This is to certify that the
thesis entitled

Temporal Distance and Intentions toward
Socially Desirable and Undesirable Behaviors

presented by

Soe Yoon Choi

has been accepted towards fulfillment
of the requirements for the

MA degree in Journalism

Major Professor's Signature

August 14, 2008

Date

TEMPORAL DISTANCE AND INTENTIONS TOWARD SOCIALLY DESIRABLE AND UNDESIRABLE BEHAVIORS

By

Soe Yoon Choi

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Journalism

2008

ABSTRACT

TEMPORAL DISTANCE AND INTENTIONS TOWARD
SOCIALLY DESIRABLE AND UNDESIRABLE BEHAVIORS

By

Soe Yoon Choi

Construal Level Theory posits that a decision on distant-future actions is more likely to depend on abstract than concrete features of those actions whereas a near-future decision is more likely to depend on concrete than abstract features. This study tested Construal Level Theory by proposing that people's intentions toward socially desirable behaviors (blood donation and recycling) would be greater when they expect them in the distant than near future as the desirability (abstract features of behaviors) of behaviors would look more salient in the distant future (hypothesis 1). In contrast, the intentions toward undesirable behaviors (downloading unauthorized copies of media files and littering) were hypothesized to decrease with temporal distance (hypothesis 2). The study further hypothesized that the correlation between perceived descriptive norms and intention towards socially desirable and undesirable behaviors would weaken over temporal distance (hypothesis 3). Hypothesis 1 was partially supported as intention towards blood donation increased whereas intention towards recycling did not change over time. Hypothesis 2 was not supported as intention towards downloading unauthorized copies of media files increased and intention towards littering did not change over time. Hypothesis 3 was not supported as the correlation between intention and perceived descriptive norms changed in the opposite direction to the hypothetical prediction.

TABLE OF CONTENTS

LIST OF TABLES

I. INTRODUCTION

Intention to engage in a behavior can depend on how far in the future individuals consider acting on that behavior. For behaviors such as donating blood and recycling, individuals may not intend to do them today, but may intend to do them some time in the future. From among the many factors that can affect behavioral intentions, the current study focused on the temporal distance, which refers to the time interval between the present and any time in the future when a behavior is supposed to occur. Construal Level Theory (CLT, hereafter) posits that temporal distance affects the way individuals construe a behavior and that the effect of temporal distance on the construal is reflected in behavioral choices and responses to the behavior (Trope & Liberman, 2003). Distant-future events and behaviors are represented abstractly on a high-level construal whereas near-future events and behaviors are represented with concreteness and details on a low-level construal (Trope, Liberman, & Wakslak, 2007). Depending on whether individuals predict to engage in a behavior in the very near future or distant future, the abstract or concrete aspects of each construal (i.e., high-level versus low-level construals) can influence the individuals' behavioral motivation (Trope et al., 2007).

The current study tested CLT concerning the effects of temporal distance on intentions to engage in socially desirable and undesirable behaviors. Socially desirable and undesirable behaviors are categorized into those that are accepted in society or not (Platow, 1994). In the current study, blood donation and recycling will be categorized as socially desirable behaviors, and littering and unauthorized downloading of copyrighted materials will be considered as socially undesirable behaviors. According to CLT, abstract features such as attitudes and social values (e.g., altruism, independence, freedom, and equality) are more likely to guide distant than near-future decisions, whereas near-future

decisions are more likely to depend on situational conditions (Trope & Liberman, 2003). This study hypothesizes that the farther into the future individuals plan socially desirable behaviors, their intentions to engage in those behaviors will be strengthened as the abstract aspect (i.e. social desirability) becomes more salient and the concrete aspects (i.e. situational constraints) become less prominent over temporal distance. In contrast, for socially undesirable behaviors, the intentions will be greater in the near than distant future as undesirability becomes more salient in the distant future and situational constraints that may lead individuals to engage in those behaviors become more prominent in the nearer time frame.

As another factor affecting intention to engage in behaviors over temporal distance, the current study further examines the role of perceived descriptive norms, which pertain to individuals' beliefs about the prevalence of specific behaviors. Typically, the more likely individuals are to perceive that a behavior is commonly done by many others, the more likely they are to consider the behavior as normal. The study suggests that, especially for socially undesirable behaviors, the more likely individuals consider the behaviors as popular and prevalent among others, the more likely they intend to engage in those behaviors in the near future, but the less likely they intend to engage in those behaviors in the distant future. In sum, this study will firstly test CLT by examining the changes of behavioral intentions toward socially desirable and undesirable behaviors over time. Then, the influence of descriptive norms on behavioral intentions over temporal distance will be discussed.

II. LITERATURE REVIEW

Theoretical Background: Construal Level Theory

Trope and Liberman's (2003) assumption on CLT is that temporal distance influences individual responses to future events by systematically changing the way they construe the events. Constructing an event using high-level construals involves drawing the perceived essence, gist, or summary of the given information whereas constructing an event by low-level construals involves descriptions using secondary and incidental features of events or objects (Henderson, Trope, & Carnevale, 2006). Near-future events are often constructed with low-level construals, but distant-future events are constructed with high-level construals. Because high-level construals consist of superordinate and more central features and low-level construals include subordinate and less essential features of events, near future events are described with rich details, whereas distant future events are without secondary and incidental features of events (Liberman, Sagristano, & Trope, 2002). For example, Liberman and Trope (1998) found that individuals used different construals when they described activities, such as reading science fiction or taking an exam, for either tomorrow or next year. For those engaged in the former case, reading activities were imagined as "I read a science fiction book by flipping pages." However, those describing their activities for next year said, "I will broaden my horizons by reading a science fiction book."

CLT has been applied to many studies regarding future choices, evaluations, and perceptions (Trope & Liberman, 2003), including changes in preference on main versus filler tasks (Trope & Liberman, 2000), consumers' choices of products (Trope et al., 2007), desirability for events depending on the probability of their occurrence (Todorov,

Goren, & Trope, 2007), negotiating styles (Henderson et al. 2006), and activation of different selves (Kivets & Tyler, 2007). These studies commonly reported that favorability toward future actions depended on the activities' specific characteristics (high-level construal factors or low-level construal factors) that are differently emphasized over temporal distance. For example, when examining the changes in preference on main (high-level construal factor) or filler (low-level construal factor) tasks in the future, Trope and Liberman (2000) found that the attractiveness of the combination of these tasks change based on individuals' perceptual emphasis on specific task characteristics. As a distant future task, individuals preferred the combination of interesting main and boring filler tasks whereas they preferred boring main and interesting filler tasks as a near future task. In terms of consumers' preference on products, Dhar and Kim (2007) showed that consumers were more likely to focus on abstract attributes of products, such as quality, when considering their purchase in the distant future whereas low-level, concrete, or peripheral features, such as prices were intensively considered at the time of purchase.

CLT and Behavioral Intention toward Socially Desirable and Undesirable Behaviors

Socially desirable behaviors can be characterized as acts that many people approve and that society rewards, whereas socially undesirable behaviors are those that many people disapprove of and that society sanctions and punishes (Cialdini, Kallgren, & Reno, 1991; Kallgren, Reno, & Cialdini, 2000). Social acceptance of behaviors is often determined by consensual moral codes (Bandura, 1991), and morality becomes an issue when a person's choice, when freely performed, may harm or benefit others (Jones, 1991). Satisfying social values and complying with moral rules can be accomplished by engaging in socially desirable behaviors and by not engaging in socially undesirable

behaviors. What prevents individuals from engaging in socially desirable behaviors as often as they wish (or society wishes) and what makes it difficult to refrain from socially undesirable behaviors can be situational constraints and practical concerns. For example, as socially desirable behaviors, blood donation is an act that helps others in need, and recycling is an act that contributes to the efforts to save the environment. On the other hand, as socially undesirable behaviors, unauthorized downloading of copyrighted materials (e.g., music, movies, and books) is an act that is illegal and has negative consequences to society (e.g., adverse impacts on creative efforts) and littering is an act that increases clean-up costs for society and can harm the environment. The reasons why individuals may engage in socially undesirable behaviors and may not engage in socially desirable behaviors can include, for example, "I don't have the time right now," "unauthorized downloading is easy and cheap to get the music file I want," and "there is no trash can nearby."

Based on the concept of CLT, social desirability and undesirability of behaviors can be values representing high-level construals, which become more salient for the distant than near-future behavioral decisions. On the other hand, practical concerns relevant to engaging or not engaging in those behaviors can typify low-level construals, which can be more prominent for the near than distant-future behavioral decisions. Past research testing CLT has shown relevant empirical evidence. For example, concerning moral principles, individuals were more likely to construe future activities with value-laden terms rather than value-neutral terms and are more likely to apply moral principles to distant than near-future actions (Eyal, Liberman, & Trope, 2008). Additionally, immoral behaviors in the distant future were judged more severely than those in the near

future whereas moral behaviors in the distant future were judged more positively than those in the near future (Eyal et al., 2008). The effects of temporal distance on the salience of either construal expand to individuals' perceptual domain. For example, making decisions for the distant future events was more likely to be based on idealistic views of decision makers themselves and identity benefits as "intrinsic reinforcements that support the expression of one's true self and values," whereas making decisions for the near future events was more likely to be based on their pragmatic view of themselves and instrumental benefits as "extrinsic resources or means that can be used for achieving other positive outcomes (e.g., financial rewards)" (p. 197, Kivetz & Tyler, 2007). CLT states that "temporal changes in the attractiveness of an option depend on the value associated with the high-level construal of the option (high-level value) and the value associated with the low-level construal of the option (low-level value)" and predicts that "temporal distance should increase the weight of high-level value and decrease the weight of low-level value" (Trope & Liberman, 2003, p. 407).

The prediction of CLT and previous empirical findings in support of CLT indicates that the values reflected in high-level construals (e.g., the abstract and prosocial values such as morality, altruism, benefit to others in need, and contribution to the efforts to save the environment) will be considered more positive than the values reflected in low-level construals (e.g., the concrete and practical considerations such as efficiency, materialism, and convenience) in the distant than near future. Therefore, it is expected that socially desirable and undesirable aspects of behaviors will become more prominent when individuals consider those behaviors in the distant future, whereas practical concerns, such as convenience situational constraints, may become more salient when

individuals consider those behaviors in the near future. Thus, the current study predicts that intention to engage in socially desirable behaviors will be strengthened with temporal distance and intention to engage in socially undesirable behaviors will be weakened with temporal distance.

H1: For socially desirable behaviors, intention to engage in a behavior will increase as temporal distance (i.e., the time interval between the present and any time in the future when a behavior is supposed to occur) increases.

H2: For socially undesirable behaviors, intention to engage in a behavior will decrease as the temporal distance increases.

Descriptive Norms and Behavioral Intention

Individuals' perception of the descriptive norms about a given behavior can be a relevant factor for individuals' behavioral intentions. Descriptive norms refer to what people commonly do (Cialdini et al., 1991; Kallgren et al., 2000). Individuals can vary in the extent to which they perceive a certain behavior is popular in the society. The effects of actual and perceived descriptive norms on behavioral intentions have been examined in bodies of research ranging from condom use (Blanton et al., 2001) to organ donation (Park & Smith, 2007), littering (Kallgren et al., 2000), energy conservation (Schultz et al., 2003), college students' alcohol consumption (Rimal & Real, 2003, 2005) and smoking (Castro et al., 1987). A meta-analysis showed that perceived descriptive norms explained on average 5% of the variance in various behavioral intentions even after other predictors (i.e., attitudes, subjective norms, and perceived behavioral control of theory of planned behavior) were taken into account (Rivis & Sheeran, 2003). The effects of descriptive norms on behavioral intentions and behaviors, however, can vary. For example, descriptive norms are influential only when the norms are made salient (Kallgren et al.,

2000). Perceived descriptive norms among individuals' close and important people are significantly associated with behavioral intentions when the behavior can be done by individuals alone (i.e., enrolling in a state organ donor registry) but not when the behavior involves other people (i.e., family discussion) (Park & Smith, 2007).

The current study examines individuals' perception of descriptive norms as a factor that has varying effects on behavioral intentions as the temporal distance changes. The study also considers the possibility that the effect of perceived descriptive norms on behavioral intentions can be different between socially desirable and undesirable behaviors. For behaviors in the near future, individuals' perceived prevalence of the behavior (i.e., the strength of perceived descriptive norms) can be more strongly and positively related to their intentions to engage in socially undesirable behaviors than to their intentions to engage in socially desirable behaviors. Past research on health-related behaviors provides some relevant evidence. For example, a meta-analysis (Rivis & Sheeran, 2003) showed that perceived descriptive norms had a stronger relationship with intentions for health-risk behaviors (e.g., binge drinking and drug use) than for health-promoting behaviors (e.g., healthy eating and physical exercise). It is possible that the level of influence of perceived descriptive norms would be greater for socially undesirable than desirable behaviors as a way of justifying to engage on undesirable behaviors.

For behaviors in the distant future, temporal distance may weaken the expected positive relationship between perceived descriptive norms and the intention to engage in socially undesirable behaviors. That is, for individuals with a stronger perception of descriptive norms, their intentions to engage in socially undesirable behaviors can be

weaker in the distant than near future. Individuals were more likely to base decisions for distant-future behaviors on their idealistic view of themselves and identity benefits (Kivetz & Tyler, 2007). Weaker intentions to engage in socially undesirable behaviors in the distant future can indicate individuals' stronger desire to see themselves positively. Past research has shown that perception on average individuals or the percentage of others who have certain traits or behave in certain ways is related to self-enhancement. The phenomena that individuals see themselves as better than average are robust (Alicke & Govorun, 2005; Williams & Gilovich, 2008). Americans who would say the deceptive messages overestimated the percentage of others who would also say those messages (Park & Ahn, 2007). As individuals are more likely to perceive that many others are engaging in socially undesirable behaviors, their weaker intentions to engage in socially undesirable behaviors can be a way of enhancing their idealistic self. Furthermore, individuals are more likely to see themselves as better than others in the future than in the present (Kanten & Teigen, 2008). In sum, it is expected that the relationship between individuals' perceived descriptive norms and intentions to engage in socially undesirable behaviors will be weaker when they imagine themselves to engage in the behavior in the near rather than distant future.

On the other hand, as individuals are less likely to perceive that many others engage in socially desirable behaviors, their stronger intentions toward socially desirable behaviors can be a way of enhancing their idealistic self. As a way to enhance self, people underestimate the percentage of others who also possess the behaviors and traits of high personal and social desirability (Campbell, 1986; Sedikides, Gaertner, & Toguchi, 2003). Americans who would say the honest message underestimated the percentage of others

who would also say those messages (Park & Ahn, 2007). Perceived descriptive norms may have smaller effects on intentions to engage in socially desirable behaviors. However, it is expected that the relationship between individuals' perceived descriptive norms and intentions to engage in socially desirable behaviors will be weaker when they imagine themselves toward the behavior in the distant future than in the near future.

H3: There will be differences between socially desirable and socially undesirable behaviors in the extent to which temporal distance affects the relationship between perceived descriptive norms and intentions to engage in a behavior.

III. METHOD

Overview

Participants for this study were recruited from the United States and Korea. Each participant was randomly selected to answer one of six versions of the survey. The survey was composed of questionnaires to ask intentions, descriptive norms, situational descriptive norms, evaluations for behaviors' (un)desirability, experiences with and reasons of engaging in each behavior (blood donation, recycling, downloading of unauthorized copies of media files, and littering) and demographic information.

Participants

A total of 395 participants were recruited from the United States (n = 240) and Korea (n = 155). In the United States, 97 (40.4%) men and 143 (59.6%) women completed the survey. In Korea, 71 (45.8%) men and 84 (54.2%) women completed the survey.

American participants. The participants from the United States were composed of students (92.9%) and administrative staff (7.1%) of Michigan State University. Of the

participants, 65.8% were Caucasian, 14.2% were African American, 0.4% were Native American, 6.7% were Asian American, 3.8% were Hispanic, 1.3% were Pacific Islander, 0.8% were mixed, and 5.8 % were un-identifiable. Among total participants, 7.1% were international students. The range of participants' ages was 18 to 60 years old (M = 23.35, SD = 6.45). One hundred and twenty one participants (women 56.2%) completed the questionnaires for desirable behaviors and 119 (women 63%) completed the questionnaires for undesirable behaviors.

Korean participants. All participants in Korea had the identical ethnicity. The majority of Korean participants were non-student working adults. Of the participants, 75.5% were non-student working adults employed in large Korean and international companies. The other 7.1% were employed in professional positions, 0.6% in public services, 0.6% in education, 2.6% in service sector, 1.3% in self-owned business, 0.6% in part time positions, and 9% in other professions. The range of participants' ages was 21 to 48 years old (M = 32.14, SD = 4.98). Seventy nine participants (women 60.8%) completed the questionnaires for desirable behaviors and 79 (women 47.4%) completed the questionnaires for undesirable behaviors.

Procedure

American students received extra credit or compensation ($5 per participant) in exchange of participation in the study. All Korean participants voluntarily participated without any compensation. Korean participants were contacted via the researcher's personal network and snowball sampling.

The American participants completed the questionnaires in English and Korean participants completed the questionnaires in Korean. As the survey should be equivalent in transferring the meanings of questionnaires, the original English questionnaires were

translated into Korean by a professional English-Korean translator for Korean participants.

Measurements

In both United States and Korea, about one half of the participants responded to measurement items concerning socially desirable behaviors and another half responded to measurement items concerning socially undesirable behaviors. Two behaviors were selected for each socially desirable and undesirable behavior category. Blood donation and recycling were chosen as socially desirable behaviors and unauthorized downloading of copyrighted materials and littering were chosen as socially undesirable behaviors. For littering and recycling behaviors, a brief vignette with a picture developed with MS office tool was provided before measuring participants' behavioral intentions (i.e. Imagine that on a hot summer day reaching 100F degrees, you have a job interview at a downtown building. You have arrived at the entrance of the building and want to get rid of the bottle of water you just finished. You are in a hurry and do not want to be late, but there is no trash can nearby. Instead, you see a small pile of trash (e.g. crushed cans, bottles, papers, etc) at the corner of the building, which is very close to where you are now. You also see a recycling bin quite far (about 150 feet or 0.03 mile) away from your destination.). One half of the participants indicated their intentions to litter and the other half indicated their intentions to recycle. For blood donation and unauthorized downloading of copyrighted media files, behavioral intention was measured without vignettes. Appendix shows the questionnaires. All the measures used a 7-point scale (1 = strongly disagree, 7 = strongly agree). See Appendix for all the measurement items and reliabilities.

Behavioral intentions. Behavioral intentions were measured with four items. For

example, items for measuring intention of blood donation include a statement, "I will try to make myself available for blood donation about (a week /3 months / a year) from now." Items for measuring intention of littering include a statement, "I will try to discard the bottle in the small trash pile before the interview," with a conditional sentence such as "Imagine yourself about (a week /3 months / a year) from now in the above situation."

In order to examine the effect of temporal distance on behavioral intentions, each behavioral intention item was accompanied with one of three time points (a week/3 months/a year). The designation of three time points was partly based on the common way to set temporal distance in previous CLT studies and some comments of participants who participated in the pre-test to ensure the appropriateness of the temporal distance. Although the standards for creating intervals of temporal distance were not mentioned in previous CLT studies, the temporal distance interval was set to observe the relative salience of high or low-level construals for distant or near-future judgments of activities. For example, Liberman et al. (2004) used "within a week" versus "a year later" and Liberman and Trope (1998) used "tomorrow" versus "some time next year" to stimulate each construal. It is expected that the four time points will stimulate abstract or concrete aspects for each behavior.

Descriptive norms. Individuals' perceptions of descriptive norms were measured with four questionnaire items for each behavior. For example, a statement such as "Blood donation is a common behavior that many people do" was used to measure perceived descriptive norms.

Situational descriptive norms. For measuring intentions to recycle and litter, a situation was described and provided to the participants to account for the possibility that

individuals' perception of descriptive norms in general could be different from their descriptive norms specific to the situation (i.e., perceptions of what many others would do in the described situation). Individuals' perception of situational descriptive norms for the recycling and littering vignette was measured by four questionnaire items. For example, a statement such as "When facing the above situation, many people in America throw away the bottle in the small pile of trash" was used to measure perceived descriptive norms.

Social desirability and undesirability evaluations of the behaviors. Each behavior for this study was evaluated in terms of their social desirability and undesirability. In order to verify if participants consider blood donation and recycling as socially desirable behaviors and littering and unauthorized downloading of copyrighted media files as socially undesirable behaviors, participants responded to six items for each behavior. An example item is "It is expected that participation in blood donation would enhance community welfare."

The participants considered blood donation ($M = 5.47$, $SD = 0.84$) as more socially desirable than downloading unauthorized files ($M = 3.26$, $SD = 0.92$), $t\,(393) = 24.94$, $p < .001$, $\eta^2 = .61$. Recycling ($M = 5.73$, $SD = 0.87$) was also considered as more socially desirable than downloading unauthorized files ($M = 2.41$, $SD = 0.92$), $t\,(391) = 36.74$, $p < .001$, $\eta^2 = .78$. Although Americans scored consistently higher on social desirability for each behavior than Koreans did (e.g., $M = 5.10$, $SD = 0.77$ among Koreans and $M = 5.71$, $SD = 0.80$ among Americans for blood donation; $M = 5.62$, $SD = 0.81$ among Koreans and $M = 5.81$, $SD = 0.91$ among Americans for recycling; $M = 2.91$, $SD = 0.87$ among Koreans and $M = 3.49$, $SD = 0.88$ among Americans for downloading;

$M = 2.06$, $SD = 0.79$ among Koreans and $M = 2.62$, $SD = 0.94$ among Americans for littering), there was no significant and substantial interaction effect between culture (Koreans versus Americans) and behavior type (desirable versus undesirable behaviors).

Past behavior. In order to control the potential effects of past behavior on behavioral intentions, participants were asked if they had participated in any of the behaviors examined in the study (see Appendix). An example item is, "I have participated in blood donation," with answer options of "yes" or "no." When included in any of the main analyses testing all the hypotheses, past behavior did not significantly interact with any other variables such as temporal distance, culture, and behavior types (desirable versus undesirable behaviors).

IV. RESULTS

Table 1 shows means and standard deviations for each variable and table 2 shows correlations between intentions and perceived descriptive norms over each temporal distance. Since two desirable behaviors (blood donation and recycling) were used for testing the first hypothesis, the analysis was done on each behavior separately. Similarly, two undesirable behaviors (downloading media files and littering) were used for testing the second hypothesis, the analysis was also done separately on each behavior. For testing hypothesis 3, correlation analyses were conducted to examine the relationship between perceived descriptive norms and intentions across the three different temporal points.

Hypothesis 1

Hypothesis 1 predicted that the intention toward socially desirable behaviors would increase with increases in temporal distance (i.e., the time interval between the present and any time in the future when a behavior is supposed to occur). A 3 (temporal distance: 1 week, 3 months, and 1 year) x 2 (culture: Koreans and Americans) between

subject two-way ANOVA was used to examine difference in intention to donate blood and also to examine difference in intention to litter.

Blood donation. The analysis revealed a significant main effect for temporal distance, F (2, 194) = 8.26, $p < .001$, $\eta^2 = .08$. Post hoc comparisons using Tukey's procedure ($p < .05$) revealed that people's intention to donate blood was greater after a year from now ($M = 3.51$, $SD = 1.75$) than both 3 months ($M = 2.82$, $SD = 1.58$) and a week from now ($M = 2.34$, $SD = 1.55$). However, there was not any statistically significant difference in intention between 3-month and a-week temporal distance. There was no main effect for culture, F (1, 194) = 0.76, $p = .39$, $\eta^2 = .00$; Koreans ($M = 2.79$, $SD = 1.70$) and Americans ($M = 2.97$, $SD = 1.69$) did not significantly differ in their intention to donate blood. The analysis did not reveal any significant interaction effect between temporal distance and culture, F (2, 194) = 0.70, $p = .50$, $\eta^2 = .00$. In sum, the results showed that temporal distance was a significant predictor for the increasing intention toward blood donation over time. For blood donation, the data were consistent with the first hypothesis. Particularly, the intention was significantly greater when people considered donating blood in the distant than in the near future (a week versus a year from now and 3 months versus a year from now).

Recycling. The analysis did not reveal a significant main effect for temporal distance, F (2, 193) = 0.15, $p = .86$, $\eta^2 = .00$. On the other hand, culture had a significant main effect, F (1, 193) = 47.64, $p < .001$, $\eta^2 = .20$. The analysis showed that Americans had greater intentions to recycle ($M = 4.99$, $SD = 1.49$) than Koreans did ($M = 3.49$, $SD = 1.48$). The analysis did not reveal any significant interaction effect between temporal distance and culture, F (2, 193) = 0.74, $p = .48$, $\eta^2 = .00$. The data were not consistent

with the first hypothesis in that temporal distance did not significantly influence intention to recycle.

In summary, the analysis showed that temporal distance was a significant predictor for the increase in intention to donate blood but not a predictor for intention to recycle. Cultural difference in behavioral intention was not observed in blood donation. However, for recycling, Americans showed greater intention to recycle than Koreans did.

Hypothesis 2

Hypothesis 2 predicted that intention toward socially undesirable behaviors would decrease as the temporal distance increased. A 2 (culture: Koreans and Americans) x 3 (temporal distance: 1 week, 3 months, and 1 year) between subject two-way ANOVA was used to examine the difference in intention to download unauthorized copies of media files and also to examine difference in intention to litter.

Download unauthorized copies of media files. The analysis revealed a significant main effect for temporal distance $F(2, 189) = 7.68, p < .01, \eta^2 = .07$. In the direction opposite to the hypothesis, however, the intention significantly increased with temporal distance. Post hoc comparisons using Tukey's procedure ($p<.05$) revealed that people's intention after a year from now ($M = 4.35$, $SD = 1.73$) was statistically greater than both 3 months ($M = 3.52$, $SD = 2.02$) and a week from now ($M = 3.08$, $SD = 1.78$). There was not any statistically significant difference in intentions between 3-month and a-week temporal frames.

Culture was a significant predictor for the intention to download unauthorized media files, $F(1, 189) = 6.04, p < .05, \eta^2 = .03$. The analysis showed that Americans ($M = 3.88$, $SD = 2.02$) more strongly intended to download unauthorized media files on the Internet than Koreans did ($M = 3.23$, $SD = 1.66$). The analysis did not reveal any

significant interaction effect between temporal distance and culture, F (2, 189) = 1.44, p = .24, η^2 = .01. The data were not consistent with the hypothesis in that the significant effect for temporal distance on the intention to download unauthorized copies of media files was observed differently from the hypothesis.

Littering. The analysis did not reveal a significant effect for temporal distance, F (2, 189) = 0.24, p = .79, η^2 = .00. However, there was a significant difference in intention to litter between Koreans and Americans when they faced a situation to recycle or litter a water bottle while in a hurry. The analysis showed that Koreans had greater intentions to litter (M = 4.18, SD = 1.67) than Americans did (M = 2.57, SD = 1.52), F (1, 189) = 47.37, p < .001, η^2 = .20. The analysis did not reveal any significant interaction effect between temporal distance and culture, F (2, 189) = 0.60, p = .55, η^2 = .00. The data were not consistent with the hypothesis in that temporal distance was not a significant predictor for the intention to litter over temporal distance.

In summary, the analysis showed that there was a significant effect of temporal distance on intention to download unauthorized copies of media files. However, inconsistent with the hypothesis, the intention rather increased than decreased with increasing temporal distance. For intention to litter, there was no significant difference in the intention over temporal distance. The analysis showed cultural difference in intention to download unauthorized media files and intention to litter. Americans showed greater intentions to download unauthorized media files than Koreans did, whereas Koreans had greater intentions to litter than Americans did.

Hypothesis 3

Hypothesis 3 predicted that the relationship between perceived descriptive norms and behavioral intentions would change over temporal distance and such changes would

differ for socially desirable behaviors and socially undesirable behaviors. Correlations between perceived descriptive norms and behavioral intentions were examined separately for desirable and undesirable behaviors and for each temporal time frame. For intentions to engage in blood donation (a desirable behavior), correlations were r (62) = .30, p = .02 for intention in one week, r (66) = .05, p = .69 for intention in three months, and r (66) = –.02, p = .86 for intention in one year. Although these correlations decreased over the temporal distance, Fisher's r to z transformation showed that these three correlations did not differ significantly from one another. The difference between r = .30 (intention in one week) and r = .05 (intention in three months) was z = 1.46, p = .14 (two-sided) and the difference between r = .30 (intention in one week) and r = –.02 (intention in one year) was z = 1.82, p = .07 (two-sided).

On the other hand, for intentions to download unauthorized files on the Internet (an undesirable behavior), correlations were r (66) = .29, p = .02 for intention in one week, r (64) = .58, p < .001 for intention in three months, and r (59) = .47, p < .001 for intention in one year. Fisher's r to z transformation showed that the difference between r = .29 (intention in one week) and r = .58 (intention in three months) was significant, z = 2.06 p = .04 (two-sided). But the difference between r = .29 (intention in one week) and r = .47 (intention in one year) was not significant, z = 1.21, p = .22 (two-sided).

For intention to recycle (a desirable behavior), correlations between perceived descriptive norms and intentions were r (61) = .10, p = .43 for intention in one week, r (66) = .13, p = .29 for intention in three months, and r (66) = .15, p = .20 for intention in one year. Fisher's r to z transformation showed that these three correlations did not differ significantly from one another. The difference between r = .10 (intention in one week)

and $r = .13$ (intention in three months) was $z = 0.02$, $p = .88$ (two-sided) and the difference between $r = .10$ (intention in one week) and $r = .15$ (intention in one year) was $z = 0.31$, $p = .74$ (two-sided).

Correlations between situational descriptive norms and intention to recycle were r $(61) = .37$, $p = .003$ for intention in one week, r $(66) = .54$, $p < .001$ for intention in three months, and r $(66) = .38$, $p = .001$ for intention in one year. Fisher's r to z transformation showed that these three correlations did not differ significantly from one another. The difference between $r = .37$ (intention in one week) and $r = .54$ (intention in three months) was $z = 1.26$, $p = .20$ (two-sided) and the difference between $r = .37$ (intention in one week) and $r = .38$ (intention in one year) was $z = 0.10$, $p = .91$ (two-sided).

For intention to litter (an undesirable behavior), correlations between perceived descriptive norms and intentions were r $(65) = -.12$, $p = .35$ for intention in one week, r $(64) = -.33$, $p = .008$ for intention in three months, and r $(59) = -.03$, $p = .84$ for intention in one year. Although these correlations decreased over the temporal distance, Fisher's r to z transformation showed that these three correlations did not differ significantly from one another. The difference between $r = -.12$ (intention in one week) and $r = -.33$ (intention in three months) was $z = 1.26$, $p = .21$ (two-sided) and the difference between $r = -.12$ (intention in one week) and $r = -.03$ (intention in one year) was $z = 0.49$, $p = .62$ (two-sided).

Correlations between situational descriptive norms and intention to litter were r $(66) = .26$, $p = .03$ for intention in one week, r $(64) = .16$, $p = .21$ for intention in three months, and r $(59) = .27$, $p = .03$ for intention in one year. Fisher's r to z transformation showed that these three correlations did not differ significantly from one another. The

difference between $r = .26$ (intention in one week) and $r = .16$ (intention in three months) was $z = 0.60$, $p = .54$ (two-sided) and the difference between $r = .26$ (intention in one week) and $r = .27$ (intention in one year) was $z = 0.09$, $p = .92$ (two-sided).

V. DISCUSSION

This study tested Construal Level Theory (CLT) by examining whether the intentions toward socially desirable (blood donation and recycling) and undesirable behaviors (downloading unauthorized copies of media files and littering) would change with temporal distance (hypotheses 1 and 2). The study further examined how perceived descriptive norms would influence the intentions toward each behavior over time (hypothesis 3). The hypotheses predicted that intentions toward socially desirable behaviors would increase with temporal distance and intentions toward socially undesirable behaviors would decrease with temporal distance. Additionally, with the prediction that temporal distance would moderate the relationship between perceived descriptive norms and intentions, hypothesis 3 specifically expected that perceived descriptive norms would be more strongly and negatively related to intentions toward socially undesirable behaviors over time, but less strongly related to intentions toward socially desirable behaviors.

The current findings showed partial influence of temporal distance on the intentions toward both socially desirable and undesirable behaviors. First, for blood donation (a socially desirable behavior), people showed greater intention to donate blood in the distant (a year from now) than in the near (a week or 3 months from now) future while evaluating it as socially desirable. This result supports the assumption of CLT (Trope & Liberman, 2003) since people's social value (e.g. in the current study, social desirability) is more likely a behavioral predictor in the distant rather than near future.

However, although downloading unauthorized copies of media files was considered as relatively undesirable behavior in society, people's intention to download those files increased with temporal distance. This is probably because people's intentions do not depend on the undesirability of the behavior in society. Instead, other factors such as people's positive attitudes toward Internet downloading would have influenced their intentions. For example, the analyses on past behavioral pattern and open-ended questionnaires showed that about 77.8 % of the total participants (n = 195) had an experience downloading unauthorized media files via Internet. Furthermore, among those who have downloaded unauthorized media files, about 56.3% (n = 85) said that it is a free, cheap, easy, or convenient way of obtaining those files. This implies that people may be more likely to think that downloading unauthorized media files is beneficial to themselves rather than to consider it as undesirable act to society. Trope and Liberman (2003) considered that both values and attitudes are more likely to affect distant than near-future behavioral decisions. However, it is possible that distant-future behavioral decisions may depend on either individual values or attitudes based on the type of behavior they engage in. For example, even when stereotyping is virtually against general social values, if social norms or individual values are not against it, the tendency of stereotyping would be more salient in the distant than near future (Trope and Liberman, 2003). For illegal downloading, individuals' positive attitudes toward downloading (e.g. the convenience of obtaining materials in easy and affordable ways) may have caused the increasing intentions over time. Further research would be necessary to find out whether individual or social values may be stronger predictors for the intention to download unauthorized copies of media files.

In terms of recycling and littering, intentions did not change over time for a specific situation (facing a choice between the recycling bin and a small pile of trash to throw away a bottle while in a hurry). Possible reasons for the consistent intention over temporal distance may include the common belief regarding each behavior. In other words, people would have taken recycling for granted such that temporal distance would not have any effect on the level of desirability of recycling and littering. Past behavior analysis partly supports this assumption. Ninety eight percent (n = 194) of participants had the experience of recycling and 66.8% (n = 129) had the experience of littering. In terms of recycling, the commonality of behavior may have confounded the effect of the desirability of behavior over temporal distance. Put another way, the high percentage of participation in recycling may indicate that people do not allow themselves to litter even under urgent situation (e.g. near-future time frame). Although it cannot be concluded that the high percentage of participation in recycling implies non-littering behavior, it is possible that common sense concerning littering induced socially desirable answers of participants regarding their intentions.

The analysis testing hypothesis 3 revealed minor influence of descriptive norms as moderators only for the relationship between intention toward downloading unauthorized copies of media files and temporal distance. That is, the correlation between the intention and perceived descriptive norms positively increased from one-week to 3-months temporal distance. This result is not consistent with the hypothesis as it predicted that the correlation between the intention and perceived descriptive norms toward undesirable behaviors would be weaker and negative with temporal distance. As noted earlier, this opposite direction of the effect of descriptive norms on the change in

intention over time may be caused because individual values were stronger predictors than social values concerning downloading of unauthorized copies of media files. If their intentions would have been more influenced by individual than social values, the increasing positive correlation between the intention and perceived descriptive norms over time could be partly supported by the current study's prediction. That is, as individual values may not be consistent with or possibly against the societal value, self-enhancement tendency (Kanten & Teigen, 2008) would not be prominent in the distant future.

Cultural difference was observed in the intention towards downloading unauthorized copies of media files, recycling, and littering. According to the results, Americans were more likely to download unauthorized media files and recycle than Koreans whereas Koreans were less likely to download unauthorized media files but more likely to litter than Americans. The non-significant interaction effects of culture by temporal distance, however, indicate that there were not any substantial cultural differences in the effects of temporal distance on behavioral intentions.

Even so, it is still possible that cultural difference in intentions toward these behaviors imply differing social norms between and probably within cultures (e.g. sub groups that may be divided by communities, ages, professions, etc) that may have induced confounding effects of descriptive norms on behavioral intentions. Therefore, subdivision of groups will be necessary to increase the reliability of the relationship between perceived descriptive norms and intentions over time. Although all of these behaviors were turned out to be normal among population, a crucial factor enhancing the engagement in these behaviors can be more likely to depend on close rather than others'

general behaviors. For example, diverse age groups would have different views or necessities concerning downloading unauthorized media files. Similarly, whether or not engaging in a specific behavior can also depend on different restrictions or rules of sub groups. For instance, because most American participants in this study were students and staff of a large university that accommodates recycling bins, participants may have had stronger commitment than others who do not have to recycle or have little access to recycling bins. The recycling policies in Korea have also been firmly established such that most people often recycle both at home and work places. The compliance of rules that are recommended by communities takes important roles for people to feel part of them. For instance, Rimal and Real (2005) pointed out that having a similar pattern of behaviors is a way of identifying selves within groups and people tend to resemble others to affirm their status within groups. This implies that strong commitment toward recycling may be a factor promoting it but may be a mere factor in groups without any recycling obligations. In sum, consideration on cultural diversification between groups could increase the reliability of theory testing in terms of the correlation between intentions and perceived descriptive norms in future studies.

VI. LIMITATION

The study's assumption on the desirability or undesirability of behavior as the predictor for distant-future behavioral intention was only limited to general social desirability assumptions on each behavior. For example, although people may think that downloading unauthorized copies of media files as socially undesirable, it may have been considered individually desirable. As a result, it is possible that their behavioral intention in the distant future may reflect individual rather than societal values. Additionally, the diversity in types of materials downloaded was not considered in this study. Some people

may download particular materials that are obviously against their moral values. For them, downloading could be reflected as more immoral than those who download songs and movies that are not against their morals.

In terms of recycling and littering behaviors, the study could not verify the differing level of intention over time probably due to the popularity of recycling in society and communities. People may have taken recycling for granted but may have had the intention to avoid littering, therefore answering the questionnaires more desirably than the study expected. Further studies may need to include questionnaires suggesting two options (whether a recycling bin or a small trash pile) for throwing away recyclable materials to make situational dilemma more salient in terms of moral issues. Lastly, as the composition of participants from Korea and the United States was different in terms of age or jobs (e.g. Most Korean participants were non-student working adults whereas most American participants were students.), the results may have contained cultural confounding effects.

VII. CONCLUSION

This study examined how people's intentions toward socially desirable and undesirable behaviors change whether they expect them in the near or distant future. Also, the relationship between intentions, and perceived descriptive and situational norms for these behaviors over time was analyzed. The study verified partial influence of temporal distance for a socially desirable behavior (blood donation) but neither for another desirable behavior (recycling) nor socially undesirable behaviors (downloading unauthorized copies of media files and littering). Although hypotheses were partially supported regarding the theoretical assumption of CLT, possibilities may exist for extending or modifying the theory. In particular, unlike previous studies testing CLT by

measuring moral judgment over temporal distance (Eyal, Liberman, & Trope, 2008), this study tried to verify the salience of social (un) desirability over temporal distance by measuring intentions. This approach and the findings provide practically important evidence for further research in other areas such as communication in terms of development of persuasive messages. In brief, the examination of people's changing intention on future behaviors and their relationship with social norms can be an important process to design campaigns concerning social issues and to apply timely appropriate messages based on current intentions and descriptive norms on these issues.

Table 1. Means and standard deviations (*SD*) for intention, descriptive / situational norms, and behavioral evaluation

Blood Donation	Temporal Distance	Intention	Descriptive Norms	Social Desirability Evaluation	
	1 week	2.34 (1.55)	4.10 (1.41)	5.51 (0.78)	
	3 months	2.82 (1.58)	3.93 (1.20)	5.47 (0.81)	
	1 year	3.51 (1.75)	3.90 (1.24)	5.41 (0.93)	
Recycling	Temporal Distance	Intention	Descriptive Norms	Social Desirability Evaluation	Situational Descriptive Norms
	1 week	4.46 (1.73)	4.80 (0.97)	5.72 (0.88)	3.36 (1.14)
	3 months	4.31 (1.69)	4.68 (1.11)	5.85 (0.80)	3.39 (1.30)
	1 year	4.42 (1.57)	4.51 (1.06)	5.64 (0.93)	3.27 (1.18)
Downloading	Temporal Distance	Intention	Descriptive Norms	Social Desirability Evaluation	
	1 week	3.08 (1.78)	5.72 (1.04)	3.19 (0.89)	
	3 months	3.52 (2.02)	5.57 (1.06)	3.23 (0.97)	
	1 year	4.35 (1.73)	5.83 (1.14)	3.37 (0.90)	
Littering	Temporal Distance	Intention	Descriptive Norms	Social Desirability Evaluation	Situational Descriptive Norms
	1 week	3.14 (1.77)	4.54 (1.39)	2.49 (1.01)	4.65 (1.27)
	3 months	3.22 (1.59)	4.44 (1.44)	2.38 (0.77)	4.94 (1.13)
	1 year	3.24 (1.94)	4.93 (1.27)	2.34 (0.98)	5.13 (1.12)

Note: Standard deviations are reported in parentheses.

Table 2. Correlations between intentions and descriptive / situational norms over temporal distance

	Intention				Intention		
	1 week	3 months	1 year		1 week	3 months	1 year
Blood Donation				*Downloading*			
DN	.30* (df=62)	.05 (df=66)	-.02 (df=66)	DN	.29* (df=66)	.58*** (df=64)	.47*** (df=59)
Recycling				*Littering*			
DN	.10 (df=61)	.13 (df=66)	.15 (df=66)	DN	-.12 (df=65)	-.33** (df=64)	-.03 (df=59)
SDN	.37** (df=61)	.54*** (df=66)	.38** (df=66)	SDN	.26* (df=66)	.16 (df=64)	.27* (df=59)

- * $p < .05$, ** $p < .01$, *** $p < .001$
- *Note*

  DN: Descriptive Norms
  SDN: Situational Descriptive Norms

APPENDIX
-Survey Items and Item Reliability-

Behavioral Intentions

Blood Donation (Cronbach's α = .98 / .98, US/ Korea)

1. I will try to make myself available for blood donation about (a week/3 months/a year) from now.
2. I intend to participate in blood donation about (a week/3 months/a year) from now.
3. I plan to participate in blood donation about (a week/3 months/a year) from now.
4. I have it in my mind to donate blood about (a week/3 months/a year) from now.

Recycling (Cronbach's α = .92 /.95, US/ Korea)

Imagine yourself about (a week/3 months/a year) from now in the above situation and answer the questions.

1. I will try to use the recycling bin to discard the bottle before the interview.
2. I intend to throw away the bottle in the recycling bin before the interview.
3. Before having the interview, I plan to get rid of the bottle in the recycling bin.
4. I have it in my mind to discard the bottle in the recycling bin instead of the small trash pile before the interview.

Downloading unauthorized media files on the Internet (Cronbach's α = .96 /.94, US/ Korea)

1. I will try to download media files (songs, movies, dramas, etc) from unofficial file-sharing sites about (a week/3 months/a year) from now.
2. I intend to download unlicensed copies of media files via Internet about (a week/3 months/a year) from now.
3. I plan to download pirated online media files about (a week/3 months/a year) from now.
4. I have it in my mind to download unauthorized media files via Internet about (a week/3 months/a year) from now.

Littering (Cronbach's α = .93 /.94, US/ Korea)

Imagine yourself about (a week/3 months/a year) from now in the above situation and answer the questions.

1. I will try to discard the bottle in the small trash pile before the interview.
2. I intend to throw away the bottle in the small pile of trash before the interview.
3. Before having the interview, I plan to get rid of the bottle in the small pile of trash.
4. I have it in my mind to discard the bottle in the small trash pile instead of the recycling bin before the interview.

Perceived Descriptive Norms

Blood Donation (Cronbach's α = .91 /.90, US/ Korea)

1. Many people in America participate in blood donation.
2. Many U.S. citizens are willing to donate blood.
3. Blood donation is a common behavior that people in America engage in.
4. Many U.S. citizens donate their blood.

Recycling (Cronbach's α = .89 /.95, US/ Korea)

1. Many people in America participate in recycling.
2. Many U.S. citizens are willing to recycle materials.
3. Recycling is a common behavior that people in America engage in.
4. Many U.S. citizens participate in recycling.

Downloading unauthorized media files on the Internet (Cronbach's α = .89 /.92, US/ Korea)

1. Many people in America download unlicensed copies of media files through the Internet.
2. Many U.S. citizens are willing to download pirated media files online.
3. Downloading unauthorized songs or movies via Internet is a common behavior that people in America engage in.
4. Many U.S. citizens download media files from unofficial file-sharing websites.

Littering (Cronbach's α = .88 /.94, US/ Korea)

1. Many people in America carelessly discard litter
2. Many U.S. citizens are willing to litter.
3. Littering is a common behavior that people in America engage in.
4. Many U.S. citizens throw trash on the street.

Behavioral evaluation

Blood Donation (Cronbach's α = .67 /.63, US/ Korea)

1. It is expected that blood donation would enhance community welfare.
2. Blood donation does NOT contribute to others' well-being. *
3. Donating blood is an ethical behavior.
4. Blood donation is a behavior that undermines morality. *
5. Participating in blood donation is beneficial to other people in the society.
6. Blood donation is NOT a socially responsible act. *

Recycling (Cronbach's α = .77 /.80, US/ Korea)

1. It is expected that recycling would enhance community welfare.
2. Recycling materials does NOT contribute to others' well-being. *
3. Recycling is an ethical behavior.
4. Recycling is a behavior that undermines morality. *
5. Participating in recycling is beneficial to other people in the society.
6. Recycling is NOT a socially responsible act. *

Downloading unauthorized media files on the Internet (Cronbach's α = .75 /.74, US/ Korea)

1. It is expected that downloading pirated media files via Internet would enhance community welfare.
2. Downloading unauthorized media files does NOT contribute to others' well-being. *
3. Downloading media files from unofficial sites is an ethical behavior.
4. Downloading unauthorized copies of media files is a behavior that undermines morality. *
5. Downloading songs and movies from unofficial file-sharing sites is beneficial to other people in the society.
6. Downloading unauthorized copies of media files is NOT a socially responsible act. *

Littering (Cronbach's α = .59 /.67, US/ Korea)

1. It is expected that littering would enhance community welfare.
2. Careless dumping of recyclable materials does NOT contribute to others' well-being. *
3. Throwing away trash in the trash pile instead of trash cans is an ethical behavior.
4. Littering is a behavior that undermines morality. *
5. Getting rid of trash on the street is beneficial to other people in the society.
6. Dropping individuals' litter in the public place is NOT a socially responsible act. *

Situational Descriptive Norms

Recycling (Cronbach's α = .89 /.95, US/ Korea)

1. *When facing the above situation*, many people in America throw away the bottle in the recycling bin.
2. W*hen facing the above situation*, many U.S. citizens are willing to put the bottle into the recycling bin.
3. Placing the bottle in the recycling bin *in the above situation* is a common behavior that people in America engage in.
4. W*hen facing the above situation*, many U.S. citizens dispose the bottle in the recycling bin.

Littering (Cronbach's α = .93 /.95, US/ Korea)

1. *When facing the above situation*, many people in America throw away the bottle in the small pile of trash.
2. *When facing the above situation*, many U.S. citizens are willing to put the bottle on the small trash pile.
3. Placing the bottle on the small pile of trash *in the above situation* is a common behavior that people in America engage in.
4. *When facing the above situation*, many U.S. citizens dispose the bottle in the small pile of trash.

* reverse coded item

BIBLIOGRAPHY

Alicke, M. D., & Govorun, O. (2005). The better-than-average effect. In M. D. Alicke, D. A. Dunning, & J. I. Krueger (Eds.), *The self in social judgment: Studies in self and identity* (pp. 85-106). New York: Psychology Press.

Bandura, A. (1991). Social cognition theory of moral thought and action. In W. M. Kurtines & J. L. Gewirtsz (Eds.), *Handbook of moral behavior and development* (Vol. 1, pp. 45-103). Hillsdale, NJ: Erlbaum.

Campbell, J. D. (1986). Similarity and uniqueness: The effects of attribute type, relevance, and individual differences in self-esteem and depression. *Journal of Personality and Social Psychology*, 50, 281-294.

Castro, F. G., Maddahian, E., Newcomb, M. D., & Bentler, P. M. (1987). A multivariate model of the determinants of cigarette smoking among adolescents. *Journal of Health and Social Behavior*, 28, 273-289.

Cialdini, R. B., Kallgren, C. A., & Reno, R. R. (1991). A focus theory of normative conduct: A theoretical refinement and reevaluation of the role of norms in human behavior. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 24, pp. 201-234). San Diego, CA: Academic Press.

Eyal, T., Liberman, N., & Trope, Y. (2008). Judging near and distant virtue and vice. *Journal of Experimental Social Psychology*, 44, 1204-1209.

Henderson, M. D., Trope, Y., & Carnevale, P. J. (2006). Negotiation from a near and distant time perspective. *Journal of Personality and Social Psychology*, 91, 712-729.

Jones, T. M. (1991). Ethical decision making by individuals in organizations: An issue-contingent model. *Academy of Management Review*, 16, 366-395.

Kallgren, C. A., Reno, R. R., & Cialdini, R. B. (2000). A focus theory of normative conduct: When norms do and do not affect behavior. *Personality and Social Psychology Bulletin*, 26, 1002-1012.

Kanten, A. B., & Teigen, K. H. (2008). Better than average and better with time: Relative evaluations of self and others in the past, present, and future. *European Journal of Social Psychology*, 38, 343-353.

Kivetz, Y., & Tyler, T. R. (2007). Tomorrow I'll be me: The effect of time perspective on the activation of idealistic versus pragmatic selves. *Organizational Behavior and Human Decision Process*, 102, 193-211.

Liberman, N., & Trope, Y. (1998). The role of feasibility and desirability considerations

in near and distant future decisions: A test of temporal construal theory. *Journal of Personality and Social Psychology*, 75, 5-18.

Liberman, N., Sagristano, M. D., & Trope, Y. (2002). The effect of temporal distance on level of mental construal. *Journal of Experimental Social Psychology*, 38, 523-534.

Park, H. S. & Smith, S. W. (2007). Distinctiveness and influence of subjective norms, personal descriptive and injunctive norms, and societal descriptive and injunctive norms on behavioral intent: A case of two behaviors critical to organ donation. *Human Communication Research*, 33, 194-218.

Park, H. S., & Ahn, J. Y. (2007). Cultural differences in judgment of truthful and deceptive messages. *Western Journal of Communication*, 71, 294-315.

Platow, M. J. (1994). The evaluation of the social desirability of prosocial self-other allocation choices. *The Journal of Social Psychology*, 134, 61-68.

Rimal, R. N. & Real K. (2003). Understanding the influence of perceived norms on behaviors. *Communication Theory*, 13, 184-203.

Rimal, R. N. & Real, K. (2005). How behaviors are influenced by perceived norms: A test of the Theory of Normative Social Behavior. *Communication Research*, 32, 389-414.

Schultz, P. W., Nolan, J. M., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2003). The constructive, destructive, and reconstructive power of social norms. *Psychological Science*, 18, 429-434.

Sedikides, C., Gaertner, L., & Toguchi, Y. (2003). Pancultural self-enhancement. *Journal of Personality and Social Psychology*, 84, 60-79.

Todorov, A., Goren, A., & Trope, Y. (2007). Probability as a psychological distance: Construal and preferences. *Journal of Experimental Social Psychology*, 43, 473-482.

Trope, Y. & Liberman, N. (2000). Temporal construal and time-dependent changes in preferences. *Journal of Personality and Social Psychology*, 79, 876-889.

Trope, Y. & Liberman, N. (2003). Temporal Construal. *Psychological Review*, 110, 403-421.

Trope, Y., Liberman, N., & Wakslak, C. (2007). Construal Levels and Psychological Distance: Effects on Representation, prediction, evaluation, and behavior. *Journal of Consumer Psychology*, 17, 83-95.

Williams, E. F., & Gilovich, T. (2008). Do people really believe they are above average? *Journal of Experimental Social Psychology*, 44, 1121-1128.