

THE COMPLEXITY OF NEW MEDIA ON THE FARMING OF ETAWA GOATS IN PURWOREJO, CENTRAL JAVA, INDONESIA

Dwiningtyas Padmaningrum¹, Tatag Handaka², Subejo³

¹Sebelas Maret University, SURAKARTA

²Trunojoyo University, MADURA

³Gadjah Mada University, YOGYAKARTA

Corresponding author : dwiningtyas_p@staff.uns.ac.id

ABSTRACTS

Purworejo farmers have been farming Etawa goats for long years, ever since the Dutch colonisation in the beginning of 1900s until now. As Information and Communication Technologies (ICTs) progresses (new media), these farmers have taken initiatives to use of ICTs for marketing and promoting their Etawa goats. The purpose of this study is first, to discover the complexity of new media in farming Etawa goats in Purworejo, Central Java and secondly, it aims to explain the process of production and reproduction of the government's communication system in dealing with the complexity of new media. The research method uses explorative case study method. The research site of this study is Purworejo Regency with study sample comprising 11 out of the 16 districts, with purposive sampling as the sampling method. The demands and challenges become the complexity of the environment for the government's communication system. The system should reduce their complexity in order to obtain information of the environment which will become the input for itself. This information is the one that will be used for the process of producing and reproducing. However, the government's communication system has been slow in reducing the complexity of new media. The system doesn't become adaptive with this complexity of the environment.

Keywords: Complexity, New Media, Etawa Goat Farming, nt, Communication System

INTRODUCTION

The dynamics of contemporary rural development also encourage many developed and developing countries to pay serious attention to the use of information and communication technologies to facilitate agricultural and rural development through various agricultural and rural extension services widely known as Information and Communication Technologies/ICTs (Subejo, 2013). Whereas Sharma (2006) gives a term related to the use of ICTs for agricultural extension as the Cyber Extension which refers to the use of on-line networks, computers and digital interactive multimedia for the dissemination of technology and innovation in agriculture.

The widespread use of ICTs media in supporting the process and effectiveness of agricultural and rural development is expected to overcome the backwardness in the use of technology for information dissemination in agriculture. Many parties hope that new media will simplify the process and mechanism for the delivery of new technologies and

innovations in agriculture to farmers and other end users (end users). Burman, et.al., (2013) reported that modern communication technology is very important for rural development, especially to encourage participation, disseminate various information and to share knowledge and skills.

In line with the development of information and communication technologies which commonly also has been referred as new media, the goat farmers in Purworejo Regency Central Java at least in the last decade have started using new media their means of marketing and promoting their local superior product namely Etawa goat. Several new media application (apps) used in this media are Facebook, WhatsApp, and web. These farmers have their own Facebook and WhatsApp groups where they communicate through those apps.

The use of new media by the goat farmers is in the new stage development as well as a complexity to the communication system by the government. Marketing of Etawa goats initiated by the farmers becomes an environmental challenge and demand to the communication system. These phenomena grew to be an environmental “noise” which must soon be reduced and selected by said system. Theories used in this study are the communication system in the perspective of Niklas Luhmann (Luhmann, 2002: 160-161; Luhmann, 1992: 254; Luhmann, 2000: 96; Viskovatoff, 1999: 501-502). Communication system is the process of information producing and reproducing. This system is always present in the complexity of the environment. (Luhmann, 1995: 181-182; Lee, 2000: 320; Leydesdorff, 2000: 276).

He was urged to reduce this complexity (King and Thornhill, 2006: 200; Hardiman, 2008: 1-13). The system will select information which have value for the system. Then information will become the input to produce information in the form of regulation. (Luhmann, 1989: 28-29; Luhmann, 2004: 86). Studies regarding communication system have been done previously, reviewed from adaptive structure aspect (Handaka, 2014: 243-246) and power relation (Handaka, 2015: 280-289). The concept of new media borrows Lievrouw’s concept (2004). Since more than a decade ago, he reminded that new media will become mainstream. Matters regarding shopping, education, entertainment, socialization, and politic will go back and forth intertwined in one network (Bell, 2007: 132). The discourse of new media is often related with technology interrelationship that expands social relation in general (Holmes, 2005: 13).

New media also offers interconnection between multiple subjects in the same time (Stevenson, 2010: 157). In new media, an individual can be involved in producing and receiving message. (Freedman, 2011: 209). Martin Lister stated that in new media, the production and distribution of text/contents become decentralized and individualistic (Rayner et.al., 2004: 221). According to McLuhan, the new media is marked with sharing ideas and behaviors in a collective manner (Durham and Kellner, 2006: xxi). New media serves to participate, build identity, socialize and create network, and to self-represent (Croteau, et.al., 2006: 319). It also opens up the possibility to form collectivity, understanding, and intimacy online (McQuails, 2003: 44).

METHODS

The research method used in this study was explorative case study method. The site of this study was located in Purworejo Regency, Central Java. This regency was selected due to being one of the center of Etawa goat farming areas in Indonesia. Also, the history of Etawa goat farming has been established for long years. The sampling technique for this study was purposive sampling. It has been done the in-depth interview for 30 farming households who intensively involve on Etawa goat farming development from the selected areas.

Eleven out of 16 districts in Purworejo Regency became the sample for this study. These 11 districts were chosen to represent the following criteria: (1) the center of Etawa goat farming, which is Kaligesing district, (2) lowland area, which is Grabag district, (3) moderate plain, which are Bayan district, Gebang district, Kemiri district, Purworejo district, and Pituruh district, and (4) highland areas, which are Bener district, Loano district, Bagelen district, and Bruno district.



Figure 1. Research Site in Purworejo Regency, Central Java

(Source: <http://www.indonesiacommerce.com/portal/indonesia-tourism/central-java/map.html>)

Informants in this study comprised the head of farmer group, Head of Department of Agriculture, Food Marine and Fisheries (DAFMF), Head of Functional Position Group at DAFMF, Coordinator at District Extension Office, and Field Extension Officer. These informants were chosen for having rich information regarding the use of new media by the farmers and the production and reproduction implemented by the government's communication system. Data collection techniques used were in-depth interviews and observation. Data validation technique used triangulation, which tested data consistency obtained from various sources. These three sources are the farmers, the government, and secondary data.

DISCUSSION

The Complexity of New Media

The farmers have started using new media, which is Facebook. Aside from Facebook, they also use WhatsApp. These farmers use these media to conduct trade of Etawa goats. “Etawa Indonesia” Facebook group by these farmers have more than 1000 people in it. These Facebook group members are not just farmers and merchants from Purworejo Regency, but also farmers from regions outside Purworejo. Even more so, there are numerous members located outside the island of Java, for instance, Sumatera and Kalimantan.

These farmers post various males, females, and baby goats every day in this Facebook group. They find it easier to offer their Etawa goats, and the buyers can also look for their preferred Etawa goats easier due to various choices from hundreds of farmers. Buyers who want Etawa goats through Facebook group, can directly perform transaction with their sellers. If the buyer is from the Purworejo area, often times he/she comes straight to the farmers’ house to see the Etawa goats firsthand. If the seller and the buyer find agreements in terms of price, the transaction is carried out.

Based on indepth interviewed in surveyed households, it can be identified the general use of new media by Etawa goat farmers. The new media play pivotal role for farmers in collecting information, distributing information, marketing product, buying product and supporting various activities related to Etawa goat farming (see Table 1). Farmers can quickly and easily and flexibly obtain various information related to management of Etawa goats farming through the use of new media so that the time, distance and geographic diversity can be overcome

Table 1. The use of New Media by Farmers (n=30 farmers)

Purpose of new media use	Farmers (person)	Percentage (%)
Collecting information	30	100.0
Distributing information	30	100.0
Marketing product	30	100.0
Buying product	22	73.3
Supporting works	21	70.0
Entertaining	10	33.3
Improving social status	7	23.3

Mobile phone becomes an important tool for the farmers to access their Facebook and WhatsApp. Farmers who offer Etawa goats in a WhatsApp group, will be connected with other members to the buyer who are looking for Etawa goat specification as offered. Each member has a connection to other farmers who are not inside the WhatsApp group. Therefore, the buyers of Etawa goats offered through the WhatsApp group may not be the member of the group, but may belong to the network of one of the WhatsApp group member.

In recent years, Etawa goat farmers have increasingly actively used new media to sell and promote their local products. At first it was still limited to young farmers, but in its development the relatively senior farmers also began to get used to using new media and using it to sell and promote their products. Various local products that have been marketed and promoted by famers through new media include baby goats, mature goats, livestock

products, local potencies, goat milk, organic manure and timer for goat cage materials (in detail see Table 2).

Table 2. Type of local products to be sold by farmers using new media (n= 30 farmers)

Type products	Farmers (person)	Percentage (%)
Baby goats	4	13.3
Mature goats	21	70.0
Livestock product	6	20.0
Local potencies	1	3.3
Goat milk	5	16.7
Organic manure	1	3.3
Timber for goat cage materials	1	3.3

The Production of New Media Information

Many Etawa goat farmers have used new media to exchange information regarding farming techniques, farming management, and Etawa goat marketing. These farmers use Facebook, WhatsApp, and blog to exchange said information.

The farmers use WhatsApp to hold farmer group meeting agenda each week/month. Each member of the farmer group offers and transacts with each other through Whatsapp and Facebook. Farmers have their own group in WhatsApp and Facebook. These groups do not belong to only one farmer group, but they comprise farmers in Purworejo Regency as well nation-wide. One of the more prominent Facebook group among the farmers is “*Kampus Etawa*” (literally means “Etawa campus”).

In recent years the Facebook application has become increasingly popular among Etawa goat farmers. The application is considered easy to use and has high flexibility for searching and or sending information related to the development of the Etawa goat because it can contain almost unlimited text, photos and images. Information type which commonly have been accessed by goat farmers include baby goat, livestock raising, cage improvement, feeding, livestock diseases and treatment, milking, goat marketing, milk marketing, beauty Etawa goat contest and farm recording (in detail see Table 3).

Table 3. Types of information related to livestock development to be accessed through Facebook application (n=30 farmers)

Type of information	Farmers (person)	Percentage (%)
Baby goat	4	13.3
Livestock raising	6	20.0
Cage improvement	6	20.0
Feeding	6	20.0
Livestock diseases and treatment	7	23.3
Milking	4	13.3
Milk processing	4	13.3
Goat marketing	7	23.3
Milk marketing	3	10.0
Beauty goat contest	6	20.0
Farm recording	4	13.3

Farmers who conduct transactions of Etawa goats through WhatsApp usually perform this via Whatsap group. The farmer takes a photo of his/her Etawa goat, when another farmer generally asks the specification of offered goat. If there is a match in the quality and price, the prospective buyer will first take a look at the goats in the farmer's shed, especially if the buyer's house is near the farmer or goat traders. If both houses are far from each other, usually the transaction goes directly to negotiating price.

There are several farmers in Kaligesing who make their own blog/web that specifically discuss about Etawa goat farming. Farmers, enthusiasts, merchants, or general people often discuss various things concerning PE goat in these webpages. The web manager actively provides responses towards questions asked in their blog/web.

Farmers, along with this web manager, frequently write matters about farming techniques, farming economy calculation, and diverse Etawa goat marketing problematics. The economic calculation of PE goat farming is thoroughly explained with examples attached. Etawa goat farming enthusiasts throughout Indonesia utilize this media to exchange opinions and experiences.

The manager of "gunungkelir.com" also hosts with his home to share experiences and to become a learning place for all people who are interested in farming Etawa goats. The farmers indirectly provide counseling about Etawa goat farming to many people, even though they personally do not know them.



Figure 2. Local initiative using new media for promoting and sharing information on Etawa goat farming in Kaligesing Purworejo Regency
(Source: http://www.kambingetawa.org/peternakan-kambing-kaligesing.html/snap_2015-04-06-00-08-29_004)

A lot of farmer groups already have their own WhatsApp or Facebook group. There are already several Etawa goat transactions among existing farmers which shifted to this new media. Sometimes, if there are no fellow farmers who are interested with the offered goats, those farmers who are the member promote them to their friends who have not joined the group. Farmers who are a member of the group, then proceed to connect prospective buyer to the members who offered their Etawa goats. The new media has been used massively by

farmers, especially young ones. A lot of them make use of this media to share and gain abundant information regarding Etawa goats.

Government's communication system doesn't have specific regulations in dealing with this complexity to answer the existing problematics. Government's communication system doesn't even use the new media itself to spread information regarding Etawa goat farming to the farmer. Government's communication system also uses media, just not new media. The government uses radio broadcast to deliver information regarding Etawa goat farming. The Field Extension Officers deliver animal husbandry material, then the radio listeners inquire questions, and the officers provide the answer. This broadcast is guided by the radio announcer.

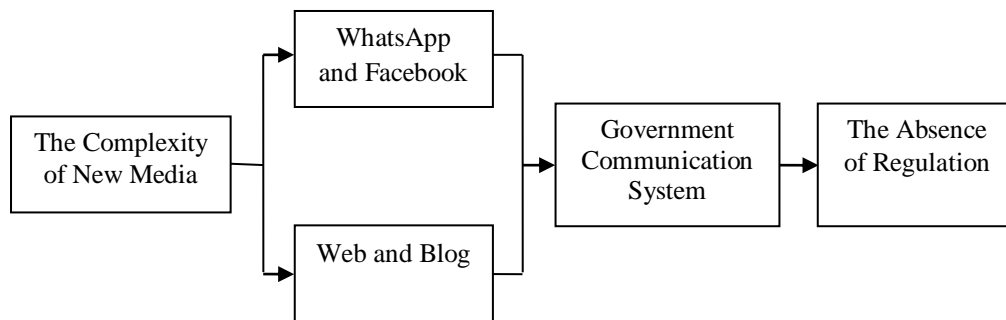


Figure 3. Analytical Framework of the Information Production by New Media

The government actually has been using new media in delivering information regarding Etawa goat farming, which can be accessed in the Purworejo Regency government web address (kabupatenpurworejo.go.id), but the information provided is very limited and is not updated. Searching the information on Etawa goat on official website of Purworejo Regency, by using key word “kambing etawa” it can only found two related information on Etawa goat development (see Figure 4).

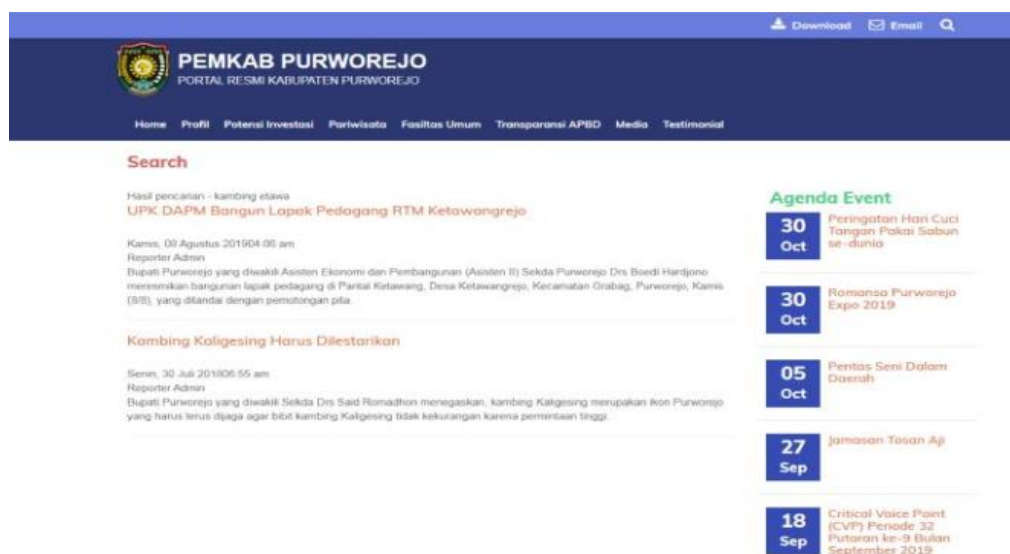


Figure 4. Information searching results on Etawa goat development on official website of Purworejo Regency
(Source: <https://purworejokab.go.id/web/search.html?k=kambing+etawa>)

CONCLUSIONS

Goat farmers have initiated the use of new media to marketing and promoting their Etawa goats. The government's communication system has not been successful in reducing the complexity of new media in relation to the farming of Etawa goats. The system also has yet to produce regulations in dealing with the demands and challenges of the environment, which is the development of the new media, thus not being adaptive. As the first step, the government's communication system should produce relevant regulations for the new media through the official webpage of the Local Government of Purworejo Regency.

REFERENCES

- Bell, David. (2007). *Cyberculture Theorists: Manuel Castells and Donna Haraway*. New York: Routledge.
- Burman, RR, et.al., 2013, Information Dynamics for Designing Cyber Extension Model for Agricultural Development, *Journal of Community Mobilization and Sustainable Development* Vol. 8(2):182-185, July-Dec 2013
- Croteau, David, and Hoynes, William, and Milan, Stefania. (2006). *Media/Society: Industries, Images, and Audiences*. 4th Edition. Los Angeles: SAGE Publications.
- Durham, Meenakshi Gigi and Kellner, Douglas M. (2006). *Media and Cultural Studies: Key Works*. Revised Edition. USA: Blackwell Publishing Ltd.
- Freedman, Eric. (2011). *The Limits of the Cellular Imaginary*. In *Flow TV: Television in the Age of Media Convergence*. Kackman, Michael, and Binfield, Marnie, and Payne, Matthew Thomas, and Perlman, Allison and Sebok, Bryan (eds). New York: Routledge.
- Handaka, Tatag. (2014). *Struktur Adaptif (Adaptive Structure) dalam Sistem Komunikasi Budidaya Kambing Peranakan Etawa (PE) di Kabupaten Purworejo*. Prosiding Seminar Nasional Pembangunan Peternakan Indonesia Berbasis Riset Inovatif, Program Studi Peternakan, Fakultas Pertanian, UNS.
- Handaka, Tatag. (2015). *Relasi Kuasa dan Sistem Komunikasi Pemerintah dalam Budidaya Kambing Peranakan Etawa (PE) Kaligesing di Kabupaten Purworejo*. Prosiding Komunikasi Politik di Era Digital, Fakultas Ilmu Komunikasi, Universitas Multimedia Nusantara (UMN).
- Hardiman, F. Budi. *Teori Sistem Niklas Luhmann*, Th. XXIX no. 3/2008, *Jurnal Filsafat Driyarkara*, Sekolah Tinggi Filsafat (STF) Driyarkara, Jakarta.
- Holmes, David. (2005). *Communication Theory: Media, Technology and Society*. London: SAGE Publications.
- King, Michael and Thornhill, Chris (ed). (2006). *Luhmann on Law and Politics: Critical Appraisals and Applications*. Oxford: Hart Publishing.
- Lee, Daniel. *The Society of Society: The Grand Finale of Niklas Luhmann*, *Journal of Sociological Theory* 18 (July 2000), American Sociological Association, USA.

- Leydesdorff, Loet. *Luhmann, Habermas, and the Theory of Communication*, Systems Research and Behavioral Science 17 (3). 2000. pp. 273-288. <<http://www.leydesdorff.net/montreal.htm>> (Diunduh hari Sabtu, 1 Maret 2014, jam 20.15).
- Luhmann, Niklas. (1989). *Ecological Communication*. Translated by John Berdnarz, Jr. Chicago: The University of Chicago Press.
- Luhmann, Niklas. (1992). *What is Communication*, Journal of the International Communication Association, Volume 2, Issue 3, ISSN: 1050-3293, pp. 251-259.
- Luhmann, Niklas. (1995). *Social Systems*. Translated by John Bednarz Jr. with Dirk Baecker. Stanford: Stanford University Press.
- Luhmann, Niklas. (2000). *The Reality of the Mass Media*. Translated by Kathleen Cross. California: Stanford University Press.
- Luhmann, Niklas. (2002). *Theories of Distinction: Redescribing the Description of Modernity*. Translated by Joseph O'Neil [et al.]. California: Stanford University.
- Luhmann, Niklas. (2004). *Law as A Social System*. Translated by Klaus A. Ziegert. New York: Oxford University Press.
- McQuails, Denis. (2003). New Horizons for Communication Theory in the New Media Age. In *A Companion to Media Studies*. Angharad N. Valdivia (ed). USA: Blackwell Publishing Ltd.
- Proposal Usulan Penetapan Wilayah Sumber Bibit Kambing Kaligesing (Kambing PE) di Kecamatan Kaligesing Kabupaten Purworejo Provinsi Jawa Tengah, DPPKP Kabupaten Purworejo, 2015.
- Rayner, Philip, and Wall, Peter and Kruger, Stephen. (2004). *Media Studies: The Essential Resource*. London: Routledge.
- Sharma, P.V. 2006. Cyber Extension: Information and Communication Technology Applications for Agricultural Extension Services-Challenges. Opportunities, Issues and Strategies in "Enchangement of Extension System in Agriculture". Sharma, PV (ed.), APO Tokyo.
- Stevenson, Nick. (2010). *New Media, Popular Culture and Social Theory*. In *The Routledge Companion to Social Theory*. Elliott, Anthony (ed.). New York: Routledge.
- Subejo, 2013, Cyber Extension: A New Hope for Agriculture and Rural Extension, Opinion The Jakarta Post, Paper Edition June 4, 2013.
- Viskovatoff, Alex. *Foundations of Niklas Luhmann's Theory of Social Systems*, Philosophy of the Social Sciences, Vol. 29 No. 4. December 1999, pp. 481-516.