twice as big as the spending in 2014. Thanks to growing demand for advertising, the estimated total value of top 100 YouTube MCN in the future would be worth 10 billion dollars (DigitalTVEurope, 2015). Fig. 1 illustrates the total advertising revenue in influencer marketing to increase from \$5 to \$10 billion dollars until 2020 (Mediakix, 2016).

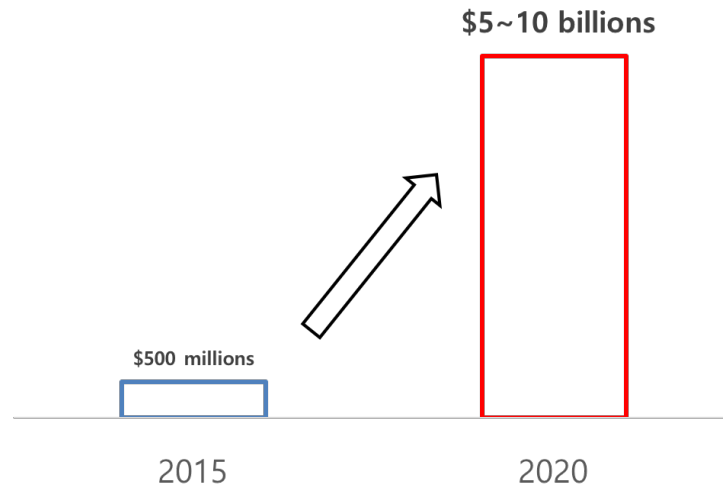


Fig. 1 Expected total influencer market size from 2015 to 2020. (Source: Mediakix (2015))

As more and more millennials spend their time watching online videos, MCN is regarded as a key to reaching young millennial target audience. According to New York Times (2013), about 34% of millennials watch mostly online videos without watching any videos on broadcast TV. In effect, online video viewers only in North America are about to be over 200 million in 2016 (ParksAssociates, 2015). In the light of this consideration, traditional content providers were eager to invest or acquire MCNs to catch the young audiences who never sit in front of TV.

MCN serves as content channels which can't be produced by previous media corporations like CNN, BBC, DISNEY because of regulations (KISDI, 2016). MCN's content is created in a user-oriented way and adopted many unique approaches in monetizing contents (Cunningham et al., 2016; Mann, 2014; B. Mueller, 2014). Those were reasons why MCN has diverse contents such as gaming, music or comedy compared to old media (PwC, 2014). At this point, PwC (2014) regarded MCN's content as a complementary content to the established broadcasters.

To measure how MCN has been grown, analysts focused on the investment in MCN companies. Indeed, traditional content providers invested more than 1.65 billion dollars in MCNs (Tubefilter, 2014). For example, Disney purchased Maker Studio for 500 million

dollars, Warner Bros. acquired Machinima and DreamWorks bought for 33 million dollars (KISDI, 2016). The recent investments were followed by not only broadcasting companies but also other companies including streaming platform, telecom companies. Since many corporations from other industries such as movie industry, gaming industry, telecom industry have invested MCN industry, the MCN ecosystem is expected to grow larger than now.

As a result, even though MCNs began with YouTube, MCNs' ecosystem is supposed to expand beyond YouTube.

2.3. Korean MCN history

In Korea, YouTube Partner Program was launched in 2011. However, any MCN corporation was established until CJ, a major company in Korean entertainment industry, entered the market because there was no successful individual creator in the platform (KRPA, 2016). According to Software Policy & Research Institute (2016), there are more than 100 MCN corporations and the total value of MCN industry in Korea is more than 200 million dollars. Koh and Youn (2016) also demonstrated that MCN industry in Korea is sustainable and expected to lead the growth of the online content market.

Many companies have entered MCN industry in Korea. CJ, a major player in cable and entertainment industry, established DIA TV. DIA TV has more than 700 creators, 36 million subscribers, 800 million monthly views and has signed MoU with international video platform such as DailyMotion, WebTV Asia (Kim, 2016). It ranked 30th on the global YouTube ranking. Treasure Hunter, which attracted an investment of 16 million dollars has more than 120 million monthly views. Treasure Hunter ranked 80th on the global YouTube ranking.

Traditional broadcasting companies also followed the rapid expansion of MCN industry. KBS, a national broadcasting company, established Yetti Studio offering management and content education service for creators in 2014 (Dongailbo, 2017).

According to Media Today (2016), SBS which is a national broadcasting company also set up an institution for MCN contents.

As Korean MCN industry and the global online video market show signs of rapid growth, corporations from other industries are eager to enter the industry. Naver, a company which has the dominant web service in Korea and usually compared to Google in Korea, launched PlayLeague which affiliates with MCNs to create contents for a young audience (Joongangilbo, 2015). YG Entertainment, which a leading entertainment in South East Asia, also showed a plan to invest MCN industry by hiring famous TV program producers (Starnews, 2017). WeMakePrice, a social commerce platform offering e-commerce, also cooperated with Leferi which is a company targeting young female millennials to boost sales. Hyundai Homeshopping and GS SHOP, popular home shopping channels, also showed the plan to attract millennials with cooperation with MCN companies and creators (The PR, 2016).

As a result, MCN industry in Korea has shown the similar process as it aggregates more stakeholders in the ecosystem and develops beyond YouTube ecosystem. Thus, it is crucial for MCNs to predict who will enter the market in the future to predict its growth and geography in the market.

3. Theoretical Framework and Literature Review

Previous researches investigated MCNs' business models or analyzed how traditional media firms reacted to MCNs. Some researchers focused on which factors affect the motivation of consumer's willingness to pay for MCN contents. Kim (2016) tried to identify the creator's loyalty to MCN.

Koh (2016) investigated MCNs' business models on online platforms such as YouTube and Twitter. Song (2016) adopted the theory of disruptive innovation to find out global MCNs' business models. Some researchers studied how traditional media companies reacted to MCN's expansion and regarded MCNs as a cultural event in the digital era (Yim, 2016; Lobato, 2015). There were approaches to study MCN using case study, to investigate

MCN regarding management of technology (Cunningham, Craig & Silver, 2016; Muller, 2014).

Therefore, it is evident that researchers tried to define MCNs and to investigate MCNs' business models. Most researches explained each MCN's business model or strategies. However, there was no research investigating how MCNs interact with other companies or how they build up their ecosystem. There was no single study focusing on how MCN ecosystem has developed and who will enter this ecosystem.

This paper would define the MCN industry as a network between various actors from the viewpoint of sociology, and measures the maturity of this network and divides the steps to understand the current position of the MCN industry.

Therefore, it would be meaningful to study how MCNs build up their industries and interact with companies in other areas. This study would try to study the origin of MCNs' industry network in Korea using actor-network theory.

3.1. Actor network theory

This study uses the actor-network theory (ANT) to analyze MCN industry. The system and innovations are described as a result of collective achievement of diverse actors (Van de van, 2005).

Latour (1987; 1996), Law (1992) introduced and clarified the actor-network theory. It concentrates on the multi-directional interrelationships of factors and actors in the system. Actors are referred to from non-human or human to individual or group which can modify the state of the network by making different actions. (Latour, 1987). Especially, the theory focuses on the interactions among actors in the network. Callon (1986) defined the theory as a theory about the network which is an actor whose activity is networking various elements and a network that can redefine and change the component at the same time. The actor-network theory regards network as a result of interactions among heterogeneous actors.

In this sense, this theory is used to explain how networks form, develop, grow. Actors consist of human actors and non-human actors including an important technology in the system. The heterogeneous actors (society, organization, actor, technology) composed network, and this network is the actor network.

The network is not a structure fixing actors into the network but close to coordinated one which is similar to an ecosystem (Shim & Shin, 2016). Unlike a technological network, the actor-network may lack compulsory paths, strategically positioned nodes (Latour, 1996). Successful networks are created with enough body of allies having aligned interests. ANT regards the network builders as the focal actor who can develop the network and mediate each actor's interest (Cressman, 2009). After the establishment of networks, actors act in a way which is to maintain the network (Cressman, 2009). ANT views material objects as an active role determined by their position in the networks of interrelationships (Sørenssen, 2016).

The focal component of this theory is 'translation'. Translation is a process for actors to create the central network granted that all the actors agree it is meaningful to build and sustain the network (Young, Borland, & Coghill, 2010). Translation is the process that can create convergences and homologies by relating things that were previously different from each other (Callon, 1981). According to Troshani (2014), translation includes several negotiations varying by the various actors' interest. Actors' interests are aligned to obtain a stable network to get the highest benefit from the network. Translation is the act of constructing a network of actors, interpreting one actor's understanding or intention with another actor's language. The process of translation is the process of making an order in actors' network to obtain power among actors. An actor would break existing networks and bind them into the new network. In this sense, translation is a behavior dedicated to develop the new network among actors. Through the translation, actors create allies and align their interests.

Even though it is hard to distinguish each stage exactly, there are four different stages in translation. Translation includes problematization, interessement, enrollment, and mobilization (see Table 1).

Table 1

Four different stages in translation process

Stage	Description
Problematization	A focal actor convinces potential allies to join the network to solve a common problem.
Interressement	A focal actor convinces other actors to follow the characteristics and interests defined by the focal actor and to join the network.
Enrollment	Enrollment involves multilateral negotiations to persuade diverse actors to strengthen and to stabilize the network.
Mobilization	The focal actor reassures allies should operate according to their agreement not to betray the network's interests.
<i>Source: Akrich & Latour (1992)</i>	

In the problematization stage, a focal actor defines the characteristics and interests of other actors and try to figure out an association with other actors (Callon, 1986). An actor, initiating the development of the network, could suggest there is a common problem among certain actors. The focal actor would convince them to join the network to solve the common problem (Wang et al., 2015).

In this stage, the focal actor would define and construct the common problem and identify who are related to this issue. The focal actor would share the way to solve the problem. Problematization is the stage to design a problem in a way that different actors could have a compatible understanding regarding the problem and the solution. It is a stage declaring actors in the network share the same problem and the interest even though actors are heterogeneous (Troshani, 2014).

In problematization, focal actors establish an obligatory passage point (OPP) which is the point where all the actors in the network must pass. The focal actor is trying to make its

technology or program as OPP. It is important for the focal actor to create a presence that other actors cannot but depend on. It is a dutiful passing point that attracts actors to their side by letting other actors go through the network (Latour, 2005).

After problematization, in the second stage, *interessement*, the focal actor convinces other actors to follow the characteristics and interests defined by the focal actor and to join the network. *Interessement* is a stage generating lock in effect to other actors by making allies with them (Wang et al., 2015). The focal actor would convince others to make allies with each other in the network in terms of developing a solution to their common problems. Each actor with different skills would make an ally with each other because of resources (Troshani, 2014).

Then, during enrollment stage, new actors accept the definition of focal actors, embracing the underlying process of the network, and finally join the lately established network. In enrollment, more diverse actors outside the network would be persuaded to adhere to the network not only by the focal actors but also by other actors in the network. According to Callon (1986), enrollment involves multilateral negotiations among actors to strengthen and to stabilize the network. It is a mature version of *interessement*. Walsham (1997) argued successful enrollment would align actors' diverse interests.

In the last stage, *mobilization*, all the actors in the network are persuaded and have the trust that no actor would betray each other. As a result, the network becomes stabilized. In this stage, the focal actor reassures allies should operate according to their agreement not to betray the network's interests (Troshani, 2014). In *mobilization*, temporary stability could be achieved in the network when allies' interests are institutionalized and are not seen as controversial and don't need negotiations anymore (Mähring et al., 2004). Existing actors in the network would mobilize resources toward solving the problem and try their best to secure the network (Wang et al., 2015).

As a method, ANT is used as a tool to analyze science and technology under making progress. Indeed, previous researches were focused on the newly created technology industry such as WiBro, Fintech and Cloud computing (Park, Kim & Nam, 2014; Shim & Shin, 2016).

Even though MCN industry does not depend on certain unique technology, it started from YouTube which is the technology company who was able to monetize content through the technology innovation. Also, YouTube is the dominant video sharing platform in all ICT platforms (Cline, 2014). In this sense, YouTube itself can be a de facto standard. It has become widely used by all the actors in the network.

How MCN industry can be analyzed through ANT perspective. Monetization through YouTube, growth based on YouTube and the expansion beyond YouTube and stabilization of the ecosystem can be explained as a process where technologies are devised (problematization) and associated with other actors (interessement, enrollment, and mobilization).

3.2. Research Questions

As MCNs in Korea is expected to grow continuously and the network is going to expand when many actors enter, it is crucial to analyze the ecosystem in the actor-network perspective. With this in mind, research questions are proposed:

RQ1. Who initiated the development of MCN actor-network in the problematization stage?

RQ2. Who are the focal actors that have been successfully translated in Korea's MCN industry?

RQ3. Which players have entered Korea's MCN industry during the interessement stage?

RQ4. At what stage is Korea's MCN industry located regarding Actor Network theory?

RQ5. Will MCNs still act as a focal player in the network? Or Will they be niche players?

4. Methodology

This study takes a case study approach to analyze MCN industry in terms of actor-network perspective. A case study as a method helps researchers to understand the whole picture of the certain circumstance or event (Yin, 1984; Anderson et al., 2005). It was widely used to study recent phenomenon (Park, 2014; Kim, 2010; Shin, 2007; Yoo et al., 2005). Also, this case study approach is an efficient methodology to study this topic because MCN in Korea is a subject to be investigated by Korean industry. Also, there are empirical pieces of evidence to be collected in Korea.

To collect data, this study usually focused on two major sources. The first one is archival material collections. They include government publications, research papers from consulting firms, banks, industry reports from companies, academic papers, news articles and archival materials related to MCN industry. They can provide factual information and statistical figures relevant to MCN industry.

The second one is an in-depth interview with experts in the industry. This study adopted face-to-face meetings and e-mail exchanges. The interviewees are experts who are directly or indirectly associated with the development of MCN industry. This study interviewed experts in the industry, researchers who wrote articles about MCN. The details are as for Table 2.

Table 2

The profiles of interviewees

Interviewee No.	Organization	Expertise / Major
1	SK Research Institute	Media Industry, IT and Economics
2	Seoul National University	Media Industry and Economics

3	Korea Information Society Development Institute	Media Industry, ICT and Broadcasting
4	DIA TV (MCN company)	Media Industry and Broadcasting
5	DIA TV (MCN company)	Media Industry and Broadcasting
6	Treasure Hunter (MCN company)	Media Industry and Entertainment
7	Multi-Channel Network Association	Media Industry, Entertainment and Broadcasting
8	SM Ent.	Media Industry
9	Afreeca TV	Media Industry and IT
10	Independent YouTuber	Media Industry and Business

5. Results

5.1. Problematization (2011~2013)

Problematization is a stage where focal actors suggest a problem to aggregate actors into the network (Callon, 1986). Even though there were many video platforms in Korea where users could upload their videos, people did not regard video creators could be a sustainable job until YouTube in Korea adopted Partner Program in 2011, which is sharing advertising profits with creators. In this sense, most interviewees and experts agreed YouTube is a focal actor who initiated the development of MCN actor network.

YouTube presented the problem of profitability of creators and suggested a solution to solve the problem of profitability for creators. To fix this problem, YouTube collected

creators, viewers, advertisers, and introduced the concept of MCN. They have different interests. YouTube needed contents to catch the audience, and creators needed commercialization of their contents, viewers needed well-created niche contents, and advertisers needed viewers. The network is described in Fig. 2

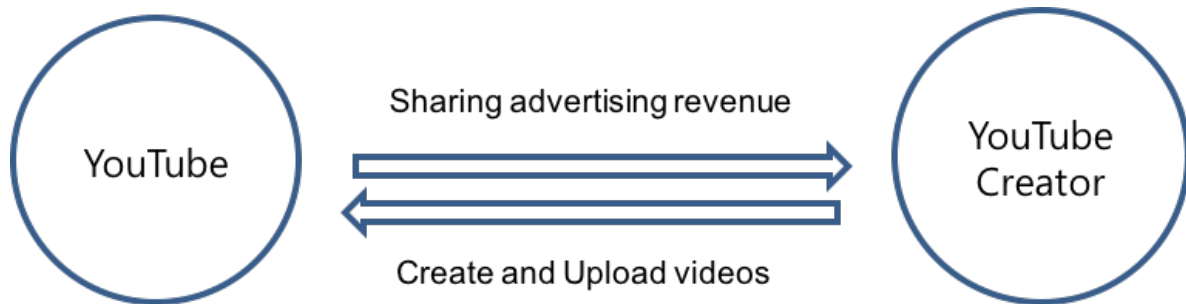


Fig. 2 Actor Network Configuration - Problematization

The timing of the problematization is judged from 2011 to 2013. During this period, advertisers, video platforms, and users would be contacted using YouTube.

For the first time in 2013, native MCN operators came out, but the signs started in 2007. Even though they could not make sustainable business models, there were creators in video platforms such as Pandora, Afreeca TV. However, interviewees did not call that moment as the problematization because and only a few of them made money through it (Business Wire, 2007).

The MCN industry has started with the introduction of YouTube's partner program in 2011. Although the first MCN firm – CJ creator group - came out in 2013, the industry was formed in 2011 because users began uploading videos after the introduction of the YouTube Partner Program.

Of course, there were domestic video platforms such as Africa, Pandora, and Daum Pot. However, it did not provide the creator with a stable revenue stream because the size of the viewer itself was small and there was no reliable business model. The biggest growth is due to the introduction and regulation of YouTube's partner program. Some interviewees and articles told there was a political issue at the time. Pandora, Daum Pot, and Africa were

regulated, and YouTube was not regulated because YouTube was a foreign company (The Kyunghyang Shinmun, 2010).

Except for one interviewee, all the interviewees insisted that the Korean MCN industry can't ignore YouTube's influence. Since the introduction of YouTube's partner program, a lot of Korean video content has been produced. In other words, the influence of YouTube has been enormous since 2011 when the partner program was introduced in Korea, and it is estimated that there are not many MCN companies to survive by excluding YouTube.

Until now, there is no MCNs that can survive without YouTube. All the interviewees said that the MCN business in Korea is not sustainable without YouTube because of its dominant position in the market. According to ZDNet Korea (2015), YouTube has dominated 80% of total page views in Korea online video market.

Although MCN companies are trying to enter overseas markets such as China and Southeast Asia and collaborate with companies other than YouTube, no one can pass over YouTube because it is highly effective. Some interviewees from MCN companies said the revenue from YouTube is not absolute because of growth in branded contents and advertising on other platforms.

However, they cannot work without YouTube because it is the most common platform in the world and advertisers especially regard YouTube as an index of evaluation. 2 Interviewees said there were several trials for MCNs to take the power of YouTube. MCN companies try to aggregate creators independently of YouTube and try to create original contents through other platforms to be independent of YouTube continuously. The creator and creating original content. However, all of them were unsuccessful till now.

5.2. Interestment (2013~2015)

Interestment is a stage that the focal actor persuades other actors to accept the concept defined by the focal actor (Callon, 1986). In this sense, interestment in MCN industry in Korea is from 2013 to 2015.

A variety of MCNs were launched in 2013 from the Creator Group, previous version of DIA TV, and legacy broadcasters are also actively involved which promoted MCNs to have incorporations with large companies. The network is described in Fig. 3

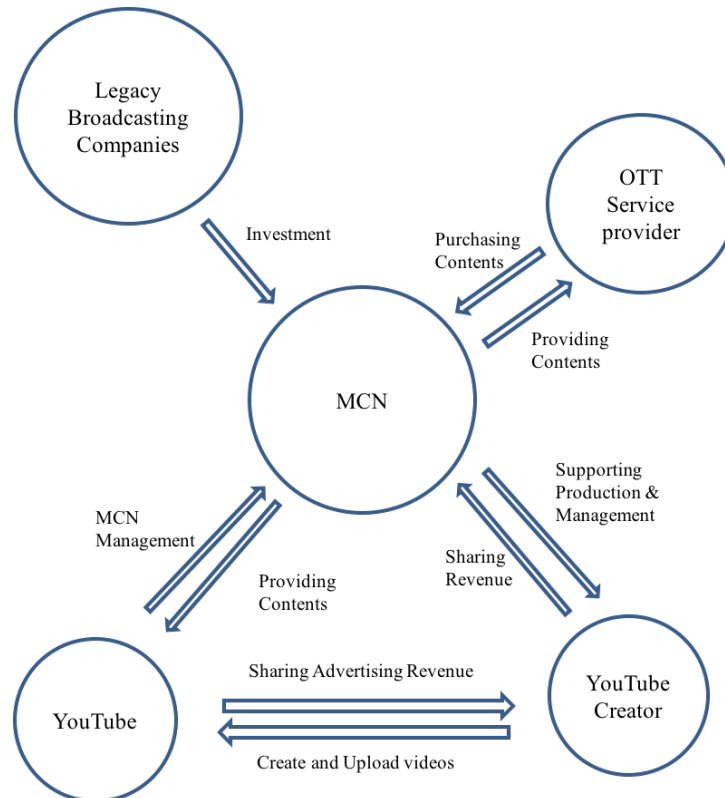


Fig. 3 Actor Network Configuration - Interressement

YouTube continued to bundle its creators into YouTube through advertising. To collect more advertising, YouTube persuaded existing companies in the content and advertising market to enter the MCN industry. Interviewees said YouTube's effort contributed to the formation of early MCN companies in Korea. For example, CJ created Creator Group in 2013 and jumped into the MCN industry. However, there was no reliable business model except YouTube although CJ has plunged in the market. MCN companies in this stage could not develop revenue models other than advertising. As YouTube's

market dominance grew, YouTube's interests were aligned with the benefit of creators and MCN companies. Creators and corporations had to follow the way suggested by YouTube.

Interviewees told MCN companies sprang up everywhere from 2013 to 2015. In 2015, a variety of MCNs, such as DIA TV and Treasure Hunter, appeared and existing broadcasters such as KBS and MBC invested in MCN (PD Journal, 2015). Since the founding of DIA TV in 2015, Sandbox, Treasure Hunter, Carrie Soft, and Jedi other several companies related to MCN emerged.

5.3. Enrollment (2015~)

According to Callon (1986), enrollment is a stage where more diverse actors outside the network would be persuaded to join the network.

From 2015 till now, following the definition by Callon (1986), interviewees agreed that the MCN industry in Korea is estimated to be in the enrollment period because MCN operators are calling for many companies to invest the MCN industry. This persuasion is done not only by the focal actor but also by other attracting operators in other fields. So, MCN industry in Korea is considered to be enrollment stage. The network is described in Fig. 4

Starting in 2015, advertisers with B2C brands and internet operators, legacy platform operators and legacy content providers who want to get niche contents have begun to invest MCN industry because MCN companies are showing strong strength in the mobile content market. That is why advertisers with consumer brands and existing content providers and platform operators are actively entering the MCN industry (The PR, 2015). Naver playground, and Kakao TV are examples.

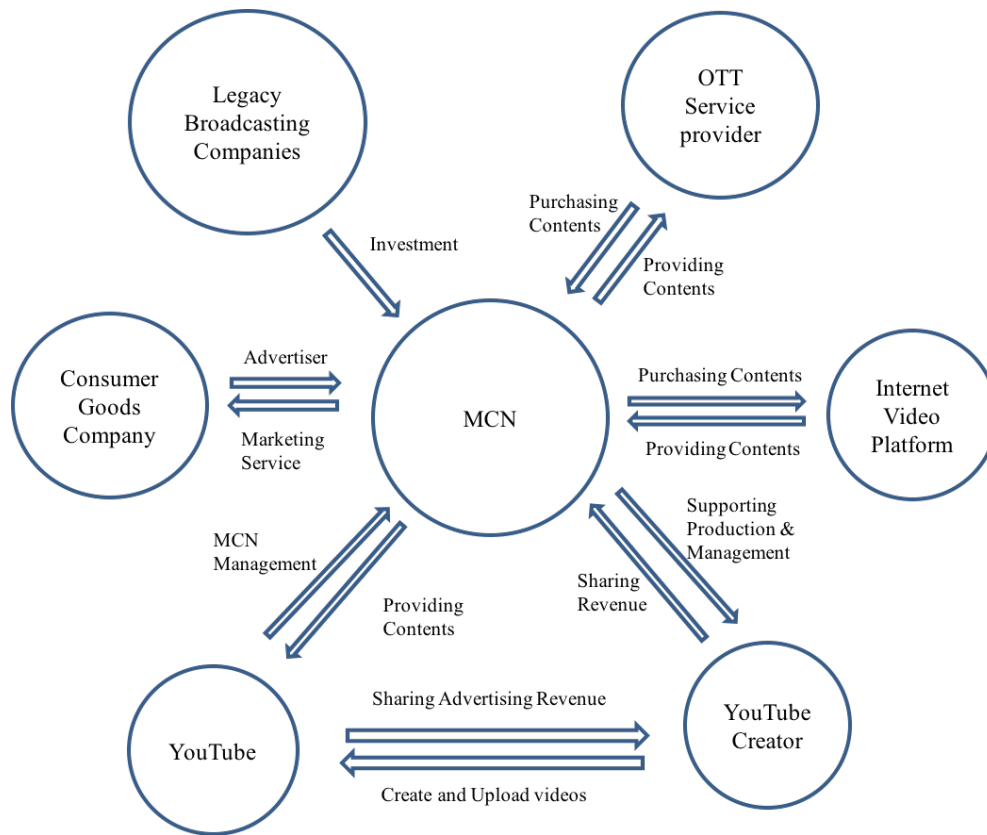


Fig. 4 Actor Network Configuration - Enrollment

Interviewees said the influence of YouTube has been relatively reduced in these days because the MCN business becomes more sophisticated and digital outdoor advertising and overseas video platforms have appeared. Of course, MCNs can't do business without YouTube, but they are trying to find a profit from anywhere else on YouTube. MCN companies have appeared as a focal player in the network from this period because they had contents and creators and tried to develop other reliable business models. Interviewees agreed that YouTube is not the only one revenue stream for MCN companies from 2015 because all the company sought to find out other business models such as selling character products, selling video contents to OTT services, developing original contents outside YouTube.

Interviewees said there are cases where an MCN operator makes direct sales to consumers by making a consumer goods and selling it directly. MCN operators have strong

strengths in mobile contents so that they would make products appealing to younger mobile-friendly generations (Platum, 2017). It is a kind of profit diversification strategy.

As commerce is activated through video commerce, shopping, and commerce sites that are not based on mobile contents such as home shopping and social commerce sites has invested in MCN contents (Cho, 2016). Interviewees recognized this trend would maintain for a long time because companies eager to catch young generations and young generations consume MCN contents so far.

Interviewees said the status of MCN operators would not be shaken even though large-scale companies are trying to enter MCN market such as SK Telecom, Hyundai Homeshopping because they do not have a strategy for contents. To get the strength in contents area, large-scale companies need to collaborate with MCN companies having strengths in contents production.

Korean MCN industry is considered to be Enrollment because not only the focal actors but also other actors in the network are calling for other companies outside the market to expand the network.

6. Conclusion

The problematization of MCN industry in Korea started from 2011. In this period, YouTube provided revenue model to the creators through the Partner Program, and from that time the foundations of the MCN industry were established. With the advent of the mobile age, including smartphones and data infrastructure, YouTube has grown rapidly, and as users grow, so do the number of creators. Although YouTube did not directly stipulate stakeholder interests and tie up directly to the operators, it does encourage and contribute to the formation of MCN operators indirectly through the growth of YouTube's creators. In this sense, YouTube was the focal actor who initiated the network.

Interessement stage of MCN actor network started from 2013. In 2013, CJ created Creator Group, the former version of DIA TV, and took a full-fledged approach to the MCN

industry. As the platform of YouTube had been laid on the ground, and CJ has taken off-track, an industry called MCN in Korea officially started. In 2015, a variety of MCNs such as DIA TV and Treasure Hunter appeared, and existing broadcasters such as KBS and MBC invested in MCN.

From 2015 to now on, the MCN industry in Korea is in enrollment stage. As commerce companies are eager to catch young generations has entered MCN market, companies which were outside MCN industry joined the actor network. MCN companies became another focal actor during this stage because the content becomes the key to make a success in MCN industry. The power of the platform was reduced a little because all the actor in the network was eager to get contents at any cost.

Interviewees expected MCN companies would not lose the power in the actor network in the industry because they have expertise in mobile content. Even though companies from other fields are bigger than MCN operators, they need to make a collaboration with MCN companies because of the expertise in the mobile contents. this study reviews and analyzes Korean MCN industry within an academic point of view. There have been many reports about MCN industry, but there was no research trying to find out how the MCN industry consists of. This study investigates how the industry has evolved and takes a snapshot of the industry using the actor-network theory from sociology.

This study implies who would enter this industry and what the key is to get the focal position in the network. according to interviewees, the objective of companies entering MCN industry is to catch young millennials. indeed, Warner Bros announced that it acquired Machinima to catch young generations (Variety, 2016). So, it is predictable that consumer goods companies such as Starbucks or Amore-Pacific would collaborate MCNs to promote their products to young generations. As more companies are interested in advertising through MCN, more MCNs would change themselves from agencies to advertising companies providing solutions.

As the competition in the market intensifies, only a company which has a high level of production would survive. In this sense, the ability to create well-developed mobile contents is the key for MCNs to have competitiveness. to achieve the key, MCNs would

invest in producing original contents or discovering new creators. CJ and Korea Creative Content Agency has opened a contest to find out new creators annually (IT Today, 2016).

This research is not without limitations. although this study conducted in-depths interviews among diverse actors, and used multiple documents to get evidences, it has methodological limitations. this study could have had more reliability and the degree of generalization with interviews with video platform providers in foreign countries, and financial investors interested in MCN industry. due to the immaturity of the industry, there are not enough quantitative statistics about the market. thus, this study depended on guessing about the market from many analytic reports.

Further researches could be explored in three ways. First, there could be a comparative study between Korea and other countries. A comparative study about foreign MCNs would be meaningful. Also, researchers could adopt the same framework to investigate how social networking services adopt live streaming services. for instance, Facebook and Twitter tried to broadcast sports event and to add interim advertisement to share advertising revenues with broadcasters. A similar phenomenon happens in social networking services. So, researchers could find out the actor-network. Finally, there could be a research using event-study methodology. researchers could study the fluctuation of the stock price of companies which acquired MCNs. using the event-study, researchers would be able to judge whether mergers and acquisition are helpful or not.

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