Chapter #6

MEASURING PERSONAL ATTITUDES TOWARD SOCIAL NORMS
Development of the Descriptive/Injunctive Norm Preference Scale (DINPS)

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ABSTRACT

The development of the *Descriptive/Injunctive Norm Preference Scale* (*DINPS*), measured individual differences in personal attitudes toward social norms, was reported. Cialdini, Kallgren, and Reno (1991) distinguished social norms into two types. Descriptive norm is what behavior most people engage in a particular situation, which is reflected in perceived typicality. Injunctive norm is what people approve/disapprove. A 90-item pilot scale inquired personal attitudes toward descriptive/injunctive norms was adopted to a research panel consisted of 400 Japanese adults. An exploratory factor analysis extracted 3 factors out of selected 55 items; F1: Apprehension of deviance from descriptive norms, F2: Regard for injunctive norms, and F3: Aversion to injunctive norms. The main study tried to replicate the factor-structure, and to examine the content validity of the scale, with an anew research panel of 400 Japanese adults. A confirmatory factor analysis indicated the goodness of fit to be fair to the 3-factor model. The 3 subscales were highly reliable (αs>.85), and significantly correlated to the *need for uniqueness scale* (Snyder & Fromkin, 1977), the *F-scale* (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1951), and the *individual and social orientedness scale* (Ito, 1993) as a priori hypothesized. These results provided some evidence for the validity and usability of the *DINPS*.

Keywords: injunctive and descriptive norms, scale development, factorial validity, content validity.

1. INTRODUCTION

1.1. Background

Social norms can be defined as common beliefs about behavioral standards that are considered socially acceptable or appropriate in a given situation. In spite of some criticism, a lot of psychologists regarded social norms as an important concept in explaining human social behaviors (e.g. Berkowitz, 1972; Deutsch & Gerard, 1955; Fishbein & Ajzen, 1975; McKirnan, 1980; Pepitone, 1976; Sherif, 1936; Staub, 1972; Triandis, 1977). A lot of studies provided evidence that social norms can affect on actual behaviors, such as looking up at the sky, littering in public places, consuming behaviors (Bickman, 1972; Milgram, Bickman, & Berkowitz, 1969; Venkatesn, 1966).

Some sociologists and social psychologists, however, criticized from the viewpoint of the equivocality which complicated its operational definition and empirical testing (Darley & Latane, 1970; Garfinkel, 1967; Krebs, 1970; Krebs & Miller, 1985; Marini, 1984; Mehan & Wood, 1975). Accordingly, Cialdini (1988) distinguished social norms into two types. Descriptive norm is decided by what most people do in a particular situation, which may

bring about perceived typicality. On the other hand, injunctive norm is defined by moral rules, which reflects what people approve/disapprove. In many cases, these types of norms agree with each other. People recognize thieving as vice, and most people do not engage in such a misdeed. In some cases, however, descriptive norms can conflict with injunctive norms. Although people think they should not litter in public places, rubbish on the ground may indicate that many people litter habitually. When the two types of norms are disparate, the descriptive norms have greater effects on individuals' behaviors than the injunctive norms do (Cialdini, Reno, & Kallgren, 1990).

Our previous researches tried to reveal affective states when people obey/violate social norms. Sano, Kuroishi, & Erlandsson (2010 September) showed Japanese people feel calmer and have less negative affects when they follow descriptive norms. These tendencies seemed to be robust across demographic and cultural backgrounds. Exploration about genders, age-groups, and some other individual differences such as fear of success among Japanese (e.g. Kuroishi & Sano, 2013), and especially individualism-collectivism and need for uniqueness across East Asian countries (Kuroishi & Sano, 2015; Sano & Kuroishi, 2015), indicated these factors were irrelevant to the affective states. Only the within-subject examination revealed rejection sensitivity moderate the affective reactions to social norms in Japan (Kuroishi & Sano, 2017).

1.2. Objectives

This study tried to construct a scale that assess directly how people prefer to obeying/violating descriptive/injunctive norms, named the *Descriptive/Injunctive Preference Norm Scale* (*DINPS*). The first step was to explore the factor structure of the pilot version, and to select items for the main version of the *DINPS*. The second step tried to examine the factorial validity by a confirmatory factor analysis, and content validity by analyzing the correlation with other scales measuring the relevant psychological constructs.

Three scales were adopted to examine the content validity. First, the *need for uniqueness scale* was adopted, because this scale was developed by Snyder & Fromkin (1977), who looked at "deviation from group norms" from a positive perspective. Therefore, this scale can be considered to reflect a construct conceptually opposite to what *DINPS* measures. Second, the *F scale* was taken up as a scale related to the injunctive norm. The *F scale* was created by Adorno and his colleagues (see Adorno et al., 1951), and attempts to measure the potentially antidemocratic personality which has to do with the moral aspect of life. So the *F scale* can be said to be conceptually related to *DINPS*, especially to injunctive norm. Finally, the *individual and social orientedness scale* (Ito, 1993) was adopted, and this scale measures the process of orienting and adapting to others and society and the process of orienting and establishing oneself. In the process of orienting others and society, how to recognize and internalize norms plays an important role. From this point of view, it is considered that this scale conceptually overlaps with the content measured by *DINPS*.

2. METHODS

2.1. Data collection

Web questionnaire survey was applied to acquire two research panels who have registered with Neo Marketing Inc. Each panel consisted of 400 Japanese adults, which were planned to be obtained equally from four demographic groups; genders (males and females) x age-groups (aged 20-39 and 30-59). Data were collected successfully for all cells. The first sample consisted of 100 younger males (aged $M=33.7$, $SD=4.65$), 100 older males (aged $M=51.0$, $SD=5.25$), 100 younger females (aged $M=32.0$, $SD=4.63$), and 100

older females (aged *M*=47.9, *SD*=5.21). The second sample consisted of 100 younger males (aged *M*=33.4, *SD*=4.87), 100 older males (aged *M*=51.0, *SD*=5.63), 100 younger females (aged *M*=32.8, *SD*=4.92), and 100 older females (aged *M*=49.0, *SD*=5.44).

2.2. Measures

In the first survey, the pilot version of *DINPS* was applied to the respondents. The second survey included the main version of the *DINPS* and some other scales measuring the relevant psychological constructs to examine the content validity of the *DINPS*.

2.2.1. *DINPS*

In the first survey, 90 items were generated de novo for the pilot version of the *DINPS*, conceptually originated from the Cialdini's theory of social norms. Each of the items referred to cognition, emotion, or behavior along with when people obey or violate descriptive/injunctive norms. According to the exploratory factor analysis from the first survey data, 55 items were selected for the following study. The main version of 55 items was used in the second survey to examine the factorial and content validity of the scale. The *DINPS* asked the respondents to read the statements about descriptive/injunctive norms carefully, and decide how they agree to the opinion expressed in each item on 5-point rating, from "strongly disagree" (1) to "strongly agree" (5). The items were arranged randomly and displayed to each respondent.

2.2.2. Other Relevant Scales

In the second survey, three other scales which assess the relevant psychological constructs were included. 1) The *need for uniqueness scale* (Snyder & Fromkin, 1977, 1980); 32 items. 2) The *F scale* (Adorno et al., 1951); 29 items which composed 9 subscales as "conventionalism", "authoritarian submission", "authoritarian aggression", "anti-intraception", "superstition and stereotypy", "power and toughness", "destructiveness and cynicism", "projectivity", and "sex". 3) The *individual and social orientedness scale* (Ito, 1993); 30 items which measured two aspects of social orientedness (positive/negative) and individual orientedness (positive/negative). Respondents completed all of the three scales in the second survey.

2.3. Procedure

Participants were invited to participate in this study by the Neo Marketing Inc. They were guided to access to the website, and completed the questionnaire with agreement with providing their data for this study. Therefore, this study engaged no conflict with ethical issues.

3. RESULTS

For the first data set, an exploratory factor analysis by maximum likelihood extraction with a varimax rotation was conducted. Three-factor solution was adopted according to the scree plot. In consideration of a simple structure of the scale as a whole (i.e. the factor loadings on a principal factor were greater than .45, and on other factors were less than .30) and internal consistency of each factor, items were selected for a subsequent analysis. Subsequently, an exploratory factor analysis by maximum likelihood extraction with a promax rotation was conducted on the 41 selected items of the scale.

The results indicated 3-factor structure as assumed. The extracted factors were interpreted and named as follows. F1: Apprehension of deviance from descriptive norms (e.g. "I am worried about whether I behave differently from the surrounding people."), F2: Regard for injunctive norms ("Rules are important for everyone to live comfortably."), and F3: Aversion to injunctive norms ("Traditions and customs are stuffy."). The inter-factor correlation coefficients were $r_{F1\text{-}F2}=.36$, $r_{F2\text{-}F3}=.08$, and $r_{F3\text{-}F1}=.08$, respectively. These results suggested approximately simple structure of the scale. The Cronbach's α coefficients of the nisi subscales were $\alpha_{F1}=.96$, $\alpha_{F2}=.92$, and $\alpha_{F3}=.86$ respectively, which indicated substantially high reliability.

Subsequently, an exploratory factor analysis by maximum likelihood extraction with a promax rotation was conducted for the second data set. Three-factor solution was adopted according to the pilot analysis. All the items loaded the most on the expected factor. The factor structure of the pilot data was replicated by the current data.

Mainly, a confirmatory factor analysis indicated the goodness of fit to be fair to the 3-factor model which was hypothesized from the pilot study (RMR=.070; RMSEA=.068, 90%CI [.065, .070]). The factors were interpreted in the same way as the pilot analysis; F1: Apprehension of deviance from descriptive norms, F2: Regard for injunctive norms, and F3: Aversion to injunctive norms (see Table 1).

Table 1.
Standardized factor loadings estimated by confirmatory factor analysis.

Item Details	F1	F2	F3
I want to do the same with everyone.	.789		
It is embarrassing unless I do the same behavior as the surroundings.	.731		
I am worried about whether I behave differently from the surrounding people.	.718		
I'd like to do the same thing as everyone.	.727		
I want to do the same by looking at the behavior of people around me.	.798		
I am careful not to get out of what everyone is doing.	.724		
I am worried that I am not doing the same thing as everyone else.	.734		
I am relieved that I am doing the same as the surrounding people.	.753		
I want to adopt what many people do.	.762		
I am too embarrassed to behave in the different way from others.	.680		
I am concerned about being out of touch with other people.	.774		
I feel nervous when I am different from other people.	.715		
I act like people around me before I know it.	.761		
It is better to tailor to the behavior many people do.	.735		
I am okay when I follow the things people do.	.736		
I cannot stop looking at what everybody is doing.	.644		
I feel quite safe when keeping the same behavior as other people.	.741		
I often behave like the surrounding people at first.	.778		
It is safe to obey the major opinion, even though it is different from my own opinion.	.671		
It is better to do in concert with everyone.	.700		
I am concerned about the state of the surrounding people.	.721		
Apart from my opinions, it is better to behave in the same way as everyone.	.706		

I look down on those who behave differently from everyone.	.540		
I often slip my eyes attracted towards behaviors of the surrounding people.	.619		
I don't want to act out of the surroundings.	.769		
I try to keep rules and regulations.		.756	
It is better to keep rules.		.778	
Rules are important for everyone to live comfortably.		.759	
I want to act socially appropriate.		.784	
It is natural to observe rules.		.781	
It is not good to break rules.		.746	
I feel anger for those who do not follow rules.		.677	
It is not good to ignore customs and customs.		.513	
I want to make rules so that confusion will not occur.		.617	
I feel guilty when in breaking rules and regulations.		.662	
An old custom has some meaning.		.527	
There are many customs which do not fit the present era.		.406	
There are some worthless rules.		.425	
I am relieved when under rules and regulations.		.680	
I feel uneasy when I don't keep rules and regulations.		.639	
Rules and regulations are not necessary for our lives.		-.336	
I am sensitive to the rule and the regulation to protect.		.572	
I do not want to obey customs and traditions.			.719
I am not concerned about customs and traditions.			.679
Traditions and customs are stuffy.			.659
I don't want to be tied down with customs.			.614
I don't want to be bound by rules.			.560
I don't like to behave in the same way as everyone else.			.491
I don't like customs or traditions.			.718
It does not matter whether I can follow customs and traditions.			.676
I don't mind even if I break customs and traditions.			.637
I don't care about customs and traditions.			.672
I really hate rules and regulations.			.542
I feel stressed in observing rules and regulations.			.509
One should carry the opinion once he/she believe to be right, even though contrary to the public convention.			.506

Note: The original version is in Japanese, and translated in English.

The inter-factor correlation coefficients were $r_{F1-F2}=.367$, $r_{F2-F3}=-.142$, and $r_{F3-F1}=.117$, respectively. These correlations suggested a structure in which the first and the second axes were oblique and other pairs of the axes were almost orthogonal.

Most of the subscales approximately followed normal distributions. Descriptive statistics of four scales were shown in Table 2. All the subscales showed moderate averages, and there were no warries concerning ceiling or floor effects. The standard deviations were less than 1.00 on all subscales, which indicated relatively low scatter.

Table 2.
Descriptives of the four scales.

Scales	M	SD
DINPS		
a: Apprehension of deviance from descriptive (23 items; α=.96)	2.94	0.65
b: Regard for injunctive (9 items; α=.91)	3.42	0.55
c: Aversion to injunctive norms (9 items; α=.86)	2.93	0.56
Need for uniqueness scale		
d: Need for uniqueness (32 items)	2.89	0.34
F scale		
e: Conventionalism (4 items)	0.47	0.78
f: Authoritarian submission (7 items)	0.25	0.64
g: Authoritarian aggression (8 items)	0.10	0.72
h: Anti-intraception (4 items)	0.19	0.72
i: Superstition and stereotypy (6 items)	0.23	0.68
j: Power and toughness (7 items)	-0.09	0.65
k: Destructiveness and cynicism (2 items)	0.08	0.93
l: Projectivity (5 items)	-0.21	0.78
m: Sex (3 items)	-0.05	0.85
Individual and social orientedness scale		
n: Social Orientedness (positive) (9 items)	3.31	0.62
o: Social Orientedness (negative) (6 items)	3.02	0.66
p: Individual Orientedness (positive) (8 items)	3.20	0.55
q: Individual Orientedness (negative) (7 items)	2.97	0.61

Note: *DINPS*, the *need for uniqueness scale* and the *individual and social orientedness scale* were measured by 5-point Likert scale (1-5). The *F scale* used 7 point Likert scale (1-7) and transformed as follows: 1 into -3, 2 into -2, 3 into -1, 4 into 0, 5 into 1, 6 into 2, and 7 into 3. This was because, although measurement methods were from 1 to 7 due to implementation restrictions, the original scale ranged from -3 to 3. Some items of the *F scale* overlap among subscales.

Correlation analyses to examine the content validity of the *DINPS* were shown in Table 3. As expected, "apprehension of deviance from descriptive" and "regard for injunctive" were correlated negatively with "need for uniqueness" (r=-.51, p<.001 and r=-.38, p<.001, respectively), on the other hand, "aversion to injunctive norms" were correlated positively with "need for uniqueness" (r=.36, p<.001).

Table 3.
Inter-subscale correlation coefficients.

	DINPS		
	a: Apprehension of deviance from descriptive norms	b: Regard for injunctive norms	c: Aversion to injunctive norms
Need for uniqueness scale			
d: Need for uniqueness	-.51***	-.38***	.36***
F scale			
e: Conventionalism	.10	.42***	-.07
f: Authoritarian submission	.27***	.39***	.04
g: Authoritarian aggression	.21**	.25***	.13**
h: Anti-intraception	.17**	.22***	.11*
i: Superstition and stereotypy	.19***	.34***	.21***
j: Power and toughness	.23***	.07	.24***
k: Destructiveness and cynicism	.27***	.15**	.11*
l: Projectivity	.19***	-.02	.31***
m: Sex	.24***	.13**	.18***
Individual and social orientedness scale			
n: Social orientedness (positive)	.28***	.54***	-.08
o: Social orientedness (negative)	.72***	.23***	.16**
p: Individual orientedness (positive)	-.38***	.16**	.08
q: Individual orientedness (negative)	-.05	-.00	.53***

Note: $^{***}p<.001$, $^{**}p<.01$, $^{*}p<.05$

Also, "apprehension of deviance from descriptive" and "regard for injunctive" were positively correlated with "social orientedness". These results were consistent with an assumption. As "social orientedness" measured one's concern for others/society and external adjustment, it was obvious that observing or concerning for descriptive and injunctive norms fitted conceptually with "social orientedness". The *F scale* was related with injunctive norms. Specifically, "conventionalism" and "authoritarian submission" of the *F scale* were positively correlated with "regard for injunctive norms". In addition, "aversion to injunctive norms" was positively correlated with "projectivity", "Power and toughness" and "Superstition and stereotypy" ($r=.31$, $p<.001$, $r=.24$, $p<.001$, $r=.21$, $p<.001$, respectively).

4. FUTURE RESEARCH DIRECTIONS

This study examined a reliability and content validity of the *DINPS*. As results showed, the *DINPS* had high reliability and related adequately with three scales measuring the relevant psychological constructs. This study conducted only in Japan. As descriptive/injunctive norm preference is universal psychological process, and cross-cultural studies are needed in future. Although preferences for descriptive/injunctive norms are considered to be universal across cultures as noted earlier, the meaning and interpretation of those norms may differ from one culture to another. In particular, it is obvious that a culture with a large number of options in which individual freedom is respected, and a culture in which rules are to be prioritized over individual freedom have different meanings in keeping or breaking social norms.

The *DINPS* is considered possible to use practically. For example, one can distinguish between people who respond differently to descriptive/injunctive norms. In order to confirm the aptitude of the various tasks performed in the workplace, the *DINPS* can predict behaviors when a person responds in various concrete situations. There is a difference between those who are suitable for a conservative workplace that follows customary practices and those who are suitable for a workplace that requires free thinking and innovation. By using the *DINPS*, it is possible to qualify candidates and promote matches for their workplaces.

5. CONCLUSION/DISCUSSION

This study developed a scale to measure personal preferences for injunctive and descriptive norms named *DINPS*, and examined its reliability and content validity. First, the *DINPS* showed high reliability indicated by Cronbach's α coefficients of the 3 subscales.

Second, theoretical predictions were supported and content validity of the *DINPS* was found to be sufficiently high. The *DINPS* measured anxiety about deviance from descriptive norms and respect for injunctive norms. They were negatively associated with need for uniqueness and positively related with authoritarian personalities measured by the *F scale*. Both need for uniqueness and authoritarian personalities are closely connected to the *DINPS* conceptually. Also, observing or concerning for descriptive and injunctive norms fitted conceptually with the social orientedness. Although we had not achieved any prediction, "aversion to injunctive norms" was positively correlated with the negative scale of "individual orientedness". According to Ito (1993), "individual orientedness" measures an orientation to self and internal adjustment, which means putting values on one's own internal standards. And the negative scale of "individual orientedness" measured one's maladaptive state (Ito, 1993). Therefore, the aversion to the injunctive norms measured by the *DINPS* is considered to include personal values, especially with regard to maladaptational conditions.

The relationship between the *DINPS* and individual adaptation is an important topic to consider. Because the sensitivity of an individual to compliance or deviation from norms affects how well he/she adapts in the social environment. Complying with injunctive norms means following the rules of society, and observing to descriptive norms means maintaining a harmonious relationship with the people around them. Therefore, it can be said that the sensitivity to compliance and deviation from those norms functions as a monitor which reflects the state of adaptation.

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