

Putting off Until Tomorrow What is Better Done Today: Academic Procrastination as a Function of Motivation Toward College Work

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We examined the relative impact of intrinsic and extrinsic motivation toward academic work, as well as personality variables such as fear of failure, perfectionism, and locus of control, on academic procrastination in college students ($N=96$). In addition, we compared attribution styles of students who reported high levels of academic procrastination with those who do not. Results revealed that low extrinsic motivation, coupled with perfectionism (for women in particular) and both an external locus of control and attributional style, contributed to the tendency to delay school tasks. Low academic procrastinators were more motivated by both internal and external forces than were high academic procrastinators and found academic tasks to be less aversive in general. Moreover, high academic procrastinators made external attributions (to context and luck) for their successes, acknowledging that they do little to contribute toward their academic achievements when these do occur. These findings suggest that both salient motivators and stable personality factors contribute to academic procrastination.

Procrastination is common among college students, even though failure to perform academic work in a timely fashion leads to lower grades (e.g., Owens & Newbegin, 1997) and causes personal stress (e.g., Tice & Baumeister, 1997). The personal and environmental factors contributing to procrastinatory behavior have been the focus of research detailing the problems incurred by foot-dragging, the origins of procrastination, and the traits of procrastinators (see Ferrari, Johnson, & McCown, 1995). However, less is known about how situation-specific motivation toward a given task may influence the propensity to procrastinate on that

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We are grateful to Esther Rothblum for providing the PASS and its scoring manual. We thank Edith Bolick, Robin Roberts, Kathy Walter, and the editor and reviewer for comments on the research. Portions of this paper were presented at the 42nd annual meeting of the Southeastern Psychological Association, March, 1996, Norfolk, VA.

Ferrari, J.R., & Pychyl, T.A. (Eds.). Procrastination: Current Issues and New Directions. [Special Issue]. *Journal of Social Behavior and Personality*, 2000, Vol. 15, No. 5, 15-34.

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task. This work addressed the relationship between motivation to engage in scholastic endeavors and academic procrastination.

Procrastination is the purposeful delay of the start or completion of a task (Solomon & Rothblum, 1984). It is considered to be chronic or dysfunctional when such behavior disrupts everyday functioning by impinging on ability to work (McCown & Johnson, 1991) and creates psychological and physical discomfort. Procrastinators differ from non-procrastinators in several ways. For example, procrastinators seek perfection and fear failure (Flett, Blankstein, Hewitt & Koledin, 1992), are pessimistic (Lay, 1992), and are more anxious, especially when they realize they are procrastinating (McCown & Johnson, 1991) or when deadlines loom (Tice & Baumeister, 1997). The personal and practical problems that result from dysfunctional procrastination are particularly acute in academic settings, as the tendency to put off school-related tasks results in problematic levels of stress (Rothblum, Solomon, & Murakami, 1986), particularly toward the end of the academic term (Tice & Baumeister, 1997).

In essence, procrastinators have a problem setting goals for themselves, and subsequently perceive that they have less control of time in a given period (Lay & Schouwenburg, 1993). These problems manifest themselves in a number of disruptive behaviors. Academic procrastinators study fewer hours than they had planned to study for exams (Lay & Burns, 1991; McCown & Johnson, 1991), intend to start later (and actually start later) than they should on class assignments (Lay & Burns, 1991), and delay in returning materials to professors (Ferrari, 1992). Not surprisingly, students who procrastinate on school tasks tend to be dissatisfied with their courses (McCown & Johnson, 1991), and earn lower grades than non-procrastinators (Rothblum et al., 1986; Tice & Baumeister, 1997; Wesley, 1994).

Dilatory behavior may occur for several different reasons. Some chronic procrastinators say that they put work off for the "rush" of trying to accomplish a given assignment (Ferrari, 1992), while others indicate that they enjoy being spontaneous (Ferrari, Parker & Ware, 1992; McCown & Johnson, 1991). Others delay to avoid the task or situation at hand (Ferrari, 1991b, 1991c, 1992; Lay, Knish, & Zanatta, 1992; Solomon & Rothblum, 1984), and some may procrastinate due to fear of failure (et al., 1992).

The latter two reasons—task avoidance and fear of failure—are the primary excuses given for academic procrastination, although fear of failure is the most prominent reason given by students who avoid starting their work (Solomon & Rothblum, 1984). Task avoidance is particularly likely if the task involves a heavy cognitive demand and is subject to

evaluation (Ferrari, 1991c, 1992). Fear of failure, on the other hand, causes delaying for fear that performance will be substandard and not reach the expectations set by others (Rothblum et al., 1986; Solomon & Rothblum, 1984). In academics, particularly, concern about how others will evaluate performance may be overwhelming (Saddler & Sacks, 1993). These two reasons for procrastination probably work in concert, as fear of failure leads to task avoidance, which becomes habitual and lowers self-esteem (Ferrari, 1991a; Senécal, Lavoie, & Koestner, 1997). Those with lower self-esteem may like to succeed, but do not have a reasonable expectation that they will do so (McFarlin & Blascovich, 1981), making them even less confident in their abilities and thereby providing more reasons to delay tasks. Moreover, fear of failure contributes to avoidance (rather than achievement) goals, which have been linked to personal and academic dissatisfaction, lack of perceived control, and negative emotion in college students (Elliot & Sheldon, 1997).

Those who regularly avoid starting or completing school tasks may not engage in other types of procrastinatory behavior. That is, academic procrastinators may not be chronic procrastinators. While research has often focused on related and concomitant personality traits of both chronic and academic procrastination, non-chronic or situation-driven procrastination may be a function of task-related motivation, or may be a result of a stable orientation combined with lack of motivation toward the endeavor at hand. Thus, academic procrastination may be situation-specific. What motivates students to perform and accomplish school work in the first place is paramount to understanding whether they will procrastinate, why they will do so, and the types of reasons they will use to justify their procrastinatory behavior.

Motivation is the force that drives a person to engage in activities. Intrinsic motivation refers to the motivation that results from an internal drive toward a task (Amabile, 1993a; Lepper & Green, 1973). Extrinsic motivation is a function of the external contingencies to perform a specific activity (Deci, Betley, Kahle, Abrams, & Porac, 1981). Intrinsic motivation may be undermined by conditions of the educational and work environment (Amabile, 1983b, p. 159). Factors such as monetary rewards (e.g., Amabile, Hennessey, & Grossman, 1986), surveillance (e.g., Lepper, Green, & Nisbett, 1972), lack of choice (Amabile & Gitomer, 1984), evaluation by others (Waschull & Kernis, 1996), deadlines (e.g., Amabile, DeJong, & Lepper, 1976), and competition coupled with the expectation that one should win (Harackiewicz & Elliot, 1993; Reeve & Deci, 1996) may be detrimental to intrinsic motivation by focusing attention on the external reasons for doing something, thereby minimizing the importance of the original drive. Consequently, the

justification for the behavior is determined by the environmental factors present at the time (cf. Bem, 1972). Thus, if external rewards or social influences are present, then the attribution for the behavior will be to extrinsic factors. Because rewards are one of the most important influences on intrinsic motivation (Amabile et al., 1986), motivation toward academic endeavors may be unstable because of the dependence on external rewards (such as grades or praise) for the work.

Understanding self-perceived motivation toward work may be important to articulating the subsequent attributions made in light of recurrent procrastination. Explanations for behavior can be focused on internal factors (i.e., disposition, emotion, intention) or external causes (such as others' behavior, the environment) that are either within or beyond the control of people (cf. Weiner, 1985). Internal attributions may be made to either ability or effort, the latter of which is perceived as a result of motivation (Ross & Fletcher, 1985). However, external attributions, such as those made to luck or situational context, are perceived as a result of the environment. Typically, people attribute their successes to internal disposition, taking responsibility for outcomes, but blaming external reasons (such as task difficulty) for their failures. Thus, a self-serving bias is evident in that people continue to view themselves in a positive light regardless of whether the outcome of an event is a success or a failure (Miller & Ross, 1975).

In order to facilitate self-serving attributions and protect self-image, people may construct actual external barriers to success or arrange and contrive in advance possible justifications for defeat (Berglas & Jones, 1978; Lay et al., 1992; Shepperd & Arkin, 1989). This process, called *self-handicapping*, allows for external attributions for poor performance (Rhodewalt, Morf, Hazlett, & Fairfield, 1991). Self-handicapping is one of a larger class of self-defeating behaviors that individuals employ in order to get short-term benefits and protect the self-image by creating or locating external reasons for the inability to accomplish life tasks (Baumeister & Scher, 1988).

Not surprisingly, procrastinators are notorious for self-handicapping. Perhaps they more acutely fear failure than do those who do not put off tasks (Ferrari, 1991b; Senécal et al., 1997), or because procrastinators have difficulty with self-regulation (the setting, pursuing, and following of goals) and must therefore be externally motivated to get their work done (Tice & Baumeister, 1997). Academic procrastinators may choose tasks that will produce the most barriers to success (Ferrari, 1991b, 1991c, 1991d; Lay, 1992) or create situations where it is impossible to succeed. For example, high self-handicapping students may select classes that are well above their abilities or may study in a noisy

dorm rather than a quiet library. In such cases, the students have erected roadblocks to success, allowing for an external attribution (i.e., to the class or the study situation) for the inevitable failure. Academic procrastinators put off tasks to protect their self-esteem, but also as a self-presentation strategy to make sure that others see them in a positive light by having ready external reasons for their procrastinatory behavior (Ferrari, 1991b).

Clearly, academic procrastinators differ from academic non-procrastinators on a number of social and personality dimensions, and probably differ in attributional styles. Because academic procrastination may be a function of both an enduring propensity as well as unstable motivation toward engaging in specific tasks, we examined the relative impact of both motivation toward academic work and personality variables on academic procrastination. We hypothesized that academic foot-dragging would be a function of motivation because salient intrinsic or extrinsic rewards may determine whether or not procrastinatory school behaviors will occur. Another goal of this study was to examine the nature of attributions for academic procrastination. If academic procrastination is a function of situation-specific motivation toward work, then attributions for this type of procrastination should be external.

METHOD

Participants

Participants were 96 undergraduate students (48 men, 48 women; distributed among college class) who volunteered or participated for course credit. Participants completed the study at their convenience, either alone or in scheduled sessions of mixed-sex groups up to 10 people.

Measures

Academic Procrastination. The Procrastination Assessment Scale-Students (PASS; Solomon & Rothblum, 1984) focuses on academics and yields multiple indices of procrastination. Among these indices are assessments of the frequency of school procrastination and measures of various reasons given for the dilatory behavior. All questions are measured on 5-point scales, and test-retest reliability for both frequency (.74) and justifications/reasons (.56) has been documented (see Ferrari, 1989). In this research, measures of reliability were comparable or better ($\alpha = .71$ for frequency and .81 for justifications). To assess frequency of academic procrastination, students are given several situations (e.g., writing a paper, studying for an exam, meeting with professors) and are asked to indicate the degree to which they procrastinate. To determine

the reasons students delay academic tasks, respondents read a scenario and reveal how much reasons such as "you waited until a classmate did his or hers, so that he/she could give you some advice" and "you liked the challenge of waiting until the deadline" reflect their perceptions of their own behavior. The justifications for procrastination include fear of failure, task aversion, difficulty making decisions, dependency, lack of assertion, risk taking, and rebellion against control, and are based on Solomon and Rothblum's (1984) factor analysis.

Motivation. The Work Preference Inventory (WPI; Amabile, 1987; updated by Amabile, Hill, Hennessey, & Tighe, 1994) was utilized to measure motivation toward college work. Two types of motivation are described by the major scales of the WPI: *intrinsic* and *extrinsic* motivation. The subscale of intrinsic motivation is *task satisfaction* (or enjoyment), which measures gratification experienced during a task.¹ *Outward orientation* (external) assesses how motivating people find competition with others. *Compensation* is the motivation that comes from the possibility of recognition from others for work. It is the second subscale of extrinsic motivation. Some items included on the WPI are "I am strongly motivated by the grades I can earn," and "I want to find out how good I really am at my work." Items are rated on a 4-point scale and, after appropriate reverse scoring, an average for each scale is obtained. Major scales and subscales show internal consistency (with alphas ranging from .71 to .79 in Amabile et al., 1994, although somewhat lower in this study as alphas ranged from .60 to .81). Two participants are missing all WPI scores because this scale was left out of their packet.

Fear of Negative Evaluation. The Brief Fear of Negative Evaluation Scale (Brief FNE; Leary, 1983) assesses concern and apprehension about negative evaluations received by others. This scale consists of 12 items, including "I am frequently afraid of other people noting my shortcomings" and "When I am talking to someone, I worry about what they may be thinking about me." Each item is rated on a 5-point scale and a total FNE score (out of 60 possible) is obtained. Leary (1991) reported high internal consistency with this test ($\alpha = .90$), which was confirmed with this sample ($\alpha = .92$).

Perfectionism. The Burns' Perfectionism Scale (Burns, 1980) was used to measure perfectionism. Items on the scale include "People will probably think less of me if I make a mistake" and "If I try hard enough, I should be able to excel at anything I attempt." The Burns' Perfection-

¹ Amabile et al. (1994) added *challenge* as another intrinsic motivation measure; however, the 1987 version of the WPI was utilized in this study and we therefore scored the instrument according to original instructions.

ism scale yields a total score ranging from -20 to +20, and has been shown to be internally consistent (alphas range from .70 to .78 in previous research; $\alpha = .78$ in the current study).

Locus of Control. An abbreviated version of the Locus of Control Scale (Rotter, 1971) was used to measure whether the student has an internal and controllable, or external and environmental locus of control. The original scale of 23 items (from which ten key items have been detailed and constituted the scale used in this work) is reliable, with a one-month test-retest reliability of .72. The scale consists of yes/no questions that produce two scores: a number of agreements for internal locus and a number of agreements for external locus. Example questions include "when I am right I can convince others" and "it is silly to think that one can really change another person's basic attitudes." The scale produced an alpha of .75 with this sample.

Attributional style. Attributional style was measured through the Multidimensional-Multiattributional Causality Scale (MMCS; Lefcourt, von Baeyer, Ware, & Cox, 1979). The MMCS delineates two types of attributional styles, internal and external, and further distinguishes whether internal attributions are made to ability or effort, and whether external attributions are made to luck or situational context. The MMCS consists of 48 items such as "Whenever I receive good grades, it is always because I have studied hard for that course" and "Some of my bad grades may have been a function of bad luck, being in the wrong course at the wrong time." The questions are divided equally between success and failure situations. Among these success and failure situations are an equal number of questions that determine attributions to ability, effort, luck, and context. This scale thus produces 15 separate attributional indices, including (a) a total score for overall attributional style; (b) a score for internal and external attributions, collapsed across the four types of attributions and the success and failure dimension; (c) a measure for each type of attribution, collapsing across success and failure; and (d) an attributional index for each type of attribution for both success and failure. The various scales and subscales have shown differing levels of internal consistency in previous research, with alphas ranging from .50 to .88. In this study, the scales and subscales produced similar reliabilities ($\alpha = .50$ to .77).

Procedure

After providing consent, participants completed the scales in this order: (1) Burn's Perfectionism Scale; (2) Multidimensional-Multiattributional Causality Scale; (3) Locus of Control; (4) Fear of Negative Evaluation; (5) Work Preference Inventory; (6) Procrastina-

tion Assessment Scale-Students. The WPI and PASS were given last so that the participants were less likely to determine that motivation and procrastination were our major focus. At the conclusion of the testing session, which lasted about 30 to 40 minutes, participants were informed of the specific intentions of the study, and were provided an opportunity to ask questions. None indicated explicit knowledge of the purpose of the study.

RESULTS

Relative Influence of Motivation and Personality on Academic Procrastination

In order to examine the impact of motivation and personality on tendency to procrastinate on school tasks, a stepwise regression was calculated with major motivation scales (intrinsic and extrinsic), Perfectionism, Fear of Negative Evaluation, Locus of Control (both scales), MMCS (overall internal and external style measures), and participant sex (as a dummy variable) as predictors of scores on the PASS. The regression included only the major scales from those personality inventories that produce general scales as well as subscales (i.e., the internal and external styles from the MMCS, but not the specific types of attributions nor those specifically based on success or failure situations, and intrinsic and extrinsic motivation on the WPI, but not the subscales). As can be seen in Table 1, Perfectionism ($\beta = .45$, $\Delta R^2 = .12$, $F(1, 92) = 12.77$), lack of extrinsic motivation ($\beta = -.34$, $\Delta R^2 = .10$, $F(2, 91) = 13.02$), a tendency to make external attributions ($\beta = .23$, $\Delta R^2 = .07$, $F(3, 90) = 12.40$), an external locus of control ($\beta = .20$, $\Delta R^2 = .05$, $F(4, 89) = 11.34$), and being male ($\beta = -.18$, $\Delta R^2 = .03$, $F(5, 88) = 10.34$) all predicted academic procrastination. Given that participant sex contributed to school-related procrastination, parallel regressions utilizing only the significant predictors from the foregoing regression were calculated within sex of participant.

As is shown in Table 1, academic procrastination in male students was predicted by lack of extrinsic motivation ($\beta = -.32$, $\Delta R^2 = .10$, $F(1, 46) = 5.34$) and an external attributional style ($\beta = .30$, $\Delta R^2 = .09$, $F(2, 45) = 5.49$). Perfectionism ($\beta = .64$, $\Delta R^2 = .23$, $F(1, 44) = 13.50$) and lack of extrinsic motivation ($\beta = -.32$, $\Delta R^2 = .08$, $F(2, 43) = 9.94$) both contributed to academic procrastination in women.

Motivation Differences According to Academic Procrastination Tendency

In order to directly compare the motivation, self-reported reasons for academic procrastination, and attributional styles of those students who often delay school endeavors with those students who don't, a

TABLE 1 Results of Regression Analyses to Predict Academic Procrastination

<i>Predictors</i>	<i>b</i>	<i>DR</i> ²	<i>F</i>
All Participants (N = 96)			
Perfectionism	.45	.12	24.00***
WPI-Extrinsic Motivation	-.34	.10	13.45***
MMCS-External Style	.23	.07	6.86**
External LOC	.20	.05	5.39*
Sex	-.18	.03	4.54*
Men Only (n = 48)			
WPI-Extrinsic Motivation	-.32	.10	5.62*
MMCS-External Style	.30	.09	5.15*
Women Only (n = 48)			
Perfectionism	.65	.23	22.28***
WPI-Extrinsic Motivation	-.39	.08	7.61**
MMCS-External Style	.26	.07	4.53*

* $p < .05$; ** $p < .01$; *** $p < .001$.

median split of the PASS scores was used. An unequal number of men and women participants were distributed in the high and low academic procrastination group, therefore, participant sex was included as a two-level factor in ANOVAs along with academic procrastination (high vs. low). The results of these 2×2 (Academic Procrastination $\times$ Sex) ANOVAs with WPI scores, reasons for academic procrastination (from the PASS), and MMCS measures are located in Tables 2–4.

As can be seen in Table 2, high academic procrastinators were less intrinsically motivated than were low academic procrastinators, $F(1, 90) = 4.90$, $p < .05$, although this effect was qualified by sex, $F(1, 90) = 5.70$, $p < .025$. Scheffé tests ($\alpha = .05$) revealed that intrinsic motivation was lower for men who reported high academic procrastination, but that women did not differ in their motivation levels. The differential intrinsic motivation on the part of academic procrastinators may have been a function of task satisfaction, as low academic procrastinators indicated that they found school tasks inherently more satisfying than those who reported excessive delay on scholastic tasks, $F(1, 90) = 4.33$, $p < .05$. Once again, the interaction was significant, $F(1, 90) = 4.54$, $p < .05$, and post-hoc tests revealed that only among men did task satisfaction differ according to tendency to procrastinate in school.

Examination of the means displayed in Table 2 further reveals that low academic procrastinators were more extrinsically motivated than were high academic procrastinators, $F(1, 90) = 4.43$, $p < .05$. Finally,

TABLE 2 Mean Intrinsic and Extrinsic Motivation (and WPI Subscale) Scores According to Academic Procrastination Tendency and Sex

	<i>Academic Procrastination</i>					
	<i>Low</i>			<i>High</i>		
	<i>Men</i> (<i>n</i> = 16)	<i>Women</i> (<i>n</i> = 32)	<i>Total</i> (<i>n</i> = 48)	<i>Men</i> (<i>n</i> = 32)	<i>Women</i> (<i>n</i> = 14)	<i>Total</i> (<i>n</i> = 46)
Intrinsic ^{b, ab}	3.18 (.33)	2.87 (.42)	2.98 (.41)	2.79 (.42)	2.90 (.38)	2.82 (.40)
Extrinsic ^b	2.87 (.38)	2.86 (.41)	2.86 (.40)	2.67 (.40)	2.69 (.40)	2.67 (.40)
Task Satisfaction ^{b, ab}	3.24 (.33)	2.95 (.40)	3.04 (.40)	2.87 (.44)	2.96 (.43)	2.90 (.43)
Outward Orientation	2.48 (.42)	2.46 (.58)	2.47 (.53)	2.53 (.47)	2.37 (.50)	2.48 (.48)
Compensation ^a	3.13 (.48)	3.31 (.43)	3.25 (.45)	2.86 (.56)	3.21 (.59)	2.97 (.59)

Note: Higher numbers denote more of the motivation type listed; standard deviations appear in parentheses. Superscripts indicate significant effects ($p < .05$) of participant sex (^a), procrastination (^b), and interactions of those factors.

women were more motivated by potential compensation for their school work than were men, $F(1, 90) = 5.48$, $p < .025$. Outward orientation was not affected by sex or propensity to postpone school work.

Reasons for Academic Procrastination

The PASS assesses seven different reasons given for academic procrastination. In order to examine these reasons as a function of tendency to procrastinate in school, responses to each were used as measures in 2×2 (Academic Procrastination $\times$ Sex) ANOVAs (Table 3). Procrastinators put off school work more due to task aversion $F(1, 92) = 13.71$, $p < .001$, and also reported more difficulty in making decisions, $F(1, 92) = 5.49$, $p < .025$. Also, women more than men reported delaying academic work because of fear of failure, dependency, and difficulty in making decisions, all $F_s(1, 92) > 4.29$, $p_s < .05$.

Attributional Style as a Function of Academic Procrastination

To articulate how those with high academic procrastination tendencies differed in attributional style when compared to low procrastinators, 2×2 (Academic Procrastination $\times$ Sex), ANOVAs for MMCS scales and

TABLE 3 Mean Scores for Reasons for Academic Procrastination According to Procrastination Tendency and Sex

	<i>Academic Procrastination</i>					
	<i>Low</i>			<i>High</i>		
	<i>Men</i> (<i>n</i> = 16)	<i>Women</i> (<i>n</i> = 32)	<i>Total</i> (<i>n</i> = 48)	<i>Men</i> (<i>n</i> = 32)	<i>Women</i> (<i>n</i> = 14)	<i>Total</i> (<i>n</i> = 46)
Fear of Failure ^a	1.61 (.69)	2.14 (1.01)	1.96 (.94)	2.02 (.97)	2.51 (.92)	2.18 (.97)
Task Aversion ^b	2.38 (.70)	2.80 (1.00)	2.66 (.93)	3.44 (1.05)	3.29 (.96)	3.39 (1.01)
Dependency ^a	2.13 (1.09)	2.75 (1.27)	2.54 (1.24)	2.34 (1.23)	3.13 (1.20)	2.60 (1.27)
Lack of Assertion	1.63 (.81)	2.09 (1.25)	1.94 (1.14)	2.25 (1.32)	2.06 (1.24)	2.19 (1.28)
Risk Taking	2.56 (1.47)	1.69 (1.08)	1.98 (1.28)	1.83 (1.07)	1.78 (1.18)	1.81 (1.10)
Difficulty Making Decisions ^{a, b}	2.50 (1.10)	3.31 (1.38)	3.04 (1.34)	3.13 (1.16)	3.88 (.72)	3.38 (1.08)
Rebellion Against Control	1.72 (1.20)	1.55 (.89)	1.60 (.99)	1.78 (.94)	1.88 (1.24)	1.81 (1.04)

Note: Higher numbers denote more of the reason listed; standard deviations appear in parentheses. Superscripts indicate significant effects ($p < .05$) of participant sex (^a), procrastination (^b), and interactions of those factors.

subscales were computed. Given the large number of analyses, we lowered to .025 the acceptable p -level for interactions to be considered significant. Table 4 displays the means from these analyses.

Not surprisingly, high academic procrastinators reported a greater likelihood to make external attributions when compared to low academic procrastinators, and did so when specifically directed to recount attributions to both context and luck, all $F_s(1, 92) > 5.22$, all $ps < .025$. However, high academic procrastinators recognized that their successes are a function of context or luck, as they were more likely than low academic procrastinators to make these external attributions *only* in success situations, both $F_s(1, 92) > 5.84$, $ps < .025$. Those who reported little foot-dragging in school attributed their successes to their efforts more so than did high academic procrastinators, $F(1, 92) = 4.45$, $p < .05$.

TABLE 4 Mean MMCS Attributional Style Scores According to Academic Procrastination Tendency and Sex

	<i>Academic Procrastination</i>					
	<i>Low</i>			<i>High</i>		
	<i>Men (n = 16)</i>	<i>Women (n = 32)</i>	<i>Total (n = 48)</i>	<i>Men (n = 32)</i>	<i>Women (n = 14)</i>	<i>Total (n = 46)</i>
Total	54.19 (9.12)	56.72 (9.42)	55.88 (9.30)	58.13 (9.89)	60.63 (10.15)	58.96 (9.94)
External^b	21.44 (8.29)	23.19 (9.09)	22.60 (8.78)	27.75 (6.96)	26.50 (8.00)	27.33 (7.26)
Context ^b	11.94 (4.58)	14.03 (5.49)	13.33 (5.25)	15.94 (3.58)	14.56 (4.35)	15.48 (3.86)
Success ^b	6.19 (2.48)	7.78 (2.89)	7.25 (2.76)	8.63 (2.62)	8.56 (2.79)	8.60 (2.65)
Failure	5.75 (2.94)	6.25 (2.37)	6.08 (2.58)	7.31 (2.75)	6.00 (2.90)	6.88 (2.77)
Luck ^b	9.50 (4.44)	9.41 (4.49)	9.44 (4.42)	11.81 (4.31)	11.94 (4.77)	11.85 (4.42)
Success ^b	5.00 (2.48)	5.84 (2.89)	5.56 (2.76)	6.75 (2.62)	6.94 (2.79)	6.81 (2.65)
Failure	4.50 (2.94)	3.56 (2.37)	3.88 (2.58)	5.06 (2.75)	5.00 (2.90)	5.04 (2.77)
Internal	32.75 (5.41)	33.53 (5.74)	33.27 (5.58)	30.38 (6.83)	34.13 (4.75)	31.63 (6.41)
Ability ^a	12.94 (3.80)	15.28 (3.42)	14.50 (3.68)	12.47 (3.96)	14.94 (2.91)	13.29 (3.80)
Success	8.44 (2.06)	8.63 (2.59)	8.56 (2.40)	7.72 (2.81)	8.38 (2.00)	7.94 (2.56)
Failure ^a	4.50 (3.03)	6.66 (2.70)	5.94 (2.96)	4.75 (2.51)	6.56 (2.66)	5.30 (2.68)
Effort	19.81 (3.99)	18.25 (4.50)	18.77 (4.36)	17.91 (4.06)	19.19 (2.48)	18.33 (3.63)
Success ^b	10.25 (1.77)	9.19 (2.72)	9.54 (2.48)	8.38 (2.67)	8.81 (2.01)	8.52 (2.46)
Failure	9.56 (3.52)	9.06 (2.77)	9.23 (3.01)	9.53 (1.95)	10.38 (1.20)	9.81 (1.77)

Note: Higher numbers denote more of the motivation type listed; standard deviations appear in parentheses. Superscripts indicate significant effects ($p < .025$) of participant sex (^a), procrastination (^b), and interactions of those factors.

Finally, women more than men provided ability attributions, particularly when they failed in some situation, both $F_s(1, 92) > 9.53$, $ps < .01$.

DISCUSSION

The results of this study revealed that motivation toward school tasks and personality orientation impact academic procrastination. Low extrinsic motivation and external attributional style and locus of control predicted the general tendency to postpone school tasks. Perfectionism was an additional strong predictor of foot-dragging in women. Men who reported procrastinating in school were less intrinsically-motivated and satisfied with academic tasks than men who did not. Women—regardless of their academic procrastination tendencies—did not differ in their intrinsic motivation toward school work. High academic procrastinators put off scholastic endeavors due to task aversion and a difficulty in making decisions.

Procrastinators have difficulty self-regulating, and therefore need to be externally motivated in order to get their work done (Tice & Baumeister, 1997). Consistent with this notion, our results showed that a lack of extrinsic motivation toward academic work predicted the tendency to put off school tasks. While most people (particularly college professors and parents) perceive that grades are salient extrinsic motivators, these might not be strong or meaningful enough to serve as motivators, particularly when students are not overly intrinsically motivated toward their school work to start. Academic procrastinators and non-procrastinators did not differ in their reliance on recognition by others (as tapped by the WPI measure of compensation) as a motivation. This may imply that grades are not an important recognition standard or that they are not viewed as a true indicator of ability, perhaps because grades are not consistently applied. That is, students may receive differing messages from parents and peers with regard to the meaning or importance of grades, and professors are notoriously variable in their grading standards.

For those who were neither intrinsically-nor extrinsically-motivated, academic procrastination was likely. People unmotivated by intrinsic and extrinsic factors may be different from others on a number of dimensions (see Amabile et al., 1994). For these people, school tasks may be judged as particularly onerous, allowing for dislike of the work to be a justification for foot dragging. For example, a student who does not see the intrinsic value of school work *and* who perceives that personal autonomy is threatened (via presence of extrinsic motivators such as grades) has a lower self-perceived competence, and will therefore expend little scholastic effort (Vallerand, Fortier, & Guay, 1997). Or, academic procrastinators more than their non-laggard peers may have

minimized the role of extrinsic motivators (such as rewards) in their environment (cf. Amabile, 1983b, p. 201), allowing them to blame only the aversiveness of school tasks for their academic procrastination, rather than themselves. Perhaps motivation toward any type of cognitive task—like attributional style, perfectionism, and fear of negative evaluation—may be relatively stable, cutting across situations and domains (Amabile et al., 1994). To understand the degree to which academic procrastination fluctuates as a function of motivation, motivational style that is constant in some people, but situationally defined in others, must be examined.

High academic procrastinators did not indicate fear of failure to be a reason for their dilatory behavior, although women (regardless of their tendency to procrastinate in school) did note that they feared failing more than men. If academic procrastination had been problematic in the past and had contributed to failure or less-than-satisfactory performance, thereby decreasing self-efficacy for academics, the primary motivation toward school work would not be self improvement (an intrinsic motivation) but would instead be to avoid future embarrassment (an extrinsic reason; Baumeister & Tice, 1985). However, if the reasons for failure have been externalized then avoidance of similar tasks is likely, as another attempt coupled with a failure would necessarily result in an internal attribution for the lack of success (Baumeister & Tice, 1985). Thus, for some it may be safer not to try at all, or to wait until more information is available or help from others is forthcoming.

This idea is supported by the finding that high academic procrastinators had more difficulty making decisions than low academic procrastinators, perhaps because the former hoped for more assistance. On the other hand, academic procrastination may aid self-esteem because failure can be attributed to lack of effort rather than lack of ability (Beck, this issue; Owens & Newbegin, 1997). High academic procrastinators did not indicate external attributions for their failures, which is surprising given that people will not blame themselves whenever external factors are available (Doherty, Pennington, & Schlenker, 1992). Academic procrastinators also make external attributions for their successes (Rothblum et al., 1986), thereby seeing most outcomes of their efforts as external and unstable. Perhaps attributions to external factors for failures were not seen because procrastinators do not even bother to try aversive tasks (Lay et al., 1992). If unmotivated to try, a failure due to neglect of work could be safely blamed on dearth of interest, rather than deficiency of intellect.

Our results revealed that men and women procrastinate in school for different reasons. Men who were slack with school tasks had low

intrinsic motivation toward academics and found little inherent satisfaction in school work. This is not surprising given that procrastinators often dawdle because they dislike endeavors that are cognitively challenging (Ferrari, 1991d, 1992). Poor school performance for academic procrastinators may be both a cause and effect of low motivation, as unmotivated students tend to perform poorly in classes (Brownlow, Gilbert, & Reasinger, *in press*). Although this research cannot articulate whether low intrinsic motivation is a self-handicapping strategy that causes academic procrastination or whether the lack of inherent desire is a result of this behavior, the results did indicate that academic procrastinators found school tasks to be more inherently unpleasant than did non procrastinators (*cf.* Solomon & Rothblum, 1984).

For women, perfectionism was a strong predictor of academic procrastination. This link is consistent with previous research (*cf.* Flett et al., 1992) detailing how the tendency to compulsively overdo something perfectly is related to the propensity to put off starting an endeavor. Perfectionists also tend to set extreme goals for themselves and then become overwhelmed by the fact that they may not be able to achieve those goals (Ferguson & Rodway, 1994). This probably perpetuates their proclivity to procrastinate. However, Flett et al. (1992) found that men, more than women, procrastinate because of perfectionism, although we found the opposite pattern.²

Women may have used their perfectionism as a palliative or self-handicapping technique because they feared failure and were more motivated by potential recognition (compensation) for their work than men. In addition, they admitted dependence on others for guidance and reported difficulty making decisions. The reason that women academic procrastinators indicated dragging their feet, waiting for direction, and worrying about the evaluations of others may be a function of their self-generated reasons for failure. Consistent with previous research (*e.g.*, Crombie, 1983; Licht, Stader, & Swenson, 1989; Stipek, 1984) concerning sex differences in the attribution process, women made internal, ability-based attributions for their failures. For women, the effect of failure may have been to blame their self-perceived lack of ability, and therefore to protect their esteem they may instead have chosen not to even start certain tasks, or they may have waited for guidance so that they

² Consistent with our data, the literature indicates that the link between perfectionism and generalized or situational procrastination is not a direct one. In particular, there are several different types of perfectionism (such as that which is self-generated versus that which emanates from social or familial pressures) and each shows a somewhat different relationship with procrastination (see Ferrari et al., 1995).

could have firmer parameters—thereby increasing the likelihood of success.

For some, academic procrastination may be a beneficial strategy, as these procrastinators have less anxiety about academic work and fewer stress-related health symptoms at the beginning of an academic term when they are not focused on deadlines (Tice & Baumeister, 1997). In some respects, these students may use dilatory behavior to effect a "trade off" (Baumeister, 1997) whereby short-term benefits are exchanged for longer term costs. However, if it is not certain that the costs may actually be incurred (that is, that failure will result from procrastination) then such a strategy may make sense. Students who procrastinate may "get lucky" and not pay the consequences of dawdling by getting help from a friend who has completed the work, having a forgiving or sympathetic professor, or just finding some burst of inspiration. Reliance on strokes of luck characterizes people with an external locus of control, which did predict academic procrastination in our sample.³ Moreover, our high academic procrastinators recognized that they do little to impact their successful endeavors, as they provided external attributions (to both context and luck) for their successful behaviors more than did their non-delaying peers, whereas those who did not report much academic procrastination made effort-based attributions for their successes.

In sum, the results of this study revealed that both motivation and personality orientation have a joint impact on students' propensity to procrastinate on academic tasks. Academic procrastination is an overwhelming obstacle for many students, leading to scholastic problems (i.e., bad grades), and stress-related physical ailments (Ferrari, 1991b; Lay, 1992; Solomon & Rothblum, 1984; Tice & Baumeister, 1997). Researchers must not ignore motivational influences that may have an additive impact on academic procrastination when coupled with personality variables. Without an understanding of what motivates students to start and how such motivation (or lack thereof) influences their procrastination, "don't do today what can be put off until tomorrow" will continue to be the motto of many students.

³ While the simple, general locus of control scales utilized predicted academic procrastination, another scale (such as the Academic Locus of Control Scale) may have been more appropriate in assessing this construct and may have provided stronger data to support the notion that students who delay school tasks see that outside influences have much to do with their successes. In general, however, the findings concerning the relationship between Locus of Control and academic procrastination have been mixed (Ferrari et al., 1992; 1995).

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