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# Decisional and Behavioral Procrastination: How They Relate to Self-Discrepancies

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A self-discrepancy is a gap between the perceived real self and other standards like the ideal self. One hundred and eighty-one college students completed a self-report measure of self-discrepancies and decisional and behavioral procrastination. Regression analysis showed that overall dysfunctional procrastination (the composite measure of both kinds of procrastination) significantly varied as a function of self-discrepancies. The amount of variance explained was small. Those scoring high in self-discrepancies were more likely to be dysfunctional procrastinators than those scoring low. The discrepancy between the actual-self and the ought-to self was the strongest predictor of dysfunctional procrastination. When decisional and behavioral procrastination were analyzed separately, only decisional procrastination significantly varied as a function of self-discrepancies.

Even though almost every researcher on procrastination contributes a particular definition (see Ferrari, Johnson, & McCown, 1995, chap. 1, for a review), all are based on the common definition of the word: “to put things off.” Sabini and Silver (1982) argue that procrastination is a nonadaptive behavior—a delay that carries the risk of negative consequences for the individual. By procrastinating, a person is delaying a behavior that is conducive to completing a task or meeting a goal. Thus, the paradox of this behavior is that people put off doing what would lead to accomplishing personal goals.

Previous research has found that procrastination is a widespread human condition. Among the general population, approximately 20% of a sample of 211 respondents reported being chronic procrastinators (Harriott & Ferrari, 1996). Procrastination also affects an important percentage of college students. Solomon and Rothblum (1984) found

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that 46% of a sample of 342 college students procrastinated while writing a term paper. Hill, Hill, Chabot, and Barrall (1976) found that 50% of a sample of students reported themselves as “usual” (10%), “frequent” (17%) and “about half of the time” (23%) procrastinators.

Procrastination has been linked to several negative emotional states and outcomes. Among college students, procrastinators reported significantly fewer semester hour of class enrollment and fewer hours dedicated to study than did non-procrastinators (McCown, Petzel, & Rupert, 1987). In addition, procrastinators perceived this behavior as a problem that they wanted to reduce (Ferrari, 1991; Ferrari, 1993; Solomon & Rothblum, 1984).

A growing body of literature offers several self-report measures of procrastination (see Ferrari et al., 1995, ch. 3, for a review). These self-reported measures have facilitated the identification of various types of procrastination: academic, everyday, arousal seeking, decisional, and behavioral-avoidant procrastination (Effert & Ferrari, 1989; Ferrari, 1992, 1994; Ferrari & McCown, 1994; Milgram, Sroloff & Rosenbaum, 1988; Solomon & Rothblum, 1984). These types of procrastination seem to be linked to different underlying motivational factors (Ferrari et. al., 1995).

The present study focused on behavioral-avoidant and decisional procrastination. The combination of these two types of procrastination is known in the literature as dysfunctional procrastination, which is defined as the chronic delay of tasks (Ferrari, 1994). The Adult Inventory of Procrastination (AIP) (Ferrari et al., 1995) has been found to assess the behavioral-avoidant type of procrastination. It measures the tendency to delay the beginning and/or the completion of tasks. In a study conducted by Ferrari (1992), a factor analysis of the AIP and the Need for Cognition Scale showed that the AIP inventory scores loaded negatively with a need for cognition. These findings strongly suggest that the AIP inventory measures procrastination linked to an avoidance motivation.

Decisional procrastination is best understood within the framework of Janis and Mann’s (1977) conflict model of decision making. They distinguish between adaptive and nonadaptive patterns of coping with challenge. One of the nonadaptive patterns is defensive avoidance, which arises when any alternative available is unsatisfactory or risky and the decision-maker does not hope to find a better solution. The individual then may try to escape from making a decision by procrastinating. Mann’s (1982, as cited in Ferrari et al., 1995) Decisional Procrastination Scale (DPS) was developed within this framework of decision-making research (Mann, Burnett, Radford, & Ford, 1997). As implied by the name, this kind of procrastination means to put off making a decision within some specific time frame.

A body of studies on dysfunctional procrastination have shown its association to several personality traits and characteristics (see Ferrari et al., 1995, chap. 3, for a review). One of the personality characteristics whose links to procrastination have been explored is *self-discrepancies* (Lay, 1994, 1995).

Self-discrepancy theory (Higgins, Bond, Klein, & Strauman, 1986; Higgins, Klein, & Strauman, 1985; Higgins, 1987) states that people compare their “actual-self” to internalized standards called “self-guides.” The “actual-self” is a person’s representation of attributes of the self (such as being “intelligent,” “sociable,” and so forth). This “actual-self” corresponds to what is usually recognized in the literature as self-concept (Moretti & Higgins, 1990). The theory identifies two main types of self-guides: “ideal-self” and “ought-self.” The ideal-self is a person’s representation of the attributes that someone (self or other) would *ideally* like the person to possess (hopes, wishes, goals, or aspirations). The “ought-self” is a person’s representation of the attributes that someone (self or other) believes the person *should* or *ought* to possess (sense of duty, rules, obligations or responsibilities). In sum, the theory posits four main kinds of self-guides: ideal/own, ideal/other, ought/own, and ought/other (Higgins et al., 1985; Higgins et al., 1986; Higgins, 1987).

These different representations of the self can be conflictive or contradictory, and a source of emotional discomfort. A self-discrepancy is a disagreement or gap between two of these self-representations. According to the theory, people are motivated to minimize the gap between their actual-self and self-guides by matching their actual-self to these self-guides. Actual-ideal (ideal/own and ideal/other) and actual-ought (ought/own and ought/other) are the self-discrepancies more often studied in the literature. Both actual-ideal and actual-ought discrepancies lead to different self-regulatory strategies and are accompanied by distinct affective components (Higgins et al., 1985; Higgins et al., 1986).

The theory predicts that self-regulation aimed to close the actual-ideal discrepancy would rely mainly on a strategy of “approaching the desired end-states.” Individuals who possess this type of discrepancy are motivated to obtain—or maintain—the positive outcomes presumed to be obtained by matching the ideal self-guides. They are motivated to maximize the presence of positive outcomes and minimize the absence of positive outcomes. The emotions corresponding to this state are dejection-related, such as dissatisfaction and embarrassment (Higgins et al., 1985; Higgins et al., 1986; Higgins, Roney, Crowe, & Hymes, 1994). The self-regulation aimed to close the actual-ought discrepancy, on the other hand, would rely mainly on a strategy of “avoiding mismatches to desired end-states.” Individuals who possess this discrepancy are moti-

vated to avoid the negative outcomes associated with violating these self-guides. They are oriented to maximize the absence of negative outcomes and to minimize the presence of negative outcomes. Emotions linked to this tendency are agitation-related, such as feelings of fear, anxiety, and worry (Higgins et al., 1985; Higgins et al., 1986; Higgins et al., 1994).

So far, the studies linking procrastination to self-discrepancies (Lay, 1994, 1995) have focused on the affective components of the self-discrepancy theory. Lay (1995) found that procrastinators tend to present higher levels of dejection-related emotions than non-procrastinators. As the self-discrepancies literature reports, such emotions are related to actual-ideal discrepancies. Conversely, procrastinators did not present higher levels of agitation-related emotions, which are linked to actual-ought discrepancies (Higgins et al., 1986). In Lay's studies, procrastination scores were obtained with the General Procrastination Scale (GPS), which measures an arousal-seeking related procrastination. No studies of the relationship between procrastination and the cognitive component of self-discrepancies are reported in the current literature. Such cognitive component is obtained by measuring the degree of discrepancies between the perceived actual-self attributes and the ideal-self and ought-self attributes. Higgins and colleagues have developed an instrument, the Selves Questionnaire, to measure such discrepancies (Higgins et al., 1985; Higgins et al., 1986).

The underlying motivational factors for both dysfunctional procrastination and actual-ought self-discrepancy have been described in very similar terms. Whereas the actual-ought discrepancy relies on an avoidance strategy (Higgins et al., 1985), procrastination appears to be a self-defeating behavior in which people both attempt to reach a desired goal, and undermine their success by putting off the behaviors conducive to the goal (Ferrari, 1994; Sabini & Silver, 1982). Procrastinators seem to maintain an avoidance relationship with their goals. In particular, behavioral procrastination has been found to be strongly linked to avoidance strategies (Ferrari, 1992). In Janis and Mann's (1977) theory of decision making, procrastination is one of the possible strategies emerging from a defensive avoidance coping pattern. Such a pattern is likely to occur when individuals have to make decisions under situations of conflict.

In sum, the present study was designed to explore the degree of relationship between procrastination and self-discrepancies. We expected a positive significant relationship between these variables. We predicted that participants who scored higher in actual-ideal (AI) and actual-ought (AO) self-discrepancies would score significantly higher in

dysfunctional procrastination. Given the proposed similarities between the underlying factors on both the cognitive dimension of self-discrepancies and procrastination, AO discrepancy was predicted to be a stronger predictor of dysfunctional procrastination than AI discrepancy.

## METHOD

### Participants

One hundred and eighty-one undergraduate students of an introductory psychology course at a private Midwestern urban university participated in this study in exchange for course credit. Seventy-four participants were males (41%), 107 were females (59%). The overall group mean age was 18.6 ( $SD = 1.41$ ). Twenty-one participants (11.6%) were psychology students, whereas 153 (84.5%) declared different majors. Eighty-two percent were freshman, 12.7% were sophomore, and 4.4% were juniors.

### Measures

*The Selves Questionnaire.* Self-discrepancies were measured with the Selves Questionnaire (Higgins, 1987; Van Hook & Higgins, 1988). Test-retest reliability of the questionnaire reported by Moretti and Higgins (1990) is .39,  $p < .05$  for AI (actual-ideal) discrepancy and .53,  $p < .01$  for AO (actual-ought) discrepancy.

Following instructions specified by Higgins and colleagues (Higgins, 1987; Van Hook & Higgins, 1988), participants were asked to generate five lists of self-attributes on separated sheets. On each of the first three lists they would report no more than ten traits or attributes of the type of person they believed they actually are (actual-self list), ideally would like to be (ideal-self/own standpoint list), and ought to be (ought-self/own standpoint list). For the other two lists, participants were asked to identify the person whose opinion about them was the most important (e.g., mother, father, etc.). They were then asked to generate lists of up to ten attributes from the standpoint of that person regarding the participant's ideal attributes (ideal-self/other standpoint list) and ought attributes (ought-self/other standpoint list).

The questions were formulated in terms such as: "Please list the attributes of the type of person you think you actually are" (for the actual list). In addition, in the actual list, participants were required to rate on a 4 point scale (from 1 = *slightly* to 4 = *extremely*) the extent to which they actually possessed each listed attribute. In the ideal/own list, they were asked to rate the extent to which they ideally would like to possess each attribute, and so forth for the other lists.

Self-discrepancy values were obtained by comparing the actual-self list with the other lists. An actual-ideal/own standpoint discrepancy score was generated by comparing the actual and ideal/own lists. The same procedure was used to obtain the actual-ought/own, the actual-ideal/other, and the actual-ought/other discrepancy scores.

The comparison between the lists to obtain the discrepancy scores was made using the following formula (Higgins et al., 1986; Moretti & Higgins, 1990, p.113)

$$\text{Discrepancy} = (\text{synonymous mismatches}) + \\ (2 \times \text{antonymous mismatches}) - \\ (\text{synonymous matches})$$

*Synonymous mismatches* are those semantically equivalent attributes present in both lists that have a difference in ratings of two or more. For example, the attribute *gregarious*, from the actual list, which has a rating of 1, is a synonymous mismatch of *sociable*, listed in the ideal/own list, with a rating of 4. *Antonymous mismatches* are those attributes with an opposite semantic relation between them, regardless of their rating (e.g., *shy*, from the actual list, is an antonym of *outgoing*, from the ought/other list). *Synonymous matches* are semantically equivalent attributes that have a difference in ratings of less than two. *No-matches*, attributes that were neither synonyms nor antonyms, were excluded from the analysis. Both synonyms and antonyms were defined according to *Roget's Thesaurus* (Higgins et al., 1986).

Own and other standpoint scores were aggregated across to generate an actual-ideal (AI) discrepancy score and an actual-ought (AO) score. In turn, by aggregating these two scores, an overall self-discrepancy score (SD) was obtained.

Participants were blind to the hypotheses, and the data coders were blind to the scores obtained by participants in the procrastination measures. To assess inter-raters reliability, two raters coded 35 randomly selected questionnaires. The inter-rater reliability for each self-discrepancy was obtained by correlating their scores. Zero order correlations ranged from .75 to 1.00, with a mean of .96.

*Decisional Procrastination.* This variable was measured with Mann's (1982, as reproduced in Ferrari et al., 1995) Decisional Procrastination Scale (DPS), and Frost and Show's (1993) Indecisiveness Scale (IS). In the present study, both scales were highly correlated,  $r(181) = .77, p = .0001$ . Consequently, a composite decisional procrastination score was obtained by averaging the scores of both inventories' items.

The *Decisional Procrastination Scale (DPS)* is a 5-item scale embedded among five other conflict coping patterns in a 31-item inventory. Procrastination items include statements such as "I delay making deci-

sions until it is too late." Participants had to rank each item from 1 (*low*) to 5 (*high*). The total score was obtained by summing up the responses of the 5 items. High scores indicate a tendency to put off decisions. Previous studies have reported a Cronbach alpha ranging from .71 to .80, and a one-month test-retest reliability of .69 (Effert & Ferrari, 1989; Ferrari, 1994). With the present sample, the alpha coefficient was .83 ( $M = 12.85$ ,  $SD = 3.96$ ).

The *Indecisiveness Scale (IS)* is a 15-item questionnaire. For each item, participants indicated the extent to which they agreed or disagreed with the statement, from 1 (*strongly disagree*) to 5 (*strongly agree*). One of the statements is "I try to put off making decisions." There are six items with reversed scores. Frost and Gross (1993), and Frost and Shows (1993) have reported a good internal reliability for this instrument (Cronbach alphas of .87 and .90, respectively). The present study had an alpha coefficient of .87 and a mean score of 41.62 ( $SD = 9.37$ ). Frost and Shows validated the questionnaire by relating it with behavioral latency in decision-making. Participants scoring high in indecisiveness (those scoring above the 75th percentile) had a significantly higher latency when deciding about a laboratory task ( $p < .03$ ) than participants low in indecisiveness (those scoring below the 25th percentile).

*Adult Inventory of Procrastination (AIP)*. The AIP (McCown & Johnson, 1989, as reproduced in Ferrari et al., 1995), assessed the behavioral tendency to put off the beginning and/or the completion of tasks. This inventory has been used in a wide range of populations, including traditional and nontraditional college students. This is a 15-item unidimensional scale. It has seven items with reversed scores. Each item consisted of a 5-point scale (from 1 = *low* to 5 = *high*). The scale includes items such as: "Putting things off 'til the last minute has cost me money in the past year." Procrastination scores were obtained by summing up item responses. Previous studies have shown coefficient alphas ranging from .79 to .83 and a one-month test-retest reliability of .71 (Ferrari, 1994; Ferrari et al., 1995). In the present study, the coefficient alpha was .89, with a mean score of score of 39.78 ( $SD = 11.19$ ). Factor analyses of the questionnaire showed that AIP scores loaded on a factor that included avoidance of self-relevant cognitive information and low self-esteem (Ferrari, 1992). The AIP correlated positive and moderately with DPS,  $r = .44$ ,  $p < .001$  in Ferrari (1994), and  $.31$ ,  $p < .01$  in Ferrari and McCown (1994). With the present sample, the correlation coefficients for the AIP and the DPS, as well as for the AIP and the IS was  $.58$ ,  $p < .001$ .

A composite measure of dysfunctional procrastination was obtained by averaging the item scores of the three procrastination scales ( $M =$



2.69,  $SD = .72$ ). Higher scores indicate a higher degree of procrastination.

*Timing of experimental participation.* An objective behavioral measure was used to check the construct validity of the procrastination inventories. A specific number of research participation hours are required for each student to obtain course credit at this Midwestern university. Previous studies have operationally defined procrastinators as those students signing up late in the semester for research participation (McCown, Johnson, & Petzel, 1989; Solomon & Rothblum, 1984). In the present study, participants were classified into two groups: late signers, those signing up in the last two weeks of class ( $n = 86$ ) and early signers, those signing up before the first two weeks of class ( $n = 63$ ). The remaining group of participants, those signing in the middle of the semester, were not included in this analysis.

## Procedure

The data were collected in nine sessions of up to 20 participants each. At each session, participants were greeted and received a packet containing the consent form, the Selves Questionnaire, the Decisional Procrastination Scale, the Indecisiveness Scale, and the Adult Inventory of Procrastination. They were asked to read carefully the questionnaires and to answer them as honestly as possible. Their answers were anonymous. Participants spent approximately thirty minutes filling out the questionnaires. Once finished, they were debriefed and thanked for their participation.

## RESULTS

Consistent with previous findings in college student samples (Hill et al., 1976; Solomon & Rothblum, 1984), approximately 50% of the participants reported moderate to high levels of procrastination. Specifically, 48.6% of the participants scored above the 50<sup>th</sup> percentile in the composite measure of decisional procrastination (DPS and IS combined); 47.5% participants scored above the 50<sup>th</sup> percentile in the measure of behavioral procrastination (AIP).

To explore the construct validity of the self-report measures of procrastination, a MANOVA was conducted to analyze their relationship with timing of experimental participation. Multivariate tests showed an overall significant difference between means,  $F(2,146) = 4.33$ ,  $p = .02$ . Univariate tests revealed a significant difference between groups for behavioral procrastination,  $F(1,147) = 8.31$ ,  $p = .005$ ,  $\eta^2 = .053$ . The mean score for late signers was 42.44 ( $SD = 10.40$ ); it was 37.57 ( $SD =$

TABLE 1 Mean Scores and Zero Order Correlations for Self-Discrepancies

Variable	<i>M</i>	<i>SD</i>	2	3	4	5	6	7
1. A-I total	-3.97	5.22	.91***	.89***	.79***	.70***	.74***	.95***
2. A-I/own	-1.80	3.10		.63***	.69***	.66***	.61***	.86***
3. A-I/other	-2.15	2.68			.75***	.62***	.75***	.87***
4. A-O total	-4.46	4.96				.92***	.93***	.94***
5. A-O/own	-2.58	2.66					.70***	.86***
6. A-O/other	-1.93	2.73						.88***
7. Total SD	-8.37	9.67						

*Note:* A-I total = Total Actual-Ideal discrepancy; A-I/own = Actual-Ideal discrepancy/own standpoint; A-I/other = Actual-Ideal discrepancy/other standpoint; A-O total = Total Actual-Ought discrepancy; A-O/own = Actual-Ought discrepancy/own standpoint; A-O/other = Actual-Ought discrepancy/other standpoint. *N* = 181.

\*\*\*  $p < .0001$

11) for early signers. As for the composite measure of decisional procrastination, the difference between groups was not significant,  $F(1,147) = 1.50$ ,  $p = .22$ ,  $\eta^2 = .01$ . The mean score for late signers was 55.89 ( $SD = 12.8$ ) and 53.62, ( $SD = 12.84$ ) for early signers. A MANOVA with actual-ideal and actual-ought discrepancy as dependent variables failed to find significant differences between early and late signers regarding self-discrepancies.

Descriptive statistics for the self-discrepancy variables are presented in Table 1. The lower negative scores indicate higher levels of self-discrepancies. Respondents reported more actual-ideal/own discrepancies than any other, followed by actual-ought/other discrepancies. Overall, actual-ideal (AI) discrepancies were reported more frequently than actual-ought (AO) discrepancies. Actual-self-self-guides discrepancies were highly correlated with each other, with correlations ranging from .61 to .95 (see Table 1). One-way ANOVAs detected no significant differences in procrastination and self-discrepancies when analyzed by gender, major, and academic standing.

### Procrastination and Self-Discrepancies

Self-discrepancy scores were analyzed as continuous variables in their relationship with procrastination. Zero order correlations between self-discrepancies and procrastination were very modest, ranging from .00 to .20. Actual-ought/own discrepancy showed the strongest correlation with both decisional and behavioral procrastination (see Table 2).

TABLE 2 Zero Order Correlation Scores between Self-Discrepancies and Procrastination Measures

<i>Measures</i>	<i>Decisional</i>	<i>Behavioral</i>	<i>Dysfunctional (Composite)</i>
1. A-I total	.12	.12	.14
2. A-I/own	.10	.10	.12
3. A-I/other	.11	.12	.13
4. A-O total	.17*	.14	.19*
5. A-O/own	.16*	.16*	.20**
6. A-O/other	.14	.11	.15
7. Total Self-discrepancies	.17*	.14	.19*

*Note:* A-I total = Total Actual-Ideal discrepancy; A-I/own = Actual-Ideal discrepancy/own standpoint; A-I/other = Actual-Ideal discrepancy/other standpoint; A-O total = Total Actual-Ought discrepancy; A-O/own = Actual-Ought discrepancy/own standpoint; A-O/other = Actual-Ought discrepancy/other standpoint.  $N = 181$ .

\* $p < .05$ ; \*\* $p < .01$

We predicted that there would be a significant positive relationship between self-discrepancies and dysfunctional procrastination. A regression analysis with the dysfunctional procrastination as the criterion and the composite measure of self-discrepancies as the predictor was conducted. The regression analysis resulted in a significant association between the variables,  $F(1,165) = 5.83$ ,  $p = .02$ . The amount of variance in procrastination explained by self-discrepancies was, however, small,  $R^2 = .03$ ;  $B = .01$ ;  $SE B = .01$ ;  $\beta = .18$ .

A multiple regression analysis using the stepwise method was performed with dysfunctional procrastination as the criterion; the four actual-self-guides discrepancies (AI/own, AI/other, AO/own, and AO/other) were the predictors. Given the high degree of correlation between self-discrepancies, it was not surprising that only one of them reached the .05 criteria and was entered in the equation. Actual-ought/own was the strongest predictor of dysfunctional procrastination,  $F(1,165) = 7.15$ ,  $p = .01$ . The amount of variance explained was, again, relatively small,  $R^2 = .04$ ;  $B = .05$ ;  $SE B = .02$ ;  $\beta = .20$ .

A regression analysis using the stepwise procedure with decisional procrastination as the criterion, and self-discrepancies (AI/own, AI/other, AO/own, and AO/other) as predictors, resulted in AO/own being the only self-discrepancy entered in the equation,  $R^2 = .03$ ,  $F(1,165) = 5.56$ ,  $p = .02$ ;  $\beta = .04$ ;  $SE B = .02$ ;  $\beta = .18$ . On the contrary, a regression

analysis showed that AI and AO self-discrepancies were not significantly related to behavioral procrastination. None of the self-discrepancies were entered in the equation.

## DISCUSSION

More than half of the present sample of college students reported moderate to high levels of procrastination. These findings were consistent with previous studies (Hill et al., 1976; Solomon & Rothblum, 1984, Ferrari, 1993; Harriott & Ferrari, 1996).

In the present study, the procrastination inventories were correlated to a higher degree than has been reported in past research (Ferrari, 1994; Ferrari & McCown, 1994). The real life behavioral procrastination measure, timing of research participation, supported the construct validity of the paper and pencil procrastination measures. We found a significant difference between early and late participants regarding both behavioral and decisional procrastination, with the difference being larger for behavioral procrastination. Early participants were those signing for research participation the first two weeks of class, and late participants were those signing for research participation the last two weeks of class.

Consistent with the main prediction of this study, dysfunctional procrastination significantly varied as a function of self-discrepancies. The variables were related in the expected positive direction. Actual-self-guides discrepancies (AI/own, AO/own, AI/other, AO/other) were highly correlated; higher than what previous studies have reported. This high correlation made it impossible to build groups of participants high in one discrepancy and low in others. Creating such groups has been the usual way to test the impact of each discrepancy on the dependent variables, above and beyond the contribution of other discrepancies. Nonetheless, a regression analysis with the four discrepancies as predictors showed that AO/own was the strongest predictor of overall procrastination. Not surprisingly, the cognitive measure of procrastination (composite decisional procrastination) rather than the behavioral measure (AIP), was the more strongly associated with the cognitive component of self-discrepancy (the perceived gap between different aspects of the self).

The finding that AO discrepancies showed the strongest relationship with decisional procrastination is consistent with Janis and Mann's (1977) theory of decision making in conflict situations. According to Janis and Mann, defensive avoidance is one of the coping patterns used in such situations. Similarly, actual-ought discrepancies have been found to be related to an avoidance motivation. Thus, avoidance may be a

coping pattern particularly useful in decision situations for individuals whose perception of their actual-self conflicts with their perception of their ought-to-be-self.

It is interesting to note that the Adult Inventory of Procrastination (AIP) was also supposed to tap the avoidance factor underlying procrastination. However, the AIP was not related to actual-ought/own or any of the self-discrepancy measures. This happened in spite of the moderate correlation between AIP and the measures of decisional procrastination. It may be that the avoidance pattern underlying behavioral procrastination is different from the avoidance pattern underlying decisional procrastination. Further exploration of this issue is needed.

Among the domains of the self (actual, ideal and ought), the actual-ought discrepancy was the strongest predictor of procrastination. This suggests that individuals are more likely to procrastinate when they are confronted with a goal that they have to accomplish (a duty), than when confronted with a goal that they want to reach (a wish). Regarding the standpoints of the self (own and other standpoints), actual-own standpoint discrepancy showed higher association with procrastination than actual-other standpoint discrepancy. In other words, individuals were more likely to be procrastinators when they had a discrepancy between what they were and what they thought they should be from their own standpoint. The discrepancy between what they were and what they thought they should be from the standpoint of somebody else was not as important. This suggests that, as Sabini and Silver (1982) have pointed out, procrastination consists of delaying the performance of actions conducive to goals that an individual wants to accomplish. When they are externally forced to perform the action, they do not interpret the delay as procrastination.

The attempt of the present study, to link a theoretical cognitive concept (self-discrepancy) with a specific behavior (procrastination), was partially successful. Even though the degree of relationship between self-discrepancy and procrastination was small, it was statistically significant. Several factors might have affected the results. The differences between participants in the Selves Questionnaire may not have been due to differences in self-discrepancies. Instead, they may have been due to differences in their likelihood to report attributes that remind them of negative aspects of their self-concept (e.g., shy, or lazy). In those circumstances, the probability of finding self-discrepancies in the participant's response, if any, was lowered or eliminated by the underreporting of negative self-characteristics. In addition, the coding system of the Selves Questionnaire was based on eliminating the synonyms within each list (e.g., eliminate "friendly" if "sociable" was listed

first in the I/own list, etc.). By eliminating attributes listed in the same list as if they were synonyms, we may be diminishing the ability of the instrument to measure self-discrepancy in a more ideographic way. Therefore, future investigations may avoid eliminating synonyms within the same list when coding the Selves Questionnaire. The results of the study suggested that general self-discrepancy measures are not very good predictors of procrastination. Future research should address the extent to which a self-discrepancy questionnaire on a particular issue is a good predictor of procrastination on tasks related to that issue.

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