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경영학 석사학위 논문

# **When and How Does Categorization in Reward Presentation Increase the Likelihood of Joining Frequency Programs?**

범주화가 고객보상프로그램의 가입 가능성에 미치는 영향

-목표 성취의 인지된 용이성의 매개역할과

성취욕구의 조절역할을 중심으로-

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전연주

# When and How Does Categorization in Reward Presentation Increase the Likelihood of Joining Frequency Programs?

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이 논문을 전연주 석사학위논문으로 제출함

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## **Abstract**

# **When and How Does Categorization in Reward Presentation Increase the Likelihood of Joining Frequency Programs?**

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The categorization of time, space, area and objects is a ubiquitous and spontaneous process. People, consciously and unconsciously, have perceived the world in the way of categorization and this way has not only widely influenced perception, judgement, choice, and motivation, but also has been a means of understanding and communicating with the world where they live. While a substantial body of research on categorization that focuses on how quickly people understand the categorized world or how categorization influences motivated

behavior has been documented for decades, little research on cognitive information process through visually categorized stimuli has been done so far. Hence, this research will explore the effect of categorization in reward presentation on the likelihood of joining frequency programs. Specifically, the research investigates the factors through which how and under what conditions this occurs.

This research proposes that the categorized stamp card (compared with one that is non-categorized) would increase the likelihood of joining frequency programs because the categorization increases the perceived easiness of goal attainment and this perceived easiness would increase the intention to enroll. Moreover, this effect would be moderated depending on the boundary conditions, especially the Need For Achievement.

An experiment conducted among 112 participants through Amazon Mechanical Turk examines whether three propositions are supported. The findings from the experiment showed that when participants (experimental group) saw the stamp card that was categorized by different colors, they were more likely to join the frequency program compared with the other participants (control group) who saw the visually non-categorized stamp card. Furthermore, the results revealed that the underlying mechanism of the effect of categorization on the likelihood of joining frequency programs that was perceived as easier goal attainment, was partially supported. Finally, the findings indicated that the main effect was moderated depending on the need for achievement. That is, participants who have a high need for achievement were more likely to join the frequency program when

they saw the categorized stamp card than when they saw the non-categorized one. On the contrary, participants who have a low need for achievement showed no difference in the likelihood of joining the frequency program even when they saw a categorized stamp card or not.

The current research significantly contributes to the extant literature on loyalty programs by investigating the two different responses of the likelihood of joining frequency programs depending on the low and high need for achievement. Moreover, this study extends the present studies on categorization by illustrating the effect through cognitive information processing. This study also has practical implications because marketers who would like to keep their long-term relationships with loyal or frequent customers are able to design and construct frequency programs more effectively.

**Keywords: Frequency Program, Categorization, Need For Achievement, Goal Attainment, Goal Theory, Visual Heuristic**

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# I . Introduction

*"Nearly half of the U.S. population belongs to at least one FP and that such programs are growing at a rate of approximately 11% a year".*

*(Schneiderman, 1998)*

In 1981, US company 'American Airlines' first introduced the loyalty program, (Liu 2007; Simonson & Kivetz 2002) in which, instead of gaining new customers, it proved to be more efficient for the company, both in monetary and management aspects, to maintain and manage existing customers (Kopalle, Neslin, & Singh 1999; O'Brien & Jones 1995; Orr 1995; Raphael 1998; Simonson & Kivetz, 2002) resulting in countless companies to invest heavily into this marketing tool. The "Frequency Program" as well as the "Loyalty Program" are marketing tactics that reward (both monetarily and non-monetarily) the frequent customer, according to the volume of visits and the amount of money spent per visit. These programs have established to be at the core of marketing strategies employed by companies around the world (Kopalle & Neslin 2003; Simonson & Kivetz 2002). Currently, the company, 'E. Leclerc' of France, spends an annual investment of 18 million Euros on these programs (Warrden 2007), while major American companies such as AT&T, Barnes and Noble and companies with similar consumption goods, even airlines, hotels, restaurants and the customer service industry (Barlow, 1999; Blattberg & Deighton 1996; Kearney 1990) all invest heavily into these programs (Kopalle & Neslin 2003).

*"The secret of the specialty coffee shop stamp cards"*

*The most important item for the modern man is coffee. When you go to a specialty coffee store and order your drink, there is something you get in return; It is the stamp card. For every one drink, there is one stamp. For most specialty coffee stores, a free drink is offered for every 10-stamps collected on a stamp card. However, while certain stores give out blank stamp cards, there are certain stores that give out cards already stamped, allowing the consumer to collect only 9 more stamps. What is the difference? In the 'Journal of Consumer Research', Joseph C. Nunes and Xavier Dreze wrote "The Endowed Progress Effect: How Artificial Advancement Increase Effort" explaining the difference between these two cards. Namely, the customers who received the already stamped cards were more willing to revisit the same establishment because the goal was perceived to be sooner attained. Customers frequented the shops with already stamped cards more than the shops with blank stamp cards, thereby increasing their customer loyalty and revealing the secret that hid inside."*

<sup>1</sup>(E-Best Investments blog, 2015.2.)

Coffee has become a staple food, where people choose to pay for prices that cost more than meals and therefore creating the exponentially growing number of specialty coffee shops. In an attempt to attract return customers, these many coffee shops most commonly use loyalty programs. With every single beverage purchase

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<sup>1</sup> February 4, 2015 E-Best Investments blog. [http://blog.naver.com/dream\\_asset/220261760732](http://blog.naver.com/dream_asset/220261760732)

or by purchasing a set minimum amount, a single stamp is received in return. This established loyalty program is not only the most commonly used marketing tool, more and more different types of industries are branching out to use them (Barlow 1999; Blattberg & Deighton 1996; Kearney 1990). Therefore, studying these loyalty programs and how to make consumers loyal to applicable companies and stores is treated to be of great importance (Kopalle & Neslin 2003; Simonson & Kivetz 2002). Currently, the actual circumstances are that vast amounts of money are being invested into introducing loyalty programs by companies aforementioned (Warrden 2007). In the aspect of cost and profit of this program, the outcome differs depending on the efficiency in operation and the measure of actions taken by the company. For example, the aforementioned French company, 'E. Leclerc' invests and maintain a budget of 18 million Euros a year, while on the other hand, US company 'Safeway' stopped a 7.5-million-dollar investment, concluding that the program was not effective, doubting the efficiency and effectiveness of loyalty programs (Warrden 2007).

Despite all this, countless studies of these loyalty programs have been done because the construction and enticement show continuous effect on the consumer. Many of these studies test what kinds of influences affect psychological and behavior in consumers, however, there are very few studies on the cause of influencing consumer participation or enrollment. This paper will explain that in the instance where the consumer is not confused, overwhelmed or made to pay extensively, (Dowling & Uncles 1997; Lewis 1997; Orr 1995) the presentation of

the frequency program (in the case of stamping a physical card or marking digitally on a smart phone app for every visit) can differ the chances of consumer participation. In other words, the presentation (how to present) of the frequency program when enrolling a consumer changes the probability of a positive outcome and one of the main reasons is due to categorization.

People perceive objects and space uniquely from one another because consciously and subconsciously they divide the objects into categories (Rosch 1976). This phenomenon occurs naturally at a young age, learning even without consciously practicing the activity of categorizing and it is through categorization people are able to recognize and interpret their surroundings. It is this type of categorizing that influences the ability to recognize variety. For example, Broniarczyk, Hoyer & Mcalister (1998) performed a study to measure how far variety can be recognized by comparing two spaces. Both spaces displayed products throughout, but one space was modified by clearing and removing the products from one corner. Interestingly, both spaces provided the same amount and variety of products on the shelves, however, the test subjects believed the space with the corner removed was lacking in variety. Through the study performed by Wiltermuth & Gino (2012), it is found that when people are offered rewards for their efforts presented in categories of two to three groupings, opposed to rewards presented in a single grouping, people are more prone to work harder for the reward. Not only are the variety in categories realized, this proves also that this influences motivation. Various studies are showing that people's motivation, attitude, and decision-making are influenced by categorization even without knowing its reasons or presence in

and of itself.

Will the chances of potential customers wanting to join in a frequency program increase by reducing efforts through categorization, when customers are purchasing a product or paying for services in the future and receiving stamps on stamp cards. I predict that when separating a single space into many separate spaces on a stamp card, the customer will recognize the ease in effort to receive the reward and perceive the effort needed to achieve the reward as much less. It is understood not all people perceive spaces in the same way, therefore, the conditions that may influence consumer behavior will be discussed. With this in mind, this study will be as follows.

- 1) Through categorization, will a differently presented frequency program increase the amount of potential customers to join?
- 2) If there is a relationship between frequency programs and categorization with chances of joining, what is the most explainable factor?
- 3) If not all people are influenced by categorization, what is the factor that creates the difference between those people that are affected.

Using these three questions, this study will draw a theory, thereby creating a hypothesis and through testing, the results will demonstrate the validity of the hypothesis. Afterwards, the limitations and the implications of the study will be helpful for future research.

## **II . Theoretical Background and Development**

### **1. Frequency Programs**

Because of the importance of frequency programs (also known as loyalty programs), studies in this field have started with focus in the late half of year 1999. At this time, most of these studies focused on the efficiency and effectiveness of consumer actions and the buyers' decision when it pertained to frequency programs. Results were found to be interesting and even contradictory (Nako 1997; Sharp & Sharp 1997; Bolton et al. 2000; Benavent et al. 2000; Leenheer et al. 2003; Magi 2003; Yi & Jeon 2003; Lewis 2004; Taylor & Neslin 2005; Kivetz et al. 2006, Warrden 2007). For example, frequency programs positively influenced continuous brand attachment and increased return buyers (Klempere 1987; Kopalle & Neslin 2003), but companies would have to pay vast development costs (Dowling & Uncles 1997; Lewis 1997) and cause complexity in the designing or layout of the programs (Orr 1995). In regards to the customer, it also questions whether the frequency programs can create positive actions or attitudes (Dowling & Uncles 1997; Sharp & Sharp 1997; Rosenspan 1998). Yi & Jeon (2003) found that these frequency programs were effective depending on customer involvement and expanded beyond the simple study of present influence to explaining at what conditions certain processes would influence a consumer.

Starting towards later end of year 2000, studies have shifted focus from arguments questioning the efficiency of frequency programs to now studies on how the design will create more brand attachment to the existing members. Ultimately, in the corporate perspective, the point of these frequency programs are not to attract one-time consumers, but to increase the consumptive activities of long-term consumers for profit (Kopalle & Neslin 2003). For example, Bagchi & Li (2010) did a study that showed the process of how the design (step-size and reward distance) lead to consumers joining frequency programs and proved these programs formed a different attitude towards the brand. A study by Dreze & Nunes (2008) showed the method of how designed programs can conscientiously make aware the consumer's position in regards to the rewards and the special treatment that come with the program and therefore continuously stay with the brand.

It is important for companies to first invite consumers to join into these frequency programs and frequency programs for the benefits of brand frequency, long-term purchases, and word-of-mouth advertising (Dowling & Uncles 1997; Yi & Jeon 2003). The issues are how to appeal to first time customers as well as return customers to join into these programs and create brand frequency. According to the study by Yi & Jeon (2003), consumers with low involvement into the programs will realize their worth and therefore become more loyal to the program and eventually will become loyal to the brand itself. For those customers highly involved in the programs already, brand frequency will happen more quickly because of the program frequency already achieved. The main point is that customers highly involved in the frequency programs directly translate to brand frequency.

Depending on how appealing the design is for the frequency program will indirectly prove the effectiveness of brand frequency.

As long as frequency programs are made for easy access, simplicity and low costs for the consumer (Dowling & Uncles 1997; Lewis 1997; Orr 1995), these programs (in the cases of physical stamp cards or smart phone apps that will be stamped with every purchase) will succeed if focused on the design and efficiency of presentation. Furthermore, how a customer is approached to join in a frequency program when buying a product or receiving a service will determine the success of joining and one of the important causes is due to categorization.

## **2. Categorization**

### ***2.1 Visual Heuristics***

Many studies show that heuristics influence human decision-making and how it plays an important factor in cognitive information processing. Because heuristic-based information processing is fast and voluntary and humans are impacted by influential cues that cause predictable actions (Evans 2008; Kahneman 2003; Kahneman & Klein 2009), the importance in the role of change in decision-making and actions has been emphasized (Kahneman 2003; Kahneman & Frederick 2002). Humans do not always make decisions based on analytic processing or subtle research. Quick decisions could be based on the mood, situational cues and atmosphere as well (Baron 2008; Evans 2008; Kahneman & Tversky 1979; Schwarz

& Clore 1983).

In truth, heuristics is quite varied in types and occasions, but studies on visual heuristics is still somewhat lacking. Some studies based on heuristics or visual cues and environment show how humans are aware of and can recognize between objects. It is suggested that by influencing these differences, it can be utilized to predetermine results. Especially, visual and audible cues fall in as combined cognitive cues, so heuristic information processing is the effect of visual cues which have been proven by substantial current studies (Alter & Oppenheimer 2006; Zhong et al. 2010). Although decision making by visual cues is not detail-oriented and does not need a closer inspection, under situations like being flooded by information, pressured for time, boredom, and monetary incentive, heuristic information processing has a constant influence (Ambady & Gray 2002; Ambady et al. 2000).

It is possible that through categorization, visual heuristics can be implemented and then create unpredictable outcomes. A single space (in this instance, the stamp card) is divided by categorizing it into levels or visual groups, so, through the process of visual heuristics, the intended outcome can be lead. It is unknown where this process is recognized or how the information is processed in the human mind. I predict that if visually categorized information is recognized differently, then the processing of the interpretation will be different as well.

In this study, heuristic information processing through presented visual categorization must be accepted as one of the ways of goal attainment. Through this, the chances of consumers joining frequency programs will increase. Although the

number of slots on a stamp card is the same, the perceived difficulty of achieving a complete stamp card (mentally placing this as a lower level goal to achieve) will decrease when categorizing the slots. By separating the slots into categories, the customer will feel more driven to fill each category and thereby more driven to complete the card altogether. This will lessen the burden the customer might feel about completing the card and will motivate the need to achieve the applicable task or goal. So then, what special properties in categorization make this possible? These arguments will be further discussed in the following section.

## ***2.2 Categorization***

The phenomenon of categorization can be seen every day in spaces, people and in objects (Allport 1954; Brewer 1988; Cohen & Basu 1987; Devine 1989; Fiske & Neuberg 1990; Tu & Soman 2014). People's ability to recognize, create opinions, make decisions, and motivation are influenced by these categorizations. For instance, in space recognition, people feel closer to spaces that are categorically familiar than to spaces foreign (Tversky 1992). Mishra & Mishra (2010) performed a study showing that US citizens are more affected by natural disasters impacting their own residential state than by news of incidents from neighboring states (even if the event occurred the same distance away). A study by LeClere, Hsee, & Nunes (2005) shows that consumers compare the products within the same category grouping than comparing products in different categories. Zhao et al. (2012) also proves that if a visible boundary of no significance is drawn around a workplace,

people's concentration and motivation will change depending on whether they are inside or outside of that boundary. In this case, then what is the main purpose of categorization?

According to Rosch (1976), categorization serves its purpose in two ways. Firstly, little cognitive effort is used to gain the most information. Secondly, it helps the comprehension of one complete and structured constant than having to decipher the unpredictable and the random. If more of the world's structures were depicted through categorization, people would be able to process more information with the very least effort. Then why should the world be structured and categorized? The goal for categorizing is to recognize similarities between objects of the same grouping and to mentally separate that from the objects in different groupings. This allows to recognize and focus on objects of similar properties than having to see each individual object and ultimately decrease the effort of cognitive thinking (Heit & Rubinstein 1994; Lassaline 1996; Rosch 2002; Sloutsky 2003). People will group products in one category with similar characteristics as one and group other products in another category as another. By separating the products into groups, people recognize that decision-making can be achieved much quicker. Even when randomly categorizing similar objects, each individual category is perceived differently and this potentially can influence decisions. For example, a study by Tu & Soman(2014) proved the attitude of a test subject when communicating was determined by what color their calendar was marked all the days down to the end of testing. If the color marked as today's date was the same color of the final day, people felt that the date was closer. On the other hand, if the color of today's date

was a different color, they felt the last day was in the far future. Technically, both cases measured the same duration of time, but by using color to categorize the dates, the subjects were affected differently. Similarly, Wiltermuth & Gino (2013) performed a test separating two groups of test subjects. The first group was offered a reward from a single category while the second group was offered a reward from various categories. The subjects in the second group showed more effort to receive the reward that were in various categorizes. Even when the subjects of both group were told that the reward was not of personal value and that the categorization was done at random, the second group still showed more effort than the subjects of the first group. This proves that people differentiate and recognize by categorizing. Through this, I predict that by categorizing the visually presented object that is the frequency program, the probability of joining will increase.

### ***2.3 Visual Categorization***

A study by Zhao & Soman (2012) shows that consumers use visual cues and logical information (semantic information) to categorize their environment and the environmental categorizations that they belong to influences their actions and their inclined behavior. Visual categorization, opposed to categorization by language, is an exceedingly more automatic and direct process (Luna & Peracchio 2003; Paivio 1971; Unnava & Burnkrant 1991; Townsend & Kahn 2014) Carr et al. (1982) whereas instead of linguistic meaning, it is possible to approach the meaning of written names and images faster and more automatically. Just by observing visual

images, or symmetry and proportion, it is influential because of the ability to recognize appeal, even without outside instruction (Arnheim 1974; Birkhoff 1933). This is due to the fact that visual image information processing occurs easier than with listing and speaking. Similarly, I predict that visual categorization invokes meaningful action more than language categorization because this form of information processing is more intuitive and effortless. Furthermore, people will believe that any categorization done visually is with purpose, so will interpret this as external cues and will actively put effort in trying to understand the information. So, exactly what kind of information do customers receive from spaces that are categorized?

Categorization theory explains that visually categorized spaces are meant for people to quickly discern the differences between items (Heit & Rubinstein 1994; Lassaline 1996; Rosch 2002; Sloutsky 2003). This means that categorization simplifies the mental processes when classifying similarities and differences, ultimately being convinced there is meaning in the communicated information (Clark 1985; Grice 1975 Wiltermuth & Gino 2013 and therefore associating visual cues as noteworthy information, and even feeling there is differences in the separate categories. When being presented with a stamp card that has been categorized (in comparison to being presented with a stamp card that has not been categorized), there is a need to fill all the slots that are visually in the first category. After successfully completing the first category, the task would be to complete the second category and therefore will recognize the ease in achieving the goal of the task that has been given. As such, this study will follow the first suggested hypothesis.

**Hypothesis 1.** When visually presenting the frequency program through categorization (in comparison to the non-categorization), the chances of joining will be increased.

### **3. Need for Achievement (N-Ach)**

The need for achievement (N-Ach, or also known as NFA) is the innate desire to learn to achieve difficult and important tasks, specific skills, self-controls, and higher knowledge (Murray 1938). It appears when categorizing the degree in which future action should be taken, and because the amount of force, continuity, and repetition to accomplish the difficult task depends on individual personal characteristics, it does not increase or decrease in a moment's time and is formed through continuous and repetitive process (Jackson 1974). People with formed high need for achievement (High NFA) prefer an environment where they are responsible for problem solving and prefer to set moderately difficult goals and to take risks within a calculated range. Self-regulating the level of goal attainment and desiring applicable feedback are key characteristics found in those with a high NFA (McClelland 1961). On the reverse side, people with a low need for achievement (Low NFA) prefers easily attainable goals and has a propensity to evade tasks difficult to achieve and take responsibility for. Tasks to attain certain goals are self-implemented and the regulation or management of these tasks are avoided. A key characteristic of those with a low NFA is if they feel the task is too difficult to

achieve from the beginning, they give up on goal attainment before they start. However, there have been past studies with conflicting information on the need for achievement and self-set goal difficulty. Matsui et al.(1982) and Yukl & Latham (1978) suggests that the difficulty of goal attainment increases with the higher NFA, while Roberson-Bennet(1983) claims that people with a high NFA do not necessarily create goals difficult to attain.

Following the main focus of the study aforementioned, if people with a higher need for achievement do not necessarily have a need to set un-realistic goals, then the characteristics of people with a low need for achievement can also be found in those with a high NFA. As such, people with a high NFA may have a tendency to avoid difficult challenges that are outside of their skill sets and may prefer to undertake goals that are attainable by their existing skill sets and limitations. Therefore, I predict that by changing the task found to be difficult for those with a high NFA into an easier one will alter the chances of trying to achieve the goal. When following the previously mentioned goal theory, dividing the same goal by hierarchy or steps allows for people to feel it is relatively easy to achieve and will recognize the ease of goal attainment and therefore will increase the chances of trying to attain the goal. Tu & Soman (2014) states no matter what task is undertaken, the chances of it being completed will only increase by simply starting, so it is important to try and lead one to this action.

On the other hand, this process may not cognitively stimulate those with a low need for achievement. Even through cognitive manipulation, their motivation is low when taking action or making plans to attain their objective and even more,

they tend to avoid the situation all together. In this case, I propose there will be no influence through categorization and although there might be a slight visible difference, it will not be statistically significant. Therefore, the second hypothesis is as follows.

**Hypothesis 2.** The chances of joining due to the visual categorization of the frequency program will be determined by the individual need for achievement.

**Hypothesis 2a.** For consumers with a high need for achievement, the chances of joining into the frequency program will be increased when presented with a visually categorized frequency program (as opposed to a visually presented frequency program that is not categorized)

**Hypothesis 2b.** For consumers with a low need for achievement, there will be no difference in joining when presented with either the visually categorized or non-categorized frequency program.

## **4. Perceived Easiness of Goal Attainment**

What are the specific differences to the meaning of “perceived” and “expected” as well “virtual” and “actual?” Expected (or perceived) effort and the effort to attain a degree of rationality is not measured (Dreze & Hoch 1998; Hsee 2000; Soman 1998) but refers to the given situation, predictions based on the environment and the degree of imagination. A study by Kivetz & Simonson (2002)

states that perceived effort does not exist unless brought in from somewhere specific; the discomfort of going to a specific place to purchase a specific item to complete a specific frequency program is the definition of perceived effort. The definition also includes the concept of opportunity cost and the concept of inefficiency for consumers to go to a specific place to purchase the specific item (Blattberg & Neslin 1990). Realistically, people do not take action or make decisions wholly influenced by their committed physical quantity, but also by the surrounding situation and social cues.

By changing awareness, can it truly influence preferences, actions, and decision-making? According to Kivetz & Simonson (2002), when consumers complete a frequency program card and expect a reward, the consumer prefers a more luxurious reward (compared to a utilitarian preference) according to the amount of effort made to receive the reward. Soman & Shi (2003) shows that consumers have a tendency to choose against services that they predict will enact needless processes between services, when in actuality, it is the same amount of idle time spent. In a study by Fishbach & Dhar (2005), people on a diet who were presented with a changed unit of measure for the amount of weight to be lost, recognized their degree of process to achieve their weight goals differently than in reality. It was proven that when these people's weight-loss goal was scaled closer to the actual goal amount, the more they acted against their diet by eating sweets. Just through expectation and recognition, future decision-making was influenced. In addition, Zhao et al. (2012) did a study where people were made to wait in a waiting aisle to withdraw money. This waiting aisle was a created system where people

were visually sectioned off and therefore changed the mind-set of people waiting in line; they acknowledged and accepted the wait time because it will be their turn soon. This shortened the perceived wait time and fulfilled the feeling of task completion. On the one hand, whether one engages in an easy argument or argues forcefully (Wicklund et al. 1967), the change in attitude towards the argument shows (attitudes change more positively when one argues more with ease) that in truth the effort to the argument or the situation does not change, but the person's recognized demeanor is felt and is considered more important. Then how can we simplify the process of recognizing the chances of goal attainment through categorization?

According to goal theory, goal structure is a set of related goals and depending on how the formation of the goals are structured, the chances of accomplishment may change (Pieters, 1993). Even when performing tasks that work towards the same goal, the differences in the construction causes differences in the goal achievement. Generally, goals are organized by hierarchy and those goals of low rank will build up to fulfill goals of high rank (Bandura 1989; Beach 1990; Carver & Scheier 1981; Emmons 1989; Vallacher & Wegner 1985). By breaking down one of these goals into steps and turning it into the final objective, the chances of goal achievement will increase. A study by Devezzer et al. (2014) proves that when people are tasked with a sizable goal such as environmental protection, they will most likely fail to accomplish any level tasks if they fail to accomplish the lowest level task (such as newspaper recycling). If the lower level goal's failure precedes that of the higher level goals, then the chances of ultimate or final goal

achievement will become more difficult, so it is important to accomplish lower level goals and depending on the success of these goals, it will further aid in the chances of success in the final goal.

Lower level goals are achievable naturally and subconsciously, so the next level goals are achieved by goal contagion (Aarts et al. 2004). This study explains how a person can be influenced by and follow the actions of a stranger whom have set their goals and have taken action to achieve these goals. The basis of this study is how the first step to goal achievement will contagiously spread naturally and automatically to the next goal achievement. It is this logic that explains how goals are a formation of different levels of hierarchy which allows to separate the levels in detail and also how a well-shaped goal can suggest a person to concentrate with ease on goal achievement.

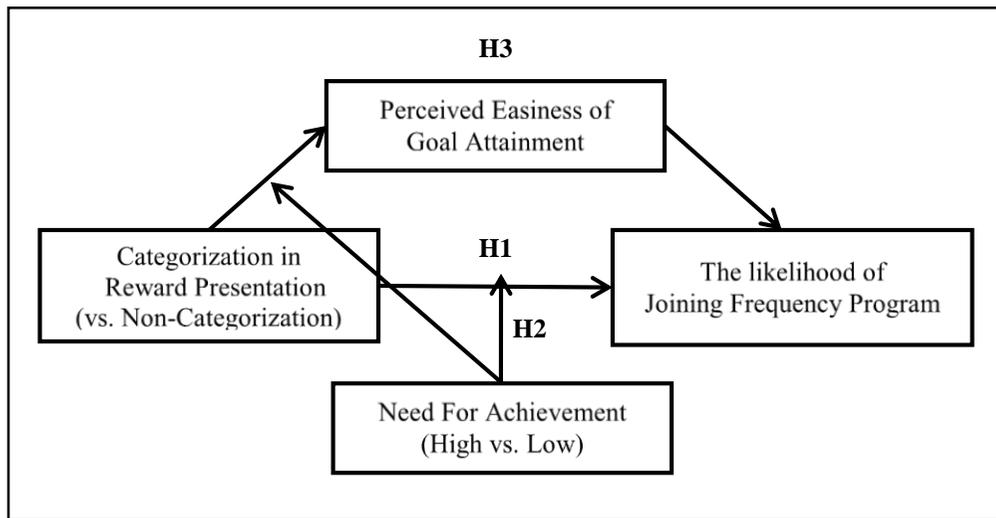
Conclusively, I predict that it is possible to successfully combine the previously-mentioned study with categorization. This is possible through visually heuristic processes, recognizing that achieving one category is the same as achieving one goal and because the final goal is presented as separately detailed levels, it makes it easier to succeed. The categorized structures are recognized as lower level goals, allowing for goal achievement easily and thereby logically increasing the chances of joining frequency programs. A twelve-slot stamp card will be separated into three categories, visually highlighting the categories as the lower level goal and by completing a row with stamps or achieving the lower level goal, the need to succeed will contagiously spread to the next level of goal achievement.

Ultimately, the accomplishment of the final goal will be easy because of the visual categorization. Using this as the basis for the third hypothesis, the study will continue as follows.

**Hypothesis 3.** Frequency programs through categorization (in comparison to frequency programs that are presented without categories) allows for consumers to recognize goal achievement easily and thereby increase the chances of joining frequency programs.

### III. Hypotheses and Overview

Based on those theoretical backgrounds, three hypotheses are developed, and the summarized theoretical framework is shown in the <Figure 1.>



<Figure 1. Framework>

1. The test of the main effect of categorization in reward presentation on the likelihood of joining frequency programs (Hypothesis 1.)
2. The test of the moderating effect of the categorization in reward presentation on the likelihood of joining frequency programs depending on the level of Need For Achievement (Hypothesis 2.)
3. The test of the mediating effect of the perceived easiness of goal attainment as an underlying mechanism (Hypothesis 3.)

## IV. Experiment

This experiment set out to investigate the main effect of categorization in reward presentation on the likelihood of joining frequency programs and the underlying mechanism between them. The potential boundary conditions will also be documented. The objective was to demonstrate whether the participants who see the categorized stamp card by different colors will increase the intention to enroll the frequency program compared to the participants who see the non-categorized one. It was expected that there would be a significant difference between participants who see either a categorized or a non-categorized stamp card. According to a theory on visual heuristics (Alter & Oppenheimer 2006; Zhong et al. 2010), when people perceive the categorized space as a separate grouping, they would increase the perceived easiness of goal attainment. That is, compared with a non-categorized stamp card, when a card is categorized with several grouping by either colors or lines etc., it would enable people to attain their goals much easier. This is because people usually perceive the space as a section, not by individual objects, which results in recognizing the first line immediately that includes four out of twelve stamps in this experiment. In this view, how easily people perceive the goal attainment would be the most important explanatory variable to the main effect.

Moreover, it is believed that people who have a high need for achievement always set challenging goals, and aspire to accomplish difficult tasks that is beyond their abilities (Matsui et al. 1982; Yukl & Latham 1978). However, based on the

need for achievement theory (McClelland 1961), individuals high in need for achievement prefer environments where they are able to take responsibilities in settling problems , set moderately difficult goals that are neither much easier nor more difficult to achieve and take risks within calculated ranges. So, this study investigates the boundary conditions on the effect of categorization and the likelihood of joining frequency programs, especially on the need for achievement. I suggest that when participants with a high need for achievement see the categorized stamp card, they would be more likely to show the intention to join the program than participants who see the non-categorized one because the categorized stamp card enables participants to perceive it is much easier to complete all stamp cards. They also prefer moderately difficult tasks, which results in higher intentions to enroll in to the program. On the other hand, individuals with a low need for achievement not only prefer relatively easy tasks but also tend to avoid difficult work. In addition, since they do not try to adjust their goals depending on the surroundings or the degree of progress, they hardly try new or challenging things if the tasks have a low possibility of accomplishment. So it is suggested that there would be no significant difference between the categorization group and the non-categorization group within a low need for achievement condition.

After reading a scenario through their computer , all participants in this study either saw a stamp card that was categorized by different colors (experimental condition) or saw a stamp card that was not categorized (control condition). They answered all the relevant questions that measure the likelihood to join the program

as a dependent variable, perceived easiness of goal attainment as a mediator and the need for achievement as a boundary condition. The sex and age were also measured.

## **4.1 Methods and Procedures**

### **Participants and Design**

One hundred-twenty people through Amazon Mechanical Turk participated in this experiment (68 male, 52 female) in return for 50 cents. Participants were randomly assigned to a 2 between-subjects design (Categorization in reward presentation vs. Non-categorization in reward presentation). Both groups read the scenario that gave a lively description and answered relevant questions. Two participants were excluded from the analysis because their response time was 10 and 13 seconds, respectively, even though the expected duration time for the experiment was 7 minutes. Six participants were also excluded for their consistently singular responses. So, the analysis was conducted from one hundred-twelve valid data (64 male, 48 female).

### **Stimulus**

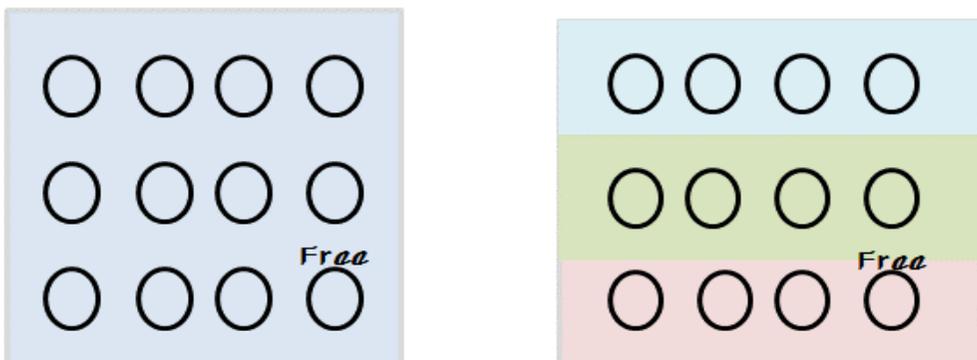
Before the different stimulus was presented, the participants were made to be immersed in the situation as if they were in it by focusing on the scenario. Although the experimenter of Tu & Soman (2014) directed participants to answer

the questions without telling the purpose of the experiment, I reasoned that there is no need to deceive the experiment's objective because this study is about the influence of stimulus itself on the change in intention to join the frequency program.

Therefore, the scenario was organized by assuming that participants were in a familiar café and the content is as follows.

*Please read the scenario below carefully imagining that you are in that situation and answer questions below honestly and truthfully.*

*One sunny day, you and your close friends visit a coffee shop to catch up on each other's lives and chat, having drinks. After finding good seats, you head for the counter where employees are standing to place your order. As you order your drinks, you were informed that the coffee shop is offering a benefit to customers by stamping a certain paper card. That is, the employee told you that you can get one stamp per drink, and you will be able to get one free drink if you complete your stamp card. As you seem to be interested in that benefit, the employee presents the stamp card to you asking "Would you like one?" And the presented stamp card is as follows.*



<Control Group>

<Experimental Group>

< Figure 2. The examples of stimuli for experimental and control group >

After reading the scenario above for about 2 minutes, participants were exposed to the two types of stamp cards according to their condition group. The non-categorized stamp card was presented to the control group, showing a stamp card designed in a single visual category, composed of 12 slots. On the other hand, the categorized stamp card was shown to the experimental group, showing a stamp card designed in three colors of separate categories, dividing the 12 slots into groups of 4. When it comes to designing stamp cards, the stimulus was adopted from Tu & Soman (2014). A pretest among 27 participants was conducted using various types of categorization, such as lines, black and white contrasts and colors, indicating that categorization by colors was the most salient to participants among them ( $N_{\text{line}}=2$ ,  $N_{\text{contrasts}}=9$ ,  $N_{\text{color}}=16$ ). The results demonstrated that the stamp card categorized by colors was the appropriate stimulus for this experiment. Furthermore, the categorized stamp card in two parts was used in the pretest, but was changed to a stamp card that was categorized into three parts in the main experiment to make the categorization more salient and visually meaningful, which was presented above.

### **Perceived Easiness of Goal Attainment**

After participants read the scenario and saw the stamp card, they were asked to rate two items ( $\alpha=0.895$ ) using a 7-point Likert Scale ("How many difficulties are you expecting to have to complete that stamp card?", "Do you think it will take much time to complete that stamp card?"; 1=not at all, 7=very much), which indicated that the more closely they rate to 1, the more easily they can

complete the program. The two items were also combined to form a single index for the next analysis. The following four items were measured for alternative explanations (see appendix), but because no meaningful results were found, it was not mentioned further in the next following analysis.

### **The Likelihood of Joining Frequency Programs**

After participants finished the underlying mechanism questions, the likelihood of joining the frequency program was measured. They rated two items ( $\alpha=0.909$ ) using also a 7-point Likert Scale ("How likely will you be to join the frequency program when the coffee shop employee presents that stamp card?"; 1=not at all, 7=very much, "Do you have any intention in joining the frequency program?", 1=definitely no, 7=definitely yes), which indicated that the more closely they rate to 7, the more likely they are to join the frequency program. The two items were also combined to form a single index in order to analyze the data.

### **Need For Achievement (NFA; N-Ach)**

At the end of the scenario questions, five items for need for achievement were measured. Since the five items were pertaining to individual characteristics, participants were asked to respond honestly about themselves. The items ( $\alpha=0.809$ ) were adopted from Need for Achievement (Loon & Casimir 2008) using a 5-point Likert scale (1=strongly disagree, 5=strongly agree) ("I work hard", "I continue working until everything is perfect", "I excel in what I do", "I plunge into tasks with

all my heart", "I am not one of those people who do just enough work to get by" reverse coding; 1=strongly disagree, 5=strongly agree). That is, it indicated that the more closely they rated to 5, the higher their need for achievement, except for the last question that was reversely coded. An average of the five questions for need for achievement was calculated to derive a single index and separated the group from the median (median = 4.0) by the participants who ranked higher than 4.0 (high NFA) and those that ranked lower than 4.0 (low NFA). The need for achievement was coded as; one, if the participants are in a low need for achievement group, and two, if the participants are in a high need for achievement group for analyzing. Finally, participants were asked to respond their demographic questions and then, were debriefed, paid and thanked.

## **4.2 Results and Discussion**

### **Main Effect**

This study used (Categorization vs. Non-Categorization) between subjects design. This analysis used independent t-test for verifying hypothesis that there would be a significant difference between categorization and non-categorization. The independent variable was a group (Categorization vs. Non-categorization) and two items for the dependent variable were combined to form a single likelihood index. Participants who saw a categorized stamp card were more likely to have an intention to join the frequency program than those who saw a no-categorized stamp card ( $M_{\text{control}}=4.66$ ,  $SD=1.62$  vs.  $M_{\text{experimental}}=5.41$ ,  $SD=1.49$ ), and this difference

was significant at 95% significance level ( $t(110) = 2.545, p < 0.05$ ). Results from this study supported hypothesis 1 that participants show a higher likelihood to join the program when they see a categorized stamp card than a non-categorized stamp card.

### **Moderating Effect of Need For Achievement**

This study used a 2 (Categorization vs. Non-Categorization) x 2 (High Need For Achievement vs. Low Need For Achievement) between subjects design. The Univariate ANOVA on participants' likelihood of joining frequency programs yielded a significant effect across conditions ( $F(1,108) = 4.592, p < 0.05$ ) and the main effect of categorization on the likelihood of joining frequency programs was still significant at the 95% significance level ( $F(1,108) = 8.478, p < 0.01$ ). While the interaction effect between presence of categorization and the level of NFA as well as the main effect of categorization were significant, there was no difference to the likelihood of joining frequency programs across NFA conditions. That is, the difference between participants who have a high NFA and the other participants who have a low NFA was not significant ( $F(1,108) = 0.002, p > 0.9, n.s.$ ). Thus, hypothesis 2 supported that the effect of categorization on the likelihood of joining frequency programs will be moderated by the level of need for achievement. So I found out that although the NFA that was used for moderating variables do not influence the likelihood itself, it can affect the likelihood with the categorization, yielding the interaction effect. The following <figure 1> is the results from the Univariate ANOVA.

### Tests of Between-Subjects Effects

Dependent Variable: Likelihood of joining frequency program

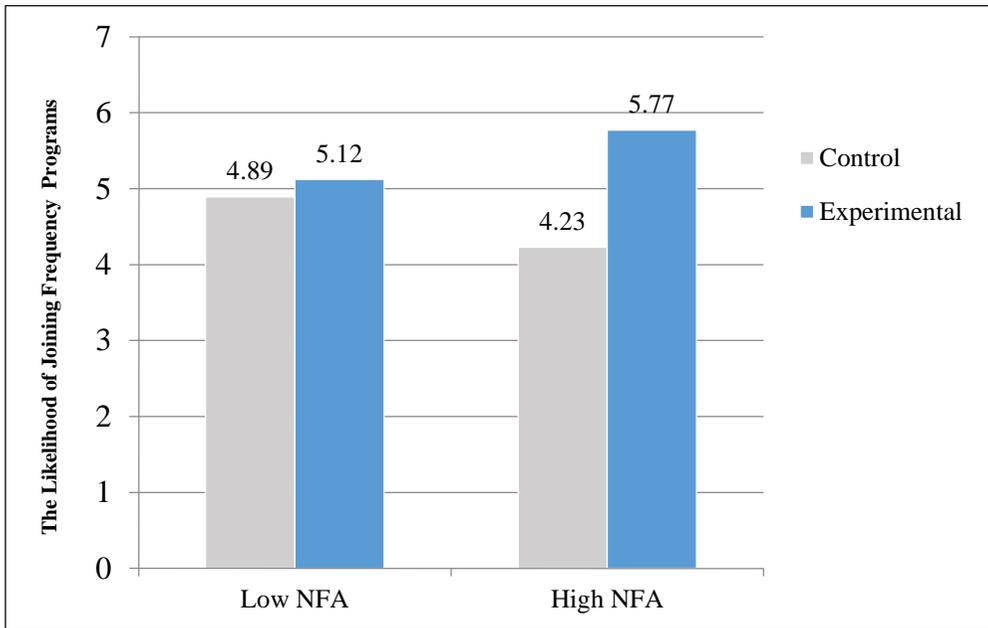
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	26.432 <sup>a</sup>	3	8.811	3.757	.013
Intercept	2699.304	1	2699.304	1151.149	.000
Cat.	19.881	1	19.881	8.478	.004
NFA	.006	1	.006	.002	.961
Cat*NFA	10.768	1	10.768	4.592	.034
Errors	253.247	108	2.345		
Total	3140.000	112			
Corrected Total	279.679	111			

< Table 1. ANOVA (IV: Categorization; MV; NFA; DV: Likelihood) >

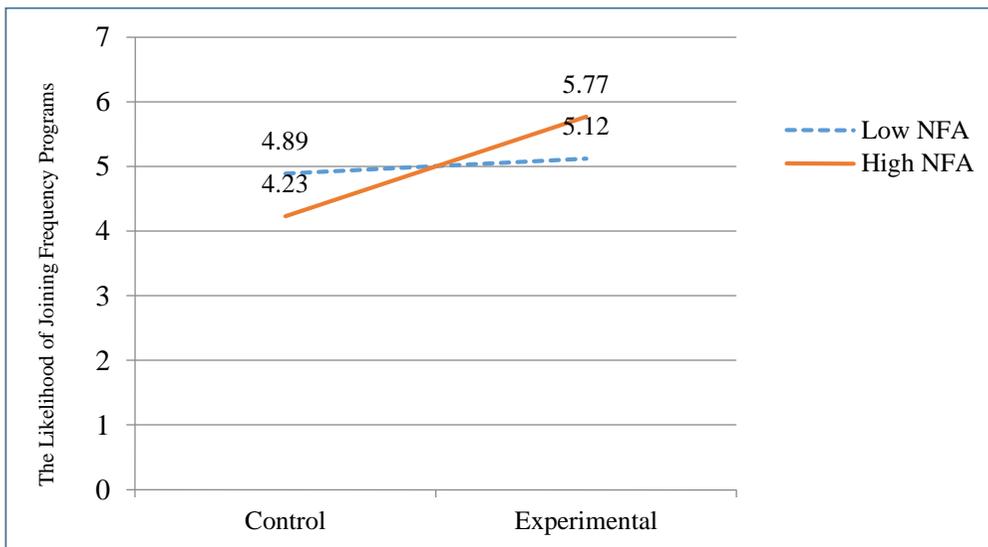
Based on the significant interaction effect, Post-Hoc analysis was conducted to find the difference amongst four groups. The four groups were recoded as group 1, 2, 3 and 4, indicating group 1(Non-Categorization, Low NFA), group 2(Non-Categorization, High NFA), group 3(Categorization, Low NFA) and group 4(Categorization, High NFA). I found out that only group 2 and 4 had a significant difference between them ( $M_2=4.28$ ,  $SD=1.64$  vs.  $M_4=5.77$ ,  $SD=1.51$ ;  $F(3,108) = 3.78$ ,  $p<0.01$ ) and no significant difference was found amongst the left groups.

Because no difference can be found between categorization and non-categorization within low need for achievement ( $M_1=4.90$ ,  $SD=1.57$  vs.  $M_3=5.12$ ,  $SD=1.44$ ;  $F(3,108) = 3.78$ ,  $p>0.9$ , n.s.), I conclude that there is a difference between groups under a high need for achievement, on the other hand no difference

under a low need for achievement. <Figure 3> and <figure 4> are as follows.



<Figure 3. The likelihood of joining frequency programs based on the need for achievement>



<Figure 4. The likelihood of joining frequency programs based on the experimental group and the control group>

SPSS PROCESS MODEL 1(Hayes 2012) was also used to confirm the interaction effect with categorization and need for achievement. From this result, it was confirmed that while there is no significant difference between categorization and no-categorization group when participants have a low need for achievement [ $\beta=0.2273$ , 95% CI (-0.5200, 0.9745)], there is a difference between the groups when participants have a high need for achievement [ $\beta=1.4942$ , 95% CI (0.5915, 2.3970)].

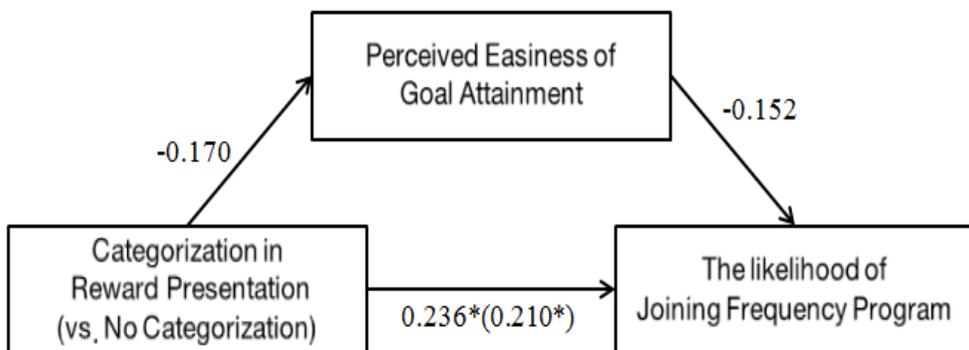
From the findings, hypothesis 2a and 2b were supported because the effect of categorization on the likelihood of joining frequency programs was moderated depending on the need for achievement for the participants. More specifically, even if participants who have a low NFA showed similar likelihood of joining frequency programs (H2a), high NFA participants were more likely to enroll the program when they saw a categorized stamp card compared to no-categorized one (H2b).

### **Mediating Effect of Perceived Easiness of Goal Attainment**

In the present study, I suggest two ways to analyze the mediation effect. One is a simple mediation that shows the relationship between categorization and the likelihood of joining the program via perceived easiness of goal attainment. The other one is a moderated mediation that presents the influence of interaction with categorization and need for achievement on the likelihood of joining the program via the mediator. So, the two methods will be conducted to demonstrate the mediating effect, and the simple mediation analysis will be shown as follows.

***Simple mediation.*** To verify the simple mediation, Baron & Kenny (1986)'s three steps method was followed using regression. First, I regressed the perceived

easiness of goal attainment on the categorization. This analysis resulted in a marginally significant effect ( $\beta=-0.170$ ,  $t(110)= -0.812$ ,  $p<0.1$ ). Second, I regressed the likelihood of joining frequency programs on the categorization, which revealed a significant effect ( $\beta=0.236$ ,  $t(110)= 2.545$ ,  $p<0.05$ ). Finally, I regressed the likelihood of joining frequency programs on the categorization and the perceived easiness of goal attainment together. The results revealed that the main effect of categorization still remained ( $\beta=0.210$ ,  $t(109) = 2.249$ ,  $p<0.05$ ) and the effect of perceived easiness of goal attainment was still marginally significant ( $\beta=-0.152$ ,  $t(109)=-1.633$ ,  $p<0.1$ ). But because the  $\beta$  was decreased from 0.236 to 0.210, it can be concluded that perceived easiness of goal attainment partially mediates the main effect. The following <figure 5> presents the process of the simple mediation according to Baron & Kenny's method.

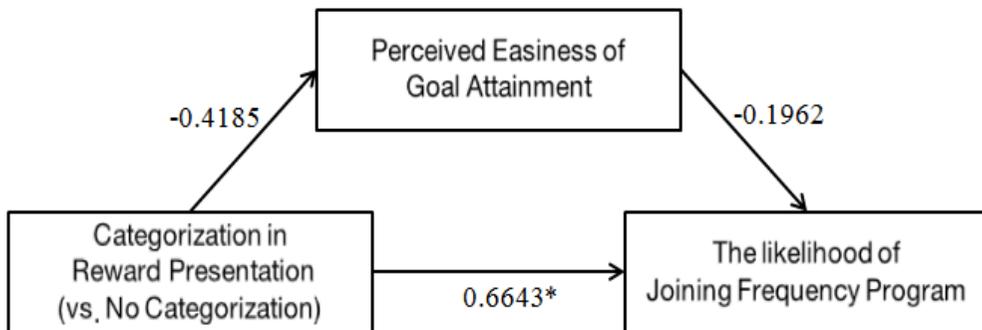


< Figure 5. Mediation analysis based on Baron & Kenny(1986)' method >

(Note. \* significant at the 0.05 level; none significant at the 0.1 level)

A bootstrapping analysis that generated a sample size of 5,000 was then conducted using SPSS PROCESS MODEL 4(Hayes 2013; Preacher, Rucker, & Hayes 2007). Although a 95% confidence interval (CI) for the direct effect was

significant and excluded zero [ $\beta=0.6643$ , 95% CI (0.0789, 1.2479)], the CI for the indirect effect included zero [ $\beta=0.0821$ , 95% CI (-0.0101, 0.3273)], which proved that the perceived easiness of goal attainment could not function as a mediator to the effect of categorization on the likelihood at the 95% significance level. According to the results of simple mediation that used Baron & Kenny (1986)'s method, the effect of categorization on the perceived easiness of goal attainment was marginally significant at the 95% significance level ( $p=0.072$ ). Based on the results, bootstrapping analysis was conducted again at the 90% significance level. At the 90% significance level, the CI for the direct effect [ $\beta=0.6643$ , 90% CI (0.1743, 1.1543)] still remained significant and excluded zero. Also, the CI for the indirect effect [ $\beta=0.0821$ , 90% CI(0.0028, 0.2798)] was significant and excluded zero, which proved the partial mediation effect is evident at the 90% significance level and <figure 6> is as follows.



< Figure 6. Mediation analysis based on Hayes (2012)' method >

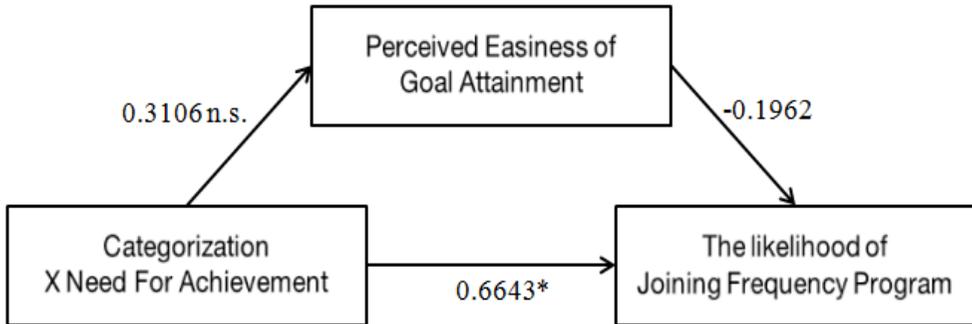
(Note. \* significant at the 0.05 level; none significant at the 0.1 level)

Therefore, it is concluded that the perceived easiness of goal attainment partially mediates the effect of categorization in reward presentation on the likelihood of joining frequency programs at the 90% significance level, which supported proposed hypothesis 3.

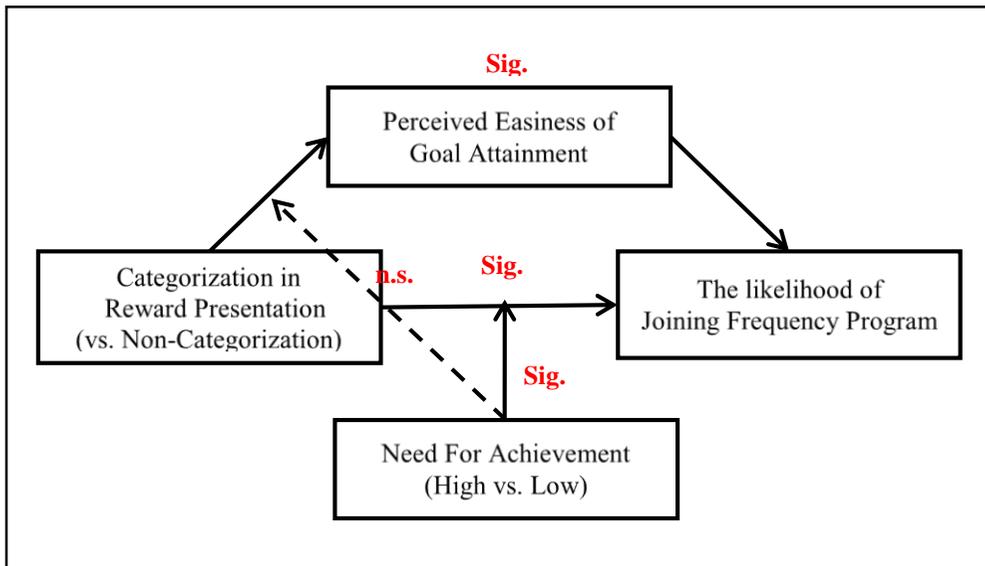
***Moderated mediation.*** To demonstrate moderated mediation, a bootstrapping analysis that generated a sample size of 5,000 was conducted using the SPSS PROCESS MODEL 7 (Hayes 2013; Preacher, Rucker, & Hayes 2007), which indicated the results at the 95% significance level was not significant because the CI for the indirect effect included zero [ $\beta = -0.0610$ , 95% CI (-0.3390, 0.0525)]. The outcomes of moderated mediation showed that a more powerful mediator might exist in case of interacting the categorization and NFA, so the issues on alternative explanation will be discussed in the next section.

Even if the overall moderated mediation was not meaningful, close inspection of results in part indicated that while at the 90% significance level, there was no significant difference in a low NFA group [ $\beta = 0.0491$ , 90% CI (-0.0364, 0.2977)], but significant difference were found in a high NFA group [ $\beta = 0.1100$ , 90% CI (0.0055, 0.3506)]. These results showed that when participants have a high NFA, the perceived easiness of goal attainment can be acted as an underlying mechanism between the categorization and the likelihood of enjoying frequency programs. However, the perceived easiness of goal attainment cannot be used as a mediator when the participants are under low NFA conditions, suggesting another alternative

explanation. As a result, although the simple mediation was significant, the moderated mediation was not significant (See fig.7), which proved that hypothesis 3 was partially supported.



< Figure 7. Moderated mediation analysis based on Hayes (2012)' method >



(Note. \* significant at the 0.05 level; none significant at the 0.1 level)

< Figure 8. Overall theoretical framework based on the significance of results >

In conclusion, while the propositions for hypothesis 1, 2 were supported, hypothesis 3 was supported in part, since the simple mediation was demonstrated but the moderated mediation was not.

## **V. General Discussion**

### **1. Summary**

Making consumers patronize and visit frequently is the most important factor in turning a profit and continuing everyday business. In this situation, it goes without saying that inducements or drivers of any actions should be offered to potential purchasers. In this research, one experiment was conducted to see if consumers are influenced from categorized stimulus and if so, how this happens. In addition, it is suggested that there would be boundary conditions that moderate the effect of categorization on the likelihood of joining the frequency program. I explored whether the intention to join the program depends on the existence or non-existence of categorization (hypothesis 1). In the study, while the non-categorized stamp card was shown to some participants who were in a control group, the categorized stamp card was shown to the other participants who were in a experimental group by highlighting the sections using different colors. The results of the experiment showed that participants were more likely to show the intention to join the frequency program when the stamp card was categorized by sections than the stamp card that was not categorized. Further, the evidence of the proposed mechanism was provided (hypothesis 2). The study measured the impact of the categorization in reward presentation on the perceived easiness of goal attainment and demonstrated that the stamp card categorized by colors was viewed with a high perceived easiness of goal attainment than with non-categorized stamp cards. The

study also measured the impact of categorization in reward presentation on the likelihood of joining the frequency program and showed that among participants with a low need for achievement, there was no meaningful difference in the way the stamp card was presented, but there was a significant difference between the categorization group and non-categorization group. Taken together, the results of the study provide support to the model (except for moderated mediation) depicted in <figure 8>. The findings contribute to previous research and open up new avenues for future research in various domains.

## **2. Theoretical Contributions and Practical Implications**

This study significantly contributes to the extant literature. Specifically, although the researches on loyalty or frequency programs are well recognized (Kopalle & Neslin 2003; Simonson & Kivetz 2002), little is known about how consumers increase their first intention to join the program depending on the presentation, regardless of the degree of efforts to make or the types of rewards. In this study, categorization in reward presentation was identified as one of the factors. That is, how the stamp card was constructed could trigger their initial intention to join the program. By merely categorizing the stamp card (rather than non-categorizing), the likelihood of joining the frequency program could be increased. Therefore, based on the previous studies that demonstrated how categorization can affect the initial behaviors and cognitive information processing (Allport 1954;

Brewer 1988; Cohen & Basu 1987; Devine 1989; Fiske & Neuberg 1990; Tu & Soman 2014), three hypotheses were verified and the implications are as follows.

First, the current research extends the understanding of categorization by facilitating cognitive information processing through visual heuristics. In the field of psychology and marketing, a substantial number of researches on categorization have been conducted, most of them focusing on perceived variety (Hoch et al. 1999; Kahn & Wansink 2004; Young & Wasserman 2001). That is, it has been known that the categorization leads to perceived variety; the increased or decreased perceived variety triggers changes in their behaviors. For example, when a pack of yogurt with various flavors was on display, the perceived variety increased total sales by 23%, compared to displaying a pack of yogurt with just one flavor (Rolls et al. 1981). However, this research posits that categorization can also make consumers perceive the categorized sections as a low-ranked goal that will help them see their stamp card as an easy task to complete. Thus, by making the goal attainment much easier, consumers are willing to join the frequency program, even though they may not know the kind of reward for redemption.

Second, it was demonstrated through experiment that for people with a high need for achievement, the NFA is not always high regardless of the situation. In other words, because people with a high need for achievement prefer moderately difficult tasks they can actually accomplish rather than extremely hard tasks that are beyond their ability, then consumers will be more likely to initiate the tasks if marketers make the process easier. More surprisingly, it was verified that initiating

the task early could also facilitate task completion (Tu & Soman 2014). Therefore, it is important to initiate the tasks (in this research, it is the enrollment of the frequency program), implying the completion of the ultimate goal.

### **3. Limitations and Future Research**

Although the findings are meaningful, there are several limitations to the research. First, this study demonstrated that the effect of categorization on the likelihood of joining frequency programs is significantly different across the need for achievement conditions. But, the perceived easiness of goal attainment, which was postulated as an underlying mechanism, could not account towards the likelihood of joining the program in conjunction with categorization and need for achievement, which suggests there would be more explanatory variables. After careful analysis of the results, it was found that those with a high NFA were affected by the perceived easiness of goal attainment and those identified with a low NFA were not affected by the perceived easiness of goal attainment. Although the theoretical framework makes no prediction on the variables, the coupon proneness, for example, could be a reasonable underlying mechanism in case of the low need for achievement condition. For people with a low need for achievement, the intention to initiate hard tasks is relatively shallow compared to the people with a high need for achievement and it is important to motivate those with a low NFA to start hard tasks as soon as possible through external influences. Thus, in the case of people with a low need for achievement, coupon proneness may be one of the

explanatory variables.

Second, the questions on the perceived easiness of goal attainment were measured indirectly. That is, in this study, the questions did not include terms related to goal or goal attainment, which I thought consequently could not account for the moderated mediation. If the questions had been measured through direct questions on goal attainment, meaningful results would have followed. However, the motive of the experiment should not be exposed to the participant, so it is needed to make more elaborate questions asked still indirectly for the next research.

Third, the design of stimulus should be intricately and deeply considered. In preparation for the main experiment, the pretest was first conducted to confirm the effective categorization design for the main experiment and the results of the pretest indicated that not only colors but also the number of slots and stages can influence the intention to join the program. But, because there were no other study examples to base the design as the most effective construction, it was difficult to come up with the final construct of the presented stimulus. Therefore, the effective designs for categorization should be considered for more noteworthy results.

Fourth, to increase the chances of enrollment is one thing, and to increase brand loyalty may be another matter. Research on purchase intention have a limitation on whether the intention to purchase can lead to the actual purchase or not. In reality, marketers are questioning whether purchase intention can bring profits to companies. In this case, it is more important to push the consumers to complete the stamp card than simply just enroll. That is, although it was verified that initiating the task early could also facilitate task completion (Tu & Soman

2014), the chances of completion cannot be confirmed. But, because for those consumers already enrolled in the frequency programs, accomplishing the task is another matter (Atkinson 1957; Nicholls 1989; Kivetz & Simonson 2002; Wiltermuth & Gino 2012), I think the matter is needed to be documented in another research.

Last but not least, there would be a culture difference. The experimental scenario was postulated to fit in Korean culture, but because the participants were all Americans, stamp cards may not be recognized to the same degree. For example, the frequency program for Starbucks called 'e-frequency' is a culture-specific program that is currently used only in Korea. Based on this, the influence of frequency programs in Korea can be very high compared with other countries. Therefore, it would be interesting to see if there is a cultural difference between Korea and America in the perspective of frequency programs.

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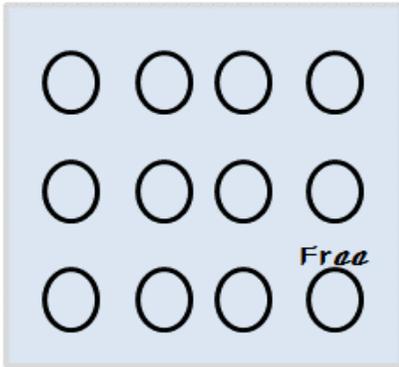
## Appendix

You are invited to participate in this online survey. This is a research project being conducted by Yeonju Jeon, a graduate student at Seoul National University. This should take approximately 7 minutes to complete. Your survey answers will be sent to a link at Qualtrics.com where data will be stored in a password protected electronic format. Qualtrics does not collect identifying information such as your name or email address. Therefore, your responses will remain anonymous. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study. If you have questions at any time about the study or the procedures, you may contact me via email at [passyeonju@snu.ac.kr](mailto:passyeonju@snu.ac.kr).

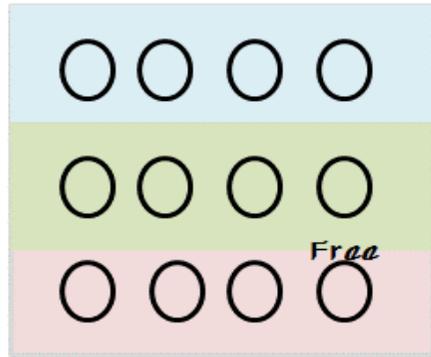
Please read the scenario below carefully imagining that you are in that situation and answer questions below honestly and truthfully.

One sunny day, you and your close friends visit a coffee shop to catch up on each other's lives and chat, having drinks. After finding good seats, you head for the counter where employees are standing to place your order. As you order your drinks, you were informed that the coffee shop is offering a benefit to customers by stamping a certain paper card. That is, the employee told you that you can get one stamp per drink, and you will be able to get one free drink if you complete your stamp card. As you seem to be interested in that benefit, the employee present the

stamp card to you asking "Would you like one?" And the presented stamp card is as follows.



<Control Group>



<Experimental Group>

1. How many difficulties are you expecting to have to complete that stamp card?

1.....2.....3.....4.....5.....6.....7  
 Not at all Very Much

2. Do you think it will take much time to complete that stamp card?

1.....2.....3.....4.....5.....6.....7  
 Not at all Very Much

3. How much effort are you expecting to exert to complete that stamp card?

1.....2.....3.....4.....5.....6.....7  
 Not at all Very Much

4. Is it effortful to complete that stamp card?

1.....2.....3.....4.....5.....6.....7  
Not at all Very Much

5. How easy is that stamp card to complete?

1.....2.....3.....4.....5.....6.....7  
Not at all Very Much

6. Is it possible to complete that stamp card without too much work?

1.....2.....3.....4.....5.....6.....7  
Not at all Very Much

7. How likely will you be to join the frequency program when the coffee shop employee presents that stamp card?

1.....2.....3.....4.....5.....6.....7  
Not at all Very Much

8. Do you have any intention in joining the frequency program?

1.....2.....3.....4.....5.....6.....7  
Not at all Very Much

Questions from this to the end of page are about your personal characteristics or dispositions. So please answer questions below honestly and check only one each question. You will not allowed to move next page if unchecked things are left.

I work hard.	1.....2.....3.....4.....5 Strongly Disagree Strongly Agree
I continue working until everything is perfect.	1.....2.....3.....4.....5 Strongly Disagree Strongly Agree
I excel in what I do.	1.....2.....3.....4.....5 Strongly Disagree Strongly Agree
I plunge into tasks with all my heart.	1.....2.....3.....4.....5 Strongly Disagree Strongly Agree
I am not one of those people who do just enough work to get by.	1.....2.....3.....4.....5 Strongly Disagree Strongly Agree

1. What is your age?

2. What is your gender?

1. Male

2. Female

## 국 문 초 록

시간, 공간, 지역, 사물 등 우리가 마주보고 겪는 이 세상의 모든 것들은 주관적 또는 사회 통념적으로 범주화 되어 인식된다. 따라서 사람들은 의식적이거나 무의식적으로 범주화된 세상을 인지하면서 살아왔으며 이것이 사람들의 행동, 의사결정, 동기부여 등에 많은 영향을 미칠 수 있다는 다양한 연구들은 흥미로운 결과들을 보여주며 범주화된 세상을 이해하는 하나의 의사소통도구로 자리잡아왔다. 하지만 그 동안의 연구는 사람들이 얼마나 빨리 범주화 된 세상을 이해하는지, 그러한 범주화가 사람들의 동기부여 행동에 어떠한 영향을 끼치는지에 대한 근본적이고 관념적인 연구들이 주류를 이루어 왔다. 따라서 본 연구는 이러한 범주화가 실제로 사람들의 인지적인 정보처리과정에 영향을 미쳐 처음에 의도했던 바와는 다른 결과를 이끌 것인지에 대해 알아보하고자 하며, 특히 그동안 연구가 거의 되어 있지 않은 시각적인 범주화를 통해 자극물을 설정함으로써 범주화의 인지적인 연구 분야에 새로운 방향성을 제시하고자 한다.

Amazon Mechanical Turk을 이용하여 실험에 참가한 112명의 실험 참가자들은 특정 시나리오를 읽고 두 집단으로 나누어져 범주화 된 스탬프 카드와 범주화되지 않은 스탬프 카드를 본 뒤 이것이 고객 보상 프로그램의 가입 가능성을 증가시키는지, 증가시킨다면 그러한 과정이 목표성취의 인지된 용이성을 통해 일어나는지, 그리고 개인들의 성취 욕구에 따라 이러한 과정들이 어떻게 달라지는지에 대해 답변하였다. 즉, 본 연구는 고객보상프로그램을 고객에게 제시할 때 범주화하여 제시한 경우에 그렇지 않은 경우보다 프로그램의 가입 가능성이 높아질 것이라는 가설 1을 실험을 통해 검증하였으며(주 효과), 이것이 사람들의 고유한 성격적 특성인 성취 욕구와의 상호작용을 통해서 달라질 것이라는 가설

2(조절 효과) 또한 검증하였다. 마지막으로 매개효과와 조절된 매개효과 검증을 통해 이러한 현상이 목표성취의 인지된 용이성이라는 경로를 통해 일어날 것이라는 가설 3을 검증하였으며 연구의 결과는 다음과 같다.

범주화 된 스탬프 카드를 본 집단이 그렇지 않은 집단보다 고객 보상프로그램의 가입가능성이 통계적으로 유의하게 높음을 통해 가설1이 지지 되었고, 성취 욕구에 따라 범주화가 고객보상프로그램에 미치는 영향이 달라짐에 따라 가설2 또한 지지되었다. 그러나 본 연구에서 예상하였던 목표성취의 인지된 용이성의 매개효과는 단순매개효과가 90% 신뢰구간에서 유의하고, 조절된 매개효과는 유의하지 않음이 밝혀짐에 따라서 가설 3은 부분적으로 지지되었음을 확인하였다.

**주요어:** 범주화, 고객보상프로그램, 성취욕구, 목표성취, 시각적 휴리스틱

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