

Spring 2016

Going For The Goal: The Effect Of Subjective Temporal Distance On Goal Selection

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GOING FOR THE GOAL: THE EFFECT OF
SUBJECTIVE TEMPORAL DISTANCE
ON GOAL SELECTION

being

A Thesis Presented to the Graduate Faculty
of the Fort Hays State University in
Partial Fulfillment of the Requirements for
the Degree of Master of Science

by

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ABSTRACT

Goals are often classified into two types, intrinsic and extrinsic. Intrinsic goals are furnished when one finds an activity inherently interesting or pleasurable (Abuhamdeh & Csikszentmihalyi, 2009), whereas extrinsic goals are created when one seeks a reward from an external force (Gunnell, Crocker, Mack, Wilson, & Zumbo, 2014). The pursuit of intrinsic goals represents the purest form of autonomy, which is a staple of positive psychological well-being, and promotes greater task orientation (Nie, Chua, Yeung, Ryan, & Chan, 2014). The current study explores the effects of subjective temporal distance on the selection of intrinsic or extrinsic goal pursuit. Construal Level Theory posits that goals set in low construal are more concrete and feasible, increasing the likelihood of goal progress (Trope & Liberman, 2010). Based on CLT and the task orientation associated with intrinsic goals, it is postulated that intrinsic goals are represented in low construal. Additionally, it is hypothesized that the selection of intrinsic or extrinsic goals will vary according to the temporal distance between the present and the goal. It is predicted that participants induced to perceive high level construal will be more likely to work towards an extrinsic goal. Conversely, participants primed to perceive a low level of construal will be more likely to select an intrinsic goal. There has been little research examining the effect of temporal distance on pursuit of intrinsic or extrinsic goals. Research into this area is important for psychotherapy because intrinsic goal pursuit has shown benefits in the areas of education and psychological well-being.

ACKNOWLEDGEMENTS

I would like to express my gratitude to my thesis committee members: Dr. Park, Dr. Hill, Dr. Herrman, Dr. Davis and Gina Smith. Without their continued support, encouragement, and wealth of ideas, this project would not have become all that it is. Additionally, I cannot extend enough thanks to my fellow peers, who lent their ears and sacrificed their time to aid in the development of this project. The hours and the laughs spent pouring over our thesis projects will never be forgotten.

Lastly, I would like to thank my wonderful family. Their words of strength, perspective, and humor kept me grounded during this time. I am eternally grateful to all they have sacrificed to allow me the opportunity to earn a Master's degree. Though miles apart, they were always close in my heart.

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INTRODUCTION

As shown by history, numerous world records were set by many high goal achieving people. In 1932, Amelia Earhart accomplished her daring transatlantic flight. She was the first woman to fly solo, non-stop across the Atlantic Ocean (“Amelia Earhart Biography,” 2016). In 1975, Evel Knievel set a world record by jumping a whopping 14 greyhound buses on his motorcycle. Although he later went on to enter the Guinness World Records for breaking the most bones in a lifetime (“The Man: Legendary Evel,” 2016). Michael Phelps, at the age of 30, is a world renowned swimmer. He has received the World Swimmer of the Year Award seven times, and holds the all-time record for winning the most Olympic gold medals (“Michael Phelps,” 2016).

The population of high goal achieving individuals is not exclusively made up of world record holders, but is also comprised of college students. Each year, approximately 1.8 million students graduate from four-year universities and obtain their baccalaureate degrees. They participate in numerous classes, stay up until dawn completing homework, and balance work and social life on top of school. In 2013, the National Center for Education Statistics reported 40 percent of students work while attending college full time (“Characteristics of Postsecondary Students,” 2015). None of these achievements are easy feats that can be accomplished on a whim; they necessitate long-term goals.

Goals are cognitive representations of future events that people pursue (Ellilot & Niesta, 2009). The purpose of a goal is to guide behavior to increase the likelihood that a future object may be approached or may be avoided. All goals reside in the future and

could represent short-term or long-term goals. Short-term goals are often conceptualized as immediate and concrete (Steca, Monzani, Greco, D'Addario, Cappelletti, & Pancani, 2015). They can also be achieved in a relatively short time period, such as a few months (Boersma, Maes, Joekes, & Dusseldorp, 2006). Conversely, long-term goals are more abstract, intensive, and take a number of years to achieve.

According to Piaget, children begin to show goal-directed behaviors between eight and twelve months of age (Miller, 2011). Goal-directed behaviors are executed intentionally to bring about a specific outcome (Klossek, Russel, & Dickinson, 2008). For instance, a child may move an object in order to reach his or her favorite toy. The event can be explained as a means-end relationship. The presence of goal-directed behaviors at a young age suggests that goals serve a purpose. For example, goals increase motivation, the likelihood of reaching a desired outcome, overall well-being, and are often an essential element of therapy (Pueschel, Schulte, & Michalak, 2011).

In general, goal presence elicits motivation to reach a set goal. Motivation can be described as the amount of energy, effort, and resources one allocates to goal pursuit and it may be autonomous or controlled (Aarts, Custers, & Veltkamp, 2008). Autonomous motivation is self-directed, whereas controlled motivation is regulated by external forces (Koestner, Otis, Powers, Pelletier, & Gagnon, 2008). Both types of motivation may be attributed to meeting basic needs, obtaining a desired outcome, or avoiding an undesired outcome (Olsson, 2008).

In an academic setting, motivation is essential for students to reach academic success, which is often a goal they seek to achieve. According to achievement goal theory, students endorse two types of achievement goals: mastery or performance goals (Diseth & Kobbeltvedt, 2010). Those who develop mastery goals measure competence in regards to how well the information is retained and understood. Mastery goals may be generated by students with dominant intrinsic, rather than extrinsic motivation (Van Yperen, 2006). Intrinsically motivated students seek a thorough understanding of the material that they find inherently interesting. Conversely, those with performance goals judge competence by how well they perform as compared to others. Performance goals reflect extrinsic motivation, where the end goal is to obtain a higher course grade than other students, and thus, gain approval of their peers (Svanum & Aigner, 2011).

Harackiewicz, Barron, Tauer, and Elliot (2002) found that achievement goals in college freshmen positively correlated with academic achievement. The presence of performance goals was predictive of course grades, whereas mastery goals predicted amount of interest in a course. Course grades and interest in the material are important for academic success, however; unrealistic expectations of performance and ability to understand the material can be maladaptive. Extremely high expectations or personal standards is termed as perfectionism (Eum & Rice, 2011). Personal standards are generated by students who hold performance or mastery goals, however; performance goals, more so than mastery goals, have been linked to negative reactions for imperfection or failure and more concern regarding mistakes (Stoeber, Stoll, Pescheck, &

Otto, 2008; Hall, Kerr, Kozub, & Finnie, 2007). These perfectionistic concerns associated with performance goals are indicative of psychological and emotional distress, such as depression and anxiety (Kobori, Yoshie, Kudo, & Ohtsuki, 2011; Stoeber & Eissman, 2007). Additionally, the research conducted by Stoeber and Eissman (2007) linked negative reactions to imperfection with greater extrinsic motivation. While unrealistic goal setting can be maladaptive, the presence of realistic goals is important for the academic success of college students. In addition to academic achievement, goals are suggestive of psychological well-being.

Goal progress and attainment are linked to overall feelings of psychological well-being. High positive affect, low negative affect, and life satisfaction combine to describe subjective well-being (MacLeod, Coates, & Hetherington, 2008). A study conducted by Sheldon et al. (2010) suggested that individuals whose goals supported feelings of autonomy, competence, or relatedness in life ranked higher in well-being than those who set goals to improve life circumstances. Furthermore, higher ratings of subjective well-being paralleled efficient progress towards a goal. Thus, type of goal and continued goal pursuit can be indicators of psychological well-being.

Another type of goal that people often strive for are life goals. Life goals, or aspirations, are internalized by the individual and represent what he or she strives for across the life span (Kasser & Ryan, 2001). They are important for functioning, decision-making, and guiding one's behavior. Kasser and Ryan (1993, 1996) developed a list of popular life goals for their Aspiration Index. The Aspiration Index measured the

importance of eight various life goals and the likelihood that it will be obtained in the future. The Aspiration Index was later revised in 2005 when three additional scales were added to the index (Grouzet et al., 2005). The life goals are comprised of intrinsic and extrinsic contents. Intrinsically oriented life goals included affiliation, community feeling, physical health, hedonism, safety, self-acceptance, and spirituality. Conversely, the extrinsic goals included popularity, conformity, image, and financial success. The Aspiration Index has a broader implication and is useful to understand people's behavior behind their longer-term goals as stemming from an internal or external drive. Aspiration Index can also be utilized to understand why and how people set the goal and show their general everyday behavioral pattern. The intrinsically and extrinsically oriented goals were constructed according to the self-determination theory.

Self-Determination Theory

Self-determination theory (SDT) is a well-researched theory of human motivation. It proposes that personality and the self-regulation of behavior stems from internal and external processes, such as motivation and life goals (Ryan & Deci, 2000). Internal and external processes are reinforced by the construct of autonomy. Central to SDT, is the importance of autonomy as part of a basic psychological need. According to Ryan and Deci (2008), autonomy is the self-endorsement of one's own behavior. Additionally, autonomous actions are based on pleasure, interest, and personal choice (Nie, Chua, Yeung, Ryan, & Chan, 2014). SDT articulates two kinds of motivation that harbor autonomy: intrinsic and extrinsic.

Intrinsic motivation promotes the pursuit of activities because the individual finds them inherently interesting (Abuhamdeh & Csikszentmihalyi, 2009). Intrinsically motivated behaviors are purely autonomous because they are self-determined. The pursued activities typically provide enjoyment and are completed with high levels of performance. On the other hand, activities pursued as a result of extrinsic motivation are engaged in as a means to an end. Completion of the activities yields rewards and positive social judgments. However, some extrinsically motivated behaviors can become autonomous when the individual identifies the instrumental value of the behavior for the future, rather than its inherent interest (Ryan & Deci, 2000). For example, a student may be motivated to study for an English exam, not because the material is interesting or pleasurable, but because the material has value for his or her future career.

Research suggests that intrinsic goals are more present-oriented than extrinsic goals (Bilde, Vansteenkiste, & Lens (2011). Individuals focused on intrinsic goals are immersed in the activities necessary for goal pursuit. Whereas individuals pursuing an extrinsic goal are focused on an external, future reward. However, intrinsic and extrinsic motivation each create a willingness to work towards a goal.

SDT recognizes a third type of motivation, amotivation, a state of lacking motivation (Shen, 2015). Amotivation is constructed by deficient effort, value, ability, and unappealing tasks (Legault, Green-Demers, & Pelletier, 2006). Amotivation may be seen in individuals who suffer from depression. An amotivated individual does not act with intention or purpose and this attitude often results in the absence of engagement in

activities, such as in the school classroom (Cheon & Reeve, 2015). To curb the effects of amotivation, specifically in the classroom, Cheon and Reeve (2015) suggest creating an autonomy-supportive environment. For example, a teacher expresses openness to a student's perspectives, incorporates their suggestions, and generates interesting activities. This environment in turn encourages the student to take a more active, self-determined role in their education. While an autonomous form of motivation is essential for goal progress, a sub-theory of SDT, Goal Contents Theory, describes the behavioral impact of the goals' content.

Goal Contents Theory (GCT) postulates how the content of a goal affects performance, behaviors, and overall well-being (Deci & Ryan, 2000). The aforementioned Aspiration Index was constructed in concordance with this sub-theory. Similar to motivation, goal contents can also be intrinsically or extrinsically oriented. Intrinsic goal contents are inherently rewarding and often focus on satisfying basic psychological needs, such as relatedness, competence, and autonomy (Sheldon, Ryan, Deci, & Kasser, 2004). Although extrinsic goal contents are rewarding, the reward comes from external forces, such as peer comparisons and judgements (Gunnell, Crocker, Mack, Wilson, Zumbo, 2014). Additionally, type of goal content can lead to different types of motivation, including autonomous and controlled motivation.

There are various implications for focusing on goals with intrinsic or extrinsic content. In the educational setting, students who attend to intrinsic goal contents demonstrate a deeper engagement and more persistence in learning material than students

who attend to extrinsic goal contents (Vansteenkiste, Lens, & Deci, 2006). Thus, intrinsic goal content promotes greater task-orientation. Similarly, engaging in exercise was more meaningful and enjoyable for individuals who sought exercise to better their own health, therefore focusing on the intrinsic goal content (Reeve, 2012; Vansteenkiste, Simons, Soenens, Lens, 2004). It was suggested that future intrinsic goals, compared to extrinsic goals, promote a deeper commitment, persistence, and enhanced performance with behaviors necessary for goal pursuit.

Intrinsic and extrinsic goal contents and motivations are also related to psychological well-being. SDT posits that three constructs make up basic psychological need: autonomy, relatedness, and competence. Autonomy includes the ability of one to select his or her own behaviors or choices. Relatedness refers to one's feelings of connectivity and harboring meaningful relationships with others (Sheldon & Filak, 2009). According to Niemiec & Ryan (2009), an individual meets the need for competence when he or she feels a concept has been mastered or a behavior implemented effectively. Satisfaction of these needs induces the more optimal intrinsic motivation and facilitates positive psychological outcomes, such as fewer depressive symptoms (Deci & Ryan, 2008).

Lower psychological well-being has been noted in individuals who place more importance on extrinsic, rather than intrinsic, goals (Sheldon, Ryan, Deci, & Kasser, 2004). Extrinsic goals prompt individuals to look to external forces for social comparison and self-worth. Depending on others for determining one's self-worth is often associated

with lower self-esteem and thus, lower psychological well-being. Conversely, intrinsic goal content has a positive relationship with well-being because it is supported by the basic psychological needs of competence and autonomy (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). Furthermore, the pursuit of intrinsic goals is inherently satisfying and thus, reward comes from the self rather than others. The locus of reward with intrinsic and extrinsic goal content differs, but all goals share one characteristic, they are future-oriented. Goals set in the far future are psychologically distant from the present.

Construal Level Theory

A common measurement of psychological distance is time, such as the time until an event is perceived to occur. One theory that demonstrates the relationship between the psychological distance of an event and its perception is the Construal Level Theory (CLT). CLT was described by Trope and Liberman (2010) as a medium to explain how people think, plan, perceive, and generate action plans for the future. The future cannot actively be experienced, thus individuals must transcend the present to make predictions about what the future holds. Predictions about the future guide the actions, choices, and decisions that are made in the present. Additionally, the way activities, objects, or events are construed influences one's preference of an option in the near or distant future (Trope & Liberman, 2000). Preferences are strengthened or weakened through the way these objects are mentally represented. Mental representations are guided by level of construal, which, as CLT proposes, is affected by temporal distance. Thus, we make choices and set

preferences with respect to our construals of objects rather than the objects themselves. The influence of temporal distance on mental construal is described by level of construal.

According to CLT, there are two levels of construal: Low-level construal and high-level construal. The levels are separated on a dimension of temporal distance, or time. Low construal is associated with perceptions or representations of objects and events in the near-future, while high construal is associated with the distant-future. Events in the near-future, low-level construal, are composed of concrete details, facts, and descriptions (Trope and Liberman, 2010). While the levels of construal may seem to exist as separate entities, they occur on a continuum. As the psychological distance from the present increases, the event becomes less concrete and more abstract (Trope & Liberman, 2003).

A common depiction of high and low construal is “seeing the forest or the trees” (Fujita, 2008). Driving along a winding road, one may see a forest in the distance. The forest is an abstract representation of itself because only broad aspects and few details can be seen. Yet, as the distance between the car and the forest decreases, the trees themselves become more pronounced. In close proximity to the trees, one can describe the trees in detail, such as the height of the trees, the color and texture of the bark and leaves, and the animal life that resides in the trees. In other words, the forest represents the abstract, distant, high level of construal, whereas the trees represent the detailed, near, low level of construal.

The way an object or event is construed dictates the way it is mentally represented. Additionally, level of construal has been linked to action identification, such that actions described in low-level terms are considered subordinate means, while actions in high-level terms are described as a superordinate purpose. Subordinate means relate to “how” one performs an action and superordinate purpose relates to “why” one performs an action. Thinking in terms of ‘how’ things will be done primes a low construal level of thinking and reflects specific, concrete actions (Freitas, Gollwitzer, & Trope, 2004). Conversely, thinking in terms of ‘why’ certain actions occur primes a high construal level of thinking and reflects general, abstract actions (Trope & Liberman, 2010).

Liberman and Trope (1998) distinguished the subordinate and superordinate action identifications of low and high-level construals, respectively. Participants were split into near-future or distant-future groups and instructed to describe a variety of activities (e.g., reading a science fiction book). Content analysis of the open-ended responses suggested that subordinate, low-level responses produced by the near-future group fit the structure “[activity] by [description].” In other words, participants in the low construal group, described activities in terms of “how” or the means to accomplish the activity (e.g., I read a science fiction book by flipping pages). Thinking in terms of “how” to complete an action makes the action seem more feasible. Conversely, superordinate, high-level responses produced by the distant-future group fit the structure “[description] by [activity]” and thus, fit the description of “why” the activity will be performed or what

purpose the activity serves (e.g., I broaden my horizons by reading a science fiction book).

Thinking about a future goal in terms of “how” an action will be completed represents low construal processes. It allows one to generate concrete, behavioral action plans for goal pursuit. Additionally, goals in the near future are deemed to be higher in feasibility, or the ease at which it can be attained (Liberman & Trope, 1998). Conversely, temporally distant goals are represented as broad, abstract constructs in high level construal. However, distant future goals are often deemed more desirable, such that the outcome is more valuable (Liu, 2008).

Temporal Distance

Temporal distance refers to how far from the present a future event is set to occur. For instance, a college exam scheduled for three days from the present may be considered a near-future event. On the other hand, a college final exam scheduled for three months from the present would be conceptualized as a distant-future event. As a basic premise of Construal Level Theory (CLT) the more temporally distant an event is, the more it will be represented at higher levels of abstraction (Trope, Liberman, & Wakslak, 2007). Thus, temporal distance as a measure of time is a key factor in determining level of abstraction, and hence, level of construal (Liberman, Sagristano, & Trope, 2002).

An event perceived to occur in the near-future is mentally represented in a low-level construal, where there is an emphasis on concrete details and specific action plans. Conversely, an event perceived to occur in the distant-future is mentally represented in a

high-level construal. When events construed at higher levels the abstract and desirable features of an event are considered. The link between temporal distance and level of construal implies a positive relationship: as temporal distance increases so does the level of abstraction.

Past research has exemplified the link between temporal distance and level of construal. Liberman et al. (2002) suggested that elements of distant-future events are classified into a limited number of broad superordinate categories, whereas the elements of near-future events are classified into a larger number of narrow, subordinate categories. In general, superordinate categories are more abstract than subordinate categories because they are more comprehensive. For instance, the broad category “education” is more all-encompassing than the subordinate categories of “semester courses” and “required textbooks.” In addition to the emphasis placed on construal level and categorization, increasing attention has been given to the way in which an event is thought about.

As events become more distally located, the reason behind the event, the “why,” becomes more prominent than the “how” (Liberman & Trope, 1998). Thinking in terms of “why” is associated high-level construal and “how” with low-level construal. When activities (e.g., studying) were represented in the distant future, they were identified in high-level “why” terms (e.g. doing well in school), as opposed to low-level “how” terms (e.g., reading a book). Thus, as the temporal distance of an event increases it simultaneously increases in abstractness and loses concrete details, which is

representative of high-level construal. Likewise, proximally located events are represented at a lower level of construal with concrete details (Peetz, Wilson, & Strahan, 2009).

Liberman, Trope, McCrea, and Sherman (2007) further identified the relationship between temporal distance and level of construal as bi-directional. When participants were primed to think in terms of “why” and “how” they would like to attain certain goals, they were primed to think in terms of high- and low-level construal, respectively. It was shown, over a series of studies, that those in the high-level, “why” condition consistently rated enactment times as more distant than those in the low-level, “how” condition. The convergence of past research provides evidence for the premise that temporal distance has the ability to change the way future events are construed and vice versa. Not only does temporal distance influence level of construal, but level of construal impacts perceived temporal distance. The positive relationship between temporal distance and level of construal is bi-directional.

Relative to Construal Level Theory, there are two forms of temporal distance; subjective temporal distance and objective temporal distance. Operationally defined, subjective temporal distance refers to how close or far away a future event feels from the present (Peetz et al., 2009). Subjective temporal distance is the perception of closeness or farness from a future event. Unlike subjective temporal distance, objective temporal distance is fixed; one week from today is seven days in the future for everyone. However, depending on one’s perceived subjective temporal distance, one week from today could

feel as though it were in the near-future or the distant-future. Therefore, subjective temporal distance allows one to feel closer to or farther from an event, regardless of the objective distance from the future event. While objective temporal distance cannot be manipulated, alterations of one's subjective temporal distance is possible.

A common method used to alter subjective temporal distance is the timeline procedure. To enact the timeline procedure, participants in the near-future condition are provided a timeline with a set begin date and end date (e.g., 2015 and 2095) and are instructed to mark on the timeline where a specified date (e.g., 2035) would be located. This manipulation aims to create a shorter physical distance between the provided present date and the specified future date; creating a sense of closer temporal distance. Participants in the distant-future condition are given a similar timeline with a set begin date and end date (e.g., 2015 and 2040); however, the set end date is objectively closer in time. By doing so, the mark on the timeline for the specified date actually appears physically farther from the present date on the timeline; creating a sense of greater temporal distance. Using the timeline procedure, participants can be induced to perceive a future event as temporally close or distant. Having been used throughout subjective temporal distance research, the reliability of the timeline procedure has been reinforced by the consistency of the timeline to induce participants to feel subjectively closer to or more distant from a future event (Bashir, Wilson, Lockwood, Chasteen, & Alisat, 2014; Pennington & Roese, 2003; Peetz et al., 2009; Sanna, Change, Carter, & Small, 2006; Wilson, Buehler, Lawford, Schmidt, & Yong, 2012; Wilson, & Ross, 2003).

Using the timeline procedure, Peetz, et al. (2009) showed that future (i.e., graduated) selves could be induced to feel closer to the present by manipulating subjective temporal distance. Additionally, feeling closer to the present created a parallel response in level of construal. Inducing one to perceive their future self as closer to the present elicited thinking in a lower, more concrete construal. Those who were induced to feel closer to their future graduated selves focused on the concrete actions necessary for goal achievement, while those induced to feel more distant from their future selves were more outcome-focused. In addition to generating more concrete actions plans, those induced to feel more temporally proximal to their future selves reported higher levels of motivation to pursue their goal immediately.

Bashir, Wilson, Lockwood, Chasteen, and Alisat (2014) also studied the implications of subjective temporal distance on motivation to achieve distant-future goals. Although the objective date of the impending event remained unchanged, participants were induced to subjectively experience the event as temporally proximal. Findings suggested that individuals induced to view an event as temporally proximal construed the event at a more concrete, low-level construal. The feeling of closeness to the event and the “how” of the low-construal would, in turn, increase motivation to pursue the goal in the present.

In line with Peetz et al. (2009), Bashir et al. (2014) revealed that altering subjective temporal distance was powerful enough to influence individuals’ motivation. Additionally, the actual relationship between subjective temporal distance, concrete

construals, and goal pursuit was discovered. Subjectively perceiving events to feel closer prompts individuals to think in terms of a concrete, “how,” low-construal and thus, increases goal pursuit in the present by enhancing behavioral intentions.

Implementation Intentions

Similar to behavioral intentions are goal intentions, the presence which increases the likelihood of goal attainment. Goal intentions are stated in terms such as, “I intend to do x .” For example, in the statement “I intend to exercise” the goal is identified and acknowledged. Commitment to a goal is prompted by one’s identification and realization of the goal (Gollwitzer, 1999). However, goal intentions do not include the when, where, or how goal attainment will be reached. Sheeran, Milne, Webb, and Gollwitzer (2005) suggest that stating an intention to achieve a goal is not necessarily enough for successful goal attainment. On the path of goal pursuit, many obstacles, distractions, and delays create road blocks that prevent goal intentions from translating into goal-directed behaviors. A step up from goal intentions are implementation intentions. While goal intentions are linked to the self (I intend to do x), implementation intentions maintain actions that are linked to situational cues (I intend to do y , when x occurs).

Implementation intentions also increase the likelihood that a goal will be reached. They add an if-then, situational context to the action plan. Stated as, “If situation y arises, then I will perform goal-directed behavior z ,” goal-directed responses and the situation in which they will be enacted are identified. In a series of studies by Gollwitzer and Brandstatter (1997) it was hypothesized that goal intentions with implementation

intentions would show a higher rate of completion than goal intentions alone. Results showed that completion rates of difficult goals more than tripled when implementation intentions were formed. A meta-analysis of 94 studies examining the effects of implementation intentions found that the formation of implementation intentions had a medium to large effect on successfully reaching goal attainment (Gollwitzer & Sheeran, 2006). Additional support for implementation intentions comes from the notion that goal intentions account for only 20% to 30% of the variance in behavior (Gollwitzer, 1999).

Implementation intentions promote the creation of a detailed action plan that includes a specified situation and action response, thus increasing task orientation. Implementation intentions work to delegate the locus of control to the unconscious, making responses to situational cues automatic. The automaticity of responses decreases the probability of other situational factors overriding pursuit of the identified goal. In that way, goal-directed action responses occur automatically when the situational cue appears. This facilitates the overcoming of obstacles and strengthens the path to goal attainment. Commitment to goal-directed behaviors is enhanced and immediate action is promoted upon the appearance of a situational cue (Gollwitzer & Brandstatter, 1997).

Research conducted by Webb and Sheeran (2007) indicated the implementation intentions are successful in promoting goal attainment because they increase accessibility to situational cues and strengthen the association between the cue and the action response. Cue accessibility and the strength of the association between the cue and the intended action response both significantly predicted goal attainment. Additionally,

together they partially mediated the effect of implementation intentions on goal attainment. Cue accessibility has been related to feeling “perceptually ready” for an event to transpire, while cue-response links allow a person to respond quickly when the situational cue has been identified.

A psychological process underlying the effect of implementation intentions on goal attainment is the formation of mental representations. By furnishing an implementation intention, and thus an if-then plan, links between the identified future situation and goal-directed action response are reinforced. These neural connections continue to be strengthened as one deliberates when the optimal opportunity to act will occur and what the appropriate action will be. Thinking about the ideal if-then plan, activates mental representations of what the situation and action response will look like. In turn, mental representations strengthen the situational cues that will present themselves when the situation arises. The activated situational cues make the goal-directed action response more accessible and thus, more likely to transpire.

In the literature, there has been little research examining the effect of temporal distance on pursuit of intrinsic or extrinsic goals. Furthermore, there is a deficit in the research regarding whether the manipulation of temporal distance between the present and a future goal can sway intrinsic or extrinsic goal selection. However, research has shown that the presenting a goal as occurring in the near future, and thus, low construal promotes the concrete representation of how to reach the goal. Bilde, Vansteenkiste, and Lens (2011), suggest that intrinsic goals are more present-oriented than extrinsic goals, as

individuals are more immersed in the activity at hand than an external, future reward. Furthermore, breaking a large, abstract goal down into steps often makes the goal appear more feasible and accomplishable. One way individuals break down a goal is by creating implementation intentions, which promote engagement in goal-oriented behaviors. Additionally, research suggests that pursuing intrinsically-oriented goals promotes higher persistence and engagement in goal-oriented behaviors. Thus, it can be hypothesized that intrinsic goals reside in the low construal.

Current research with intrinsic or extrinsic goals examines their relation to psychological well-being. Research suggests that endorsement of intrinsic or extrinsic goals is associated with higher, or lower, psychological well-being. According to SDT, psychological well-being is enhanced when the three basic psychological needs are satisfied. These needs include: competence, relatedness, and autonomy. The needs are most strongly supported by intrinsic goal content and motivation. Hence, it can be postulated that those who perceive a goal as occurring the near future, low construal, and select an intrinsic goal to work towards demonstrate greater psychological well-being than those who select abstract goals in the distant future, or high construal. Research into this area is important for psychotherapy because intrinsic goal pursuit has shown benefits in the areas of psychological well-being. This will be further discussed.

The hypotheses are as follows:

H_{1A}: Intrinsic goals are found to be presented at a lower construal level, as they are more present-oriented (Bilde, Vansteenkiste, & Lens, 2011), thus if lower construal level was

primed (by using the timeline method), it was expected that participants would be more likely to select intrinsic goals than extrinsic goals.

H_{1B}: Extrinsic goals are arranged at a higher construal level (Bilde, Vansteenkiste, & Lens (2011), thus if higher construal level was primed (by using the timeline method), it was expected that participants would be more likely to select extrinsic goals than intrinsic goals.

H_{2A}: Feasibility was shown to be presented at a lower construal level (Trope & Liberman, 2010), thus if feasibility was primed it was expected that participants would be more likely to choose/ select intrinsic goals than extrinsic goals.

H_{2B}: Desirability was shown to be presented at a higher construal level (Trope & Liberman, 2010), thus if desirability was primed it was expected that participants would be more likely to select extrinsic goals than intrinsic goals.

H₃: It was expected that if low construal (feasibility and timeline method) was primed, participants would rate themselves higher on the Basic Needs Satisfaction in General Scale than when high construal (desirability or timeline method) was primed because low construal was representative of more concrete, obtainable goals (Trope & Liberman, 2010).

H₄: Based on previous research, it was expected that priming low construal (feasibility and timeline method) would prompt participants to rate the likelihood of reaching the selected goal higher than participants primed to think about high construal (desirability and timeline method) (Liberman & Trope, 1998).

METHOD

Participants

To evaluate the effect of subjective temporal distance, and feasibility and desirability on intentions to select intrinsic or extrinsic goals, 111 participants were recruited from on-campus, general education psychology courses at Fort Hays State University (FHSU). No exclusions were made based on gender, age, ethnicity, or other demographic characteristics. Of the 111 participants, 40 were male and 71 were female, with age ranging from 18 to 52 ($M = 19.88$, $SD = 3.61$). Eight-three participants identified as Caucasian, 16 as Hispanic, 8 as African American, one as Asian, and three identified as Other. Participants included freshman ($n = 61$), sophomore ($n = 26$), junior ($n = 15$), and senior ($n = 9$) status students. The recruited participants also had majors in different colleges at FHSU: 43.2% in the College of Health & Behavioral Sciences, 21.6% in the College of Arts, Humanities, & Social Science, 18% in the College of Science, Technology, & Mathematics, 10.8% were Undecided/Exploratory, 3.6% in the College of Business and Entrepreneurship, and 2.7% were from the College of Education. Participant recruitment occurred via emails sent to class instructors asking for permission to perform the study during a designated class period. Once permission was received from instructors, the researcher announced the research opportunity in class. During the designated class period, participants were read the rights and conditions of the study and given the choice to participate or not participate at this time. Most participants were

compensated for their time via course credit or extra credit based on the instructor's discretion. Time commitment for participants was approximately 15 minutes.

The study utilized a 2(Construal level: near vs. far) x 2(Construal level: feasibility vs. desirability) factorial analysis of variance (ANOVA) design. Both of the independent variables represented aspects of CLT. The levels were broken down into near-future and distant-future, and feasibility and desirability. The dependent variables included selection of intrinsic or extrinsic goals, the likelihood of reaching the selected goal, and score on the Basic Needs Satisfaction in General Scale.

Materials

Informed consent was obtained from participants prior to data collection. Each participant completed a brief demographic questionnaire (see Appendix M). The questions inquired about sex, age, ethnicity, year in college, and expected graduation date. The survey contained no identifying information that could be traced back to the individual to ensure anonymity.

Academic Motivation Scale – College Version. The purpose of the Academic Motivation Scale – College version (AMS-C) was to measure the existence of three types of motivation, as endorsed by SDT: intrinsic, extrinsic, and amotivation (Vallerand et al., 1992). Academic motivation is essential for classroom engagement and without it, students would fail to prosper. Thus, by identifying the strength and type of student motivation, the AMS is pertinent to the field of education. With this information, instructors can tailor their lesson plans and better meet the needs of their students. For

example, if a professor's students consistently scored highest in extrinsic motivation, the professor could enact an autonomous-supportive intervention to increase intrinsic motivation levels.

The original AMS-C, known as the EME, was created in French and translated into English in 1992 (Vallerand, Blais, Briere, & Pelletier, 1989). Similar to the French version, the English AMS-C demonstrated acceptable concurrent and construct validity, and satisfactory internal consistency and test-retest reliability (Vallerand et al., 1993; Vallerand et al., 1992). The AMS-C measures seven constructs related to intrinsic, extrinsic, and amotivation in terms of why an individual attends college. Intrinsic motivation breaks down to intrinsic motivation towards knowledge, accomplishments, and stimulation and extrinsic motivations into external, introjected and identified regulations. Only one subscale measures amotivation, or a lack of intrinsic and extrinsic motivation. Each subscale contains four items which are scored on a seven-point Likert scale, ranging from "Does not correspond at all" to "Corresponds exactly."

Each participant completed the 28-item AMS-C prior to completing the subjective temporal distance timeline procedure (see Appendix K). Scores for intrinsic, extrinsic, and amotivation were calculated by summing the subscales for each respective category. The score was used to determine whether the participant is often intrinsically or extrinsically motivated, or amotivated, in college. Additionally, it served as a source of reference to determine if the subjective temporal distance manipulation was successful.

Subjective Temporal Distance Timeline Procedure. Participants were instructed to visualize themselves at a future point in time (i.e., graduation). Depending on random assignment, participants were presented with a timeline that primed them to perceive the future either as temporally distant or near (see Appendices A and C). In the near-future condition, the timeline began at present day (i.e., 2015) and extend to the year 2040. Participants were then asked to mark their college graduation date on the timeline. This served to manipulate the construal levels by following the past research (Peetz, Wilson, & Strahan, 2009). It was presumed that the longer time span between the present and end date will cause the participant to mark their graduation date physically closer to the present. The apparent physical closeness of the participant's graduation date to the present date should prime participants to feel subjectively closer to their graduation date. In the distant-future condition, the beginning date remained the same, but the end date was be 2020. Thus, participants placed their graduation date respectively more distant from the present, causing their graduation date to seem more physically distant from the present. It is the perception of the physical distance between the present date and the marked graduation date on the timeline that alters one's subjective temporal distance of the event.

Using the timeline procedure, participants can be induced to perceive a future event as temporally close or distant. Having been used throughout subjective temporal distance research, the reliability of the timeline procedure has been reinforced by the consistency of the timeline to induce participants to feel subjectively closer to or more

distant from a future event, although effect sizes were often reported to be small (Bashir, Wilson, Lockwood, Chasteen, & Alisat, 2014; Pennington & Roese, 2003; Sanna, Change, Carter, & Small, 2006; Wilson, Buehler, Lawford, Schmidt, & Yong, 2012; Wilson, & Ross, 2003).

Manipulation Check. To measure the effectiveness of the timeline procedure participants completed an additional scaled question (see Appendices B and D). Participants in the low construal condition were asked to rate if graduation feels close to the present, with “1” being strongly disagree and “10” being strongly agree. Conversely, participants in the high construal condition were asked if graduation feels distant from the present. Scores for the high construal condition were reversed scored in order to create one manipulation check variable for data analysis.

Feasibility and Desirability List. Feasibility and desirability are elements of construal level theory, with feasibility often represented in the low construal and desirability in the high construal (Liberman & Trope, 1998). It is suggested that listing steps for ‘how’ to achieve a goal primes a low level construal of thinking, while listing reasons ‘why’ a goal should be met primes for high construal level thought (Trope & Liberman, 2011).

Each participant read through a list of either four feasible steps or desirable aspects of college graduation (see Appendices E and F). The feasible steps were presented as ‘examples for how to graduate college.’ Some steps were adapted from the Fort Hays State University graduation requirements. The desirable aspects of graduation,

stated as ‘why graduate from college,’ were retrieved from *Education Pays 2013* (College Board, 2013). After reading either list, participants were prompted to develop and record two additional statements pertaining to the feasibility or desirability of graduating from college. Thus, the purpose of reading a feasibility or desirability list and writing additional statements was to lead participants to think in terms of low or high construal.

Aspiration Index. The Aspiration Index was first developed by Kasser and Ryan (1993) to examine the effect of intrinsic and extrinsic life goals, or aspirations, on psychological well-being. The index was later revised in 2005 to measure more constructs related to intrinsic and extrinsic life goals (Grouzet et al., 2005). A factor-analysis of the updated Aspiration Index showed that 11 separate domains constituted the measure. Intrinsic goals consisted of seven domains: Self-acceptance, affiliation, community feeling, physical fitness, spirituality, safety, and hedonism. Extrinsic goals consisted of only four domains: Financial success, social recognition, appealing appearance, and conformity. The 47-item index was validated on a sample of over 1800 college students from 15 different nations. The psychometric properties of the Aspirational Index have also been verified with acceptable levels of internal consistency and cross-cultural validity (Grouzet et al., 2005).

Participants read nine pairings of intrinsic and extrinsic life goals adapted from the Aspiration Index (Grouzet et al., 2005). Eighteen goals were retrieved from the Aspiration Index. Intrinsic and extrinsic goal domains were paired as follows: Hedonism

and Conformity, Physical Fitness and Appealing Appearance, and Self-Acceptance and Social Recognition, with three goals making up each domain (see Appendix G for domain definitions and Appendix H for goal pairings). The goals were counter-paired based on their likenesses in content, but difference in source of motivation. Hedonism and conformity were paired because they both focus on how one's life will be lived, while physical fitness and appealing appearance were paired because of their focus on physical features. Additionally, self-acceptance and social recognition were paired because of their relationship to recognizing behaviors or traits. Goal X denoted the intrinsic goal and Goal Y, the extrinsic goal.

Goal Choice Rating Scale. After the presentation of two competing goals, participants in each condition rated which goal they are more likely to choose to work towards, with “1” being definitely Goal X and “10” being definitely Goal Y. Goal X referred to the intrinsic goal and Goal Y, the extrinsic goal (see Appendix I for an example). The average goal choice was created by summing the participant's rating across the nine goal pairs and dividing by nine.

Measure of Behavioral Intention. To measure behavioral intentions, participants were asked imagine having \$100 and then record how much money they would bet that the goal they selected will be met by graduation (see Appendix J). The more confidence someone has in their likelihood of reaching the goal, the higher the bet amount should be (Van Leijenhorst, Westenber, & Crone, 2008). Willingness to pay is often used in the marketing or economics literature to measure behavioral intentions (Blumenschein,

Blomquist, Johannesson, Horn, & Freeman, 2008; Bigné, Mattila, & Andreu, 2008; Ojea & Loureiro, 2007). Research suggests that willingness to pay increases for near future events, which are highest in feasibility (Trope, Liberman, & Wakslak, 2007). The average behavioral intention rating for each participant was generated by summing his or her bet amount across the nine goal pairs and dividing by nine.

Basic Needs Satisfaction in General Scale. The purpose of the Basic Needs Satisfaction in General Scale (BNSG-S) was to measure the level of competence, relatedness, and autonomy one feels in their life. According to SDT, these three constructs make up basic psychological needs. Competence is endorsed when an individual believes he performed a task or behaved effectively (Niemiec & Ryan, 2009). Relatedness refers to feeling meaningfully connected to others and autonomy includes self-endorsed and self-determined behaviors (Sheldon & Filak, 2008). When the needs of competence, relatedness, and autonomy are met, they contribute to overall psychological well-being.

The BNSG-S was created in 2003 to measure the extent to which individuals feel the three psychological needs were being met in their life (Gagne, 2003). The scale contains a list of 21 statements, with seven covering autonomy, six for competence, and eight over relatedness. Individuals are instructed to respond to each statement on a Likert scale ranging from one, not at all true, to seven, very true. The psychometrics of the BNSG-S were heavily assessed in a 2010 study by Johnston and Finney. Results suggest that competence, relatedness, and autonomy are distinct constructs that do relate to

overall well-being, as posited by SDT. Thus, construct validity was supported. However, the reliability was unsatisfactory, as the variance was not accounted for by each construct.

Participants read through the 21 statements regarding competence, relatedness, and autonomy. After reading each statement, the participant selected on a Likert scale the degree to which they felt the statement is satisfied in their life (see Appendix L). A total score was obtained for the BNSG-S by summing the Likert scale scores for the 21 statements. Additionally, scores were obtained for the facets of competency, relatedness, and autonomy by summing the Likert scale scores for each respective facet.

Procedure

Once participants consented to the study, a packet of materials was passed out. Participants began the study by completing the AMS-C. To manipulate near- versus distant-future conditions, participants completed the timeline procedure. To complete the procedure, they were instructed to mark on the timeline the anticipated date of their college graduation. Next, participants responded to a Likert scale question about how close, or distant, their graduation feels from the present. The question served as an additional tool to solidify the perception of a near-future or distant-future graduation.

Additionally, participants in the near-future and distant-future condition read examples of either feasible or desirable aspects of graduation. The feasibility of graduation was represented by a list of concrete steps for how to achieve graduation, while the desirability was depicted as answers to the question, “Why graduate from

college?” Additionally, participants were prompted to record two ideas for “how to graduate college” or “why graduate from college.”

Participants then viewed nine pairs of competing goals taken from the Aspiration Index. With each presented goal pair, participants rated which goal they were more likely to choose to work towards and how much money they would bet that the goal they choose to work towards this week will be achieved by graduation. Participants then completed the BNSG-S and a demographic questionnaire.

Upon completion of the study, participants were debriefed and thanked for their participation.

RESULTS

Data Cleaning

To begin data cleaning procedures, the frequencies were calculated for the two groups of future distance and construal level. The frequencies were relatively similar across the groups of future distance, near future ($n = 61$) and distant future ($n = 50$), and construal level, feasibility ($n = 55$) and desirability ($n = 56$). The data was then checked for missing values. Substantial missing values were found in four cases for the goal pair selection and the Basic Needs Satisfaction in General Scale (BNSG-S), both dependent variables. Due to the large amount of missing data in each case, as the measures were not completed by the participants, the four cases were deleted.

Goal pair selection, goal intentions, and the BNSG-S Total data were checked for outliers by converting the data to z-scores. No scores were greater than the absolute value of 3.29, representing an absence of outliers (Tabachnick & Fidell, 2001). Z-scores were not generated for the two groups of construal level because of the nominal nature of the data. However, the two groups of future distance and construal level were checked for improbable data by evaluating the minimum and maximum values. No scores exceeded the minimum value of one or the maximum value of two and thus, no improbable data were found.

The homoscedasticity of the data was checked while running a 2 (Near Future vs. Distant Future) x 2 (Feasibility vs. Desirability) factorial ANOVA and a Levene's Test. According to the Levene's Test of Homogeneity, equal variances can be assumed for goal

pair selection $F(3, 107) = 0.26, p = .85$ and goal intentions $F(3, 107) = 0.99, p = .40$; and the BNSG-S Total $F(3, 107) = 0.94, p = .43$. Thus, the assumptions of homoscedasticity were not violated for the three dependent variables.

The normality of the distribution was checked by looking at the skewness and kurtosis of the data. The computed z -scores for skewness and kurtosis for goal pair selection, goal intentions, and the BNSG-S Total were compared against a conservative alpha (.001), corresponding to a z -score of ± 3.29 by following the recommendation of Tabachnick and Fidell (2001). No statistical significance was found in the skewness ($z = 0.10$) or kurtosis ($z = 0.89$) of goal pair selection, in the skewness ($z = -3.48$) or kurtosis ($z = 0.22$) of goal intentions, or in the skewness ($z = -1.72$) or kurtosis ($z = -0.29$) of the BNSG-S Total. Data transformation was not warranted due to the lack of statistical significance in the skewness or kurtosis of the dependent variables.

Main Analyses

Six hypotheses were presented in this study. It was hypothesized that thinking about the distant future (using the timeline method), participants would be more likely to select extrinsic rather than intrinsic goals. Conversely, thinking about near future (by using the timeline method), participants would be more likely to select intrinsic rather than extrinsic goals. It was also hypothesized that if feasibility was primed, participants would be more likely to select intrinsic rather than extrinsic goals. On the other hand, if desirability was primed, participants would be more likely to select extrinsic rather than intrinsic goals. Additionally, it was hypothesized that priming low construal (timeline

method and feasibility) would prompt participants to rate the likelihood of reaching the selected goal higher than participants primed to think about high construal. Lastly, it was hypothesized that if low construal was primed, participants would rate themselves higher on the BNSG-S than when high construal (timeline method and desirability) was primed. To test various hypotheses presented in this study, statistical analyses were performed using temporal distance and feasibility/desirability as independent variables.

An independent samples t-test was performed to determine whether the timeline method had the intended effect on the perception of future distance until graduation. Temporal distance was used as the independent variable and the manipulation check as the dependent variable, $t(109) = 2.53, p = .01$. The results indicated that participants primed to view graduation as occurring in the near future ($M = 5.93, SD = 2.65$) rated graduation as feeling closer to the present than participants primed to view graduation as occurring in the distant future ($M = 4.64, SD = 2.71$; see Figure 1).

Results of the first 2 (Near Future vs. Distant Future) x 2 (Feasibility vs. Desirability) factorial ANOVA, with goal pair selection as the dependent variable, did not show a main effect for temporal distance, $F(1, 107) = 1.15, p = .48, \eta_p^2 = .54$, which indicated that there was no difference between the near future ($M = 3.87, SD = 1.42$) and distant future ($M = 4.24, SD = 1.32$) levels on goal pair selection. Additionally, there was no main effect for feasibility/desirability, $F(1, 107) = 0.04, p = .88, \eta_p^2 = .04$. This finding indicated that there was no difference between the participants primed to think in terms of feasibility ($M = 4.02, SD = 1.30$) and desirability ($M = 4.04, SD = 1.38$) on goal

pair selection. The analysis did not yield a significant interaction between temporal distance and feasibility/desirability, $F(1, 107) = 1.62, p = .21, \eta_p^2 = .02$. Thus, the initial two hypotheses were not supported by the current data.

Results of the second 2 (Near Future vs. Distant Future) x 2 (Feasibility vs. Desirability) factorial ANOVA, with goal intentions as the dependent variable, did not show a main effect for temporal distance, $F(1, 107) = 0.10, p = .81, \eta_p^2 = .09$. This finding showed that there was no difference between the near future ($M = 66.34, SD = 25.53$) and distant future ($M = 68.65, SD = 24.02$) levels on goal intentions. There was also no main effect for feasibility/desirability, $F(1, 107) = 0.26, p = .70, \eta_p^2 = .21$, which indicated that there was no difference between the participants primed to think in terms of feasibility ($M = 69.55, SD = 24.60$) and desirability ($M = 67.38, SD = 24.77$) on goal pair intention. The analysis did not show a significant interaction between temporal distance and feasibility/desirability, $F(1, 107) = 2.21, p = .14, \eta_p^2 = .02$. Thus, the fourth hypothesis was not supported by the current data.

A 2 (Near Future vs. Distant Future) x 2 (Feasibility vs. Desirability) multivariate analysis of variance (MANOVA) was performed to examine the effect of temporal distance and feasibility/desirability on three BNSG-S subscales (Autonomy, Relatedness, and Competency). The Wilks' Lambda analysis suggested that there was no main effect for temporal distance, $F(3, 105) = 2.12, p = .10, \eta_p^2 = .06$, or feasibility/desirability, $F(3, 105) = 0.76, p = .52, \eta_p^2 = .02$, on the overall score of the three subscales. Additionally, the analysis did not show a significant interaction for temporal distance or

feasibility/desirability, $F(3, 105) = 0.46, p = .71, \eta_p^2 = .01$. Thus, the current data does not support the third posed hypothesis. A univariate analysis showed no difference in all conditions (see Table 1) except for Relatedness, $F(1, 110) = 6.31, p = .01, \eta_p^2 = .06$. This indicated that there was a statistically significant difference between the near future ($M = 46.25, SD = 6.01$) and distant future ($M = 43.10, SD = 7.14$) levels regarding relatedness. Participants in the near future condition showed a higher level of relatedness, or their ability to form meaningful relationships with their peers.

[Insert Table 1]

A MANOVA was performed to explore the effect of sex on autonomy, relatedness, and competency; subscales of the BNSG-S. According to Wilks' Lambda, there was no main effect for sex, $F(3, 107) = 2.02, p = .12, \eta_p^2 = .05$. A univariate analysis showed no main effect for autonomy, $F(1, 110) = 0.75, p = .39, \eta_p^2 = .01$, or competency, $F(1, 110) = 1.68, p = .20, \eta_p^2 = .02$. However, a main effect was found for relatedness, $F(1, 110) = 6.00, p = .02, \eta_p^2 = .05$, which indicated that females ($M = 46.00, SD = 5.93$) rated themselves higher in relatedness than males ($M = 42.80, SD = 7.55$).

Additionally, the effect of sex on intrinsic and extrinsic motivation orientations was explored by performing a one-way between-subjects ANOVA. While no main effect was found for intrinsic motivation, $F(1, 110) = 1.62, p = .21$, there was a main effect for extrinsic motivation, $F(1, 110) = 3.83, p = .05$. This result suggested a significant difference between the ratings of extrinsic motivation for males and females.

Specifically, females ($M = 70.58$, $SD = 9.74$) rated themselves higher in extrinsic motivation than males ($M = 66.53$, $SD = 11.70$).

A multiple linear regression was performed to determine the predictive capabilities of autonomy, relatedness, and competency on goal selection. Goal selection served as the criterion variable and autonomy, relatedness, and competency served as the predictor variables. Results of the analysis suggested an acceptable model fit ($R^2 = .17$) and that the model was a statistically significant predictor of the criterion variable $F(3, 107) = 7.24$, $p < .001$. The analysis showed a main effect for autonomy on goal selection, $t(110) = -3.40$, $p < .01$, $\beta = -.38$, indicating that autonomy was a unique predictor of the criterion. Higher ratings of autonomy were associated with lower ratings on the goal selection scale, which indicated a greater likelihood of selecting to work towards an intrinsic goal. Additionally, there was a main effect for relatedness on goal selection, $t(110) = 2.52$, $p = .01$, $\beta = .27$, indicating that relatedness was a unique predictor of the criterion. Higher ratings of relatedness were associated with higher ratings on the goal selection scale, which indicated a greater likelihood of selecting to work towards an extrinsic goal. The analysis did not yield a main effect for competency on goal selection, $t(110) = -1.33$, $p = .19$, $\beta = -.15$ (Refer to Figure 4 for a scatterplot of the standardized residuals and standardized predicted scores).

An additional multiple linear regression was performed to examine the predictability of goal selection, using the Academic Motivation Scale subscales of transformed intrinsic motivation, extrinsic motivation, and transformed amotivation as

predictor variables. Of the three subscales, only transformed intrinsic motivation scores significantly predicted the goal selection, $t(110) = -2.349, p = .01, \beta = -.29$. A higher level of transformed intrinsic motivation predicted a lower rating on the goal selection scale, which indicated a greater likelihood of selecting an intrinsic goal.

DISCUSSION

The purpose of this study was to explore the effect of subjective temporal distance and construal level on one's decision to work towards intrinsic or extrinsic life goals. Multiple hypotheses were generated to explore this potential effect. It was first hypothesized that priming participants for low construal, using the timeline method, would increase their likelihood of selecting to work towards intrinsic goals. Conversely, participants primed for high construal, using the timeline method, were expected to have a higher likelihood of selecting extrinsic goals to work towards. The timeline method allowed for the participant's subjective temporal distance to be manipulated. If low construal was primed, it was believed that participants would perceive graduation as an event set to occur in the near future. On the other hand, if high construal was primed, participants would be more likely to perceive graduation as an event that is distant from the present. It was also hypothesized if feasibility, represented in the low construal, was primed, participants would be more likely to select intrinsic rather than extrinsic goals. On the other hand, if desirability, represented in the high construal, was primed, it was expected that participants would be more likely to select extrinsic rather than intrinsic goals to work towards.

Analysis of the manipulation check data demonstrated a significant difference between participants primed for near or distant future using the timeline method. These results suggested that participants primed to view graduation as a near future event, rated graduation as feeling closer to the present than participants primed to view graduation as

an event distant from the present. In line with research conducted by Peetz, Wilson, and Strahan (2009), these results further elude to the strength of the timeline method for manipulating subjective temporal distance.

While the strength of the timeline method was corroborated, its hypothesized effect on the decision to select intrinsic or extrinsic goals to work towards was not supported. Data analysis showed no difference in the goal selection of participants primed for low construal or high construal via the timeline method or feasibility and desirability lists/writing prompts. Thus, participants primed for low construal were not more likely to select intrinsic or extrinsic goals than those primed for high construal, and vice versa. Past research suggested a relationship between low construal and intrinsic goals based on the sharing of similar features.

Low construal-oriented thought processes promote the construction of concrete action plans and produce greater task-orientation (Liberman & Trope, 2010). Concrete action plans increase persistence and the likelihood of goal attainment (Gollwitzer & Sheeran, 2006). Similarly, intrinsic goal pursuit promotes higher persistence and engagement in goal-oriented behaviors (Vansteenkiste, Lens, & Deci, 2006). Bilde, Vansteenkiste, and Lens (2011) conceptualized this idea by suggesting that intrinsic goal pursuit is therefore present-oriented because individuals are immersed in the activity at hand, and not the value of a distant future, external reward. Thus, low construal and intrinsic goals both reside in the near future and promote persistence and engagement in the behaviors necessary for goal attainment.

According to the results of this study, the similarities present between low construal and intrinsic goals were not influential enough to have an impact on the decision-making process for goal selection. It is possible that changing one's perception of a future event (e.g., graduation) does not relate to the selection of goals that do not pertain to the future event. In other words, while the timeline method was successful in manipulating the participant's subjective temporal distance, their near or distant future orientation may not have applied to the goal pairings because attaining the provided goals is not necessary in order to obtain the over-arching goal of graduation. Additionally, the selection of a goal to work towards is complex and related to more factors than the perception of time, feasibility, and desirability. For instance, an individual may consider the availability of resources, where the particular goal ranks amongst other goals, the needs of family members, and other occupational or social obligations.

Another explanation for the results can be deduced to the idea that most individuals are not solely intrinsically or extrinsically oriented. The goals presented to the participants were drawn from a wide range of domains, including hedonism, physical fitness, self-acceptance, conformity, appealing appearance, and social recognition. According to Grouzet et al. (2006), hedonism, physical fitness, and self-acceptance goals are comprised of intrinsically oriented content, while conformity, appealing appearance, and social recognition goals are extrinsically oriented. Prior to any manipulation, individuals may have had a preference for intrinsic and extrinsic goals based on the

domain. Thus, the brief manipulations may not have been strong enough to alter one's preference in the way of becoming entirely intrinsically or extrinsically oriented.

It was further hypothesized that priming low construal, using both manipulations, would prompt participants to rate themselves higher on the BNSG-S than those primed for high construal. The current data did not lend support to the hypothesis as the results indicated no difference between the two levels of construal and overall BNSG-S scores. However, when the BNSG-S was broken down into the subscales of autonomy, relatedness, and competency, a significant difference was found between temporal distance and relatedness. Individuals primed to think in terms of the near future rated themselves higher in relatedness than those primed to think in terms of the distant future.

According to Self-Determination Theory, psychological well-being has a positive relationship with intrinsic goal content because competency and autonomy are fostered (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). Conversely, lower psychological well-being has been found in individuals who place more emphasis on extrinsic goals because external sources are sought after for reward (Sheldon, Ryan, Deci, & Kasser, 2004). The desired results may not have been found because the manipulations were unsuccessful in priming individuals to select intrinsic or extrinsic goals. Thus, the BNSG-S may have measured the participant's current level of overall psychological well-being, rather than their psychological well-being following the intended effects of the manipulations. This may also explain the significant difference found between temporal

distance and relatedness. Questions regarding relatedness may have been based on the participant's current level of meaningful relationships, a present-oriented feature.

Lastly, it was hypothesized that priming low construal, using both manipulations, would prompt participants to rate the likelihood of reaching the selected goal higher than participants primed to think about high construal. Data analysis did not support his hypothesis. The results indicated that participants primed for low construal did not generate higher ratings of goal intentions than those primed for high construal. Previous research indicated that items represented in the near future, or low construal, are more concrete and thus, more obtainable (Liberman & Trope, 1998). The concrete nature of items represented in the low construal allows one to generate step-by-step behavioral action plans. The action plans, also termed implementation intentions, provide directions for "how" to reach a goal (Gollwitzer, 1999). It was believed that the concreteness of items in the low construal would promote greater ratings of goal intentions because the goals would feel easier to attain.

The lack of supporting results regarding a difference between low and high construal and goal intentions could be explained by the use of money to measure the intentions. While participants were asked to rate the likelihood of achieving the selected goal by graduation, they may have used the monetary value to rate how valuable, and thus, desirable goal attainment would be. Although the hypotheses of this study were not supported by current data, further analysis of the data revealed significant results. However, caution should be taken when interpreting the results of the exploratory

analyses, as the analyses did not have a theoretical basis and thus, the findings may not be replicable.

Significant differences were found for sex in relation to the BNSG-S subscale of relatedness and extrinsic motivation. Specifically, females rated themselves higher in relatedness and extrinsic motivation than males. Another analysis indicated that higher ratings of autonomy on the BNSG-S predicted an increased likelihood of selecting to work towards an intrinsic goal. This corresponds with research conducted by Vansteenkiste, Simons, Lens, Sheldon, and Deci (2004), which noted the pursuit of intrinsic goals fosters autonomy. Autonomy may be fostered because individuals are more likely to select the goal they find inherently interesting or self-rewarding. Furthermore, the analysis showed that individuals who rated themselves higher in relatedness were predicted to select an extrinsic goal. Individuals who pursue extrinsic goals may look to external sources, such as classmates, for social comparison and self-worth. Thus, individuals who are trying to align themselves with a particular clique may look to the group to guide his or her behaviors in order to relate to the group. Lastly, in line with what would be expected, ratings of higher transformed intrinsic motivation on the Academic Motivation Scale – College Version predicted a greater likelihood of selecting to work towards an intrinsic goal.

The lack of current data support for the posed hypotheses must not lead to a conclusive idea that there is no relationship between construal level, goal selection, and psychological well-being. The ability to prime clients to focus on the near future and

intrinsic goals, rather than extrinsic goals, could lead to greater success in therapy. The psychological benefits that stem from goal progress and attainment represent successes in psychotherapy as well. According to Pueschel, Schulte, and Michalak (2011), clients made more progress towards goals they believed to be important and demonstrated fewer depressive symptoms, compared to those whose goals were incongruent with their motives. Therefore, goal setting is an essential element of most therapies and is considered one of the five stages of counseling (Ivey, Ivey, & Zalaquett, 2014). Goals set mutually by the therapist and the client provide a distinctive course for therapy. Therapeutic goals must be specific, unambiguous, and measurable so that it is clear what the outcome of therapy entails (Spiegler & Guevremont, 2010). Goals are used to generate treatment plans, which describe the methods and treatments that will be implemented in therapy. The methods will be employed to make progress towards the established goals. The general aim of most therapies is to assist the client in reaching his or her treatment goals.

Often times, focusing on one broad, abstract treatment goal can seem overwhelming and unreachable for clients (Ivey, Ivey, & Zalaquett, 2014). To help the client reach his or her treatment goal, therapists seek to break down the goal into steps. Graded task assignments are used in cognitive-behavioral therapy to assist clients in viewing the steps as a staircase, where the top is the treatment goal (Beck, 2011). Instead of focusing on the broad goal, the client is instructed to focus on the current step necessary to make progress towards the goal. When a client successfully completes a

step, they are reinforced by the psychological benefits of goal progress to continue striving for their overarching treatment goal. Goal progress, combined with the selection of an intrinsic goal, may promote the most beneficial therapeutic outcome for the client. Thus, the continuation of temporal distance and goal selection research is important for the fields of psychotherapy and counseling.

Limitations

This study was not without limitations. Participants were presented with pre-fabricated goals and asked to select between pairings of intrinsic and extrinsic goals, which goal they were more likely to work towards. The pre-fabricated goals set up the first limitation of the study. Due to the fact that participants did not generate the goals on their own, it is possible that the inherent interest represented in the definition of intrinsic goals was lacking. Additionally, the provided life goals may not have embodied goals important to the participants. One participant recorded, “I don’t like these goals,” on his or her packet of materials. The participant’s potential lack of interest or importance in the provided goals may have resulted in the decreased likelihood of participants strongly selecting one goal over the other to work towards.

The second limitation is the lack of ecological validity. Ecological validity refers to the ability to generalize the behaviors seen in the study to other settings. The current study is low in ecological validity because it posed hypothetical scenarios where participants were instructed to choose between intrinsic or extrinsic goals. Often in the real world, individuals are not faced with making the decision between an intrinsic and an

extrinsic goal simultaneously. Additionally, participants were presented with multiple sets of goals and no information was provided about what would need to be done to reach the selected goal. Thus, the method used in this study may not be applicable to every day, real word decision-making.

Lastly, the timeline method, while successful in manipulating perception of time, was not a strong enough manipulation of CLT. The manipulation of time may not be an adequate tool to manipulate psychological distance in order to influence decision-making. According to CLT, psychological distance also includes social and spatial distance (Trope & Liberman, 2010). These features should be further explored as alternative methods of manipulating CLT.

Future Directions

Future research ought to move away from the use of pre-fabricated goals in goal-based research. The types of goals which persons find important may be an individualistic characteristic. Thus, researchers may enable their participants to generate and record his or her own goals under domains similar to the ones used in this study. For instance, participants could be asked to record an intrinsically and extrinsically oriented goal for the domain of physical fitness and then rate which goal they are more likely to work towards.

Additionally, future research should examine whether intrinsic and extrinsic orientations are state or trait based. Traits are the more stable characteristics of an individual's personality, while states vary depending on the situation. Researching the

nature of goal-motive orientations would aid in the understanding of the decision-making process for goal selection. This research could also lead to enhancements in the measures or manipulations used to guide goal selection because they can be targeted for state or trait features.

Conclusion

Every day, millions of college students across the country awake early from their beds and make the trek to class, where they take notes, listen to lectures, and complete homework assignments and exams. These are just a few of the steps necessary in order to reach the overarching goal of graduation. While the end goal may be similar for many students, the reason why they aim to attain the goal may differ due to intrinsic and extrinsic goal orientations. This study attempted to manipulate one factor that could influence the selection of intrinsic or extrinsic goals; subjective temporal distance. The timeline method, used to manipulate subjective temporal distance, was successful in leading participants to feel closer to or more distant from graduation. However, the manipulation did not influence the selection of an intrinsic or extrinsic goal to work towards. While the expected results were not found in this study, it can be suggested that various other factors play into goal selection and intention because every day, those same students are driven by something to complete the tasks necessary to reach the supreme goal of graduation.

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Table 1*Tests of the univariate differences for the three subscales of the BNSG-S in the 2 x 2*

MANOVA

Source	Dependent Variable	SS	DF	MS	F	p	Partial η^2
Temporal Distance	Autonomy	28.37	1	28.27	.877	.35	.01
	Relatedness	269.37	1	269.37	6.31	.01	.06
	Competency	31.05	1	31.05	0.93	.34	.01
Feasibility/Desirability	Autonomy	19.83	1	19.83	0.61	.44	.01
	Relatedness	96.88	1	96.88	2.27	.14	.02
	Competency	14.10	1	14.10	0.42	.52	.00
Temporal Distance * Feasibility/Desirability	Autonomy	10.21	1	10.21	0.32	.58	.00
	Relatedness	0.19	1	0.19	0.00	.95	.00
	Competency	8.73	1	8.73	0.26	.61	.00
Error	Autonomy	3460.55	107	32.34			
	Relatedness	4568.63	107	42.70			
	Competency	3591.02	107	33.56			
Total (Corrected)	Autonomy	3522.78	110				
	Relatedness	4937.75	110				

Competency 3643.00 110

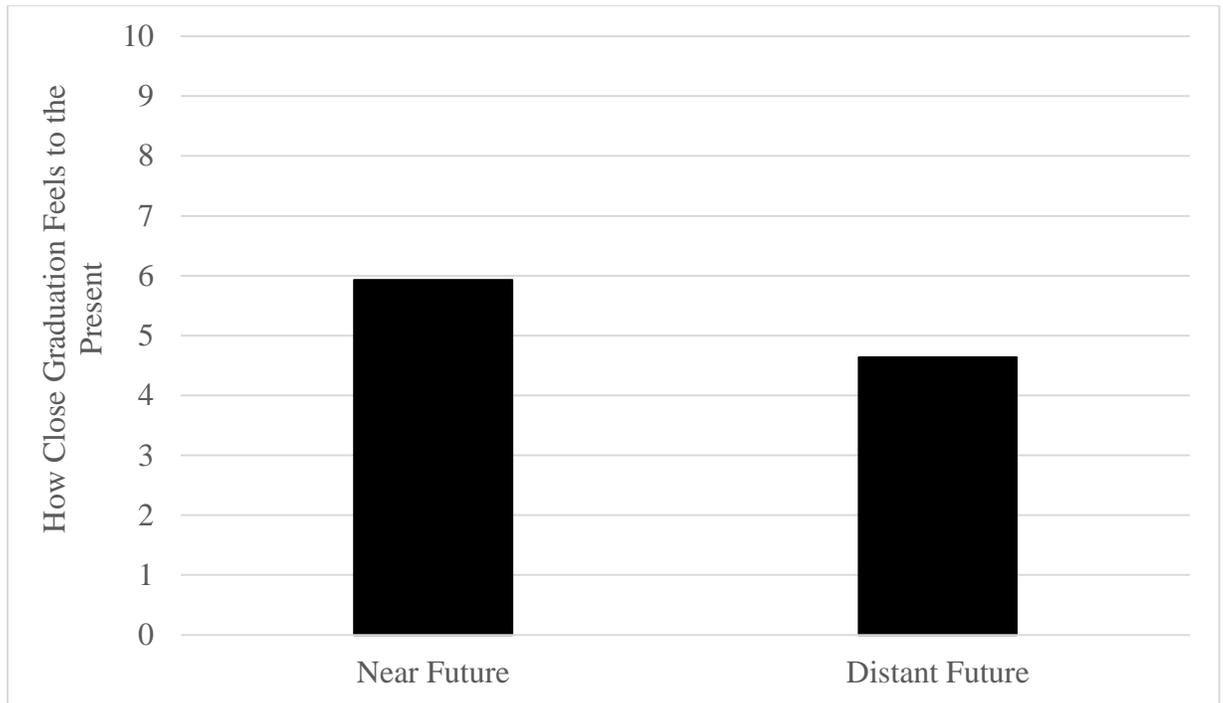


Figure 1. The effect of subjective temporal distance on how close graduation feels to the present.

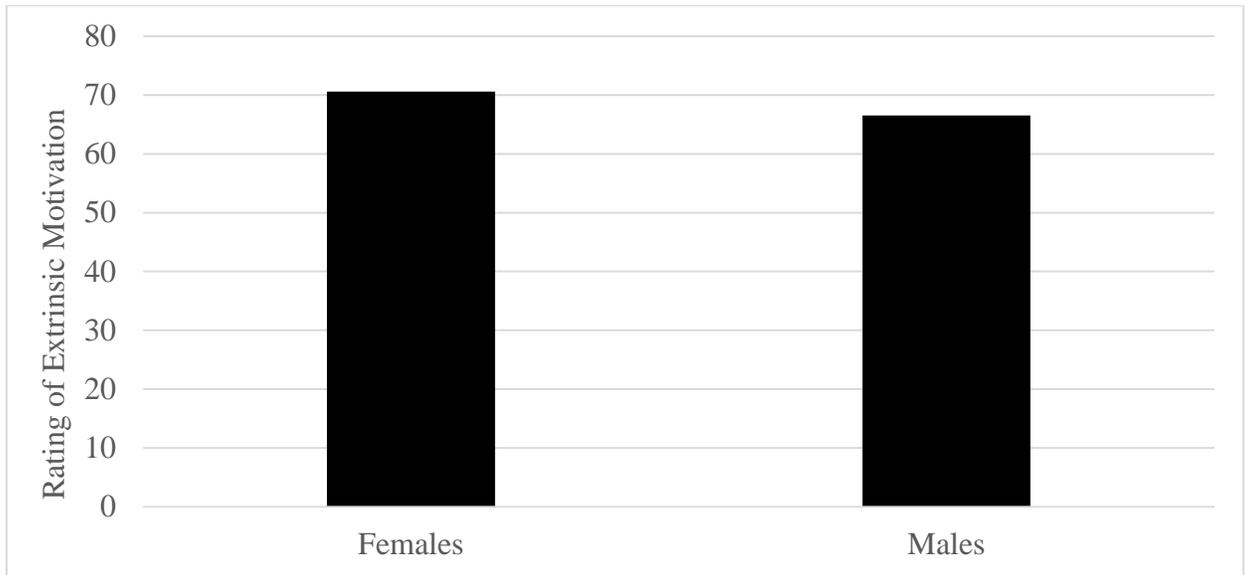


Figure 2. The effect of sex on ratings of extrinsic motivation.

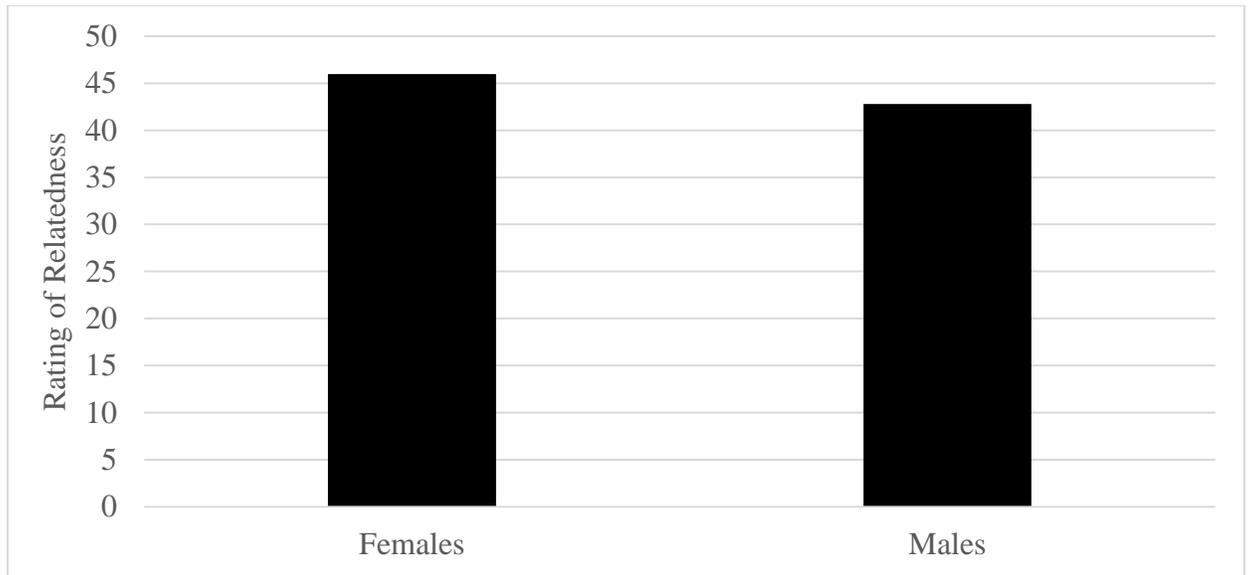


Figure 3. The effect of sex on ratings of relatedness, a subscale of the BNSG-S.

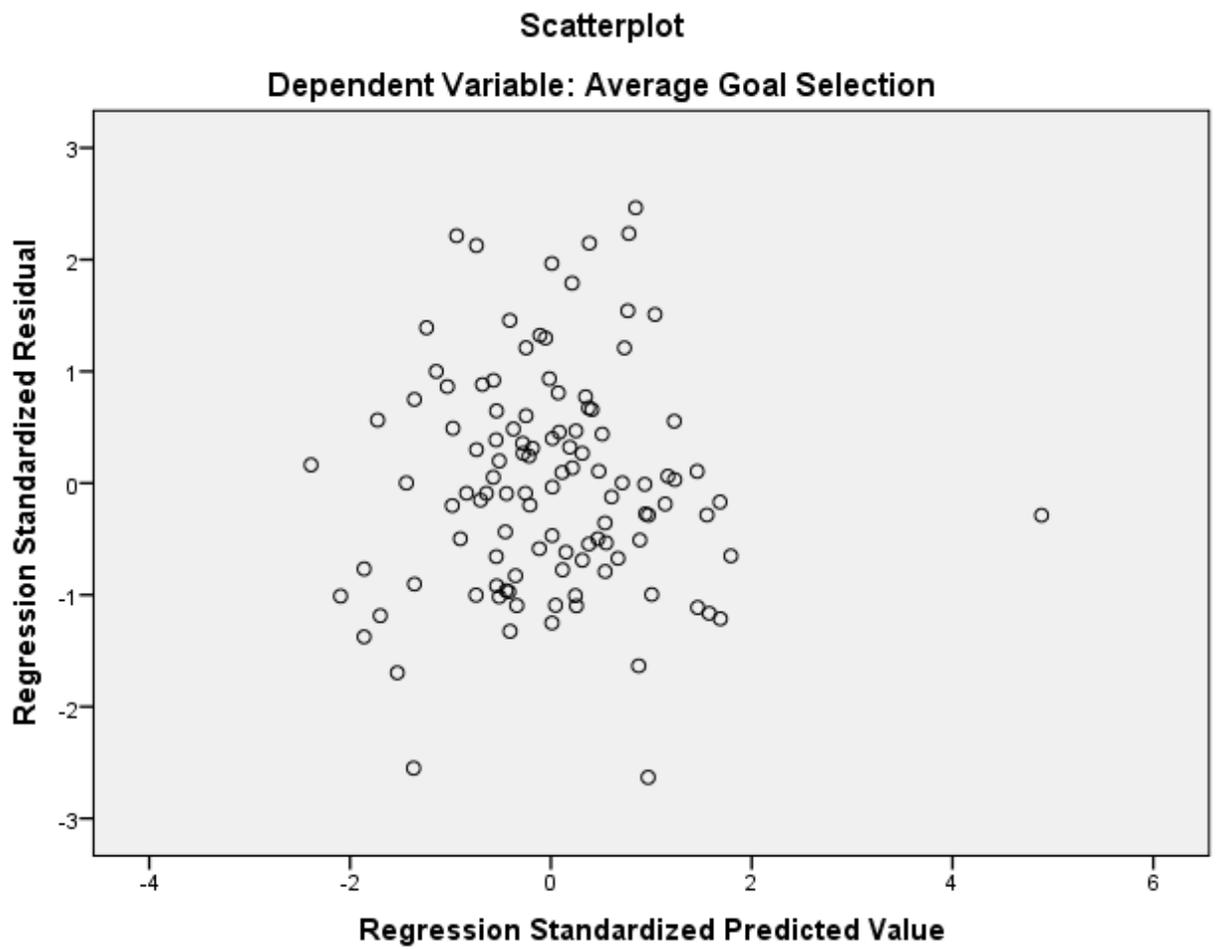


Figure 4. Graph of standardized residuals versus standardized predicted scores on dependent variable (average goal selection).

Appendix A

Low Construal Timeline Procedure

Visualize your college graduation day in the future. You will soon read about some personal goals that you hope to have completed by this day. To help you think about the time until graduation, please mark your graduation day on the timeline with a black dot.

Present

(2016) _____ 2040

Appendix B

Low Construal Timeline Manipulation Check

Graduation feels close to the present:

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10

Strongly
Disagree

Strongly
Agree

Appendix C

High Construal Timeline Procedure

Visualize your college graduation day in the future. You will soon read about some personal goals that you hope to have completed by this day. To help you think about the time until graduation, please mark your graduation day on the timeline with a black dot.

Present

(2016) _____ 2020

Appendix D

High Construal Timeline Manipulation Check

Graduation feels distant from the present:

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10

Strongly
Disagree

Strongly
Agree

Appendix E

Feasibility List and Writing Prompt

Examples of how to graduate from college:

- Successfully pass at least 90 credit hours



- Maintain a minimum 2.5 GPA



- Receive acceptable grades on coursework



- Make time to study and complete coursework each day

Please write two more actions for how to graduate from college:

1. _____

2. _____

Appendix F

Desirability List and Writing Prompt

Examples of why you should graduate from college:

- Increased likelihood of employment



- Opportunity for a well-paying job



- More flexibility to choose your own lifestyle



- Live a more satisfying life according to your own standards

Please write two more reasons for why you should graduate from college:

1. _____

2. _____

Appendix G

Aspiration Index Domain Definitions

Domain Name	Definition
Hedonism	Sensual pleasure.
Physical Fitness	Feel healthy and free of illness.
Self-Acceptance	Achieve psychological health, autonomy, and self-regard.
Conformity	To fit in with other people.
Appealing Appearance	Look attractive – body, clothing, and fashion.
Social Recognition	Be famous, well-known, and admired.

Appendix H

Goal Counter-Pairs on Aspiration Index

Hedonism	Conformity
33. I will have a lot of excitement in my life.	15. I will be polite and obedient.
48. I will experience a great deal of sensual pleasure.	41. My desires and tastes will be similar to those of other people.
16. I will have a great sex life.	52. I will “fit in” with others.

Physical Fitness	Appealing Appearance
23. I will be in good physical shape.	30. People will often comment about how attractive I look.
31. I will feel good about my level of physical fitness.	13. I will achieve the “look” I’ve been after.
53. I will be physically healthy.	3. My image will be one other’s find appealing.

Self-Acceptance	Social Recognition
38. I will feel good about my abilities.	14. I will be admired by many people.
7. I will choose what I do, instead of being pushed along by life.	22. My name will be known by many different people.
46. I will have insight into why I do the things I do.	37. Most everyone who knows me will like me.

Appendix I

Modified Aspiration Index, Goal Selection Example

Listed below are two goals that need to be met by graduation:

Goal X: I have a goal to have a lot of excitement in my life.

Goal Y: I have a goal to be polite and obedient.

On a scale of 1 to 10, with 1 being definitely Goal X and 10 being definitely Goal Y,
which goal are you more likely to choose to work towards?

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10

Definitely
Goal X

Definitely
Goal Y

Appendix J

Measure of Behavioral Intentions

If you had \$100, how much money would you bet that by graduation you will have achieved the goal you were more likely to work towards? _____

Appendix K

Academic Motivation Scale – College Version

WHY DO YOU GO TO COLLEGE ?

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to college.

Does not correspond at all	Corresponds a little	Corresponds moderately	Corresponds a lot	Corresponds exactly
----------------------------	----------------------	------------------------	-------------------	---------------------

1	2	3	4	5	6	7
---	---	---	---	---	---	---

WHY DO YOU GO TO COLLEGE ?

- | | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. Because with only a high-school degree I would not find a high-paying job later on. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. Because I experience pleasure and satisfaction while learning new things. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. Because I think that a college education will help me better prepare for the career I have chosen. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. For the intense feelings I experience when I am communicating my own ideas to others. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. Honestly, I don't know; I really feel that I am wasting my time in school. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. For the pleasure I experience while surpassing myself in my studies. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Does not correspond at all	Corresponds a little		Corresponds moderately		Corresponds a lot		Corresponds exactly			
1	2	3	4	5	6	7				
7. To prove to myself that I am capable of completing my college degree.				1	2	3	4	5	6	7
8. In order to obtain a more prestigious job later on.				1	2	3	4	5	6	7
9. For the pleasure I experience when I discover new things never seen before.				1	2	3	4	5	6	7
10. Because eventually it will enable me to enter the job market in a field that I like.				1	2	3	4	5	6	7
11. For the pleasure that I experience when I read interesting authors.				1	2	3	4	5	6	7
12. I once had good reasons for going to college; however, now I wonder whether I should continue.				1	2	3	4	5	6	7
13. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.				1	2	3	4	5	6	7
14. Because of the fact that when I succeed in college I feel important.				1	2	3	4	5	6	7
15. Because I want to have "the good life" later on.				1	2	3	4	5	6	7

Does not correspond at all	Corresponds a little		Corresponds moderately		Corresponds a lot		Corresponds exactly			
1	2	3	4	5	6	7				
16. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.				1	2	3	4	5	6	7
17. Because this will help me make a better choice regarding my career orientation.				1	2	3	4	5	6	7
18. For the pleasure that I experience when I feel completely absorbed by what certain authors have written.				1	2	3	4	5	6	7
19. I can't see why I go to college and frankly, I couldn't care less.				1	2	3	4	5	6	7
20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.				1	2	3	4	5	6	7
21. To show myself that I am an intelligent person.				1	2	3	4	5	6	7
22. In order to have a better salary later on.				1	2	3	4	5	6	7
23. Because my studies allow me to continue to learn about many things that interest me.				1	2	3	4	5	6	7
24. Because I believe that a few additional years of education will improve my competence as a worker.				1	2	3	4	5	6	7

Does not correspond at all	Corresponds a little		Corresponds moderately	Corresponds a lot		Corresponds exactly				
1	2	3	4	5	6	7				
25. For the "high" feeling that I experience while reading about various interesting subjects.				1	2	3	4	5	6	7
26. I don't know; I can't understand what I am doing in school.				1	2	3	4	5	6	7
27. Because college allows me to experience a personal satisfaction in my quest for excellence in my studies.				1	2	3	4	5	6	7
28. Because I want to show myself that I can succeed in my studies.				1	2	3	4	5	6	7

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Caroline B. Senécal, Évelyne F. Vallières, 1992*

Appendix L

Basic Needs Satisfaction in General Scale

Basic Need Satisfaction in General

Feelings I Have

Please read each of the following items carefully, thinking about how it relates to your life, and then indicate how true it is for you. Use the following scale to respond:

	Not at all true			Somewhat true				Very true
	1	2	3	4	5	6	7	7
1. I feel like I am free to decide for myself how to live my life.	1	2	3	4	5	6	7	7
2. I really like the people I interact with.	1	2	3	4	5	6	7	7
3. I do not feel very competent.	1	2	3	4	5	6	7	7
4. I feel pressured in my life.	1	2	3	4	5	6	7	7
5. People I know tell me I am good at what I do.	1	2	3	4	5	6	7	7
6. I get along with people I come into contact with.	1	2	3	4	5	6	7	7
7. I pretty much keep to myself and don't have a lot of social contact.	1	2	3	4	5	6	7	7
8. I generally feel free to express my ideas and opinions.	1	2	3	4	5	6	7	7

Not at all true	Somewhat true					Very true				
1	2	3	4	5	6	7				
9. I consider the people I regularly interact with										
to be my friends.										
				1	2	3	4	5	6	7
10. I have been able to learning interesting new skills recently.										
				1	2	3	4	5	6	7
11. In my daily life, I frequently have to do what I am told.										
				1	2	3	4	5	6	7
12. People in my life care about me.										
				1	2	3	4	5	6	7
13. Most days I feel a sense of accomplishment										
from what I do.										
				1	2	3	4	5	6	7
14. People I interact with on a daily basis tend to										
take my feelings into consideration.										
				1	2	3	4	5	6	7
15. In my life I do not get much of a chance to show										
how capable I am.										
				1	2	3	4	5	6	7
16. There are not many people that I am close to.										
				1	2	3	4	5	6	7
17. I feel like I can pretty much be myself in my										
daily situations.										
				1	2	3	4	5	6	7

Not at all true	Somewhat true					Very true							
1	2	3	4	5	6	7							
18. The people I interact with regularly do not seem to like me much.							1	2	3	4	5	6	7
19. I often do not feel very capable.							1	2	3	4	5	6	7
20. There is not much opportunity for me to decide for myself how to do things in my daily life.							1	2	3	4	5	6	7
21. People are generally pretty friendly towards me.							1	2	3	4	5	6	7

(Gagne, 2003)

Appendix M
Demographic Questionnaire

Age:

What is your sex?

Ethnicity (circle one):

- a. Caucasian
- b. Hispanic
- c. African American
- d. American Indian
- e. Native Hawaiian or Pacific Islander
- f. Asian
- g. Other: _____

Year in College: FR SO JR SR

Anticipated Graduation Date: _____

Major: _____

Appendix N

IRB Exemption Status



**FORT HAYS STATE
UNIVERSITY**

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OFFICE OF SCHOLARSHIP AND SPONSORED PROJECTS

DATE: March 9, 2016
TO: Megan Blackley
FROM: Fort Hays State University IRB
STUDY TITLE: [867137-1] Going for the Goal: The Effect of Subjective Temporal
Distance on Goal Selection
IRB REFERENCE #: 16-087

SUBMISSION TYPE: New Project
ACTION: DETERMINATION OF EXEMPT STATUS
DECISION DATE: March 9, 2016

REVIEW CATEGORY: Exemption category # 2

Thank you for your submission of New Project materials for this research study. The departmental human subjects research committee and/or the Fort Hays State University IRB/IRB Administrator has determined that this project is EXEMPT FROM IRB REVIEW according to federal regulations.

Please note that any changes to this study may result in a change in exempt status. Any changes must be submitted to the IRB for review prior to implementation. In the event of a change, please follow the Instructions for Revisions at <http://www.fhsu.edu/academic/gradschl/irb/>.

The IRB administrator should be notified of adverse events or circumstances that meet the definition of unanticipated problems involving risks to subjects. See

<http://www.hhs.gov/ohrp/policy/AdvEvtGuid.htm>.

We will put a copy of this correspondence on file in our office. Exempt studies are not subject to continuing review.

If you have any questions, please contact Leslie Paige at lp Paige@fhsu.edu or 785-628-4349. Please include your study title and reference number in all correspondence with this office.