Globalization, Information and Communication Technology, and The Existence of Culture and Its Inheritors A Case Study on Javanese Karawitan

by khafiizh hastuti

Globalization, Information and Communication Technology, and The Existence of Culture and Its Inheritors: A Case Study on Javanese Karawitan

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Abstract: Globalization eliminates time and space boundaries within local culture scope into global one. The effect of westernization definitely becomes one of globalization components. The development of information and communication technology accelerates globalization process. *Karawitan*, a traditional art originating from Java, has also experienced westernization process. Globalization in information and communication technology, besides its positive impact, also has negative impact on the existence of karawitan and on Indonesian people as the heirs of this culture. The lack of control over *karawitan* works uploaded on the internet and the ease of access to these works will certainly threaten *karawitan* music existence. Moreover, the data information of *karawitan* circulated on the internet is dominated by foreign sources. Thus, as a cultural heritage, *karawitan* should be preserved through good policies and documentation which are completely and validly arranged. In addition, the use of internet technology as a medium to present musical information in cultural globalization era is one of many ways to do to maintain the existence of Indonesian people as *karawitan* inheritors.

1 INTRODUCTION

There are two cultural heritage categories, tangible cultural heritage which includes monuments, artifacts, and cultural area; and intangible cultural heritage as traditional architecture, regional languages, traditional fabrics, local wisdom, traditional crafts , traditional culinary, ancient manuscripts, traditional clothing, traditional games, traditional arts, traditional weapons, traditional technology, as well as oral traditions. In Indonesia, the number of cultural heritages which have been successfully documented does not reflect the overall amount considering abundant wealth of Indonesia's cultural heritage.

Cultural statistic data published by the Secretariat General of the Center of Education and Culture Data and Statistics of Indonesia in 2016 show the fact of extinction in cultural arts of Java, in which 26 performances, 6 music and 16 dances have been extinct. Back to 2013, as reported in Sindonews, an national newspaper of Indonesia, Aprinus Salam, the chief of the centre for cultural study of Gadjah Mada University, mentioned that there were about 200 types of traditional cultures in districts Sleman, province of Yogyakarta which have been and near to extinct. There were quite difference in numbers between data given from these two institutions; one which represents Indonesia government stated that 48 cultural arts of Java have been extinct, while another one which represents a research institution of a university stated that about 200 types of traditional culture have been and near to extinct in just one districts.

Further, Salam (2013) stated that the lack of protection, preservation, development and funding from the government as policy holders, traditional culture transfer which is increasingly imperfect or diminished in its essence and the entry of foreign cultures due to the influence of globalization are considered as the reasons for the cultural heritage extinction.

Globalization opens boundaries, forms linkages and influences all aspects of life among nations. Westernization is one component in globalization (Scholte, 2001) which gives the influence of the

diffusion of western culture into local culture. Information and communication technology accelerates this globalization process. The main actors in this process are developed countries which master information and communication technology through the diffusion of their local own values into global values. This condition threatens local/regional (Indonesian/traditional) arts such as *gamelan* (Mubah, 2011).

Nasution (2017) proposed an approach focusing on the defense of local culture by strengthening the filter to foreign culture and resistance on values threatening local culture in order to stem globalization in culture. In addition, Mubah (2011) suggested government intervention to issue regulations which can protect local culture and to use communication and information media (internet) in marketing local culture to the world.

This paper aims to discuss globalization accompanied by the development of information and communication technology in relation to the existence of culture and cultural heirs. In addition, the objects of this study are *karawitan*, and Javanese *karawitan* community. *Karawitan* is traditional music ensemble from Java which use *gamelan* as the music instruments, and *gendhing* as the songs. The discussion focuses on the application of information and communication technology into western arts (western) as well as their influence on Indonesian local culture, i.e. *karawitan*.

2 KARAWITAN

2.1 Existence in Modern Technology Globalization

The influence of globalization can be found in the use of music recording systems or notations in *karawitan* as one of Javanese culture products. Music notation is a western technology requiring musicians to obey and follow all the conditions recorded within, while *karawitan* art uses it as a general picture in playing music. Becker in Rusdiyantoro (2011) stated that notation system is the most dangerous influence of western music in *karawitan*. However, this system can penetrate Javanese culture even almost without any resistance. Although the use of notation system can lead to misleading, this influence in its development can open up the awareness of musical figures to document *gendhing* in order not to cause it disappear as well as to make it as a medium of learning, and to make it used by musicians as a guide in presenting *karawitan*.

The effect of diffusion not only stops in the application of musical notation, but song formulations which are common to western music are also applied by Sindusawarna to *gendhing* with a concept of *ding dong* for *gatra*, a kind of a bar containing four beats, in formulation: small *ding*-small *dong*-big *ding*-big *dong* (Supardi, 2016) or *fore-back-fore-terminal* formulation of *gatra* by Martopangrawit (1969). Furthermore, western people who study *karawitan*, such as Becker and Becker (1982), Hughes (1989), and Benamou (2016) tried to mathematically formulate *gendhing* further to predict the pitch value of notation for each beat. The paradigm of western society in learning *karawitan* tends to formulate *gendhing* using mathematical logic of *if A then B*, while Javanese *karawitan* characters emphasize more in the view that *gendhing* reflects a feeling which certainly cannot be formulated. Thus, the logic built whould be *if A then it is not always B*.

Logic difference in understanding *gendhing* between Indonesian and western musical figures does not cause any conflict or resistance from Indonesian musicians or even make cancellation of *gendhing* formulation by the Western *Karawitan* community. The humble nature held firmly by Javanese *karawitan* people makes it the basis for accepting differences by allowing some formulations to create *gendhing*. Supanggah (2015) states that there is nothing wrong or right in composing *gendhing* since it is widely opened to be created by anyone, yet the society acceptance must be taken into consideration in composing *gendhing*.

It can be seen that the attitude shown by Javanese *karawitan* figures/community who can accept these differences is definitely a proper way with the current cultural globalization which absolutely cannot be dammed. People or individuals from foreign countries or from Indonesia itself are free to learn *karawitan* in Indonesia, and are surely free to apply what they have learned based on their knowledge capacity. On the other hand, the globalization era makes it possible for everyone to publish works through the internet which can be accessed by anyone and anywhere without any control to measure the suitability of the work against *karawitan* characteristics. This condition can actually erode the existence of *karawitan* originality if there are more works circulating on the internet which do not fit *karawitan* characteristics and consequently there will be more who study *karawitan* through the internet.

The phenomenon of artificial intelligence application in art also cannot be prevented in *karawitan*. Artificial intelligence approach is used to develop computer programs possessing the ability to

create songs. This phenomenon has broadly developed since the emergence of string quartet composition works (one type of classical music) created by computer programs (Hiller and Isaacson, 1959). The development of artificial intelligence-based computer program which is able to create songs started to become a trend with the application of various artificial intelligence algorithms and methods in creating compositions of various music types, such as works from Xenakis (1965), Ebcioglu (1986), Gillick *et al* (2009), Kitani and Koike (2010), Pestana (2012), Quick (2015) and (Pachet, 2016), while the application of artificial intelligence to computer programs which can create *gendhing* was developed by Hastuti et al (2016).

It is natural that there is a controversy over the application of artificial intelligence in *karawitan*. However, resistance cannot prevent the continuation of this phenomenon. The researchers in this study are based on efforts to document the characteristics of *karawitan* in the form of computer programs which can compose a song. Moreover, the researchers try to formulate the characteristics of *gendhing* and store the formulation into a computer program so that *karawitan* characteristics will be maintained forever. In addition, if the generated *gendhing* does not meet its original *karawitan* characteristics, there will be many more further researches carried out to fix and improve the computer program performance.

The existence of *karawitan* originality must indeed be maintained without raising any rejection on the existing *karawitan* work which becomess the impact of current cultural globalization. In addition, policy formulation related to any possibilities which may influence *karawitan* existence is necessary to be issued by considering social, legal and technological development perspectives. Policies with original or non-original classification outputs need to be considered, for example: by using the classification proposed by Sunarto (2015) which distinguishes new music in *karawitan* into three classes, i.e. classical-traditional, popular, and *gagrag*/contemporary.

Development of computers and cellphone technology has affected the development of applications for virtual music instruments, such as Rubbycell's *Pianist HD*, *Synthesia* by Synthesia LLC, *Piano Play and Learn* by Yokee, and *Smule* by Ge Wang. The application of virtual music instruments which was originally created for learning and game purposes has been growing so extensively that it was used for music shows. Dannen (2009) describes that Smule is able to turn iPhone into a creative channel which allows the users to learn, play and perform a musical show. This phenomenon finally penetrates

karawitan world with various created applications of virtual gamelan instruments, such as *e-Gamelan* by Dian Nuswantoro University, *Gamelan Toetoel / Gatoel* by B201dev, *Saron Digital* by ProAndro, *Bali Digital Gamelan* by Daksa Digital, Bueh Developer's *Digital Gamelan*, and so on.

Different views between Indonesian *karawitan* figures/community and virtual gamelan application developers are commonly based on the same goal, i.e. preserving cultural heritage. FX Hadi Rudyatmo as the Mayor of Solo city, Central Java Province stated that the use of virtual applications cannot fulfill the need for respect to both the ancestors who created *gamelan* and the noble values of *gamelan* (www.liputan6.com). In contrast, developers of virtual gamelan application possess different perspectives in interpreting cultural heritage respect, i.e. developing virtual *gamelan* application is as an effort to preserve it. 22

Similarly to the application of artificial intelligence in creating *gendhing*, the development of virtual *gamelan* cannot be possibly avoided or even prevented as one of globalization impact s in information and communication technology whether from within the country or from abroad. Moreover, globalization allows all works accessible by anyone and anywhere. In virtual *gamelan* case, Catherine Basset (2005), a French citizen, is one of many pioneers in the development of virtual *gamelan* applications with her work '*Mécanique Gamelan*' developed in 2003. In addition, this application can be downloaded in the internet. In conclusion, it is good to provide some opportunities for the Indonesian to contribute in preserving their national culture through the use of using information and communication technology by developing virtual *gamelan*, although it is necessary to conduct more in-depth studies investigating its positive and negative impacts

2.2 The Existence of Indonesian People in Karawitan Information Globalization

Cultural heritage preservation can be done by directly coming into the cultural heritage location and by developing systems which are able to act as cultural information centers (Aufar, 2012). Easy access to information today is a challenge for Indonesian people in managing *karawitan*. As a cultural heritage, *karawitan* must be preserved by conducting good documentation which is completely and validly arranged. Besides, the use of internet technology as a medium for presenting *karawitan* information in this

cultural globalization era is one of the major things to do in maintaining the existence of Indonesian people as *karawitan* inheritors.

The use of terms '*karawitan*', '*gamelan'* or '*gendhing*' on the names or contents in websites owned by either Indonesian people or non-Indonesian citizens has eliminated the boundaries of space and time in the scope of local culture to be global one. The influence of information and communication technology in culture globalization leads to the lack of the existence of Indonesian people as *karawitan* inheritors. This fact can be found when we conduct some searching for *karawitan* information via the internet. Although *karawitan* is an indigenous Indonesian cultural heritage. Based on the facts obtained while searching *karawitan* information in the internet using keywords related to *karawitan*, such as "*karawitan*", "*gendhing*", "*gending*", or "*gamelan*"; most *karawitan* information data are dominated by foreign sources.

Searching conducted through Google search engine using keyword "*karawitan*" produce abundant data on websites presenting *karawitan* information. In addition, at the top of the lists are Wikipedia website, a number of individual blogs, and linked websites from YouTube which present video performances from individuals or *karawitan* groups. Searching with keyword "*karawitan music*" still do not result in some web site data presenting *karawitan* music information in a structured way in terms of completeness and its validity. The search recommends various websites as it does when searching using keyword "*karawitan*".

Furthermore, search using keywords "*gendhing*", "*gending*", and "*gamelan*" results in almost similar data to the search using keyword "*karawitan*". Sadly, the irony occurs since the search results mostly refer to websites owned by non Indonesian citizens when searching using keywords "*gendhing collection*" or "*gending collection*", even *gendhing* database which is easily obtained in the Internet is through a website gamelanbvg.com (Boston Village *Gamelan* from the United States).

Besides websites belonging to individuals, groups or institutions, Wikipedia, blogs (Blogspot or Wordpress), and YouTube are Web sites dominating the internet media to present *karawitan* content and those websites are owned by non-Indonesian citizens. Accordingly, the placement of *karawitan* content on the websites, by both Indonesian people and non-Indonesian citizens, is a manifestation of *karawitan* globalization. In the perspective of cultural inheritors, *karwotan* information dominated by foreign sources clearly reduces the Indonesian's pride as *karawitan* inheritors.

Regarding the naming of websites, the identity of websites using *gamelan* name is not inherent to Indonesian people ownership; for instances: *gamelan.org* is owned by American Gamelan Institute, gamelan.org.nz is owned by Gamelan Wellington Newzealand, *gamelan sulukala* website is owned by Plainfield Village Gamelan from Vermont, USA, and gsj.org stands for Gamelan Sekar Jaya is based in San Francisco city, United States.

It is clear that *karawitan* has globalized, and it is legitimate for any individual or group from Indonesia or other countries involved in *karawitan* art to use *karawitan* or *gamelan* or *gendhing* terms as their identity or group. On the other hand, Internet technology accelerates the process of *karawitan* globalization. The ownership and mastery of Internet technology by *karawitan* community from the western countries which is more advanced than Indonesian *karawitan* community provides more opportunities to the western people to publish their knowledge and *karawitan* works through the Internet by including the word *gamelan* as the identity of their websites. Although foreign *karawitan* communities still respects the origin of *karawitan* by providing some information stating that *karawitan* or *gamelan* is originated from Java, Indonesia, the Indonesian as the original owner of karawitan and must consider their existence as the main provider of *karawitan* information resources on the Internet.

Searching information for *karawitan* groups (*gamelan* studios) in the United States is actually easier than searching for *karawitan* groups from Indonesia. Data saying that there are more than 100 *karawitan* groups in the United States, including the profile of the *karawitan* group, have been published on Wikipedia website on a page entitled "List of gamelan ensembles in the United States". More ironically, there is no information about Indonesian *karawitan* figures/musicians on the page entitled "Gamelan" in the Website, it mentions some musicians collaborating with *karawitan* instead, such as John Cage, Colin McPhee, Lou Harrison, Béla Bartok, Francis Poulenc, Olivier Messiaen, Pierre Boulez, Bronislaw Kaper, Benjamin Britten, and many others.

Searching information using keywords "Javanese *karawitan* figures" results in not much different data from other *karawitan* information searches. There is no website providing complete and valid information about Javanese *karawitan* musicians or figures, profile information of such Javanese *karawitan* musicians as Sindusawarna, Martopangrawit, Mloyowidodo, Wasitodiningrat, Sumarsam, Rahayu Supanggah, Sri Hastanto, Narto Sabdo, and so on; is

documented incompletely and still spreading on various websites so that the search will be impractical. If this condition continues, *Karawitan* figures can be forgotten by future Indonesian generations.

The eradication of Indonesia identity as the original owner of *karawitan* will continue to occur if Indonesian pople do not actively conduct complete and valid *karawitan* documentation with easy access to *karawitan* information on the internet. In addition, it will continuously happen if *karawitan* information resources on the Internet from foreign countries dominate with uploaders or *karawitan* content owners as well as Websites providers which present *karawitan* information on the internet and also if there are more users (*karawitan* information searchers) not from Indonesia.

2.3   The Priorities and Actions

Javanese *karawitan* documentation includes history and learning, *karawitan* figures, *gendhing* (creators, notations, lyrics and meanings), *karawitan* groups, performances/shows (audio, or audio and visual), *gamelan* instruments which have historical value, and so on. Until today there is not any easy access to the availability of *karawitan* information in complete and valid data through the Internet of which this should be provided and guaranteed by the Indonesian people as *karawitan inheritors*.

Javanese *karawitan* preservation must be done through complete and valid documentation, and supported by the ease in information retrieval/search. There are three main points being priorities in maintaining the existence of the Indonesian as *karawitan* inheritors in *karawitan* globalization era, they are: (1) developing an ICT-based Javanese *karawitan* documentation system which supports the availability of Javanese *karawitan* databases and easy information search via the internet, (2) conducting socialization to Indonesian people to build awareness of Indonesian *karawitan* community about the importance of maintaining the existence of Indonesian people as *karawitan* inheritors in this cultural globalization era, (3) providing knowledge transfer to Indonesian *karawitan* communities about the mechanisms to actively contribute to the documentation and provision of *karawitan* information through built information systems.

Karawitan is one of Indonesian cultural heritages which is rich of figures, works, instruments and other information. If the search for *karawitan* information through the internet does not reflect the wealth of *karawitan*, it can be assumed that there is still a lot of data in the form of manuscripts which are spreading out everywhere, and there are still many Indonesian *karawitan* communities who do not yet realize the importance of digital documentation or they even do not have any knowledge to do digital documentation as well as to use the internet to publish the documentation.

By considering the value of Javanese *karawitan* wealth, process of developing system which includes the formulation of regulations in *karawitan* documentation through the internet, collection, validation, digitization and data uploading as well as system maintenance mechanisms (continuous content management and system promotion on the internet) will require both hard and smart work . furthermore, not less important work is to disseminate and transfer the knowledge to Indonesian *karawitan* communities regarding *karawitan* documentation system. The involvement of stakeholders, such as: representatives of the Republic of Indonesia government, representatives of cross-academics with fine arts/*karawitan* arts background, information and communication technology, or others, representatives from *karawitan* practitioners and other relevant parties; is needed to maintain the existence of Indonesian people as the inheritors of *karawitan* by being *karawitan* information center through ICT-based *karawitan* documentation.

4   CONCLUSIONS

Globalization eliminates time and space boundaries within the scope of local culture to be global one and the influence of westernization becomes one of the components in globalization. *Karawitan*, a traditional art originating from Java, is also affected by globalization. Besides the positive impacts, the development of information and communication technology accelerating globalization process may cause a negative impact on the existence of culture and its inheritors if it is not properly and correctly addressed. Some facts described in this paper indicate that the government, Indonesian generation (people), and especially Indonesian *karawitan* community are less prepared to respond to the use of internet technology in the globalization era of information and communication technology particularly in culture. In principle, the negative impacts arising cannot be solved without involving the information and communication technology itself.

In-depth studies are required to do to formulate policies in preserving the existence of *karawitan* as a cultural heritage, and the existence of the Indonesian

(people and nation) as its inheritors. Government interference is one thing which must be done by the Indonesian government, as the Malaysian government's efforts to protect its local arts. In 2008 Malaysia sought to review the law restricting the broadcast of foreign songs on private radios by applying a discourse regulating a 90:10 quota, i.e. 90% for broadcasting local songs and 10% for broadcasting foreign songs (www.republika.co.id). Under these conditions, Malaysian government encourages more artists in Malaysia to be ready to compete than to prevent the entry of art from foreign countries by considering that making prevention solution measures less effective by the existence of internet media. Besides the government, it is necessary to involve other stakeholders from such various backgrounds as experts from various fields, for instances: culture (*karawitan*), information and communication technology, law, social, education, etc. Last but not least and should also be regarded as a priority is to create a *karawitan* information center on the internet and to conduct transfer of information and communication technology knowledge to Indonesian *karawitan* community as a real effort to build awareness on the importance of actively contributing in documenting everything related to *karawitan* in the internet world.

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