

Approach and Avoidance Personal Goals and Procrastination:

A Project Analytic Perspective

A thesis submitted to the Faculty of Graduate Studies and Research
in partial fulfillment of the requirements for the degree

Masters of Arts

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Abstract

In this study, I explored the relations among procrastination, approach and avoidance goal types and approach and avoidance personality. I hypothesized that avoidance goals in particular would be related to increased procrastination. In addition, I hypothesized that the individual difference in behavioural inhibition (BIS) and behavioural activation (BAS) would also be related to goal type and procrastination. A sample of 212 undergraduate students (71.7% female, mean age = 20.42 years) completed a series of online measures including the Personal Goal Elicitation Procedure (PGEP; Elliot & Friedman, 2007), a Personal Goal Appraisal Module (PGAM; Little, 1983), the Behavioural Inhibition/Activation Scales (BIS/BAS Scales; Carver & White, 1994), and the General Procrastination Scale (GPS; Lay, 1986). The results of a linear regression analyses indicate that only BIS scores predicted the quantity of avoidance and approach goals being pursued. Correlation analyses revealed that neither BIS nor BAS was related to trait procrastination, however BIS was related to more specific measures of procrastination. Dependent sample *t*-tests were used to investigate if procrastination and other dimensions from the PGAM differed depending on goal orientation. The results indicated that negatively-motivated personal goals were rated lower on many positive appraisal dimensions such as enjoyment and capability, indicating that pursuing these goals is unlikely to be an enjoyable experience and may lead to procrastination.

Approach and Avoidance Personal Goals and Procrastination: A Project Analytic Perspective

When asked, we can all think of many personal goals that we have in our lives. Some of these goals involve attaining or maintaining positive outcomes such as “get an A in my psychology course,” or “keep in touch with good friends,” while others focus on avoiding or eliminating negative outcomes, “do not fail my psychology course,” or “fix my relationship with my parents,” for example. The distinction between goals involving possible positive and negative outcomes is one that has received a great deal of attention in the literature on approach and avoidance motivation (e.g., Carver, Sutton, & Scheier, 2000; Elliot, 2006; Elliot & Church, 1997; Elliot & Thrash, 2002; Ogilvie & Rose, 1995). Research in this area has suggested that all goals can be viewed and categorized using this approach-avoidance distinction.

The distinction between approach and avoidance motivations is one that has a long history and documented utility (Elliot & Friedman, 2007). In fact, Elliot and Friedman (2007) suggest that this distinction is both fundamental and basic to all studies of affect, cognition, and action, and allows for the organization and integration of various levels of inquiry. It can be applied to dispositional, domain-specific and situation-specific levels of analysis, and can be theoretically useful in the study of temperament, personality, motives, strategies, and goals (e.g., Elliot & Thrash, 2002; Higgins, 2005, Ogilvie, Rose, & Heppen, 2001).

In past research (e.g. Elliot & Sheldon, 1997; Elliot, Sheldon, & Church, 1997), it has been suggested that the pursuit of avoidance goals relative to approach goals has negative consequences for an individual’s well-being. It has also been argued (e.g., Tamir & Diener, 2008) that all people will have both approach and avoidance motives, as both types of motivation help individuals regulate their behaviour in ways that are necessary for successful

adaptation. Approach motivation and the pursuit of approach goals are essential for growth and flourishing, while avoidance motivation and the pursuit of avoidance goals promote protection and survival. Although Tamir and Diener (2008) suggest that it is adaptive to have at least some avoidance and approach goals in life, they also acknowledge that pursuit of approach versus avoidance goals carry different implications in regards to a person's well-being.

Subjective Well-Being (SWB) is also a focus of several studies that use personal project methodologies (e.g., Christiansen, Backman, Little, & Nguyen, 1999; Elliot, Sheldon, & Church, 1997; Pychyl & Little, 1998) to investigate what aspects of projects are generally associated with project systems that contribute to an individual's SWB. These studies have indicated that personal projects (i.e., personal goals) that are meaningful, manageable, well supported, and low in stress are associated with higher levels of SWB (Little, Salmela-Aro & Phillips, 2007).

In this study, I use the approach-avoidance distinction in combination with a personal project analysis to explore the relations between personality, goal type, and goal appraisals in relation to procrastination. By using these methods together it was possible to extend the existing research to examine outcomes other than subjective well-being. In order to do this, it was first necessary to operationalize the personal goals that people have in their lives, which I did using Elliot and Friedman's (2007) Personal Goal Elicitation Procedure (PGEP) in combination with Little's (1983) Personal Project Appraisal Module (PPAM).

Once the data were collected, I grouped personal goals based on the approach-avoidance distinction and then compared the goals on several appraisal dimensions. This approach allowed us to examine how approach and avoidance goals differ in terms of how

they were thought about by the people pursuing them. I was also able to help discover why the differential adoption of approach and avoidance personal goals may have an influence on SWB.

In addition to providing insight on how approach and avoidance personal goals differ, I was able to investigate another outcome that may be influenced by goal orientation. I had participants report on the procrastination level for each of their goals, and this allowed me to determine if the orientation of goals was also related to levels of reported procrastination.

Beyond simply examining the goals people are pursuing, I also examined two particular personality constructs that have been linked to the adoption of approach and avoidance personal goals. These constructs are the Behavioural Activation System (BAS) and the Behavioural Inhibition System (BIS). BAS and BIS are constructs first hypothesized by Gray (1970). Individuals with high BAS tend to be sensitive to cues of reward in their environment, while individuals with high BIS have a greater sensitivity to cues of potential punishment (Carver & White, 1994). Carver, Sutton, and Scheier (2000) have suggested that individual differences in BAS and BIS lead to differential adoption of approach and avoidance goals. Furthermore, research by Elliot and Thrash (2002) has supported this suggestion, at least in the achievement goal domain.

More specifically, I examined whether BAS and BIS continued to predict the adoption of approach and avoidance personal goals when goals were not restricted to any particular domain. In addition, I extended the existing research by examining whether BAS and BIS predicted the adoption of approach and avoidance goals when the goals were classified based on the motivation for pursuing them rather than by the wording of the goals themselves. Furthermore, the inclusion of both trait and goal specific measures of

procrastination allowed me to examine whether BIS and BAS were related to trait procrastination and/or to state procrastination on the personal goals provided by the participants.

The thesis begins with a discussion of personal goals as a unit of analysis explaining how personal goals have been defined, how they have been used in research, and how their use was suitable for the current study. Following this, I summarize the research literature on approach and avoidance motivation and goals. The focus of this section is on studies that have used personal goals, particularly in relation to BIS and BAS and subjective well being (e.g., Elliot & Church, 1997; Elliot & Sheldon, 1997). In the next section, I discuss the constructs of BIS and BAS and how they have been related to approach and avoidance goals. This research in particular demonstrates the relevance of this individual difference variable for the current study involving procrastination. In the final section of the literature review, I expand further on how goal and personality orientation might contribute to differences in the types of goals on which people are more likely to procrastinate. This integration of personality, goal type, and procrastination provides the theoretical basis for the methods and results of the study which follow.

Literature Review

Personal Goals

In general, goals are described as objectives or desired outcomes. They are considered the desired state of affairs that are sought out by individuals (Elliot & Thrash, 2002). Some goals are pursued by many, if not all of us (e.g., buy new food or clothing), while others may be highly individualistic (e.g., finish my M.A. thesis or climb Mount Everest). Personal goals refer to those goals that individuals think of as being relevant to themselves and that provide

a sense of purpose, structure, and identity in their lives (Elliot, Sheldon, & Church, 1997).

Over the years, these personal goals have been conceptualized as many different goal constructs such as current concerns (Klinger, 1977), personal projects (Little, 1983), personal strivings (Emmons, 1986), and life tasks (Cantor & Kihlstrom, 1987), to name a few of the most prominent units of analysis defined in goal-pursuit research.

These constructs are similar in that they are all goal constructs that involve personal action. Little (1989) has grouped these various goal constructs into a larger group labeled Personal Action Constructs (PAC) units of analysis. Although the PAC constructs are similar, Chambers (1997) suggests some of the ways in which these constructs can be distinguished from one another. The first is in terms of molarity (i.e., level of abstraction), with personal strivings being molar, life tasks being mid-level, and projects and concerns spanning goals from molar strivings to molecular acts. These constructs can also be distinguished based on whether they are action or cognition based, as well as by their temporal focus. For example, current concerns, personal strivings, and possible selves focus on cognition, while personal projects and life tasks focus on actions. Chambers (1997) suggests that personal projects are most useful in that they allow participants to identify the most diverse set of actions and cognitions.

For the purposes of this study, I adopted the term personal goals as it is used by Elliot and Friedman (2007) as a generic term that encompasses all of the above Personal Action Constructs (Little, 1989) or goal units of analysis. The key distinction of interest in this research with personal goals is whether the goals are approach or avoidance oriented. Approach goals involve reaching or maintaining desired outcomes, while avoidance goals focus on avoiding or eliminating undesired outcomes. Elliot and Friedman (2007) propose

that the way goals are represented lexically by participants also indicates how they are represented in memory and, in turn, how they are used in the regulation of behaviour.

Classifying Personal Goals. Using Elliot and Friedman's (2007) system, the classification of personal goals as either approach or avoidance is based on the wording of the goals themselves. For example, a goal such as "Don't fail psychology," would be classified as an avoidance goal. If the goal were worded as "Pass psychology," it would be classified as an approach goal. Using this system of goal classification one needs only to examine the actual goal the person has listed in order to classify the goal as either approach or avoidance. While this system based on the linguistic expression of the goal is rather straightforward, it does not take into consideration the purpose, reason, or motive behind why the person is pursuing the goal.

In order to address the motive of goal pursuit in the classification of approach and avoidance goals, Ogilvie and Rose (1995) have also developed a system to classify personal goals. For these researchers, the truly important aspect of goal classification is the motives the person has for pursuing his or her goals. So, rather than examining the goals themselves, Ogilvie and Rose (1995) developed a system to classify the purposes people have for pursuing their goals. The system involves coding the purposes into four motivational categories called the PACK taxonomy. The PACK taxonomy was originally based on the punishment and reward system of operant conditioning and includes the following categories: 1) Prevent (positive punishment) – avoid negative outcomes; 2) Acquire (positive reinforcement) – attain positive outcomes; 3) Cure (negative reinforcement) – get rid of existing negatives; 4) Keep (negative punishment) – retention of existing positives.

Goals can then be classified using three dichotomous groupings using these categories. First, goals can be classified using an approach-avoidance distinction. Ogilvie et al. (2001) suggest that approach goals are those with Acquire and Cure purposes, while avoidance goals are those with Prevent and Keep purposes. Second, goals can be classified using a positive-negative distinction, with positively-motivated goals having Acquire and Keep purposes and negatively-motivated goals having Cure and Prevent purposes. The third distinction is existence-absence. Existence goals have Keep and Cure purposes, while absence goals have Acquire and Prevent purposes. For the current study, two of the above mentioned distinctions are of particular interest. These are the approach-avoidance and positive-negative distinctions. These two distinctions are represented visually in Table 1.

Table 1. *Approach-Avoidance and Positive-Negative Goal Distinctions based on PACK*

Taxonomy

	Approach	Avoidance
Positive	<i>Acquire</i>	<i>Keep</i>
Negative	<i>Cure</i>	<i>Prevent</i>

Although the approach-avoidance distinction has the same name as that used by Elliot and colleagues, the goals included are somewhat different. Elliot and colleagues (1997; 2002; 2007) refer to approach goals as those that involve attaining or maintaining positive outcome and avoidance goals as those that involve preventing or eliminating negative outcomes. Using the approach-avoidance distinction provided by Ogilvie and Rose (1995), approach goals are those that involve attaining positive outcomes or curing existing negative states and avoidance goals involve preventing negative outcomes or keeping existing positive states.

While it has a different name, the negative-positive distinction used by Ogilvie and Rose (1995) is consistent with what has been viewed as approach and avoidance goals in the research conducted by others (e.g., Elliot & Church, 1997; Elliot & Sheldon, 1997; Elliot, Sheldon, & Church, 1997; Elliot & Thrash, 2002). For this reason, in this study, I focused on the approach-avoidance distinction based on the wording of the goals and the positive-negative distinction based on the motivation for pursuing the goal.

Now that I reviewed the possible ways in which goals can be distinguished, I turn my attention to the past research that has investigated some of the consequences and possible antecedents of approach and avoidance goal adoption. In addition, I review how Elliot and Church (1997) have used the mastery, performance-approach, and performance-avoidance goal classifications as a further possible way to distinguish between approach and avoidance goals.

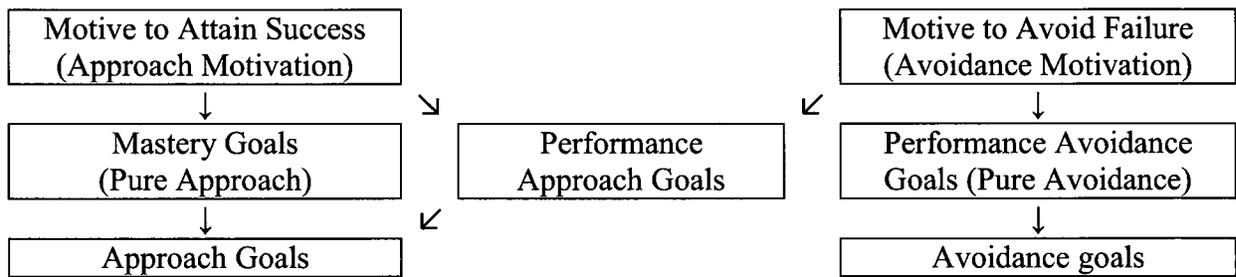
Past Research Using Approach and Avoidance Personal Goals. Much of the past research on approach and avoidance personal goals has focused on the ratio of avoidance to approach goals in relation to subjective well-being (SWB), adjustment, and experience (Elliot & Friedman, 2007). Elliot and colleagues (i.e., Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Elliot & Sheldon, 1997; Elliot, Sheldon, & Church, 1997), major contributors to the research in this area, present a hierarchical model of approach and avoidance achievement motivation, and this model has been extended to work with personal goals from a variety of domains.

The hierarchical model of achievement motivation (Elliot, 2006) was proposed as a theory that integrated classic achievement motivation theories, which emphasize orientation towards attainment of success and avoidance of failure, with contemporary theories that

utilize the concepts of performance and mastery orientations. The hierarchical model posits that these concepts can be brought together by utilizing three goal types, which include mastery goals, performance-approach goals, and performance-avoidance goals (Elliot & Harackiewicz, 1996). These three goal types can then be reduced to two overarching types of motives achievement (approach) and avoidance of failure (avoidance), with achievement motivation predicting the adoption of mastery and performance-approach goals, while avoidance of failure results in the adoption of performance-avoidance goals. The rationale here is that both mastery and performance-approach goals have the purpose of approaching positive outcomes, while performance-avoidance goals are focused on avoiding potential negative outcomes (Elliot & Church, 1997).

Elliot and Church (1997) also propose that performance-approach goals may be adopted as a means of satisfying an avoidance of failure motive. The rationale for this is that individuals adopt these performance-approach goals as a form of active avoidance. Since performance-approach goals allow for a normative comparison, success with these goals removes the possibility of failure. Accordingly in this model, mastery and performance-avoidance goals are viewed as “pure” representations of approach and avoidance motivations respectively, whereas performance-approach goals may result from either underlying motivational orientation (Elliot & Church, 1997). Figure 1 provides a visual depiction of how Elliot and Church (1997) have connected achievement and fear of failure motives, approach and avoidance motives, mastery and performance goals, and approach and avoidance goals.

Figure 1. *Elliot and Church's Hypothesized Connections among Motives and Goals*



In addition to connecting motivational orientations to the type of achievement goals adopted, Elliot and Church's (1997) research also examined the consequences of differential goal adoption on relevant achievement outcomes, particularly intrinsic motivation and performance. Results of a path analysis indicated that the adoption of mastery goals ("pure" approach) was related to higher intrinsic motivation, but no increase in performance. The results also indicated that performance-avoidance goals ("pure" avoidance) were related to lower intrinsic motivation and performance. Finally, performance-approach goals (a combination of approach and avoidance) lead to better performance, but no increase in intrinsic motivation (Elliot & Church, 1997).

Elliot and Sheldon (1997) extended the research on approach and avoidance personal goals by examining the consequences of pursuing avoidance personal achievement goals over the course of a semester. In this research, they focused on two classes of outcome measures. The first included goal progress and affective responses to this progress. The second class was related to general well-being and included measures of self-esteem, personal control, vitality, and life satisfaction. Near the beginning of the semester, participants identified eight goals that represented their achievement pursuits for the semester and answered a series of questions regarding these goals. Participants also completed a subjective well-being measure at this time. Over the course of the semester, participants were

asked to complete measures about their perceived competence with regard to their goals every four weeks. Near the end of the term, participants completed another subjective well-being assessment as well as a goal outcome questionnaire (Elliot & Sheldon, 1997).

The results of this research indicate that the pursuit of a greater number of avoidance goals is related to less satisfaction with progress, more negative affect about progress, and less positive affect about progress of personal goals. Furthermore, greater numbers of avoidance personal goals were related to decreased self-esteem, decreased personal control, decreased vitality, and less satisfaction with life. In addition, it was also found that those individuals with more avoidance goals felt less competent in their goal pursuits over the course of the semester (Elliot & Sheldon, 1997).

Although informative, the two studies discussed to this point are limited to the achievement domain. This limitation is addressed in another set of studies conducted by Elliot, Sheldon, and Church (1997). In these studies, they explored the relations between the adoption of avoidance relative to approach goals and subjective well-being (SWB) without limiting personal goals to any specific domain. These studies also set out to examine the possibility that perceived progress acts as a mediator of the relation between avoidance personal goals and SWB (Elliot et al., 1997).

Elliot et al. (1997) predicted that adoption of more avoidance goals would lead to lower perceptions of progress, and that this lower perceived progress would be related negatively to SWB. Furthermore, they predicted that when perceived progress was controlled for, the relation between avoidance regulation and SWB would no longer be significant. A final goal of the studies was to examine two possible antecedents of avoidance personal goals. The first study examined neuroticism and the neuroticism by extraversion interaction

as predictors of avoidance goal adoption. The second study looked at life skills as a possible antecedent (Elliot et al., 1997).

In their first study, Elliot et al. (1997) found that those individuals who adopted a higher ratio of avoidance to approach goals had lower expectations about the progress they would make on their goals. In addition, they found that these individuals reported less perceived progress over the course of a semester as well as reporting lower levels of SWB. A regression analysis also indicated that the only significant predictor of avoidance goal adoption was neuroticism. Finally, they used a multiple regression analysis to test the mediation model they had predicted. The analysis indicated that perceived progress did predict SWB and that the relation between avoidance goals and SWB was no longer significant when perceived progress was added to the equation.

In their second study, Elliot et al. (1997) sought to conceptually replicate the findings from the first study in terms of the consequences of adopting more avoidance goals relative to approach goals. Additionally, the second study examined life skills as a possible antecedent to the adoption of avoidance goals. Two other notable changes were also made. First, SWB was measured both at the beginning and at the end of the semester as well as four days after the semester had ended. This was done to provide both a change in SWB score and a retrospective rating of SWB over the past semester. The second change was in the procedure used to elicit the personal goals of the participants. They used Emmons' (1986) personal strivings procedure in the first study, while in the second, they used Little's (1983) personal projects elicitation. This was done to show that the results of the first study generalized to the different personal goal constructs.

The results of the second study regarding the consequences of avoidance goal adoption replicated those found in the first study. Individuals who adopted a higher ratio of avoidance to approach goals had lower expectations about the progress they would make on their goals and lower SWB. In addition, the second study indicated that both changes in SWB over the semester and retrospective SWB were hampered by the adoption of avoidance goals. Multiple regression analysis once again supported a model that has perceived progress as a mediator of the relations between avoidance goals and both changes in SWB and retrospective SWB. The results of this study also indicate that low perceptions of life skills, specifically self-regulatory skills, predicted the adoption of more avoidance relative to approach goals (Elliot et al., 1997).

Taken together, the research discussed to this point indicates that approach and avoidance goals can be seen as representations of underlying dispositions. The research indicates that an individual's dispositional traits (neuroticism) and self-perceptions (perceived self-regulatory skill) influence the orientation of the goals he or she adopts. Furthermore, the adoption of more avoidance relative to approach goals is harmful to subjective well-being and this relation is mediated by perceived progress on personal goals. However, Tamir and Diener (2008) have suggested that this may not be entirely correct when examining approach-avoidance goals at the level of the individual. They have suggested that both approach and avoidance may be beneficial for well-being depending on the feasibility and desirability of the goals for the individual.

Tamir and Diener (2008) suggest that individual differences not only influence the adoption of approach versus avoidance goals, they also moderate the link between approach-avoidance goals and well-being. To show this connection, they used both activity theories

and telic theories of well-being. Activity theories emphasize the importance of goal pursuit, while telic theories focus on the likelihood of successful goal completion. From an activity theory perspective, goal desirability is important and individual differences can lead some individuals to view avoidance goals as more desirable, which should in turn improve well-being. Telic theories emphasize goal feasibility and individual differences lead to some individuals viewing their avoidance goals as more likely to be successful, which would moderate the link between goals and well-being (Tamir & Diener, 2008).

To support the hypothesis that goal desirability moderates the link between approach-avoidance goals and well-being, Tamir and Diener reviewed the research of Elliot, Chirkov, Kim, and Sheldon (2001). Elliot and colleagues demonstrated that the pursuit of more approach goals relative to avoidance goals was only beneficial to well-being in individualistic cultures. Tamir and Diener then turned to research published by Higgins and colleagues (e.g., Forster, Higgins, & Idson, 1998; Freitas & Higgins, 2002; Higgins, 2000; Higgins, Idson, Freitas, Spiegel, & Molden, 2003) to find support for the moderating effect of feasibility. This line of research indicates that individuals who adopt goals that fit with their motivational orientation are more likely to be successful in their goal pursuits and enjoy them more. In sum, as Tamir and Diener argue, these studies do appear to indicate that the meaning and manageability of goals does moderate the deleterious effects of avoidance goal adoption.

This research clearly indicates that individual differences in personality such as neuroticism are related to the types of goals people pursue. This may be a result of the fact that a personality-goal fit makes these goals more meaningful and more feasible for the individual. Of interest to the current study is the possibility that other individual differences

may play a role in goal-type adoption and pursuit. For example, in addition to neuroticism, another individual difference variable of interest when examining approach and avoidance goal adoption is a person's Behavioural Activation System (BAS) and Behavioural Inhibition System (BIS) sensitivities. Pickering and Gray (1999) have reported that differences in BAS and BIS sensitivities are related to preferences for approach and avoidance regulation, respectively.

Behavioural Activation & Behavioural Inhibition Systems (BAS & BIS)

Gray (1970; 1987) proposed that the Behavioural Inhibition System (BIS) and Behavioural Activation System (BAS) are two independent neurological systems in the brain that help to regulate behaviour and influence emotion. Gray (1987) states that BAS "mediates behaviour elicited by rewards" (p. 172) and BIS "organizes responses to conditioned aversive stimuli" (p. 176). Gray posits that BAS responds to incentives (e.g., signals of reward, non-punishment, and removal of punishments) and facilitates movement towards goals. He also holds that BIS responds to threats (signals of punishment, non-reward, and novelty) and in doing so inhibits movement towards goals.

The BAS is thought to act through the activation of the ascending dopaminergic projections from the ventral tegmental area (VTA) and nucleus accumbens (NAcc). When activated by stimuli these structures send neural transmissions through the ventral pallidum and the dorsomedial nucleus of the thalamus to the prefrontal cortex response control system, which in turn selects from available responses. BIS outputs are thought to originate from the amygdale, entorhinal cortex, and subiculum (Pickering & Gray, 1999).

As these systems are independent, all individuals have both BIS and BAS sensitivities, however one system may be stronger than the other and, in turn, predominate in

behavioural regulation. Individuals with strong BIS sensitivity will favour avoidance regulation and individuals with strong BAS sensitivity will favour approach regulation (Pickering & Gray, 1999).

Relating BAS & BIS to Approach and Avoidance Goals. Some researchers (e.g., Elliot, 2006; Elliot & Thrash, 2002) have argued that the basic motivations that drive behavioural decisions revolve around approach and avoidance tendencies. This distinction is echoed by Carver, Sutton, and Scheier (2000) who have suggested that all behaviours can be classified into two types of action tendencies: approach and avoidance. Research by Carver et al. (2000) indicates that approach and avoidance processes coexist at all times in regards to human behaviour. We are constantly faced with the challenge of determining which behaviours we will avoid (i.e, avoidance goals), while at the same time approaching other behaviours (i.e, approach goals). These determinations are based on the perceived incentives and threats attached to the behaviours or goals. These consequences force decisions about what behaviours we should approach and avoid to maximize incentives, while at the same time avoiding threats (Carver, 2006).

In addition, the incentives and threats that are associated with behaviours and goals are also in flux. These shifting incentives and threats can lead to shifts in approach and avoidance behaviours. Approach behaviours may be stopped if actions needed to attain incentives result in the creation of, or approach towards, threats (Carver et al., 2000). The existence of multiple shifting incentives and threats makes the system complex and requires malleability on the part of the individual in order to manage his or her efforts and prioritize his or her goals to maximize incentives and minimize threats.

Although it may seem that approach and avoidance behaviours are mutually exclusive, it has been argued that even avoidance motivations can serve to direct action towards approach goals. For example, Baumann and Kuhl (2005) present evidence that when faced with unattractive tasks, state-oriented individuals rely on self-suppression as a means of concentrating on the unattractive task. In this case, they are using avoidance of self-generated needs and goals as a way of fuelling approach behaviour towards another intended goal. It is also suggested that these individuals often use avoidance motivation as a means of approaching a goal by thinking of the consequences that would result if they failed to complete the intended goal. In these instances, the individuals are using avoidance of a feared possible state to push them to approach their goals (Baumann & Kuhl, 2005), and this study provides another link between temperament and personality (in this case, state-orientation) and approach-avoidance goals.

Other authors have also explored the link between personality and approach-avoidance goals providing even further support for the role of BIS and BAS as a key individual difference variable. Elliot and Thrash (2002) conducted a set of seven studies to examine the relations between individuals' approach and avoidance goals and individuals' underlying temperaments. Like goals, Elliot and Thrash (2002) argue that temperaments can be operationalized as either approach oriented or avoidance oriented. They propose that approach and avoidance goals "serve as channels for the general propensities evoked by approach and avoidance temperaments (p. 806)." Initially Elliot and Thrash (2002) operationalized approach temperament as a combination of extraversion, positive emotionality, and BAS and avoidance temperament as a combination of neuroticism, negative emotionality, and BIS. However, after conducting their earlier studies, approach and

avoidance temperaments were represented by only BAS and BIS, respectively, as they found that these variables adequately represented the constructs.

Two of the studies conducted by Elliot and Thrash (2002) relate directly to the connection between BAS and BIS and the adoption of approach and avoidance goals. In one of their earlier studies, they examined the connection between BIS and BAS and the adoption of different types of nomothetic achievement goals. Their findings indicated that BAS was a positive predictor of mastery goals, $F(1, 200) = 14.91, p < .001$ ($\beta = .26$), and BIS was unrelated to mastery goal adoption. Both BAS and BIS were positive predictors of performance-approach goals, $F(1, 202) = 5.82, p < .05$ ($\beta = .17$), and $F(1, 200) = 7.65, p < .01$ ($\beta = .19$), respectively. Finally, BIS was a positive predictor of performance-avoidance goal adoption, $F(1, 195) = 7.92, p < .01$ ($\beta = .20$), while BAS was unrelated to performance-avoidance goal adoption (Elliot & Thrash, 2002).

In their final study, Elliot and Thrash (2002) used an idiographic personal goal elicitation procedure, but limited it to the elicitation of personal achievement goals. This study was conducted to determine if BIS and BAS predicted higher levels of avoidance, relative to approach personal achievement goal adoption. The results of the study indicated that BAS was a negative predictor of avoidance (relative to approach) personal goal adoption, $F(1, 121) = 5.21, p < .05$ ($\beta = -.20$) while BIS was a positive predictor, $F(1, 121) = 5.98, p < .05$ ($\beta = .21$).

Based on the research above, it appears that both personality and personal goals can be thought of as having either approach or avoidance orientations. One aspect of personality that seems to be particularly relevant to the approach-avoidance distinction is BIS and BAS sensitivity. Not surprisingly, it also appears that the type of goals an individual chooses to

pursue is related to his or her underlying personality orientation. Individuals with an approach-oriented personality (strong BAS) are less likely to adopt avoidance-oriented personal goals whereas individuals with an avoidance-oriented personality (strong BIS) are more likely to pursue avoidance-oriented personal goals.

Using the concepts of approach and avoidance goals as well as approach and avoidance personality, I sought to replicate the findings that BIS and BAS were predictive of the types of goals a person is pursuing even when the elicited goals are not restricted to the achievement domain. Furthermore, I wanted to examine another possible consequence of pursuing avoidance-oriented goals. Since the pursuit of avoidance goals has been linked to decreased progress, I wanted to determine if the pursuit of avoidance goals was related to increases in procrastination.

Relating Procrastination to Approach and Avoidance Goals

Past research has used the personal projects operationalization of personal goals in relation to procrastination (e.g., Blunt & Pychyl, 2000; 2005; Lay, 1986; 1990; Pychyl & Little, 1998). Although focused on personal goals and personal projects specifically, none of this past research has distinguished between approach- and avoidance-oriented personal goals. Rather, the research has focused on cognitive appraisals of goals and how these appraisals are related to procrastination and subjective well-being.

Blunt and Pychyl (2000) found that goal dimensions such as boredom, frustration, resentment, low personal meaning, low autonomy, lack of structure, stress, and negative emotions were all related to procrastination. Similarly, Blunt and Pychyl (2005) found significant correlations of procrastination with dimensions such as uncertainty, low absorption, low control, and low progress. Pychyl and Little (1998) also found progress to be

negatively related to procrastination. Finally, Lay (1986; 1990) found procrastination was related to time spent on goals, with trait procrastinators spending less adequate time on short-term goals, less adequate time on long-term goals likely to succeed, and more time on long-term goals likely to fail.

We can apply the knowledge of personal goals and procrastination to what we know about approach and avoidance goals. Carver and Scheier (1998; 2002) suggest that approach goals should be more manageable than avoidance goals because they have a clear target to aim for. They use discrepancy-reducing and discrepancy-enlarging loops to help explain why this is the case. On the one hand, approach goals follow a discrepancy-reducing loop pattern where the person is working to reduce the discrepancy between his or her current state and a foreseen possible state, the goal. On the other hand, avoidance goals follow a discrepancy-enlarging loop pattern where the person attempts to move away from an unwanted possible future state (Carver & Scheier, 2002). In this case, there is no clear path to follow in order to increase the discrepancy and therefore progress is more difficult to monitor. This difficulty in monitoring progress may in turn be related to procrastination on avoidance oriented goals.

Carver and Scheier (1998) also suggest that the cognitions activated by the pursuit of approach and avoidance goals are different. When pursuing approach goals, an individual is monitoring positive outcomes and this makes positive cognitions more accessible during the goal pursuit. In contrast, the pursuit of avoidance goals involves monitoring negative outcomes and brings negative cognitions to the forefront during goal pursuit. As past research has shown (e.g., Blunt & Pychyl, 2000; 2005), negative cognitions such as stress, frustration, uncertainty, and negative emotions are related to procrastination on personal goals. If this is the case, then it seems reasonable to assume that the pursuit of avoidance

goals may be hampered by procrastination as a result of the negative cognitions it elicits.

Taken together, the above research suggests that procrastination should be more of an issue when an individual is pursuing avoidance goals than when they are pursuing approach goals.

For many people, avoidance goals may be plagued by increased procrastination, but Higgins and colleagues (e.g., Forster et al., 1998; Freitas & Higgins, 2002; Higgins, 2000; 2005; Higgins et al., 2003) have found this may not be the case for all people. Their research has demonstrated the benefits that occur when there is a match between personality and goal orientation. For example, Forster et al. (1998) distinguished between promotion-focused and prevention-focused regulatory strategies as an individual difference variable. Promotion-focused regulation is similar to an approach orientation or BAS in that the focus is on rewards, while prevention-focused regulation is similar to an avoidance orientation or BIS in that it focuses on prevention and safety. However, they are somewhat different in that a promotion focus is based on “ideals” and a prevention focus is based on “oughts,” whereas BAS and BIS are based on sensitivities to rewards and punishments, respectively.

Although the personality dimensions used differ slightly, what is important here is the finding regarding how personality-goal fit can be beneficial. In a series of three studies, Forster et al. (1998) demonstrated that participants exerted more effort and performed better when a goal was compatible with their regulatory focus, but did not when the goal was incompatible. In another set of three studies, Freitas and Higgins (2002) found that participants reported increased anticipation of enjoyment when actions fit with their regulatory focus. When primed to think about a positive future state (i.e., an approach goal) participants in this study rated possible approach strategies for achieving the goal as more enjoyable than possible avoidance strategies that could be used to reach the same goal. For

example, if the approach goal was “earning a high GPA,” an approach strategy, “complete school work promptly,” was rated higher on anticipated enjoyment than the comparable avoidance strategy “stop procrastinating.” In addition, they found that high regulatory fit resulted in reports of more enjoyment and perceived success when participants were asked about a task they performed in the laboratory, regardless of their actual performance on the task.

Higgins et al. (2003) extended the research on regulatory focus and goal fit in a series of five studies designed to examine the transfer of value experienced from regulatory fit to later assessments of an object. In the first two studies, participants indicated that a coffee cup they selected was more valuable when it was chosen by a strategy congruent with their regulatory focus. In the third study, they demonstrated this added value attained through regulatory fit was independent of the participants’ mood. In the fourth study it was shown that participants rated an unrelated object more favourably after a regulatory fit manipulation in which there was a congruent fit. In the final study Higgins et al. (2003) found that regulatory fit also increased the motivational intensity and importance evaluations given by participants.

Although the above research used different operationalizations for the personality distinction, it indicates that when there is a fit between goals and personality, people view their goals more favourably, are more motivated to work on them, and show improved task performance. These findings suggest that a congruent personality-goal fit may also be related to decreases in procrastination. For some individuals, there may be no increase or in fact a decrease in procrastination in relation to the avoidance oriented goals. To investigate this possibility I examined whether approach and avoidance goals differed in terms of reported

procrastination and whether BIS and BAS were related to procrastination on the different goal types.

Literature Review Summary and Conclusions

In reviewing all of the research discussed to this point, there are some key ideas that need to be highlighted, as they are particularly relevant to the current study. First, both Elliot and Friedman (2007) and Tamir and Diener (2008) have indicated that almost all of us have both approach and avoidance personal goals in our lives and both types of goals serve adaptive purposes. Although both types of goals may serve adaptive purposes, Elliot and colleagues (e.g., Elliot & Thrash, 2002; Elliot et al., 1997) have found that the pursuit of avoidance (relative to approach) goals is detrimental to our perceived progress and in turn to our well-being. These researchers have also reported that BIS and BAS are related to the quantity of avoidance goals that an individual is likely to adopt. Research by Higgins and colleagues (e.g., Forster et al., 1998; Freitas & Higgins, 2002; Higgins et al. 2003) has provided a different perspective of the effects of avoidance goal adoption. In their research, they have found that what is important is the fit between a person's motivational orientation and the goals they pursue. Finally, Carver and Scheier (2002) have indicated that the pursuit of approach and avoidance goals brings different cognitions to mind more often. This suggests that when people appraise their personal goals, approach and avoidance goals will have different cognitive profiles.

Overview of the Study and Summary of Hypotheses

The preceding review of approach and avoidance goal pursuit (e.g., Elliot & Church, 1997; Elliot & Sheldon, 1997; Elliot et al., 1997) in combination with the work of Carver and Scheier (1998; 2002) forms the basis for the current study. Their research has demonstrated

that goals can be categorized as either approach or avoidance oriented and that pursuit of relatively more avoidance goals comes with consequences. In this study, I investigated whether these consequences included increased procrastination and more negative cognitive appraisals. The work of Elliot and Thrash (2002) supports the idea that BIS and BAS sensitivities lead individuals to differentially adopt approach versus avoidance goals. High BIS sensitivity predicts more avoidance (relative to approach) personal goals, whereas high BAS sensitivity is related to the adoption of fewer avoidance (relative to approach) personal goals. This shows that there is in fact a connection between this aspect of personality and the types of personal goals individuals pursue in their daily lives. Based on these findings, I hypothesized that BIS would positively predict the adoption of more avoidance relative to approach goals, and that BAS would negatively predict the proportion of avoidance goals being pursued. Since negatively-motivated goals and positively-motivated goals are distinguished in a conceptually similar way to approach and avoidance goals, it was also hypothesized that BIS would be a positive predictor of negatively-motivated goals and BAS would be a negative predictor of these goals.

The work of Elliot and colleagues (e.g., Elliot & Church, 1997; Elliot and Sheldon, 1997) indicates that this differential adoption of approach and avoidance goals has consequences for subjective well-being, and that this relation is mediated by perceived progress (Elliot et al., 1997). Carver and Scheier (1998; 2002) also indicate that avoidance goal adoption comes with the costs of being more difficult to manage, more difficult to monitor progress, and bring negative cognitions to the forefront more often. When taken together with what is known about procrastination and personal projects, this suggests that the pursuit of avoidance and negatively-motivated goals may be related to higher levels of

procrastination than the pursuit of approach and positively-motivated goals. It also suggests that avoidance and negatively-motivated goals will be viewed as less enjoyable, more stressful, and less controllable when compared to approach and positively-motivated goals, respectively.

Based on these findings regarding approach and avoidance goals, I examined whether reports of procrastination were higher for avoidance and negatively-motivated personal goals than for approach and positively-motivated personal goals. I hypothesized that avoidance goals would be rated higher on procrastination than approach goals and that negatively-motivated goals would receive higher procrastination ratings than positively-motivated goals. Furthermore, I investigated whether BAS and BIS were related to procrastination on goals overall or with procrastination on only certain types of goals. I hypothesized that based on the work of Higgins and colleagues (e.g., Forster et al., 1998; Freitas & Higgins, 2002; Higgins et al. 2003) BAS would be related to procrastination on avoidance and negatively-motivated goals, while BIS would be related to procrastination on approach and positively-motivated goals. In addition, based on the idea that approach and avoidance goals activate different cognitions, I created cognitive profiles for approach and avoidance goals, as well as positively- and negatively-motivated goals based on the Personal Goal Appraisal dimension ratings that were assessed.

Method

Participants

Participants consisting of undergraduate and graduate students enrolled at Carleton University were recruited through the SONA system. The SONA system at Carleton provides access to on-going psychology studies in which students may choose to participate. In total,

267 students accessed this study, however, 55 students declined to participate after reading the informed consent or failed to complete enough of the study materials to be included. This resulted in a sample of 212 student participants providing data for this study. Course credit was given to eligible participants, and a chance to win \$100 dollars (name entered in draw) was given as an incentive to other participants not eligible for extra course credit.

In total, the final sample consisted of 152 female and 60 male students. The mean age of the sample was 20.42 years ($SD = 3.23$). The ages of participants ranged from 17 to 35 years. The vast majority of participants were undergraduate students (99%). There were only two graduate students that completed the study and three students did not indicate their level of study. Participants also provided information about their ethnicity. However, the question regarding ethnicity proved to be somewhat ambiguous. Some participants provided answers indicting their race, while other participants indicated a country or culture they identified with. For this reason the data from this question could not be analyzed in a meaningful way, although it is fair to describe the sample as primarily Caucasian. Participants in the study were also asked to indicate if they perceived their procrastination as a problem in their lives. The majority (84.9%) indicated that procrastination was a problem in their life. This percentage was 85.5% and 83.3% for female and male participants respectively. This difference was not statistically significant at the .05 level, $\chi^2(212) = .161, p = .688$.

Materials

This study included questionnaires and a personal goal assessment procedure that was a combination of the procedures described by Elliot and Friedman (2007) and Little (1983). The questionnaires included a demographic questionnaire, the Behavioural Inhibition/Activation Scales and the General Procrastination Scale. The personal goal

assessment procedure included a Personal Goals Elicitation Procedure and a Personal Goals Appraisal Module (Note: All materials are included in Appendix A).

Demographic Questionnaire. The demographic questionnaire used in this study was brief. Participants were asked to indicate their age, sex, ethnicity, and whether they considered procrastination to be a problem in their life. Participants were also asked to indicate if they were a student and if so what level of study they were completing or had completed. All participants in the study indicated they were students.

Personal Goal Elicitation Procedure (PGEP; Elliot & Friedman, 2007). The PGEP is based on similar procedures designed by Little (1983) and Emmons (1986) to elicit personal projects and personal strivings, respectively. In this procedure, participants were given the definition of a personal goal and a list of example personal goals generated by participants in past research. These example personal goals covered a variety of life domains and demonstrated how personal goals may be either approach or avoidance oriented. These examples were followed by additional information about personal goals including that they involve either approaching or avoiding something; they may represent what a person is trying to do regardless if they are actually able to accomplish it; they may be broad or specific; and they may last for various amounts of time (Elliot & Friedman, 2007).

After reading the examples and concept definitions, participants were asked to list all the personal goals they were currently working on or thinking about. From this initial list, participants were asked to select eight of their personal goals that best described what they were trying to do in their daily lives. These eight goals were then listed on a separate page that had eight relatively short text boxes (100 characters). This was done to encourage participants to list their goals in a concise fashion and to prevent participants from listing

multiple goals on one line or including both the goal and the reasons for its pursuit. Concise goal elicitation was necessary for effective coding of the goals as either approach or avoidance oriented (Elliot & Friedman, 2007). In addition, participants were also asked why they were pursuing each of their eight person goals. Reasons were listed by participants in a further eight short text boxes (100 characters). Once the eight goals were listed, these goals were then used by the participants to complete the Personal Goal Appraisal Module.

Personal Goal Appraisal Module (PGAM; Little, 1983). The Personal Goals Appraisal Module was adapted from Little's (1983) Personal Projects Analysis. In this module, participants were asked to rate each of the eight goals they generated in the PGEM from zero to ten on 22 dimensions. The dimensions used in this study included the original 17 dimensions used by Little (1983), as well as five additional dimensions used in previous research relating personal projects to procrastination (Blunt & Pychyl, 2000, 2005). The following is a list of the dimensions used in this study: importance, enjoyment, difficulty, visibility, control, initiation, stress, time adequacy, outcome, self-identity, others' view, value congruence, positive impact, negative impact, progress, challenge, absorption, boredom, frustration, capability, uncertainty, and procrastination. Mean scores for each dimension were then calculated across participants' different goal orientations.

Behavioural Inhibition/Activation Scales (BIS/BAS Scales; Carver & White, 1994). The BIS/BAS scales are a measure of two personality dimensions related to sensitivity to punishment and reward, respectively. The measure has 20 items in total, and participants indicate their level of agreement with each item on a four-point Likert-type scale with 4 indicating *strong agreement* and 1 indicating *strong disagreement* (with no neutral response).

The BIS/BAS scales consist of four subscales, one that assesses BIS sensitivity and three that are summed to give a total BAS sensitivity. The BIS subscale is a measure of BIS sensitivity (sensitivity to potential threats). This subscale consists of seven items “referencing reactions to the anticipation of punishment (Carver & White, 1994, p. 322)” (e.g., “I feel worried or upset when I think or know somebody is angry at me.”). Two of the items on this subscale are reverse scored (e.g., “I have very few fears compared to my friends.”) and a high score on the scale indicates high BIS sensitivity. The BIS subscale was found to be relatively reliable with an alpha value of .74 (Carver & White, 1994) and this reliability ($\alpha = .76$) was replicated by Jorm et al. (1999) using a large community sample. I found the scale to have a very similar internal consistency, with alpha being .75.

The remaining three subscales are used to assess different aspects of BAS sensitivity (sensitivity to potential rewards); these include Reward Responsiveness (RR), Drive (D), and Fun Seeking (FS). The Reward Responsiveness subscale includes five items “that focus on positive responses to the occurrence of anticipation of reward (Carver & White, 1994, p. 322)” (e.g., “When I get something I want, I feel excited and energized.”). The four items on the Drive subscale are related to the pursuit of desired goals (e.g., “When I want something, I usually go all-out to get it.”). Finally, the four items from the Fun Seeking subscale assess a desire for novel rewards and willingness to approach potential rewards on the spur of the moment (e.g., “I crave excitement and new sensations.” & “I often act on the spur of the moment.”). The scores for each of these subscales are then summed to give a measure of overall BAS sensitivity with high scores indicating high BAS sensitivity. The reliability of these subscales is moderate to good, with alpha scores ranging from .66 to .73 (Carver & White, 1994). Once again, Jorm et al. (1999) found similar reliability when they tested the

scales using a large community sample (Cronbach's alpha values: RR, $\alpha = .65$; D, $\alpha = .80$; FS, $\alpha = .70$). In this study the alpha values of the three BAS subscales were found to be .60, .72, and .70 for the RR, D, and FS subscales, respectively.

The convergent and divergent validity of the BIS/BAS scales was tested by Carver and White (1994) by examining correlations with other scales used to assess somewhat similar constructs. These analyses indicated that BIS/BAS scales are related to alternative measures of similar constructs; however they are also distinguishable from these measures. These findings were also replicated by Jorm et al. (1999) who found that the BIS scale was related to neuroticism and negative affectivity and the BAS scale was related to extraversion and positive affectivity. They also found that the BIS scale was less correlated with anxiety and depression symptoms than neuroticism or negative affectivity scales, indicating that it likely tapped a unique construct. Carver and White (1994) also demonstrated the construct validity of their BIS/BAS scales by demonstrating that higher BIS scores predicted levels of nervousness in anticipation of an impending punishment, while BAS scores predicted positive emotional reactions to indications of potential rewards.

General Procrastination Scale (GP Scale; Lay, 1986). The GP scale is a measure of the trait of procrastination developed by Lay (1986). This scale contains 20 items that are rated on a 5-point Likert scale ranging from 1 (*false of me*) to 5 (*true of me*). Examples of such items include, "I generally delay before starting on work I have to do" and "In preparing for some deadlines, I often waste time by doing other things." Half of the items on this scale were reverse scored and then ratings were summed to determine an overall scale score. When the GP scale was used by Schouwenburg and Lay (1995) to measure trait procrastination, Cronbach's alpha was calculated to be .89. I found the GP scale to have a similar internal

consistency, with alpha being .87. Predictive validity was established by Lay (1986) where he demonstrated that students who scored higher on the measure were more likely to procrastinate on the return of a questionnaire by mail.

Procedure

I used a series of questionnaires and an adapted version of Personal Project Analysis (PPA) (Little, 1983; 1989) to examine how an approach-avoidance personality orientation may be related to the orientation of the personal goals a person is pursuing. In addition, I examined how the approach-avoidance orientation of personal goals relates to personal appraisals of these goals and to procrastination. Participants were asked to generate a list of eight personal goals and the reasons they were pursuing these goals. They were then asked to rate the goals on a series of dimensions. Approach-avoidance personality orientation was assessed using the BIS/BAS scales (Carver & White, 1994). Participants were also given the General Procrastination scale (Lay, 1986) to look for potential relations among personality orientation, goal orientation, and trait procrastination. All questionnaires, the PGEP, and the PGAM were presented online using Survey Monkey©.

Participants were recruited through the Carleton University psychology experiment sign-up system (SONA system). Students that indicated they were interested in participating in the study were directed to click on a web link which opened a new window with the study materials. Participants were first asked to read an informed consent form (Appendix A). If participants were still interested in participating they were asked to click the “yes” button at the bottom of the page and then continue to the next page by pressing continue. Those that decided not to participate were instructed to click the “no” button and close the window.

Once consent was given, participants were first asked to complete a brief demographic questionnaire. Once completed, participants were instructed to click continue and were presented with the Personal Goal Elicitation Procedure (PGEP). To complete the PGEP, participants were first asked to read a short explanation of what personal goals are and were given some examples. They were then asked to generate a list of all the personal goals they were currently working on or thinking about. From this list they were asked to select eight goals that exemplified what they are trying to do in their daily lives. In addition, participants were asked to give the reason they were pursuing each of these eight goals.

From here, participants completed the Personal Goal Appraisal Module (PGAM). To complete the PGAM participants were asked to rate each of the eight goals they had previously provided from zero to ten according to 22 project dimensions listed previously. To aid participants in this task, an explanation of each dimension was provided. To further assist participants, the extreme scores in the pull-down menu were accompanied by statements indicating the direction that this score would indicate. For example the option 0 was followed by “not at all,” and the option 10 was followed by “extremely.”

When participants completed the goal appraisal matrix they were then presented with BIS/BAS scales and the General Procrastination (GP) scale. To complete the BIS/BAS scales, participants indicated their level of agreement on the 20 items. Participants then completed the GP scale by indicating how true or false of them each item was. At this point, participants were asked to indicate if they would like to receive course credit for their participation or if they would like to have their name entered in a draw. In order to either assign credit or enter the person in the draw it was necessary to also have the participants provide their names. Those who wished to be entered in the draw were also asked to provide

an email address. The final page of the study was the debriefing form (Appendix A), in which participants were thanked for their contribution.

Once all participants had completed the study, the data were retrieved from Survey Monkey©. The data were stored on a password protected computer. To protect the participants' from having their names attached to their data, the information provided for credit assignment or draw entry was stored separately from the rest of the data and deleted once credits were assigned and the draw was complete. The data from the PGEP, the PGAM, and the scales were then transferred to SPSS for cleaning, coding, and analysis.

Goal Coding

In this study, the personal goals provided by participants were coded using two different coding procedures. In the first case, I coded the goals based on the language used in the goals themselves. Classification of goals using this system was done using a procedure from Elliot and Friedman (2007) (Appendix B). Goals were then coded using a second procedure developed by Ogilvie and Rose (1995) (Appendix C). This coding involved categorizing the goals based on the purpose people gave for pursuing the goals. In this study, this purpose was given by participants when they were asked why they were pursuing each of their personal goals.

In order to code the goals using Elliot and Friedman's (2007) procedure, each of the goals had to be read and classified into one of four categories: 1) approach, 2) avoidance, 3) approach, then avoidance, and 4) avoidance, then approach. For the first 100 goals, this was done independently by two coders. I then compared the two coders' classifications to determine the inter-rater reliability. Similar to the 99% agreement found by Elliot and Friedman (2007), the raters in this study reached 98% agreement on their classifications. Due

to this very high inter-rater reliability, the remainder of this coding was done by one coder (i.e., the author).

Once all the goals were coded, they were then grouped into two categories. Approach and approach, then avoidance goals were coded as approach goals, while avoidance and avoidance, then approach goals were coded as avoidance goals. After goals were coded as approach or avoidance, an avoidance index measure was created. This was done by dividing the number of avoidance goals a participant listed by the total number of goals he or she listed.

For the classification of goals using the procedure from Ogilvie and Rose (1995), the reasons listed by participants for pursuing their personal goals were examined. When the reason alone was not enough to classify the goal, the accompanying goal was also examined as per the instructions in the coding procedure. All the goals were first coded into five categories: 1) cure, 2) keep, 3) prevent, 4) acquire, and 5) N/A. For each participant, indices were then calculated to determine what proportion of their goals were of each type.

Once classified in this manner the goals were next grouped in two ways. The first was what Ogilvie et al. (2001) suggested as the approach-avoidance dimension. To do this, acquire and cure goals were coded as approach goals, and keep and prevent goals were coded as avoidance goals. One again indices were calculated, this time to determine the proportions of a participant's goals that were approach and avoidance motivated. The second grouping was done based on what Ogilvie et al. (2001) call the positive-negative dimension. In this case, acquire and keep goals were coded as positive goals, and cure and prevent goals were coded as negative goals. A final set of goal orientation indices were then calculated to

determine the proportion of goals listed by each participant that fell into the positive and negative categories.

Results

Preparation for Analysis

Data cleaning. Before beginning the analyses it was first necessary to clean the data and to compute scale scores based on the items from the General Procrastination scale and the BIS/BAS scales. The first step in cleaning the data was to remove the 55 participants that did not complete the Personal Goal Elicitation Module (PGEM). The participants that only completed the demographics questionnaire were compared to participants who completed the study and I found they did not differ in terms of gender, age, or level of study.

Following the removal of these participants, the rest of the data were checked for missing values. Missing values were treated differently depending on the variable they were associated with. Missing values in the Personal Goal Appraisal Module (PGAM) were coded as missing, and dimension scores were calculated using the remaining scores for the participants. Missing values that occurred in the General Procrastination (GP) scale were addressed by using mean substitutions. There were a total of 8 missing values and no participant missed more than one item. There were no missing values in the BIS/BAS scale data.

The next step in the data cleaning process involved examining the data for out-of-range scores. As the materials were completed online using radio buttons and pull-down menus, participants were unable to give responses that fell outside of the appropriate ranges. The data were checked to make sure no errors occurred when the data were downloaded or

when scale and dimension scores were calculated. This check found that there were no out-of-range values in the data set.

BIS/BAS scales. To calculate the scale scores for the BIS/BAS scales, the first step involved reverse scoring two of the items on the BIS subscale. Once these items were reverse scored, the scores for the seven items comprising the BIS subscale were summed to give each participant an overall BIS score with a possible range of 4 to 28. High scores on this scale indicate a heightened BIS sensitivity. The BIS scale was completed by all of the participants. The average BIS score was 21.00 ($SD = 3.19$) and females ($M = 21.53$, $SD = 3.12$) scored significantly higher than males ($M = 19.65$, $SD = 2.98$) on this measure, $t(210) = -4.01$, $p < .001$.

Next, items from each of the three BAS subscales were summed, resulting in a Reward Responsiveness (RR) score, a Drive (D) score, and a Fun Seeking (FS) score being created for each participant (RR, $M = 16.11$, $SD = 1.85$; D, $M = 10.80$, $SD = 1.97$; FS, $M = 11.55$, $SD = 1.95$). RR scores were higher for females ($M = 16.34$, $SD = 1.81$) than for males ($M = 15.53$, $SD = 1.84$), $t(210) = -2.89$, $p = .004$. There were no significant differences between the males and females on the other two BAS subscales. To create an overall BAS score, these three subscales were summed to provide each participant with a total BAS score, with a possible range of 13 to 52. High scores on this scale indicate a high BAS sensitivity. For my sample the average BAS score was 38.46 ($SD = 4.47$). Again females ($M = 38.91$, $SD = 4.38$) scored higher than males ($M = 37.33$, $SD = 4.53$) on this measure, $t(210) = -2.34$, $p = .02$.

General Procrastination (GP) scale. The GP scale scores were created in a similar way to the BIS scores. First, ten of the items were reverse scored. Following this, the scores

for each of the 20 items were summed to create an overall scale score with a possible range of 20 to 100. This score was used as an indicator of the participants' level of trait procrastination, with higher scores indicating more procrastination. Of the 212 participants in the study, 211 completed the GP scale. The average score was 60.66 ($SD = 12.06$) with a low score of 28 and a high score of 93. There was no significant difference on average GP scores between females ($M = 60.24$, $SD = 12.34$) and males ($M = 61.73$, $SD = 11.35$), $t(209) = .81$, $p = .418$.

Goal dimension scores. The calculation of goal dimension scores involved averaging the dimension scores for each of the 22 dimensions across the personal goals listed by participants. This process was then completed for the different goal types within a participant's overall goal system. For example, the rating for the dimension of importance was averaged across a participant's approach goals. This was then repeated for all other appraisal dimensions. The procedure was also repeated for the various goal classifications. Once average dimension scores were calculated for each participant, they were averaged across participants. Table 2 shows the average dimension ratings for the different goal types. The number of participants varies for the various goal types as not all participants listed goals from every goal type. Changes in the number of participants within a goal type are a result of missing data in the PGAM. The averages in Table 2 were calculated using the data provided by all participants. These data provide some initial information about how people are generally appraising the various goal types. Later comparisons used data that were restricted to only those participants that had at least one avoidance goal, so means in later analyses may differ from those provided in Table 2.

Table 2. Average Dimension Ratings for the Various Goal Types

Dimensions	Approach Goals		Avoidance Goals		Approach Motivated Goals		Avoidance Motivated Goals		Positive Motivated Goals		Negative Motivated Goals	
	Mean (N)	SD	Mean (N)	SD	Mean (N)	SD	Mean (N)	SD	Mean (N)	SD	Mean (N)	SD
Importance	7.99 (212)	1.22	7.86 (135)	1.74	7.98 (209)	1.32	8.04 (171)	1.43	8.20 (201)	1.26	7.84 (197)	1.44
Enjoyment	5.68 (212)	1.77	3.89 (135)	2.72	5.44 (209)	1.96	5.62 (171)	2.55	6.09 (201)	1.97	4.77 (197)	2.08
Difficulty	5.78 (212)	1.70	6.49 (135)	2.46	6.05 (209)	1.83	5.54 (171)	2.37	5.66 (201)	1.92	6.23 (197)	2.10
Visibility	6.02 (212)	1.78	5.55 (135)	2.54	5.96 (209)	1.89	6.29 (171)	2.42	6.30 (201)	1.97	5.74 (197)	2.08
Control	6.95 (212)	1.66	6.48 (135)	2.43	6.81 (209)	1.85	7.21 (171)	1.90	7.08 (201)	1.82	6.83 (197)	1.95
Initiation	7.46 (212)	1.80	7.27 (134)	2.20	7.50 (208)	1.80	7.72 (171)	1.98	7.65 (201)	1.87	7.49 (197)	1.86
Stress	5.52 (212)	1.99	6.29 (135)	2.60	5.67 (209)	2.09	5.59 (171)	2.62	5.57 (201)	2.25	5.69 (197)	2.38
Time	5.61 (211)	1.79	5.33 (134)	2.52	5.56 (208)	1.87	5.93 (170)	2.28	5.83 (200)	2.01	5.25 (196)	2.13
Adequacy												
Outcome	6.74 (212)	1.49	6.33 (135)	2.03	6.65 (209)	1.62	6.91 (170)	1.76	6.99 (201)	1.65	6.47 (197)	1.78
Self Identity	7.00 (212)	1.76	6.75 (135)	2.32	7.04 (209)	1.84	7.26 (171)	1.92	7.30 (201)	1.77	6.81 (197)	2.01
Others' View	6.31 (210)	1.77	6.40 (133)	2.15	6.35 (207)	1.88	6.72 (169)	2.11	6.52 (199)	2.04	6.21 (195)	2.02
Value	7.18 (212)	1.60	7.12 (135)	2.02	7.19 (209)	1.73	7.35 (171)	2.96	7.48 (201)	1.66	6.97 (197)	1.82
Congruence												
Positive Impact	6.87 (212)	1.87	6.79 (135)	2.78	7.01 (209)	1.93	6.95 (171)	2.33	6.94 (201)	2.03	6.87 (197)	2.19
Negative Impact	2.62 (212)	2.25	2.65 (134)	2.86	2.53 (209)	2.24	2.67 (171)	2.63	2.63 (201)	2.30	2.58 (196)	2.42
Progress	5.33 (212)	1.64	5.12 (134)	2.29	5.10 (209)	1.73	5.89 (170)	2.22	5.67 (201)	1.88	5.01 (196)	1.95
Challenge	6.24 (212)	1.73	6.73 (135)	2.30	6.42 (209)	1.81	6.23 (171)	2.33	6.26 (201)	1.92	6.49 (197)	2.06
Absorption	5.97 (211)	1.64	5.82 (134)	2.34	5.95 (208)	1.78	6.28 (170)	2.27	6.33 (200)	1.78	5.75 (196)	2.04
Boredom	4.35 (212)	2.08	4.48 (135)	2.73	4.42 (209)	2.15	4.26 (171)	2.72	4.22 (201)	2.33	4.56 (197)	2.43
Frustration	5.16 (212)	2.09	6.37 (135)	2.63	5.39 (209)	2.14	5.24 (171)	2.78	5.16 (201)	2.36	5.70 (197)	2.37
Capability	7.10 (212)	1.57	6.34 (134)	2.28	6.97 (209)	1.64	7.27 (171)	1.95	7.49 (201)	1.62	6.63 (197)	1.83
Uncertainty	3.82 (212)	2.08	4.21 (135)	2.62	4.01 (209)	2.17	3.51 (171)	2.52	3.80 (201)	2.30	3.90 (197)	2.31
Procrastination	5.10 (212)	2.01	5.57 (135)	2.88	5.14 (209)	2.05	4.96 (171)	2.79	4.90 (201)	2.29	5.57 (197)	2.21

Goal indices. Goal indices were calculated as a measure of the proportion of goals listed by a participant that were of various orientations. For example, when a participant listed their eight goals, if three goals were coded as avoidance type goals the avoidance goal index would be .375. Indices were calculated for avoidance goals, prevent goals, acquire goals, cure goals, keep goals, approach-motivated goals, avoidance-motivated goals, positively-motivated goals, and negatively-motivated goals. These goal indices were then used when investigating whether personality orientation predicted the types of goals a person was pursuing. Table 3 lists the average score for each of the calculated indices. From these indices, it can be seen that on average only 14% (approximately 1 of 8) of a participant's goals were coded as avoidance goals, while on average 46% of a participant's goals were coded as negatively-motivated goals.

Table 3. *Average Score for Goal Indices of the Various Goal Orientations*

Goal Orientation	Mean	SD	Minimum	Maximum
Avoidance Goal Index (AVGI)	.14	.14	0	.625
Prevent Goal Index (PGI)	.13	.14	0	.625
Acquire Goal Index (AGI)	.37	.22	0	1
Cure Goal Index (CGI)	.33	.25	0	1
Keep Goal Index (KPI)	.13	.15	0	.625
Approach-Motivated Goal Index (APMGI)	.71	.23	.125	1
Avoidance-Motivated Goal Index (AVMGI)	.26	.21	0	.875
Positively-Motivated Goal Index (PMGI)	.50	.24	0	1
Negatively-Motivated Goal Index (NMGI)	.46	.25	0	1

N = 212

Personality and Goal Adoption

A multiple regression analysis was run to examine whether BIS and BAS predicted the adoption of relatively more avoidance orientated goals, when goals were categorized using the Elliot and Friedman (2007) procedure. Prior to the analysis, all of the independent

and dependent variables were checked for the presence of univariate and multivariate outliers. This was done using leverage values and Cook's distance scores as suggested by Tabachnick and Fidell (2007). No influential outliers were identified in the data. The assumption of normality, linearity, and homogeneity of variance were also checked. Residual plots did not indicate any violation of the regression assumptions.

It was expected that BIS would positively predict and BAS would negatively predict the Avoidance Goal Index (AVGI), as this was previously the case in research conducted by Elliot and Thrash (2002). However, the multiple regression analysis of the variables did not produce significant results ($F(2, 209) = .025, p = .975$) indicating that neither the combination of independent variables nor either of the independent variables on their own significantly predicted the AVGI.

In order to investigate the relations between personality (i.e., BIS and BAS) and the other goal indices (see Table 3), a series of multiple regression analyses were conducted. Again, the assumptions of regression were checked and no violations were found. I expected that BIS would positively predict the adoption of relatively more prevent and cure motivated goals (i.e., negatively-motivated goals), while BAS would positively predict the adoption of relatively more acquire and keep type goals (i.e., positively-motivated goals).

The results of the multiple regression analyses can be seen in Table 4. My analysis revealed that, contrary to my prediction, BAS was not a significant predictor of any of the goal indices. BIS, on the other hand, did significantly predict four of the tested goal indices. BIS was a positive predictor of the Cure Goal Index (CGI) and the Negatively-Motivated Goal Index (NMGI). BIS was also a negative predictor of the Acquire Goal Index (AGI) and the Positively-Motivated Goal Index (PMGI).

Table 4. Statistically Significant Multiple Regression Analyses of BIS, BAS, and the Goal Indices

Predictors	Goal Indices											
	Acquire			Cure			Positive			Negative		
	β	r_{sem}	r	β	r_{sem}	r	β	r_{sem}	r	β	r_{sem}	r
BAS	.003	.003	.003	-.022	-.022	-.036	-.018	-.018	-.003	.053	.052	.036
BIS	-.180**	-.180	-.180**	.210**	.210	.212**	-.235***	-.235	-.234***	.262***	.261	.258***
R^2		.033			.045			.055			.070	
F		3.47*			4.89**			6.02**			7.69***	
df		2, 206			2, 206			2, 206			2, 206	

Note: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$; r_{sem} – semi-partial correlation

The results of these analyses indicate that when goals were classified based on the motivations people had for pursuing them, BIS was a significant predictor in the adoption of certain goal types. Participants with higher BIS scores were more likely to have a higher proportion of cure and negatively-motivated goals and a lower proportion of acquire and positively-motivated goals in their overall goal system.

Personality and Procrastination

In this study I used two measures of procrastination, I used the General Procrastination scale (Lay, 1986) as a measure of trait procrastination, and I used average procrastination ratings from the PGAM as a task-specific measure of procrastination on various types of personal goals. Before examining the relations among personality and procrastination, I first examine the relations among my measures of procrastination. Table 5 provides the correlations between the GP scale scores and the average procrastination ratings for the various goal types.

Table 5. *Correlations between General Procrastination Scale Scores and Procrastination*

Ratings of Personal Goals

Type of Personal Goal	<i>r</i>	<i>n</i>	<i>p</i>
All Personal Goals	.375	211	<.001
Approach Goals	.351	211	<.001
Avoidance Goals	.343	134	<.001
Positively-Motivated Goals	.296	200	<.001
Negatively-Motivated Goals	.336	196	<.001

Although the trait and goal measures of procrastination used in the study are correlated, the correlations are only moderate, revealing that trait procrastination is not the same thing as procrastination appraisals on individual goals or on the goal systems taken as a

whole. This may be understood as the difference between trait and state procrastination, and this difference provides an interesting comparison for the subsequent analyses.

To test my second hypothesis that the personality constructs BAS and BIS were related to a person's level of procrastination, I first ran a correlation analysis to determine if BAS or BIS was related to my trait measure of procrastination (i.e., GP scale scores). Again my analysis revealed unexpected results. I found that neither BAS nor BIS was significantly correlated with my measure of trait procrastination (BAS, $r(211) = -.101, p = .142$; BIS, $r(211) = .089, p = .198$). While a person's overall BAS was not related to their general procrastination score, the BAS Drive subscale was found to have a significant negative correlation with general procrastination scores, $r(211) = -.246, p < .001$.

To further examine the relations among the BAS/BIS constructs and procrastination, I next ran a series of correlation analyses to determine if BAS and/or BIS were related to my state measure of procrastination (i.e., the procrastination dimension in the PGAM) on the various goal types. The analyses correlating BAS with average procrastination ratings from the PGAM revealed that BAS was not significantly related to procrastination ratings for goals overall or for any of the goal types examined. The three BAS subscales were tested and again there were no significant correlations found.

Unlike BAS, when I examined the relation between BIS and procrastination ratings from the PGAM several significant correlations were found. First, BIS was positively correlated with average procrastination ratings across all goals, $r(212) = .237, p = .001$. This indicates that people with higher BIS report more procrastination on their personal goals. Second, BIS was positively correlated with average procrastination ratings for both approached goals and approach-motivated goals, $r(212) = .234, p = .001$ and $r(209) = .178, p$

= .010, respectively. These results show that people with high BIS report a greater amount of procrastination on their personal goals that were worded in an approach manner and on their personal goals that were fueled by an approach motivation.

In addition, BIS was also related to procrastination ratings for three other goal types. Although unexpected, BIS was found to have a positive correlation with average procrastination ratings for prevent-motivated goals, $r(125) = .198, p = .027$. This was not anticipated as prevent-motivated goals involve avoiding a potential negative state or condition and individuals with a high BIS should be particularly sensitive to cues of potential punishment. However, it appears that even if they are aware of these potential problems they are also more likely to procrastinate on this type of goal compared to someone with a less sensitive BIS.

The final two correlations involving average procrastination ratings and BIS deal with positively- and negatively-motivated goals. My analyses indicated that BIS was positively correlated with the procrastination ratings of both positively- and negatively-motivated goals $r(201) = .159, p = .024$ and $r(197) = .205, p = .004$, respectively. On the one hand, the positive correlation between BIS scores and procrastination ratings of positively-motivated goals was expected as these goals may not be a good fit for a person with a highly sensitive BIS. On the other hand, the positive relation between BIS scores and procrastination ratings on negatively-motivated goals was unexpected. It seems that individuals with a more sensitive BIS are more likely to adopt negatively-motivated goals, as was shown in the previous section. However, they also indicated more procrastination on this type of goal. This is contrary to what was expected since it was anticipated that a personality-goal fit would

help to eliminate the problems usually associated with the pursuit of negative/avoidance goals.

Goal Orientation and Procrastination

To test my hypotheses that individuals would indicate more procrastination on avoidance goals, avoidance-motivated goals, and negatively-motivated goals than on approach goals, approach-motivated goals, and positively-motivated goals, respectively, I used a series of three paired sample *t*-tests. To protect against an inflated type one error rate, a Bonferroni adjustment was applied to the alpha level. An alpha of .017 was used to determine if tests were statistically significant. Only participants that had listed at least one of each type of these goals in their goal systems were included in these analyses. The average procrastination ratings for these goal types were then used to determine if participants reported different levels of procrastination.

A total of 135 participants listed at least one approach and one avoidance type goal. Although it was predicted that procrastination would be higher for avoidance goals than for approach goals, my analysis revealed that the difference was not significant ($t(134) = -1.80, p = .074$) with avoidance and approach goals having average procrastination ratings of 5.57 ($SD = 2.88$) and 5.16 ($SD = 2.04$), respectively. My analyses also indicated that there was not a significant difference between procrastination ratings for approach-motivated goals ($M = 5.12, SD = 2.08$) and avoidance-motivated goals ($M = 4.96, SD = 2.79$), $t(170) = .79, p = .429$.

The negative-positive motivated goal distinction was used in the final paired sample *t*-test. The procrastination ratings for these two goal types were significantly different. Participants reported more procrastination on their negatively-motivated goals ($M = 5.54, SD$

= 2.25) than on their positively-motivated goals ($M = 4.93$, $SD = 2.26$), $t(188) = -3.46$, $p = .001$. This result indicates that people report higher levels of procrastination on goals that are motivated by a desire to prevent a potential negative state or cure an existing negative state than on goals motivated by the desire to acquire or keep a positive state or condition.

Goal Appraisal Dimensions Relating to Procrastination on Different Goal Types

For these analyses, I used correlations to determine which of the other personal goal (i.e., PGAM) dimensions were related to procrastination ratings. To do this I correlated the average dimension rating for the other 21 dimensions with the average dimension rating for procrastination. This was done separately for approach and avoidance type goals and for positively- and negatively-motivated goals to determine if the dimensions related to procrastination differed depending on the goal type.

When using the approach-avoidance goal distinction I found that all but one of the other dimensions were related to procrastination for approach goals. For avoidance goals, the number of related dimensions was smaller, with only 12 other dimensions relating to procrastination. Table 6 lists the dimensions and their correlations with the procrastination dimension. In this table, we can see that many of the dimensions that only relate to procrastination for approach goals are often associated with a goal's meaning. These include dimensions such as importance, self identity, value congruence, and absorption. Other dimensions such as difficulty, boredom, frustration, and uncertainty were found to have a positive correlation with procrastination regardless of the goal type.

Table 6. *Correlations between Average Procrastination Ratings and the Other Average**Dimension Ratings for Approach and Avoidance Goals*

Dimensions	Goal Type					
	Approach			Avoidance		
	<i>r</i>	<i>n</i>	<i>p</i>	<i>r</i>	<i>n</i>	<i>p</i>
Importance	-.14*	212	.047	.02	135	.815
Enjoyment	-.37**	212	<.001	-.20*	135	.020
Difficulty	.22**	212	.001	.42**	135	<.001
Visibility	-.24**	212	<.001	<-.01	135	.964
Control	-.29**	212	<.001	-.16	135	.071
Initiation	-.28**	212	<.001	<.01	134	.986
Stress	.29**	212	<.001	.24**	135	.005
Time Adequacy	-.31**	211	<.001	-.23**	134	.006
Outcome	-.31**	212	<.001	-.29**	135	.001
Self Identity	-.24**	212	.001	-.01	135	.899
Others' View	-.17*	210	.016	.04	133	.647
Value Congruency	-.27**	212	.001	-.02	135	.780
Positive Impact	-.05	212	.453	.05	135	.534
Negative Impact	.15*	212	.025	-.03	134	.750
Progress	-.40**	212	<.001	-.36**	134	<.001
Challenge	.17*	212	.015	.35**	135	<.001
Absorption	-.31**	211	<.001	-.15	134	.078
Boredom	.52**	212	<.001	.39**	135	<.001
Frustration	.41**	212	<.001	.31**	135	<.001
Capability	-.33**	212	<.001	-.38**	134	<.001
Uncertainty	.35**	212	<.001	.19*	135	.027

* $p \leq .05$, ** $p \leq .01$

When the positive-negative motivated goal distinction was used, I found that 17 of the 21 dimensions were related to procrastination for positively-motivated goals and 13 were related to procrastination for negatively-motivated goals. The complete list of correlations can be seen in table 7. Similar to the findings with approach and avoidance goals, meaning dimensions such as self identity and value congruence were only related to procrastination when examining positively-motivated goals. Interestingly, the importance dimension was not

related to procrastination for positively-motivated goals or negatively-motivated goals. The dimensions of difficulty, boredom, frustration, and uncertainty continue to show a positive correlation with procrastination regardless of the goal type.

Table 7. *Correlations between Average Procrastination Ratings and the Other Average*

Dimension Ratings for Positively- and Negatively-Motivated Goals

Dimensions	Goal Type					
	Positive-Motivated			Negative-Motivated		
	<i>r</i>	<i>n</i>	<i>p</i>	<i>r</i>	<i>n</i>	<i>p</i>
Importance	-.03	201	.679	-.10	197	.159
Enjoyment	-.32**	201	<.001	-.23**	197	.002
Difficulty	.25**	201	<.001	.31**	197	<.001
Visibility	-.18*	201	.011	-.01	197	.879
Control	-.15*	201	.030	-.17*	197	.017
Initiation	-.16*	201	.025	-.09	197	.225
Stress	.34**	201	<.001	.27**	197	<.001
Time Adequacy	-.21**	200	.004	-.41**	196	<.001
Outcome	-.19**	201	.006	-.27**	197	<.001
Self Identity	-.20**	201	.004	-.06	197	.427
Others' View	-.04	199	.540	<-.01	195	.952
Value Congruency	-.15*	201	.040	-.12	197	.091
Positive Impact	<-.01	201	.954	-.08	196	.243
Negative Impact	.07	201	.330	.12	196	.098
Progress	-.32**	201	<.001	-.34**	197	<.001
Challenge	.21**	201	.003	.33**	197	<.001
Absorption	-.15*	200	.031	-.28**	196	<.001
Boredom	.52**	201	<.001	.35**	197	<.001
Frustration	.50**	201	<.001	.35**	197	<.001
Capability	-.22**	201	.002	-.29**	197	<.001
Uncertainty	.37**	201	<.001	.29**	197	<.001

Note: * $p \leq .05$, ** $p \leq .01$

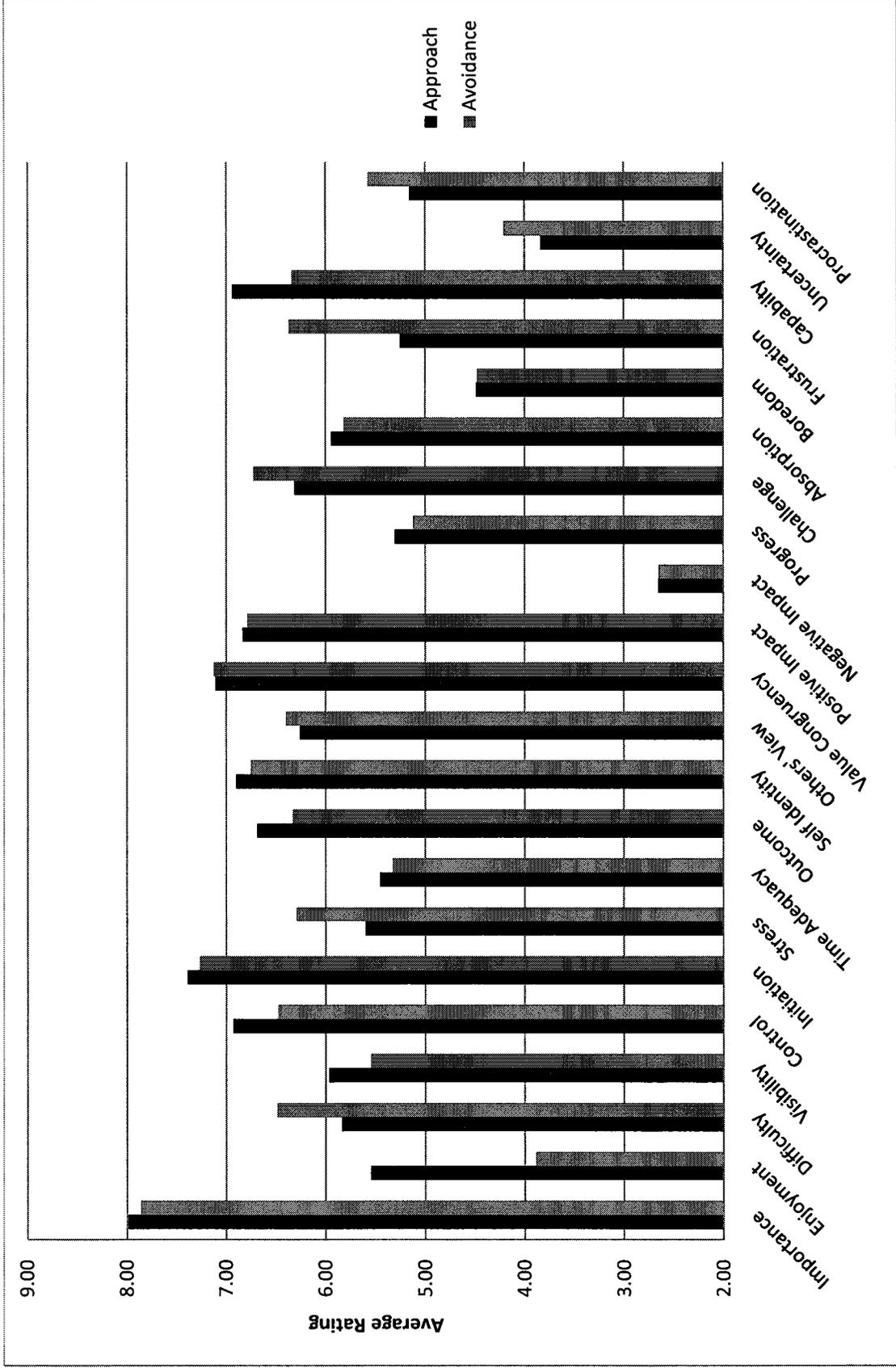
Goal Orientation and Goal Appraisals

To test my final hypothesis, that approach and avoidance goals and positive and negative goals would have different profiles based on the 22 dimensions participants used to

appraise them I conducted a series of paired sample *t*-tests. Due to the large number of tests being conducted a Bonferroni adjustment was made to the alpha level to help protect against an inflated type one error rate. The alpha level used in these analyses to determine if tests were significant was .002. In addition, since paired sample *t*-tests were used, only participants that listed at least one of each type of goal were included in these analyses (N = 135 for the approach-avoidance goal profiles and N = 189 for the positive-negative goal profiles). This allowed us to create profiles based on the average dimension rating participants reported for the different types of goals they had in their goal system.

The analyses were first performed using the approach-avoidance distinction to classify the participants' goals. Figure 2 provides a complete profile of approach and avoidance goals based on the 22 dimensions used to appraise them. My results indicate that approach and avoidance goals differ on five of these dimensions. On average, people rated their approach goals as more enjoyable [Approach, $M = 5.55$, $SD = 1.76$; Avoidance, $M = 3.89$, $SD = 2.71$; $t(134) = 7.95$, $p < .001$] and thought they were more capable of completing them [Approach, $M = 6.94$, $SD = 1.60$; Avoidance, $M = 6.34$, $SD = 2.28$; $t(133) = 3.70$, $p < .001$]. Participants also reported avoidance goals as being more difficult [Approach, $M = 5.84$, $SD = 1.76$; Avoidance, $M = 6.49$, $SD = 2.46$; $t(134) = -3.23$, $p = .002$], more stressful [Approach, $M = 5.60$, $SD = 2.12$; Avoidance, $M = 6.29$, $SD = 2.60$; $t(134) = -3.46$, $p = .001$], and more frustrating [Approach, $M = 5.25$, $SD = 2.09$; Avoidance, $M = 6.37$, $SD = 2.63$; $t(134) = -5.83$, $p < .001$].

Figure 2. Goal Profiles for Approach and Avoidance Goals

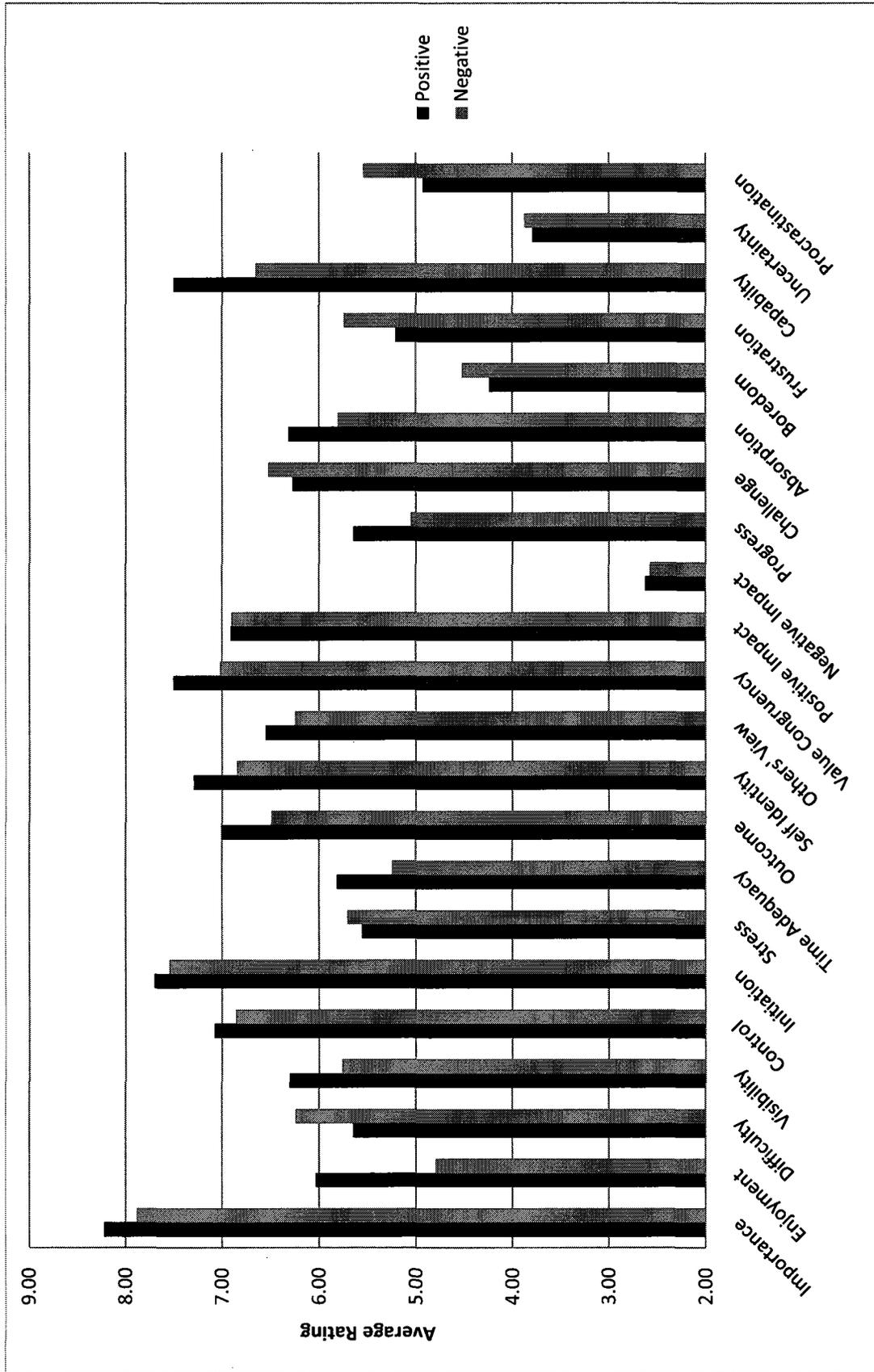


The same procedure was used again to create profiles for goals categorized using the positive-negative motivated distinction. Figure 3 provides a complete profile of positively-motivated and negatively-motivated goals based on the 22 dimensions used to appraise them. Classifying the goals by this distinction resulted in several significant differences in dimension ratings. On average, participants rated their positively-motivated goals as more important, more enjoyable, and more visible to important others. They also rated positively-motivated goals higher on time adequacy, outcome, self identity, value congruence, progress, absorption, and capability. Negatively-motivated goals were rated higher on the dimensions of difficulty and procrastination. The means and test values for these dimensions can be seen in Table 8.

Table 8. *Significantly Different Dimension Ratings for Positively and Negatively-Motivated*

<i>Goals</i>					
Dimensions	Positively Motivated Mean(<i>SD</i>)	Negatively Motivated Mean(<i>SD</i>)	<i>t</i>	<i>df</i>	<i>p</i>
Importance	8.22(1.20)	7.89(1.40)	3.20	188	.002
Enjoyment	6.04(1.93)	4.80(2.11)	8.00	188	< .001
Visibility	6.31(1.93)	5.77(2.10)	3.53	188	.001
Time Adequacy	5.82(1.99)	5.25(2.13)	3.85	187	< .001
Outcome	7.00(1.62)	6.50(1.81)	3.68	188	<.001
Self Identity	7.30(1.76)	6.85(2.03)	3.23	188	.001
Value Congruence	7.51(1.63)	7.02(1.83)	4.02	188	<.001
Progress	5.65(1.88)	5.06(1.95)	4.08	187	<.001
Absorption	6.32(1.77)	5.80(2.02)	3.48	187	.001
Capability	7.50(1.61)	6.66(1.84)	6.95	188	<.001
Difficulty	5.65(1.93)	6.25(2.12)	-3.84	188	<.001
Procrastination	4.93(2.26)	5.54(2.25)	-3.45	188	.001

Figure 3. Goal Profiles for Positive and Negative Motivated Goals



Summary of Results

In examining whether the individual difference variables BIS and BAS predicted the number of avoidance relative to approach goals a person is pursuing, I found that neither was a significant predictor. BIS and BAS were then tested to determine if they predicted the proportion of negatively- and positively-motivated goals being pursued. Overall, 5.5% of the variance in the proportion of positively-motivated goals being pursued was explained by the combination of these two predictors [$F(2, 206) = 6.02, p < .01$], but only BIS significantly contributed to the total explained variance ($\beta = -.235, p < .001$). The combination of BIS and BAS also explained 7.0% of the variance in the proportion of negatively-motivated goals being pursued [$F(2, 206) = 7.69, p < .001$] and again only BIS significantly contributed to the total variance explained ($\beta = .262, p < .001$).

When these individual difference variables were examined in relation to procrastination, neither BIS nor BAS was related to trait procrastination as measured by the GP scale. However, when I investigated whether BIS and BAS were related to procrastination ratings for personal goals, BIS had positive correlations with procrastination rating on goals overall, as well as positive correlations with procrastination ratings for approach, avoidance, positively-motivated, and negatively-motivated goals. These results demonstrate that regardless of goal type, BIS is related to increased procrastination on personal goals. BAS was not related to any measure of procrastination.

The next step in the analyses assessed which of the other appraisal dimensions were related to procrastination for the different goal types. I found that many of the dimensions associated with a goal's meaning, such as self identity and value congruence, were only negatively related to procrastination when the goals were approach or positively-motivated

type goals. Other dimensions such as stress, frustration, and boredom were found to be positively related to procrastination regardless of the goal type.

Finally, when I created cognitive profiles for goals based on the approach-avoidance and the positive-negative distinctions, I found that participants viewed these goals differently on several dimensions. The biggest differences, irrespective of the goal type distinction, were found for ratings of enjoyment and capability. This indicates that people feel more capable of completing their approach and positively-motivated goals, and they find these goals more enjoyable than their avoidance and negatively-motivated goals.

Taken together the results suggest that individuals with a highly sensitive BIS will have more negatively-motivated personal goals in their lives. These individuals are also more likely to procrastinate on their personal goals. Negatively-motivated goals are also rated lower on many of the positive appraisal dimensions, particularly enjoyment and capability, indicating that pursuing these goals is unlikely to be an enjoyable experience.

Discussion

It will be recalled that the purpose of this study was to explore the relation of procrastination with both goal type and personality. I hypothesized that avoidance goals in particular would be related to increased procrastination as past research has demonstrated that avoidance goals are more difficult to manage and monitor. In addition, I hypothesized that the individual difference in behavioural activation and behavioural inhibition known as BAS and BIS, respectively, would also be related to goal type and procrastination, as BAS and BIS reflect approach and avoidance motives at the level of personality. The results of my study indicate that the relations among these variables are complex. Overall, there is certainly a relation between avoidance and procrastination both in terms of goal type and personality,

but how this is expressed in the lives of individuals as reflected in the data is not a simple matter.

To understand the results of my study, I need to address key issues related to how goals are categorized in the research literature as well as how they are thought about by the individuals who are pursuing them. In doing this, a few important themes also need to be discussed, including the notion of task aversiveness in relation to procrastination, the idea of personality-goal fit, and the notion that individual differences in personality can predict the types of goals a person is more likely to pursue. The discussion begins with the issue of individual differences in relation to goal type.

BIS, BAS and Personal Goal Adoption

One of the purposes of this study was to examine whether the individual difference constructs of BIS and BAS were predictive of the number of avoidance (relative to approach) goals a person is pursuing when the goals were not restricted to any particular domain. The results of this study provided interesting, and somewhat unexpected, results that suggest a need to further study how goals are classified as approach or avoidance. When goals were classified as approach or avoidance based on the linguistic expression of the goals themselves, I found that BIS and BAS were *not* significant predictors of the types of goals people were engaged in. Given previous research, this finding was unexpected and led to further examination of the motives people reported for their goal pursuits. When I classified goals based on positive and negative motivations for pursuing the goals, I found that BIS was a predictor of the adoption of relatively more negatively-motivated goals.

On first glance it may appear that my findings are in direct contradiction with the findings of Elliot and Thrash (2002) and Heimpel, Elliot, and Wood (2006). They reported

that BIS positively predicts and BAS negatively predicts the adoption of relatively more avoidance goals. There are at least two issues that need further examination in order to make sense of these apparently contradictory findings. First, the goal elicitation procedures used in the studies differed in terms of what goals participants were asked to report on. Second, it is important to consider whether goals are classified as approach or avoidance based on the wording of the goal or the motive for pursuing the goal.

In the research conducted by Elliot and Thrash (2002) and by Heimpel, Elliot, and Wood (2006), the goals listed by participants were restricted to the personal achievement domain and were goals that participants pursued on a daily basis. In the current study, the elicited goals were not restricted in any way. This difference in the goal elicitation procedure provides the first possible explanation for the differing results. To support the contention that the goal elicitation procedure may have led to these different findings, consider the work done by Elliot et al. (1997). In their research, goals were *not* restricted, and they found that when extraversion and neuroticism were used as predictors of avoidance goal adoption, only neuroticism was a significant predictor. While neuroticism and extraversion are not exactly the same as BIS and BAS, they are very similar. Measures of BIS and BAS have been found to be related measures of neuroticism and extraversion in several studies (e.g., Caseras, Avila, & Torrubia, 2003; Gomez & Gomez, 2005; Smits & Boeck, 2006). In addition, Elliot and colleagues (e.g., Elliot & Thrash, 2002; Elliot et al., 1997; Heimpel, Elliot, & Wood, 2006) have used BIS and BAS as well as neuroticism and extraversion interchangeably as measures of avoidance and approach temperaments, respectively. Taken together, this suggests that when goals are not limited to the achievement domain, neuroticism and possibly the similar construct BIS are likely to be the only significant predictors of avoidance goal adoption.

What still needs explanation is why I did not find that BIS predicted the adoption of relatively more avoidance goals. To help with this explanation I need to revisit the work of Ogilvie and colleagues (e.g., Ogilvie & Rose, 1995; Ogilvie et al., 2001). Ogilvie developed a method of classifying personal projects (i.e., personal goals) based on the motivations people have for pursuing their goals. Using Ogilvie's method, goals motivated by a desire to acquire or keep a positive outcome or state are coded as positively-motivated goals, while goals motivated by a desire to prevent or cure a negative outcome or state are coded as negatively-motivated. Although he uses different names, this distinction is conceptually equivalent to the approach-avoidance distinction used by Elliot and colleagues, only using motives rather than the linguistic expression of the goal for goal coding.

When I used this positive-negative distinction, I found that BIS positively predicted the adoption of relatively more negatively-motivated goals. This finding is similar to that of Elliot et al. (1997) that neuroticism predicts more avoidance goal adoption. Most importantly, my findings also suggest that it is important to look beyond the wording of the goals, to the motives for pursuing the goal. Research by Freitas and Higgins (2002) further supports the need to look beyond the goal phrasing itself. In their research, they found that approach and avoidance goals did not differ in terms of enjoyment when both were in the pursuit of a higher-order approach goal. In other words, when the motive for pursuing the goal is positive, the orientation of the goal itself is unrelated to appraisals of enjoyment. In addition, my suggestion that it is necessary to examine the motive for pursuing the goal is consistent with Elliot's (2006) hierarchical model of achievement motivation. In this model, Elliot describes how the pursuit of some approach goals may in fact be fueled by avoidance

motivation. For example, the approach goal “Complete my thesis,” may be energized by an avoidance motivation such as “To avoid losing my job.”

If goals that in terms of their linguistic expression are coded as approach goals can be driven by avoidance motivation, then the wording of the goal will not be representative of the motivation behind the goal. This inconsistency may help explain why I was unable to use BIS scores to aid in the prediction of the avoidance goal index, but I did find that BIS scores helped in the prediction of the negatively- and positively-motivated goal indices. Based on my findings, therefore, I argue that future studies that classify goals as approach and avoidance oriented will need to take into consideration not only the linguistic expression or wording of the actual goals, but also the orientation of the motivations that are fueling these goals.

BIS, BAS and Procrastination

As there are no previous studies that I know of that have examined the relation between BIS and procrastination, I once again turn to research involving neuroticism. Steel (2007) reports in his meta-analysis of causes and correlates of procrastination, that across studies the relation between neuroticism and procrastination is at best weak. As was previously mentioned, the individual difference variables BIS and neuroticism are related. This suggests that if neuroticism is at best only weakly related to procrastination, the relation between BIS and trait procrastination may be so small as not to be statistically significant. More importantly, research by Schouwenburg and Lay (1995) indicates that the relation between neuroticism and procrastination is due to the facet of impulsiveness as an underlying component of Neuroticism. The BIS construct does not include such a facet, and

this helps to further explain why no relation was found between BIS scores and the trait measure of procrastination.

Although I did not find any significant correlations between BIS or BAS and procrastination these non-significant results do add to the literature on procrastination. In searching the current literature on procrastination, I was unable to find any studies that had examined these relations. While there is certainly a need for replication of this study, the results of this study provide the initial indication that BIS and BAS are unrelated to trait procrastination. These results are informative at the trait level, but do not rule out the possibility that BIS and BAS are related to state or task-specific procrastination.

When I examined the links between BIS and BAS and a more task specific measure of procrastination (i.e., personal goal appraisal ratings), I did find a link between BIS and procrastination. BIS scores were positively correlated with average procrastination ratings on goals overall. BIS scores were also positively correlated with procrastination on goals regardless of the approach-avoidance or positive-negative orientation of the goals. The finding that BIS is linked to more reported procrastination on goals overall is in keeping with the idea that “BIS activation causes inhibition of movement toward goals” (Carver & White, 1994, p. 319).

Further, I expected to find that the relation between BIS and procrastination on personal goals would depend on the orientation of the goal. Tamir and Diener (2008) have suggested that individual differences such as BIS and BAS may not only influence the adoption of different goal types, they may also moderate the effects of adopting such goals. The work of Higgins and colleagues (e.g., Forster et al., 1998; Freitas & Higgins, 2002; Higgins, 2000; Higgins et al., 2003) has provided support for this suggestion. In their work,

they found that a fit between motivational orientation and goal orientation leads to more enjoyment and more success during goal pursuit. Based on this, I anticipated that BIS would be related to increased procrastination on approach and positively-motivated goals as these goals have an incongruent fit with avoidance motivation. I found that BIS scores were positively correlated with procrastination ratings on approach and positively-motivated goals. However, I also found a positive relation between BIS and procrastination ratings for avoidance and negatively-motivated goals.

Contrary to my expectations, my results suggest that the personality-goal fit did not influence the relation between BIS and procrastination on personal goals as I expected. Rather, my findings suggest that, regardless of the personality-goal fit, higher BIS scores are linked to increased procrastination on personal goals. This may be a result of the fact that avoidance and negatively-motivated goals use a negative target as a reference and that this brings negative cognitions to mind more often (Carver, 2006; Carver et al., 2000). A person with a sensitive BIS may be particularly aware of these negative cognitions since the BIS responds to signals of potential punishment. When the BIS is activated by these negative thoughts, it may in turn prevent movement toward the intended goal, leading to increased procrastination.

Adding further support to my argument that personality-goal fit is not related to procrastination is my finding that BAS was not related to procrastination ratings of personal goals of any orientation. If personality-goal fit was influencing the relation between BAS and procrastination ratings, I would have expected to see that BAS was positively related to procrastination on avoidance and negatively-motivated goals but not to procrastination ratings of approach and positively-motivated goals. Based on these findings, it seems that

although a personality-goal fit may increase the anticipated enjoyment of pursuing certain goals (Freitas & Higgins, 2002), it does not relate to the level of procrastination reported when these goals are being pursued.

Taken together, the results discussed to this point have shown that BIS predicts the adoption of relatively more negatively-motivated goals. Furthermore, even though BIS and negatively-motivated goals provide a congruent personality-goal fit, this fit does relate to a decrease in procrastination on these goals.

Goal Type and Procrastination

Given the focus on goals in this study, I now turn my attention to the investigation of whether approach and positively-motivated goals differ from avoidance and negatively-motivated goals in relation to the amount of procrastination reported. As noted previously, my results indicated that the difference in procrastination on approach and avoidance goals was not significant when the linguistic phrasing of the goal was used to classify goals. However, reported procrastination on negatively-motivated goals was significantly higher than that reported for positively-motivated goals. These findings are consistent with past research describing the outcomes of pursuing goals with these different orientations. Carver and Scheier (2002) suggest that progress on avoidance goals is more difficult to monitor as these goals do not have a clear target to approach, but rather focus on moving away from an undesired state. Elliot et al. (1997) also found that the pursuit of relatively more avoidance goals lead to students reporting less perceived progress on their goals over the course of a semester.

My findings add to the existing literature on procrastination in that they provide information about the types of goals people are more likely to procrastinate on. Previous

research (e.g. Blunt & Pychyl, 1999; Pychyl, Lee, Thibodeau, & Blunt, 2000) has examined other aspects of goals such as task aversiveness, but has not focused on the orientation of the goals themselves. I suggest that when investigating procrastination on personal goals, we need to consider the motives people have for pursuing their goals in addition to the way they appraise their goals. As I will discuss later, the different motivations that energize goal pursuit are related to differences in the cognitive appraisals of goals. So, in order to develop a more complete understanding of procrastination on personal goals, both goal orientation and cognitive appraisals need to be examined.

Appraisal Dimensions Related to Procrastination

As a means of further investigating procrastination on personal goals, I examined which of the other appraisal dimensions were related to procrastination when goals were classified based on the approach-avoidance and positive-negative distinctions. Past research (e.g., Blunt & Pychyl, 2000; 2005; Lay, 1990; Pychyl & Little, 1998) has found that dimensions such as boredom, frustration, uncertainty, stress, low absorption, low progress, low personal meaning, lack of structure and low autonomy were all related to procrastination. While this research is informative, it does not take into consideration the orientation of the goals being appraised. When I looked at the relations between these dimensions and procrastination according to the different goal types, I found many similarities, however I also found some interesting differences. The dimensions of boredom, frustration, uncertainty and stress were found to be related to procrastination regardless of the goal's orientation. However, when I examined the relation of procrastination to dimensions regarding the meaning (i.e., self identity and value congruence) and structure of a goal (i.e., initiation), I found that the goal's orientation mattered. For approach and positively-motivated goals,

these meaning and structure dimensions had a negative relation with procrastination. For avoidance and negatively-motivated goals, there were no significant relations between initiation, self identity, and value congruence and procrastination.

According to Tamir and Diener (2008), what is really important in goal pursuit is the desirability and feasibility of the goals. Similarly, Little et al. (2007) also suggest that meaning and manageability are important to the successful pursuit of personal projects. We need goals that are meaningful to us (e.g., enjoyable, value congruent, important) but also manageable (e.g., structured, controlled). My results suggest that these two aspects of goal pursuit may not be enough to fully understand why a person procrastinates on certain types of personal goals. The enjoyment dimension, which Little (1989) suggests relates to a goal's meaning, was found to be negatively related to procrastination regardless of goal orientation. However, self identity and value congruence dimensions, which Little (1989) also indicates are connected to a goal's meaning, only had this negative relation to procrastination for approach and positively-motivated goals. Considering these findings, I contend that when a goal involves acquiring or keeping a positive state or condition, procrastination will be lower when the person feels that the goal fits with his or her self identity and personal values. In other words, the meaning of the goal is important when the goal is positively motivated. However, when a goal is negatively motivated, procrastination is not related to whether the goal fits a person's self identity and values. This suggests that there is a need to look at more than the overall meaning of a goal, to the specific dimensions involved in a goal's overall meaning and that we also need to take into consideration the orientation of the goal in order to determine what is really important in successful personal goal pursuit.

Cognitive Appraisals of Different Goal Types

While knowing which dimensions are related to procrastination on the various goal types is informative, it was also important to determine if ratings of these dimensions differed depending on goal orientation. For example, Elliot et al. (1997) found that the adoption of relatively more avoidance goals was related to lower perceived progress on personal achievement goals. When I utilized this same distinction to classify goals, I did not find that there was a significant difference in the progress ratings of approach and avoidance goals. However, when the negative-positive distinction purposed by Ogilvie and Rose (1995) was used, I did find a difference in progress ratings of positively- and negatively-motivated goals. These findings again highlight the importance of examining the motivation or purpose of the goal when goals are not restricted to the achievement domain.

Elliot and Sheldon (1997) reported that the adoption of more avoidance goals was associated with lower feelings of competence. This suggested that avoidance and negatively-motivated goals would differ from approach and positively-motivated goals on ratings of capability. When control and capability ratings were compared using the approach-avoidance distinction, I found that capability ratings differed between the goal types. Similarly, when I applied the positive-negative distinction, I once again found a difference in capability ratings of the different goal types. Specifically, approach and positively-motivated goals were found to be rated higher in capability than avoidance and negatively-motivated goals, respectively.

The work of Carver and colleagues (e.g., Carver, 2006; Carver & Scheier, 2002; Carver et al., 2000) also suggests that goal types would differ on cognitive appraisals, as they use different types of targets as a reference, which bring different cognitions to mind more often. Using the approach-avoidance distinction, I found that appraisals differed on the

dimensions of enjoyment, difficulty, frustration, and stress. When I utilized the positive-negative motivated distinction, I found even more differences in how the goals were appraised. The enjoyment, difficulty, capability, and progress dimensions differed as I expected, but I also found differences on dimensions such as self identity, value congruence, visibility, absorption, and importance; clearly aspects of the goals that reflect personal meaning.

The differences I found on the dimensions of self identity and value congruence are important as they help to explain some of the findings that I have already discussed. Specifically, I found that negatively-motivated goals had higher reports of procrastination and that higher ratings on the value congruence and self identity dimensions were related to less procrastination on positively-motivated goals, but not negatively-motivated goals. We now see that positively-motivated goals were in fact given higher ratings for self identity and value congruence. It is my contention that one reason for lower procrastination on positively-motivated goals is that these goals have more meaning for people and that meaning for this type of goal is related to less procrastination.

Regardless of the distinction utilized to classify the goals, I found that the largest differences in cognitive appraisals were for the dimensions of enjoyment and capability. I also found that both of these dimensions had negative correlations with procrastination ratings. This is consistent with past research that has found task aversiveness is related to increased procrastination (e.g., Blunt & Pychyl, 2000) and self-efficacy has a negative relation with procrastination (e.g. van Eerde, 2003). Given this, I contend that these differences in enjoyment and capability ratings are a key reason why participants reported more procrastination on their negatively-motivated goals. This difference in the cognitive

appraisals suggests working on negatively-motivated goals is likely to be a less enjoyable experience than working on positively-motivated goals. While both goal types were viewed as important, it seems likely that people would choose to work on their more enjoyable projects first. This helps to further explain why participants reported more procrastination on their negatively-motivated goals.

Implications for Potential Procrastination Interventions

My results suggest a possible new approach to procrastination intervention. As Pychyl and Binder (2004) wrote, "...much may be gained from a project analytic perspective in which various categories of personal projects are explicitly identified, and the project-analytic framework itself may help counselors intervene at the level of the students' projects to help maintain their self-regulation (p. 164)." This goal-based approach to intervention is important in that it provides an opportunity to examine and modify goals, rather than attempting to intervene at the level of personality, where traits are thought to be relatively enduring (Pervin & John, 1999). My research suggests that it would be possible for a counselor or clinician to utilize a Personal Goals Analysis to classify goals based on their motivations in order to better understand why a person is procrastinating on their personal goals.

Currently, cognitive-behavioural interventions are the most common type of procrastination interventions. These interventions often focus on self-regulation training and enhancing feelings of self-efficacy (Schouwenburg, 2004). Based on my results, I would also suggest that these interventions focus on goal framing. While it may not be possible for people to change the end-state of their goal (e.g., doing well in calculus), it is possible that the goal may be reframed into an approach or positively-motivated goal rather than an

avoidance or negatively-motivated goal. For example, a person who has the goal “Avoid doing poorly in calculus,” that is motivated by the purpose “To avoid being unemployed,” may benefit from reframing the goal and purpose as “Develop my understanding of calculus,” and “To get the job I want,” as this may help them to reduce their procrastination on the goal. Little (1989) refers to this ability to reframe a goal as project “spin.” He argues that the ability to “spin” a project allows a person to view the project as more enjoyable and therefore the person is more motivated to work on it.

The use of project analytic perspective also allows for the examination of how individuals are thinking about their goals. This ability to see how people are appraising their goals is important to the cognitive aspects of interventions. My findings suggest that the focus of cognitive interventions not only focus on developing a sense of self-efficacy, but that they also concentrate on dimensions related to the meaning and structure of goals. For example, I found that value congruence, self identity, and absorption dimensions were all rated higher for positively-motivated goals and that these dimensions were also related to less procrastination. I suggest that this creates the opportunity to help people develop a greater sense of meaning and structure in their personal goals and by doing so this may help reduce procrastination. Furthermore, I found that dimensions such as boredom, frustration, stress, and uncertainty were related to procrastination regardless of the goal orientation. Knowing this would allow a counselor to also focus on these aspects of goal pursuit during an intervention.

These recommendations related to reframing goals must be interpreted with some caution. While this type of intervention should be helpful in reducing procrastination, it must also be remembered that the mean differences in dimension ratings and effect sizes found in

this study were small. Consequently, although this type of intervention may help in reducing procrastination, I am in no way suggesting that goal reframing and changing individuals' perceptions of enjoyment, self identity, value congruence, and capability will completely eliminate experiences of procrastination. Clearly the small effect sizes indicate that other psychological processes need to be taken into account.

A final benefit to using project analytic approach as an intervention strategy is that it can be enlightening for the person completing it. For many people, this may be the first time they have considered their goals in such an explicit and detailed manner. Having people think about their personal goals in this way may help them to understand why they procrastinate on some goals, while they complete others with little to no unintended delay. Once people are able to identify and appraise their goals, they may have a better understanding of what needs to be changed in order for them to be successful in their goal pursuits.

Limitations and Future Research

While I was able to show that BIS predicted the adoption of relatively more negatively-motivated goals, the amount of variance accounted for by this variable was small ($R^2 = .07$). This suggests that there may be other individual difference variables that would also aid in predicting the relative number of negatively-motivated goals a person is pursuing. Furthermore, it may be that BIS is a distal variable and that the relation between BIS and the adoption of more negatively-motivated goals is mediated by more proximal variables. Past research such as by Heimpel et al. (2006) has found that self-esteem may be one such mediating variable. Although I did not explicitly explore a mediated model, in future studies that examine this relation between BIS and negatively-motivated goal adoption, it will be important to consider other variables that may act as mediator variables.

Another key limitation of this study that needs to be mentioned was the data collection method used. This study was conducted using a series of online questionnaires. This method provided easy access to participants and plenty of respondents, however not having access to speak with participants about the reasons for pursuing their goals proved to be somewhat problematic for later classification of these motivations. In the online module that asked participants to give the reason they were pursuing goals, respondents often gave very brief reasons that were difficult to classify into one of the four PACK categories of motivation. For example, the goal “Eat better,” was accompanied by the purpose “Health.” In this case it was extremely difficult to determine whether “health” should be classified as an acquire, keep, cure, or prevent motivation. If future studies intend on using materials similar to those used in this study, I would strongly recommend that goal and purpose elicitation procedures be done in person so that the researcher can probe the participants further to determine which types of motivations are driving their goal pursuits.

A final limitation that I will address here is that all data collected were one time self-report measures. Measures such as these rely on participants being able and willing to accurately report on various aspects of their personal goal pursuits. Since personal goals are by definition idiographic, it is necessary to use self-report measures to determine the goals a person is pursuing. However, when asked to list their personal goals, participants may choose any eight goals and in doing so may leave highly personal goals off the list. In order to help participants feel more comfortable sharing this highly personal information it may be more appropriate to conduct the goal elicitation procedure in a face-to-face setting where the researcher is able to build a rapport with the participant, and provide assurances with regard to how the information will be used.

In addition, I only asked participants to appraise their goals at one point in time. It is possible that ratings on appraisal dimensions change as a goal progresses. Future studies examining goal appraisals could address this issue by having participants appraise their goals at several intervals over time. Having participants appraise their goals over time may also provide an opportunity to examine whether the completion of avoidance goals is delayed compared to the completion of approach goals. In addition, on initial elicitation of goals, future studies could ask participants to identify the intended completion date for each goal. Then, in follow-up sessions, the researchers would be able to determine if participants were working to their intended schedule on approach and avoidance goals. This type of investigation may provide a better indication of whether people procrastinate more on avoidance-oriented goals than using a onetime report of procrastination.

Summary and Conclusion

Overall, the results of my study indicate that procrastination is related to having goals that are negatively-motivated and that personality, namely the Behavioural Inhibition System (BIS), predicts the adoption of relatively more negatively-motivated goals. Furthermore, BIS scores were positively correlated with ratings of procrastination on personal goals, regardless of the orientation of the goals. When I examined how people were thinking about their different goals, I found that approach- and avoidance-oriented goals differed on several dimensions and that these differences were also dependent on which goal classification system was used.

In terms of classifying personal goals, I conclude that when one wants to examine approach and avoidance goals, it is important to look past the way in which a goal is worded to the purpose or reason a person has for pursuing the goal. By doing this, we get a better

understanding of whether the goal is motivated by a desire to keep or acquire something positive or whether it is fueled by a desire to prevent or cure something negative. These motivations appear to be a better indication as to whether a goal should be coded as approach or avoidance oriented.

Goal motives of this type are clearly related to a number of aspects of goal pursuit that are related to procrastination. Specifically, I found that negatively-motivated goals were viewed as being less enjoyable, and participants reported feeling less capable of successfully completing them. Moreover, these aspects of goal pursuit may be useful in a clinical application where the intervention is focused on modifying goal appraisals. For example, working with clients to reframe or “spin” their negatively-motivated goals into positively-motivated goals should help to increase feelings of enjoyment and capability. These feelings of increased enjoyment and capability may in turn lead to lower reports of procrastination on personal goals.

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Appendix A:

Study Materials - Informed Consent, Demographic Questionnaire, Personal Goal Elicitation Module, Personal Goal Appraisal Module, BIS/BAS Scales, General Procrastination Scale, and Debriefing Form

1. Informed Consent: Approach and Avoidance Personal Goals

The purpose of an informed consent is to ensure that you understand the purpose of the study and the nature of your involvement. The informed consent is intended to provide sufficient information such that you have the opportunity to determine whether you wish to participate in the study. This study has been approved by the University Ethics Committee for Psychological Research.

Research personnel: The following people may be contacted regarding this study. Matt Dann (Principle Investigator, mdann@connect.carleton.ca); Dr. Timothy A. Pychyl (Faculty Sponsor, 613-520-2600, ext. 1403). Should you have ethical concerns about the study, please contact Dr. Avi Parush (Chair, Carleton University Ethics Committee for Psychological Research, 613-520-

2600, ext. 6026) or Dr. Janet Mantler (Chair, Department of Psychology, Carleton University, 613-520-2648).

Purpose: The purpose of this study is to examine whether the type of personal goals a person pursues is related to the amount of procrastination on these goals and whether a congruent fit between goal types and personality impacts this relation. Specifically, this study is looking at a person's approach or avoidance orientation and how this relates to the approach and avoidance personal goals in his or her life in terms of reported procrastination. In addition, we will be creating profiles of how people think about their approach and avoidance goals.

Task Requirements: You will be asked to complete a brief questionnaire detailing some of your personal information such as your age and gender. You will then be asked to generate a list of the goals you are pursuing in your daily life and rate them on a number of dimensions such as importance, difficulty, stress, enjoyment, procrastination, etc. Lastly, you will be asked to complete three questionnaires that have you rate your level of agreement with statements. This study takes approximately 90 minutes to complete and you will receive either .75 credits towards your psychology course (Only available to Carleton students) or you will be entered in a draw for \$100.

Potential Risk/Discomfort: There is no anticipated risk or discomfort in this study. However, as you will be reflecting on and rating your personal goals and this may create some anxiety or discomfort for you. If this is the case, you may wish to speak to a counsellor or doctor at Carleton Health and Counselling Services. They are located in the Carleton Technology and Training Centre, across from the parking garage. They can be reached by phone at 613-520-6674. For academic concerns you may wish to contact an advisor at the Student Academic Success Centre. They are located in 302 Tory Building and can be reached by phone at 613-520-7850.

Anonymity/Confidentiality: The information you provide during this study will be kept confidential. Your name will not be recorded anywhere unless you indicate you would like to participate in a draw. Names and email addresses for the draw will be stored separately from the rest of the data you provide. Access to the data you provide will also be limited to the researchers listed above, and your name will not be revealed in any report regarding this research. The data from any measures you complete will be saved on a secured computer in the researcher's laboratory.

Right to Withdraw: You have the right to refuse to answer any question and to withdraw from the study at any time, for any reason, without explanation.

Please indicate that you have read the above description of the study and understand the conditions of your participation. Clicking YES indicates that you have read the above description and agree to participate in this study. You must answer YES if you wish to continue.

YES

NO (If you clicked NO please close this window now.)

2. Demographic Information

1. Please indicate your age in years (e.g., 20).

2. Please indicate your sex.

Female

Male

3. Please indicate your ethnicity.

4. Are you currently a student?

Yes

No

5. If you answered YES to question 4 please indicate your level of study (e.g., 2nd year undergraduate)

If you answered NO to question 4 please skip to question 6.

6. If you answered NO to question 4 please indicate your occupation (e.g., Electrician, Teacher, etc.)

If you answered YES to question 4 please skip to question 7.

7. Do you consider procrastination to be a problem in your life?

Yes

No

3. Personal Goals Elicitation and Goal Appraisals

Personal Goals

In this study, we are interested in the things that you typically or characteristically are trying to do in your daily life – your “personal goals.”

Here are some examples of personal goals that others have provided in previous studies (this can help you to understand what we mean by “personal goal”):

- “Be physically attractive to others”
- “Persuade others that I am right”
- “Avoid being lonely”
- “Do well in my place of employment”
- “Avoid procrastination”
- “Not feel inferior to others”
- “Get an A in my English class”
- “Don’t fail statistics”

Here are some other things to note about personal goals:

1. Personal goals may involve trying to approach something or trying to avoid something. For example, you may typically try to “get attention from others” or you may typically try to “avoid calling attention to yourself.”
2. Personal goals are phrased in terms of what a person is trying to do, regardless of whether the person is actually successful. For example, a person might try to “be on time for all my appointments” without necessarily being successful.
3. Personal goals may be fairly broad such as “avoid making other people angry” or more specific such as “avoid making my roommate angry in the morning.” Also personal goals can last for varying lengths of time, but in this study, we would like you to identify a set of goals you expect to last at least through the next month.

In the next section, we would like you to list the 8 personal goals that you think best describe what you are typically trying to do in your daily life.

Before you select your final set of 8 personal goals, you may want to take a few minutes to “brainstorm” by jotting down various possibilities in the large textbox that we have provided. When considering your personal goals, please be as honest and open as possible. Remember, your name will not be on this list, and all of your responses will be kept completely confidential.

Now, please begin by listing possibilities in the following textbox.

If you find you are having difficulty generating at least 8 goals you can break down the big goals you have listed in several smaller ones. For example the goal "Get promote at work" might be broken down into goals such as "Impress my boss", "Avoid being late for work", and "Improve my reports."

1. Here is some room to list all of the personal goals you can think of.

2. In the spaces below, please list the 8 personal goals that best describe what you will typically be trying to do in your daily life. Following each goal you will be asked to given a brief reason why you are pursuing this goal.

For example:

Personal Goal - "Get more exercise"

Why - To perform better in the race this summer.

Personal Goal - "Get more exercise"

Why - To avoid gaining weight.

You will need to remember these goals and the order you listed them so please scroll back to this section to look at the list if you need to.

Personal Goal 1: _____

Why? _____

Personal Goal 2: _____

Why? _____

Personal Goal 3: _____

Why? _____

Personal Goal 4: _____

Why? _____

Personal Goal 5: _____

4. BIS/BAS Scales

Instructions: These items are concerned with your opinions of different situations. No two statements are exactly alike, so please consider each statement carefully before responding. Answer as honestly as possible. This information, as mentioned in the informed consent, is completely confidential. Indicate your answer by clicking on the circle beside your response.

1. **If I think something unpleasant is going to happen I usually get pretty “worked up.”**
 Strongly Agree Agree Disagree Strongly Disagree
2. **Even if something bad is about to happen to me, I rarely experience fear or nervousness.**
 Strongly Agree Agree Disagree Strongly Disagree
3. **When good things happen to me, it affects me strongly.**
 Strongly Agree Agree Disagree Strongly Disagree
4. **I go out of my way to get things I want.**
 Strongly Agree Agree Disagree Strongly Disagree
5. **I crave excitement and new sensations.**
 Strongly Agree Agree Disagree Strongly Disagree
6. **I feel worried when I think I have done poorly at something.**
 Strongly Agree Agree Disagree Strongly Disagree
7. **I will often do things for no other reason than that they might be fun.**
 Strongly Agree Agree Disagree Strongly Disagree
8. **It would excite me to win a contest.**
 Strongly Agree Agree Disagree Strongly Disagree
9. **I feel pretty worried or upset when I think or know somebody is angry at me.**
 Strongly Agree Agree Disagree Strongly Disagree
10. **When I’m doing well at something, I love to keep at it.**
 Strongly Agree Agree Disagree Strongly Disagree
11. **When I go after something I use a “no holds barred” approach.**
 Strongly Agree Agree Disagree Strongly Disagree
12. **I have very few fears compared to my friends.**
 Strongly Agree Agree Disagree Strongly Disagree
13. **When I get something I want, I feel excited and energized.**
 Strongly Agree Agree Disagree Strongly Disagree

14. If I see a chance to get something I want, I move on it right away.

Strongly Agree Agree Disagree Strongly Disagree

15. Criticism or scolding hurts me quite a bit.

Strongly Agree Agree Disagree Strongly Disagree

16. I'm always willing to try something new if I think it will be fun.

Strongly Agree Agree Disagree Strongly Disagree

17. When I want something, I usually go all-out to get it.

Strongly Agree Agree Disagree Strongly Disagree

18. I worry about making mistakes.

Strongly Agree Agree Disagree Strongly Disagree

19. When I see an opportunity for something I like, I get excited right away.

Strongly Agree Agree Disagree Strongly Disagree

20. I often act on the spur of the moment.

Strongly Agree Agree Disagree Strongly Disagree

5. General Procrastination Scale

Instructions: These items are concerned with your opinions on different situations. No two statements are exactly alike, so please consider each statement carefully before responding. Answer as honestly as possible. This information, as mentioned in the informed consent, is completely confidential.

On a scale from “False of Me” to “True of Me” please answer each of the items below by clicking the response that best describes you.

	False of me	Not usually true of me	Sometimes false/true of me	Mostly true of me	True of me
1. I often find myself performing tasks that I had intended to do days before.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I often miss concerts, sporting events, or the like, because I don't get around to buying tickets on time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. When planning a party, I make the necessary arrangements well in advance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. When it is time to get up in the morning, I often get right out of bed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. A letter may sit for days after I write it before I mail it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I generally return phone calls promptly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Even with jobs that require little else except sitting down and doing them, I find they seldom get done for days.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I usually make decisions as soon as possible.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I generally delay before starting on work I have to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. When travelling, I usually have to rush in preparing to arrive at the airport or station at the appropriate time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. When preparing to go out, I am seldom caught having to do something at the last minute.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. In preparing for some deadlines, I often waste time by doing other things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. If a bill for a small amount comes, I pay it right away.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 14. I usually return an "R.S.V.P." request very shortly after receiving it. | <input type="checkbox"/> |
| 15. I often have a task finished sooner than necessary. | <input type="checkbox"/> |
| 16. I always seem to end up shopping for birthday gifts at the last minute. | <input type="checkbox"/> |
| 17. I usually buy even an essential item at the last minute. | <input type="checkbox"/> |
| 18. I usually accomplish all things I plan to do in a day. | <input type="checkbox"/> |
| 19. I am continually saying "I'll do it tomorrow". | <input type="checkbox"/> |
| 20. I usually take care of all the tasks I have to do before I settle down and relax for the evening. | <input type="checkbox"/> |

6. Credit for Participation

1. Please indicate whether you would like to receive course credit for your participation or if you would like to be entered in a draw for \$100.

Course credit

Enter me in the draw

2. If you would like to be entered in the draw please provide your name and email.

Name: _____

Email: _____

7. Debriefing: Approach and Avoidance Personal Goals

This debriefing page is intended for you to keep. Please feel free to print a copy for future reference.

Thank you for completing the questions and activities for this study. The aim of this research is to examine how approach and avoidance oriented goal adoption relates to procrastination and whether a person's approach or avoidance personality orientation influences this relation. We also wish to explore the ways in which people think about the approach and avoidance goals in their lives.

We have predicted that a person's approach or avoidance orientation will predict the number of avoidance oriented goals they pursue. In addition, we have predicted that people will report higher levels of procrastination on avoidance personal goals. However, we anticipate that this relation will be reduced when the person has an avoidance personality orientation that is congruent with his or her avoidance goals. Furthermore, we predict that the rating people give to their personal goals will differ depending whether the goals are approach or avoidance oriented, creating two distinct cognitive profiles for these goal types.

If you have any questions or concerns regarding any of this research, or any of the items included within it, please contact: MattDann, Researcher (mdann@connect.carleton.ca) or Dr. Timothy A. Pychyl, Faculty Sponsor (tim_pychyl@carleton.ca).

For any ethical concerns you have about the research please contact:

Dr. Avi Parush, Chair, Carleton University Ethics Committee for Psychological Research
613-520-2600, ext. 6026

OR

Dr. Janet Mantler, Chair, Department of Psychology 613-520-2648

If after completing these questionnaires and activities you feel stressed or concerned about your life at the university, you may wish to speak to a counsellor or doctor at Carleton Health and Counselling Services. They are located in the Carleton Technology and Training Centre, across from the parking garage. They can be reached by phone at 613-520-6674. For academic concerns you may wish to contact an advisor at the Student Academic Success Centre. They are located in 302 Tory Building and can be reached by phone at 613-520-7850.

If you would like to read more about the measures used in this study, and the rationale behind them, please refer to the following websites and article.

www.procrastination.ca

www.brianrlittle.com

Carver, C. S., & White, T. L. (1994). Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment: The BIS/BAS Scales. *Journal of Personality and Social Psychology*, 67, 319–333.

Thank you once again for helping advance this research through your participation.

Matt Dann

M.A. Psychology Student, Carleton University

Appendix B:
Approach-Avoidance Personal Goals Coding System

Approach-Avoidance Personal Goals Coding System

Codes

- 1 = approach
- 2 = avoidance
- 3 = approach, then avoidance
- 4 = avoidance, then approach

Guidelines

1. Structurally, approach goals focus on a positive possibility that a person is trying to move toward or maintain, whereas avoidance goals focus on a negative possibility that a person is try to move away from or stay away from.
2. The foci of goals vary tremendously across participants; the tendencies with regard to the foci also vary, but to a lesser extent. Thus it is possible to identify a set of words or phrases that commonly appear in avoidance goals: not, no more, get away from, keep away from, stay away from, stop, omit, reduce, got out of, get rid of, prevent, turn away from, lose, diet, avoid, escape, quit, be free from, refrain from, eliminate, squash, lessen, forget, do away with, _____ less. This set of words and phrases is meant to be illustrative, not exhaustive.
3. Most goals should be easy to code for approach-avoidance. However, some goals are worded in an ambiguous way, seem to possess a mismatch between the focus of the goal and the tendency regarding that focus, or contain multiple goals or goal-reason combinations. Each of these issues is discussed in the following points.
 - a) For some goals such as “be nonjudgmental” it is difficult to know whether the focus is positive (i.e., nonjudgmental, which is a desirable characteristic the person wants to approach) or negative (i.e., judgmental, which is an undesirable characteristic the person wants to avoid). If this goal was phrased “not be judgemental” it would clearly be coded avoidance, but when phrased “be nonjudgmental” it is best to assume that nonjudgmental is a positive characteristic that the person wants to approach, and to code it as an approach goal.
 - b) Some goals such as “get a handle on my temper” seem, on first glance, to contain a negative focus coupled with an approach tendency. However, this apparent mismatch is resolved if one considers the focus of the goal to be “a handle on my temper,” as opposed to “my temper.” Thus “get a handle on my temper” clearly represents an approach goal in which the focus is positive and the tendency is approach.
 - c) Some goal statements contain multiple goals such as “take life as it comes and be less uptight” or contain both an aim (i.e., goal) and a reason for pursuing the aim, such as “avoid chocolate so that I can get in better shape.” The first example coded approach, then avoidance, whereas the second should be coded avoidance, then approach. For goals written in English, it is assumed that the most important goal or the aim comes first or at the beginning of the statement, and the less important goal or reason for pursuing the aim comes second or at the latter part of the statement (see Elliot &

Thrash, 2001, for details on the aim vs. Reason distinction and its importance). As such, approach, then avoidance should be collapsed into the approach category, and avoidance, then approach should be collapsed into the avoidance category. For goals written in a language in which the most important goal or aim would not systematically come at the beginning of the statement (e.g., Chinese, Japanese, Korean), both approach, then avoidance and avoidance, then approach should be collapsed into the avoidance category. In other words, in this instance, goal statements containing any avoidance content are coded as avoidance goals. Furthermore, for the sake of comparability, this latter approach should be used for all samples in cross-cultural work in which this issue applies to any sample in the study.

4. In general, use approach as the default code, because the majority of goals in any given sample will be approach goals. So, a goal must clearly fit the avoidance category to be coded avoidance.

Appendix C:
Goal Motivation Coding System

Goal Motivation Coding System

Codes:

- 1 = Cure
- 2 = Prevent
- 3 = Keep
- 4 = Acquire
- 5 = N/A (Motivation)

1. CURE

The purpose reflects a goal or motivation to fix or repair an existing negative condition or situation.

Examples w/ explanations:

- a. Often the usage of certain words or phrases is sufficient to qualify a response as a CURE. For example, if one says, I WANT TO BE INDEPENDENT, this may at first seem to be coded as ACQUIRE. However, the word “independent” directly implies an existing state of dependence and should therefore be coded as CURE. Other words which indicate an existing negative state include freedom, security, safety, and relaxation. If in doubt as to whether or not a word directly implies an existing negative state, look up the word in the dictionary for a prevalence of negative connotations. Be wary about reading too much into the words of the respondent; if you have the persistence, you will be able to argue that all words have negative connotations and should be coded as CURES. In order to steer clear of this danger, give a lot of credence to your initial hunch.
- b. Another potential problem with this statement, I WANT TO BE INDEPENDENT is that it may be unclear whether one is currently dependent (to be coded as CURE) or if one just wants to prevent becoming dependent in the future (to be coded as PREVENT). This problem can usually be resolved by reading the project description and action columns (e.g., most teenagers who say this are currently dependent on their parents so this statement should be coded as CURE). If it is not readily apparent whether this should be coded as CURE or PREVENT, assume that one is NOT currently experiencing it, and code it as PREVENT.
- c. Note that TO BE MORE INDEPENDENT or TO BECOME SELF-SUSTAINING both imply that the state of dependence is currently in existence. These statements should be coded as CURE.
- d. TO FEEL BETTER may seem to imply an existing state of suffering. However, this phrase alone is not sufficient to indicate such a state. This is when the other column (i.e., project description) plays a significant role—if such evidence is apparent in this column, then this purpose may be coded as CURE rather than as ACQUIRE. If there is not sufficient evidence to argue for an existing negative state, then it must be coded ACQUIRE.

- e. **NOT TO OBSESS OVER THE POWER THAT IT HAS OVER ME** explicitly states a current state of powerlessness which one is motivated to allay. If the purpose is merely **NOT TO OBSESS**, then even though the person may be simultaneously **CURING** and **PREVENTING** obsession, it is more important to interpret this as **PREVENTION** for 2 reasons: (1) we cannot always assume that the state is currently in existence, so we must assume that it is **NOT** unless explicitly stated; (2) prevention actually subsumes the cure conceptually—prevention involves more cognitive steps so it is more important to capture this in this case (cf, higher vs. lower level motivations).
- f. **TO PAY BILLS** directly implies the existence of debt which must be allayed. Therefore this should be coded as **CURE**.
- g. **TO LIVE COMFORTABLY AND HAVE THE HOUSE UP TO MY STANDARDS** implies that one is currently **NOT** comfortable and the house is currently **NOT** up to one's standards. However, this is not quite enough evidence for a **CURE**; there has to be more evidence of a currently existing negative condition. For example, if the project of this purpose had been **REPLACING THE GUTTER**, this would be a **CURE** since such a project typically only occurs when the existing gutter is in bad shape. **REPLACING THE CARPET** may or may not imply that the existing carpet is in bad condition; it may simply be an attempt at redecorating which would be coded **CURE**. In such cases, take into account the full context of the purpose statement.

Other examples of **CURE**:

- to relax
- to have more freedom
- to be independent (if there is evidence that one is currently dependent)
- to improve the safety of my employees
- to clear up my complexion
- recovery from illness
- to get away from my parents
- to become financially secure
- to relieve pain
- to lose weight

2. PREVENT

The purpose reflects a goal or motivation to avoid a potentially negative future condition or situation. If it is not explicitly expressed or directly implied that one is currently experiencing this negative state, then the purpose must be coded as **PREVENT** rather than as **CURE**. There may be some cases in which the person is currently experiencing a negative state, but the focus is still on **PREVENTING** a deterioration of this condition rather than **CURING** the existing condition. Such a case should be coded as **PREVENT**.

Examples w/ explanations:

- a. **SO THAT I WON'T HAVE A HEART ATTACK** as it stands should be coded as **PREVENT**. Even if there is evidence that the person has already had a heart attack

- and wants to prevent it from happening again, this is still a case of prevention. If, on the other hand, the purpose had been worded, TO RELIEVE PAIN IN MY CHEST (which is a symptom of heart disease), then this should be coded as CURE.
- b. TO KEEP MYSELF FROM BECOMING MORE BORED THAN I ALREADY AM is a case in which it is clear that one is already experiencing the negative state of boredom. However, rather than code this as CURE, the statement should rather be coded as PREVENT since the focus is on preventing a future deterioration of this state.
 - c. TO KEEP FROM BECOMING DEPENDENT ON MY FAMILY MEMBERS should be coded as PREVENT since it is not explicitly stated that one is currently experiencing this state of dependence. This argument is similar for other states mentioned in the CURE section (e.g., self-sufficiency).
 - d. SO I WON'T BE IN TROUBLE AT HOME may seem as if it should be coded as CURE. However, it cannot be assumed that one is currently in a state of trouble at home and needs to alleviate this state. Therefore, this statement should be coded as PREVENT. Another clue in this case that the code is PREVENT is that the statement is written in the future tense. Similarly, I DON'T WANT FINANCIAL PROBLEMS, though not written in the future tense, must be coded as PREVENT unless there is evidence that one is currently experiencing financial problems (in which case it should be coded as CURE).
 - e. WHEN TIME COMES TO SOCIALIZE, I REALIZE THAT I HAVE TONS OF WORK TO DO at first glance may not seem to be worded in terms of PURPOSE as we are used to interpreting it. However, the future tense of the statement implies a potentially negative future state which one will attempt to avoid in the future. Therefore, this statement can be appropriately coded as PREVENT.

Other examples of PREVENT:

- so that I won't look as old as I am
- so I won't ever be in debt again
- I don't want to get sick
- so my dad won't have to live in a nursing home
- avoid being yelled at by my mother

3. KEEP

If there is sufficient evidence that the state is currently in existence, then the statements otherwise coded as ACQUIRE can be coded as KEEP. For example, if one says, SO MY CAR WILL KEEP RUNNING SMOOTHLY, this is a KEEP. Similarly, words such as STAY, KEEP, MAINTAIN, CONTINUE, REMEMBER, and PRESERVE will usually imply a code of KEEP. However, keep in mind that these words do not necessarily mean that the statement should in all cases be coded as KEEP; it depends on the context in which the statement is made. Also note that just because the personal project itself may currently be in existence, the purpose may not necessarily be in the present (i.e., the purpose may still be coded ACQUIRE in this case).

It may at times be difficult to distinguish between KEEP and PREVENT purposes. To make this decision, note the kinds of words which are used in the purpose. In many cases, if

negative words are used (e.g., deplete, overweight, ugly), this purpose will be more likely a PREVENT (or a CURE if the state is currently in existence). On the other hand, if statements typically use positive or neutral words (e.g., remember, appearance, healthy), then the purpose will more likely be a KEEP purpose.

Examples w/ explanations:

- a. TO KEEP MY CAR FROM BREAKING DOWN uses the word “keep” so it seems it should be coded as such. However, even though “keep” is used, it’s used in the context of prevention, so this should be coded as PREVENT.
- b. TO KEEP EMPLOYEES SAFE ON THE JOB at first glance, especially because of the word “keep” seems that it should be coded as KEEP. However, word “safe” implies that one must prevent danger, which is a potentially negative state. In fact, the dictionary supports this interpretation. Therefore, rather than being coded as KEEP (a positive), this statement should be coded as PREVENT (a negative). It should NOT be coded as CURE (a negative) because the word “keep” implies that one is currently safe (not in danger) and must therefore only worry about preventing future danger.
- c. DON’T WANT TO DEplete MY BANK ACCOUNT implies that one currently has a positive balance in one’s account, but the word deplete connotes a fear of a future negative condition (e.g., debt or zero balance), so this should be coded as PREVENT. On the other hand, if it had been worded, I WANT TO KEEP LOTS OF MONEY IN MY SAVINGS ACCOUNT, then this would be coded as KEEP.
- d. TO REMEMBER MY CHILDREN should also be coded as KEEP, since memories are currently in existence and one wants to maintain their existence. However, if this statement was instead worded as SO THAT I DON’T FORGET MY CHILDREN, even though this conceptually means the same thing, the use of the word “FORGET” rather than “REMEMBER” is important; it means that the person is focusing on preventing a negative rather than maintaining a positive! Such a statement then should be coded as PREVENT.
- e. TO KEEP MY ROOTS ALIVE may be interpreted to mean that one wants to prevent the death of one’s roots. However, the word “alive” in the dictionary has primarily positive connotations. Therefore, this expression should be coded as KEEP rather than as PREVENT.
- f. HAS FOUND SOMEONE WHO HE IS COMFORTABLE WITH AND WANTS TO SPEND THE REST OF HIS LIFE WITH sounds like a KEEP. However, upon examining the project which is GET MARRIED IN NEAR FUTURE, it is clear that the “spend the rest of his life with” part of the purpose means commitment in the form of marriage. Such a purpose is an ACQUIRE rather than a KEEP because it involves “improvement” over and above an existing positive state.
- g. TO LIVE LONGER may indicate KEEP (keep on living), ACQUIRE (acquire more years), or PREVENT (prevent death). If the person’s words ring with contentment (i.e., currently has an existing positive) then code this statement as KEEP. An ACQUIRE code would be more appropriate when the person’s words are more than just content—if there is a feeling of improvement (e.g., life getting better). If there is any feeling of negativity in the purpose column (or other column), then a PREVENT

may be the most appropriate code (e.g., SO HER HUSBAND WILL LIVE LONGER—IT'S HER BIGGEST WORRY).

- h. The purpose PEOPLE LIKE TO HEAR FROM HER should be coded ACQUIRE. Even when the project in this context is to KEEP IN BETTER TOUCH WITH FRIENDS, which sounds like a KEEP, the purpose itself is an ACQUIRE. The reason for this is that given the context of this project, it is clear that the person does not currently keep in touch with friends and would like to “acquire” this habit.

Other examples of KEEP:

- hang on to my material possessions
- preserve my high standing in the community
- hold on to my boyfriend
- keep my figure
- stay healthy
- to live longer
- remain in touch with my feelings
- continue to keep my house in good shape
- to keep in contact with my friends

4. ACQUIRE

Assume you don't have it unless you say you do (this assumption is opposite to that of the PREVENT/CURE distinction). For example, “I want a car” implies that I don't yet have a car. “I want to look better” or “I want to look good” then should similarly be coded as ACQUIRE. Also, even though I may already look good, I still want to look better—i.e., acquire a higher-level of a given characteristic (improvement).

Examples w/ explanations:

- a. TO LOOK GOOD and TO LOOK BETTER are both rewards because they are intended to result in a change towards a more positive state. Therefore, both should be coded as ACQUIRE. These types of expressions cannot be coded as KEEP, even if the positive state is currently in existence, because the state one is hoping to attain is at a higher level and therefore qualitatively different. In sum, any statement of improvement should be coded as ACQUIRE. TO LOOK BETTER should NOT be coded as CURE, unless there is evidence in the purpose column or in the goal column which lead us to believe with great certainty that the person is indeed currently feeling like s/he looks bad (e.g., “I'm overweight so I'm exercising every day”).
- b. WANT COMPANY seems to imply an existing state of loneliness, in which case this would be coded as CURE. However, it may just as well be true that one already has company and simply wants to maintain this company in which case it would be coded as KEEP. It may also be the case that the person wants more company, which would be coded as ACQUIRE. For this ambiguous example which has many different possible interpretations, it is especially important that you seek evidence for one of the above in the project description. NOTE: ACQUIRE is no longer the default motivation. Use other means to make coding decisions.

- c. IT GIVES ME SOMETHING TO DO sounds similar to the TO DO IT statement which should be coded as N/A. However, IT GIVES ME SOMETHING TO DO implies that one is working on the project in order to prevent being bored or to just have the positive experience of feeling like one is doing something. This brings up the question of whether this should be coded as PREVENT or ACQUIRE. However, although it may be the case that the person says this because s/he is bored, unless this state is explicitly expressed, it cannot be assumed that the person is in fact bored. Therefore, this expression should be coded as ACQUIRE.
- d. Often, respondents will use language such as I WANT A CAR or I NEED A CAR. It is difficult to establish a rule regarding whether such expressions indicate a need for a cure or a desire for acquisition. Therefore, within the context of the other expressions used for a given project, code such a purpose according to your understanding of what the person is trying to say, regardless of whether they use the word NEED or WANT. When in doubt, code the acquisition of possessions, no matter how necessary they may seem, as ACQUIRE.
- e. The “wanting” of other people, as in meeting others or in establishing relationships, should usually be coded as ACQUIRE. However, if it is explicit that a need is being fulfilled in this process, as in I’M MEETING PEOPLE IN ORDER TO HELP ME GET OVER THE DEATH OF MY SPOUSE, then this should be coded as CURE.
- f. If it’s not apparent that there is a current state of suffering or need, and there are no strong negative influences, code the statement as ACQUIRE. For example, I NEED TO EAT should not be coded as CURE since the current state of hunger is not mentioned and cannot be directly implied. Further, it may be the case that the person is attempting to PREVENT the future negative state of hunger. However, unless this potentially negative state is explicitly mentioned or implied, code I NEED TO EAT as ACQUIRE. In contrast, the fulfillment of explicit psychological or physical needs should be coded as CURE or PREVENT, depending on the current or future state of existence. For example, SO THAT I WON’T BE HUNGRY should be coded as PREVENT, and BECAUSE I’M LONELY should be coded as CURE.
- g. TO COOK HEALTHIER MEALS is in itself an ACQUIRE purpose. However, evidence of an existing negative condition such as “my digestive system can’t take fast food anymore” would be a CURE. Evidence of a person’s fear of a future negative condition such as “so I don’t get anymore kidney stones” would be a PREVENT.

Other examples of ACQUIRE:

- improve my figure
- improvement of social skills
- to receive a nice tax refund
- it gives me something to do
- to earn more money
- buy a house
- give kids a better life

5. N/A (Motivation)

This category should be rarely used—only when the expression does not resemble or imply a MOTIVATION as we are used to interpreting it and therefore does not easily fit into any of the above categories. It may also be the case that the reason the expression cannot be placed into a motivation category is because the person is not interpreting PURPOSE in the way we are used to interpreting it.

Examples w/ explanations:

- a. TO DO IT, or some other phrase indicating that the person is doing the project merely for its own sake, should be coded as N/A. This coding is justified by the definition of purpose which is intended to go beyond the act of performing the personal project. In other words, BECAUSE I ENJOY IT goes beyond the project itself since it is a reason for doing the project (and should therefore be coded as ACQUIRE) whereas TO DO IT cannot imply such a feeling of self-satisfaction and therefore does not seem to go beyond the actions. In some cases, BECAUSE I HAVE TO DO IT may also be coded N/A (e.g., “I have to do it; it’s worth 3 grades in social studies).
- b. The project is TO BUY GLUE TO FIX A VASE and the purpose is BECAUSE MARY IS CLUMSY. The purpose is not really a purpose, and this purpose is also difficult to code in terms of MOTIVATION. Therefore, this purpose should be coded as N/A for motivation.