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# Attention Economy in Video Streaming Application: Avatar Interaction in YouTube Video Content Monetization

Reno Dalu Maharso<sup>1</sup>, Irwansyah<sup>2</sup>

## Abstrak/Abstract

*Aplikasi streaming video YouTube adalah aplikasi media yang populer di era digital saat ini. Para pengguna internet baik tua maupun muda sudah tidak asing lagi dengan keberadaan YouTube sebagai tempat berbagi konten video. Sebagai aplikasi berbagi video yang bekerja dalam ruang digital, para pengguna YouTube dituntut menggunakan avatar sebagai cara merepresentasikan diri mereka dalam lanskap YouTube. Pada kesempatan ini, penulis ingin menunjukkan adanya interaksi avatar dalam kerangka attention economy di kanal YouTube populer serta manfaatnya dalam monetisasi konten video di kanal YouTube tersebut. Penulis menggunakan teori attention economy untuk menjelaskan interaksi antaravatar dalam situs YouTube sebagai sebuah bentuk transaksi dengan attention sebagai nilai tukar (currency)-nya. Tulisan ini kemudian dikembangkan dengan menggunakan teori social information processing untuk mengidentifikasi kredibilitas avatar pembuat konten melalui cues yang dihasilkan dalam computer-mediated communication (CMC). Untuk memperkaya konsep kredibilitas dan perumusan metodologi, penulis juga menggunakan teori prominence-interpretation. Metode yang penulis gunakan adalah analisis isi kualitatif dengan mengamati lima kanal YouTube termonetisasi. Dalam tahap coding, penulis mengidentifikasi beberapa elemen dalam kanal seperti usia kanal, jumlah pengikut, dan jumlah video. Kemudian penulis memilih video dengan jumlah view terbanyak di kanal tersebut dan melihat iklan yang tayang dalam video itu. Hasil penelitian menunjukkan lima kanal YouTube terbesar berdasarkan jumlah subscriber telah memonetisasi video mereka. Video terpopuler pada peringkat lima teratas memiliki iklan yang berbentuk overlay atau non-stoppable video ad. Artinya, jumlah views dan engagement merupakan hasil interaksi avatar pembuat konten dengan avatar pengunjung kanal dalam situs YouTube. Attention metrics menjadi ukuran dalam memonetisasi attention economy, sehingga sebuah kanal YouTube memiliki standar bagi pengiklan agar mau beriklan di kanal tersebut.*

This article would like to unveil avatar interactions under the attention economy framework in online video streaming applications, taking YouTube as example, and how it benefits content creators to monetize their channels' contents. The theory of attention economy is proposed to explain how these avatar interactions in video streaming applications are perceived as a mode of transaction by using attention as universal currency. This article is elaborated using the social information processing theory to identify content creators' avatar credibility through the application of cues during computer-mediated communication. To enrich the concept of credibility and methodology, the prominence-interpretation theory is also proposed. The method applied to this study is qualitative content analysis by examining five monetized Indonesian YouTube channels. In coding stage, several elements of the channels were identified, such as channel age, number of followers, and number of videos. Then from each channel, the video with the biggest number of views was picked and the types of advertisement showing up in such videos were examined. The observation found that five biggest YouTube channels in Indonesia in terms of number of subscribers had monetized their videos. Their videos had either overlay or non-stoppable video ad content during playback. This showed that number of views and engagements were generated from interactions between the content creators' and visitors' avatars. Attention metrics served as metrics in the attention economy framework, which in turn contribute to monetization — making it possible to see that YouTube channels were standardized to meet advertisers' requirements.

## Kata kunci/Keywords:

*attention economy, avatar, interaksi, monetisasi, kredibilitas*

attention economy, avatar, interaction, monetization, credibility

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## Background

Nowadays, people who have been exposed to the internet are certainly familiar with a particular application that is able to share and show videos online either in computers or smartphones. One of biggest brand in the video streaming application industry is YouTube, owned by Google. In fact, YouTube has become one of the big players in video streaming applications on the inter-

net. Alexa recorded that YouTube was second in place as the most widely accessed application by internet users worldwide (Bärthel, 2018). Therefore, YouTube is not a new thing for today's internet users. Vonderau in Bärthel (2018) noted that there were 3 billion videos uploaded to Youtube in 2015. This number keeps increasing every day.

YouTube popularity in Indonesia is growing promisingly. Data from We Are Social showed enthusiasm from internet users in accessing YouTube contents. In 2017, YouTube ranked 6<sup>th</sup> for the most visited website in the 4<sup>th</sup> trimester of 2017. During such period, YouTube has generated monthly traffic equivalent of almost 600 million visitors from all over Indonesia. The same data also stated that the access time of each visitor reached 23 minutes or twice the access time to Facebook. Furthermore, such data explained that each visitor at least accessed eleven pages in each visit. The first place was held by the homepage of google.co.id search engine with 2.9 billion visitors. Meanwhile, Facebook was in the third place with 1.1 billion visitors (Kemp, 2018).

A survey showed that total Indonesian population was 265 million people in January 2018. From such data, around 132 million people have used the internet. The rate of internet penetration in Indonesia has reached 50% (Kemp, 2018). Compared to global internet user data, the internet penetration in Indonesia is consistent to the global internet penetration. In other words, half of Indonesian population has used the internet.

Considering YouTube's global success, it is no wonder that YouTube presents itself into one of the highly attractive platforms for advertisers to advertise in video streaming applications. YouTube also developed technology to enable advertisers to publish their product and services ads, whether placing the ads in the video during streaming or inserting product placements in video contents (Gerhards, 2017).

YouTube is a good example to describe how digital media works in the digital space. As a digital media and new digital media, YouTube operates with binary code 0 and 1 serves as the basis. Binary codes store different information. Such information will give the required data when it is accessed by users and read by a certain "censor" (Allen-Robertson, 2017). In the case of YouTube, data to appear will present in audio and visual format.

Users of digital media do not directly interact in the digital space. The reason being the nature of human as analog entity that is not compatible to enter digital space, as human is not able to enter a computer or a server physically. Thus, these users rely on a digital agent referred to as 'avatar'. An avatar can simply be defined as the representation of a user in digital space and it represents user's actions in such space (Terras, Ramsay, & Boyle, 2015). Therefore, according to Terras, Ramsay, and Boyle (2015), interactions in the digital space could take place due to inter-

actions among avatars.

If interactions in the digital space are to be put into economic context, a theoretical framework is necessary for accommodating the idea that there is an economic activity in each and every interaction among avatars. It was answered by Manzerolle and Wiseman (2016). In their journal, they explained interactions among users in a digital space have transactional value.

The definition of transactional in this context is a person giving something in exchange for obtaining something. Within the transactional digital media ecosystem context, there are two applicable currencies. The first one is attention payment. Attention is the data provided by avatars of video streaming applications' visitors as payment for obtaining an access to a video content. Attention economy can be measured by a metric system referred to as attention and engagement. Therefore, a transaction takes place when attention is exchanged with content (Manzerolle & Wiseman, 2016), in this case it is a streaming video. The second currency is the conventional way of paying money as in the same sense as buying and selling in the real world. Manzerolle and Wiseman (2016) referred to this second payment method as commercial payment. The payment can only be accessed if an internet user has a payment gateway that enables a payment transaction. Digital technology will always be developed to make payment gateway more integrated to the system. Therefore, various commercial transactions may be carried out easier, faster, more fluid, and less complicated.

In YouTube context for example, transactional act can be defined as a condition when a YouTube visitor's avatar gives its attention to a video post by clicking on the link to the video. Such attention will be converted into a value namely number of views and added to the statistics of the content creator's avatar video post. In exchange, the visitor avatar is then given access to the video content by the content creator avatar. Consequently, the user of YouTube application in the analog space – the real world – that has his or her avatar acts as visitor of the video post may access and enjoy video contents via his or her monitor and speaker.

The example above is observed from the point of view of the internet user's avatar as the real self in analog space clicks on a link to see a content in YouTube. In other words, it can be seen that avatars act as representatives of real people in the digital space. The YouTube content creator's account is considered as an avatar. The visitor's account is treated as an avatar as well. When a visitor's avatar accesses a content, such access will be recorded and converted into additional total "view" for the video post.

In addition to the attention economy perspective, the concept of prominence is adopted from the prominence-interpretation theory. This theory states that when accessing a website, a user

will assess its credibility from several observable features (Fogg, 2003). The prominence concept is suitable to observe whether components of information in the video streaming page affect the increase of access to a video page.

Another theory applicable to digital interaction is social information processing theory (Griffin, Ledbetter, & Sparks, 2019), which refers to the use of “cues” in a computer-mediated communication (CMC). The cues concept is relevant to determine whether the information about a video post received by video streaming application visitors is related to the content creator’s credibility.

The social network market concept can also be applied into YouTube accounts that have a large number of followers and views. As suggested by Cunningham (2012), the social network market is applied to manipulate a video mechanism as an interactive market. Video contents accessed by many users will enter into the YouTube algorithm and featured in a recommendation system.

Through recommendation system, a video streaming application can affect an individual’s decision to access video contents based on featured choices. The recommended contents are based on the user’s previous behaviour recorded by the system. This activity record will become a basis to create a content preference based on user’s preference (Cunningham, 2012). For example, a popular YouTube channel has a large number of followers and number of views. This characteristic attracts the advertisers to partner with the content creator for advertisement (Gerhards, 2017). The number of followers and views will contribute to a scale of opportunity of a content creator’s channel to be listed in the algorithmic system and appear in YouTube recommendation list.

Derived from the above explanation, the attention economy is shown as highly vital in the digital space, specifically as the current interactivity concept is constructed with the attention economy as the footing. Attention economy is a central perspective in observing the work method of the digital media and digital creative industry.

As Manzerolle and Wiseman (2016) have stated, an exchange of attention with content was explained by what is called attention economy framework. An audience gives his or her attention to the one who owns a content. Then, the content owner will respond and give his or her content to the audience. Transaction in attention economy regards an exchange between attention and content, which are treated as two things that hold values. This framework is also applicable in digital space context. The two valuable things being exchanged are still the same in essence, but with difference in form. In digital space, an audience – as digital media user – is represented by his or her avatar and the avatar holds the attention data. In video streaming application, the one who owns a content is a content creator. The content creator is represented by his or her

avatar that has all the content creator’s content in the application. The content creator’s avatar is then ready to exchange access to content it has with attention from an audience’s avatar.

In attention economy perspective, this transaction is seen as an exchange between attention data and access to content. Each avatar will give codes that allow a particular thing to happen in digital space. When an audience’s avatar gives its attention to a content creator’s avatar, the content creator will receive it. The reception will trigger content creator’s avatar to give a code to audience’s avatar. This code will allow audience avatar to access a content from content creator’s avatar’s database. This way, audience’s avatar and content creator’s avatar gain something from each other.

Attention economy in digital space can be applied in the perspective of advertiser’s attention. All the processes that happens in attention economy perspective also works in this perspective. However there are differences in how audience attention is treated. Advertisers will be interested in how the attention obtained be converted into attention metrics. This metrics can be seen as traditional metrics such as number of views or click-through rates (Manzerolle & Wiseman, 2016). In this article, the metrics can be seen as number of views, number of subscribers, as well as number of comments. Advertisers will see the potential of online video streaming application from the quality of video contents uploaded and how professional the contents are made (Gerhards, 2017). A way to measure how well a video content by seeing how many audience consume it (Gipson, 2009 in Gerhards, 2017). Therefore, metrics such as number of views and number of subscribers will be relevant to guide advertisers to select appropriate channels as advertising spaces.

To put on a simpler term, interaction between avatars means exchanging access to each other’s digital property to gain something from each other. In other words, the audience avatar gives attention to the content creator’s avatar. Attention data is then exchanged with access to content belonged to content creator’s avatar. While audience avatar can now access the content, the content creator’s avatar may use attention data to add more value to its statistics (such as number of views, duration of attention, and many more). Content creator’s avatar might get ahold of audience’s avatar’s data such as age and gender, and this information will be useful for advertisers.

The writer chose to discuss the YouTube phenomenon to explain attention economy in video streaming application because it has had a stable digital framework and video monetization system. YouTube was also selected because it provided highly accessible and highly representative examples to study whether the attention economy works in the digital space. In addition, YouTube was also highly relevant to explain avatar

interaction perspective in the digital space.

Based on the background and preliminary observation on YouTube, it has triggered a question whether interaction between avatars can describe the application of attention economy in video streaming application. Therefore, it may lead to a form of standardized performance statistics which contributes to attracting advertisements.

### **Concept Comprehension**

#### ***Attention economy***

This concept derives from the economic perspective in the digital media. The attention economy is oriented on transactional study in the digital media. This transactional ecosystem discusses what kinds of “cost” should be paid by the internet users to access a digital content. According to economic perspective, no content on the internet is free even if an internet user may believe he or she is not charged for accessing a website. In fact, an internet user gives away information such as “impression” or “click” to access a particular content on the web. Then, both number of clicks and impression data will be recorded by the system as statistics of the content creator’s page. Being said as “paying attention”, this understanding will make more sense (Manzerolle & Wiseman, 2016).

It is referred to as ecosystem because the transactional feature will affect the technology applied to support one of two transactional systems. There are two currencies of transactional ecosystem mentioned in the introduction. The first payment system is a cash payment system as similar to a transaction in the analogue space. Meanwhile, the second payment system is attention economy where attention is the currency (Manzerolle & Wiseman, 2016).

This article focuses on the “attention” currency in the digital media. Therefore, the attention economy conceptual framework is the centre of this article. Attention economy is closely related to a metric or unit to measure data. Metric is a tool to convert information from the content visitors into data that have relevant values and can be utilized in a particular system. In day-to-day application, attention is used in digital advertising and marketing. Attention metric can be applied to digital media and devices such as smartphones, smart TVs, computers and laptops, and out of home (OOH) advertising devices. In addition to advertising and marketing, the attention economy perspective is used as foundation for digital media development that is directed for commercial purposes (Manzerolle & Wiseman, 2016).

Reviewing the context and connecting it to interaction between avatars framework, the attention metric allows data conversion of visitors’ avatar into information that has values for the content creators’ avatar. Examples of metric application for advertising have been applied in

social media to attract financial benefits. In addition to the attention metric, several metrics in social media in terms of indicators for user engagement are number of likes, clicks, comments, or users sharing such content to their network. It is relevant to Heath’s view that the current trend in social media is to monetize videos in the social media for advertisement purposes (Heath in Manzerolle and Wiseman, 2016).

#### ***Monetization***

If a metric means a method to measure the behaviour of internet users who access contents, and change such behaviour into a unit for attention or engagement, monetization is related to converting attention or engagement unit into other units that have financial value (Terranova in Manzerolle and Wiseman, 2016). In economic perspective, attention is assumed as a limited resource (Manzerolle & Wiseman, 2016). This opinion makes sense since the number of attention in the digital space is proportional to the number of internet users. Therefore, both content providers and content creators on the internet compete to get the most attention. Due to its valuable significance, the concept of monetization rapidly develops in advertising and marketing.

Monetization is a method to create values for a concept in the digital space. Buckley in Ryan, Emerson, and Robertson (2014) mention the nature of digital as calculation based on division and its variations to predict and mark (Ryan, Emerson, & Robertson, 2014). Meanwhile, Allen-Robertson (2017) sees digital as a differential encoding of binary codes in a series of eight that consists of 0s and 1s and is able to be given meaning through a means of translation (Allen-Robertson, 2017). In monetizing, a group of data will have a specific value or meaning if they have interacted with other data. Therefore, a value can also be considered as potential data which occur when the data interact with other data set.

Monetization is a result of the digital media rapid development which reflects co-evolution of the market and household sector. Monetization and professionalism together apply professional aspects in amateur content production. They grow along with the developing concept of social network markets which is born from the digital media development. In the social network market, a social media user’s choices are actually affected by choices of other users. A group of choices recorded by the system forms a preference of choices for social media users (Cunningham, 2012). A good example to show monetization and professionalism in the social network market according to Cunningham (2012) is YouTube video streaming applications.

#### ***Avatar***

The form of interaction and communication by digital media takes place in the digital space. However, digital media users cannot present

physically in the digital space because of their analogue nature. Therefore, digital media users rely on a form of digital agent to interact in digital space. Such digital agent interacts with each other in the digital space to exchange information. Thus, the role of the digital media users in digital space is to order the agents to take certain actions (Terras et al., 2015).

In the digital space, such agents are referred to as avatar. According to Terras et al. (2015), an avatar is a representation of a digital media user, where the avatar has a role as an identity of the user in the digital space and represents actions of the digital media user when the user spends his time in the digital space. He also mentioned avatar as a unit used by a digital media user to interact with fellow users in the digital space.

Meanwhile, Turkle in Terras et al. (2015) considers an avatar as a graphical unit used by the digital media user to represent his or her identity when being in the digital space. The graphic can be selected from an available database or customized by the user. Because it is created, it is assumed that the form taken by an avatar is not the same as the original form of the media user. An avatar can be similar to the user's form or take a totally different form because there is no binding rule that the avatar has to be similar to the physical appearance of the user.

#### **Marketplace of attention**

This concept is originally an addition to three future digital media development myths stated by Webster (2017). The original three future digital media development myths considers more powerful role of digital media users, neutrality of big data as infrastructure, and a tendency for digital media users to live in clusters of information because digital media conditions them to only access information they prefer and avoid the ones they do not like (Webster, 2017).

In the beginning, Webster referred to the fourth digital media perspective myth as a digital media marketplace. Then, such concept developed and Webster translated it into a marketplace of attention where it contained user, media, and metric. This concept acts as a counterbalance for the other three myths since they are user-centric in nature. The marketplace of attention views interactions in the digital space from the point of view of data as the basis for digital media work (data-driven system). In the marketplace of attention, digital media users interact in a landscape referred to as a marketplace. The marketplace works by applying the concept of the economy of attention. Therefore, interactions among avatars in the marketplace are seen as avatars giving attention and providing particular contents.

#### **YouTube**

Bärtl (2018) noted YouTube as the second most accessed website in the world. The YouTube phenomenon also attracts media and communication researchers to review this most popular video

content sharing application (Bärtl, 2018).

In the early stage of its life in 2005, YouTube was a website to share videos among its users. Benkler in Gerhards (2017) documented that YouTube was a user-generated content website which video contents were created by amateur content creators. YouTube users contributing in content creation were not people looking for profit (Gerhards, 2017).

Lobato in Gerhards (2017) observed that content creators on YouTube were originally oriented on producing contents to satisfy their own pleasure. At that time, the content creators were not profit-oriented ones since YouTube system had not enabled monetization. However, advertisement partnership in the form of product placement in video contents had been possible at that time. Then again, most users were not oriented on such financial benefit (Gerhards, 2017).

Referring to a study by Burgess and Kim in Gerhard (2017), regardless of no demand or motivation to content monetization, YouTube content creators grew in quality by learning work methods of professional video makers and implementing professional attitude in creating their own videos. This situation improved the professionalism aspect of the YouTube content creators. This content creation culture attracted the advertisers which had forecasted an opportunity to place ads in such video sharing website (Webster, 2017).

A major change which altered the YouTube landscape forever took place one year after it was launched. The giant company Google acquired YouTube in October 2006. From such acquisition, the orientation of YouTube, which was initially a user-generated content based video sharing website, turned to a new advertising space (Gerhards, 2017). Google had the door wide open for corporations and professional content creators to upload their contents to YouTube. Therefore, the YouTube's appeal for advertisers and money-making orientation (Gerhards, 2017) would also increase.

#### **SIPT and Cues**

Social Information Processing Theory (SIPT) is a theory explaining communication that takes place in a computer-mediated communication (CMC). According to this theory, both parties communicating by CMC can understand each other, provided that both parties have sufficient time to collect information. When this theory was first introduced at the beginning of 1990s, Walther drew two major concepts, namely non-verbal message had increasingly significant role because it substituted for verbal messages' role in communication, and extended time of communication is needed to collect information from each information source (Griffin et al., 2019).

SIPT highlights the significance of cues – information exchanged in CMC – as key success for CMC. In face-to-face communication, more information can be exchanged because both communicating parties exchange verbal and non-ver-

bal cues altogether. Meanwhile, at the beginning of CMC application in the context of public use, non-verbal cues were harder to exchange due to media limitations at that time. Therefore, the amount of information was also limited.

The concept of cues was further developed through sticky cues introduced by Van Der Heide and Shumaker in D'Angelo et al (2014). Sticky cues are information related to an information source in a communication and used to assess its credibility (D'Angelo, Zhang, Eickhoff, & Moreno, 2014). The difference that makes sticky cues different from normal cues is that the sticky cues have information which can attract the attention of other parties and have more power to affect their decisions. Examples of the sticky cues in video streaming application such as YouTube page are video titles, video thumbnails, number of views, likes, content creators' display picture, and video description.

SIPT also plays a role in identifying the credibility level of an information source in a CMC. The concept used is warranting values. It is generated by comparing information provided by the information source and information obtained from a third party. If two compared information is consistent with each other, the information is seen as having high warranting values which means the incredibility possibility of the information source is high.

The next development of SIPT gives equal opportunity for non-verbal cues to construct the credibility of one information source (D'Angelo et al., 2014). Non-verbal cues, such as photographs and thumbnails along with a self-disclosure description will obtain trust from the content visitors.

#### *PIT and Credibility*

Prominence-Interpretation Theory or PIT can be used to analyse contents of a website and assess its credibility. Fogg (2003) came up with the theory and stated that the credibility of a website depended on its site design. The quality of the site design and the ability of its visitors to interpret any pieces of information from the website, significantly affect the visitors' assessment on a website's credibility.

Two main concepts of PIT are prominence and interpretation (Fogg, 2003). Prominence is defined as visible and observable aspects in a website that visitors can access. Prominence is influenced by five factors: involvement, topic, task, experience, and individual differences. Involvement is motivation and ability of the site visitors in exploring contents of a website. Topic is information related to the type of contents and its variations in a website. Task is related to the types of website visitors' activities – searching for information, searching for entertainment contents, carrying out transactions, etc. Experience is related to the site visitors' skill in using the internet – beginner, familiar, or advanced. Indi-

vidual differences are related to different characters of the website visitors and how this diversity contributes to a difference in assessment about one type of information in a website.

The second main concept in PIT is interpretation. As the name suggests, interpretation is related to a way website visitors interpret information after observing elements of a website. There are three factors affecting the interpretation, such as assumptions, skill/knowledge, and context. Assumptions are preliminary assessments on a website when visitors access it for the first time. Assumptions contribute to a visitor's assessment on a website. Then, skill/knowledge is related to website visitors' knowledge level. The last is context which is information around site visitors which gives a chance to affect their assessment on a site. Context may consist of ecosystem situation, visitors' norm or belief, and type of device used to access a website.

#### *Conceptual and Theoretical Development in the Context of Inter-Avatars Interactions*

From the explanation above, several important concepts such as attention economy, monetization, avatar, marketplace of attention, YouTube, verbal and non-verbal cues, and credibility are elaborated. In literature review for this paper, journals that discuss key concepts of digital interaction mainly utilize a perspective where the interaction taking place is an interaction between a digital media user and the other, and digital media acts as a direct medium in their interaction.

However, these concepts could be developed more to analyse interactions between avatars in digital space. These concepts are relevant to explore the role of digital representation of self in digital space, which takes the form of avatars and what happens during their interactions. Based on the main concept which is the attention economy, it is highly possible to apply a transactional model during an interaction between avatars. Putting it in YouTube context as an example, the content creator's avatar has the information needed by the visitor's avatar. Therefore, the visitor gives command to his or her avatar to access contents owned by the content creator's avatar. When two avatars interact, a transaction takes place. The visitor's avatar gives its attention to the content creator's avatar, which will then be converted by attention metric and counted as "one view". When the visitors' avatars give its attention, the content creator's avatar in return gives access to contents that it has. The visitor's avatar that has gained access to the desired content will then access it. As a consequence, the visitor avatar user can watch a video content from the content creator's YouTube channel.

The illustration above shows that interactions between avatars will result in an exchange of access between properties of each avatar. Audience's avatar has attention data to give, and con-

content creator's avatar has content. Audience's avatar's attention data is given in the form of code to content creator's avatar, which in turn will then be used to gain access to better statistics that improve a content creator's channel performance. This statistics is seen as number of views, number of subscribers, as well as number of comments. On the other hand, audience's avatar will get access to content that will also benefit the audience in real life.

In this procedure, avatars play an important role in content monetization. Interactions and actions in the digital space may only take place if two or more avatars interact to contribute to the attention economy. The attention metric and engagement metric which measure the number of attention and engagement in a video content, which will affect the opportunity of a video content to be listed in the particular video streaming application's recommendation system through preferencing by the network of users as stated by Cunningham (2012). If it occurs, video contents will then move to enter the social network market scheme. Video content recommendations viewed as social network market scheme will give more relevance to content choices which the visitor's avatar can access.

From CMC point of view, avatar interactions in the digital space can be seen as a form of interaction using verbal and non-verbal cues. The idea of avatars using cues to interact is applicable because CMC can be applied in the form of visual culture. Visual culture is related to the use of visual forms with a given meaning in order to make interaction (Favero, 2013). The visual forms used for avatar interaction is distinct because avatars use binary codes to interact with each other and then the codes are given particular meanings.

The concept of credibility offered by PIT is also relevant for inter-avatar interactions in video streaming application. If prominence aspect is related to elements in the contents, then the content creators' avatars have control on that aspect. When the quality of prominence is high, then there will be no problem for the visitors' avatars to access contents available. Meaning, the visitors' avatars will not face difficulties when accessing the contents because there are no problems in links, the server runs well, and information in binary code can be translated well by the visitors' avatars.

From the elements mentioned, comes a temporary conclusion that interactions between content creator's avatar and visitor's avatar show that these interactions are attention economy because these interactions contribute to the statistics of content creator's avatar. The contributions lead to increasing of number of views and engagement metrics such as number of likes and comments. Contents with high number of views and engagements are then monetized in order to attract advertisers.

## Research Method

Qualitative content analysis was used as research method to identify popularity and credibility of YouTube contents, its potential to attract visitors, and its efforts in monetization to entice advertisers. This qualitative content analysis adapted Welbourne and Grant's (2016) research. For this study, adjustments to their study were conducted to become criteria for selecting and analysing sample video contents.

Qualitative approach was conducted considering the nature of how language works as context of interaction in video streaming application. This article revolves around video contents from Indonesian channels which use Indonesian language. This research saw local language has vital contribution to successful interaction. As Hsieh and Shannon (2005) stated, language becomes a differential characteristic to study textual information, focusing on content and meaning as its object of study. A particular language works in certain context, therefore results in different meaning-making.

Qualitative content analysis method is described as a process of describing and interpreting a certain textual data through coding. The method is used to study a phenomenon in order to gain descriptive knowledge as well as its understandings (Assarroudi, Heshmati Nabavi, Armat, Ebadi, & Vaismoradi, 2018). Qualitative content analysis is described by Schreier (2012) and Downe-Wamboldt (1992) in Elo et. al. (2014) as a research method to qualitatively analyze data and interpret its meaning in order to describe and quantify phenomena with a means of research that is systematic and objective. Cavanagh (1997), Elo & Kyngäs (2008), Hsieh & Shannon (2005), Morgan (1993), and Weber (1990), as cited by Elo et. al. (2014), mentioned that reducing data to relevant concepts through categorization creation, concept definition model creation, as well as conceptual system mapping is key to the success of content analysis (Elo et al., 2014).

Qualitative content analysis becomes relevant because this method focuses on language characteristics of media text in printed form, or even verbally and electronically, with the focus on its context and meaning (Hsieh & Shannon, 2005). Textual information in video page such as number of views, video title, thumbnails, number of likes and so on can be treated as information classifications or categories relevant with digital media use, namely video streaming applications context. Categorization in this method is suggested by Weber (1990) as cited by Hsieh and Shannon (2005). The role of local language is regarded vital in this article. The local language is Indonesian language, introduced in video contents that were selected as samples. Moreover, local language is seen as part of a digital global media's platform localization. This effort to localization will affect how the media work because they will have to consider the existence of local



content creators and local contents circulating in its system (Mohan & Punathambekar, 2018). This view is especially crucial if a digital media application sees localization as a way to boost content popularity in terms of number views and engagement, as cited from YouTube (2012) by Welbourne and Grant (2016). Thus, analysing local video contents from local content creators, in this case Indonesian content creators and their channels, will help show that interactions between avatars in video streaming application are also affected by use of language.

In adapting Welbourne and Grant's (2016) methodology into qualitative approach, a differentiating factor that must be put into perspective is the role of language. For this article, language is viewed as crucial element that contributes to interaction. Language can be seen as a tool to make meanings out of something, mechanism to create meaning, and vehicle for exchanging it (Holtgraves & Kashima, 2008). Holtgraves and Kashima even addressed that language usage may lead to consequences that are unintended.

From the above explanation, it can be seen that qualitative approach holds importance in this article since it puts language as a vital aspect because it gives context in communication and in meaning-making. Even though avatar interaction works through binary codes, these avatars will only engage in interaction if their users command them to. To make users desire an action, it means a user must make meaning of the language provided by the contents. This article sees relevance of qualitative approach because it endorses language as part of context. Indonesian YouTube channels that are selected as samples are identified using Indonesian language as its primary language. It can be seen immediately from the video title, captions in video thumbnails, and when the hosts present the content during video playback. This will show that Indonesian language works as context in videos that are directed for Indonesian audience and individuals with Indonesian language skills. They are people who can make the most meaning out of those video contents. Therefore, this article emphasizes and focuses on the importance of language as a factor in an interaction process that will lead to exchange of access, either in attention economy perspective or in advertiser's attention perspective.

In practising it, qualitative content analysis can be conducted either inductively or deductively. Inductive method emphasizes open coding, category-creation, and abstraction, while deductive method emphasizes developing categorization matrix and coding the data accordingly (Elo & Kyngäs, 2008). The deductive approach was chosen for this article since analyzing YouTube content is more suitable through breaking up the data obtained into categories. Moreover, the way YouTube breaks down data of particular video contents into relevant categories is already

visible from how their statistics are constructed. Categories that make up data for video contents statistics can be seen, for example, from the number of views and number of likes in a video page. The categorization is backed up by coding format in Welbourne and Grant's research (2016).

Content analysis can be conducted in three steps, namely preparation phase, organization phase, and reporting phase. Preparation phase consists of data collection method, strategy of sampling, and unit of analysis selection (Elo et al., 2014), organization phase is mainly developing the categorization matrix for further coding (Polit & Beck, 2012 in Elo et al., 2014), and reporting phase consists of describing the phenomenon through the determined categories (Elo et al., 2014).

In preparation phase, the statistics-monitoring application Social Blade (Social Blade, 2018) was used. It generated a raw data showing 250 Indonesian YouTube channels with the most subscriber. The data was generated from Social Blade website on December 19, 2018 (<https://socialblade.com/youtube/top/country/id/mostsubscribed>). The data on channel subscriber was selected because it sufficiently represents the popularity of a YouTube channel (Welbourne & Grant, 2016), and it is relevant to this article. Purposive sampling was used to filter 250 channels, resulting in five most subscribed channels to focus.

Based on this first filter, each of the five channels was then filtered again to identify which video had the most number of views in every channel. At the end of the process, five videos were collected. They represent the video with the most number of views for each channel. These videos became the samples. Number of views was considered because it is also relevant with popularity aspect (Welbourne & Grant, 2016). Mozilla Firefox browser was used for selecting the videos. In order to avoid irrelevant recommendations on YouTube feed, incognito mode was used.

Rank	Grade	Username	Uploads	Subs	Video Views
1st	A	Alta Halllinter	347	7,761,469	605,897,104
2nd	A	Ricis Official	393	7,293,083	881,092,081
3rd	A	Calen Sarjana	718	6,569,915	1,320,498,490
4th	B+	Raditya Dika	790	5,275,062	671,084,746
5th	A-	GEN HALILINTAR	361	4,767,890	917,744,541
6th	A-	Katyan Official Sabayn gambus	9	4,542,059	1,068,019,797

Picture 1. Screen capture of Social Blade application

In the organization phase, the writer adapted a data coding format from Welbourne & Grant's (2016). The coding format resonates with the purpose of this study on the YouTube content analysis intended to be conducted. The journal showed a data coding format for channels and videos to be selected (Welbourne & Grant, 2016). Identifi-

cation will observe number of video views, number of channel views, and number of comments. In order to conduct the qualitative content analysis to what this article needs, Welbourne and Grant's (2016) coding format was adapted as criteria to explore each sample.

For channel identification, the following items would be identified: (1) age of YouTube channels seen from the joining date; (2) number of videos in the channel; (3) number of views of the channel; (4) number of channel subscribers; and (5) whether it is a corporate channel or a user-generated content (UGC) channel.

After channels were identified, videos with the most views were identified based on the popularity metric: (1) number of views of the videos; (2) number of comments of the videos; and (3) number of likes of the videos.

Furthermore, each identified video was reviewed and coded to identify following factors: (1) video duration; (2) conformity of the title and content; (3) sex of the host; (4) identification of content types: vlog, hosted, interview, presentation, voice over visuals, text over visuals (Welbourne & Grant, 2016); (5) advertisement format: display, overlay, skippable video ad (duration more than five seconds), non-skippable video ad (duration 15-20 seconds), bumper (duration 6 seconds at the beginning of the content playing), sponsored card (YouTube, 2018); and (6) frequency of advertisements showing.

For the reporting phase, preliminary data from Social Blade on December 19, 2018 showed that there were top five channels based on the number of subscribers. These were: (1) Atta Halilintar with 7.7 million subscribers; (2) Ricis Official with 7.2 million subscribers; (3) Raditya Dika with 5.2 million subscribers; (4) Gen Halilintar with 4.7 million subscribers; and (5) Official Sabyan Gambus with 4.5 million subscribers. After that, a follow-up observation was conducted on December

20, 2018 to gather data on channel identification. The channel Calon Sarjana as seen in Picture 1 was not included as sample because it was found that there was no advertisement shown. There was not enough data to decided whether the account was monetized or not. Therefore, the account did not meet the requirement as sample.

Based on follow-up observation, five videos with the most views in each channel are: (1) *NYAMAR JADI ORANG MISKIN! Cewe Matre PRANK! (Gold Digger Prank Indonesia)* (Halilintar, 2018); (2) *RAINBOW SQUISHY TAG + GUNTING SQUISHY?! sayang banget... :( - Ria Ricis* (Ricis, 2017); (3) *SUCRD - NGOMONGIN INSTAGRAM* (Dika, 2017); (4) *MIC DROP ENG & KOR TO INA* (HALILINTAR, 2018); and (5) *YA HABIBAL QOLBI versi SABYAN* (Gambus, 2017).

### Findings and Discussion

Based on identification through coding process, it was found that monetized contents were identified in five Indonesian top YouTube channels with most subscribers. Therefore, these channels were considered as monetized channels. All five monetized channels were identified to have at least 4.5 million subscribers on the date of identification. It means other channels must surpass 4.5 million figure to be in the top five YouTube channels with the most subscribers. All five channels were also identified producing their own contents. These channels also fell under user-generated content (UGC) category.

From identifying each channel, it was discovered that all five channels have total number of channel views that range between 600 million and one billion, with the lowest being Atta Halilintar with 606 million channel views and the highest being Official Sabyan Gambus with 1,06 billion channel views. If number of subscribers is compared with number of channel views, it

Table 1. Identifications for each channel

Channel name	Atta Halilintar	Ricis Official	Raditya Dika	GEN HALILINTAR	Official Sabyan Gambus
Channel age	4 years 11 months	2 years 11 months	11 years 6 months	3 years 9 months	2 years 11 months
Number of videos	348	394	790	361	9
Number of channel views	606,027,315	881,544,719	671,256,017	918,007.17	1,068,335,294
Number of subscribers	7,761,469	7,293,083	5,275,062	4,767,890	4,542,059
Corporate channel or UGC	UGC	UGC	UGC	UGC	UGC

Table 2. Criteria of most viewed videos in each channel

Content creator	Atta Halilintar	Ricis Official	Raditya Dika	GEN HALILINTAR	Official Sabyan Gambus
Video title	NYAMAR JADI ...	RAINBOW SQUISHY ...	SUCRD ...	MIC DROP	YA HABIBAL
Number of views	17,314,124	22,576,432	6,909,486	23,775,745	263,938,525
Number of comments	Disabled	73,178	3,285	75,414	82,050
Number of likes	374 thousand	466 thousand	143 thousand	470 thousand	1.5 million
Duration	13.28	6.03	9.50	5.02	4.25
Upload date	January 9, 2018	April 22, 2017	December 18, 2017	January 26, 2018	December 25, 2017
Conformity of title and content	Conform	Conform	Conform	Conform	Conform
Sex of the host	Male	Female	Male	Male	Female and male
Identification of content types	Hosted	Vlog	Presentation	<i>Presentation</i>	Presentation
Ad format	Overlay	Non-skippable video ad	Overlay	Non-skippable video ad	Overlay
Frequency of ad showing	2 overlays	1 non-skippable video ad	1 overlay	1 non-skippable video ad	1 Overlay

can be seen that number of subscribers does not necessarily guarantee high number of channel views. This is seen from comparing subscribers and channel views between Atta Halilintar, recorded 7.7 million subscribers and channel views of 606 million, and Sabyan Gambus Official, recorded 4.5 million subscribers and channel views of 1,06 billion. In fact, Sabyan Gambus Official became the channel with the most views while Atta Halilintar became the channel with the most subscribers.

When comparing the most viewed video from each channel, it could be observed that these five channels had different characteristics in their contents. This could lead to a fact that each channel develops its own unique character to be used for content monetization. On the other hand, the similarity between each video lied within how each of them showed at least one ad during video playback. As a side note, display ads on the upper right side of the page (rectangle 1) are not counted in the coding.

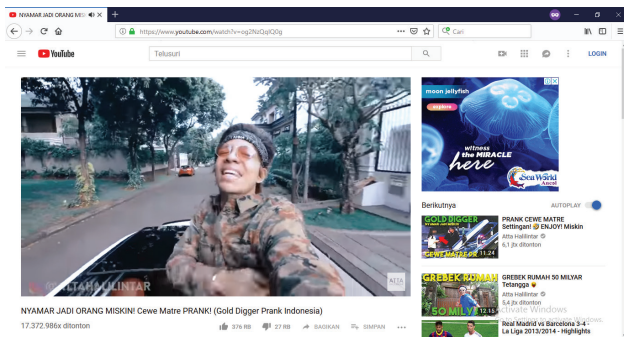
The video with the most number of views were held by Official Sabyan Gambus with 263 million views. It was categorized as a music video presentation of 4 minutes and 25 seconds long. It was liked by 1.5 million users and garnered 82 thousand comments. As a monetized contend, it could be observed that it showed one overlay ad during video playback. Atta Halilintar's video was a different one in terms of monetization because it showed two overlay ad instead of just one.

Meanwhile, the lowest video statistics was

of Raditya Dika's. The number of views only reached 6.9 million views or more than 10 million in difference from that of Atta Halilintar's which ranked four. Raditya Dika's video was categorized as a stand-up comedy presentation that was 9 minute 50 second long. It was liked by 143 thousand users and got 3 thousand comments. The video was monetized and there was one overlay advertisement shown during playback.

Other videos that showed different type of ad were videos of Ricis Official and GEN HALILINTAR. Both videos had non-skippable video ads that were 15-20 seconds long shown in the beginning. Both videos had almost similar statistics which Ricis Official's and GEN HALILINTAR's respectively had 22.5 million and 23.7 million views, 466 thousand and 470 thousand likes, and 73 thousand and 75 thousand comments.

Going back to important concepts at the introduction, it could be seen that five popular Indonesian YouTube channels had implemented attention economy through avatar interactions. This is a relevant example to show that Manzerolle and Wiseman's (2016) idea of attention economy in digital space actually works in video streaming applications. The avatars' role is also at play in this perspective as representation of digital media user in the digital space, relevant with what Terras et al. (2015) had mentioned. In video streaming application, an avatar is ready to carry out transaction with other avatars using one of Manzerolle and Wiseman's (2016) transactional ecosystem in digital media, which is attention,



Picture 2. Screen capture of Atta Halilintar's most viewed video

as the form of payment. This avatar is willing to pay attention to get access to video contents in return, while other avatars are at bay and wait for the first avatar to give its attention in order to get access to their contents.

On the content creators' avatar side, the outcomes of attention economy can be observed from the channel statistics owned by the avatar, which is translated into attention metrics in the form of number of views and engagement metrics in the form of likes and comments of each video. A content creator's avatar will give access to its contents to other avatars only if they give their attention as payment. When they do, a transaction takes place. The attention form of payment is then translated by attention metric into a relevant unit, which in this case, is called 'one view' and added to the content statistics of the content creator's avatar. The engagement aspect is also well implemented by engagement metrics where a content can be given likes and comments. When combined, these two metrics serve the purpose of increasing the popularity of video contents provided by content creators' avatar, as cited from YouTube (2012) by Welbourne and Grant (2016).

This article shows that five most popular YouTube channels in Indonesia that are monetized are Atta Halilintar, Ricis Official, Raditya Dika, GEN HALILINTAR, and Official Sabyan Gambus. These channels were identified as popular channels because in one part they have the most number of subscribers for monetized channels. These statistics is also supported by their accumulated number of views to their total videos. Therefore, these channels managed to obtain significant audience reach and become successful popular channels, relevant to what Burgess and Green (2009) mentioned as cited by Welbourne and Grant (2016).

Factors that contribute to the popularity of a video content, as stated by several studies, are related to the content itself, the video streaming application's recommendation system, the *age* of the content as seen from the date of the upload, and another factor labeled as content-agnostic factor (Borghol, Ardon, Carlsson, Eager, & Mahanti, 2012; Figueiredo, Benevenuto, & Almeida, 2011). Content factor is regarded as how interesting a video content is. This includes the topic and

quality of video. A video content is considered to have 'age' from the day it was uploaded to the system. Therefore, it is possible to say that a video is one month old or one-year-old by looking at the information about the date of the upload. The video streaming application's recommendation system sees that there is a system that identifies which video content is viewed most and then decides to recommend the video to more audience. Meanwhile, content agnostic factor is considered as external characteristics that do not relate to the quality of the content but relate to the quality of the content creator's social presence in social network applications and time of content upload (Welbourne & Grant, 2016).

In terms of the topic, all five identified videos showed that the topics endorsed are related to the interest of many audiences who use Indonesian language. This is shown from all the video titles and video description that use Indonesian language. In terms of delivery style, videos belonged to Halilintar (2018), Ricis (2017), and Dika (2017) used Indonesian language as their delivery language. However, a difference happens with Gambus' (2017) delivery style. The video shows Sabyan Gambus sing an Arabic song. However, this topic is liked by audience who use Indonesian language because the comment section indicates audience who watch this video are audience who use Indonesian language in consuming this content. In terms of video quality, all five videos apply 144p and 1080p as minimum and maximum video quality for the audience to enjoy. This means audience can enjoy the videos from lowest to highest quality, depending on their connection quality. In terms of the recommendation system, all videos are easily discoverable when searching for the title in search box or when opening a content from their channel. Judging from the age of each video, it can be seen that all the popular videos are uploaded around 2017 and 2018. The oldest video was Official's (2017) video, uploaded on April 22, 2017 and the youngest was HALILINTAR's (2018) video which was uploaded on January 28, 2018. This shows that recently uploaded videos with 1-2 years time difference will show up-to-date topic. On the other hand, content-agnostic factors impacting a video's current viewing rate include the video uploader's social network size, the total number of previous views to the video, and the number of associated keywords. This could be identified from the content creators' social presence in social media and how many number of views already garnered. In a way, it could be said that Official Sabyan Gambus's YA HABIBAL QOLBI versi SBYAN video which gained 263.9 million views was more popular than Raditya Dika's *SUCRD - NGOMONGIN INSTAGRAM* video which gained 6,9 million views.

This popularity performance is relevant with the idea of social network market that determines a recommendation to a user based on

what contents other users have accessed (Cunningham, 2012). Therefore, a user's recommendation shows popular videos in which significant amount of users have viewed them before. Their data is then collected by video streaming application provider and made as basis to select which videos is considered popular. However, there are critiques on video recommendation system. There are concerns that the recommendation system applied by video streaming application may have a tendency of deciding which videos are popular while stripping away less popular videos' opportunity to shine (Welbourne & Grant, 2016). Social network market model also does not give significant consideration to content creators with small number of views even though their videos actually have good quality. It is because selection preferencing in video recommendation system works if the number of previous views are significant enough to be detected by the application's algorithm. Thus, this will lead to what is called rich-get-richer situation where popular videos that enter recommendation will generate more views while the opposite is not (Borghol et al., 2012).

In relation to content monetization perspective, it was found that Indonesia's top five YouTube channels had monetized their videos. The attention that was accumulated as number of views contribute to popularity of the videos and channels (Welbourne & Grant, 2016), which in turn will be beneficial to advertisement during content monetization (Gerhards, 2017). The proof of monetization could be observed when ads based on YouTube's ad criteria (YouTube, 2018) were shown during video playback. It was seen during observation that non-skippable video ad and overlay ad was shown on top five most popular Indonesian YouTube channels. They at least showed up once during playback. It can be said that popular channels monetizing their popular videos is relevant with Gerhards' view on video streaming application becoming new advertising spot, and both content creators and advertisers consider profit-making as their orientation in content creation (Gerhards, 2017).

From interactivities perspective, interactions between avatars in digital media is at play. As a form of interaction in digital space, two or more avatars engaged in such activity will exchange their own language – their own visual culture, relevant to what Favero has stated (Favero, 2013) – in the form of binary codes. When a visitor's avatar tries to access a video content, that means it asks for permission to the content creator's avatar to access the content. During an interaction, avatars will exchange information such as content creator's avatar's content and visitor's avatars' behaviours data in digital space.

This article shows that inter-avatar interaction in digital space revolves around three main issues which are access, attention, and avatar. Access is an important part in interaction be-

cause it puts into motion the attention economy framework by introducing an exchange of access between audience's avatar and content creator's avatar. In terms of access, audience's avatar that gives attention data to content creator's avatar will then be granted access to the content that the content creator's avatar has. In the content creator's perspective, the attention given to it will help improve its statistics. This is what makes attention economy able to create a mutual benefit to each party involved. The next issue is the existence of attention as a scarce resource owned by the audience, and how attention of the audience can be transformed into attention data that is passed on to their avatars. This attention data becomes the resource that audience avatar's holds to obtain contents from other avatars. Thus transaction in attention economy will take place. The next issue is the importance of avatars as digital agents. Avatars represent the existence of the actual audience in the digital space, and the *real* audience command avatars to do the tasks.

When applied to the digital space such as video streaming application, the relevant content of discussion is the video content owned by content owners. However, because this is digital space, the content owners are not physically present there. Instead, their avatars will be their representation of who owns the video contents. Then, audience logs into the video streaming application to find videos they want to see. Again, audience is not able to enter the application physically so they rely on the presence of their avatars. These avatars are the one that make connections, interact with each other, and perform exchanges.

To access a content, the audience's avatar will give its attention data to the designated avatar that owns the content. The attention data itself is transmitted in the system with the use of codes. These codes act as a way to request access as well as carrying attention data to the other party. If the codes are successfully transmitted and received by the content creator's avatar, that avatar will give back codes which become the key to access the particular content that is desired by audience's avatar. The more attention data gave by audience's avatar, the longer and more varied the access to contents that will be given in turn to it. This explains the situation when the audience stop watching a video. It means the audience's avatar stops giving its attention data to the content creator's avatar, which will in turn stops the content creator's avatar from giving access to its video. This illustration shows that exchange of access to each other's property is the backbone of attention economy in video streaming application.

In advertiser's perspective, advertisers need a guide to help them decide which content creators are suitable ad placement. The ad placement could either be organized by the video streaming application or direct partnership between advertisers and content creators in the form of product

placement (Gerhards, 2017). Therefore, there is a need for advertisers to identify which channels will work for their cause. Mostly what the advertisers seek are popular channels that can help them with making their messages viral (Figueiredo et al., 2011). Moreover, advertisers also try to find new business opportunities in utilizing popular video streaming channels, as stated by Figueiredo et al. (2011).

This reason introduces advertiser's needs with the existence of attention metrics. In attention metrics, number of views are regarded important. Meanwhile, there are other metrics called engagement metrics. This metrics consists of the number of subscribers, likes, and comments. These also become advertiser's consideration in putting up ad (Welbourne & Grant, 2016). Attention metrics gives importance to the channel statistics owned by content creators. The more subscribers a channel has may mean that the channel is engaging. Combined with the number of views, the popularity of a channel can then be identified. As more subscriber means more engagement in the system, the video streaming application provider may see this as an opportunity to attract more advertisers to its platform. Therefore, providers will motivate content creators in their system to produce better content and improve their statistics. As an example, YouTube pushes their content creators to gain more subscribers. YouTube gives awards to content creators that manage to reach a certain number of viewers, as proof of their achievements and hard work. In this case, YouTube gives 'Play Button' as token for their 'YouTube Creators' (YouTube, n.d.).

In textual level, all five most viewed videos from five most popular Indonesian YouTube channels show that their titles use Indonesian language. Moreover, capital letters were identified. A major similarity was found from all five videos. They all used capital letters in their title. This indicated that capital letters were content creators' strategy to obtain significant number of views. All video titles also use roman letters. Even though Gambus (2017) wrote the video title in Arabic language, it was written in romans and it still contains Indonesian word and used Indonesian language in its video description. This shows that language also becomes important in content. From the five videos identified, comment sections are filled by comments in Indonesian language, with exception of Halilintar (2018) who disables comments for this particular video. This shows that language plays important part in engagement of a video content as it gives context for interactions. Audience can relate to the topic, make meaning out of the content delivered, and response it in relevant manners.

It was identified that video descriptions in the video are delivered in Indonesian language. This is a relevant content strategy regarding to context and location of the content creators in

response to their target audience. All the content descriptions in all five videos are delivered in Indonesian language. This is done to attract more audience from Indonesia. Audience will be interested to open a content with Indonesian language. This is because the context is relevant to make meaning out of the video.

The role of language in interaction between avatars is seen vital because avatars are *given* orders from their users. In video streaming application, users are called audience and content creators. Language works to catalyze audience attention and engagement because it creates a collective representation based on a particular context (Holtgraves & Kashima, 2008). This collective representation is the factor that bridges communication between audience and content creators, as cited from C.D. Hardin & Conley (2001) and C.D. Hardin & Higgins (1996) by Holtgraves and Kashima (2008). Collective representations make sure there is a certain degree of reliability that guarantees if the information being transmitted is accurate and trustworthy. Collective representations are built from context. In this case, the context are held in the language the audience and content creators mutually use, acts to represent mutual understanding between parties, as well as involving a mutual identity. Collective representation also works as a factor to set a common area of interaction, as well as indicating that two interacting parties share same representation of ideas based on a particular context. In the end, language will contribute to a particular shared reality (C. D. Hardin & Conley, 2001; C. D. Hardin & Higgins, 1996; Higgins, 1992 in Holtgraves & Kashima, 2008).

Language also becomes an important factor in content recommendation. It shows the importance of keywords embedded in a video, which will contribute to the popularity it will get (Borghol et al., 2012). In digital system, language works as part of algorithm. As a context, language can build a pattern that will be constructed as content recommendation. It is made possible since choices for a user are built from aggregating other users' choice and preferences (Cunningham, 2012). Therefore, related language will contribute to creating relevant content recommendation, possibility for a particular search result, and social network market will take place.

As a system that serves as basis for payment ecosystem, the marketplace of attention can be seen from interactions between the content creators' avatars as producer and visitors' avatars as consumer. The marketplace of attention utilizes attention and engagement metric (Manzerolle & Wiseman, 2016) that content creators' avatar's use to improve their statistics. Meanwhile, the visitors' avatars treat content creator's avatar's contents as inputs to decide their next steps.

Meanwhile, prominence-interpretation theory could suggest avatars consider the level of other avatars' credibility during interactions. This

could be explained from prominence and interpretation aspects (Fogg, 2003). Prominence aspect sees avatars involve themselves in interactions to pursue a goal of obtaining contents from each other. For the visitor's avatars, what kinds of content relevant to be accessed from a content creator's avatar is seen as binary codes. In the eyes of digital media users, this situation is seen as he or she browsing on the YouTube homepage to find a video uploaded by content creators that he or she wants to watch. Experience and individual aspects of avatars can be seen as the level of access an avatar has that allowed it to open a particular type of content. Interpretation aspect sees visitors' avatars assume codes from content creators' avatars to decide whether the codes are compatible to read so visitors' avatar could take their next actions. In the eyes of the user, this could be seen as he or she finds a video on YouTube that he or she knows and wants to watch.

The avatars' existence can be identified through the use of verbal and nonverbal cues mentioned in social information processing theory (Griffin et al., 2019). A user may identify an avatar from non-verbal cues such as display picture used, and verbal cues such as the name of the account and descriptions about the channel that refer to the account. Social information processing theory could be used to suggest that interactions in digital media rely on these cues. Verbal cues that also acts as sticky cues on contents are identified by users as video title, thumbnails, number of views, date of upload. In determining a credibility of a particular content, visitors rely warranting values in the form of number of views, number of likes, recommendation, and comments from other visitors. In the eye of the avatars, these cues and warranting values are seen in the form of binary codes that carry the corresponding information.

Similar study on YouTube popularity by Welbourne and Grant (2015) found that user-generated contents were more popular, even though in terms of quantity, professionally generated contents proved to be more superior. This study resonates well with findings in Indonesia contexts, where top five most subscribed content creators were user-generated content creators. Another study suggests that content distribution is shaped by the way a content is accessed (Manzerolle & Wiseman, 2016). This suggestion is also relevant with the findings in Indonesian YouTube context, where videos in terms of number of views will have more chance to be featured as recommended videos and attract more visitors.

What can be explored more from past research is seeing how language plays important role in the interaction. Both audience and content creators rely on a particular language in their content. Audience use language to navigate their way through ubiquitous content, and content creators use it to find as many audiences as possible. Language will give context and a form of

mutual representation of things, which will then make possible that audience and content creators share a reality (Holtgraves & Kashima, 2008). Therefore, qualitative study becomes relevant as this article identify channels that use Indonesian language, made by Indonesian, and consumed by Indonesian. Language will give more understanding in interaction between avatars and how access is exchanged with the help of a language.

## **Conclusions**

To conclude, this article sees that interaction between avatars revolves around access, attention, and avatars. Access becomes an important factor in interaction between avatars because it is what resulted from the interactions. Audience's avatars need access to open a certain content while content creators' avatars need access to more improved statistics, and their needs can only be fulfilled when they interact with each other. Meanwhile, attention is important because it is considered as the limited resource to move the attention economy framework. Attention economy can only happen if one of the properties used for transaction is in fact attention, or in digital space, the attention data. Last but not least, avatars are the crucial digital agent that brings attention economy in digital space to life. This is due to the fact that avatars are digital representations of audience and content creators that carry their user's digital data in the form of attention data and content.

Advertiser's perspective sees attention economy in the presence of a reliable statistics, or in this case attention and engagement metrics. As popular channels and video content in video streaming application can be measured with these metrics (Welbourne & Grant, 2016), advertisers need to rely on said metrics to identify popularity of a channel and video content, thus make decision to place an ad (Figueiredo et al., 2011).

The outcomes of this research prove that the interactions among avatars support the practice of attention economy. It can be viewed from the "transactional" mechanism that takes the form of interactions between avatars in digital space. An avatar is allowed to access other avatars' data or content only if the aforementioned one agrees to give its attention in the form of attention data. From the digital media user perspective, this activity might simply be perceived as clicking on a link to go to the next web page.

This attention data of the avatar accessing a certain content is measured with an attention metric and changed into a unit that has relevant value, for example counted as one view. This then can be added to the number of view statistics. One view from the accessing avatar will contribute to an increase of the number of views of the content creator's avatar's video content. A content that generates a large number of views means it manages to win visitors' attention. Its possibility to be detected by algorithm and featured

as recommendation will also increase. Being in the recommendation list will benefit content creator's avatar since it increases the probability of attracting more avatars to access contents it has. In addition to the content being more popular, the avatar which acts as content owner is reaping the benefit of having popular content in terms of increased statistics such as getting more subscribers.

In transactional perspective, both avatars of content creator and visitor exchange visual cues taking shape of binary codes and algorithm. When cues from content creator's avatar is well-received by visitor's avatar, the visitor's avatar considers the content creator's avatar credible. The exchange of visitor avatar's attention with content creator's avatar content will then take place. The content creator's avatar performance in the form of its contents and statistics will then be utilized for monetization scheme. This way, contents are open for advertisement.

Taking YouTube as example, the attention economy can be perceived as a currently trending foundation in digital media practice. The attention economy framework makes it possible to convert audience attention in digital space into something valuable. When monetized, attention will have added value of financial significance. In economic point of view, every avatar interaction means incentives for every parties involved. In order to gain more incentives, digital media users that create content will push themselves to create better contents and make more use of their avatars when it comes to garnering attention in digital space. This can manifest as efforts from amateur content creators to be more professional in terms of skills, appearance, and technology used. Thus, they can enter social network market.

To conclude, the attention economy perspective helps content creators to generate viewers' attention in video streaming applications that are translated into statistics such as their videos' number of views and other engagement metrics such as number of likes and comments. The more a channel gets viewers' attention, the more likely it will benefit a content creator when it comes the time to monetize his or her contents. Therefore, both video streaming application providers such as YouTube and the content creators in it who wish to monetize their contents must assure viewers that having advertisements or sponsored messages in their contents are a good sign for the well-being of the channel. Derived from such point of view, video streaming application providers and content creators must be able to present advertisements in such a fashion in each monetized content. Meanwhile, video streaming application providers can also empower non-profit oriented content creators in attention economy without coming up with monetization as the suggestion.

There are possibilities of future research about interaction and monetization in digital media can be further explored based on this article. For example, in terms of the intrusive nature of advertisement in a monetized content. Therefore, a research to see whether a type of advertisement on a digital media is seen as more intrusive than the others will help identify which type of advertisement is more acceptable by the users of a particular media. Another future research that can be conducted would be seeing how video streaming application providers maintain the existence of non-profit oriented content creators in parallel with the providers' motivation to attract advertisers, also the survival capabilities of these creators and their motivations for creating contents.

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