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INTRODUCTION A BRIEF REVIEW OF CONSISTENCY MOTIVATION EXPERIMENT Experimental objective Method Results DISCUSSION

## Introduction

Does the work performance change when some kind of disturbance and/or interference<sup>1)</sup> is perceived while working? Most people would predict that the work performance decrease because of the emergence of discomfort feeling<sup>2</sup>).

One of several problems at this time is the degree of disturbance. It can be roughly divided into the behavioral level and the cognitive level. Judging from the perspective of behavioral level, the work performance would doubtless decrease if it is the one that it interrupts the progress of work. It is because work itself discontinues. While on the other hand, how the work performance changes is not understood well when judges from the cognitive level. That is because the level of disturbance is greatly judged by the cognitive level that is based on an individual subjectivity. However, it is possible to think about at least two possibilities. The first one is a prediction that any change would not be seen even if the disturbance is perceived while working. The second one is a prediction that the work performance would decrease.

The first prediction is based on organizational behavioral and social psychological perspectives supported from the previous experimental results regarding the consistency motivation hypothesis (ex. Bator and Cialdini, 2006; Cialdini, Trost, and Newsom, 1995). According to the consistency motivation hypothesis stated by Cialdini (2001) and Goldstein, Martin, and Cialdini (2008), consistent behavior shown in daily life comes to be requisite for people because it makes their behavior more rational and economical. If it follows from this hypothesis, even if the disturbance is perceived, the desire that avoids the decrease in the work performance would be continued. In other words, even if some degree of decreases is seen, the consistency motivation hypothesis suggests that a significant decrease in the work performance would not be seen<sup>3</sup>.

While on the other hand, the second prediction is the one that is mainly supported by an "empirical rule" based on general common sense. If it follows from this rule of thumb, the work performance would decrease when some kind of disturbance is perceived. The best reason is that the concentration on work becomes interrupted. The difference between work with concentration and work without it has empirically been obvious. Furthermore, it is possible to assume that the confusion caused by the disturbance would exert the negative influence on the work performance.

In this paper, I would like to examine the noise effect that some kind of disturbance while working influences on the work performance. Whether or not one unpleasant sound (cell-phone melody) for participants exerts the negative influence on the work performance is examined through an experiment, in other words. If consistency motivation hypothesis is supported, validity and reliability regarding a basic hypothesis of human attitudes<sup>4</sup> would be increased. On the other hand, if the hypothesis based on the empirical rule is supported, a general hypothesis of human attitudes would be strengthened. It is the one that contributes to strengthen one of the existing hypotheses in any way even if which result is led.

## A BRIEF REVIEW OF CONSISTENCY MOTIVATION

## Construct of consistency motivation

The first consistency motivation hypothesis is based on the accumulation of many experimental and research results in the field of organizational behavior and social psychology. It has been assumed for years that the construct of consistency is the key to understand human attitudes and desires (Cialdini, 2001), and under such a belief, early sociological theorists<sup>5</sup> developed or played a significant role in developing consistency motivation theories (Bator and Cialdini, 2006; Cialdini, 2001; Cialdini, Trost, and Newsom, 1995). For instance, a cognitive dissonance theory is one of the theories known well in the field of organizational behavior and social psychology. This theory supposes the consistency motivation as an assumption of understanding human attitude change<sup>6</sup>. Its theory maintains that people enhance their opinions of decisions after they have made them (Rosenfeld, Kennedy, and Giacalone, 1986).

Consistency motivation is often called consistency principle and it is treated synonymously of consistency principle (Goldstein, Martin, and Cialdini, 2008; Cialdini, 2001). According to Cialdini (2001), consistency motivation is a desire that embraces that the present attitude has to be consistent with

what he or she has done. Consistency motivation might be a psychological state that implies that there is subjectively no contradiction between what he or she is going to do, what he or she does, and what he or she has done, in other words.

Because most people behave on the basis of their beliefs, attitudes and opinions (Abe, 1997; Arakaki, 1975), they attempt to avoid an unpleasant state, which is mental inconsistency<sup>7</sup> (Rosenfeld *et al.*, 1986). Furthermore, there are many cases that try to justify what they have done. The previous decision tends to be justified (Cialdini, 2001; Regan and Kilduff, 1988; Younger, Walker, and Arrowood, 1977; Knox and Inkster, 1968). Chops and changes, incoherence, illogical thinking and behavior are the bipolar examples outside assumption judging from the perspective of the consistency motivation.

## Why do individuals behave consistently?

Some answers to the above-mentioned question can be chiefly shown based on the explanation of Cialdini (2001). It can explain some strengths and/or merits of the consistency motivation from the standpoints of some features such as convenience, rationality, and economy and general evaluation by others.

The consistency motivation provides the function to simplify an individual attitude. A new judgment need not be done because it is consistent with a previous one. As long as the individual follows a prior decision and act on precedents, his or her attitude is considered to be unquestionably-safe. An individual behavior that is based on the consistency motivation is convenient and economical in this sense. Attitudes that base the experience and knowledge in the past are one of appropriate examples.

Even if such a consistent attitude is wrong, the previous research reveals that individuals attempt to maintain their experience and knowledge (Goethals and Reckman, 1973; Ross and Shulman, 1973) or revise their memories of past attitudes (Olson and Cal, 1984; Ross, McFarland, Conway, and Zanna, 1983; Ross, McFarland, and Fletcher, 1981) in order to justify their decisions and actions and bring them in line with new attitudes (Cialdini, 2001; Regan and Kilduff, 1988; Younger *et al.*, 1977; Knox and Inkster, 1968). In some cases, the tendency of self-deception is reported (Cialdini, 2001; Conway and Ross, 1984). The consistency motivation has one of the attractive functions of human attitudes<sup>8</sup>.

Next, the consistent attitudes are socially-accepted and highly evaluated in many cases. Inconsistent attitudes are not preferable and not adaptative in many of daily lives (Goldstein, Martin, and Cialdini, 2008; Cialdini, 2001; Allgeier, Byrne, Brooks, and Revnes, 1979). As previously mentioned, chops and changes, incoherence, illogical thinking and behavior are examples to which most people are not preferable. That is because consistency indicates people's logic, rationality, stability, conscience, and so forth in some degree. If there is the difference of language and behavior, dramatis personae might be thought as an untruthful person or a psychopathic person. As one of research results, Allgeier, Byrne, Brooks, and Revnes (1979) reports that attitude change per se may produce negative evaluation. In one of their experiments, participants who changed their attitudes were generally evaluated more negatively than those whose attitudes remained stable. Compared with unstable and inconsistent attitudes, the consistent attitudes which are evoked by the consistency motivation have been generally or socially allowed for years<sup>9</sup>).

#### **Consistency motivation models**

The positive aspects of the consistent attitude have been referred to the previous studies so far. However, is an individual consistency motivation intense enough to affect his or her attitude? That is because the degree of consistency motivation is attributed to individual subjectivity. It is also true that there are a stickler for a certain phenomena or event and an indifferent person (don't -care) to the same phenomena. In this regard, two models of consistency motivation as a preference for consistency are adequately stated by Bator and Cialdini (2006). The first model is a *univalent* model and the second one is characterized as *bivalent*. Both models indicate a preference for consistency regarding personal consistency motivation (See **Table 1**).

The first model, a univalent model, which is the conceptual model of the early consistency theorists such as Festinger (1957), Newcomb (1953), and Heider (1946), assumes that the consistency motivation ranges from lack of a desire for consistency to a strong desire for consistency. That is because they see people as possessing some measure of a preference for consistency (Bator and Cialdini, 2006, p. 219). Furthermore, this model is briefly explained by Bator and Cialdini (2006, p. 219):

> According to the univalent model, an emphasis on the topic of consistency should have little effect on the responses of individuals scoring lowest in preference for consistency, but should have progressively greater impact on the responses of individuals with middle and high degrees of preference for consistency...

While on the other hand, the bivalent model is a psychological scale

Two models of consistency motivation				
Lacking	Moderately positive	Strongly positive		
(0)	(+)	(++)		
Strongly negative	Lacking	Strongly positive		
()	(0)	(++)		
	Lacking (0) Strongly negative	Lacking Moderately positive (0) (+) Strongly negative Lacking		

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Two models of consistency motivation

Source: Bator, Renee J. and Cialdini, Robert B. (2006). The nature of consistency motivation: consistency, aconsistency, and anticonsistency in a dissonance paradigm. *Social Influence*, 1(3), TABLE 10f p. 220.

and a conceptual model of consistency motivation that the position of the origin on the consistency scale is modified. This model does not simply extend from the univalent model (Bator and Cialdini, 2006), however. According to Bator and Cialdini (2006), unlike the univalent model, in the framework of the bivalent model, individuals with a lack of consistency motivation in the middle the dimension are located, and individuals who are strongly inclined toward or away from consistency are located on polar points (each sides) on a continuum.

The typical issue here is that which model should be employed in order to execute an experiment in this paper. That is because different implications of these models might arise. Both models would predict at least the lacking consistency motivation and positive consistency motivation; however, the position of "strongly negative (- -)" and low-scoring scale of the preference for consistency scale (PFC) might raise the different interpretations of experimental results (Bator and Cialdini, 2006). There might not be influence on this experiment even if there is such an interpretation problem as long as the consistency motivation that participants have attempt to be controlled through the appropriate instruction<sup>10</sup>. Thus, the issue that which model should be employed would be fixed in this experiment because the consistency motivation is supposed to be

located in the positive position.

## **EXPERIMENT**

## **Experimental objective**

In order to confirm whether or not some kind of disturbance while working influences the participant's work performance, one experiment was conducted on December 21, 2009. Participants<sup>11</sup> in this experiment were 124 (analysis object is 46.). If it follows the consistency motivation theory, the substantial change of the work performance would not be seen. On the other hand, the work performance would decrease if it applies to a general common opinion (an empirical rule).

## Method

#### Experimental design

A basic structural outline is seen in **Figure 1**. Doing simple work which indicates numerous errors on the eight documents is given and directed to the participants by one of four experimenters who had known this experimental objective<sup>12</sup>. Next, it is planned that all participants who belong to an experimental group unexpectedly hear unpleasant sound (noise) while working. In this context, whether or not the work performance would change significantly compared to a control group is examined.

#### FIGURE 1

А	basic	structural	outline	of	an	experimental	group
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Noise	Discomfort feeling		
	Consistency motivation		

Work performance (0 or -)

## Variables in this experiment

In this experiment, as an independent variable, a cell-phone melody is employed. The main reason is based on the preliminary survey on December 9, 2009. The survey result (n=119) indicates that a cell-phone melody while working produces the discomfort feeling for most preliminary participants (n=78, 65.546%). Its result is statistically significant  $(X^2_{(1)} = 11.504)$ .

As a dependent variable, the work performance, the accurate rate of each task is employed because each task has the different numbers of right answers. For instance, the first task has 13 errors to be found within 90 seconds; on the other hand, the second task has 10 errors. Work in this experiment is composed of eight tasks. 90 seconds to do each task which is repeated eight times are given to all participants. A few minutes break between the forth task and the fifth task is given to all participants. In analysis, a synthesis variable of the fifth task and sixth task and a synthesis variable of the seventh task and eighth task are employed because from the first task to the forth task, all conditions for participants are assumed to be same<sup>13</sup>. Also, 23 participants near the sound source have been extracted at random<sup>14</sup> and their data is employed as an analysis object.

In order to control other conditions, the directing style, room air temperature, the generation source of unpleasant sound and so forth are controlled.

## Procedure

One of four experimenters directed order to work. It is composed of eight tasks and all participants are supposed to find errors in the documents within a given time (90 seconds for each task). They are not told how many errors there are in each document.

Cell-phone melody which is supposed to make most participants feel uncomfortable was set between the fifth task and sixth task for not a control group but an experimental group. 20 seconds unpleasant sound from a cell-phone was repeated five times (20 seconds  $\times$ 5 times=100 seconds) during the fifth task and sixth task. Also, every single cell-phone melody was set by the same experimental collaborator who pretended to be one of participants. His seat position was fixed at the left of the front row toward on the platform.

After a series of eight tasks, all participants were asked to answer the questionnaire regarding self-evaluation of each task, the degree of concentration while working, state of tension, working conditions, and so forth.

## Results

A two-way analysis of variance (one-unrelated, one-related) was executed<sup>15</sup>). As a series of analytical results, the comparison between groups does not indicate any statistically significant difference ( $F_{(1, 44)}$ =0.730, n.s.). On the other hand, the comparison between the first synthesis variable (the fifth task and sixth task) and the second synthesis variable (the seventh task and eighth task) indicates the significant difference ( $F_{(1, 44)}$ =8.614, p < 0.01). Furthermore, the effect of interaction was not seen ( $F_{(1, 44)}$ =0.097, n.s.). This analytical basic statistic is seen in **Table 2**.

## DISCUSSION

Any significant influence on the work performance was not seen by the disturbance while working, several unexpected cell-phone melody,

Group		Average (SD)	
1 <sup>st</sup> Synthesis variable of	Experimental (n=23)	0.696 (0.087)	
5 <sup>th</sup> task and 6 <sup>th</sup> task	Control (n=23)	0.671 (0.083)	
2 <sup>nd</sup> Synthesis variable of	Experimental (n=23)	0.741 (0.104)	
$7^{th}$ task and $8^{th}$ task	Control (n=23)	0.726 (0.119)	
	F-statistic		
Between two groups	0.730(1,44)	n.s.	
Between two synthesis variables	8.641 <sub>(1,44)</sub>	p < 0.01	
Interaction	$0.079_{(1,44)}$	n.s.	

#### TABLE 2

Basic statistic of a two-way analysis of variance

Note: The numerical values of the table are rounded down after the decimal point in the fourth place.

which was supposed to make most participants feel uncomfortable. From the above-mentioned statistical result, the rule of thumb hypothesis is experimentally unsupported because any decrease in the work performance was not seen in this experiment. The degree of concentration which participants have might maintain; however, what did so is not understood well at this time. While on the other hand, it is clear that the consistency motivation hypothesis is partially supported. The personal consistency motivation to work in this experiment was stronger than the discomfort feeling even though each task itself is so simple.

However, according to the consistency motivation theory, the statistically significant increase in the work performance is not expected. That both the experimental group and control group indicate the statistically significant increase in the work performance is beyond the scope of the assumption, in other words. At this point, why such a phenomenon happened is not understood well. Even though the main reason might attribute to the tasks employed for this experiment, the working condition, the

magnitude of sound, or instruction method itself, the most rational reason among these might be the "learning effect" and "audience effect" because the data for analysis object was mainly employed from the latter half of the experiment. In this sense, it is impossible to negate participants' learning effect. Besides the consistency motivation theory, investigating what influences the enhancement of the work performance empirically would be the next experimental subject.

- 1) "Disturbance" is used here in a wide meaning and considered as a situation, an event, and an action by others that make it difficult for performers to do what they want to do or have to do. The concept of obstruct, interference, interruption, and so forth are included in disturbance, which mean that a variety of phenomena that have negative influences on the work performance.
- 2) The concept of "dissonance", which is stated by Festinger (1957, pp. 2-3), is not employed here because the concept "contradiction" has been included in it (Abe, 1997).
- 3) Some might argue that the responsibility to work would keep also maintaining the work performance. It might be true; however, because a micro situation is assumed here and it is discussed from the perspective of consistency motivation hypothesis, we are not concerned here with the responsibility to work.
- 4) According to Robbins and Judge (2008, pp. 15-22), attitudes are "evaluative statements either favorable or unfavorable concerning objects, people, or events. They reflect how one feels about something." Furthermore, they explain "attitudes have three components: cognition, affect, and behavior" (*ibid*, pp. 16-17). In this paper, the concept of attitudes follows Robinson and Judge's explanations.
- 5) Bator and Cialdini (2006), Cialdini (2001), and Cialdini *et al.* (1995) introduce Heider (1946), Newcomb (1953), Festinger (1957), and others as the great early theorists of the discipline of consistency motivation.
- 6) See Festinger, Leon A. (1957). *A theory of cognitive dissonance*, Stanford University Press.
- 7) It has been assumed as a univalent model of a consistency motivation that

there is a consistency motivation which ranges from a lack of a desire for consistency to a strong desire for it (See Bator and Cialdini, 2006, pp. 219-221).

- 8) Cialdini (2001) also points out some negative aspects of consistency motivation. That an obvious mistake is justified is one of the negative results of the consistent attitude and behavior.
- 9) From November to December in 2009, one private university students in Tokyo (n=130) and one public university students in Yokohama (n=46) were asked to describe the image of "consistency" within one sentence which is a fill-in-the-blank sentence as follows. RR was 96.045% (n=170).

# A person who shows his or her consistent attitude and behavior is ( ).

Analytical result indicates that 98.235% (n=167) think the consistent attitude and behavior is positive and preferable. For instance, the words such as reliance, trust, earnestness, honesty, responsibility, and so forth are mentioned as a synonym of consistency. In sum, most people believe that consistent attitude and behavior is relatively evaluated.

- 10) As will become apparent below, the typical discomfort feeling that most participants do not like was searched through the preliminary survey. Most survey objects are participants in this experiment. However, Cialdini, Trost, and Newsom (1995) state that the consistency motivation that fuels dissonance is not always or equally active in the population.
- 11) They are undergraduate students who go to a private university in Tokyo (n= 124). Male participants were 75 people (60.483%), and Female participants were 49 people (39.516%). Participants average age is 20.69 (SD=1.083). About other basic information, see Table A.

The custe information of participants			
	Group		
	Experimental	Control	Total
Male	51	24	75
Female	31	31	49
Total	82	42	n=124

TABLE A				
The basic	information	of participants		

12) In this experiment, four experimenters (instructors) knew the experimental

objective; therefore, this experiment is not a double blind method.

13) The confirmatory result (t-test) reveals that there are no significant difference between an experimental group (n=82) and control group (n=42) from the first task to forth task. Each analytical result is seen in Table B.

The work performance differences			
Task	t-value (degree of freedom)	p-value	
1 <sup>st</sup> task	0.311 (122)	n.s.	
2 <sup>nd</sup> task	0.931 (122)	n.s.	
3 <sup>rd</sup> task	0.829 (122)	n.s.	
4 <sup>th</sup> task	1.386 (122)	n.s.	

TABLE B

- 14) A random sampling procedure was executed as follows. First, participants near the sound source was selected (experimental group, n=54, control group, n =24). Next, the quasi-random number for each group was made by using the RAND function of Microsoft Office Excel 2007. Those numbers were ranked by employing the RANK function of that software. Finally, 23 participants from each group were selected.
- 15) SPSS 16.0 Japanese and Microsoft Office Excel 2007 were employed to execute a series of analyses.

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