

The Motivation for Proenvironmental Behavior: Household Waste Disposal Towards Environmentally Friendly Daily Life: Case Studies in Finland

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Abstract Recent growing emphasis on environmental issues has heightened the need for environmentally friendly life. In response to this gain of momentum, municipalities have launched the environmental policies and attempted to promulgate environmentally friendly activities such as recycling and waste minimization. In this context, this paper focuses on the waste disposal, attempts to introduce the case studies conducted in Finland, and argues the need for the robust and mutual relationship between residents and the waste management company. Based on the methodology of group dynamics, case studies in Finland were carried out and analyzed. Following the results, the words, "environmental communication" and "environmentally friendly daily life", are redefined. This paper suggests the significance of establishing the robust and mutual relationship between residents and the waste management company through the environmental communication towards the environmentally friendly daily life. This paper also emphasizes the need for the collaborative activities by residents and the waste management company for the betterment of the environmental communication.

Keywords: *group dynamics; waste management; environmental communication; Finland; environmentally friendly;*

1. Introduction

Recent growing emphasis on environmental issues has heightened the need for environmentally friendly life. In response to this gain of momentum, municipalities have launched the environmental policies and attempted to promulgate environmentally friendly activities.

Many recent studies have focused on people's proenvironmental behavior. Dahlstrand and Biel (1997), for example, explored the propensity levels in behavioral change. Fransson and Gärling (1999) considered whether environmental concern plays an important role for behavior changes. Stern (2000) developed a conceptual framework for the theory of environmentally significant individual behavior. Kollmuss and Agyeman (2002) analyzed the factors that have been found to have some influence, positive or negative, on proenvironmental behavior. Barr, Gilg and Ford (2001) developed a conceptual framework which can be used to formulate both questionnaire design and psychological variables and demonstrated the utility of this framework by focusing on household-waste management. Williams and Kelly (2003) conducted a case study in England and studied the public's perception of a local authority recycling scheme by performing a social survey. These previous findings are insightful. Little, however, discussed environmental communication and collaborative activities focusing on the waste management from the social constructionist perspective.

This paper focuses on the waste disposal from the viewpoint of environmental communication. We cannot live without waste disposal, that is to say, waste disposal is indispensable in our daily life. Incorrect disposal of waste, for instance, is one of the issues that has generated a major discussion in terms of environmental problems in Japan. One of the underlying causes of this problem is the complexity of garbage separation. In Japan, the way to separate garbage differs from municipality to municipality. Once he or she moves to the area in a different municipality, he or she has to learn how to separate garbage from the beginning. The

imposition of the proenvironmental behavior and activities is insufficient for the change of people's daily life, for the way of life is deeply ingrained in daily habits.

By focusing on waste disposal, this paper considers what is needed for the environmentally friendly daily life as well as the betterment for environmental communication. Based on the methodology of group dynamics and the case studies conducted in Finland, this paper redefines the environmentally friendly daily life, suggests the significance of the robust and mutual relationship through the environmental communication which encourages people to spend the environmentally friendly daily life, and emphasizes the need for the collaborative activities by residents and the waste management company.

Waste disposal is conducted in our everyday life. In general, people conduct waste disposal without bringing to mind environmental issues; "why do we have to separate the waste and what kind of effects would the incorrect disposal have on the environment?" Waste disposal is usually conducted as their habit once they learn how to separate the garbage from the guideline distributed by the local waste management company, their family, their neighbors and so forth. Waste disposal behavior is not easily changeable.

This paper builds upon the methodology of group dynamics newly proposed by Sugiman. The next section provides an overview of its methodology and its definition of communication as well as the explanation of the overall collectivity newly conceptualized by the metaphor of canopy by Sugiman, which contributes to the theoretical analysis of case studies conducted in Finland. The third section shows the case studies conducted in Finland, which has unique environmental policies focusing on environmental communication provided by regional waste management companies. In the fourth section, following the results of the case studies conducted in Finland, the word, environmentally friendly daily life, is redefined. The last section provides the conclusion of this research.

2. Methodology

In this section the methodology of group dynamics is overviewed as well as the redefinition of environmental communication and the brief explanation of the overall nature of a collectivity described by using the image of "canopy" for its metaphor proposed by Sugiman (1992, 1998).

2.1 Group Dynamics

A new group dynamics advocated by Sugiman (2006) accentuates collaborative practice by researchers and people, maintaining social constructionism as its meta-theory. It greatly differs from traditional group dynamics created by Kurt Lewin (1947a, 1947b). This group dynamics newly proposed by Sugiman emphasizes the nature of a collectivity while the traditional group dynamics underlines the psychological process of individuals.

Sugiman (1998) defines group dynamics as "a field of study in which the dynamic nature of human collectivities or groups is investigated by examining the collectivities as wholes on the one hand, and the dynamic bilateral relations between the collectivity and the lives, or the psychological states, of individuals who belong to these collectivities on the other."

2.2 Environmental Communication

In group dynamics newly proposed by Sugiman (2008), holding social constructionism as its meta-theory, communication is defined as what produces something communal, provides a basis of meaning and enables our life world to be less ambivalent in the end.

Following the definition of communication above, this paper considers environmental communication as communication providing people with the basis of the meaning of the practice of the proenvironmental behavior and activities which are redefined in the later section of this paper according to the case studies conducted in Finland.

2.3 Overall Nature of a Collectivity – the Concept of "Canopy"

Sugiman (1992, 1998) vividly describes the overall nature of a collectivity by using a metaphor of an image of a "canopy", or "*kaya*" in Japanese. Sugiman (1998) outlines the dynamic and bilateral relations between the nature of a collectivity and the individual life-world as follows:

- (1) Every collectivity is encompassed by a canopy and thus the life-world of each person in the collectivity is determined to some extent by the canopy;
- (2) The life-world of each person is not, however, determined completely by the canopy. Each person still feels, thinks, and behaves more or less freely even while they are determined by the canopy
- (3) The exercise in free choice by each person in turn changes the canopy to some extent
- (4) The canopy which has now changed again determines the life-world of each person, and so on.

(Sugiman, 1998)

According to Sugiman (1998), any collectivity in an ordinary setting is almost always encompassed by many canopies which are theoretically countless and partially overlapping. Each person is encompassed by partially overlapping multiple canopies which might lead to his or her uniqueness. In the concept of "canopy", people are influenced by canopies and people influence canopies, which means the overall nature of a collectivity is mutable. This concept enables this paper to analyze and discuss the case studies in Finland.

3. Case Studies in Finland

This section shows the details on the case studies in Finland and the analysis of the results as well as the brief summary of the waste management in Finland.

3.1 Waste Management in Finland

According to the survey conducted in 2006 by OECD (2008), for example, Finland is the most successful in household waste minimization per capita. Table 1 summarizes the results of this survey.

Finland	Japan	France	Austria	USA	Germany	UK
240	290	340	440	460	500	510

Table 1. Amounts of household waste per capita (kg/capita) in 2006

Waste management in Finland has been executed under the Finnish waste legislation largely based on EU legislation which in some cases includes stricter standards and limits than those applied in the EU. Finland's waste policies are based on five key principles in accordance with the EU waste strategy in 1996 as follows:

- (1) Prevention: The production and harmful impacts of wastes should be reduced and wherever possible prevented at source.
- (2) The Polluter Pays: The producers of wastes take responsibility for the costs of waste management.
- (3) Producer Responsibility: Manufacturers and importers of certain product types must bear the responsibility for the management of their products when they become wastes, instead of waste producers.
- (4) The Precautionary Principle: Potential problems related to wastes and waste management should be anticipated and avoided.
- (5) The Proximity Principle: Wastes should be disposed of near to their source.

(6) The Self-sufficiency Principle: The EU and member states should remain self-sufficient with regard to the disposal of wastes.

(The Finnish Ministry of the Environment, 2010)

Waste management companies in Finland have unique environmental policies which try to instill the environmentally friendly awareness into local residents by environmental communication. Environmental communication provided by regional waste management companies in Finland values a close relationship with local residents. Many of waste management companies in Finland have at least one special center for local residents called "eco-center" where anyone can learn about the environmental issues for free and moreover in most cases can buy recycled and used items.

For the purpose of obtaining interviews from the officers of waste management companies and visiting the sites where environmental communication was taking place, I visited two waste management companies in Finland. In addition, the thorough participant observation was conducted in order to observe Finnish people's daily life and gain interviews from local residents.

• *Turun Seudun Jätehuolto Oy*

Turun Seudun Jätehuolto Oy (TSJO) is located in Turku, Finland. It is owned jointly by the regional municipalities and its customers include 317,000 residents and businesses located within its operational area. It has a unique slogan: "More From Waste."

The interview with a waste advisor who was also serving as a public relation officer at TSJO was conducted on 8th of March, 2010. According to this interview, TSJO puts an emphasis on (1) Communication between TSJO and its customers, (2) Polluter-pays principle, (3) Spurring public knowledge in recycling, (4) Exhibition at recycling center, and (5) Hotline.

TSJO accentuates the importance of the communication with each resident and local groups in its operational area and provides the information on the waste in valid and feasible ways through many activities such as visits to small groups, comprehensible brochures, original goods, and so forth.

The polluter-pays principle states that whoever is responsible for damage to the environment should bear the costs associated with it (Rogers, 1995). TSJO is operated under this principle.

Pupils visit the recycling center to learn the history of the waste and this is strongly suggested by the Finnish curriculum. They have to visit TSJO several times between lower-grade and higher-grade. TSJO aims to instill "environmentally friendly spirit" to them and it commits to strenuous efforts to spur public knowledge in recycling in multiple ways such as the visits to small groups including home visits upon request. In addition, TSJO regards exhibitions featuring photos and things which show residents in chronological order how the waste has been dealt with and recycled as one of the most important activities in terms of environmental communication.

TSJO sets up a hotline for residents in Turku to communicate with them. Waste advisors receive phone calls. Residents in Turku can obtain the best answer out of waste advisors over anything related to their waste management —the way to dispose of garbage, how to recycle things, what kind of things can be recycled and so on—.

TSJO underlines establishing the positive and productive relationship with residents through the communication, realizing and remembering the importance of the locality and motivating residents to the environmentally friendly activities in a collaborative way.

• *Pirkanmaan Jätehuolto Oy*

Pirkanmaan Jätehuolto Oy (PJO) is located in Tampere, Finland. It is owned jointly by the regional municipalities and its customers include 416,000 residents and businesses located within its operational area.

It has no slogan but it has the targets to be achieved which are to reduce the amount of waste, to improve waste recovery and to take care of safe final disposal.

The interview with a waste communication advisor who was also serving as a public relation officer at PJO was conducted on 11th of March, 2010. According to this interview, PJO puts an emphasis on (1) Communication between PJO and its customers, (2) Attunement with EU environmental policy, (3) Instillation of the positive attitude toward environmentally friendly activities into residents, (4) Landfill as an eco-center, and (5) Foreigner-friendly activities.

PJO also puts an emphasis on environmental communication like TSJO. In contrast to Turku, however, the operational area is too large and too multinational to communicate with each resident and local groups in feasible ways for each. Therefore PJO tries to establish the relationship with each resident in Tampere with other means such as arranging photo contests for the "waste calendar" which PJO distributes every year. PJO regards the attunement with EU environmental policy as important, for it shows what should be done as part of proenvironmental activities.

PJO puts high priority on instilling "positive attitude toward proenvironmental activities" into residents in Tampere through various original goods such as video games, CDs, and calendars. PJO believes that the earlier children get the positive information on proenvironmental activities, the more positive and robust their attitude toward proenvironmental activities becomes and the more spontaneously they put them into practice. PJO owns the two biggest landfills in Finland, located on the fringe of Tampere. PJO strongly recommends residents to call the landfill "eco-center" because the word "eco-center" gives people a more positive image toward the landfills and these landfills are not only a landfill but also a center that anyone can visit and learn environmental issues.

PJO provides foreign residents with easy-to-understand brochures written in plain Finnish and English with rich illustrations. PJO is also making an effort to build up the positive relationship with foreign residents. They are often blamed for the incorrect disposal. PJO is afraid they will have the negative attitude toward proenvironmental behavior and activities because of this.

PJO emphasizes that building up the positive attitude toward proenvironmental behavior and activities is the most urgent and crucial.

These two waste management companies stated that they successfully created and maintained a close and good relationship with local residents based on the environmental communication. To investigate the environmental communication from the residents' side, the participant observation was conducted.

3.2 Participant Observation Conducted in two Households

I conducted the participant observation in two households in Tampere and Joensuu. In Joensuu, I also interviewed twenty-three Finnish local residents during the participant observation. I spent all day long together with the collaborators, video-taped or recorded their behavior and activities under their permission, and kept logs as much as possible.

The collaborator in Tampere was a Finnish single male student in late twenties living in an apartment alone. The collaborators in Joensuu were members of a family of two: a Finnish female woman in late sixties and her nephew who was a single student in mid-twenties.

They all separated garbage in a correct way without reading any guideline or brochure distributed by the local waste management company about how to conduct the waste disposal correctly.

According to them, separating garbage has already become a habit. For this reason, they can always do it appropriately unless the waste management company changes the policy of the waste disposal and moreover they will be able to do it in a correct way even if the waste management company changes the policy of the waste disposal or they move to the area where the different waste management company gives service. They think they have a strong relationship with the waste management company. They can visit it, call it or ask someone from it to come to their houses to learn how to separate garbage in a correct way. Even the

collaborator who was in late sixties separated garbage correctly without any effort. She described the reason as follows: "since I was little, I have done this. I didn't know why I had to do this but I have just done this. It's, like, as if Japanese people don't eat anything before saying something when eating, you know. I just cannot throw the garbage away without separating it."

These two case studies illustrate the proenvironmental behavior conducted spontaneously and it is quite likely that the efforts by the waste management companies to establish a close and good relationship with residents through the environmental communication yielded meaningful results.

Twenty-three Finnish residents in Joensuu who volunteered to be interviewed were ranged in age from 15 to 72 years. Eleven of them were male and the rest were female. Each interview mainly focused on the proenvironmental behavior and activities that they thought they had done, how they had conducted the waste disposal and what they thought the environmentally friendly daily life should be.

According to these interviews, it was found that interviewees had confidence about the way to separate the waste correctly, the relationship between the residents and the waste management company was strong, and the residents believed in the waste management company as follows: "When I forget how to separate the waste, all I have to do is to visit the waste management company or call it to ask about how to do that". They had been repeatedly told how to separate garbage since they were little and they had an understanding of the environmental issues through the educational visits to the waste management company when they were younger. It seems quite probable that the proenvironmental behavior and activities are something very familiar to them.

Presumably, all these kind of things contribute to their proenvironmental behavior and activities, which enables the residents and the waste management company to have the robust and mutual relationship. Furthermore, these results also indicate that each person is encompassed by the "canopy" that is something environment-oriented.

4. Redefining "Environmentally friendly daily life"

This section redefines environmentally friendly daily life as well as the proenvironmental behavior and activities based on the results of the case studies in Finland.

4.1 Definition

On the basis of the definition of the environmental communication newly redefined in this paper, this paper redefines the environmentally friendly daily life as an environment-oriented daily life in which (1) people spontaneously put into practice the proenvironmental behavior and activities that are sublimed to a habit and (2) in which people can reinforce anything relevant to environmental issues such as knowledge of environmental problems through the environmental communication.

4.2 Proenvironmental behavior and activities

Following the definition of the redefined environmentally friendly daily life, the proenvironmental behavior and activities are explained.

- *Proenvironmental Behavior in Environmentally Friendly Daily Life*

In environmentally friendly daily life, people have the robust but flexible – these two words superficially seem to be conflicting – habits. Specifically, they separate the waste in a correct way without any effort once they learn how to do it. They know what is supposed to be good under the current knowledge or technology for the environment. People do not even realize that they themselves are conducting proenvironmental behavior

because it is nothing special in environmentally friendly daily life. Conducting proenvironmental behavior is sublimed to the common practice in environmentally friendly daily life.

- *Proenvironmental Activities in Environmentally Friendly Daily Life*

In environmentally friendly daily life, people willingly take part in the community-based environmental activities such as the cleanup activity in the neighborhood held by, for instance, the neighborhood association and the environmental workshops held by the local authority.

Let me give you an example of the community-based environmental activities. In Kyoto in Japan, the cleanup activity in the neighborhood is held by the neighborhood association every two to three months in general and all the residents at any age are supposed to participate in this activity. This kind of activity is what this paper mentions as the community-based environmental activities.

In environmentally friendly daily life, people willingly consent to the participation in this kind of environmental activities.

5. Towards Environmentally Friendly Daily Life

Several significant conclusions are derived from the in-depth case studies and interviews conducted in Finland.

First, it is highly important to establish the robust and mutual relationship between the residents and the waste management company through the environmental communication that spurs people to spend the environmentally friendly daily life. Waste management companies in general mainly conduct their duty, namely, waste management, and the environmental communication in an unidirectional way. It is noteworthy that the waste management companies in Finland conduct the environmental communication not in an unidirectional way but in an interactive way, which enables residents to spend the environmentally friendly daily life in term of the waste disposal. The interviews with officers from waste management companies, residents and the collaborators in Finland show the significance of creating the robust and mutual relationship between the residents and the waste management company through the environmental communication which is conducted in a non-coercive way for the purpose of creating the good relationship.

Secondly, the collaborative activities by the residents and the waste management company are needed as a driving force for the betterment of the environmental communication. They can contribute to establishing the mutual relationship and eventually creating a new or an enlarged “canopy” which is something environment-oriented that the local residents and waste management company only can create. What was useful in Finland, for instance, is not always useful in Japan. The usefulness of each collaborative activity often depends on the propensity that the country, area, that is to say, the site where it is conducted, has. The collaborative activities encourage the local residents and waste management company to create the unique “canopy” that is environment-oriented.

In conclusion, the case studies in Finland indicate the high possibility that the robust and mutual relationship through the environmental communication and the collaborative activities between the residents and the waste management company bring people to the better proenvironmental behavior and activities. This research does offer some insight into the significance of the robust and mutual relationship between people and local authorities in terms of other environmental issues. This will eventually lead to the environmentally friendly daily life.

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