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INFLUENCE OF TEMPORAL DISTANCE ON CAREER CHOICE: SELF-EFFICACY AND OUTCOME EXPECTATIONS

By

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Seungcheol Lee

A THESIS

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

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ABSTRACT

INFLUENCE OF TEMPORAL DISTANCE ON CAREER CHOICE: SELF-EFFICACY AND OUTCOME EXPECTATIONS

By

Seungcheol Lee

The current study examined the effect of time perspective on college students' social cognitive career choice. Self-efficacy beliefs were construed as feasibility considerations, while outcome expectations were posited as desirability considerations in career choice. Based on construal level theory, it was hypothesized that temporal distance to career entry would be associated negatively with the perceived importance of self-efficacy and positively with the perceived importance of outcome expectations. Perceived support and barriers, as well as pragmatic versus idealistic selves were expected to moderate the relationship. The data from 180 U.S. and 215 Korean undergraduate students showed no significant main effects of temporal distance. None of the linear, exponential, and hyperbolic relationships were significant. However, the three-way interaction of temporal distance, country, and perceived support was significant for the physical reward dimension of outcome expectations. For Korean participants with a low level of perceived support, physical rewards became less important as the time of career entry approached.

Dedicated to my beloved mother

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Last but not least, I would like to extend my special gratitude to my brother who always stands by me.

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INTRODUCTION

The process of career development continues throughout an individual's life as they make a series of decisions that have occupational consequences (Super, 1980, Zunker, 2002). However, the most influential decisions regarding an individual's future career are often made in college (Pascarella & Terenzini, 2005), where they crystallize their career preference and implement their career choice (Super, 1980).

Career choice is a vital developmental task for college students in their school-towork transition (Super, Savickas, & Super, 1996); however, it is subject to change over time. Up to two-thirds of all students change their initial career choice (Astin, 1977), and over a half of students with a declared major change it at least once (Kelly & White, 1986). Many factors may contribute to the prevalent changes in career choice. For example, as students accumulate experiences over time, their skills, needs and values regarding careers are modified (Arthur, Hall, & Lawrence, 1989). Students find their strengths and weaknesses and they become more knowledgeable about future careers (Moss & Frieze, 1993).

The current study hypothesized that the temporal distance might be a factor that influences college students' career choice. Time perspective influences an individual's perception of self-efficacy and outcome expectations (Maddux, 1995), which are important determinants of career choice (Lent, Brown, & Hackett, 1994). Self-efficacy beliefs may become more important as the time of career entry approaches, while outcome expectations may become more important for career choice in the distant future. For example, many college freshmen aspire to become physicians because medical

occupations guarantee high social status and monetary benefits (Dey, Astin, & Korn, 1991). However, the majority of them abandon this goal and find alternatives during their undergraduate years because they feel they lack the necessary academic ability (Antony, 1998). A large number of students choose engineering majors that offer lucrative salaries after graduation. Nevertheless, many of them change their initial choice because they are unable to meet the academic and professional demands (Astin, 1977; Hackett, Betz, Casas, & Rocha-Singh, 1992).

Based on social cognitive career theory (Lent et al., 1994) and construal level theory (Liberman & Trope, 1998), the current study examined how the temporal distance to career entry influenced undergraduate students' career choice by systematically changing the perceived importance of self-efficacy and outcome expectations. Additionally, the study examined the linear, exponential, and hyperbolic patterns of changes over time.

LITERATURE REVIEW

Social Cognitive Career Theory

Social cognitive career theory (SCCT; Lent et al., 1994) has become a major perspective for studying academic and career development in recent years (Betz, 2008; Lent, Sheu, Singley 2008; Swanson & Gore, 2000). The theory proposes dynamic models of academic and career-related interests, choice and performance. According to SCCT, an individual's academic and career development is a function of the interplay between personal, environmental, and behavioral variables (Lent et al., 1994). By emphasizing these dynamic aspects of career development, SCCT is distinguished from traditional trait-oriented approaches in career development models that consider personal variables as global, static self attributes (Lent et al., 1994).

The basic assumptions of SCCT are anchored within social cognitive theory (Bandura, 1986, 1997) that is founded upon the model of triadic reciprocal causality (Bandura, 1977). In this model, individuals, their behaviors, and external environments all operate as interlocking determinants that affect one another bidirectionally (Bandura, 1986). Individuals not only respond to environmental events, but also exercise control over their own behavior which then influences the environment and their cognitive, affective, and biological states (Bandura, 1986, 1989). Based on this principle of triadic reciprocal causality, SCCT regards career choice behavior as the mutual transaction of person (e.g., personal predispositions), environmental (e.g., social support), and behavioral (e.g., goal implementation) variables. Personal and environmental factors

collectively impact an individual's career choice, which in turn alters an individual's cognition and emotion, as well as environment.

Among various personal determinants within the triadic causal system, selfefficacy beliefs and outcome expectations are particularly important for career choice (Lent et al., 1994). From the perspective of social cognitive theory, goal-directed behavior is affected by self-efficacy, outcome expectations, as well as environmental support and resources (Bandura, 1986). In the same vein, SCCT posits that career behavior is largely influenced by self-efficacy beliefs and outcome expectations, which operate in concert with a variety of personal, contextual, and learning variables in developing an individual's academic and career trajectories (Lent et al., 2003).

Self-Efficacy and Outcome Expectations

Self-efficacy refers to "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). Individuals cognitively process information concerning their ability and regulate their choice behavior and exert effort accordingly (Bandura, 1977). As a result, self-efficacy beliefs determine the choice of goals, the level of effort exerted on that action, persistence in the face of adversity, and the performance level (Bandura, 1986).

Self-efficacy is not a passive, static, and trait-like personal attribute, but rather is regarded as "a dynamic set of self-beliefs that are specific to particular performance domains and that interact complexly with other person, behavior, and contextual factors" (Lent et al., 1994, p. 83). In addition, social cognitive theory hypothesizes that an individual's beliefs about their self-efficacy are concerned "not with the skills one has but with judgments of what one can do with whatever skills one possesses" (Bandura, 1986,

p. 391). Based on this distinction, self-efficacy is not synonymous with objectively assessed skills (Lent et al., 1994). Instead, it is concerned with an individual's subjective beliefs and thus is subject to change.

Outcome expectations are people's judgments of the potential consequence that a certain behavior will produce (Bandura, 1986). Choice behavior is largely dependent on the subjective probability that certain behavior will produce particular outcomes (e.g., Vroom, 1964). As a consequence, outcome expectations are partly determined by self-efficacy beliefs. An individual's expected outcomes depend on their judgments of how well they will be able to perform in given situations (Bandura, 1986). For example, individuals who are apprehensive of communication will expect jeering and embarrassment as the outcome of their public speech, while individuals who feel competent in communication will anticipate a success in persuasion and gaining credibility. Consequently, outcome expectations depend on the adequacy of an individual's performances to some extent.

However, self-efficacy and outcome expectations should be differentiated. Individuals may believe that a behavior will produce desirable outcomes, but they may not engage in the behavior because they question whether they can actually execute the necessary activities (Bandura, 1986). In addition, the relationship between self-efficacy and outcome expectations is not fixed, but contingent on the nature of a particular action (Bandura, 1995). In activities where outcomes are highly contingent on the quality of performance, self-efficacy is a predominant determinant of expected outcomes. In contrast, when outcomes are loosely tied to the quality of performance, outcome expectations are independent of self-efficacy beliefs (Bandura, 1995).

Self-efficacy beliefs and outcome expectations have a profound impact on career choice behavior. According to Lent et al., (1994) self-efficacy and outcome expectations influence the development of interest. Interest, in turn, promotes career choice goals, which increase the probability of taking choice actions. Choice actions then lead to performance domains and attainment experiences, which reinforce or debilitate selfefficacy and outcome expectations. As a result, a high level of self-efficacy and positive outcome expectations in career choice facilitate clear goal setting and goal-oriented behaviors, whereas a low level of self-efficacy and negative outcome expectations decrease the possibility of taking career goals and action courses (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Betz & Voyten, 1997; Hackett & Betz, 1981; Lent et al., 1994). Furthermore, self-efficacy and outcome expectations are good predictors of performance attainment and persistence (Fouad & Smith, 1996; Lapan, Shaughnessy & Boggs, 1996; Lent et al., 2003; Lent et al., 2008; Schaefers, Epperson & Nauta, 1997), and consequently, academic and career satisfaction (Caprara, Barbaranelli, Borgogni, & Steca, 2003; Lent et al., 2005).

The influence of self-efficacy beliefs and outcome expectations on career behavior may be affected by time. Bandura (1986) stated that the time elapsing between the assessment of self-efficacy and the actual behavior affects the strength of self-efficacy on behavior. Hesketh (2000) argued that since all career choices are about future behavior, associating outcome expectations with timing is critical. Lent et al. (1994) also suggested that self-efficacy and outcome expectations have different importance at any given point of time or for particular individuals over time. Nevertheless, few studies have examined the effect of time on career behavior (Lent et al., 2008) or social cognitive

behavior in general (Maddux, 1995). Therefore, how time systematically influences selfefficacy and outcome expectations in career choice remains an important open question. *Construal Level Theory*

Construal level theory (CLT; Liberman & Trope, 1998) proposes that temporal distance systematically changes mental construal of situations, which in turn influences the judgments, predictions and choices of future events. In other words, temporal distance determines the value of future events by systematically changing the way they are construed. Individuals construct high-level construals for distant future events, while they employ low-level construals for near future events. For example, in Liberman and Trope's (1998) study, when participants were asked to imagine themselves engaging in an action (e.g., making a list), they used subordinate low-level descriptions (e.g., writing things down) in a near future condition, while they used superordinate high-level descriptions (e.g., getting organized) in a distant future condition. The same information was construed at a higher, abstract level when it pertained to the distant future events than the near future events.

High-level construals consist of abstract, schematic, and decontextualized mental representation of future events, which includes the perception of central, abstract, and goal-relevant features of the decision. Low-level construals comprise concrete and contextual details, and represent more specific and contextualized features of future events (Trope & Liberman, 2003). The mental representations of the distant future are based on superordinate high-level construals. As a result, decisions regarding distant future events are likely to be based on relatively central and abstract features of the event. In contrast, the mental representations of the near future are based on subordinate low-

level construals, thus decisions regarding the near future tend to be based on more incidental and peripheral aspects of the event (Liberman & Trope, 1998). In short, highlevel construals predominate in distant future decisions, whereas low-level construals take a priority in near future decisions (Liberman, Sagristano, & Trope, 2002; Liberman & Trope; 1998; Trope & Liberman, 2000).

CLT proposes that the value of future events changes as the relative importance of high- and low-level construals changes over time. The value associated with high-level construals becomes prominent in the distant future, whereas the value associated with low-level construals becomes important in the near future. As a result, the value associated with low-level construals is discounted over time, while the value associated with high-level construals is augmented over time. Specifically, when the value associated with the high-level construal of an event is positive, the value of the event becomes more positive over time. In contrast, when the value associated with the highlevel construal is negative, the value of an event becomes more negative over time (Liberman & Trope, 1998). For example, in Trope and Liberman's (2000) study, participants preferred a job opportunity which was interesting but involved uninteresting training if they are requested to start the job a year later. On the other hand, they evaluated an uninteresting job with interesting training more favorably if they were asked to start the job next week. Consequently, the interesting job was perceived as more attractive and the boring job was considered as less attractive over time delay.

Feasibility and Desirability Considerations

The key concepts in value changes over time are feasibility and desirability considerations (Fujita, Eyal, Chaiken, Trope, & Liberman, 2008; Liberman & Trope,

1998). Desirability refers to the valence of an action's end state, while feasibility reflects the ease or difficulty of reaching the end state (Liberman & Trope, 1998). Desirability is associated with superordinate "why" aspects of an action, which are more abstract and central to the meaning of the action. Feasibility is related to subordinate "how" considerations, which constitute low-level construals of the action (Trope & Liberman, 2000). As a consequence, when the value of future events derives from its desirability aspects, the value is augmented over time. In contrast, when the value is based on its feasibility aspects, the value is diminished as temporal distance increases.

Studies have examined the role of feasibility and desirability considerations in decision making. For example, Liberman and Trope (1998) found that participants preferred a word processor with sophisticated function (high desirability) for distant future situations, while they preferred a word processor easier to use (high feasibility) for near future conditions. Sagristano, Trope and Liberman (2002) found that in making decisions about future gambles, payoff (desirability) was considered important for the distant future, whereas probability of winning (feasibility) was regarded as important for the near future. The findings were consistent with the hypothesis that temporal construals highlighted desirability considerations for distant future events, while they emphasized feasibility considerations for near future events.

An element of feasibility considerations in career choice is occupational selfefficacy. Self-efficacy refers to an individual's judgments of their capabilities to perform a specific behavior to reach the goal, thus is "by definition a feasibility concern" (Balliet, 2007, p. 2). Questions concerning occupational self-efficacy address "how" aspects (i.e., feasibility considerations) of career behavior such as whether individuals can perform the

specific tasks required in their career fields and whether they can negotiate career-related obstacles (Lent & Brown, 2006a). Those questions are concerned with how individuals select careers that they can succeed in. Although other factors (e.g., actual knowledge or skill levels, qualifications, and geographic limitation) also constitute feasibility considerations, perceived subjective feasibility may play an important role in governing an individual's behavior (e.g., Bandura & Adams, 1977; Krueger & Dickson, 1994). Therefore, self-efficacy and feasibility considerations have conceptual similarity. Due to this conceptual resemblance, several studies have used these two terms interchangeably (e.g., Krueger, 2000; Linan, Rodriguez-Cohard, & Rueda-Cantuche, 2006: Martire et al., 2003).

On the other hand, an aspect of desirability considerations in career choice is occupational outcome expectations. Occupational outcome expectations involve positive consequences of career choice (e.g., Lent et al., 2001; Lent et al., 2003). When prospecting for future careers, individuals usually anticipate desirable outcomes such as salary, benefits, favorable working conditions, social status, and a feeling of accomplishment. Negative outcomes (e.g., moving to remote locations) may be expected in some cases, but often are less important when compared to positive outcomes. Most studies construed outcome expectations regarding career choice as positive and desirable (Lent & Brown, 2006a) with few exceptions (e.g., Hackett et al., 1992). Questions concerning occupational outcome expectations address "why" aspects (i.e., desirability considerations) of career outcome such as a monetary reward, social prestige and selfrealization. Therefore, outcome expectations and desirability considerations in career choice are tapping a similar concept.

HYPOTHESIS AND RESEARCH QUESTION

Main Hypothesis

Based on the assumptions of the correspondences between self-efficacy and feasibility considerations, and between outcome expectations and desirability considerations, the current study examined the influence of time perspective on college students' career choice.

CLT predicts that as temporal distance increases, the importance of feasibility considerations (i.e., low-level construals) decreases, while the importance of desirability considerations (i.e., high-level construals) increases (Liberman & Trope, 1998; Trope, & Liberman, 2000; Trope & Liberman, 2003). If college students are about to start their career, self-efficacy (i.e., feasibility considerations) may become more important in choosing a career. In contrast, if they plan to start their career in the distant future, outcome expectations (i.e., desirability considerations) may become more important.

The current study examined the effect of temporal distance on participants' perceived importance of self-efficacy and outcome expectations, instead of their actual occupational self-efficacy and outcome expectations. Since participants had different majors, academic interests, and plans for their future careers, it was difficult to assess their actual level of self-efficacy and outcome expectations. In addition, the actual level of self-efficacy may be confounded with participants' class standings. For example, freshmen may not yet have professional knowledge, while seniors may be well-trained for their future careers.

Therefore, it was hypothesized that temporal distance to career entry would be associated negatively with the perceived importance of self-efficacy and positively with the perceived importance of outcome expectations.

Moderating Variables

Perceived support and barriers. Individuals are influenced by environmental support and barriers to their career progress. According to Lent et al. (2001), contextual support and barriers moderate the effects of self-efficacy and outcome expectations on career choice. Contextual support is positively related to self-efficacy and outcome expectations, while barriers are negatively related to self-efficacy and outcome expectations (Lent et al., 2001). At the same time, the presence of support and barriers influences career choice behavior (Lent & Brown, 2006b). Consequently, perceived support and barriers may moderate the effect of temporal distance on career choice behavior.

Pragmatic self vs. idealistic self. A pragmatic self is characterized as a mental representation that is primarily directed by practical concerns and self-interest, while an idealistic self is a mental representation that emphasizes principles and values and seeks to express the person's sense of true self (Kivet & Tyler, 2007). The distinction between pragmatic versus idealistic selves is relevant to career choice behavior. For example, job applicants may need to select between jobs that allow them to pursue their values and jobs that are financially rewarding (Kivet & Tyler, 2007). Time perspective influences the self-activation for preferences between pragmatic and idealistic concerns. Kivet and Tyler (2007) found that temporal distance was correlated positively with an idealistic self and negatively with a pragmatic self. Self-activation was found to mediate the effect of

time perspective on choice behavior. As a result, the activation of pragmatic and idealistic selves may moderate the effect of temporal distance on career choice behavior. *Research Question*

CLT proposes that the value associated with high-level construals is augmented over time, while the value associated with low-level construals is discounted over time. However, the pattern of change over time has not been fully investigated. Most studies in CLT literature manipulated temporal distance as a dichotomy, and used 2 (near vs. distant future) × 2 (desirability vs. feasibility) ANOVA designs (Henderson, Trope, & Carnevale, 2006), with few exceptions (e.g., Pennington & Roese, 2003). Since time has been treated as a categorical variable, the previous studies of CLT did not reflect the continuous nature of time and were not able to examine the pattern of change over time.

The current study examined how the perceived importance of self-efficacy and outcome expectations changes as a function of temporal distance. Is there a linear association between temporal distance and the perceived importance of self-efficacy and outcome expectations? Or is there a hyperbolic acceleration or deceleration? Studies have suggested that time discounting in human behavior is reported to follow a hyperbolic function (e.g., Ainslie & Haslam, 1992; Meyerson, Green, & Fristoe, 1995; Roelofsma, 1996). Hyperbolic time discounting is also reported to be relevant to career choice (Hesketh, Watson-Brown, & Whiteley, 1998). Or does the pattern follow an exponential curve, as the utility theory in economics suggests? To address the question, the current study treated time as a continuous variable and examined three types of relationships: linear, exponential, and hyperbolic. The data were collected from both the United States and Korea.

METHOD

Participants

For the U.S. data, participants were 180 undergraduate students (age M = 20.04, SD = 1.50, 55.4% female) enrolled in a large Midwestern university. Of the participants, 29.4% were freshmen, 21.1% were sophomores, 27.8% were juniors, 16.7% were seniors, and 5.0% were 5th year seniors or above. Most of them (95.5%) were U.S. citizens and Caucasians (83.3%). One half of participants were communication majors (41.1%) or communication-related majors (8.3%). Exploratory students (i.e., undecided major) were 8.3%. Most participants had a job experience as full-time employees (22.8%) or part-time workers (71.7%). On average, participants had experienced three to four jobs. Additionally, one out of six participants (17.9%) had an internship experience. Many participants (77.9%) were currently employed, working in food/hospitality service (30.0%), retailing (13.5%), and administration (10.0%). More than a half of participants (55.6%) were currently looking for a job. On average, participants planned to graduate in 22.71 months (SD = 14.30) and to start their long-term career after 19.79 months (SD =16.65) after graduation. Only a small proportion of participants wanted to start their career before graduation (5.0%) or at the time of graduation (21.7%). A large proportion of participants (73.3%) planned to begin their career journey after graduation. On average, participants wanted to start their career in 13.31 months (SD = 16.35) after graduation.

For the Korean data, participants were 215 undergraduate students (age M = 21.83, SD = 2.85, 42.8% female) enrolled in a university in Inchon, a city neighboring

Seoul. Of the participants, 30.7% were freshmen, 21.4% were sophomores, 23.7% were juniors, 22.8% were seniors, and 1.4% were 5th year senior or above. Most of them (95.8%) were Koreans, while the rest of participants were Chinese students studying abroad in Korea. Participants had diverse majors: business (25.1%), education (14.4%), international business (10.7%), natural science (10.7%), foreign language (10.2%), etc. The majority of participants (65.1%) did not have any job experience, while only 3.3% had full-time job experience. Of the Korean participants, 17.7% were currently employed, mainly as private tutors (72.7%). Only 5.8% of the participants had an internship experience and 18.6% were currently looking for a job. On average, the Korean participants planned to graduate in 31.13months (SD = 21.84). Most of the participants wanted to start their long time career at the time of graduation (60.9%) or before graduation (27.4). Only 11.6% planned to start career after graduation, after 14.08 months (SD = 11.17) on average.

Procedure

Prior to participation, all participants were asked to read, understand and sign an informed consent. Then the participants indicated their current academic status and when they plan to start their career. The survey questionnaire asked participants to indicate their perceived importance of self-efficacy and outcome expectations for their future career choice. To control the question order effect, half of the participants responded to questions about self-efficacy, followed by the questions about outcome expectations. For the rest of the participants, the question order was reversed. After answering the closed-ended questions, participants were requested to describe their future career with an open-

ended question. Finally, participants provided demographic information and were thanked for participation.

Measurement

Temporal distance. Temporal distance measured the amount of time participants had before starting their long-term career. It was measured by a two-step process: first, participants were asked to indicate when they expect to graduate, and then they were asked to indicate when they plan to start their career before or after graduation. If participants reported that they expected to graduate in 12 months and to start their career in 6 months after graduation, temporal distance was calculated as 18 months. If participants planned to start their career at the time of graduation, then temporal distance was equal to the amount of time remaining before graduation. If participants already started their career, they were excluded from the analysis. This two-step process was used to help participants estimate their time of career entry more accurately.

Perceived importance of self-efficacy. The perceived importance of self-efficacy was measured with a revised version of the occupational self-efficacy scale (Schyns & von Collani, 2002). The original scale was developed to examine the general level selfefficacy associated with various occupations, thus it was more appropriate to the purpose of the current study than other task-specific assessments of self-efficacy (e.g., Betz & Hackett, 1981; Eden & Kinnar, 1991). The original scale asked participants to indicate how strongly they feel competent in various job situations. Schyns and Von Collani's (2002) original occupational self-efficacy scale reported unidimensionality, $\chi^2 = 205.3$, *df* = 138; NFI (normed fit index) = .97; CFI (comparative fit index) = .99; TLI (Tucker-Lewis fit index) = .98; RMSEA (root mean square error of approximation) = .06.

The revised scale used in the current study asked participants to indicate how strongly they perceived the importance of being competent in choosing their future career, using a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). To test the assumption of a single latent factor, a confirmatory factor analysis was conducted using the AMOS-package (Arbuckle, 2006). With a maximum-likelihood estimation procedure, the following global fit indices of the perceived importance of selfefficacy were obtained: $\chi^2 = 489.70$, df = 119, p < .001; NFI = .79; RFI (relative fit index) = .76; IFI (incremental fit index) = .83, TLI = .81, CFI = .83; RMSEA = .14; SRMR (standardized root mean residual) = .06. The one factor solution did not yield a good fit, thus was rejected.

An alternative six-item model showed a good fit both for the U.S. data; $\chi^2 = 9.72$, df = 9, p = .37; NFI = .98; RFI = .97; IFI = .99, TLI = .99, CFI = .99; RMSEA = .02; SRMR = .02, and for the Korea data, $\chi^2 = 15.49, df = 9, p = .08$; NFI = .96; RFI = .93; IFI = .98, TLI = .97, CFI = .98; RMSEA = .06; SRMR = .03. The reliabilities (Cronbach's alpha) were .89 for the U.S. data and .80 for the Korean data.

Perceived importance of outcome expectations. The perceived importance of outcome expectations was assessed with a revised version of Lent et al.'s (2005) outcome expectations scale. The 10-item scale reflected three dimensions identified by Bandura (1986): three items for physical rewards, three items for social rewards, and four items for self-evaluative outcomes. Participants were asked to indicate how strongly they perceived the importance of outcome expectations in choosing their future career, using a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree).

Lent et al. (2005) treated the outcome expectation scale as unidimensional, however, the modified scale used in the current study did not show a good fit (χ^2 = 373.53, *df* = 35, *p* < .001; NFI = .59; RFI = .48, IFI = .62, TLI = .50, CFI = .61; RMSEA = .24; SRMR = .17). Conceptually, the scale assesses three different aspects of outcome expectation: physical rewards, social rewards, and self-evaluative outcomes. A threefactor model was tested by performing a confirmatory factor analysis and the following global fit indices of the perceived importance of outcome expectations were obtained: γ^2 = 118.02, *df* = 32, *p* < .001; NFI = .87; RFI = .83; IFI = .91; TLI = .87; CFI = .91; RMSEA = .12; SRMR = .07. The three-factor model was rejected; nevertheless, the global fit indices were more acceptable than those of the unidimensional model. The internal consistency theorem (Hunter & Gerbing, 1982) was employed to test parallelism between factors. The social reward dimension was not parallel with the physical reward dimension ($\chi^2 = 17.04$, df = 2, p < .01) or the self-evaluative outcome dimension ($\chi^2 =$ 13.13, df = 2, p < .01). When eliminating the social reward dimension, a two factor model showed an acceptable fit for the U.S. data, $\chi^2 = 38.11$, df = 13, p < .001; NFI = .94; RFI = .91; IFI = .96; TLI = .94; CFI = .96; RMSEA = .11; SRMR = .04, and for the Korean data, $\chi^2 = 32.23$, df = 13, p < .001; NFI = .94; RFI = .90; IFI = .96; TLI = .94; CFI = .96; RMSEA = .08; SRMR = .07. For the physical reward dimension, the reliabilities were .91 for the U.S. data and .83 for the Korean data. For the self-evaluative outcome dimension, the reliabilities were .84 and .71, respectively. The correlation between physical rewards and the self-evaluative outcome dimension was r = .20, p < .001.

Forced choice question. The questionnaire included a two-alternative forced question that asked participants to indicate which one between self-efficacy and outcome

expectations participants considered more important. The question was provided in the case that participants rated both self-efficacy and outcome expectations as extremely important in the previous questions (i.e., ceiling effect).

Perceived support. Unidimensionality was tested for the nine-item scale. The onefactor model did not show an acceptable fit, $\chi^2 = 202.13$, df = 27, p < .001; NFI = .86; RFI = .77; IFI = .88; TLI = .80; CFI = .88; RMSEA = .13. An alternative five-item scale showed a good fit for the U.S. data, $\chi^2 = 3.83$, df = 5, p = .57; NFI = .99; RFI = .97; IFI = .99; TLI = .99; CFI = .99; RMSEA = .01, and for the Korean data, $\chi^2 = 6.71$, df = 5, p =.24; NFI = .98; RFI = .94; IFI = .99; TLI = .98; CFI = .99; RMSEA = .04. The reliabilities were .86 for the U.S. data and .79 for the Korean data.

Perceived barriers. A one-factor solution was tested for the five-item scale. The model showed an acceptable fit for the U.S. data, $\chi^2 = 21.86$, df = 5, p = .001; NFI = .96; RFI = .89; IFI = .97; TLI = .91; CFI = .97; RMSEA = .14.and for the Korean data, $\chi^2 = 15.42$, df = 5, p = .01; NFI = .96; RFI = .89; IFI = .97; TLI = .92; CFI = .97; RMSEA = .09. The reliabilities for the U.S. and the Korean data were .91 and .77, respectively.

Pragmatic self. A one-factor solution was tested for the four-item scale. The model showed an acceptable fit for the U.S. data, $\chi^2 = 5.29$, df = 2, p = .07; NFI = .93; IFI = .95; CFI = .95; RMSEA = .10, and for the Korean data. $\chi^2 = 6.04$, df = 2, p = .05; NFI = .98; RFI = .88; IFI = .98; TLI = .92; CFI = .98; RMSEA = .09. Reliabilities for the U.S. and the Korean data were .61 and .78, respectively.

Idealistic self. Unidimensionality was tested for the four-item scale. The onefactor model showed an acceptable fit for the U.S. data, $\chi^2 = 4.02$, df = 2, p = .13; NFI = .98; RFI = .90; IFI = .99; TLI = .95; CFI = .99; RMSEA = .08, and for the Korean data, $\chi^2 = 14.16$, df = 2, p = .001; NFI = .92; IFI = .93; CFI = .93; RMSEA = .16. Reliabilities

for the U.S. and the Korean data were .82 and .72, respectively.

RESULTS

The hypothesis predicted that temporal distance would be correlated negatively with the perceived importance of self-efficacy and positively with the perceived importance of outcome expectations. The moderating effects of perceived support and barriers as well as pragmatic versus idealistic selves were examined. Hierarchical regression analyses were used to examine the main effects, the two-way interactions, and the three-way interactions of predictors. Table 1 indicates reliabilities, zero-order correlations, means, and standard deviations. The predictors were centered to the mean in order to prevent nonessential multicollinearity problems and to facilitate interpretation (e.g., Cohen, Cohen, West, & Aiken, 2003). Six main predictors (country: U.S. = 0, Korea = 1, temporal distance, pragmatic self, idealistic self, perceived support, and perceived barriers) were included in the first block. The product terms such as temporal distance × perceived support were entered to the second block to examine the two-way interactions involving temporal distance or country. Finally, the product terms such as temporal distance × perceived support × idealistic self were entered to the third block to examine the three-way interactions involving both temporal distance and country. The predictors had condition indexes ranging from 1.00 to 7.97, indicating no serious threat concerning multicollinearity.

								Physical	Self-
	С	TD	PR	ID	SP	BR	SE	Reward	Evaluative
Country	1.000)							
TD	12 [*]	1.00							
	(384)								
PR	.16**	07	.73						
	(394)	(384)							
ID	09	.07	.12*	.75					
	(394)	(384)	(394)						
SP	21***	.01	.14**	.43***	.82				
	(394)	(384)	(394)	(394)					
BR	23****	.11*	.01	07	28***	.85			
	(394)	(384)	(394)	(394)	(394)				
Self-	19***	.09	.21**	.39***	.39***	- .12 [*]	.84		
Efficacy	(394)	(384)	(394)	(394)	(394)	(394)			
Physical	06	.01	.42**	07	.14**	.01	.16**	.86	
Reward	(394)	(384)	(394)	(394)	(394)	(394)	(394)		
Self-	.04	.01	.12*	.44***	.34***	15**	.30***	.20***	.76
Evaluative	(394)	(384)	(394)	(394)	(394)	(394)	(394)	(394)	
М	0.58	33.10	5.28	5.34	5.58	2.84	5.81	5.56	6.26
SD	0.49	21.46	0.86	0.89	0.90	1.23	0.80	0.99	0.72

Table 1. Correlation Matrix of Variables

Note: C = country (0 = U.S., 1 = Korea); TD = temporal distance; PR = pragmatic self; ID = idealistic self; SP = perceived support; BR = perceived barriers; Self-Efficacy = perceived importance of self-efficacy; Physical reward = perceived importance of the physical reward dimension of outcome expectations, Self-evaluative = perceived importance of the self-evaluative outcome dimension of outcome expectations. *p < .05, **p < .01, ***p < .001

Self-Efficacy

For the perceived importance of self-efficacy (Table 2), the model for the predictors in the first block was significant, $F(6, 377) = 21.42, p < .001, R^2 = .25$, adjusted $R^2 = .24$. However, temporal distance was not a statistically significant predictor, $B = 0.003, \beta = .08, p = .08$. Country ($B = -0.27, \beta = ..17, p < .001$) was a significant predictor, indicating that the U.S. participants perceived self-efficacy as more important than Korean participants did. Both pragmatic self ($B = 0.17, \beta = ..19, p < .001$) and idealistic self ($B = 0.23, \beta = .26, p < .001$) were positive predictors of the perceived importance of self-efficacy. Perceived support ($B = 0.16, \beta = .05, p = .001$) was a positive predictor, while perceived barriers ($B = -0.07, \beta = ..10, p = .04$) was a negative predictor. Participants who expected to receive higher support in their career choice regarded self-efficacy as more important, whereas participants who expected to receive discouragement about their career perceived self-efficacy as less important.

The model for the predictors (i.e., interaction terms) in the second block was significant, *F*change (9, 368) = 4.27, p < .001, R^2 change = .07. The two-way interaction effects of idealistic self and country (B = 0.22, $\beta = .03$, p = .02) and perceived support and country (B = -0.55, $\beta = -.48$, p < .001) were significant. The significant interactions indicated that the effect of idealistic self on the perceived importance of self-efficacy was stronger for Korean participants (B = 0.32, $\beta = .36$, p < .001) than the U.S. participants (B = 0.12, $\beta = .13$, p = .05) and that perceived support was significant for the U.S. participants (B = 0.52, $\beta = .52$, p < .001), but not for Korean participants (B = -.02, $\beta = .02$, $\beta = .02$, p = .02, p = .003, thus three-way interactions were not significant.

	В	SE	β	t	sr
First block					
С	-0.27	0.08	17	-3.44***	15
TD	0.003	0.002	.08	1.70	.08
PR	0.17	0.04	.19	3.98****	.18
ID	0.23	0.05	.26	5.24***	.23
SP	0.16	0.05	.18	3.28**	.15
BR	-0.07	0.03	10	-2.05*	09
	F(6, 377) = 21.	42, <i>p</i> < .001,	$R^2 = .25$, ad	ljusted $R^2 = .24$	
Second block					
TD * C	0.001	0.004	.02	0.22	.01
PR * C	0.03	0.10	.03	0.31	.01
ID * C	0.22	0.09	.19	2.44*	.11
SP * C	-0.55	0.10	48	-5.26****	23
BR * C	0.01	0.07	.01	0.19	.01
TD * PR	0.002	0.002	.05	1.10	.05
TD * ID	0.003	0.002	.07	1.47	.06
TD * SP	-0.001	0.002	02	-0.33	01
TD * BR	0.001	0.002	.03	0.66	.03
	Fchange (9, 368)) = 4.27, <i>p</i> <	.001, R²cha n	ge = .07	
Third block					
TD * PR * C	0.005	0.005	.10	1.04	.05
TD * ID * C	0.001	0.004	.01	0.12	.01
TD * SP * C	-0.006	0.005	13	-1.21	05
TD * BR * C	-0.001	0.003	-0.03	-0.46	02
	Fchange (4, 364) = 0.45, <i>p</i> =	.77, R ² change	e = .003	

 Table 2. Multiple Regression Analysis for the Perceived Importance of Self-Efficacy

Note: sr = semipartial correlation; C = country (0 = U.S., 1 = Korea); TD = temporal distance; PR = pragmatic self; ID = idealistic self; SP = perceived support; BR = perceived barriers * p < .05, ** p < .01, *** p < .001

Physical Rewards

For the perceived importance of the physical rewards (Table 3), the model for the predictors in the first block was significant, F(6, 377) = 21.42, p < .001, $R^2 = .25$, adjusted $R^2 = .24$. Country (B = -0.24, $\beta = -.12$, p = .02) was a significant predictor. The U.S. participants regarded physical rewards as more important than Korean participants did. Pragmatic self (B = 0.51, $\beta = .44$, p < .001) was a positive predictor, while idealistic self (B = -0.22, $\beta = -.19$, p < .001) was a negative predictor. For participants who focused on practical considerations and maximizing self-interest, a physical reward was an important factor in choosing their future career. For participants who emphasized protecting their ideals and fulfilling their inner potential, a physical reward was a less important factor. Perceived support was a positive predictor (B = 0.17, $\beta = .15$, p = .01). Participants who received higher support in their career choice were more likely to regard physical rewards as important.

The contribution of the predictors in the second block was significant in explaining the variance in physical rewards, *F*change (9, 368) = 2.57, *p* = .007, R^2 change = .05. The two-way interaction effects of country and pragmatic self (*B* = 0.29, β = .20, *p* = .03), country and idealistic self (*B* = 0.25, β = .17, *p* = .04), and country and perceived support (*B* = -.034, β = -.24, *p* = .01) were significant. The effect of pragmatic self was stronger for Korean participants (*B* = 0.58, β = .52, *p* < .001) than for the U.S. participants (*B* = 0.28, β = .21, *p* = .02). Idealistic self was a significant and negative predictor for the U.S. participants (*B* = -0.30, β = -.28, *p* = .001), but not for Korean participants (*B* = 0.09, β = -.08, *p* = .24). Perceived support was significant only for the U.S. participants (*B* = 0.30, β = .28, *p* = .01), not for Korean participants (*B* = 0.07, β = .06, p = .36). Physical rewards were important for the U.S. participants when they were not idealistic or when they expected to receive support about their career choice. However, none of the two-way interactions involving temporal distance were significant.

The model for the third block was significant, F_{change} (4, 364) = 3.68, p = .006, R^2 change = .03. The three-way interaction effect of temporal distance, perceived support, and country was significant, B = -0.02, $\beta = -37$, p = .001. For this interaction, simple regression analyses were conducted and statistical significance of unstandardized simple slopes was assessed (e.g., Aiken & West, 1991). The results showed a pattern of disordinal interaction (Table 4). As perceived support increased, the slope changed from negative to positive for the U.S. participants. In contrast, for Korean participants, the slope turned from positive to negative. The significant simple slopes showed that for the low level of perceived support (one or two standard deviations below the mean), temporal distance was negatively correlated with the perceived importance of physical rewards for the U.S. participants, whereas it was positively correlated with the perceived importance of physical rewards for Korean participants. In other words, the result of Korean participants with low perceived support was consistent with the hypothesis, while the results of the U.S. participants with low perceived support contradicted the hypothesis. For Korean participants with the high level of perceived support (two standard deviations above the mean), temporal distance was a negative predictor of the perceived importance.

	В	SE	β	t	sr
First block					
С	-0.24	0.10	12	-2.36*	11
TD	0.002	0.002	.04	0.85	.04
PR	0.51	0.05	.44	9.28***	.42
ID	-0.22	0.06	19	-3.84***	17
SP	0.17	0.06	.15	2.69**	.12
BR	0.006	0.04	.01	0.15	.01
	<i>F</i> (6, 377) = 18	.15, <i>p</i> < .001,	$R^2 = .22$, adju	sted $R^2 = .21$	
Second block					
TD * C	0.007	0.005	.12	1.49	.07
PR * C	0.29	0.13	.20	2.21*	.10
ID * C	0.25	0.12	.17	2.09*	.09
SP * C	-0.34	0.14	24	-2.53*	11
BR * C	-0.13	0.08	10	-1.59	07
TD * PR	-0.002	0.003	04	-0.79	04
TD * ID	0.003	0.003	.05	0.93	.04
TD * SP	-0.005	0.002	10	-1.94	09
TD * BR	0.003	0.002	.07	1.37	.06
	Fchange (9, 368	(3) = 2.57, p =	.007, R^2 change	= .05	
Third block					
TD * PR * C	-0.001	0.006	01	-0.11	005
TD * ID * C	0.001	0.006	.02	0.19	.01
TD * SP * C	-0.020	0.006	37	-3.36**	15
TD * BR * C	-0.004	0.004	07	-1.03	05
	Fchange (4, 364	() = 3.68, p =	.006, <i>R</i> ² change	= .03	

Table 3. Multiple Regression Analysis for the Perceived Importance of Physical Rewards

Note: sr = semipartial correlation; C = country (0 = U.S., 1 = Korea); TD = temporal distance; PR = pragmatic self; ID = idealistic self; SP = perceived support; BR = perceived barriers * p < .05, ** p < .01, *** p < .001

Simple Slopes at the Different Points of

						Mode	erator 1		
		Moderator M	Moderator		2 <i>SD</i>	1 <i>SD</i>	М	1 <i>SD</i>	2 <i>SD</i>
Criterion	Predictor	1	2		Below	Below		Above	Above
				US	-0.024	-0.015	-0.006	0.003	0.012
Physical	Temporal	Perceived	Country	0.5.	<i>p</i> =.04	<i>p</i> =.05	<i>p</i> =.17	<i>p</i> = .53	<i>p</i> = .17
Rewards	Distance	Support		Kor	0.021	0.012	0.003	-0.006	-0.015
					<i>p</i> < .01	<i>p</i> < .01	<i>p</i> =.31	<i>p</i> = .16	<i>p</i> = .02

Self-Evaluative Outcomes

For the perceived importance of self-evaluative dimension of outcomes (Table 5), the model for the predictors in the first block of variables was significant, F(6, 377) =19.71, p < .001, $R^2 = .24$, adjusted $R^2 = .23$. Temporal distance was not a statistically significant predictor, B < 0.001, $\beta = -.002$, p = 97. Idealistic self (B = 0.28, $\beta = .35$, p <.001) and perceived support (B = 0.17, $\beta = .21$, p < .001) were significant predictors of the perceived importance of self-evaluative outcomes. The predictors in the second block (*F*change [9, 368] = 1.49, p = .15, R^2 change = .03) and in the third block (*F*change [4, 364] = 0.93, p = .45, R^2 change = .007) were not significant.

	В	SE	β	t	sr		
First block					·····		
С	0.13	0.07	.09	1.76	.08		
TD	0.00	0.00	.00	-0.04	.00		
PR	0.03	0.04	.04	0.76	.03		
ID	0.28	0.04	.34	6.89***	.31		
SP	0.17	0.04	.21	3.82***	.17		
BR	-0.030	0.029	05	-1.02	05		
	$F(6, 377) = 19.71, p < .001, R^2 = .24$, adjusted $R^2 = .23$						
Second block							
TD * C	0.001	0.003	.03	0.37	.02		
PR * C	0.07	0.10	.07	0.71	.03		
ID * C	0.11	0.09	.10	1.25	.06		
SP * C	-0.04	0.10	04	-0.42	02		
BR * C	-0.15	0.06	16	-2.50	11		
TD * PR	0.003	0.002	.07	1.49	.07		
TD * ID	0.001	0.002	.03	0.59	.03		
TD * SP	-0.001	0.002	04	-0.79	04		
TD * BR	0.001	0.001	.02	0.43	.02		
	Fchange (9, 368	3) = 1.49, <i>p</i> =	.15, R^2 change	= .03			
Third block							
TD * PR * C	0.002	0.005	.05	0.46	.02		
TD * ID * C	-0.007	0.004	14	-1.60	07		
TD * SP * C	0.003	0.004	.08	0.75	.03		
TD * BR * C	-0.002	0.003	05	-0.66	03		
	Fchange (4, 364	() = 0.93, p =	.45, R^2 change	= .007			

 Table 5. Multiple Regression Analysis for the Perceived Importance of Self-Evaluative

Outcomes

Note: sr = semipartial correlation; C = country (0 = U.S., 1 = Korea); TD = temporal distance; PR = pragmatic self; ID = idealistic self; SP = perceived support; BR = perceived barriers *p < .05, **p < .01, ***p < .001

Forced Choice Question

Using a two-alternative forced choice question as a dependent variable, a logistic regression was conducted to examine the effect of temporal distance. The result was significant neither for the U.S. data, *B* (unstandardized coefficient) < .001, *SE* = .008, χ^2 (1, *N* = 166) < .001, *p* = .99, Nagelkerke R^2 < .001, nor for the Korean data, *B* = .003, *SE* = .006, χ^2 (1, *N* = 228) < .001, *p* = .60, Nagelkerke R^2 = .002. Thus, the data were inconsistent with the hypothesis.

Pattern of Relationship

To examine the pattern of the relationship between temporal distance and social cognitive variables, a curve fit estimation tested three types of relationships: linear, exponential, and hyperbolic. To test a hyperbolic function, temporal distance was transformed using a general hyperbolic time-discounting formula, $f(D) = \frac{1}{1+kD}$ (Ainslie

& Haslam, 1992; Hesketh et al., 1998). The parameter k that indicates the degree of discounting was considered as an arbitrary number 1 in the current study.

In terms of the relationship between temporal distance and self-efficacy, the U.S. data were not significant for linear, F(1, 164) = 1.66, p = .20, exponential, F(1, 164) = 1.32, p = .25, and hyperbolic function, F(1, 164) = 2.94, p = .09. For the Korean data, the results were not significant for linear, F(1, 213) = 0.17, p = .68, exponential, F(1, 213) = 0.03, p = .85, and hyperbolic function, F(1, 213) = 0.06, p = .81.

Regarding the relationship between temporal distance and physical rewards, the U.S. data were not significant for linear, F(1, 164) = 0.42, p = .52, exponential, F(1, 164) = 0.92, p = .34, and hyperbolic function, F(1, 164) = 0.70, p = .40. For the Korean

data, the results were not significant for linear, F(1, 213) = 0.20, p = .66, exponential, F(1, 213) = 0.50, p = .48, and hyperbolic function, F(1, 213) = 0.01, p = .92.

Finally, regarding the relationship between temporal distance and the selfevaluative outcome dimension of outcome expectations, U.S. data were not significant for linear, F(1, 164) = 0.13, p = .72, exponential, F(1, 164) = 0.02, p = .89, and hyperbolic function, F(1, 164) = 0.21, p = .65. For the Korean data, the results were not significant for linear, F(1, 213) = 0.01, p = .94, exponential, F(1, 213) = 0.01, p = .93, and hyperbolic function, F(1, 213) = 0.003, p = .96. In conclusion, temporal distance and social cognitive variables did not show any significant relationship.

DISCUSSION

The current study examined the effect of temporal distance on college students' perceived importance of self-efficacy and outcome expectations in choosing their future career. The results showed that neither the first-order nor the second-order effects of temporal distance to career entry was associated with the perceived importance of selfefficacy or outcome expectations. The three-way interaction of temporal distance, perceived support and country on the perceived importance of physical rewards was significant. For Korean participants with a low level of perceived support, temporal distance was a positive predictor of the perceived importance of physical rewards, which was consistent with the hypothesis. In contrast, temporal distance was a negative predictor of the perceived importance of physical rewards for the U.S. participants with a low level of perceived support or for Korean participants with a high level of perceived support, which was contrary to the hypothesis. It is possible that college students in a combination of unfavorable circumstances (i.e., lack of career-related support and serious economic recession in Korea), physical rewards may be a less important consideration if they are about to start their career. If they have enough time before starting their career, physical rewards may become a more important consideration. In contrast, if participants perceive a high level of support or live in the United States, where economic recession is less severe than in Korea, then physical rewards may become more important as the time of career entry approaches.

CLT posits that the temporal distance decreases the effect of feasibility and increases the effect of desirability (Liberman & Trope, 1998; Sagristano et al., 2002).

However, results of the current study indicated that the perceived importance of selfefficacy (i.e., feasibility considerations) and outcome expectations (i.e., desirability considerations) did not change as a function of time, except under the moderation effects of perceived support and country. Several possibilities can be considered in explaining the results.

First, it is possible that occupational self-efficacy did not correspond perfectly with the concept of feasibility considerations defined in CLT. Previous studies of CLT conceptually defined feasibility as the ease or difficulty in reaching the end-state (Liberman & Trope, 1998). In the experiments, the feasibility condition was operationally defined as the ease of use (Fujita et al., 2008), ease of performance (Perugini & Bagozzi, 2004), convenience of location, amount of cost, difficulty of assignments (Liberman & Trope, 1998), or probability of winning (Sagristano et al., 2002). These difficulties arise from external factors, which can be overcome by exerting additional effort or by expending extra costs. On the contrary, self-efficacy is conceptually defined as people's judgment of their own capabilities (Bandura, 1986). The lack of self-efficacy arises from an individual's internal factors (e.g., career indecision, the lack of competence, inability to handle unexpected problems), thus it may be hard to overcome. In this case, selfefficacy may not be in a trade-off relationship with outcome expectations.

Moreover, it is possible that occupational self-efficacy did not match low-level construals. In CLT, feasibility considerations are considered as low-level construals that represent specific and contextualized ease or difficulty in attaining a goal. In contrast, the items in the occupational self-efficacy scale measured a participant's general confidence and coping efficacy. It might be difficult and abstract for participants to imagine their

future career situations. Self-efficacy may be perceived as abstract and may not be connected with low-level construals.

Additionally, it is possible that the relationship between career choice and desirability was not clear and direct. In the previous studies of CLT, participants were able to receive the rewards of their choice behavior immediately (e.g., payoff in gambling). However, for the career-related outcomes, a reward from career choice may not be immediate, making it difficult for participants to predict the outcome of their future career. Moreover, desirability may be influenced by not only by career choice but also by many other factors such as job performance or seniority.

The current study examined the participants' perception regarding their future career, not their actual career choice behavior. Because participants had different majors and different plans for their future career, it was impossible to measure their actual level of self-efficacy and outcome expectations. Instead, the current study measured the perceived importance of self-efficacy and outcome expectations. A discrepancy may exist between their actual career choice behavior and their perception of future career. In addition, since the questionnaire asked participants' perceived importance of self-efficacy and outcome expectations, instead of their actual level of self-efficacy and outcome expectations, the ceiling effects were substantial.

Although the hypothesis of the current study was not supported, the results suggested important interaction effects of moderating variables. Country, perceived support and barriers, and pragmatic versus idealistic selves may be important mediators in explaining career choice of college students. In terms of perceived support and barriers, participants who expected to receive higher support in their career choice

regarded self-efficacy and outcome expectations as more important, whereas participants who expected to receive discouragement about their career perceived self-efficacy and outcome expectations as less important. Considering that strong sense of self-efficacy and positive outcome expectations facilitate clear goal setting and goal-oriented behaviors, as well as performance attainment and persistence, perceived support may be an important factor in career choice behavior. Pragmatic self was a positive predictor of the perceived importance of physical rewards, while idealistic self was a negative predictor. This result is consistent with a tension between idealism and pragmatism prevalent in career behavior (Kivet & Tyler, 2007). Physical rewards may be more important for job applicants with pragmatic concerns and less important for those who place principles and values above practical considerations. It is interesting that both pragmatic self and idealistic self were significant predictors of the perceived importance of self-evaluative outcomes. It is possible that high level of self-consideration, regardless of whether it is pragmatic or idealistic, may increase the perceived importance of self-evaluation.

The current study collected data from two countries (United States and Korea), and country was a significant predictor of the perceived self-efficacy and outcome expectations in many cases. For example, the U.S. participants perceived self-efficacy and physical rewards as more important than Korean participants did. It is possible to speculate that the difference may come from the distinction between individualistic cultures and collectivistic cultures (Hofstede, 1980). Individualistic cultures emphasize an individual's achievement through their own efforts, while collectivistic cultures value an individual's interdependence and harmony. The U.S. participants may be more likely to think that their own ability is more important for their career success than any other

factor. At the same time, the U.S. participants may be more likely to regard financial benefits as a reward for their occupational achievement. However, the effect of culture should be interpreted carefully since culture was confounded with other factors. In terms of academic major, nearly half of the U.S. participants were communication-related majors, while a large proportion of Korean participants were business majors. In terms of job experience, 95% of the U.S. participants had job experience and 80% were currently employed. Among Korean participants, only 35% had any kind of job experience and 17% were currently employed. In addition, the different economic situations in the United States and Korea may contribute to different job perspectives of the U.S. and the Korean participants. As the factors such as academic major, job experience, currently employment status, and economic situations were systematically changed between two countries, their effects were difficult to be isolated from the effect of cultural differences. Future studies are needed to examine the effect of cultural differences on college students' career choice behavior.

The results of the current study showed no significant patterns of linear, exponential, and hyperbolic functions. Nonetheless, the relationship pattern needs to be investigated in future studies. Many time-discounting or time-augmentation theories expect exponential or hyperbolic functions, however, most studies in CLT literature have tested only two time points (i.e., near future versus distant future), and have been unable to examine whether the pattern is linear, exponential, or hyperbolic. Pennington and Roese (2003) exceptionally categorized temporal distance into multiple time points; however, the pattern was not clear: prospective temporal increase from the present into the future revealed a reliable linear effect, whereas retrospective temporal increase from

the present into the past failed to show a stable linear pattern. Therefore, the pattern of relationship remains an open question (Henderson, Trope, & Carnevale, 2006) and needs further investigation.

CONCLUSION

Organizations invest a large amount of resources to recruit the most competent job candidates. From the perspective of organizational communication, it is necessary to understand what potential job candidates consider important in choosing their future career. At the same time, from the perspective of career counseling, it is important to understand college students' perceptions regarding their future career. Based on these considerations, the current study examined the effect of temporal distance on feasibility (i.e., self-efficacy) and desirability (i.e., outcome expectations) considerations in career choice. Although the data were generally inconsistent with the hypothesis, the effort to examine the impact of time perspective on career behavior needs to be continued, as time is an unexamined but potentially important factor in career choice.

APPENDIX

Research Participant Information and Consent Form

You are being asked to participate in a research project. Researchers are required to provide a consent form to inform you about the study, to convey that participation is voluntary, to explain risks and benefits of participation, and to empower you to make an informed decision. You should feel free to ask the researchers any questions you may have.

STUDY TITLE: Career Choice Study

Researchers: Hee Sun Park (Associate Professor) and Seungcheol Austin Lee (MA Student)

Department and Institution: Department of Communication, Michigan State University Address and Contact Information: Dr. Hee Sun Park (phone: 517-355-3480; office: 481 CAS; email: heesun@msu.edu) or Seungcheol Austin Lee (email: austiny@msu.edu)

PURPOSE OF RESEARCH:

You are being asked to participate in a study of Communication. From this study, the researchers hope to learn what people think about various factors relevant to jobs and careers. You will be asked to provide your opinions and preferences on various issues on jobs and careers. If you choose to participate in this study, you will be asked to complete a questionnaire asking your values as well as demographic information. Your participation in this study will take about 15 to 30 minutes. If your instructor agreed to provide you with credit for your participation, you will earn 0.25 hour of credit or 0.5 hour of credit in your course, depending on your instructor's policy. For any reason you do not want to participate in the current study, there will be an alternative opportunity for an equal amount of extra credit that will require equal amount of effort. If you do not wish to participate in research studies, please consult your instructor for information on an alternate assignment to receive the same amount of credit. You must be 18 years old or older to participate in this study. Your instructor will be informed of your research participation and s/he will see that you receive credit in your course.

WHAT YOU WILL DO:

If you choose to participate in this study, you will be given survey questions to answer. You will be asked to indicate the extent to which you agree or disagree with each of the questions.

POTENTIAL BENEFITS:

While this study is not expected to yield any immediate direct to the individual participants, the knowledge generated from this project will add to the body of Communication research findings and is hoped to increase the understanding of communication processes in general.

POTENTIAL RISKS:

There are no foreseeable risks associated with participation in this study.

PRIVACY AND CONFIDENTIALITY:

The data for this project are being collected anonymously. Neither the researchers nor anyone else will be able to link data to you. Information about you will be kept confidential to the maximum extent allowable by law unless there is a danger to yourself or others. All materials will be kept under lock and key. Only the two researchers and the Institutional Review Board will have access to the data. The results of this study may be published or presented at professional meetings, but the identities of all research participants will remain anonymous.

YOUR RIGHTS TO PARTICIPATE, SAY NO, OR WITHDRAW:

Participation in this research project is completely voluntary. You have the right to say no. You may change your mind at any time and withdraw. You may choose not to answer specific questions or to stop participating at any time. Whether you choose to participate or not will have no affect on your grade or evaluation.

COSTS AND COMPENSATION FOR BEING IN THE STUDY:

Procedures being performed for research purposes only will be provided free of charge by the researcher. You will not receive money or any other form of compensation for participating in this study.

CONTACT INFORMATION FOR QUESTIONS AND CONCERNS

RESEARCHER CONTACT INFORMATION

If you have any questions about this study, such as scientific issues, how to do any part of it, or to report an injury, please contact Dr. Hee Sun Park (phone: 517-355-3480; office: 481 CAS; email: heesun@msu.edu) or Seungcheol Austin Lee (email: austiny@msu.edu).

IRB CONTACT INFORMATION

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail irb@msu.edu or regular mail at 202 Olds Hall, MSU, East Lansing, MI 48824.

DOCUMENTATION OF INFORMED CONSENT

Your signature (or initials) below means that you voluntarily agree to participate in this research study.

Sign here or put your initials here as electronic signature if you are participating in online survey

Date

If you are participating in online survey and you would like to keep a copy of this consent form, please print this page for your record.

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Questionnaire

- 1. Please indicate your current academic status:
 - _____ Freshman
 - _____ Sophomore
 - _____ Junior
 - ____ Senior
 - _____ 5th Year senior or above
- 2. When do you expect to graduate?

In (semester), (year)

- 3. When do you expect to start your long-term career?
 - ____Already started (_____year(s) and _____month(s) ago)
 - ____Before graduation (_____ year(s) and _____ month(s) before graduation)
 - ____ At the time of graduation
 - ____After graduation (_____year(s) and _____month(s) after graduation)

[Self-Efficacy]

4. The following questions are asking your general ideas about your future career. Imagine you are trying to get a full-time job <u>at the time you indicated</u> <u>previously</u> and maintain employment for a relatively long period of time (e.g., 1 year or more). Please indicate the extent of how important you think the following statements are.

No.	Item		npletel nporta	ly N nt N	leutra	1	Extremely important	
1	Making plans concerning my occupational future	1	2	3	4	5	6	7
2	Setting goals in my career that I can achieve	1	2	3	4	5	6	7
3	Handling unexpected problems that occur in my work*	1	2	3	4	5	6	7
4	Being able to avoid learning new things in my job when they look too difficult for me (R)	1	2	3	4	5	6	7

5	Trying harder when something doesn't work in my job immediately*	1	2	3	4	5	6	7
6	Being secure about my professional abilities	1	2	3	4	5	6	7
7	Being self-reliant as far as my job is concerned	1	2	3	4	5	6	7
8	Being able to give up easily when something doesn't work well (R)	1	2	3	4	5	6	7
9	Being capable of dealing with most problems that come up in my job*	1	2	3	4	5	6	7
10	Managing to solve difficult problems in my job	1	2	3	4	5	6	7
11	Handling unforeseen situations in my job*	1	2	3	4	5	6	7
12	Having a back-up plan when I am in trouble at my work	1	2	3	4	5	6	7
13	Remaining calm when facing difficulties in my job*	1	2	3	4	5	6	7
14	Finding several solutions when I am confronted with a problem in my job	1	2	3	4	5	6	7
15	Dealing efficiently with unexpected events in my job*	1	2	3	4	5	6	7
16	Being able to handle my job no matter what comes my way	1	2	3	4	5	6	7
17	Being prepared for my occupational future is important for me	1	2	3	4	5	6	7
18	Meeting the goals that I set for myself in my job	1	2	3	4	5	6	7
19	Being prepared to meet most of the demands of my job	1	2	3	4	5	6	7

(R) Recoded items* Items used in the analysis

[Outcome Expectations]

5. The following questions are asking your general ideas about your future career. Imagine you are trying to get a full-time job <u>at the time you indicated</u> <u>previously</u> and maintain employment for a relatively long period of time (e.g., 1 year or more). Please indicate the extent of how important you think the following statements are.

No.	Item	Completely unimportant Neutral				mely rtant		
1	Earning an attractive salary*	1	2	3	4	5	6	7
2	Receiving generous benefits*	1	2	3	4	5	6	7
3	Going into a field with high monetary rewards*	1	2	3	4	5	6	7
4	Getting respect from other people	1	2	3	4	5	6	7
5	Having a career that is valued by my family	1	2	3	4	5	6	7
6	Doing work that can make a difference in people's lives	1	2	3	4	5	6	7
7	Doing work that I find satisfying**	1	2	3	4	5	6	7
8	Increasing my sense of self-worth**	1	2	3	4	5	6	7
9	Doing exciting work**	1	2	3	4	5	6	7
10	Having the right type and amount of contact with other people**	1	2	3	4	5	6	7

* Items used in the analysis for the physical reward dimension

** Items used in the analysis for the self-evaluative outcome dimension

[Forced Choice Question]

6. When making a job or career choice <u>at the time you indicated previously</u>, which of the following will you consider more important? Please choose only one of the two options provided below. Put a check mark next to your choice of the two options.

Getting a job which I can do well	Getting a job in which I can earn	
with the skills that I will have	generous salary, respect, and	
	satisfying fulfillment.	

[Pragmatic Self vs. Idealistic Self]

7. Please think about yourself **at the time you indicated previously** and indicate the extent to which you agree or disagree with each of the following statements.

No.	Item	Strongly disagree		Neutral		1	Strongly agree	
1	"Mostly guided by practical considerations" would best describe me.	1	2	3	4	5	6	7
2	"Standing up for my ideal beliefs" would best describe me.	1	2	3	4	5	6	7
3	"Making decisions that maximize my self- interest" would best describe me.	1	2	3	4	5	6	7
4	"Contributing to my community" would best describe me.	1	2	3	4	5	6	7
5	"Focusing on financial issues" would best describe me.	1	2	3	4	5	6	7
6	"Fulfilling my inner potential" would best describe me.	1	2	3	4	5	6	7
7	"Paying attention to pragmatic constraints on what I need to do" would best describe me.	1	2	3	4	5	6	7
8	"Putting my values and principles above all other considerations" would best describe me.	1	2	3	4	5	6	7

Items 1, 3, 5, and 7: pragmatic self Items 2, 4, 6, and 8: idealistic self [Perceived Support]

8. If you were to select the career you want <u>at the time you start your career</u>, how likely would you be to...

No.	Item	Not at all Likely		Neutral			Extremely likely	
1	Have access to a "role model" in this field (i.e., someone you can look up to and learn from by observing)?	1	2	3	4	5	6	7
2	Feel support for this decision from important people in your life (e.g., teachers)?*	1	2	3	4	5	6	7
3	Feel that there are people "like you" in this field?*	1	2	3	4	5	6	7
4	Get helpful assistance from a mentor, if you felt you needed such help?	1	2	3	4	5	6	7
5	Get encouragement from your friends for pursuing this career?*	1	2	3	4	5	6	7
6	Get helpful assistance from your advisor?	1	2	3	4	5	6	7
7	Feel that your family members support this decision?	1	2	3	4	5	6	7
8	Feel that close friends or relatives would be proud of you for making this decision?*	1	2	3	4	5	6	7
9	Have access to a "mentor" who could offer you advice and encouragement?*	1	2	3	4	5	6	7

* Items used in the analysis

[Perceived Barriers]

9. If you were to select the career you want <u>at the time you start your career</u>, how likely would you be to...

No.	Item	Not Lik	at all ely		Neutral		Extren like	nely ly
10	Receive negative comments or discouragement about your career from family members?*	1	2	3	4	5	6	7
11	Worry that such a career path would require too much time or schooling?*	1	2	3	4	5	6	7
12	Feel that you don't fit in socially with other students in this career?*	1	2	3	4	5	6	7
13	Receive negative comments or discouragement about your career from your friends?*	1	2	3	4	5	6	7
14	Feel pressure from parents or other important people to change your career to some other profession?*	1	2	3	4	5	6	7

* Items used in the analysis

10. Please describe in detail what you future career will be like.

The following questions are about general information about you. You may skip any questions that are not relevant to you.

- 1. Your age: _____
- 2. Your gender: ____ Male ____ Female
- 3. Your citizenship
 - ____ U.S. citizen
 - ____ International (permanent resident)
 - ____ International (non-permanent resident)
- 4. Your ethnicity (check one):

Caucasian	Hispanic
	^

African American	Pacific Islander

- _____Native American _____Mixed (please specify) ______
- _____ Asian American _____ Other (please specify) ______
- 5. Your major: _____
- 6. Have you had an internship before? ____ Yes ____ No
 - If so, how many internships have you had? _____

Please indicate the total length of internship(s) _____ year(s) _____ month(s)

7. Have you ever been employed? (either full time or part time) Yes No
If so, how many jobs have you had? _____

Please indicate the total length of employment ____ year(s) ____ month(s)

8. Are you currently employed? ___ Yes ___ No
How many hours do you work per week? ____ hours per week
How long have you been working for the current employer? _ year(s) __ month(s)
Please indicate your job title (e.g., sales representative, manager, etc)

How would you describe your current job?

9.

	Administration/Support		Management/Business/Finance
	Agriculture/Horticulture		Manufacture/Production Operation
	Architecture/Construction		Public Service/Military
	Art/Design/Fashion		Sales/Retailing/Marketing
	Education/Publishing		Science/Engineering/Computer
	Food/Hospitality Service		Social Service
	Journalism/Media/Advertisement		Sports/Entertainment
	Legal/Law Enforcement		Transportation/Travel
	other (please specify)		
9. Are y	rou currently looking for a job? Ye	s	No
If so,	please indicate the type of employment		_Full time Part time
How	long have you been looking for a job?		_year(s) month(s)
Pleas	e indicate the name of job you are looki	ng f	õr.
10. How	would you describe your future job?		
	Administration/Support		Management/Business/Finance
	Agriculture/Horticulture		Manufacture/Production Operation
	Architecture/Construction		Public Service/Military
	Art/Design/Fashion		Sales/Retailing/Marketing
	Education/Publishing		Science/Engineering/Computer
	Food/Hospitality Service		Social Service
	Journalism/Media/Advertisement		Sports/Entertainment
	Legal/Law Enforcement		Transportation/Travel
	other (please specify)		

Thank you for participating in this study.

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