



UNIVERSITY OF GOTHENBURG

Communicating Recycling to Villagers: Insights from Hamlet in Yogyakarta, Indonesia

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ABSTRACT

Research on environmental issues such as waste recycling has always been an interesting subject. The present study focused on communication perspective of recycling program in an anonymous Hamlet in Yogyakarta, Indonesia that has implemented waste recycling program based on local initiative. The purposes of this illustrative case study were to identify the process of communicating recycling and the modes of persuasion that led behavior change of Hamlet villagers from past behavior to recycling behavior. To collect data, direct observation and semi-structured interviews were conducted in Hamlet in Yogyakarta, Indonesia.

This study identified the process of communicating recycling in Hamlet can be divided into six stages: introducing the idea of recycling to the family, relying on the local leaders, communicating to a small group of Hamlet villagers, getting acceptance of Hamlet villagers, seeking involvement of Hamlet villagers and establishing social recognition. In line with theory of planned behavior, behavior change can be seen from persuasive messages that have been aimed to change *attitude*, *normative beliefs* and *perceived behavioral control*. To change *attitude*, the persuaders provided information that raised awareness of “waste as a problem” and communicated recycling in accordance with Islamic faith and Javanese culture. With respect to *normative beliefs*, they used *commitment technique* and *block leader approach* to convince “other people are doing recycling.” While to ease villagers in performing recycling behavior (*perceived behavioral control*), they conveyed message that “recycling is easy”, emphasized income generation, encouraged involvement and recruited new generation of persuaders.

Further, this study found the persuaders used *ethos* by presenting credibility, humility and trustworthy. They also used *logos* by communicating the dangers of handling waste carelessly and the benefits of recycling program. In presenting *pathos*, they used poem, song and signs to stimulate emotion of Hamlet villagers.

Keywords: *behavior change, communicating recycling, modes of persuasion, persuasive communication*

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1. INTRODUCTION

This chapter introduces the background and motivation of this study. It is then followed by the description of the purposes and research questions of this study. At the end of this chapter, the author presents the outline of the thesis.

1.1 Why communicating recycling is necessary to study

Waste is a fundamental environmental problem in our everyday life. Improper waste management causes several problems including contaminating water, attracting insects, increasing flooding due to clogged drainage canals and further, it increases greenhouse gas emissions that contribute to climate change (U.S Environmental Protection Agency, 2006). In Indonesia, as one of developing countries, most of waste is usually burned and dumped in open sites or in rivers, streams and picked by scavengers (Mediana & Gamse, 2011; Damanhuri, et al., 2009). Advance waste processing such as recycling, composting and incinerating have not been extensively operated nationwide. With respect to waste management concept in Indonesia, recycling is an activity of reusing substances of waste either by direct self-reuse or by selling them to scavengers (Mediana & Gamse, 2010).

In line with increasing awareness towards environmental issues, there is a growing interest to improve waste management in Indonesia. More and more people are aware of the need and participate (voluntarily or involuntarily) in waste recycling, trying to make it as a common practice in their daily life. In some cities in Indonesia, there are various community initiatives such as women-owned collection cooperatives, itinerant waste pickers improvement, neighborhood-based youth groups for collection, contract to micro-enterprises, neighborhood composting and collection of user charges from each household (Mediana & Gamse, 2010).

Through communicating recycling, people have wider understanding of waste. As Hawkins and Muecke (2003) noted, waste is thereby viewed as a material that we constantly try to reutilize and not just viewed as a bad object we dispose of. In this concept, waste is actually far from being degree zero of value since it can be exchanged to recyclable resources, antiques and tourist landscape (Hawkins & Muecke, 2003). Therefore, the way we manage waste in daily life might be influenced by how we view waste and in a wider perspective, how we see the human relationship and actions toward the nature.

One way to solve environmental problems is by broadening understanding on how we talk to each other about natural resources and our relationship with them (Corbett, 2006). Similarly, the way we communicate with one another about the environment strongly influences how we define our relationship with the natural world (Cox, 2010). In line with that, communication as habitually directed at changing attitudes depends on the source, the content, the medium and the audience of the message (Triandis, 1994). Communication in

this context mediates our beliefs, attitudes and behaviors related to nature and environmental problems (Cox, 2010). In these ways, communication plays an essential role in changing human attitude towards more environmentally friendly behavior.

1.2 Narrowing to a case: recycling in Hamlet in Yogyakarta, Indonesia

Hamlet in this case is a fictitious name of a real small village located in the outskirts of The Special Province of Yogyakarta, Indonesia. Through community based waste management, Hamlet has been implementing recycling since 2004. The idea of this program stems from waste problems that emerged in the village in the year 2000. Whilst the government waste collection service was limited to several areas in Yogyakarta, each household handled waste mostly through burying, burning, and throwing it away into irrigation canals. As a result, mounds of plastics, glasses and cans clogged paddy fields in Hamlet. Farmers in Hamlet considered this as a serious problem and complained to local leaders as plastic waste may decrease the quality of soils, impede growth of paddy roots and reduce rice yields. There is also a problem related to pieces of glass waste that may injure farmers when stepped on barefoot in their paddy field. Consequently, they needed extra time to clean up their fields.

In addition to that, Hamlet became so densely populated that a higher volume and a greater variety of waste was produced. This was also followed by rapid growth of house constructions in Hamlet. However, the rapid growth of houses was not balanced with area provisioned for waste disposal. Consequently, waste was not properly managed in Hamlet. Hamlet villagers habitually threw the waste into neighbor's yard, vacant land, roadside, river or irrigation canals. Waste burning was also common practice to wipe out waste.

Hamlet villagers did not have proper knowledge on how to deal with waste management in relation to health problems. For instance, there were many used bottles containing liquid scattered around and it might have become places for breeding of mosquito *Aedes Aegypti* which later could cause dengue fever disease. Dengue fever itself is a serious and typical disease in a tropical country like Indonesia and may have fatal consequences. In addition, there is also lack of knowledge about health consequences of waste burning in open space. Burning all kind of rubbish including plastic may bring out toxic materials such as dioxin causing cancer, asthma, respiratory and cerebral diseases (U.S Environmental Protection Agency, 2006).

In 2004, a Hamlet resident initiated community based waste management. The idea then turned into actions in 2005 by financial support from an Australian NGO to buy 50 drums as waste bins (Department of Public Works of Republic of Indonesia, 2007; Iswanto, 2006). Following this idea, waste management team was established in Hamlet. They introduced information about recycling to local religious figures, youth, women and children to involve Hamlet villagers at all levels.

As the main part of recycling program, waste sorting is conducted by separating waste into two categories: organic and inorganic. From inorganic waste, waste is further sorted into three categories (plastic; paper and cardboard; glass and metal). In home recycling, each household has three bags in the kitchen. Figure 1 presents the waste sorting system in Hamlet. The sorted waste is then placed into the nearest collection points. There are twenty two collection points in Hamlet. Each collection point consists of three garbage drums that serve approximately ten to fifteen households. In handling waste, organic waste is routinely collected to a composting center while inorganic waste is weekly collected by garbage pickers to Hamlet waste storage center.

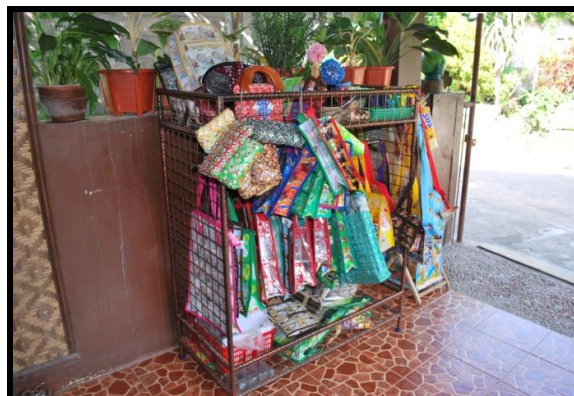
Figure 1. Waste sorting in Hamlet



Note: The picture to the left shows three bags of waste sorting at home. The picture to the right illustrates three drums of waste sorting at a collection point.

Interestingly, recycling program in Hamlet empowers participations of its villagers at all levels. Children learn how to recycle through playing games. Moreover, community youth have been trained to paint garbage drums to make them attractive and label them into three categories (see figure 1). By labeling garbage drums and placing them in proximity to villagers' home, these ease villagers to dispose and sort their waste properly. In addition, women in the community have been involved through training program to improve their skills to make recycle crafts such as handbags from plastic sachets as shown in figure 2.

Figure 2. Handbags from plastic waste



As a result, recycling program in Hamlet provides many benefits not only to Hamlet villagers but also to Hamlet itself. There are an increase of cleanliness and aesthetics of Hamlet, job opportunities for unemployed youth, women empowerment, a decrease of dengue fever cases, a decline of quantity of waste that ends up in landfills and the most important thing is improvement of environmental awareness and knowledge in Hamlet (Guidance Booklet for Recycling in Hamlet, 2008; Iswanto, 2006). Since 2009, Hamlet's identity is known as an Eco-Village in Yogyakarta and becomes a role model for other villages in Indonesia for waste management with local initiative (Department of Public Works of Republic of Indonesia, 2007; Iswanto, 2006).

To date, none of published research on communication perspective of recycling program in Hamlet has been conducted. This thesis thus is attempting to address this concern. The focuses of this thesis lie on the process of communicating recycling to Hamlet villagers that led behavior change of Hamlet villagers to be more environmentally friendly and the modes of persuasion which were used.

1.3 Purposes of study and research questions

The purposes of this descriptive study are to identify the process of communicating recycling to villagers in Hamlet and the modes of persuasion that changed their behavior (from past behavior to recycling behavior). To achieve the purposes, this study addresses two questions as mentioned below:

- (1) How was recycling communicated to Hamlet villagers that changed their behavior (from past behavior to recycling behavior)?
- (2) What modes of persuasion were used to communicate recycling to Hamlet villagers?

1.4 Disposition

This study is divided into five chapters. As the introduction part, the first chapter describes the background, the purposes and research questions of this study. In the second chapter, theory of persuasive communication, theory of planned behavior, Aristotle's modes of persuasion and previous research relevant to research questions are explained. It is then followed by the description of the research design, the procedure of data collection and analysis in chapter three. In the fourth chapter, the main results from empirical data is presented and discussed on how the results relate to existing theories (such as theory of persuasive communication, theory of planned behavior and Aristotle's modes of persuasion). Eventually, Chapter 5 presents some concluding remarks, limitations and outlook.

2. LITERATURE REVIEW

This chapter provides accounts of relevant theories and previous research that have been conducted within the research field in order to gain a more comprehensive understanding and enable the author to answer the research questions. With this regard, this chapter includes theory of persuasive communication, theory of planned behavior and Aristotle's modes of persuasion (ethos, pathos and logos). Moreover, this chapter is ended by presenting previous research related to recycling and communication.

2.1 Theory of persuasive communication

According to O'Keefe (2002), persuasion is defined as an attempt to influence others that possess some characteristics. First, persuasion is purposeful. It means that persuasive message is designed to achieve a goal. Second, the persuader has some intentions in achieving that persuasive goal. In this point, the persuader designed a persuasive message intentionally. Third, the persuadee must have freedom. In this point, persuasion is not a coercive approach. Rather, the persuadee is free either to accept or reject the message to act in particular way. Fourth, the goal of persuasive message can be achieved through one person communicating with another. Eventually, persuasion should involve a change in the mental state. In this context, persuasive communication involves the use of persuasive messages and the process of reasoning to influence attitude and behavior of the audience (Ajzen, 1992). In relation to that, designing messages to sway the heart and mind of the audience is the fundamental of persuasive communication.

Most literature on persuasion examined credibility and attractiveness of the persuader (Ajzen, 1992; O'Keefe, 2002). Here, credibility means the perceived expertise and trustworthiness of the persuader. The last term, attractiveness, refers to likability of the source that can be seen from physical appearance or behavioral features. Persuasion also considers the means that is used to communicate the persuasive message. The persuader can use communication media such as face to face interaction, written message (e.g. newspaper, brochures, personal letters, etc.) and so forth. Moreover, persuasion takes into account the characteristics of the audience such as personality traits, sex, social status, intelligence and involvement. This last point is linked to "persuasibility" meaning that how easy the audience is persuaded (O'Keefe, 2002). For instance, sex differences; it is still questionable if women are more easily to be persuaded than men. Instead of sex differences, another literature was more concerned with the topics whether the persuasive message includes male-oriented topics or women-oriented topics (O'Keefe, 2002).

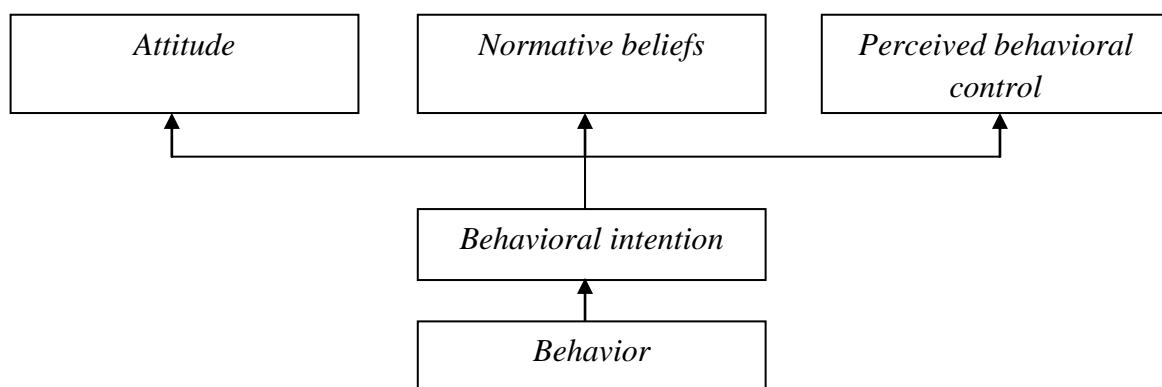
2.2 Theory of planned behavior

One of persuasion theories that concerns with influencing an individual's attitude and behavior is theory of planned behavior. Theory of planned behavior is an extension of earlier theory of reasoned action (Ajzen, 1991). In this theory, it is assumed that there are

reasons behind all of our actions. In other word, all behaviors are intentional (behavioral intention). Behavioral intention is the plan to act in a particular way. The theory posits that behavioral intention results from three variables (see Figure 3) - an individual's belief strength and evaluation towards the desired behavior (*attitude*); individual's perception about what other expect him/her to do (*normative beliefs*); and the perceived level of control over situation that may influence the performance of the desired behavior (*perceived behavioral control*). *Perceived behavioral control* is similar to the concept of self efficacy that is an individual's perception of the ease or difficulty of performing the behavior (O'Keefe, 2002).

The reasons of using theory of planned behavior as a basis in analyzing the results of the present study can be seen from two points. First, this theory was developed in an attempt to persuade voluntary behavior (O'Keefe, 2002). This point fits with recycling behavior as voluntary behavior. Second, this theory provides a model of persuading people to act in a particular way (Dainton & Zelle, 2011). In this point, the persuader needs to provide attitudinal, social norm and controllability incentives in order to convince the audience to act in a particular way. Therefore, the persuader has to send persuasive messages to affect *attitude*, *normative beliefs* and *perceived behavioral control* which later are identified as the persuasion targets. In relation to that, theory of planned behavior was used to identify the persuasion targets in the process of communicating recycling in Hamlet.

Figure 3. Persuasion model based on theory of planned behavior
(Ajzen,1991; O'Keefe,2002)



2.3. Aristotle's modes of persuasion

Aristotle's modes of persuasion consist of *ethos* (credibility), *pathos* (emotion) and *logos* (reason). *Ethos* refers to the projected character of a communicator, including their credibility and trustworthiness (Cockcroft & Cockcroft, 2005). It emphasizes the persuasiveness of the communicator's character. There are some analytical categories to identify appeals to *ethos* including similitude, self-criticism, expertise and inclination to succeed (Beason, 1991).

- Similitude can be seen when the communicator reveals similarities between themselves and their audiences that strengthen a relationship between the communicator and the audience (Beason, 1991). For instance, through choice and use of pronoun “we”, the communicator expresses group cohesiveness and harmony (Cheney, 1983).
- Self-criticism demonstrates trustworthiness, frankness and honesty that indicate personal shortcomings (Beason, 1991). The more open the communicator, the more likely the audience to trust the communicator. In this way, the communicator presents himself as a humble and honest person.
- Expertise creates credibility of the communicator since he or she knows something about specific topic and claims as the first-hand knowledge (Beason, 1991).
- Inclination to success builds credibility of the communicator in regards to being a competent person by conveying past accomplishments, present or future success (Beason, 1991). In this way, the communicator is shown as dynamic and optimistic person.

In addition, the audience can also be persuaded through their emotions or *pathos*. *Pathos* is the appeal to the audience’s feelings that stimulates the emergence of emotions such as happiness, sadness, satisfaction, shame, fear and so forth (Aho, 1985; Cockcroft & Cockcroft, 2005). The communicator conveys a sense that he or she understands the needs, values and desires of the audience (Cockcroft & Cockcroft, 2005). Through emotional appeals, the communicator and the audience establish engagement. It can be seen from the use of metaphors, photographic and artistic images that may influence emotions of the audience.

Logos is the appeal to reason that emphasize the clarity of the claim, the logic of its reason and the effectiveness of its supporting evidence (Aho, 1985; Cockcroft & Cockcroft, 2005). In this way, it is important to note that the communicator points out commonsense thinking to the audience to show his or her persuasive arguments. The choice and development of the persuasive arguments are determined by the communicator’s personality or stance together with his or her emotional engagement with the audience (Cockcroft & Cockcroft, 2005). In brief, *logos* can be used to strengthen emotional appeals. The communicator uses some persuasive techniques in relation to *logos* such as argumentation, logic, justification, claims, data and evidence (Cockcroft & Cockcroft, 2005). For instance, when the communicator explains why something has happened, he or she brings up the argument of cause and effect.

2.4 Previous research related to recycling and communication

Research area related to recycling and communication perspective is generally less explored. In relation to communication aspect, persuasive communication and public commitment are considered as effective ways to encourage and maintain recycling in everyday life (Burn & Oskamp, 1986). In persuasive communication, the message should include information suggesting that others are performing the desired behavior and

increasing the perceived efficacy of the behavior (Burn, 1991). However, persuasibility depends on the credibility (expertise and trustworthiness) of the communicator (Eagly & Chaiken, 1975).

Public commitment to perform a behavior is encouraged and strengthened by social and material incentives in order to enhance the role of social recognition and approval (Cook & Berrenberg, 1981). This approach involves signing written statement from the respected people in a community as a sign of involvement in performing the desired behavior. In more practical, involvement from the individuals is needed which increases motivation to process a persuasive communication (Petty & Cacioppo, 1981). They state that involvement is increased by emphasizing potential harmful consequences in the personal life or by using personalized communication in the form of face to face interaction. Previous literature also found people who are concerned about the environment will recycle if they were given an opportunity to get more involved in recycling activity (Derksen & Gartrell, 1993).

Moreover, the *block leader* approach can be used to increase participation rates on recycling (Nielson & Ellington, 1985; Burn & Oskamp, 1986). The *block leader* is the individuals who introduce recycling in their own neighborhood and use a persuasive communication that creates neighborhood recycling norm (Burn, 1991). In this way, a norm is developed through social interaction within community. The aim of the *block leader* is to influence behaviors of others through frequent interpersonal contact and initiate a social process (Nielson & Ellington, 1985). The *block leader* communicates that other people are doing recycling which stimulate a desire for social approval. Social approval is reached through process of modeling and imitation in social interaction (Hopper & Nielsen, 1991).

Few studies have provided suggestions on the format and the content of effective recycling campaigns. Warner et al. (2002) suggested that the use of simple and well-designed signs can influence behavior that causing greater participation in recycling. In addition, De Young (1989) noted that recycling campaigns should communicate time and space needed for recycling, inform people about where to go for assistance, explain what materials can be recycled and how to recycle. Moreover, the participation in doing recycling is correlated with their knowledge on how, where, what to recycle and how recycling benefits the environment (Barr et al., 2003).

To encourage pro-environmental behavior of recycling, most of recycling campaigns have focused on reward, goal setting, feedback, recycling information and education which may positively change individual's behavior (Schultz et al., 2002). Additionally, successful recycling campaigns use a specific appeal to recycling for instance by communicating about proximity of individual's home to the location of recycling bins (Austin et al., 1993). Nevertheless, the effectiveness of communicating recycling information not only depends on the format and the content but also frequency and media used to communicate information about recycling (Iyer & Kashyap, 2007). In this point, face to face interaction

is an effective media to influence behavioral change (Read, 1999). However, the effectiveness of face to face interaction depends on how to present evidence and argument correctly in the issue of recycling (Warner et al., 2002).

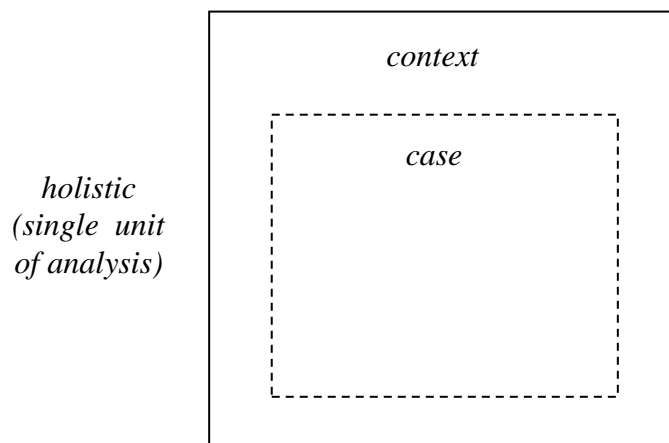
3. RESEARCH DESIGN

This chapter describes the research design used in this study i.e. illustrative case study. Further, research methodology that is used in this thesis including sampling method and data collection are explained. It is then followed by the description of data analysis. Eventually, this chapter presents validity and reliability of this study.

3.1 Research Design: Illustrative Case study

Illustrative case study is used as a research design to answer the research questions. Illustrative case study is descriptive which uses one or two instances to show what a situation looks like (Mann, 2006). Case study is a preferred method when the researcher has little control over the events and the focus is on the contemporary phenomenon within a real context (Yin, 2009). It is important to note that the case should be a real-life phenomenon (a program, an individual, a community and so forth) and consider conditional factors (context) that influence the phenomena (Yin, 2009). Theoretically, there are two kinds of case study design: single case and multiple cases to investigate a research issue. In this thesis, single case study with holistic design is employed. Holistic design means that the case study examines global nature of a program (Yin, 2009) as illustrated in Figure 4.

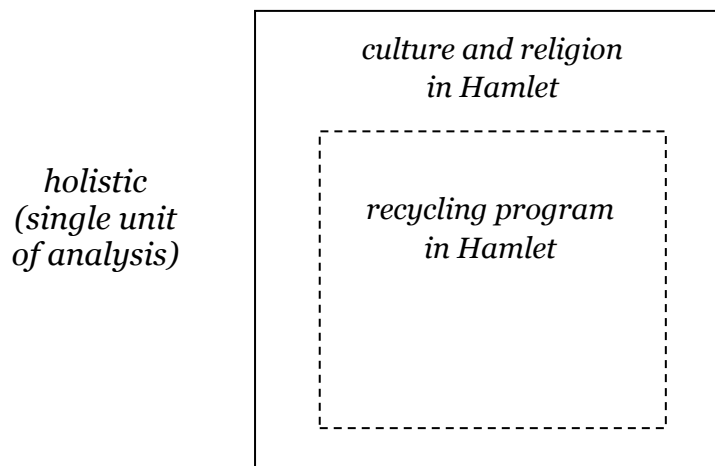
Figure 4. Yin's single case study design (Yin, 2009)



According to Yin (2009), there are several reasons to select single case study. Firstly, the topic needs to represent a unique case. In this study, the uniqueness lays in the behavior change of the Hamlet villagers who changed from past behavior to recycling behavior. Secondly, the case needs to be representative which might be a typical project or a typical urban neighborhood problem. The recycling program in Hamlet is recognized as one of the best practices in waste management program based on local initiative in Indonesia (Department of Public Works of Republic of Indonesia, 2007). With this regard, recycling in Hamlet is well known as a role model for other villagers and might be considered as a representative case of communicating recycling to villagers. The case in this thesis is a

recycling program in Hamlet concerning on communication phenomenon. Javanese cultural values and Islamic faith will also be considered as a context of the case study (see figure 5 and for detailed explanation see subchapter 4.1).

Figure 5. The present case study design



3.2 Methodology

3.2.1 Snowball sampling

Snowball sampling is a technique for getting respondents through the identification of an initial subject who is used to provide the names of other actors (Lewis-Beck et al., 2004). By getting some clues from the initial subject, there are open possibilities for expanding the network of contacts and inquiries (Lindolf & Taylor, 2011). In this study, snowball sampling provides an access to respondents who are willing to recycle and who are not willing to recycle by asking the initiator of recycling program and Waste Management Team for some clues. The total number of 27 respondents participated in this study, 10 of them were the persuaders and 17 were the persuadees. From 17 persuadees, 4 respondents did not participate in recycling program (for further detail see Appendix 1).

3.2.2 Direct observation and interview procedure

To collect data, direct observation and interviews have been conducted. Direct observation is helpful for confirming that most of Hamlet villagers changed their behavior (from past behavior to recycling behavior). In relation to communication perspective, it is useful for identifying the ways of communicating recycling to Hamlet villagers and circumstances in Hamlet that may influence the process of communicating recycling. Moreover, to gain insights from Hamlet villagers related to the process, face to face contact is preferred to identify how recycling was communicated that led to behavior change and how they interpreted the messages of recycling program in Hamlet. By doing so, the interviews have been conducted by door to door.

This study considers perspectives of persuaders and persuadees in relation to recycling program in Hamlet. The persuaders are a group of people who accept the idea of recycling and persuade villagers to recycle household waste. This includes the initiator, some local leaders and Hamlet Waste Management team. The persuadees are Hamlet villagers who are willing and not willing to recycle household waste. Due to ethical considerations, all respondents' names and work position of the persuaders were kept anonymous.

Direct observation and semi-structured interviews have been carried out from March 25th to April 5th 2013 in Hamlet in Yogyakarta, Indonesia. Semi-structured interview contains a set of questions, but allows the interviewer to change or add other questions during the interviews (Lindolf & Taylor, 2011). For the present study, the semi-structured interview was chosen since it allows the author to discover the necessary answers based on a set of questions and provide possibilities to deal with any problems that might arise during the interviews. The interviews were delivered in Indonesian and then translated into English in the data analysis (for further detail see the interview guide in Appendix 2).

3.3 Data analysis

One of the procedures in analyzing an illustrative case study is explanation building (Yin, 2009; Mann, 2006). To build an explanation, the field notes have been made and the interviews have been recorded, transcribed, tabulated and analyzed. The analysis involves categorization and coding after a rich data set has been collected. In a qualitative research, categorization and coding are useful for making sense of qualitative data (Lindolf & Taylor, 2011).

In this thesis, all written documents such as *Panduan Pengelolaan Sampah di Kampung* (Guidance Booklet for Recycling in Hamlet), *Peraturan Pengelolaan Sampah di Kampung* (Local rules for Recycling in Hamlet), poem, song and signs were translated from Indonesian into English. In the following step, the transcribed interviews were summarized, translated from Indonesian into English and tabulated. In the table, all answers from respondents were compared and examined with theory of persuasive communication, theory of planned behavior and modes of persuasion. To note, all the data collected including the recordings and the transcriptions during the interviews will never be published as there has been a verbal agreement between the respondents and the author.

3.4 Validity and reliability

According to Yin (2009), validity of single case study can be conducted by using multiple sources of evidence in relation to data collection. Sources of evidence in this study included collecting the villager's opinion from the interviews and confirming the opinion with what the author observed in the field (direct observation). Additionally, the author collected data from written documents as mentioned earlier that explains the profile of Hamlet, how recycling works in Hamlet and media used in communicating recycling to Hamlet villagers.

To enhance reliability of the qualitative study, Baxter and Jack (2008) suggested that the process of member checking could be used. Here, the researcher's interpretations on the collected data are shared with participants and the participants have the opportunity to discuss and clarify the interpretation and contribute additional perspective on the issue under study. During the interviews with Hamlet villagers, I had the opportunity to clarify the respondents' answers. In addition, further clarifications were made through a meeting with the initiator of recycling program in the last day of my observation. In the meeting, I presented some findings from interviews and observation, while some clarifications were added by the initiator.

4. RESULTS AND DISCUSSION

This section explains main findings that have been gained from direct observation and interviews. The first part illustrates the profile of Hamlet, characteristics of its villagers and change of behavior due to recycling program in Hamlet. The second part describes the process of communicating recycling that changed Hamlet villagers' behavior from past behavior to recycling behavior. The third part describes the modes of persuasion that were used in the process of communicating recycling. In the last part, discussion of the results is presented. In order to support the explanation, several pictures captured during direct observation in Hamlet are also presented.

4.1 Going to the field: profile of Hamlet, characteristics of its villagers and change of behavior due to recycling program in Hamlet

Hamlet is a sub-urban village located about 2.1 km from the city center of Yogyakarta, Indonesia. More than 800 villagers with 250 families dwell in Hamlet. They occupy approximately 42 Ha area surrounded by paddy fields, irrigation canals and rivers. The area is further divided into five neighborhoods (*Rukun Tetangga*) namely RT 05, RT 06, RT 07, RT 08 and RT 09.

A neighborhood consists of approximately 50 families. Each neighborhood has a chief of neighborhood (*Kepala Rukun Tetangga*). All neighborhoods in Hamlet are managed by a chief of Hamlet (*Kepala Rukun Warga*). The chief of neighborhoods and the chief of Hamlet are local villagers who are democratically voted by the villagers through a community meeting (*musyawarah*). It is important to note that positions of chief of Hamlet and chief of neighborhood are voluntary basis. Women's group is also a key element in the community. To facilitate women's social activities throughout Hamlet, there are two women's groups in Hamlet namely *Pembinaan Kesejahteraan Keluarga (PKK)* and *Dasa Wisma*. Their activities are much related to social, economic and family health matters.

From educational profile, generally Hamlet villagers have low education, which means that they only finished a compulsory 6 year elementary school, though some even did not finish their elementary school. As a result, they have low income. They work as farmers, workers of farmers, small traders, workers in construction project and home industry business such as soybean based food products (*tempeh* and *tofu*), crackers and traditional cookies (namely *bakpia*). Only few of them work as civil servants and workers in private sectors that have fixed income per month. Furthermore, the majority of the youths were unemployed although the number of unemployment decreased upon introduction of recycling program in Hamlet.

Javanese cultural values and Islamic faith highly influence Hamlet villagers' activities in daily life. Key values in Javanese culture are still maintained such as politeness (*alus*), humbleness (*ojo dumeh*) and correct behavior (*lair batin*) (Irawanto et al., 2011). The

manifestation of these values can be seen from avoidance of open conflict, togetherness, helping each other and showing respect to other people regardless of their situation. It is very important for Javanese to have high group loyalty, conforming to its norms and maintaining group harmony (Katz, 2006). Further, Katz also emphasized that saving face is crucial therefore causing a person shame (*malu*) in front of public should be avoided in collectivist society.

In addition, Irawanto et al. (2011) mentioned that Javanese people have a strong belief that life should not concentrate merely on materialistic objects. This belief is in accordance with Islamic faith. According to Islamic faith, people should have balanced orientation between current life in the world (*duniawi*) and life after death (*surgawi*). In this way, life orientation of the people should not only focus on *duniawi* but also consider life after death (*surgawi*) to avoid the punishment of the hell and enter to paradise (Irawanto et al., 2011).

In Hamlet, local leaders are a group of people that consists of chief of people and neighborhoods, the leader of youth association, the leader of women's groups and respected local Moslem figures. They play an important role in leading Hamlet villagers and mediating any problems within community. Additionally, local leaders have great influence to maintain the spirit of working together voluntarily (*gotong royong*) that ties relationship among Hamlet villagers and in turn led to group harmony (*kerukunan*). As a response, Hamlet villagers put respect on local leaders including their valuable advices to society. They will follow what has been exemplified by them since they believe their advices are good for the community well-being. This is linked to the concept of leadership *Ing Ngarso Sung Tulodo*, meaning that a leader has to be an exemplary role for other people (Sarsito, 2006).

From observation, it can be seen that social interaction among Hamlet villagers is very tight. Neighbors are recognized as their extended family. They greet each other friendly and do small talk, or even dedicate longer time to speak with them. They communicate to another by using Indonesian and Javanese language. It is also interesting to note that when using Javanese language, Hamlet villagers use different communication styles. In general, when young people and subordinates communicate to elders and local leaders, they use formal or "polite" style (*krama*) of Javanese language whereas when young people communicate to their friends, they use informal style (*ngoko*).

If someone gains good crops, they share it to relatives or neighbors (*bagi-bagi rejeki*). When the time of prayer is coming and call for prayer (*adzan*) is broadcasted loudly, many people come to Mosque as they prefer to pray together. This is an example of togetherness in Hamlet. Togetherness can also be seen when some of the men in Hamlet take turns in doing night watch (*ronda malam*). The night watch is a way of guarding the village at night which is run and rotated by a group of men from the neighborhood. They work voluntarily to keep their area secure during the night.

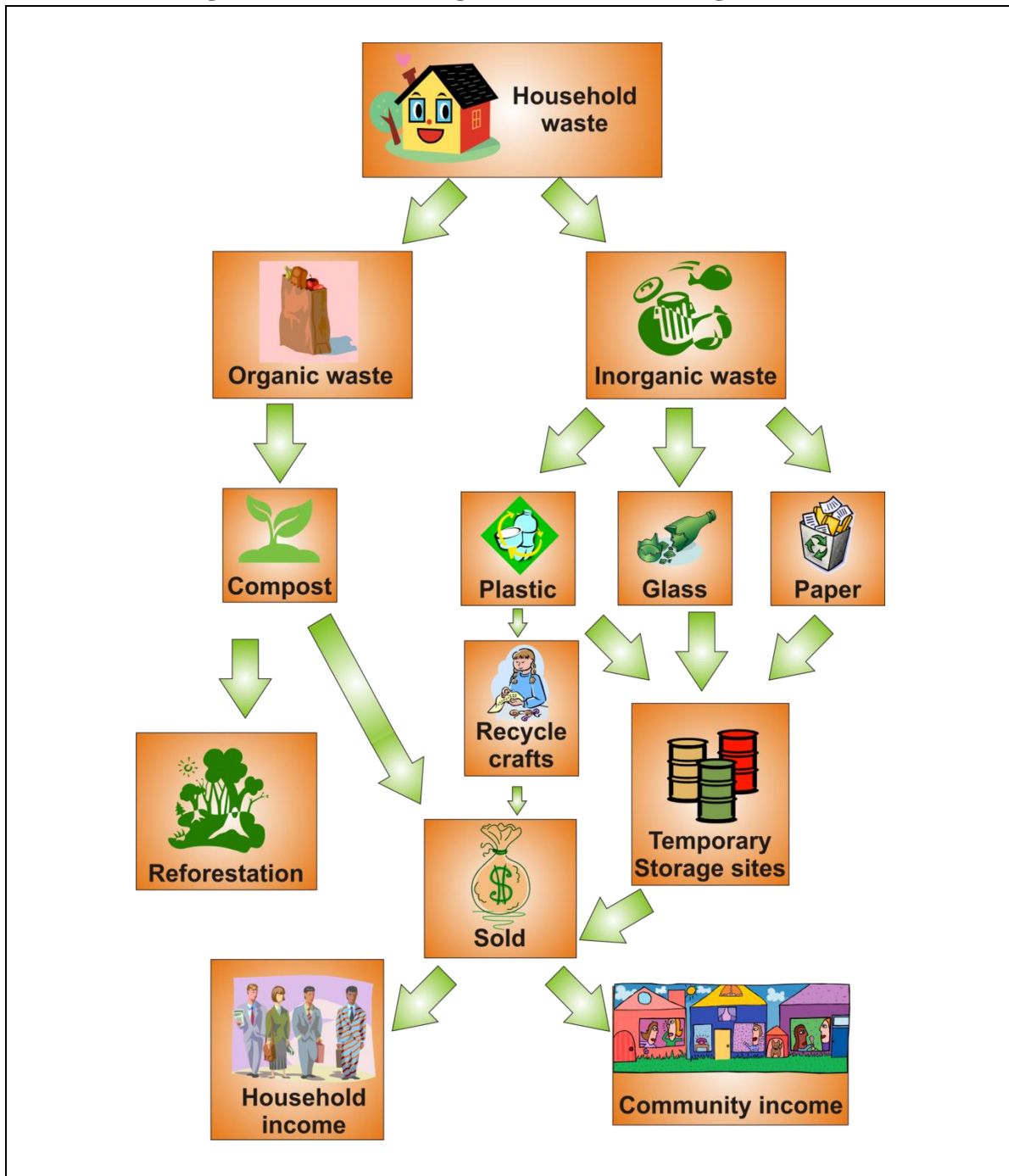
Another activity that is conducted voluntarily by Hamlet villagers is *kerja bakti* (*voluntary public work*). *Kerja bakti* is an activity which Hamlet villagers carry out voluntarily in order to keep Hamlet clean, scenic and tidy. In Hamlet's organization, there is a Division of Environment and Hygiene which organizes this monthly activity. They usually gather at village hall and walk around the village to collect scattering wastes in the pathways, the villagers' yards, vacant lands and so on. However, they didn't handle waste with sorting in the past. In that time, the outcome from *kerja bakti* is deemed as the common understanding among Hamlet villagers how they perceive cleanliness in Hamlet.

The recycling program emerged in Hamlet in 2003 when it was introduced by one of Hamlet villagers, so called the Initiator. Later on, the initiator created Hamlet waste management team which voluntarily works with commitment, consistency and patience in order to motivate Hamlet villagers to do recycling. In this thesis, this team is called persuaders as defined earlier in subsection 3.2.2.

Ways of communicating recycling was designed as such to comply with social characteristic of Hamlet villagers. For instance, the influence of Javanese values can be seen from how the persuaders perform an exemplary role (*Ing Ngarso Sung Tulodo*) and how they communicate in face to face interaction to maintain group harmony (*kerukunan*). Moreover, the influence of Islamic faith can also be identified. For instance, participation in waste sorting, which later can generate money from the waste is perceived as an act of charity (*sedekah*). Charity itself means caring to others which is highly rewarded in Islamic faith. In communicating recycling, the persuaders use Indonesian and Javanese language as mentioned above. They use various media to convey information about recycling such as face to face interaction (e.g. practical demonstration of recycling/door to door and community meeting) and written communication (e.g. booklet; poem; song; signs in the night watch post, nearby the garbage bins, around Hamlet pathways).

Upon introduction of recycling program in Hamlet, there were many pros and cons for this idea to be accepted in Hamlet. However, it is important to mention that generally most people agreed and appreciated the idea although they did not know yet how it would be implemented in Hamlet. Those who supported this idea believed that waste recycling is a promising way to minimize waste problems in paddy fields, risk of dengue fever and air pollution due to waste burning in Hamlet. Further, the recycling program eased villagers to deal with waste since they were not charged for waste retribution and they were facilitated with garbage bins. It is also believed that recycling program is in accordance with Islamic faith and Javanese culture. With respect to their economic background, potential income generation for community coffers from waste sorting is considered as the most attractive point for Hamlet villagers to support the recycling program. The schematic flow chart of waste handling in Hamlet is illustrated in Figure 6.

Figure 6. Schematic diagram of waste handling in Hamlet



Notes:

- This schematic diagram is adapted from booklet *Guidance Booklet for Recycling in Hamlet*, 2008.
- Further separation in inorganic waste: metal waste is mixed with glass waste and cardboard waste is mixed with paper waste.

There are also few obstacles from minor part of community who are ignorant or unsupportive to recycling program. They feel inconvenient to sort their waste as it is considerably difficult and takes more time. Instead, this group of people tends to simply burn the waste in open space or dump the waste in their house yard which was the common

practice in the past. They also mentioned that recycling is linked to women's interest topic that will be described in the next subchapter 4.2. Moreover, potential income from recycling program has raised an issue related to the transparency of the money use by persuaders for community fund. To some extent, this causes jealousy from minor part of community to persuaders as they believe that persuaders can gain more income by being involved in the recycling program. In addition to the potential income generation from waste as shown in figure 6, there is also potential income generation for Hamlet villagers which is associated to the increased number of visitors to Hamlet.

Despite various challenges that have to be faced by the insiders, the enthusiasm of Hamlet villagers as a whole to participate in recycling program is high. This can be seen for instance from garbage drums in Hamlet that always full although sometimes not yet sorted properly. According to an interview with persuaders, at least 85% of Hamlet villagers have been sorting their waste since 2008. There is also an increase of environmental awareness among Hamlet villagers who previously ignored the presence of waste to a level of awareness in which the waste is perceived as a problem that needs to be solved (as described earlier in subchapter 1.2). Even further, most of them currently know that waste can be a potential economic commodity. It is also noteworthy that the common understanding of cleanliness among Hamlet villagers gradually changed upon introduction of recycling program to assure that all waste should not only "disappear" in Hamlet but also needs to be sorted properly. As an appreciation to local initiative in Hamlet, people from the outside view the recycling program in Hamlet as a promising role model for other places in Indonesia who wants to transform their communities towards more sustainable community (Jellinek, 2012).

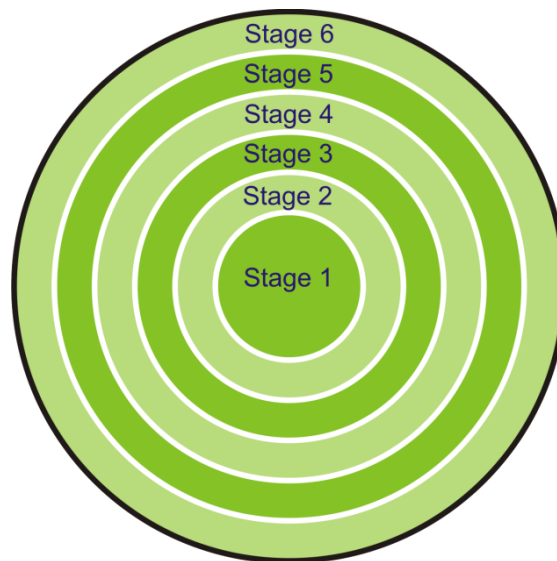
4.2 Process of communicating recycling

The process of communicating recycling in Hamlet is a long transformation process which consists of 6 stages as depicted in Figure 7. The results from each stage will be discussed in this section.

Stage 1. Introducing to the family

The idea of recycling program was initiated by a humble person with educational background in environmental health. In this study, he is called the Initiator or also identified as *respondent 1*. The initiator has been living in Hamlet since 1997. The inspiration of recycling program was obtained from a meeting with an Australian researcher who concerned with sustainable issues in Indonesia around year 2003. To begin with, the initiator adopted home recycling concept in his home by sorting organic and inorganic waste. From organic waste, the initiator made compost which he later used as fertilizer. From inorganic waste (mainly as plastic), the initiator's wife made recycle crafts i.e. handbags. Moreover, the initiator's daughter created a poem entitled "Ballad of Rubbish" which was put up in public space. In brief, all members of family participated in the recycling activities.

Figure 7. Schematic diagram of process of communicating recycling in Hamlet



The initiator follows Javanese leadership's philosophy, *Ing Ngarso Sung Tulodo*. This philosophy means a leader has to be able to perform as an exemplary model for other people (followers). With respect to this philosophy, he hoped that by conducting recycling at home he would be able to persuade others to do the same thing.

“Recycling is a new concept in this village. The critical point here is how to change their attitude and put it into action (behavior). In my belief, people want to change their attitude if they see other people have the same attitude. People are willing to change their behavior if they see other people do the same. Thus, to persuade people doing the same (recycling), I have to do the same (recycling) first in my home. Here, strong leadership (Ing Ngarso Sung Tulodo) is required” (Respondent 1)

Stage 2. Relying on local leaders in Hamlet

To extend the recycling program in Hamlet, the initiator believes that it is crucial to involve the local leaders in communicating recycling idea. Communication about recycling between the initiator and the local leaders was started around year 2003. For this purpose, the initiator utilized face to face communication through night watch (*ronda malam*) activity in night watch post as illustrated in Figure 8. The atmosphere during that activity tends to be relaxed and informal where the initiator can listen to numerous waste-related problems in Hamlet. From this activity, a number of waste-related problems in Hamlet were identified as described earlier in subchapter 1.2. In the same time as the hearing, the initiator also tried to deliver his idea on how waste should be managed and what method of waste management fits the characters of Hamlet villagers.

“We started working with Hamlet leaders to get the community active. Chief of neighborhoods and women’s groups in each of five neighborhoods in Hamlet were encouraged to spread the message.” (Respondent 9)

Knowing that the night watch activity is not sufficient to convince the local leaders, the initiator invited the local leaders to observe directly mountains of waste in final landfill in the Special Province of Yogyakarta, Indonesia. In this way, the initiator intended to present visual explanation about the impact of handling waste carelessly. The initiator hoped that direct observation can open their mind and raise environmental awareness. In the landfill, the local leaders were amazed that many scavengers collected valuable things from massive amount of mixed garbage such as plastic, metal, paper and glass. By interviewing these scavengers, the local leaders realized that waste possess economic value and can give benefit to people if waste is sorted directly at the source. In addition, the local leaders together with the initiator also met with a garbage buyer to discuss the possibility of selling garbage from their Hamlet to the buyer. Based on the potential of generating income from waste, the local leaders used this finding as one of their crucial arguments to communicate and convince the idea of recycling to Hamlet villagers considering the economic background of Hamlet villagers. To follow up, the local leaders started to intensify waste recycling communication by approaching few Hamlet villagers through face to face interaction.

Figure 8. Night watch post in Hamlet



Note: The first yellow circled-line shows a sign of warning about the danger of burning plastic waste and the second sign shows three garbage drums (with labeled information about what recycles). These symbolize ways of communicating recycling in the night watch post.

Stage 3. Communicating to a small group of Hamlet villagers

In January 2004, a team that consisted of the initiator and local leaders held a community meeting. Many villagers as representatives of each neighborhood attended the meeting. The team presented the plan and benefits of recycling program in Hamlet. The methods of waste sorting, recycling and composting were demonstrated. It was also explained how

recycling program can generate income for Hamlet villagers as depicted earlier in Figure 6. To attract Hamlet villagers, the team provided free retribution and waste facilities in Hamlet.

The team also invited the Australian researcher to introduce the recycling program particularly support from financial aspect. In the program, she took part to find potential financial aid to provide waste sorting facilities. As a result, the team was able to convince Hamlet villagers that recycling is plausible to be applied in their Hamlet.

To explain the economic values of waste, they also invited a garbage buyer to the meeting. The garbage buyer explained that sorted waste is a potential resource as it contains valuable goods that can be sold to industry. This will result on potential income generation for Hamlet villagers. In brief, payment for the sold waste is accounted based on the weight and quality of the material collected and the money goes into community coffers. The team believed that this persuasive message is more understandable for Hamlet villagers since income generation is tangible and can be directly benefited. From interviews in the field, all respondents admitted that the main reason for doing recycling is the potential of creating job and earning money.

“They might be easily persuaded if they feel the tangible benefit. The most perceived approach is income generation since most of villagers are poor and uneducated.” (Respondent 1).

“I am convinced that you (Hamlet villagers) can earn some money from sorted waste. You can make handicraft from plastic waste like this and you can sell it.” (Respondent 2).

“Recycling in Hamlet gives many benefits for me and Hamlet villagers. The tangible benefit is income generation. Before recycling was introduced in Hamlet, I was jobless. By participating in recycling program, I have something worthy to do at home and I can get some money from the sale of recycle craft.” (Respondent 13).

In communicating recycling program to Hamlet villagers, the persuaders conveyed several aspects of self-efficacy in doing recycling. The key message is *“Recycling is Easy!”*. In relation to this message, the persuaders exhibited practical demonstration of waste sorting, provided free recycling facilities such as garbage bags and garbage drums; emphasized proximity between Hamlet villagers’ home and collection points; and highlighted *“No Waste Retribution in Hamlet”*.

Emotional appeals were also used. This approach was linked to Islamic faith. In this way, recycling in Hamlet is considered as an act of charity (*sedekah*) to Hamlet in order to keep their environment clean while getting closer to the God. It is believed by Hamlet villagers that charity is a way to balance the today’s life and life after death.

“Charity is encouraged in the Qur’an (Islam Holy Book). The men who practice charity and the women who practice charity, they will have a noble reward” (Respondent 5).

Stage 4. Getting acceptance of Hamlet villagers

Most people who attended the community meeting agreed to inaugurate recycling as a village program (*Program Kampung*). To implement recycling program, Hamlet waste management team was formed and local rules for recycling were created. These local rules were signed by all local leaders, Hamlet waste management team and representatives of Hamlet villagers. In the persuaders’ opinion, local rules symbolized community commitment to do recycling. In this way, recycling behavior becomes a social norm. Hamlet villagers believe that there will be a social sanction – unstated punishment – if they do not perform recycling, e.g. they might become an object of gossiping and experiencing shame (*malu*) in front of others.

“Although recycling is a voluntary program, we expect that they will follow the rules since it (local rules for recycling program in Hamlet) is a form of community commitment.” (Respondent 6)

“Recycling becomes social norm in Hamlet which all villagers in Hamlet must follow it. I will be ashamed if my neighbors see that I don’t recycle waste properly.” (Respondent 15)

Local Rules for Recycling in Hamlet

(“Peraturan Pengelolaan Sampah di Kampung” - originally in Indonesian)

Responsibilities:

1. *Each household must sort inorganic waste into three categories:*
 - a. *Paper and cardboard*
 - b. *Plastic*
 - c. *Glass and metal**The sorting uses three garbage bags provided at each household’s kitchen.*
2. *Each household must put the sorted waste properly into three drums provided nearby to their home.*
3. *Each household must compost their organic waste, either individually by using composter or communally by using a big communal composter nearby their home.*
4. *Each household must keep their home and environment clean.*

Prohibition:

- 1. Don't burn waste.*
- 2. Don't throw waste into irrigation channel, river, paddy fields and other improper places.*
- 3. Stop using styrofoam as food box.*
- 4. It is strictly forbidden to dispose hazardous waste such as batteries, lamps, electronics, components of electronics and cables in yard, irrigation canals, rivers, ponds and paddy fields.*

Suggestion:

- 1. Bring your own bag when shopping*
- 2. Serving food/drink with reusable plates/cups*
- 3. Do not make infants and children wear disposable diapers*
- 4. Clean up our village once a month*

Stage 5. Seeking involvement of Hamlet villagers

During January-April 2004, Hamlet waste management team along with the Australian researcher promoted recycling program to the villagers through face to face and door to door interaction. They went to villagers' homes and provided three bags for waste sorting at home. By doing this, they could directly observe villagers activities and identified types of activities that may be of interest for villagers to be linked with recycling program. It was found that Hamlet villagers favored art work, music and handicrafts.

Due to low level of education of Hamlet villagers, recycling idea was communicated in a simple way. For this purpose, the persuaders demonstrated practical things to sort waste, make handicrafts from plastic waste and compost organic waste. The use of scientific language was minimized and instead the persuaders intensely used pictures or posters to illustrate the idea of recycling in Hamlet, the dangers of handling waste carelessly and the benefits of the program.

The persuaders attracted villagers to participate in recycling program through several activities that may be of interest for villagers. For instance, youth leaders organized a game for children namely "walk race". In a walk race, they were asked to sort waste properly and place it into dedicated garbage drums. As the interest in mural painting grew up among youth, there was a competition to paint reused garbage drums which were later used as waste facilities in Hamlet. The initiator's wife introduced the possibility to convert plastic waste into handbags by using second-hand sewing machines to women's group in Hamlet. Women's group also created a choir group to popularize a song entitled "Hamlet" that was written by the initiator. The song was meant as a campaign song to persuade Hamlet villagers to preserve their environment.

According to the persuaders (Respondent 1-10), women were generally perceived as a relatively easy group to be persuaded. There might be three reasons to support this phenomenon. Firstly, most of the women in Hamlet are full time mothers. Consequently, they spend most of their time at home and handle waste every day. Having said this, some respondents in the persuadee group who didn't recycle, pointed out that handling waste can be related to a gender issue. For an illustration,

“I don't sort waste regularly since in my opinion, waste is linked to home's stuff. That is a women's interest topic. At my home, my wife cooks food and cleans our home including sorting waste. In other way, I am concerned with getting job and earning money. This is a way of dividing our task as a wife and a husband. For me, putting all kinds of waste into one drum is completely fine as long as no waste is scattering.” (Respondent 22)

Secondly, women have big influence to their children as children tend to mimic how their parents deal with waste at home.

“I know about sorting waste from my mother. She gives an explanation about the benefits of waste sorting and simply demonstrates how to sort waste. She reminds me if I don't put waste properly. I remember a moment when I played in the paddy field, and I found plastic waste. Regrettably, there was no place to dispose it properly. What I did was keeping the waste in my pocket. Then, I disposed it at my home (Respondent 27)

Lastly, the reason of the gender issue is linked to the crucial role of women's groups (*PKK* and *Dasawisma*) that have many activities for women in Hamlet. This way was perceived by the persuaders as the most effective channel of communicating recycling program to Hamlet villagers, particularly women in Hamlet as they have quite frequent personal interaction.

*“In my opinion, the most effective channel of communicating recycling to Hamlet villagers is through women's group (*PKK* and *Dasawisma*) activities, for instance regular meeting and cleaning Hamlet. In the meeting, recycling is communicated repeatedly in various ways. As women take care of home and handle waste every day, it is hoped that they will influence their family to recycle at home.”* (Respondent 2)

With respect to their economic situation, it is interesting to note that poor villagers were relatively easy to be persuaded. This is due to the fact that they expected to get some money from recycling as it is tangible and understandable for Hamlet villagers.

“We (the persuaders) put more emphasis on income-generation approach. They can sell handicrafts from plastic waste and composts from organic waste. The sale of the products will give some money. In turn, we hope this is a way to alleviate poverty in

Hamlet. When we are communicating about income-generation, we see their enthusiasm to get more explanation.” (Respondent 7)

In relation to that, all respondents in the persuadee group admitted that income generation was more understandable approach than others.

“The most driving factor that encourages me to do recycling is income-generation. I have something to do and I can get some money. For me, money is concrete outcome of recycling program. By doing recycling, I can reduce burden of my husband as a breadwinner.”(Respondent 12)

Compared to previous stages where the role of the local leaders and the initiator was dominant, involvement of Hamlet villagers were increased at this stage to persuade the communities for instance by becoming persuaders. The local leaders and the initiator realize that if their role is too dominant, Hamlet villagers will be dependent on them to run the program. Moreover, there will be suspicion from few villagers if the persuaders receive money for running this program. This is crucial since there is tradition in the community not to receive any payment when someone is working to improve their own community. Therefore, more voluntary persuaders are needed to involve Hamlet villagers in the program to make everyone know how the system works. In addition, by recruiting more persuaders this will reduce the workload of few individuals who have been spending so much time to run the program.

By gradually increasing the number of persuaders from the villagers, this also indicates that the program is well-accepted by majority of the community and everyone in Hamlet has the same opportunity to involve in the program (as persuaders). Hence, the potential of horizontal conflict in the community can be minimized. Common awareness of the fact that sorting waste is a voluntarily based activity and keeping harmony among people in the community are extremely crucial to achieve a common goal of the well-being of Hamlet.

Our role as the persuader is gradually minimized. We invite as many people who want to be a volunteer in motivating the villagers to do recycling. By involving them as the persuader, they know how we work committedly. At the same time, this may counter an irresponsible gossip among few villagers as they presume we are paid by outsiders to run this program. Our purpose is to keep harmony among community in Hamlet. By doing so, this will be easier for us to persuade them to recycle everyday (Respondent 7).

New generation of people then started to appear steadily in the community. This generation mainly came from full-time mothers and single women who were interested to work as volunteers. Initially, as beginners they feared saying something wrong especially when talking to the elders. They had a strong sense of shyness and hesitance when they had to communicate with the elders and men. To tackle this problem, they used indirect communication via three approaching methods.

Firstly, the persuaders tried to attract children or grandchildren of the elders to participate in waste sorting and the recycling program as a whole. It was hoped that the children will later influence their parents or grandparents to do recycling at home. As mentioned by Respondent 4, she entertainingly approached children in Hamlet through routine activities such as storytelling, games, playing football and playing together with them in the paddy field. After spending time with them, they walked around Hamlet while they were asked to pick up any waste they found during the walk. By doing this, it was expected that their parents got embarrassed if they did not handle waste properly while their children did.

Secondly, the persuaders invited Hamlet villagers (including the elders) to participate in some activities such as planting trees, making gardens, etc. By participating in these activities, Hamlet villagers learnt indirectly on how the recycling program works in Hamlet. To exemplify, it was hoped that they knew how to make compost while they were planting trees.

Thirdly, personal interaction method was used to keep the motivation high all the time. This was conducted for instance by approaching relatives, close friends, neighbors of those who has not yet accepted the recycling program. In this way, the persuaders motivated someone else who is still in close relationship with them in order to participate in the program.

Stage 6. Establishing social recognition

In April 2004, the persuaders invited journalists from local televisions and local newspapers both in Indonesian and English language. Many people were impressed and wrote the story of recycling program in Hamlet in their personal blogs. As a result, Hamlet became famous and people outside Hamlet were inspired with the outcome of recycling program in Hamlet. Since then, many people from other villages, local governments and foreigners visited Hamlet to learn how to implement recycling program in the village and replicate persuasive communication in Hamlet in other villages in Indonesia. Consequently, Hamlet was recognized as the pioneer in implementing waste recycling in Indonesia. As Respondent 1 mentioned, there were more than 5000 people who visited Hamlet in 2006. It was astonishing that 3-5 buses from outside Hamlet lined up in the main gate of Hamlet and many people crowded in Hamlet. While during 2008, the number of visitors was recorded between 300-400 people per month. Up to 2012, it was estimated that more than 20,000 people have visited Hamlet (Jellinek, 2012).

In addition, the initiator and several persuaders were invited as speakers in several forums, seminars, discussion groups and tutorials that held by local governments outside and inside of Yogyakarta, private institutions, universities and schools to share their experience in implementing recycling program in Hamlet. Recycling program in Hamlet was awarded as the best practice of recycling in rural area in Indonesia by Ministry of Environment and Ministry of Public Works of Republic of Indonesia (see Figure 9).

Figure 9. Awards achieved by Hamlet because of recycling program



As a consequence, a sense of belonging and pride rose up among Hamlet villagers.

“In the past, our village had bad reputation since this village was stereotyped as a slum area. Personally, I was ashamed if other people told about my village. Because of recycling activities, I am proud of being a Hamlet’s villager. Our environment is now clean and tidy. Many visitors came and gave us positive opinion.” (Respondent 2)

4.3 Modes of Persuasion

4.3.1 Ethos

Credibility of the leaders i.e. the initiator and the Australian researcher is important to introduce the recycling program in Hamlet. The initiator is perceived by all respondents in the persuader and the persuadee group as a person who has a high level of education in environmental health and has good relationship with local leaders. All respondents viewed that the initiator is a charismatic and energetic person who has competence and goodwill to improve the quality of life in Hamlet. As a partner, the Australian researcher already has a long experience to study social culture subject in Indonesia. In addition, she is fluent to speak Indonesian language which makes it easy for her to interact with Hamlet villagers. Most of respondents were impressed by her great enthusiasm as a foreigner who came directly to the field to spread the recycling program to villagers. As a result, they felt respect for her, wanted to follow the instructions and felt embarrassed if they did not follow the persuaders.

Loyalty and respect to local leaders are highly cultivated in Hamlet which is in accordance with their cultural values. Hamlet villagers tend to be conformist on what is delivered by the local leaders. They see that the local leaders are trustworthy, so what they say is always believed to be good for common interest. Additionally, the local leaders also give good example in their daily life by sorting their waste to support recycling program. In this way,

they follow Javanese leadership's philosophy, *Ing Ngarso Sung Tulodo* as explained previously in subchapter 4.2.

“In the very beginning, we (the persuaders) need trust from them. To get their trust, we have to become a good partner. It means that we need to socialize with them and listen carefully to their concerns. We also show openness and honesty. In these ways, we express our sense of caring to them. No coercions in persuading them. Rather, we want to keep the community cohesiveness that is expected for local involvement. This point is a key point that needs to be emphasized. To get their understanding, we demonstrated how waste sorting works and how recycling gives benefits for them”. (Respondent 4)

All respondents admitted that there is still much room for improvement to maintain the program and hence full support from Hamlet villagers is continuously needed. This can be seen as a self-criticism form that leads to trustworthiness, honesty and humility. An example of teaching in Hamlet is: *start from yourself, start from small thing and start right now*. Humility aspect can also be observed from the appearance of persuaders who dress up politely in the same way as ordinary villagers. Further, all respondents mentioned the important role of the initiators and the persuaders. However, the initiator humbly mentioned that the initiative of recycling program is not solely due to him and persuaders rather as the initiative of whole Hamlet villagers. He mentioned:

“The success of this program is due to hard work and cooperation of Hamlet villagers since 2003”. (Respondent 1)

Persuasive appeal to *ethos* also comes in the form of similitude. The persuaders attempt to position themselves as a part of Hamlet villagers: *“we are one of you”*. This expression strengthens a sense of community and group harmony among them. Another example, the persuaders used a slogan to emphasize that *“this program is from and for all of us”*. They always tried to use a communication style that is favored by Hamlet villagers. With this respect, they shared their empathy to reap villagers' perspective. Such a *soft* approach is crucial as Javanese culture highly values social harmony in social interaction.

To show their expertise, the persuaders believe that the recycling program in Hamlet is a successful pioneer project in Indonesia. Many people also believe that waste management in Hamlet is a good model to be replicated in other villages nationwide (Jellinek, 2012). Many outsiders came to learn how the persuaders introduced a waste management program based on local initiative and how they changed Hamlet villagers' behaviors to be more environmentally friendly. As described earlier in subchapter 4.2, the initiator and the persuaders were often invited to share their experiences in several discussion forums. Hamlet also received a number of awards from several institutions as an appreciation to Hamlet's achievement. With a number of appreciations from outsiders, the persuaders used this to encourage Hamlet villagers to continue recycling program in Hamlet.

4.3.2 Logos

The persuaders presented argumentation, logic and evidence as persuasive appeals to *logos*. With respect to argumentation, the persuaders used a causal statement that was officially regulated in Waste Management Act of Republic of Indonesia No. 18/2008 which is also known as Waste Law:

“Burning plastic waste produces dioxin (hazardous gases) that causes health problems and neurological diseases, lung, heart, kidney, asthma and cancer (see figure 10).

In presenting logic, they used statement that led to common sense thinking,

“Clean and healthy lifestyle can prevent disease.” (see figure 10).

Figure 10. Presenting reason (*logos*)



“Burning plastic waste produces dioxin that causes health problems and neurological diseases, lung, heart, kidney, asthma and cancer (Waste Law No.18/2008).”



“Clean and healthy lifestyle can prevent disease.”

“Disposing and burying hazardous waste such as batteries, electric lamps, electronic components, bottles of insecticide in the environment around us can contaminate water, wells and plants as well as can be very dangerous for the health.”

To ease Hamlet villagers to understand the program, the persuaders often used pictures and posters to explain recycling program to Hamlet villagers while the use of scientific terms was minimized considering Hamlet villagers’ low level of education. They also provided detail explanations about the procedure of recycling, composting and making handicraft as documented in a booklet namely *Guidance booklet for Recycling in Hamlet*.

Although the use of scientific evident was minimized, this information was also stated in the booklet:

“The habit to combust waste was already accustomed in several communities, including in Hamlet. They do not realize that the type of waste nowadays is different

from waste in the past. The current types of waste tend to be dominated by synthetic chemicals such as plastics, rubber, styrofoam, metal, glass and so forth. If these garbages were simply burned, it would not only release toxic gases that can harm people's health but also worsen the air quality in environment. For instance, incomplete combustion of plastic waste may produce dioxins gas that has 350 times toxicity compared to cigarette smoke. Dioxin itself is classified as a supertoxic poison (above toxic) and carcinogenic that contains 72 harmful chemical bonds. It can enter into human body tissues, especially the nerves and the lungs, which could exacerbate respiratory system and cause cancer.” (Guidance booklet for Recycling in Hamlet, 2008)

However, the argumentation as mentioned above is perceived by all respondents in the persuadee group as less persuasive to motivate Hamlet villagers to participate in recycling program. They perceived that the health impact of waste is an abstract thing while it is easier for them to digest information if it has real and visible consequences such as income generation aspect. With regards to economic condition of Hamlet villagers, the persuaders showed a number of evidences by showing several data to proof the real benefits of recycling program such as job creation and income for recyclers and community. Respondent 8 mentioned that about 70% of the income from the sale of recycle craft is received by recyclers and all Hamlet villagers have the same opportunity to generate income from recycling activities. For community itself, the income is benefited to buy appliances for public use in Hamlet. In the booklet, it is stated:

“The waste management activities can absorb a workforce of approximately 35 people in the field of transporting waste to the final collection point, building signs, making handicrafts, composting, and buying-selling the sorted waste to a buyer.” (Guidance booklet for Recycling in Hamlet, 2008)

“Community coffers gains IDR 500,000-IDR 1,000,000 per month. This community coffers is used to buy equipment villages such as chairs, tables, sound system and other tools that can be used by the public.” (Guidance booklet for Recycling in Hamlet, 2008)

4.3.3 Phatos

As Javanese cultural values and Islamic faith strongly influence Hamlet villagers' daily life, the persuaders also included these aspects in designing the message of recycling program in Hamlet. As mentioned earlier in subchapter 4.1, in Javanese culture, the concept of face is very important to maintain group harmony. Therefore, it is important to prevent someone from having a feeling of shame (*malu*). Considering this concept, the persuaders created signs *“I know how to sort waste! I'm shamed (if) not sort my waste in the garbage drums properly!”*. The sign illustrated a person who got shamed if other people saw him or her didn't sort waste properly though he or she knew how to do it.

Another example, a sign “*My neighborhood is clean, my mind and soul are peaceful*”. In this way, the persuaders stimulated sense of belonging of Hamlet’s villagers by using the term “neighborhood”. The persuaders also used some phrases that were associated to Islamic symbols such as mosque and worship. For instance, a sign “*Clean mosque gives better worship*” and a sign “*Cleanliness is a part of Islamic faith*”. Figure 11 illustrates the use of emotional appeals in Hamlet as abovementioned.

Figure 11. Presenting emotional appeals (*pathos*)



“(If) my neighborhood is clean, my mind and soul are peaceful”



“I know how to sort waste!”
 “I’m shamed (if) not sort my waste in the garbage drums properly!”



“Clean mosque gives better worship”



“Cleanliness is a part of Islamic faith”

The initiator also created a poem to increase environmental awareness of Hamlet villagers in particular for those who still ignored the problem of waste. In this poem, it is imagined that waste can talk to human who said that its presence in the world is made by human but human does not take care of them and eventually causes problems to human. From the text of the poem, repetitive words in the beginning of each sentence were used to emphasize the aim of the poem as abovementioned. The poem is ended by expression “*there are pearls in bundle of rubbish*” meaning that there will be many benefits from sorting waste.

Ballad of Rubbish

(“Balada dari Seonggok Sampah”-originally in Indonesian)

*I'm born because of you
I'm here because of you*

*Every day you produce me
Every day you throw me (away)*

*How unfortunate my destiny is, always be kept away, be blamed and be wasted
How sad to be destined as rubbish, are considered as source of disaster and calamity*

*This is your false throw me into rivers, so I send (you) flood
This is your false burn me, so I give (you) pollution*

*This is your false litter me in pathways, so I come up with untidiness
This is your false put me improperly, so I spread flies and bad smell*

*Aren't you able to, Oh man? Manage me as well as possible
Aren't you aware, Oh man? There are pearls in bundle of rubbish*

In addition, the persuaders created a song to invite people to participate in recycling program. This song was often performed in local events and presented by choir group in Hamlet. By singing and listening to this song frequently, Hamlet villagers were persuaded to manage waste properly due to cleanliness and health reasons.

Hamlet

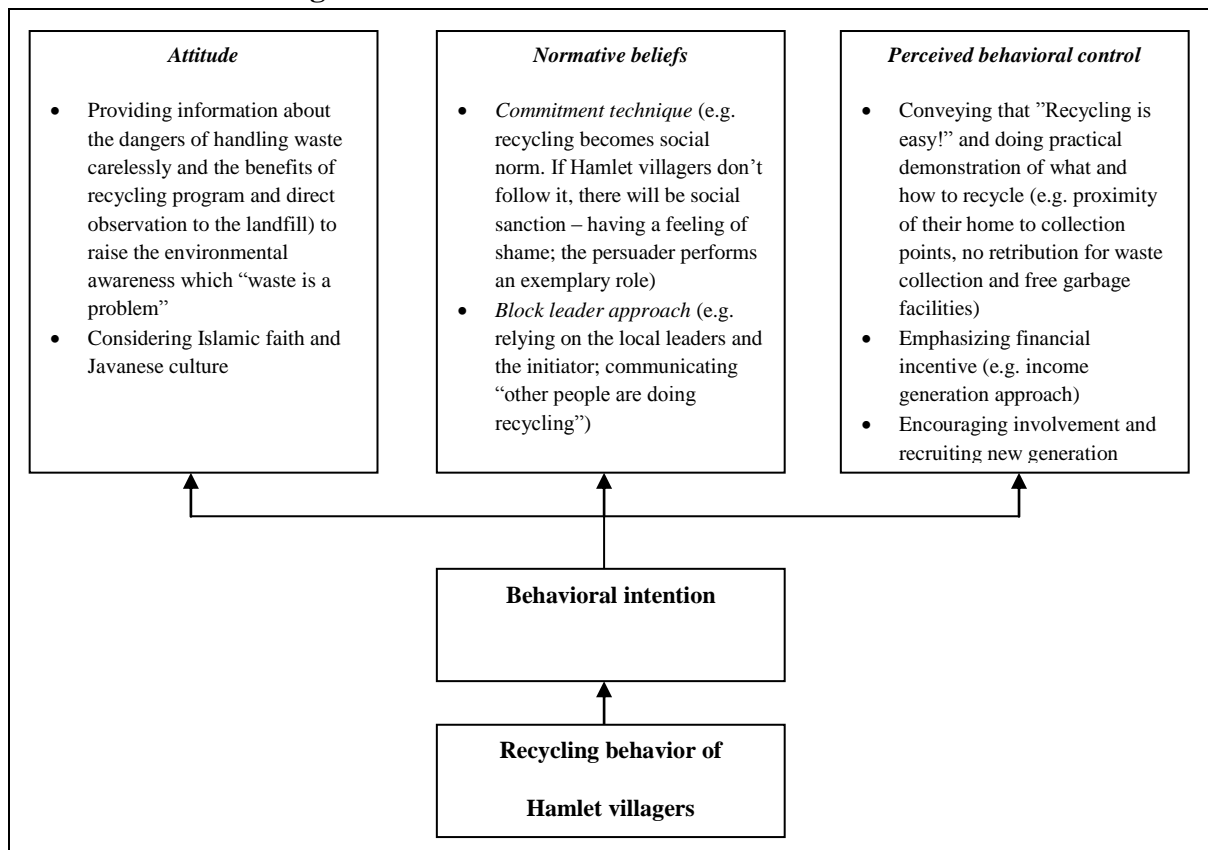
(“Mars Hamlet” – originally in Indonesian)

*Let Hamlet villagers keep our environment clean
Don't forget to sort plastic waste, paper, glass and metal
We have to care our health
Don't dispose rubbish carelessly
Don't burn plastic waste
Let us recycle our waste
Thus Hamlet, our village will be clean and comfortable*

4.4 Discussion

Consistent with theory of planned behavior (Ajzen,1991; O’Keefe, 2002) this study found that recycling was communicated through persuasive messages that considers three persuasion targets, namely *attitude*, *normative behavior* and *perceived behavioral control* (see Figure 12).

Figure 12. Persuasive communication in Hamlet



With respect to *attitude*, the persuaders influenced the villagers’ attitude by providing information about the dangers of handling waste carelessly and the benefits of recycling program through verbal and written communication such as booklet, poem, song and signs in public area of Hamlet. They also did direct observation to landfills in Yogyakarta to enhance Hamlet villagers’ understanding about waste recycling. Therefore, persuasive communication here is intended to establish positive attitude toward recycling. Upon introduction of recycling program in Hamlet, they realized that waste is a problem and in turn, they tried to solve it.

Moreover, the persuaders communicated recycling program in Hamlet that fits with the characteristics of Hamlet villagers. Here, persuasive communication was linked to the Islamic faith (e.g. the sign of “*cleanliness is a part of Islamic faith*”, the sign of “*clean mosque gives better worship*” and the persuaders’ saying that “*recycling is an act of charity*”) as well as Javanese culture (e.g. recycling was communicated by keeping group harmony among Hamlet villagers and the aim of recycling is to achieve their well-being).

In this way, the persuaders didn't force all Hamlet villagers to recycle waste by determining punishment and negative reinforcement. Previous literature found that punishment and negative reinforcement are basically viewed as undesirable ways to persuade recycling behavior because the individuals may perceive that ways as threats to their freedom (Geller, 1989). As a result, most Hamlet villagers accepted the recycling idea which was perceived as new knowledge of managing waste carefully. In turn, the attitude of most of Hamlet villagers turned to recycling behavior. In a more practical way, they didn't throw away waste in improper places. Consequently, garbage drums are always used to dispose their waste. On the other hand, for those who didn't accept the idea, recycling was interpreted as an inconvenient activity because of longer time needed to sort waste properly. In addition to that, they raised a gender issue which recycling was women's interest topic. They also revealed that recycling was suspected as an activity of getting more money for the persuaders. With this respect, it is important that the persuaders presented their credibility, humility and trustworthiness as appeals to *ethos*. Literature suggested "*who says*" is more important than the persuasive message itself (O'Keefe, 2002; Geller, 1989).

Persuasive communication of recycling program in Hamlet was also addressed to *normative beliefs* (the perception of what most Hamlet villagers do). To affect *normative beliefs*, the persuaders used *commitment technique* and *block leader approach*. In relation to *block leader approach*, recycling was communicated by relying on the initiator and the local leaders (as the persuaders) who are respected in Hamlet and considered as credible sources. In turn, they are perceived as role model in doing recycling in Hamlet. The *block leader approach* has two potential sources of influence i.e. information and personal contact (Schultz et al., 1995). Schultz et al. stated block leaders may be effective because they serve as initiators of social norms within their neighborhood. In relation to verbal communication, the persuaders convinced Hamlet villagers by saying "*other people are doing recycling*".

The persuaders also used written communication to encourage public commitment. It was found that public commitment increases participation and maintenance of recycling (Burn & Oskamp, 1986). With this regard, recycling was determined as a village program, regulated in local rules and signed by all local leaders, Hamlet waste management team and representatives of Hamlet villagers, as mentioned earlier in the subchapter 4.2. While previous literature proposed that personal commitment is more persuasive than public commitment in persuading people to act in a particular way (Burn & Oskamp, 1986), public commitment approach in the case of recycling program in Hamlet was considered to be cost-effective since there is inherent tradition in Hamlet to follow social norm which in turn needs to be internalized into personal norm. This also considers financial support of recycling program in Hamlet that based on local initiative. As Hopper and Nielsen (1991) found that personal norms have greater ability to influence recycling behavior. In this way, local rules for recycling in Hamlet is recognized as a social norm in Hamlet which possess influential social sanction among Hamlet villagers (e.g. feeling shame and being an object of gossiping). This way was used as appeals to *pathos* which the persuader tried to stir

Hamlet villagers' emotion to have feeling of a shame if other people saw them didn't sort waste properly though they knew how to do it. Moreover, the persuaders consistently performed exemplary role in doing recycling.

When *perceived behavioral control* became a persuasion target, the persuaders conveyed "Recycling is easy!" that can be seen from proximity of their home to collection points, no retribution of collecting waste and provided garbage facilities (the garbage bags and the garbage drums). This finding is in line with Ajzen (1992), Austin et al. (1993) and O'Keefe (2002) stating that the message needs to provide information that enables the receiver to overcome potential obstacles in performing the desired behavior. By doing this, the persuaders simply demonstrated what and how to sort waste through the community meeting and door to door approach. Due to Hamlet villagers' low level of education and income, the persuaders also provided relevant information in which the recycled waste can generate income for the community in many ways by using simple diagram of the recycling program and the use of scientific explanation about environmental and health consequences was minimized. All these ways are used as appeals to *logos*. As a financial incentive for Hamlet villagers in doing recycling, income generation approach was perceived by all respondents in the persuadee group as more understandable and persuasive. Additionally, persuasive communication was directed to increase Hamlet villagers' involvement in recycling activities, either based on their own interest and their engagement to be new generation of volunteer persuaders in motivating Hamlet villagers to recycle. Previous literature found that people who are aware about the environment issue will recycle if they are given an opportunity to get more involved in recycling activity (Derksen & Gartrell, 1993).

5. CONCLUSIONS

This chapter summarizes the findings of this study that have been previously discussed. At the end, this chapter presents the study limitations and suggestions for future research.

5.1 Conclusions

This thesis aims to identify the process of communicating recycling that led behavior change of Hamlet villagers from past behavior to recycling behavior. From this work, it can be shown that the process of communicating recycling to persuade behavior change comprised of six stages: introducing the idea of recycling to the family, relying on the local leaders, communicating to a small group of Hamlet villagers, getting acceptance of Hamlet villagers, seeking involvement of Hamlet villagers and establishing social recognition. In these stages, it was found that the persuaders designed persuasive messages to three persuasion targets, namely *attitude*, *normative beliefs* and *perceived behavioral control* which are in line with the theory of planned behavior (Ajzen, 1991; O'Keefe, 2002).

To alter *attitude*, the persuaders provided information to increase awareness that “*waste is a problem*”. Further, they communicated recycling in a way to fit with Islamic faith and Javanese culture. To influence *normative beliefs*, the persuaders used *commitment technique* and *block leader approach* to convince “other people are doing recycling.” While in affecting *perceived behavioral control*, the persuaders conveyed the message that recycling is easy, emphasized income generation, encouraged more involvement of Hamlet villagers and recruited new generation of persuaders.

From the ways of communicating recycling, it is interesting to note that in the very beginning, the initiator and the local leaders dominated the persuasion process to change Hamlet villagers' behavior from past behavior to recycling behavior. The communication among them could be seen as a top-down. However, the initiator and local leaders gradually decreased their roles in the higher stage of recycling communication. As a response, new generation appeared to help the persuaders to enrich new ways of communicating recycling to Hamlet villagers. As a result, the communication between the persuaders and Hamlet villagers became bottom-up and more indirect. In this way, the persuaders did not force Hamlet villagers to do recycling as it was perceived as a voluntary activity and aimed to keep harmony in social interaction which considered Javanese values. In relation to Islamic faith, recycling was communicated by making signs that cleanliness is a part of Islamic faith and communicating recycling is an act of charity (*sedekah*). It is also noteworthy that recycling was interpreted by some respondents in the persuadee group as a gender issue as women handle waste at home more frequently and their intense activities in women group's meeting in Hamlet. On the persuaders' side, this perception was useful to persuade women to initiate performance of recycling behavior to their family.

This thesis also aims to identify the modes of persuasion used in communicating recycling to Hamlet villagers namely *ethos*, *logos* and *pathos*. The findings illustrate that the use of *ethos*, *logos* and *pathos* is important in communicating recycling to Hamlet villagers. In presenting appeals to *ethos*, the persuaders presented themselves as credible, humble and trustworthy sources as well as highlighted their expertise in managing recycling as the pioneer in Indonesia. In relation to presenting appeals to *logos*, they presented argumentation that recycling program is beneficial to the environment and Hamlet villagers (i.e. income generation). Even though the scientific explanation about the dangers of handling waste carelessly has been presented, all respondents in the persuadee group perceived that income generation was more understandable and persuasive approach due to their low level of education and income. In presenting appeals to *pathos*, they used poem, song and signs to stimulate emotion of Hamlet villagers. In presenting signs in public area, the persuaders attempted to stir emotion of Hamlet villagers to feel shame if they did not recycle their waste. Moreover, poem and song were used to raise environmental awareness of Hamlet villagers.

5.2 Study limitations and outlook

First, this thesis only studies one case of recycling program with focus on communication aspect. The aim of this study is not to generalize, but rather to reveal deeper explanation about the process of communicating recycling and identify the modes of persuasion. Second, the case study is limited to the period when the idea of recycling was introduced to Hamlet villagers and period when information of recycling program was already largely spread to Hamlet villagers. With this regard, this study considers historical context that is linked to behavior change of Hamlet villagers to be more environmentally friendly. Future research may be of interest to identity persuasive communication that maintains recycling behavior in everyday life. In relation to that, comparative analysis of persuasive communication between recyclers and non-recyclers could also be interesting to study.

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7. APPENDICES

APPENDIX I. Detailed information about the interviewees

Detailed information about the profile of persuaders*

Anonymous Respondents	Age	Gender	Education	Role in communicating recycling in Hamlet	Experience in communicating recycling in Hamlet
R1	43	Male	Doing Ph.D in Environmental Health	Initiator	>10 years
R2	45	Female	Senior high school	Team	8 years
R3	45	Female	Senior high school	Team	7 years
R4	30	Female	Senior high school	Team	8 years
R5	40	Male	Senior high school	Team	>10 years
R6	31	Male	Senior high school	Team	>10 years
R7	53	Male	Junior high school	Team	>10 years
R8	48	Female	Senior high school	Team	7 years
R9	55	Male	Senior high school	Team	>10 years
R10	45	Male	Senior high school	Team	>10 years

Note:

** The persuaders are a group of people who accept the idea of recycling and persuade Hamlet villagers to recycle household waste. This includes the initiator, some local leaders and Hamlet Waste Management team. The names and the exact role of the respondents in the team were hidden to respect on principle of anonymity of all respondents.*

Detailed information about the profile of persuadees**

Anonymous Respondents	Age	Gender	Education	Notes
R11	45	Female	Senior high school	Willing to recycle
R12	34	Female	Senior high school	Willing to recycle
R13	55	Female	Senior high school	Willing to recycle
R14	45	Female	Senior high school	Not willing to recycle
R15	64	Male	Elementary school	Willing to recycle
R16	35	Male	Elementary school	Willing to recycle
R17	50	Female	Diploma in Economics	Willing to recycle
R18	55	Female	Elementary school	Willing to recycle
R19	50	Female	Elementary school	Willing to recycle
R20	42	Female	Bachelor in Islam studies	Willing to recycle
R21	70	Male	Elementary school	Willing to recycle
R22	50	Male	Elementary school	Not willing to recycle
R23	49	Male	Elementary school	Not willing to recycle
R24	45	Male	Elementary school	Not willing to recycle
R25	14	Female	Junior high school	Willing to recycle
R26	14	Female	Junior high school	Willing to recycle
R27	15	Male	Junior high school	Willing to recycle

Note:

*** The persuadees are Hamlet villagers who are willing and not willing to recycle household waste. Due to ethical considerations, all respondents' names were kept anonymous.*

APPENDIX 2.

IN DEPTH INTERVIEW GUIDE

Before start asking questions, the author emphasized the anonymity of all respondents in this study. The interviews were originally delivered in Indonesian.

Section I. Persuaders

Part I. Introducing Questions

1. How old are you?
2. What is/was your role in Hamlet Waste Management Team?
3. What kind of education do you have?
4. How long have you been working for this team?
5. Why are/were you willing to be involved in Hamlet Waste Management Team?

Part II. Substantive Questions

***The questions no.6-9 are addressed to the Initiator asking about idea of communicating recycling to Hamlet villagers**

6. How did the concept of recycling come up in your mind?*
7. How was recycling communication in Hamlet designed and thus it is applicable for Hamlet villagers?*
8. Did you set communicative strategies concerning recycling in Hamlet? If yes, could you mention it?*
9. Who was target audience in communicating recycling in Hamlet?*

10. How important is recycling for you and your village?
11. How was recycling communicated to Hamlet villagers with the purpose of changing behavior toward handling household waste? How did you approach them? What did you say to them?
12. How was villagers' reaction when recycling was communicated?
13. Which group of people in Hamlet was easily persuaded?
14. Did you find any challenges when communicating recycling to the villagers?
15. How did you handle that challenges?

Part III. Closing Question

16. Anything else that is notable or interesting to share about communicating recycling in Hamlet?

Section II. Persuadees

Part I. Introducing Questions

1. How old are you?
2. What kind of education do you have?

Part II. Substantive Questions

3. How important is recycling for you and your village?
4. How did you treat waste in the past?
5. What kind of information did you get in relation to recycling behavior?
6. How was information about recycling in Hamlet easily remembered?
7. How was your reaction when recycling was communicated? How did you interpret the message of recycling program?
8. Did you find difficulty/easiness to understand recycling in Hamlet?
9. Why were you willing/not willing to change your behavior (from past behavior to recycling behavior)?

Part III. Closing Question

10. Anything else that is notable or interesting to share about communicating recycling in Hamlet?