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**Task Aversiveness and Procrastination: A Multi-Dimensional Approach to  
Task Aversiveness Across Stages of Personal Projects**

Allan Blunt

Masters Thesis submitted to the Faculty of Graduate Studies and Research  
in partial fulfilment of the requirements for the degree  
Master of Arts.

Department of Psychology

Carleton University

January 7, 1998



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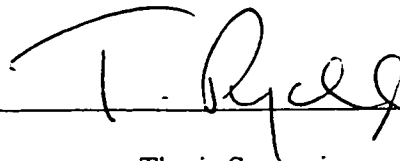
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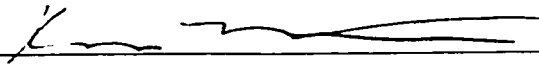
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## Abstract

The purpose of this research was to explore notions of task aversiveness across stages of personal projects (e.g., Little, 1983). Ninety-six female and 55 male undergraduate students enrolled in an introductory psychology class completed Little's Personal Projects Analysis (e.g., 1983). In addition, participants were asked to indicate along an 11-point scale the stage of each of their personal projects. Based on theories of action proposed by Little (e.g., 1983) and Gollwitzer (e.g., 1990), respondents' projects were sorted into four broad stages: Inception, Planning, Action, and Termination. Principal components analyses (PCA) revealed that boredom, frustration, and resentment emerge as dimensions associated with task aversiveness at each stage of project development. As well, PCA revealed the association between task aversiveness and dimensions which assess notions of personal meaning, autonomy, structure, stress, and negative emotions vary across the stages of project development. As hypothesized, each principal component identified with task aversiveness was found to be positively related with procrastination. These findings are discussed in terms of previous research in the area of procrastination and Kuhl's theory of action (e.g., Kuhl, 1987, 1994).

## Acknowledgements

Four years ago I returned to university with the hope that I would one day complete a graduate degree. Over the course of these four years I have had the privilege of meeting and working with many talented and dedicated individuals. However, without question it has been, and I hope will continue to be, my great privilege to work with Dr. Timothy Pynchl. It is impossible for me to imagine an educator more dedicated, patient, and inspiring than Tim Pynchl. Thank you, Tim, for providing light in times of darkness, hope in times of crisis, and kindness in times of despair.

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## Introduction

In much of the research literature, procrastination, or the tendency to put things off, has been viewed as a trait. Trait procrastination refers to a relatively stable and consistent tendency to engage in dilatory behaviour on most or all tasks. At present, three forms of trait procrastination have been suggested: arousal, avoidant, and decisional. Arousal procrastination refers to procrastinatory behaviour which arises from a motivation to increase one's arousal by working against a deadline (Ferrari, 1992a). Under these circumstances, procrastination becomes a rewarding experience by producing a "last minute rush" sensation for the procrastinator. Alternatively, avoidant procrastination describes procrastinatory behaviour which is motivated by a desire to protect one's self-esteem (Ferrari, 1992a). By putting things off, the procrastinator builds in an excuse for potential failure thereby protecting self-esteem. Finally, decisional procrastination (e.g., Beswick, Rothblum, & Mann, 1988) refers to a form of procrastination which is believed to stem from an inability to make decisions coupled with a sense of pessimism about reaching a satisfactory decision.

The majority of research on avoidant, arousal, and decisional procrastination has centred around trying to understand the etiology of each. In an attempting to do so, researchers have focused on linking procrastination to a variety of personality traits. For example, arousal procrastination has been linked to self-efficacy (e.g., Ferrari, Parker, & Ware, 1992), perfectionism (e.g., Ferrari, 1992b), and sensation-seeking (e.g., Ferrari, 1992a). Avoidant procrastination has been found to be associated with impulsivity, neuroticism, depression (e.g., McCown, Johnson, & Petzel, 1989), and self-handicapping

(e.g., Ferrari, 1992a). Decisional procrastination appears to be related to locus of control, hostility (e.g., Beswick & Mann, 1994), forgetfulness and self-esteem (e.g., Effert & Ferrari, 1989).

Although it is clear that there are documented links between trait procrastination and personality traits, research also suggests that procrastination is related to an individual's reaction to specific person-task characteristics (N. A. Milgram, Sroloff, & Rosenbaum, 1988). Person-task characteristics refer to the perceived characteristics of a given task which may influence when and how an individual engages in a task. For example, writing a term paper may be perceived by an individual to be an important and interesting task and, therefore, he or she may start to work on it as soon as possible, whereas another individual may perceive the same task to be boring and a complete waste of time and, as such, avoid engaging in it for as long as possible. Several studies have explored the relation between procrastination and person-task characteristics, finding procrastinatory behaviour to be associated with various person-task characteristics, such as task capability (e.g., N. Milgram, Marshesky, & Sadeh, 1995), task autonomy (e.g., Lay, 1992), and task aversiveness (e.g., Rothblum, Solomon, & Murakami, 1986). Of the person-task characteristics studied, task aversiveness has received the most widespread attention in the literature

### Task Aversiveness and Procrastination

Task aversiveness is typically defined in terms of how unpleasant or unenjoyable a task is to perform (e.g., Lay, 1990; N. Milgram et al., 1995; Solomon & Rothblum, 1984). Previous research has demonstrated that individuals tend to engage in more procrastinatory

behaviour on tasks which are perceived to be more unpleasant or unenjoyable than others. For example, N. A. Milgram et al. (1988), operationalizing task aversiveness in terms of the inverse of pleasure, asked participants to rate 54 tasks on the level of pleasure associated with doing each task. Ratings of task aversiveness were made along a 4-point scale which ranged from strong displeasure (4) to very pleasurable (1). As well, participants were asked to indicate their characteristic behaviour for each task, using a 4-point scale: (1) prompt performance; (2) fairly prompt performance with a comfortable interval before the deadline; (3) performance without much time to spare; and (4) performance at the last possible moment, if at all. Of the 54 tasks, 38 were everyday tasks such as paying bills or doing laundry, 10 were work-related such as asking for a raise or preparing assignments, and 6 were academic tasks such as being on time for lectures and checking for grades. Across all tasks, aversiveness was found to be significantly related ( $r = .58, p < .01$ ) to behavioral delay (i.e., procrastination) and accounted for 33% of the explained variance in procrastination.

More recently, N. Milgram et al. (1995) asked respondents to rate 17 academic tasks (e.g., writing a term paper, buying school supplies and keeping up with readings) on the amount of behavioral delay experienced for each task. Behavioral delay or procrastination was assessed along a 5-point scale, from doing the task as soon as possible (1) to doing the task after the deadline or not at all (5). Participants, however, were not asked to rate the tasks on aversiveness. Instead, tasks were described to the participants as being: (1) pleasant tasks (e.g., interesting, enjoyable); (2) unpleasant tasks (e.g., boring, difficult);<sup>1</sup> or (3) neutral tasks (i.e., tasks presented without affective descriptors). Four tasks were described

as being pleasant, four as unpleasant, and 9 as neutral. Of the three types of tasks, individuals were more likely to report experiencing greater levels of behavioral delay for unpleasant tasks than for tasks described as being neutral or pleasant.

In a similar fashion to N. Milgram et al. (1995) and N. A. Milgram et al. (1988), Szawlowski (1987), examined the relation between enjoyment and procrastination in working on personal projects (e.g., Little, 1983, 1989). Enjoyment in working on a project was assessed on an 11-point scale from 0 (no enjoyment at all) to 10 (a great deal of enjoyment). Szawlowski's findings indicate that individuals who procrastinate to a greater extent experience significantly less enjoyment when pursuing their personal projects than individuals who procrastinate to a lesser degree.

Also working with personal projects, Lay (1990) assessed the relation between procrastination and enjoyment in working on short-term and long-term personal projects. However, unlike Szawlowski (1987), Lay reverse-scored project enjoyment (i.e., the extent to which one enjoys working a project) to reflect task aversiveness. Arousal procrastination was found to be positively related to measures of task aversiveness for short-term projects with a deadline ( $r = .26, p < .05$ ) and open projects with no specific deadline ( $r = .31, p < .05$ ).

Similarly, Lay (1992) reports findings from three independent studies which demonstrate a clear relation between ratings of "how pleasant a task is to perform" and arousal procrastination. The pleasant-unpleasant dimension was assessed on a 7-point scale from 1 (extremely unpleasant) to 7 (extremely pleasant) and reverse-scored to reflect task aversiveness. In Study 1 and Study 2, arousal procrastination was found to be positively

related to ratings of task aversiveness across 21 everyday tasks. Correlations in Studies 1 and 2 ranged from  $r = .42$  to  $r = .49$ ,  $p < .01$ . In Study 3, two weeks prior to an examination, students were asked to anticipate how much they would like studying (i.e., the inverse of task aversiveness) for the examination. Students who anticipated a more aversive time preparing for the examination scored higher on arousal procrastination ( $r = .31$ ,  $p < .01$ ), than did students who anticipated experiencing a less aversive time.

More recently, Pychyl, Lee, Thibodeau and Blunt (1997) assessed procrastination and task aversiveness using the experience-sampling method (ESM; Czikszenmihalyi, Larson, & Prescott, 1977, cited in Pychyl et al., 1997) of data collection. The ESM employed by Pychyl et al. involved signalling participants randomly throughout the day by use of a pager carried by the person. At the sound of each page, respondents were required to complete a series of questions regarding their activities, thoughts and emotions at that moment. For example, participants were asked to: 1) to rate the activity in which they were currently engaged on pleasantness; 2) indicate if there was something else they should be doing and, if so, rate the activity they should be doing on pleasantness; and 3) indicate the extent to which they felt they were procrastinating on the activity they should be doing. The findings reported indicate that, when procrastinating, individuals rate their current activities as significantly ( $M = 7.06$ ,  $t(42) = 7.77$ ,  $p < .001$ ) more pleasant than activities they should be doing. In addition, activities that participants felt they should be doing (when they were, in fact, doing something else) were rated as being significantly more difficult ( $M = 5.16$ ,  $t(41) = -9.45$ ,  $p < .001$ ) and stressful ( $M = 5.59$ ,  $t(42) = -9.95$ ,  $p < .001$ ) than activities in which participants were currently engaged.

What this review of the literature demonstrates is a fairly consistent relation between task aversiveness and procrastination. Although this previous work does demonstrate task aversiveness to be associated with procrastination, task aversiveness has typically been defined in limited terms such as how unpleasant or unenjoyable a task is to perform. In this regard, Silver (1974, cited in Aitken, 1982) argues that the nature of task aversiveness can be limited to the intrinsic pleasantness of a task, but it is as likely, if not more likely, to be derived from notions associated with the anticipated outcome of a task. Similarly, Gollwitzer (e.g., 1990) suggests that pleasantness-unpleasantness of a goal will be determined by reflecting on its consequences, such as positive or negative self-evaluation and/or with incentives associated with the process of pursuing a goal, such as excitement. As well, it has been suggested (C. H. Lay, personal communication, October, 18, 1996) that the definition of task aversiveness be broadened to include person-task characteristics such as uncertainty and boredom which underlie notions of how unpleasant or unenjoyable a task is to perform.

One area of research which may provide a method for a broadened definition of task aversiveness is the study of personal projects (e.g., Little, 1983, 1987a, b, 1989, 1993, 1996, 1997). By incorporating a unit of analysis that allows us to examine individuals' appraisals of their activities, it may be possible to achieve a better understanding of how task aversiveness is conceptualized. To do this we need to examine personal projects in more detail.

### Personal Projects and Task Aversiveness

Personal projects have been defined by Little (e.g., 1983, 1989) as extended sets of personally relevant action which represent the self-expressed goals of individuals. Personal



projects are the things that people see themselves working on and caring about in their lives. Examples of student projects in previous research include, "study for my math exam," "lose 10 pounds," "plan for spring break," and "be a better person."

In Personal Projects Analysis (e.g., Little, 1983, 1989), individuals generate a list of personal projects which they are currently pursuing and appraise each project on a set of dimensions such as enjoyment, importance, and stress. Appraisal dimensions typically included in PPA are Little's standard dimensions (refer to Table 1) which have been derived on theoretical and pragmatic grounds as reflecting potentially important characteristics of personal projects.

Table 1.

Standard rating dimensions used in Personal Projects Analysis and the five theoretical factors

Theoretical factors	Standard PPA rating dimensions
Meaning	Enjoyment, Value Congruency, Self-Identity, Absorption, Importance
Structure	Initiation, Control, Time Adequacy, Positive Impact, Negative Impact
Community	Visibility, Others' View
Stress	Stress, Challenge, Difficulty
Efficacy	Progress, Outcome

As shown in Table 1, the standard PPA dimensions are subsumed under five conceptual domains of project meaning, structure, community, stress, and efficacy (e.g., Little, 1989). Project meaning dimensions evaluate the extent to which individuals perceive

their projects to be worthwhile. Project structure dimensions tap the extent to which a person's projects are organized or in a state of disarray. Project community dimensions assess the extent to which an individual's projects are known and supported by others. Project stress dimensions evaluate the extent to which individuals feel able to cope with the demands of their projects. Project efficacy dimensions assess the current progress and anticipated outcome of one's projects.

In addition to Little's standard project dimensions, researchers have been encouraged to include new dimensions which may be particularly sensitive to their research needs. For example, McGregor and Little (1997) incorporated appraisal dimensions such as fun, pride, and pleasure in examining the relation between goal characteristics and measures happiness and meaning, while Pychyl and Little (1997) included dimensions such as guilt, passion and uncertainty in their research on subjective well-being in the lives of doctoral students. Over the past two decades, researchers have used the flexibility of PPA to explore a variety of research topics and, in the process, have added over 200 dimensions (Chambers, 1996) to Little's original set of standard dimensions. Typically, however, the total number of dimensions in any one study is less than 20 appraisal dimensions (e.g., Little, 1997).

Of particular interest to the proposed research are appraisal dimensions which have been found to related to project enjoyment. Project enjoyment assesses the extent to which individuals enjoy engaging in a particular project and, by definition (e.g. Lay, 1990, 1992), reflects the degree to which a task is perceived to be aversive. Several project dimensions have been found in previous studies to be significantly associated with project enjoyment. A few examples are provided below to illustrate the variety of dimensions found in previous

research to be associated with project enjoyment.

Project enjoyment has been found to be related to the project dimension initiation. Project initiation assesses the extent to which individuals feel responsible for initiating their projects. Wilmot (1994), for example, reports that levels of project enjoyment are significantly related to ratings of project initiation ( $r = .49, p < .01$ ), which suggests that individuals find less enjoyment in projects which they have not personally initiated, as compared with projects they feel more responsible for initiating.

As well, project enjoyment appears to be associated with the project dimension self-identity, or the extent to which a project is felt to be typical of oneself. For example, Lay (1986) reports finding a strong positive relation ( $r = .50, p < .05$ ) between the project dimensions enjoyment and self-identity. Lay's (1986) finding that self-identity is related to enjoyment suggests that the people are less likely to enjoy engaging in projects which are less typical of themselves than projects which are more self-prototypical.

Another dimension which appears to be related to project enjoyment is project importance. Project importance assesses the extent to which a project is felt to be important to an individual. For instance, research conducted by MacDiarmid (1990) indicates that levels of project importance are positively associated ( $r = .47, p < .001$ ) with ratings of project enjoyment, which suggests that people are less likely to enjoy engaging in projects which are less important to them than projects which are more important to them.

In addition, project enjoyment has been found to be positively associated with the project dimension progress, which assesses the extent to which individuals feel they have been successful in their projects to date. An example here is work reported by Little,

Carlsen, Glavin and Lavery (1981) who found that levels of enjoyment are significantly related to ratings of progress ( $r = .41, p < .05$ ). Little et al.'s finding suggests, therefore, that individuals experience less enjoyment in projects which are felt to be progressing less successfully, as compared to projects which are perceived to be progressing more successfully.

More recently, Pychyl (1995) found levels of project enjoyment to be highly related to the project dimension passion ( $r = .57, p < .05$ ). The dimension passion was added by Pychyl to assess the extent to which a project is felt to be so personally satisfying that one would identify it as a passion. Pychyl's finding indicates that project enjoyment tends to be lower for projects which are less personally satisfying, than for projects which are more personally satisfying.

In sum, research involving personal projects suggests that specific project dimensions such as passion, progress, initiation, importance, and self-identity are associated with the enjoyment, and, given the logic of previous procrastination research, the aversiveness of a project. In effect, these project dimensions begin to provide a multi-dimensional perspective on task aversiveness. Before turning to the question of what other PPA dimensions might be part of this multi-dimensional definition of task aversiveness, we might first consider other aspects of personal projects such as project stages.

### Model of Personal Projects Stages

Goal pursuits such as personal projects typically progress through a sequence of stages or phases (e.g., Little, 1983, 1997; Gollwitzer, 1990, 1997). Each stage or phase is

characterised by a set of processes which focus on different aspects of goal pursuits such as the planning or enactment. With regard to task aversiveness, Silver (1974, cited in Aitken, 1982) suggests that the processes associated with the initial stages of a goal are often aversive because more decision-making and structuring is required during these stages. Consequently, we might conclude that task aversiveness in the early stages of goal development is related to issues of decision-making, which may be absent in later stages. To the extent that this is the case, we might conclude generally that task aversiveness will vary in relation to the processes associated with each stage of development. One of the purposes of this research is to explore notions of task aversiveness across the stages of personal projects.

Central to Little's (e.g., 1983, 1989) definition of personal projects is the idea that projects are extended over time. In this regard, Little (e.g. 1983, 1997; Little, Lecci, & Watkinson, 1992) suggests that personal projects can be conceptualized as progressing through a sequence of stages. In order to capture this sequence, Little (e.g., 1983) has proposed a model of personal project stages.

The model of personal project stages provides a temporal perspective on the development of personal projects, beginning with the initial awareness of the possibility of a project and ending with a project's termination. As depicted in this model, projects can be conceptualized as passing through four broad stages which include twenty project substages. Little (e.g., 1983) explains that while it is unlikely any given project will invariantly progress through each of the substages, it can be expected that project development will be sequentially constrained by the four major stages (p. 277). Each of the four stages is

described in more detail below.<sup>2</sup>

Inception Stage. The inception stage begins with an initial awareness of the possibility of a project. According to Little, awareness about a given project may be initiated from various sources. In one case, awareness may be initiated by individuals when they have perceived a disparity between their present and desired circumstances (e.g., Julia wanting to replace her Pinto with a new BMW). As well, awareness may be initiated from outside sources. For instance, Henry may become aware of a project when his mother and father suggest that Henry should go to university, or Suzie may find herself thinking about cleaning the bathroom after her mother's forceful suggestion to do so

Even though an individual may have discerned a project's possibility, Little explains that a project may fail to proceed any further if it remains unstructured and inchoate. In order for a project to proceed it must be "coded, labeled, stored, and clarified" (p. 279). According to Little, a crucial step at this point that may impact on how subsequent stages are handled is deciding upon the source of the project. Regardless of the real source, responsibility for a project is attributed in sequence with its identification and labeling. For example, Henry may identify his project to attend university as self-initiated when, in actuality, the real source of Henry's project was his mother and father. As a result, Henry may delay acting on applying to university in an effort to convince his mother and father that they were not responsible for initiating the project.

Following awareness and identification, individuals then preevaluate a project, assessing it against competing demands on their time and resources. Little explains that during this period, individuals also evaluate whether the desired outcome of a project will be

consistent with their values and needs, while comparing it with projects which are already active or in earlier sub-stages of inception. Once a project has been preevaluated, individuals then decide whether or not to accept the project.

According to Little (1983), acceptance of a project involves making a commitment to the project which can range from "grudging acceptance of the inevitability of an assigned project to passionate consecration of one's life to a cause." (p. 280) The timing and outcome of this stage will depend upon the extent to which the individual publically and/or privately accepts the project. However, Little explains that at this juncture, individuals typically accept their projects openly and proceed to the second major stage in the development of a project. planning.

Planning Stage During this stage, individuals will engage in planning and soliciting whatever personal and material support needed for a project. The first step in the planning stage involves proposing the project. Little explains that the purpose of the proposal is to present the major goals of a project so as to attract rather than discourage potential supporters, although a project may not as yet be planned in detail. If the proposal elicits negative social feedback, a project may be aborted, otherwise it may progress to an administrative phase.

According to Little, administration can be viewed in terms of three related sub-stages: funding, support, and recruitment. Funding involves obtaining resources necessary for the support and completion of a project. Because projects typically require materials and space support, plans should also be made for having a place to engage in a project or for obtaining the materials required to complete a project. In addition, the planning of a project

may involve the recruitment of participants.

As of now, the phases of the planning stage have focussed on the social and spatial elements of project management. The final phase, scheduling, addresses the temporal aspects of project planning. Little explains that the temporal nature of personal projects necessitates that they be divided into component activities so as to facilitate their successful completion. Once the planning of a project has been completed, the individual is ready to enact the goal and the project enters the action stage.

Action Stage. The initial period of the action stage involves the launching of a project. During this period of start-up or engagement, individuals may find a project to be highly stimulating and demanding of energies and resources from their other activities. Little likens this period to starting off in a car which can either be "smooth and gradual or jerking and grinding." (p. 283)

After engagement, the action stage consists of three related processes: control, continuity, and motivation. The first process, control, involves processes related to handling the direction of a project and the use of energies and resources initially diverted to a project. The second process, continuity, is instrumental in maintaining the interrelatedness of the acts which comprise a project. The third process involves the motivation of the individual(s) engaged in a project. Little advises that the processes of control, continuity, and motivation should be viewed as an integrated system rather than a linear sequence of sub-stages. Unsuccessful projects are likely to result from an imbalanced or excess reliance upon one of the three processes, whereas successful projects will involve the integrated and balanced use of all three processes.



However, Little explains that in order for a project be accomplished in accordance with the original project plan, individuals must evaluate the discrepancies arising during the action stage between the goals and accomplishments of a project. Based upon these discrepancies, individuals may decide during this period of postevaluation to terminate or re-initiate actions associated with a project. For example, Henry may decide to terminate applying to university after receiving a letter of acceptance, whereas his friend Jim may decide to re-apply after receiving a letter of rejection. According to Little, the less the discrepancy between the goals and accomplishments of a project, the more likely will a project move to the termination stage.

Termination Stage The termination stage typically begins with a signal that the project is coming to an end. End-signaling can take a variety of forms. For example, Jill's math study project might be end-signaled by her upcoming exam, or the end-signal for Jeff and Judy's relationship may be Judy's threatening to move in with her mother.

Following end-signaling, it may be necessary to remove any exit-barriers associated with a project. According to Little, exit-barriers are often signs of failure, and frequently conflict with social goals. For example, potential exit-barriers to Jeff's and Judy's impending separation might include concerns about how their families will react or the financial costs involved with separating. Identification and removal of exit-barriers is a necessary step when a project must be terminated (i.e., Judy's and Jeff's relationship) and there are pressures to continue with it (e.g., concerns expressed by Jeff's and Judy's respective families or the financial cost associated with separating). However, Little explains that exit-barriers are not endemic to all projects, and if appropriate planning has been carried out in Stage 2, exit-

barriers may be avoided.

After the removal of exit-barriers (if any), all activities associated with a project are concluded and followed by publication or revealing the project to others. At this time, any compensations associated with the conclusion of a project will be garnered by the individual(s) involved with the project. According to Little, even though activities on a project have been concluded, shut-down of a project is still required. In contrast to the sub-stage of conclusion, which involves the cessation of activities, the shutting down of a project has more symbolic importance. For example, although Judy may have said her good-byes to Jeff, in Judy's mind, shut-down of the relationship may only occur with a symbolic slam of the front door. However, the transition between the conclusion and shut-down of a project may not always be smooth. For example, if there is sufficient delay between the time of Judy's good-byes and her leaving, Judy may be forced to return to the conclusion sub-stage and reiterate her good-byes to Jeff. Nevertheless, in terms of the temporal sequence of personal projects, shut-down is the final outcome of most projects.

In sum, the model of project stages provides a temporal perspective on the development of goal pursuits. According to this model, personal projects can be conceptualized as passing through four major stages of development. The first stage, inception, extends from the initial awareness of a project to a decision to take on that project. Once a project has been accepted it enters the planning stage. This stage involves planning both social and temporal aspects of a project such as the recruitment of others as participants, deciding where it will be carried out and allocating time for engaging in a project. After planning, a project enters the action stage. The action stage extends from the

initial start-up of a project to a postevaluation of whether the project has reached its anticipated outcome. When a project is determined to have reached its anticipated outcome it progresses to the final stage, termination. The termination stage begins with the end-signaling of a project and wraps up with the final shut down of the project. Support for Little's (1983) conceptualization of the temporal nature of goal-directed behaviours can be found in the model of action phases (e.g., Gollwitzer, 1990, 1997).

### Model of Action Phases

Similar to Little's (e.g., 1983) theory of project stages, Gollwitzer's (e.g., 1990, 1997) model of action phases also provides a temporal perspective on goal-directed behaviour, beginning with the initial awareness of a wish and ending with the evaluative thoughts a person has once the goal-directed behaviour has ended. According to Gollwitzer (e.g., 1990) the sequence of events occurring within this time-frame pass through four distinct phases: predecisional, preactional, actional, and postactional.<sup>3</sup>

Predecisional Phase. The first phase in the model of action phases is the predecisional phase. During the predecisional phase wishes are deliberated upon and preferences towards wishes are established. Gollwitzer explains that because individuals tend to have too many wishes to achieve in a lifetime, or wishes that may contradict each other, or others that may be too difficult to implement, individuals must decide which of their wishes they prefer to undertake. Individuals establish their preferences towards a wish by employing the evaluative criteria of desirability and feasibility.

According to Gollwitzer, the feasibility of a wish is determined by contemplating the

chances that it will be realized. Individuals may assess feasibility by reflecting upon whether they can achieve the outcome implied by a particular wish through their own activity. For example, individuals may ask themselves if they feel capable or possess the skills or talents required to achieve the wish. As well, the feasibility of a wish may be assessed by contemplating whether the situational context will be supportive or impeding. For instance, individuals may ask themselves if they will have enough time or support and encouragement to fulfil the wish. In addition to contemplating the feasibility of a given wish, individuals will assess its desirability.

Desirability is determined by contemplating the expected value of fulfilling a wish. According to Gollwitzer, in order to determine the expected value, individuals may estimate the pleasantness-unpleasantness of potential long- and short-term consequences and the likelihood that attaining the desired outcome will lead to these consequences. These consequences may include the following: positive or negative self-evaluation or evaluation by others, progress toward an important life goal, or pleasant- unpleasant side effects unrelated to the initial wish. Also relevant to assessing the desirability of a particular wish will be incentives such as the excitement or joy related to the process of attaining the desired outcome.

As Gollwitzer explains, although preferences are established by reflecting on the desirability and feasibility of a given wish, the desirability and feasibility of a particular wish is not fixed, but is established in the context of other wishes which may be complementary or conflicting. For example, a wish associated with many positive consequences such as going on a luxury vacation may suddenly become less desirable when considered in light of a wish

to save money. On the other hand, a wish may appear more feasible when reflected upon in relation to other wishes. For example, an individual's wish to direct his or her own motion picture and his or her wish to attend film school.

After the feasibility and desirability of a wish have been evaluated, the model of action phases predicts that progress towards fulfilling a given wish will not occur until that wish is transformed into a goal intention. According to Gollwitzer, this transformation from wish to goal intention is characterized by a decision or resolution to act upon the wish and is accompanied by a feeling of determination or obligation to fulfil the wish. However, forming a goal intention is only a prerequisite towards wish fulfilment. Gollwitzer explains that once a goal intention has been formed, it becomes necessary to promote the initiation and execution of goal-directed behaviours. At this juncture the individual enters the preactional phase.

Preactional Phase. The preactional phase is characterized by planning. According to Gollwitzer, this process may be relatively simple when the required goal-directed actions are well practiced or routine. However, planning may become more complex such as when newly formed goal intentions cannot be carried out immediately, when opportunities to act are not available, when the goal intention can not be achieved in a single step, or when the individual is uncertain or undecided about how to act. As a result, individuals may be interrupted or forced to pause while awaiting future opportunities to pursue the goal intention. Gollwitzer explains that under these circumstances, it becomes necessary for individuals to create plans of action through a process of reflecting and deciding upon when, where, how, and how long to act. With the completion of planning, the individual is ready to

initiate relevant actions.

The initiation of relevant actions depends upon the volitional strength (i.e., how strongly a person is committed to implementing the chosen goal ) of a goal intention as compared with other competing goal intentions. According to Gollwitzer, volitional strength is considered to be a positive function of a goal intention's desirability and feasibility as perceived prior to being chosen. Although the volitional strength of a goal intention is an important factor in the initiation of relevant actions, action initiation also depends upon the situation.

For example, one might assume that a goal intention, competing for initiation with a goal intention of comparatively weaker volition strength, would prevail. However, if the current situation is not conducive to the initiation of the comparatively stronger goal intention, the weaker goal intention may prevail. For instance, the volitional strength associated with Joe's goal to take a luxury cruise may be greater than it is for Joe's goal to buy a new car, but because Joe's boss refuses to give him vacation time, Joe may decide to buy a new car. As well, the present situation may better favour the initiation of a goal intention than at any future time. Gollwitzer explains that under these circumstance, an individual may take the opportunity to initiate a goal intention and postpone competing goal intentions, even if the competing goal intentions are of comparatively greater volition strength. For example, because mortgage rates may rise in the near future, Kim may decide that it is time to buy a new house, even though she would prefer to invest her money in the stock market.

In sum, action initiation is incumbent upon the volitional strength of a goal intention

as compared with competing goal intentions, as well as the favourability of the present situation as compared with future situations for initiating the goal intention. With the initiation of relevant actions the individual enters the actional phase.

Actional Phase. The actional phase is associated with acting toward goal achievement or bringing goal-directed behaviours to successful completion. According to Gollwitzer, the amount of effort an individual exerts upon a particular goal intention is related to its volition strength which acts as a threshold value for a person's effort exertion. In other words, individuals are thought to increase their efforts when difficulties arise enroute to goal completion. Following the actional phase, the individual moves to the postactional phase.

Postactional Phase. The postactional phase is the final phase in the model of action phases, and involves evaluating the success of an intended goal. Gollwitzer explains that the first step in evaluating a goal is to determine whether the intended outcome of a goal has been achieved. Once this evaluative process has been accomplished, individuals can stop acting on the goal and wait for the desired consequences.

The question of whether a goal has been achieved is relatively simple when dealing with goals that have discrete outcomes such as buying a new car, asking Cathy on a date, reading *War and Peace*, or vacationing in the Bahamas. However, the question of whether a goal has been achieved becomes more complicated and uncertain when the goal in question does not have a discrete outcome, but instead can be continuously improved on or extended. For instance, it may be difficult for Bob to determine if he has studied enough for his physics exam, or for Jane to determine if she has trained enough for her upcoming 400 meter race.

Under these conditions, the individual may resort to setting clear "termination standards" regarding when the intended outcome has been met. For example, Bob might decide to stop studying after he has completed all of the practice questions in his physics book, while Jane may decide to stop training after she has run twenty 400-meter intervals.

As Gollwitzer explains, after determining whether the outcome of the intended goal has been achieved, individuals must decide whether the actual value of the completed goal matches its desired value as assessed during the predecisional phase. However, the actual value may fall short of the desired value. When this shortfall occurs, individuals may have to acknowledge that they did not perform as well as expected, or that the environment was less supportive than expected. According to Gollwitzer, this process of evaluation may cause individuals to re-evaluate their wishes, possibly resulting in a reduction in their standards with respect to the immediate goal, or the consideration of other competing wishes which now seem comparatively more feasible and/or desirable. In other words, the purpose of the postactional phase is for evaluating performances and outcomes, while directing individuals back to their original wishes, as well turning them towards future wishes.

In sum, the model of action phases (e.g., Gollwitzer, 1990, 1997) attempts to describe the achievement of goals within the context of temporally distinct phases. These phases, in temporal order, are: reflecting upon and setting preferences between competing wishes (i.e., predecisional); planning when, where, how, and how long to act (i.e., preactional); acting upon and bringing goal intentions to completion (i.e., actional); and evaluating goal achievement by comparing what has been achieved to what was initially desired (i.e., postactional). The main concern of the model of action phases is to identify the



typical problems individuals encounter when attempting to translate their wishes into reality.

### Summary and Conclusions

Common to both models is the notion that each stage or phase is characterized by a set of processes which focus on different aspects of goal or project development. For example, the Inception stage and Predecisional phase involve processes associated with deliberating and deciding on which projects or goals to accept, whereas the Planning stage and Preactional phase involve resolving where, when, and how to carry out one's projects or goals. Accordingly, we might conclude that notions of task aversiveness will vary in relation to the processes associated with each stage of development. For example, task aversiveness during the Action stage may be related issues of control and continuity, whereas in the Termination stage we might expect aversiveness to be related to issues of exit-barrier removal or fear of project evaluation.

The purpose of this study is to explore notions of task aversiveness across stages of project development. In addition, the relation between task aversiveness and procrastination will be examined within the temporal model of project stages. However, unlike the majority of research on procrastination, an attempt will be made to define and operationalize procrastination beyond mere notions of "putting off" or "delay."

### Defining and Operationalizing Procrastination

Strictly speaking, procrastination means to put off or delay (Oxford English Dictionary, 1983). In much of the research on procrastination (e.g., Lay, 1986, 1987, 1992;

Lay & Schouwenburg, 1993; Milgram, Gehrman, & Keinan, 1992), procrastination has been assessed in terms of how frequently individuals put off or delay their activities. However, Szawlowski (1987) has suggested that the conceptual formulation of procrastination be expanded beyond mere notions of putting off or delay. In this regard, Szawlowski points to Sabini and Silver's (1982) conceptual formulation of procrastination as a potential model for defining procrastinatory behaviour.

Sabini and Silver (1982) argue that procrastination can not adequately be defined in terms of "putting off." According to Sabini and Silver, putting off a task, even until the last moment, is not procrastination if the individual has reason to believe he or she can complete the task in that final moment (p. 128). In other words, when putting off a task is rational, it is not procrastination.

Sabini and Silver describe a number of situations in which putting off something is not procrastination. In one scenario they present a "typical" student, Kim, who has only the weekend to write her fifth and final art history paper, but her boyfriend, Jim, invites her out to dinner on Saturday night. In this case, Sabini and Silver explain that over the course of the year, Kim has written four "A+" papers in 6 hours, so Kim decides that she can complete her paper on Sunday. Sabini and Silver conclude that since Kim has good reason to believe she will finish the paper on time, she is acting rationally and not procrastinating.

According to Sabini and Silver, behaviour can only be procrastinatory when it is irrational. Sabini and Silver describe several scenarios which distinguish rational delay from procrastination. In one example they describe an individual, Kevin, who has an important paper due on Monday. In this case, Sabini and Silver explain that Kevin believes people

should keep their apartments spotlessly clean, and instead of focusing on his paper, Kevin's belief leads him to clean the refrigerator, vacuum the carpets, dust the bookcases, and wash the windows. Based on the assumption that Kevin abhors dirt, believing that dirty apartments cause nasty diseases, Sabini and Silver conclude that given his abhorrence of dirt, it would be difficult to accuse Kevin of procrastination. Sabini and Silver explain that Kevin's belief in having a clean apartment may be unusual, but his actions rationally follow from his beliefs and priorities. However, if Kevin's concern about nasty diseases only arises when he has to study for an exam, Sabini and Silver argue that although Kevin's cleaning behaviours still follow from his beliefs, Kevin's behaviour under these conditions is procrastinatory. According to Sabini and Silver (1982), Kevin's behaviour is procrastinatory because it stems from his recognizing that he should be doing his paper.

As evidenced in these examples, Sabini and Silver's (1982) conceptualization of procrastination distinguishes between rational and irrational delay. This distinction between rational and irrational delay is similar to the distinction Ferrari (e.g., 1993, 1994) draws between functional and dysfunctional procrastination, where procrastination means "putting off" or "delay." Dysfunctional procrastination, which can be equated to Sabini and Silver's (1982) notion of irrational delay or procrastination, refers to delay that is not in the interest of the individual. On the other hand, functional procrastination, which is conceptually similar to Sabini & Silver's (1982) notion of rational delay, refers to delay that is in interest of the individual.

Functional procrastination evokes connotations of sagacious or prudent delay, implying behaviour which works in favour of rather than against individuals. The focus of

this research will be on delay that works against individuals, that is, dysfunctional or irrational delay. In the present study, procrastination will be defined as irrationally putting something off when the irrationality is accompanied by recognizing what one ought to be doing (e.g., Sabini & Silver, 1982). In terms of personal projects, procrastination will be operationalized as putting off a given project in conjunction with the recognition that one ought to be working on the project when he or she is not. Therefore, in order to qualify as being procrastinated on, a project must not only be associated with delay but also marked by feelings of guilt based on this delay.

#### Summary of the Rationale and Research Hypotheses

Research indicates that procrastinatory behaviour is related to person-task characteristics such as task capability, task autonomy, and task aversiveness. Of the person-task characteristics examined in the procrastination research literature, task aversiveness has received the most attention.

Task aversiveness, typically defined as the inverse of enjoyment or pleasantness, has been found to be positively associated with procrastination. However, it has been suggested that the conceptual domain of task aversiveness be broadened beyond the uni-dimensional construct of project unpleasantness or lack of enjoyment, to a multi-dimensional definition of task aversiveness. As explained in the review of personal projects, it may be possible to operationalize this multi-dimensional definition by incorporating the personal project as a unit of analysis. In this case, project dimensions related to appraisals of aversiveness could be used to define a multi-dimensional construct.

Therefore, the purpose of the present study was to explore notions of task aversiveness from a project analytic perspective. Based on a theory of action proposed by Little (e.g., 1983) and Gollwitzer (e.g., 1990), it was hypothesized that:

- 1) notions of task aversiveness would vary across the four major stages of project development, and
- 2) notions of task aversiveness would be positively related to procrastination at each stage of project development.

## Method

### Sample

The sample used in this study consisted of 161 undergraduate students; 95 females and 56 males. The mean age for the females was 24.9 (SD = 7.4) and 21.4 (SD = 2.7) for males. An independent sample t test revealed a significant difference in the mean ages of males and females,  $t(159) = -4.02$ ,  $p = .08$ .

### Materials

Each participant received a questionnaire package consisting of the following measures: Personal Projects Analysis (Little, 1983); General Procrastination Scale (GP; Lay, 1986); Adult Inventory of Procrastination (AIP; McCown & Johnson, 1989a; 1989b, cited in Ferrari, Johnson, & McCown, 1995); Decisional Procrastination Scale (DP, Mann, 1982, cited in Ferrari et al., 1995); and a demographics questionnaire (refer to Appendix D). For purposes of this research the GP, AIP, and DP were not used in the analysis. In addition, participants received an Informed Consent Form (refer to Appendix C) and a general instruction sheet for completing the package (refer to Appendix B).

Personal Projects Analysis (PPA). PPA consists of two core and a number of optional interrelated assessment modules that centre around an individual's personal projects. PPA is not a fixed test, but rather a flexible and generalized assessment methodology that may be used to investigate a wide range of human activity (e.g., Little, 1987b, 1989). Investigators are free to selectively modify chosen modules in order to address their specific research interests. For the purposes of this study, only the two core PPA modules were used: the Projects Elicitation Listing Module and the Personal Projects Rating Matrix (e.g.,

Little, 1983).

Traditionally, participants completing Little's Personal Projects Analysis (e.g., Little, 1983) are asked to generate a list of as many projects as they can in which they are engaged or thinking about at the present time. This Project Elicitation List (e.g., Little, 1983, 1996) typically yields about 15 personal projects. Working with their Project Elicitation Lists, respondents are then asked to select 10 projects which they consider to be representative of their lives at the present time. However, as one of the purposes of this study was to explore procrastination, participants were asked to not only generate a list of projects in which they were engaged or thinking about, but also projects which they felt *they should be doing, but were putting off or avoiding*. Working with this list of projects, respondents were then required to select 5 projects which they felt they were actively working on and 5 projects which they felt they should be working on, but were avoiding or putting off (refer to Appendix B, Personal Projects Analysis).

Using the Project Rating Matrix and Glossary (refer to Appendix D), participants rated each of their ten projects from 0 to 10 on 28 project dimensions potentially relevant to aversiveness. Of these dimensions, 12 were derived from Little's standard dimensions. These dimensions were importance, enjoyment, difficulty, control, initiation, stress, time adequacy, outcome, self-identity, progress, visibility and other's view. As well, 16 "ad hoc" dimensions derived from previous research were included in the rating matrix. For example, Cameron (1984) suggests as a more specific measure of lack of project enjoyment, a dimension which assesses the "boring tediousness" of projects be included in PPA. (p. 109) Therefore, the dimension boredom was included to assess the extent to which a project is perceived to be

boring or tedious. Similarly, capability was included as a dimension because previous research (e.g., N. Milgram et al., 1995) indicates that as perceived task capability decreases, ratings of aversiveness and procrastinatory behaviour increase for a given task. A description of each of the 16 "ad hoc" dimensions, including the research from which each was derived, can be found in Table 2.



Table 2.

List of "ad hoc" dimensions included in Personal Projects Analysis

Dimension	Description	Previous Research
Autonomy (lack of)	The extent to which an individual feels compelled by others to engage in a project.	Lay, 1992
Others' Benefit	The extent to which a project is oriented towards the benefit of others.	McGregor, 1994
Boredom	The extent to which a project is boring or tedious.	Cameron, 1984 Blunt & Pychyl, 1997
Capability	The extent to which an individual feels capable of completing a project.	N. Milgram et al., 1995
Communion	The extent to which a project adds to a sense of harmony with other people or the environment.	McGregor, 1994
Effort	The amount of effort a project is perceived to require.	Cameron, 1984
Emotions	The extent to which a project is associated with negative emotions such as thinking about doing poorly or worrying about making mistakes.	Kanfer, 1997
Frustration	The extent to which an individual feels frustrated when engaged in a project.	Pychyl et al., 1997
Fun	The extent to which a project is perceived to be fun, delightful or whimsical.	McGregor, 1994
Passion	The extent to which a project so personally satisfying it would be identified it as a passion in one's life.	Pychyl, 1995
Pleasure	The extent to which a project is pleasurable (i.e., comfortable, relaxing, self-indulgent or hedonistic).	McGregor, 1994
Psychological Risk	The extent to which a project is associated with feelings of ridicule, rejection, or disappointment.	McGregor, 1994
Resentment	The extent to which an individual resents doing a project.	N. A. Milgram et al., 1988
Social Support	The extent to which a project is supported by others.	Pychyl, 1995
Skills	The extent to which one feels one has the skills for engaging in a given project.	Kanfer, 1997 Gollwitzer, 1990
Uncertainty	The extent to which individuals feel uncertain about the steps involved in completing a project.	Pychyl, 1995.

Also included as a dimension was task aversiveness (i.e., the extent to which one would rather not engage in a project). This dimension was included as a marker variable to identify principal components associated with aversiveness.

As well, respondents rated each of their projects on procrastination (i.e., the extent to which one puts off or avoids a project) and guilt (i.e., the extent to which one feels s/he should be working on a project when s/he is not). In order to operationalize Sabini and Silver's (1982) notion of procrastination (i.e., behavioural delay in conjunction with the knowledge that there is something else that should be done), participants' ratings of procrastination and guilt were summed, producing a measure of procrastination for each project.

In addition to rating their projects on the dimensions found in the rating matrix, respondents were asked to indicate along an 11-point Likert-type scale the current stage of each of their projects (refer to Appendix D). The seven stages described in the Project Stage Module were collapsed into the following four broad stages as described by Little (e.g., 1983):

- 1) Inception - points 0, 1 or 2 on the time-line;
- 2) Planning - points 3 or 4 on the time-line;
- 3) Action - points 5, 6, 7 or 8 on the time-line; and
- 4) Termination - points 9 or 10 on the time-line.

Respondents' personal projects were grouped according to these four stages. Project dimensions, including the measure of procrastination (i.e., procrastination plus guilt), were scored by summing the ratings across projects and calculating the mean dimension score for

each individual.

### Procedure

The participants were recruited from a population of undergraduate students enrolled in a first year psychology course. A “Notice of Recruitment” and sign-up sheet (refer to Appendix A) were posted on the Department of Psychology's experiment recruitment bulletin board. Participants were given a questionnaire package to be completed at home and returned to the researcher within 5 days. As an incentive for volunteering for this research all respondents were offered two grade-raising course credits. Upon returning the completed questionnaire package, participants were given a copy of the Letter of Debriefing.

## Results

Principal components analysis was employed as the method for exploring personal project dimensions associated with task aversiveness across the stages of project development. PCA was performed on the data at each of the four major stages. In order to identify components associated with task aversiveness, the task aversiveness dimension was used as a marker variable. Components marked by task aversiveness were scored and Pearson-product moment correlations were performed between component scores and the project measure of procrastination.

Before undertaking the PCA, an examination for univariate outliers, normality and gender effects was performed. First, an examination for univariate outliers revealed all cases to be within the recommended range of +3 or -3 standard deviations (e.g., Tabachnick & Fidell, 1983). Second, assumptions of normality and homogeneity were then assessed for each variable. An examination of the skew and kurtosis standard scores, Lillifors test of normality, Levene tests of homogeneity of variance and the shape of the stem-and-leaf plot for each variable led to the decision not to transform any of the data. Third, the data were then examined for possible gender differences. MANOVAs revealed that there were no significant gender differences on any of the personal project dimensions.

### Principal Components Analyses

An initial principal components analysis using Direct Oblimin rotation with a delta value set to zero was then performed on the data at each of the four stages. Direct Oblimin rotation was performed so as not to force an orthogonal solution on the data (e.g., Kim & Mueller, 1978; Tabachnick & Fidell, 1983). The delta value was set to zero because

solutions become increasingly orthogonal as delta becomes more negative, whereas delta values approaching 1 produce solutions which are highly correlated (Kim & Mueller, 1978; Tabachnick & Fidell, 1983). Therefore, the moderate delta value zero was used.

After obtaining the initial solution for each project stage, alternative solutions which fell within the bounds of the Kaiser criterion (i.e., eigenvalue greater than 1) were explored (e.g., Kim & Mueller, 1978; Tabachnick & Fidell, 1983). Two additional criteria were employed for determining the suitability of the alternative solutions: 1) examination of the scree-plot; and 2) the percent of variance accounted for by a component (e.g., Kim & Mueller, 1978; Tabachnick & Fidell, 1983). The same procedures were performed on the data at each of the four stages, yielding a six-component solution for the Inception and Planning stages; a five-component solution for the Action stage; and a four-component solution for the Termination stage. The component correlations for the final solutions did not reveal any correlations exceeding .30 (refer to Appendix F). Therefore, the final component solutions at each of the four stages were interpreted as orthogonal (e.g., Tabachnick & Fidell, 1983). In addition, only dimensions loading at .30 or greater were considered for further interpretation (e.g., Kim & Mueller, 1978; Tabachnick & Fidell, 1983)

As discussed, the task aversiveness dimension was used as marker variable to identify components associated with task aversiveness. For projects in the Inception stage, the task aversiveness dimension loaded on the first principal component with lack of autonomy, boredom, communion, negative emotions, enjoyment, frustration, fun, passion, pleasure, resentment, self-identity, and stress (refer to Table 3). In the Planning stage, the task aversiveness dimension loaded on the first principal component with others' benefit,

boredom, negative emotions, enjoyment, frustration, fun, passion, pleasure, resentment, and self-identity (refer to Table 4). For projects in the Action stage, the task aversiveness dimension loaded on the fifth principal component with lack of autonomy, boredom, control, frustration, initiation, resentment, and uncertainty (refer to Table 5). Finally, for the Termination stage, the task aversiveness dimension loaded on the first component with lack of autonomy, others' benefit, boredom, communion, enjoyment, frustration, fun, passion, pleasure, resentment, self-identity, and stress (refer to Table 6).

Table 3.

Inception Stage: Rotated Principal Component Solution: Loadings, Eigenvalues, And Variances

Dimensions	Principal Components					
	1	2	3	4	5	6
Autonomy (lack of)	.35	.35	-.00	-.17	.20	.39
Aversiveness	.61	.10	.02	-.08	-.02	.23
Others' Benefit	.05	.78	-.00	-.13	.04	-.14
Boredom	.76	-.02	.11	-.06	-.09	.18
Capability	-.05	.10	.70	.03	.04	-.03
Communion	-.33	.72	-.04	-.09	-.07	.13
Control	.24	-.07	.63	.04	.08	-.20
Difficulty	-.04	.08	-.29	.68	-.21	.09
Effort	.15	-.10	.05	.67	-.15	.19
Emotions	.36	-.10	-.22	.15	.09	.47
Enjoyment	-.78	.04	-.00	-.03	.09	.19
Frustration	.37	.06	-.24	.34	-.00	.36
Fun	-.81	.09	.03	-.13	-.06	-.00
Importance	-.08	.22	.03	.34	.29	.26
Initiation	-.08	-.01	.15	.70	.18	-.48
Others' View	.07	.27	.03	.00	.16	.54
Outcome	-.17	.05	.66	.11	.11	.25
Passion	-.79	.20	-.06	-.03	.04	.17
Pleasure	-.86	-.07	.03	-.03	.07	.09
Progress	-.07	-.03	.03	-.02	.76	-.08
Resentment	.66	.18	-.16	.03	.13	.23
Psychological Risk	-.05	-.08	-.03	.08	-.08	.78
Self-Identity	-.37	.03	.34	.12	.08	.33
Skill	.03	.18	.80	-.15	-.28	-.00
Stress	.31	.12	-.11	.44	-.01	.37
Social Support	.03	.62	.12	.19	-.07	.00
Time Adequacy	.02	-.02	-.09	-.11	.82	.04
Uncertainty	.06	.43	-.53	.22	-.04	.01
Visibility	-.09	.56	.15	.05	.34	-.06
Eigenvalue	6.38	4.09	2.36	1.76	1.46	1.18
Variances	22.0	14.10	8.10	6.10	5.00	4.10

Table 4.

Planning Stage: Rotated Principal Component Solution: Loadings, Eigenvalues, and Variances

Dimensions	Principal Components					
	1	2	3	4	5	6
Autonomy (lack of)	.15	.03	.04	.10	-.77	-.01
Aversiveness	<b>.62</b>	.05	-.05	-.06	-.17	.20
Others' Benefit	<b>-.42</b>	.50	-.02	-.03	-.34	.03
Boredom	<b>.78</b>	.12	.04	.20	-.16	.07
Capability	.01	.04	.74	-.08	.20	-.17
Communion	-.16	.80	-.01	-.21	.01	.00
Control	.02	.27	.38	.08	.48	.22
Difficulty	-.11	-.21	-.17	-.20	-.05	-.73
Effort	.10	.10	.10	-.04	.04	-.79
Emotions	<b>.30</b>	.10	-.16	.06	.09	-.69
Enjoyment	<b>-.73</b>	.08	-.05	.05	.02	.17
Frustration	<b>.36</b>	.23	-.21	.12	-.06	-.47
Fun	<b>-.75</b>	.24	-.04	.07	.11	.19
Importance	-.14	.11	.39	.00	-.21	-.56
Initiation	-.28	-.01	.14	.26	.64	-.14
Others' View	-.05	.25	.16	.18	-.50	-.28
Outcome	-.05	.15	.62	.21	.09	.07
Passion	<b>-.76</b>	.14	-.03	-.01	-.12	-.06
Pleasure	<b>-.80</b>	.10	-.06	.04	.06	.19
Progress	.09	-.08	-.06	.76	.14	.19
Resentment	<b>.55</b>	.07	-.27	.02	-.10	-.20
Psychological Risk	-.09	.47	-.10	.01	-.03	-.40
Self-Identity	<b>-.46</b>	-.14	.34	.29	-.11	-.08
Skill	.11	-.12	.84	-.08	-.20	.10
Stress	.12	.18	-.07	.08	-.18	-.67
Social Support	.18	.49	.16	.22	-.03	-.31
Time Adequacy	-.10	-.21	-.06	.78	-.06	-.03
Uncertainty	.13	.04	-.49	-.06	-.12	-.29
Visibility	.02	.30	.06	.56	-.10	-.06
Eigenvalue	6.88	4.22	2.66	1.51	1.42	1.04
Variances	23.7	14.60	9.20	5.20	4.90	3.60



Table 5.

Action Stage: Rotated Principal Component Solution: Loadings, Eigenvalues, and Variances

Dimensions	Principal Components				
	1	2	3	4	5
Autonomy (lack of)	.19	.00	.28	.10	<b>.70</b>
Aversiveness	-.19	-.11	.08	-.06	<b>.71</b>
Others' Benefit	.25	.56	.28	.20	.04
Boredom	-.35	-.06	.09	.09	<b>.60</b>
Capability	.11	-.49	.32	-.00	-.09
Communion	.34	.57	.35	.08	-.19
Control	-.20	-.14	.58	-.23	<b>-.35</b>
Difficulty	-.02	-.14	-.20	.73	.19
Effort	-.02	.03	.07	.68	-.08
Emotions	-.27	.12	-.04	.57	.19
Enjoyment	.79	-.12	.11	.02	-.08
Frustration	-.11	-.09	-.06	.58	<b>.43</b>
Fun	.91	-.07	-.11	-.09	.04
Importance	.22	-.08	.18	.48	-.16
Initiation	-.12	-.24	.25	.13	<b>-.57</b>
Others' View	-.05	.17	.57	.26	.01
Outcome	.22	-.40	.50	-.01	-.14
Passion	.76	.06	.05	.19	-.03
Pleasure	.85	.05	-.05	-.07	-.06
Progress	.38	-.13	.49	-.23	.15
Resentment	-.20	.09	.16	.14	<b>.53</b>
Psychological Risk	.16	.29	.00	.52	-.07
Self-Identity	.19	-.25	.24	.44	-.28
Skill	.24	-.73	-.00	.14	-.04
Stress	-.28	.23	.16	.55	.19
Social Support	.01	.09	.59	.06	.03
Time Adequacy	.05	-.02	.70	-.02	.08
Uncertainty	-.11	.30	-.10	.13	<b>.36</b>
Visibility	.00	.03	.65	.06	.26
Eigenvalue	6.35	4.55	2.11	1.57	1.33
Variances	21.90	15.70	7.30	5.40	4.60

Table 6.

Termination Stage: Rotated Principal Component Solution: Loadings, Eigenvalues, and Variances

Dimensions	Principal Components			
	1	2	3	4
Autonomy (lack of)	<b>-.40</b>	.14	-.07	.42
Aversiveness	<b>-.64</b>	-.01	-.03	.14
Others' Benefit	<b>.30</b>	.11	-.19	.42
Boredom	<b>-.81</b>	.07	-.11	.01
Capability	-.13	.15	-.69	-.14
Communion	<b>.49</b>	.29	-.10	.27
Control	.04	-.07	-.68	.12
Difficulty	-.13	.24	.56	.39
Effort	.06	-.15	.18	.76
Emotions	-.22	.29	.31	.47
Enjoyment	<b>.82</b>	.07	-.03	.21
Frustration	<b>-.56</b>	.29	.32	.29
Fun	<b>.83</b>	-.03	-.06	.21
Importance	.15	.14	-.25	.62
Initiation	.12	-.09	-.43	.17
Others' View	-.05	.73	-.15	-.08
Outcome	-.13	.21	-.79	-.07
Passion	<b>.81</b>	.20	.17	.12
Pleasure	<b>.91</b>	.07	-.01	.15
Progress	-.05	.01	-.74	.34
Resentment	<b>-.63</b>	.25	.06	.25
Psychological Risk	.07	.72	.17	.05
Self-Identity	<b>.56</b>	.34	-.06	-.32
Skill	.01	.19	-.37	-.13
Stress	<b>-.56</b>	.25	.17	.47
Social Support	-.02	.61	-.15	.06
Time Adequacy	-.05	.05	-.73	.05
Uncertainty	-.01	-.00	.60	.20
Visibility	.15	.70	-.09	-.06
Eigenvalue	6.83	4.02	3.52	1.47
Variances	23.5	13.90	12.10	5.10

In order to get a better picture on how the dimensions loading on the aversiveness component varied across the stages, each of the stages is presented in parallel in Table 7. As can be seen in the table, the dimensions loading with task aversiveness vary across stages of project development. As indicated, boredom, frustration, and resentment loaded with task aversiveness at each stage of project development. However, the loadings across stages varied to some extent in terms of dimensions which assess notions of personal meaning (i.e., enjoyment, fun, pleasure, passion, and self-identity), autonomy, structure (i.e., control and initiation), stress (i.e., stress and uncertainty), and negative emotions.

Table 7.

Project dimensions loading with the task aversiveness dimension at each stage

Dimensions	Inception	Planning	Action	Termination
Boredom	.76	.78	.60	.81
Frustration	.37	.36	.43	.56
Resentment	.66	.55	.53	.63
Negative Emotions	.36	.30		
Enjoyment	-.78	-.73		-.82
Fun	-.81	-.75		-.83
Pleasure	-.86	-.80		-.91
Passion	-.79	-.76		-.81
Self-Identity	-.37	-.46		-.56
Autonomy (lack of)	.35		.70	.40
Stress	.31			.56
Communion	-.33			-.49
Others' Benefit		-.42		-.30
Control			-.35	
Initiation			-.57	
Uncertainty			-.36	

Note. The negative sign indicates a dimension loaded negatively in relation to the task aversiveness dimension.

### Correlational Analyses

Finally, component scores were calculated for each of the components marked by the task aversiveness dimension. The component scores were calculated by summing the raw dimension scores with weights that were proportional to their component loadings (e.g., Kim & Mueller, 1978). The components were then correlated with the project measure of procrastination (i.e., the procrastination and guilt dimensions). The correlations and mean procrastination scores for each stage are presented in Table 8.

Table 8.

#### Correlations between components scores for aversiveness and procrastination scores at each stage

<u>Component Scores</u>	<u>Correlation Between Component Scores and Procrastination</u>	<u>Mean Procrastination Score</u>
Stage 1, Component 1	.40, $n = 119$	12.3
Stage 2, Component 1	.33, $n = 128$	12.3
Stage 3, Component 5	.31, $n = 153$	10.8
Stage 4, Component 1	.25, $n = 79$	9.7

Note. All  $p < .05$ .

### Summary of Results

Overall, the results of the PCA provide a multi-dimensional model of task aversiveness which includes the following project dimensions: boredom, frustration,

resentment, autonomy, enjoyment, fun, passion, pleasure, self-identity, negative emotions, control, initiation, stress, uncertainty, communion, and others' benefit. These dimensions vary across the project stages as hypothesized. Similarly, as hypothesized, the scores for the aversiveness component for each stage correlate with the measure of procrastination. How each of these dimensions relates to task aversiveness and possible reasons why the dimensionality of aversiveness varies across the project stages are discussed below.

## Discussion

It will be recalled that the purpose of this research was to explore the personal project dimensions associated with task aversiveness across the stages of personal projects. In order to identify PPA dimensions associated with task aversiveness, a principal components analysis (PCA) was performed with a task aversiveness dimension used as a marker variable to define components of aversiveness at each of the four major stages of project development. The principal components analyses revealed that boredom, frustration, and resentment emerge as dimensions associated with task aversiveness at each of the four major stages of project development. As well, PCA revealed that the loadings across stages varied to some extent in terms of dimensions which assess notions of personal meaning (i.e., enjoyment, fun, pleasure, passion, and self-identity), autonomy, structure (i.e., control and initiation), stress (i.e., stress and uncertainty), and negative emotions.

Specifically, the PCA for projects in the Inception stage revealed that task aversiveness loaded with dimensions of negative emotions, personal meaning, autonomy, and stress. For projects in the Planning stage, task aversiveness was found to load with dimensions of negative emotions and personal meaning. Task aversiveness, for projects in the Action stage, was found to load with dimensions of autonomy, stress, and structure. Finally, the PCA for projects in the Termination stage, revealed task aversiveness loaded with dimensions of personal meaning, autonomy, and stress. As hypothesized, each component identified with task aversiveness was found to be positively related with procrastination.

Overall, these results provide a multi-dimensional perspective of task aversiveness in

the projects of the participants. What remains to be done is to explain how these dimensions relate to task aversiveness throughout the stages of a project as well as their relation to procrastination.

In preface to this discussion, several caveats regarding the methodology of the present study should be addressed. First, the reliability of the principal components analyses can be called into question due to the relatively small sample size and the use of only a single marker variable (i.e., task aversiveness) to define components identified with task aversiveness. With regard to sample size, while it is preferable to use a sample size of 500 or more (e.g., Comrey, 1973), Tabachnick and Fidell (1983) note that a sample size of 100 - 200 is adequate for most purposes, and that the use of a sample size of 50 is not unusual.

Likewise, in terms of marker variables, while it would be ideal to use four or five variables with demonstrated relationship to task aversiveness as the marker variables (e.g., Comrey, 1973; Tabachnick & Fidell, 1983), in an exploratory analysis such as this, it is not unusual to rely on a single dimension. In fact, previous PPA research has included factors which have been identified on the basis of a single loading variable. For example, McGregor and Little (1997) relied on a single loading variable, the PIL score, as one of their key factors to define meaning.

Finally, caution should be taken with respect to over-interpreting the results of the PCA. Although all studies have the potential of "capitalizing on chance," hence the role of probabilistic decision rules to mark statistical significance, the interpretation of component loadings is particularly plagued with "overinterpretation." Comrey (1973) notes that one must be especially conservative when interpreting the results from relatively small samples

sizes as compared with ideal sample sizes of 500 or more. Without replication, it is impossible to know if the structure identified with this sample is a stable or realistic model of task aversiveness from a project-analytic perspective. This problem of generalizability must be tempered with the overall exploratory purpose of the study, as well as with the subjective nature of the interpretation of PCA or FA techniques. As noted by Kim and Mueller (1978), the labels that factors are given and the interpretation of the number of factors best representing the data overall involves subjective criteria.

In light of the above limitations, the following discussion focuses on theoretically meaningful trends in the data as opposed to a more detailed, and potentially problematic, description of single dimensions at each stage of project development. The discussion of the results have been organized by project dimension, and where applicable, related groups of dimensions. Stage variation is presented within this discussion of the dimensions.

### Frustration, Resentment, and Boredom

The three dimensions associated with the aversiveness component across all project stages were: boredom, frustration, and resentment. In this respect, these relatively negative aspects of project appraisal represent rather stable components of task aversiveness. To the extent that individuals rate their projects high on these dimensions, the projects are also appraised as aversive, and these are projects associated with higher levels of procrastination. An examination of related research literature reveals that all three dimensions share some relation to procrastination, and that boredom has previously been related to task aversiveness explicitly.



In previous research, task aversiveness has been identified with notions of boredom. For example, N. Milgram et al. (1995) defined aversiveness in terms of boredom and difficulty. Although N. Milgram and colleagues did not distinguish between boredom and difficulty in their analyses, they suggest procrastination is likely to increase when one's tasks are perceived to be boring. This interpretation is supported by the findings of Hermon, Grossman-Baklash, and Sela (1991, cited in N. Milgram et al, 1995) which demonstrate that among interesting, easy, difficult, and boring tasks, boring tasks were associated with the highest levels of delay.

More recently, Blunt and Pychyl (1997) have speculated on why boredom may be a causal factor of procrastination. Based on Kuhl's theory of action (e.g., Kuhl, 1987, 1994), Blunt and Pychyl suggest that individuals who are engaged in what they perceive to be boring tasks may not be able to sustain these activities as an intentional activity in the face of less boring alternatives actions. Research by Kuhl and Beckmann (1994) supports this interpretation as they conclude that continued performance of a boring task can often be maintained only through self-control involving global inhibition of task-irrelevant emotions and cognitions (Kuhl, 1994, p. 16). To the extent that boredom contributes to an inability to inhibit these task-irrelevant emotions and cognitions, and shield the intended activity from competing action tendencies, we would expect individuals to procrastinate.

In addition to boredom, frustration was found to load with task aversiveness for projects at each stage. Kuhl's theory of action (e.g., 1994) suggests that continuous frustrations may lead to frequent rumination over task-irrelevant emotions or uncontrollable cognitions. According to Kuhl (e.g., 1994), when preoccupied with task-irrelevant emotions

or uncontrollable cognitions, individuals will be unable to focus on their intended activities. Consequently, we might expect procrastination to occur when individuals become preoccupied with task-irrelevant emotions or uncontrollable cognitions, and are unable to focus on their intended activities.

Sheldon and Kasser (1995) speculate that as a way of managing frustration, individuals may engage in distracting activities such as watching television. This interpretation is supported by research conducted by Pychyl et al. (1997) which indicates that when procrastinating, individuals rate their current activities (e.g., watching television, playing video games) as less frustrating than activities they feel they should be doing (e.g., studying for exams, working on assignments). Accordingly, we might expect procrastination to occur when frustrating projects have to compete with distracting or alternative activities which offer relief from frustration.

In addition to being associated with frustration and boredom, task aversiveness at each stage was found to load with the resentment dimension. Several clinicians, researchers and theorists (e.g., Burka & Yuen, 1983; N. Milgram et al., 1988; N. Milgram, Dangour, and Raviv, 1992) in the area of procrastination have offered resentment as an explanatory concept for procrastination. According to this view, procrastination will occur when individuals resent having to engage in their activities. Procrastination of this kind will take the form of an avoidant reaction to activities individuals feel have been imposed upon them by others. To date, however, resentment has not been studied explicitly in relation to procrastination, but has been inferred on the basis of studies of such things as passive aggressive personality (e.g. N. Milgram et al. 1988). Further support of the role of project

resentment as a factor in task aversiveness was found in the present study with the loading of the project dimension of autonomy with task aversiveness at the Inception, Action and Termination stages of project development.

### Lack of Autonomy

Lack of autonomy, the extent to which individuals feel compelled to engage in their tasks, has been found in previous research to be positively associated with procrastinatory behaviour (Lay, 1992). In three separate studies examining the relation between task-characteristics and trait procrastination, Lay found lack of autonomy (i.e., feeling compelled to engage in one's tasks) to be positively related to procrastination in each study. Although Lay (1992) did not explore the relation between aversiveness and autonomy, the findings from the present study indicate that lack of autonomy emerges as a dimension associated with task aversiveness for projects in the Inception, Action, and Termination stages of project development. To the extent that lack of autonomy is an underlying dimension or causal factor of task aversiveness, we would expect projects low on autonomy to be appraised as aversive, and these projects to be associated with higher levels of procrastination

More recently, in research exploring personal strivings in relation to goal autonomy, Sheldon and Elliot (1997) have referred to goals that individuals feel compelled to pursue (i.e., lack of autonomy) as controlled goals. According to Sheldon and Elliot (1997), controlled goals will not be pursued with a full sense of personal ownership or choice, and as such, are less likely to be well shielded from competing desires and temptations. As a result,

controlled goals will be more difficult to maintain in the face of competing action tendencies

In as much as lack of autonomy in personal projects reflects "controlledness" as defined by Sheldon and Elliot, we would expect that personal projects lower in autonomy would be less effectively shielded from competing action tendencies, and as a result more likely to be procrastinated on than more autonomous projects. While not providing a direct link between task aversiveness and autonomy, Sheldon and Elliot's discussion of issues of goal autonomy in relation to Kuhl's theory of action (e.g., 1987), particularly the breakdown in action, provides the most recent support for the autonomy dimension as an important component relating project dimensions to task aversiveness and procrastination.

### Personal Meaning

At the centre of previous definitions of task aversiveness have been notions of enjoyment or pleasantness (e.g., Lay, 1990, 1992; N. A. Milgram et al., 1988; N. Milgram et al., 1995). Given that task aversiveness has been typically equated to the inverse of enjoyment or pleasantness, it is not surprising that enjoyment and similar notions of pleasure and fun emerged as dimensions associated with task aversiveness. From a PPA perspective, enjoyment, fun, and pleasure have been identified as dimensions which tap aspects of personal meaning (e.g., McGregor, 1994; McGregor & Little, 1997).

Personal meaning refers to the extent to which individuals feel their projects to be worthwhile pursuits (e.g., Little, 1989). Personal meaning has traditionally been identified with dimensions of importance, value-congruency, absorption, self-identity, and enjoyment (e.g., Little, 1989). More recently, the conceptual domain of personal meaning has been

expanded to include a wider range of project dimensions such as fun, pleasure, communion, and others' benefit (e.g., McGregor, 1994; McGregor & Little, 1997).

In addition to enjoyment, fun, and pleasure, the findings from the present study revealed that self-identity (during Inception, Planning, and Termination), communion (during Inception and Termination), and others' benefit (during Planning and Termination) emerge as dimensions associated with task aversiveness. As well, passion was found to load with task aversiveness during Inception, Planning and Termination. Although passion has not been previously identified with personal meaning, research by Pychyl (1995) indicates that passion forms a moderate pattern of associations with dimensions of personal meaning such as absorption, self-identity, and importance.

Based on these findings, we might conclude that aversive projects are those which lack a sense of personal meaning, and by definition, are less worthwhile. To the extent that projects low on personal meaning are aversive, we might expect individuals to procrastinate. In fact, previous research involving personal projects (e.g., Szawłowski, 1987) has demonstrated a link between procrastination and personal meaning. For example, Szawłowski found procrastination on personal projects to be negatively related to enjoyment, self-identity, importance, absorption and value-congruency.

In terms of Gollwitzer's theory (e.g., 1990), we might assume that less worthwhile pursuits or projects low in personal meaning are those which are low in desirability. Although not the only factor, desirability is an important factor in the development of a goal. Specifically, when deciding on which goals to pursue, goals lower in desirability may be given lower preference than more desirable goals. As well, desirability is an important factor

in determining the volitional strength of a goal (i.e., how strongly a person is committed to implementing the goal). In the context of Kuhl's theory of action (e.g., 1987), we might expect goals which are lower in desirability to be less well shielded from competing action tendencies, and as such, more likely to be procrastinated on.

### Structure

The findings from this study revealed that dimensions which assess project structure load with task aversiveness during the Action stage. Structure refers to the extent to which an individual's projects are organized or in disarray (e.g., Little, 1989). Project structure is reflected in appraisal dimensions such as control and initiation. The PCA revealed that control and initiation emerge as dimensions associated with task aversiveness during the Action stage. In addition to control and initiation, uncertainty was found to load with task aversiveness in the Action stage. Although not been previously identified as a dimension of project structure, Pychyl (1995) found uncertainty to be most highly associated with control. In terms of the present study, the findings indicate that during the Action stage, aversive projects are those which are unstructured or in a state of disarray.

Why dimensions of structure emerge as being associated with task aversiveness only during the Action stage may be a consequence of the processes involved at this stage. It will be recalled that the Action stage involves coordinating the interrelated acts which comprise a given project. To some extent, difficulties with coordinating projects might be reflected in appraisals of project structure. We might expect that individuals would find projects which are difficult to coordinate as aversive.

Little (e.g., 1983) explains that when projects become too difficult to coordinate or plagued by "chronic hassles" they may simply be abandoned. Likewise, we might expect individuals to procrastinate to a greater extent on projects which are less structured and difficult to coordinate. In previous research in the area of procrastination and personal projects, Szawlowski (1987) demonstrated dimensions of project structure such as control and initiation to be negatively related to procrastination.

### Stress and Negative Emotions

The principal components analysis revealed that stress emerged as a dimension associated with task aversiveness during the Inception and Termination stages. Previous research by Szawlowski (1987) indicates the more stressful a project, the more likely it will be procrastinated on. According to Silver (1974, cited in Aitken, 1974), stress disrupts the normal sequencing or coordination of steps necessary to reach a goal by causing an individual to procrastinate in one of two ways: 1) by delaying the initiation of the necessary goal, or 2) by perseverating on one component of the goal rather than switching to another.

Finally, in relation to stress, anxiety has been found to be positively related to procrastination (e.g., Flett, Blankstein, & Martin, 1995). Although not found to load with the anxiety dimension, task aversiveness was found to load with the dimension negative emotions for projects in the Inception and Planning stages. Negative emotions was included as a dimension to tap emotions associated with performance anxiety such as worrying about doing poorly or making mistakes. Lay and Silverman (1996) suggest that anxiety may be viewed as a response that accompanies perceived task aversiveness. Insofar as anxiety is

aversive, McCown and Johnson (1991) suggest that individuals will engage in less anxiety-provoking activities, therefore avoiding the task they should be doing.

### Summary and Implications

In its broadest sense as revealed in this research, task aversiveness is related to four major clusters of personal project dimensions. The first cluster is consistent across stages and includes boredom, frustration and resentment. It would seem that irrespective of what we are currently doing in our projects (i.e., what project stage), projects that are boring, frustrating or that we resent are projects that we also appraise as aversive. Other aspects of task aversion depend on the project stage. When we are in the process of initiating a project (i.e., the inception stage), task aversiveness is most related to the project factor of personal meaning. Projects low in meaning are just those projects which in Gollwitzer's terms are low in desirability, or, as demonstrated in this study, are aversive. The planning phase of our projects resembles the inception stage in terms of overall aversiveness, with aversive projects identified as projects low in personal meaning. An important difference in aversiveness emerges as we begin to engage in our projects. Project structure in the action stage plays a role in our perceptions of aversiveness. In this case, projects which we do not initiate, are out of our control, and in which we may be uncertain about how to proceed are just those projects that we appraise as aversive. Finally, as we near the end of a project in the completion stage, aspects of structure cease to be a factor in our appraisals of aversiveness, and instead personal meaning and stress once again seem to provide the foundation for our perception of aversiveness.



What this brief summary of the major personal project factors related to task aversiveness indicates is that task aversiveness can be defined as a multi-dimensional construct from a project-analytic perspective. Appraisals of task aversiveness involve more than simple notions of unpleasantness or lack of enjoyment. Task aversiveness is related to, and most likely is caused by, a variety of different factors that fluctuate over the life of a project.

Although the focus of the present study has been on exploring task aversiveness from theoretical models of action (e.g., Little, 1983; Gollwitzer, 1990), it might be appropriate at this point to comment on the applied implications of this research. In terms of reducing procrastination, the findings from the present study indicate, in the broadest sense, that problems with procrastination may arise when individuals perceive their projects as being aversive in that they are less meaningful, less structured, or more stressful. To the extent that aversiveness is a causal factor in procrastination, we might expect problems with procrastination to be alleviated through a counselling approach which addresses aspects of aversiveness such as personal meaning, structure, and stress.

Little (e.g., 1987c) has developed a counselling approach for enhancing well-being based on personal projects analysis. This approach focuses on identifying problem areas associated with each of the five major project factors (cf. discussion, p. 7). For example, Little suggests that problems in personal meaning might be addressed by helping people generate new projects that are more central to their core values and deep aspirations. As well, Little explains that problems with structure might be alleviated by having individuals break down their projects into more manageable ones. Given that several dimensions, which

tap into Little's five major factors, emerged as being associated with task aversiveness. Little's approach may be well-suited as a therapeutic model for reducing procrastinatory behaviour in that it allows one to pinpoint problem areas which may be related to task aversiveness, and ultimately procrastination.

### Directions for Future Research

Having explored personal project dimensions associated with task aversiveness across the stages of personal projects, it is suggested that task aversiveness is a multi-dimensional construct. However, including the need for replication of the present study, several areas of potential research are suggested below.

First, notions of task aversiveness might be explored across different categories or project domains. Projects can be classified into content categories or domains such as academic, vocational, interpersonal, intrapersonal, leisure, administrative, and health/body (e.g., Little, 1983; Pychyl; 1995; Wilmut, 1994). Previous research indicates that project domains are characterized differently in terms of appraisal dimensions. For example, Little (1997) reports that among adolescents, academic projects are appraised as less enjoyable and less self-expressive than interpersonal projects. To the extent that project domains are characterized differently, we might expect notions of aversiveness of vary in relation to project domains.

Second, Cochran and Tesser (1996) propose that goals can be framed in terms of gains and in terms of loss or inhibition. For example, "save money for a new car" and "be a better person" are gain goals, whereas goals such as "stop smoking" and "lose ten pounds"

are loss or inhibition goals. Cochran and Tesser explain when an individual is trying to inhibit behaviour (i.e., a loss goal), anything short of that will be perceived as failure and cause the individual to stop trying. However, when a person is attempting to increase a behaviour (i.e., a gain goal), even if he or she does not reach the desired level, progress towards the goal will still be perceived and the individual will continue to try. According to Cochran and Tesser, individuals will be more likely to experience problems enacting loss goals, as compared to gain goals. Future research might explore notions of aversiveness in relation to "loss" and "gain" goals, and the extent to which individuals procrastinate on each.

Third, future research should explore the relation between trait procrastination and perceptions of task aversiveness. Previous research (e.g., Lay, 1986, Szawlowski, 1987) indicates that trait procrastinators view their projects in a different light than non-procrastinators. For example, Szawlowski (1987) demonstrated that trait procrastinators perceived their projects to be less enjoyable, less in control, less self-expressive, less likely to have successful outcomes, and progressing less well than did non-procrastinators. Based on these findings, one might expect notions of task aversiveness to differ among trait-procrastinators and non-procrastinators.

Fourth, future research might explore the relation between project identification and the false internalization of goals. In terms of Little's model of project stages, regardless of their original source in the awareness stage, projects are labeled as self- or other-generated during the process of identification. This process might have implications in terms of false internalization of goals (e.g., Kuhl, 1994). According to Kuhl, false internalization can occur when a goal is identified as self-generated when, in actuality, it is incompatible with one's

self-identity. Procrastination can be expected to the extent to which an individual falsely internalizes his or her goals. To the extent that self-identity is an underlying dimension of task aversiveness, we would expect projects low in self-identity to be appraised as aversive, and these projects to be associated with higher levels of procrastination.

In conclusion, the results from the present study provide support for a multi-dimensional model of task aversiveness. It is particularly important that subsequent research in the area of procrastination incorporate a theory of action as a guiding framework, as a great deal of literature to date has not connected the inaction of procrastination to the expanding body of research related to volitional or intentional action. To the extent that we can further explain the relations between aspects of our own behaviour such as identity-congruent goals or the volitional skills required to successfully maintain progress on a project, we will move further ahead in our understanding of procrastination.

## Endnotes

<sup>1</sup> It appears, in classifying boring and difficult tasks as unpleasant. N. Milgram et al. (1995) are suggesting that boredom and difficulty may underlie notions of unpleasantness, and ultimately task aversiveness.

<sup>2</sup> The discussion of personal project stages was referenced from Little (1983). For the benefit of rhetorical clarity, specific references (i.e., Little, 1983) to this article have been omitted from this discussion.

<sup>3</sup> The discussion of action phases was referenced from Gollwitzer (1990; 1997). For the benefit of rhetorical clarity, specific references (i.e., Gollwitzer, 1990, 1997) to these articles have been omitted from this discussion.

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## Appendix A

**Ethics Approval #:**

**PSYCHOLOGY 49.100**

**Experiment Title:** Personal Projects and Task Aversiveness

**Experimenter's Name & Room #:** Allan Blunt, Room A407

**Experimenter's Phone No.:** 520-2600 ext. 1448

**Location of Experiment:** Room A407 Loeb (refer to sign-up sheet for dates and times)

**Experiment Number:**

**Faculty Advisor:** Professor Tim Pychyl

We are interested in finding out why some projects are harder to do than others. As a participant in this research you will be asked to answer some questions about the projects in your life. This study will take between 1.5 and 2.0 hours to complete. If you are interested in participating in this study, please sign up below. **You will be asked to complete the questionnaires at home and return them to the researcher within a few**

**Brief Description:**

PARTICIPANTS WILL RECEIVE Two CREDITS FOR THIS EXPERIMENT

**IT IS YOUR RESPONSIBILITY TO KNOW WHERE AND WHEN THE EXPERIMENT IS HELD. PLEASE KEEP A RECORD OF THE FOLLOWING:**

**EXPERIMENTER'S NAME  
TITLE OF THE EXPERIMENT  
LOCATION AND TIME.**

SIGN-UP SHEETS FOR THIS EXPERIMENT ARE BELOW. PLEASE PROVIDE ALL INFORMATION REQUESTED.





Appendix B

## General Instructions

### **Contents of the package**

1. Instructions
2. Informed Consent Form
3. Five Questionnaires

### **Instructions**

**Step 1:** Please read the informed consent form. If you choose to continue with the study, please fill in the required information on the informed consent form. If you choose not to continue with the study please feel free to recycle the package.

**Step 2:** Complete the questionnaires. Please read the instructions and questions for each questionnaire carefully. **Please note, that when completing the Personal Projects Rating Matrix you should refer to the glossary of project dimensions.**

**Step 3:** After completing all of the questionnaires (**check to see if you completed all of the questionnaires**), please place the completed questionnaires and the informed consent form in the envelope.

**Step 4:** Return the package to the researcher (**Allan Blunt, A407 Loeb, 520-2600, ext.1448**). I will then give you a credit slip and the Letter of Debriefing. Please read the Letter of Debriefing. If you have any concerns or questions about the study feel free to contact any of the individuals listed in the debriefing letter (the departmental contacts have been listed below). You can keep the Letter of Debriefing for future reference.

Thank you for your participation,

*Allan Blunt*

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### **Contacts**

Any ethical concerns may be directed to Dr. Lise Paquet (Chair, Ethics Committee) at 520-2600 ext. 2692 or Dr. Bill Jones (Chair, Department of Psychology) at 520-2600 ext. 2648

### **Sources of Aid**

A list of important phone numbers appears below. In the event that your participation in this study causes any personal distress to you, please call:

1. Carleton University Counselling and Student Life Services: 520-6600
2. Carleton University Health Services: 520-6674

## Appendix C

**Ethics Approval #:**

### **Statement of Informed Consent**

**Description of Procedure:** We are interested in exploring why some projects are harder to do than others. As a participant in this study, you will be asked to answer some questions about the projects in your life. **Please note, this research does not involve deception.** We are simply asking you to tell us how you feel about your projects. You will be given more detailed information about this research after you have completed and returned the questionnaires.

**Please note that...**

**YOUR PARTICIPATION IS ENTIRELY VOLUNTARY.**

**YOU MAY WITHDRAW FROM THE STUDY AT ANY TIME.**

**YOU ARE NOT OBLIGATED TO ANSWER ALL QUESTIONS.**

**YOUR IDENTITY SHALL REMAIN ANONYMOUS.**

**I understand the above information and agree to voluntarily participate in this research project.**

Date: \_\_\_\_\_

Participant's Student Number : \_\_\_\_\_

Participant's Name (please print): \_\_\_\_\_

Participant's Signature: \_\_\_\_\_

Principal Investigator: *Allan Blunt*

## Letter of Debriefing

As part of the ethical conduct of research, we do our best to ensure that no research participants are harmed in any way. Apart from the actual design of the data collection, we address this issue of harm through discussion and with this written "debriefing". Please take time now to read the information on this page.

The purpose of our research is to examine why some projects are less enjoyable to engage in than others. During this study you were asked to rate your projects on a variety of dimensions such as enjoyment, importance, procrastination, boredom, and resentment. Based upon the dimension ratings provided by you and your peers, we will examine the relation between project enjoyment and dimensions such as importance, procrastination, boredom and resentment. It is hoped that the results from this line of research will contribute to our overall understanding of the multi-dimensional nature of project enjoyment and how it is related to procrastination.

If you have any questions about this research, or if you are interested in the results of the study, please feel free to call us: Allan Blunt (Principal Investigator) at 520-2600 ext. 1448 or Professor Tim Pychyl (Supervisor of this research) at 520-2600 ext. 1403. Results of the data analysis should be available in October.

Any ethical concerns may be directed to Dr. Lise Paquet (Chair, Ethics Committee) at 520-2600 ext. 2692 or Dr. Bill Jones (Chair, Department of Psychology) at 520-2600 ext. 2648.

**Sources of Aid:** A list of important phone numbers appears below. In the event that your participation in this study causes any personal distress to you, please call:

1. Carleton University Counselling and Student Life Services: 520-6600
2. Carleton University Health Services: 520-6674

**References:** Here is a brief list of references should you wish to pursue the topic further:

Ferrari, J. R., Johnson, J. L., & McCown, W. G. (1995). Procrastination and task avoidance: Theory, research, and treatment. New York: Plenum Press.

Little, B. R. (1983). Personal Projects: A rationale and method for investigation. Environment and Behavior, 15, 273 - 309.

**Thank You for Participating**

## Appendix D

## Questionnaire

**Please answer each of following questions.**

1. Your age: \_\_\_\_\_

2. Your sex (please circle):   **Male**   **Female**

3. What approximately is your GPA (please circle one of the choices below)?:

**A+    A    A-    B+    B    B-    C+    C    C-    D+    D    D-**

4. What percentage of classes do you attend approximately (please circle one of the choices below)?:

**5    10    15    20    25    30    35    40    45    50    55    60    65    70    75    80    85    90    95    100**

## PERSONAL PROJECTS ANALYSIS

We are interested in studying the kinds of activities and concerns that people have at different stages of their lives. We call these personal projects. All of us have a number of personal projects at any given time that we think about, plan for, carry out and sometimes (though not always) complete. In this sense, personal projects may be ongoing tasks as well as finite ones; they may be things we choose to do or things we have to do. Please think of projects in this broad way. We are particularly interested in the projects you are involved in at the university, at home, in leisure and in the community.

### Here are some examples of projects:

Completing my psychology assignment

Continue to eat healthily

Exercise more often

Finish my undergraduate degree

Go out with my friends Friday night

Plan my spring vacation

Study for my exams

Visit my parents

Find a part-time job

---

Now that you have seen a sample of the variety of projects that we have in our lives, we would appreciate it if you would begin by just writing down as many personal projects as you can. Use the following page to make your project list. Take about ten minutes or so and list as many personal projects as you can that you are **actively engaged in or feel that you should be working on, but are avoiding or putting off**. Remember, these are not necessarily formal projects, or "important" ones. We would prefer that you give us wide range of activities or concerns that characterize your life at present.

**NOTE:** If you do not want to explicitly reveal the nature of a project by naming it in your list, code it as "Project X" instead of writing out any details. If you do choose to code a project, we would appreciate it if you would tell us if the project is related to school, family, work, friends, etc. For example, "Project X - school" or "Project X - family".



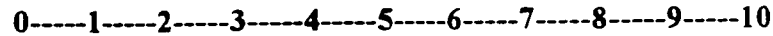






### PROJECT STAGE

Projects often go through several stages which can be visualized along a time-line such as the one below.



Try to think of each of your projects as moving through stages (as listed below) on a time-line such as the one above.

**Stages:**

**Awareness** (points 0 and 1 on the time-line). The idea for the project has just come to you.

**Transition** (point 2 on the time-line). You have the idea for the project and some thoughts on how to approach it. You are deciding whether the project can actually be carried out.

**Planning** (points 3 and 4 on the time-line). You have decided to do the project. You are planning it and obtaining whatever personal and material support you need.

**Transition** (point 5 on the time-line). You have the project planned out and you are beginning (or trying to) actively start the project.

**Action** (points 6 and 7 on the time-line). You are actively working on the project and trying to balance it with your other projects, resources and commitments

**Transition** (point 8 on the time-line). You are evaluating the project and your motivation to continue with it or bring it to completion.

**Completion** (points 9 and 10 on the time-line). The project is coming to a close or has actually been completed or terminated.

Now, please recopy the names of 10 projects that you rated in space provided below (under Project Name). Next, using the stages listed above, indicate on the time-line beside each project the stage at which you think each project is in (circle one number on each time-line to indicate what stage a project is in).

<b>Project Name</b>	<b>Stage</b>
1. _____	0---1---2---3---4---5---6---7---8---9---10
2. _____	0---1---2---3---4---5---6---7---8---9---10
3. _____	0---1---2---3---4---5---6---7---8---9---10
4. _____	0---1---2---3---4---5---6---7---8---9---10
5. _____	0---1---2---3---4---5---6---7---8---9---10
6. _____	0---1---2---3---4---5---6---7---8---9---10
7. _____	0---1---2---3---4---5---6---7---8---9---10
8. _____	0---1---2---3---4---5---6---7---8---9---10
9. _____	0---1---2---3---4---5---6---7---8---9---10
10. _____	0---1---2---3---4---5---6---7---8---9---10

## Personal Project Dimensions Glossary

The following is a list of personal project dimension definitions. **Use this glossary to complete your project ratings on the rating matrix.** For easier reference, please feel free to remove this glossary.

**RATE EACH OF YOUR PROJECTS ON THE DIMENSIONS LISTED IN THIS GLOSSARY. USE ANY NUMBER BETWEEN "0" AND "10" FOR YOUR RATING. ONLY THE EXTREMES OF "0" AND "10" HAVE BEEN LABELLED FOR THE RATING SCALE.**

**1. Importance:**

How important is this project to you at the present time? (Use 10 if the project is very important to you and 0 if it is not at all important to you.)

**2. Enjoyment:**

How much do you enjoy working on this project? (Use 10 if you enjoy working on it a great deal and 0 if you do not at all enjoy working on it.)

**3. Difficulty:**

How difficult do you find it to carry out this project? (Use 10 if this project is extremely difficult to carry out and 0 if this project is not at all difficult to carry out.)

**4. Visibility:**

How visible is this project to the relevant people who are close to you, that is how aware are they that you are engaged in this project? (Use 10 if this project is very visible to those around you and 0 for if this project is not at all visible to those around you.)

**5. Control:**

How much do you feel in control of this project? (Use 10 if you feel in complete control of this project and 0 if you feel that you have no control of this project.)

**6. Initiation:**

How much do you feel responsible for having initiated this project? (Use 10 if you feel fully responsible for having initiated this project and 0 if you feel you have taken no part whatsoever in initiating this project.)

**7. Stress:**

How stressful it is for you to carry out this project? (Use 10 if this project is very stressful to carry out and 0 if this project is not at all stressful to carry out.)

**8. Time Adequacy:**

How much do you feel that the amount of time you spend working on this project is adequate? (Use 10 if you feel that the amount of time spent on this project is perfectly adequate and 0 if you feel, for any reason, that the amount of time you spend working on this project is not at all adequate.)

**9. Outcome:**

What do you anticipate the outcome of this project to be? (Use 10 if you think the project will be extremely successful and 0 if you think that the project will turn out to be a total failure .)

**10. Self-Identity:**

All of us have things we do that are typical of us. These things can be thought of as our "trade marks" or personal style. Think of what your own personal trade marks are, and then rate this project on the extent to which it is typical of you. (Use 10 if this project is very typical of you and 0 if this project is not at all typical of you.)

**11. Other's View:**

How important is this project seen to be by relevant people who are close or significant to you either at school, work, or home? (Use 10 if this project is seen by other's as very important and 0 if it is seen as not at all important.)

**12. Progress:**

How successful have been in this project so far? (Use 10 to indicate that you have been very successful and 0 if you have had no success at all.)

**13. Aversiveness:**

To what extent would you rather not engage in this project? (Use 10 to indicate that you definitely do not want to engage in this project and 0 to indicate that you very much want to engage in this project.)

**14. Autonomy:**

Sometimes we engage in projects which we may feel compelled by others to do and, on the other hand, we sometimes engage in projects which we feel completely free to engage in or not to engage in. (Use 10 to indicate if you feel extremely compelled by others to engage in this project and 0 to indicate that you feel completely free to engage in or not engage in this project.)

**15. Boredom:**

To what extent do you feel this project to be boring or tedious? (Use 10 if you feel this project to be extremely boring or tedious and use 0 if you feel that this project is not all boring or tedious.)

**16. Capability:**

How capable do you feel you are of doing this project at a level that is acceptable to you (use 10 to indicate that you feel extremely capable of doing this project at a level that is acceptable to you and 0 to indicate that feel completely incapable of doing this project at a level that is acceptable to you.)

**17. Effort:**

How much effort do you feel this project requires of you? (Use 10 to indicate that this project requires a great deal of effort and 0 to indicate that this project requires little or no effort.)

**18. Frustration:**

To what extent do you feel this project to be frustrating? (Use 10 if you feel this project to be extremely frustrating and use 0 if you feel this project not at all to be frustrating.)

**19. Fun:**

To what extent do you feel this project to be fun, delightful or whimsical? (Use 10 to indicate that this project is a great deal of fun and 0 to indicate that this project is no fun at all.)

**20. Passion:**

To what extent do you feel this project so personally satisfying that you would identify it as a passion in your life? (Use 10 if you are extremely passionate about engaging in this project and 0 if you are not at all passionate about this project.)

**21. Pleasure:**

To what extent do you find this project to be pleasurable (i.e., comfortable, relaxing, self-indulgent or hedonistic)? (Use 10 if this project is extremely pleasurable and 0 if this project is not at all pleasurable.)



**22. Procrastination:**

To what extent do you put off or avoid engaging in this project? (Use 10 if you put off or avoid engaging in this project at all costs and use 0 if you never put off or avoid engaging in this project.)

**23. Resentment:**

To what extent do you resent having to do this project? (Use 10 to indicate that you resent a great deal having to do this project and 0 to indicate that you feel little or no resentment for having to do this project.)

**24. Social Support:**

To what extent do you feel that this project is supported by other people? For school or work projects this would include faculty, supervisors and colleagues, and for other projects this may be family or friends. (Use 10 if you feel other people support this project a great deal and 0 if there is no support at all.)

**25. Communion:**

To what extent does this project contribute toward a sense of togetherness and harmony with other people or your environment? (Use 10 if this project contributes a great deal towards a sense of togetherness and harmony with other people or your environment and 0 if this project does not at all contribute towards a sense of togetherness and harmony with other people or your environment.)

**26. Other's Benefit:**

To what extent is this project oriented toward the benefit or well-being of others? (Use 10 if this project is highly oriented toward the benefit or well-being of others or 0 if this project is not at all oriented toward the benefit or well-being of others.)

**27. Psychological Risk:**

How much psychological risk (i.e., being ridiculed or rejected, feeling stupid or having hopes disappointed if the project were to fail) is associated with this project? (Use 10 if this project is associated with a great deal of psychological risk and 0 if this project is not at all associated with psychological risk.)

**28. Uncertainty**

In order to successfully carry out our projects, we need to know what steps to take in order to complete a project. How uncertain are you about the subsequent steps required for this project? (Use to 10 if you are extremely uncertain about what to do next in the course of carrying out this project and 0 if you are sure of the steps to take to carry out this project.)

**29. Emotions**

To what extent do you experience negative emotions (e.g., thinking about doing poorly on this project, worry or upset for making mistakes) when engaging in this project? (Use 10 if you experience a great deal of negative emotions when engaging in this project and 0 if you rarely ever experience negative emotions when engaging in this project.)

**30. Skills**

Most projects require a variety skills such as verbal, written, mathematical, creative, leadership, organizational, etc.. To what extent do you feel you have the skills for engaging in this project? (Use 10 if you feel you have all of the skills needed for this project and 0 if you feel you do not have any of the skills required for this project.)

**31. Guilt**

When you are **not working** on this project, to what extent do you feel that you should be working on it? (Use 10 if, when you are not working on this project, you always feel you should be working on it and 0 if, when you are not working on this project, you never feel that you should be working on it.)

## Appendix E

**General Procrastination  
Questionnaire**

**Instructions**

On a scale of 1 (LOW VALUE) to 5 (HIGH VALUE) please answer each of the items below by circling the number (i.e., 1, 2, 3, 4 or 5) that best describes you. 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**.

---

**1. I often find myself performing tasks that I had intended to do days before.**

False of Me 1	Not Usually True of Me 2	Sometimes False/True 3	Mostly True of Me 4	True of Me 5
---------------------	--------------------------------	------------------------------	---------------------------	--------------------

**2. I often miss concerts, sporting events, or the like, because I don't get around to buying tickets on time.**

False of Me 1	Not Usually True of Me 2	Sometimes False/True 3	Mostly True of Me 4	True of Me 5
---------------------	--------------------------------	------------------------------	---------------------------	--------------------

**3. When planning a party, I make the necessary arrangements well in advance.**

False of Me 1	Not Usually True of Me 2	Sometimes False/True 3	Mostly True of Me 4	True of Me 5
---------------------	--------------------------------	------------------------------	---------------------------	--------------------

**4. When it is time to get up in the morning, I often get right out of bed.**

False of Me 1	Not Usually True of Me 2	Sometimes False/True 3	Mostly True of Me 4	True of Me 5
---------------------	--------------------------------	------------------------------	---------------------------	--------------------

**5. A letter may sit for days after I write it before I mail it.**

False of Me 1	Not Usually True of Me 2	Sometimes False/True 3	Mostly True of Me 4	True of Me 5
---------------------	--------------------------------	------------------------------	---------------------------	--------------------

**6. I generally return phone calls promptly.**

False of Me 1	Not Usually True of Me 2	Sometimes False/True 3	Mostly True of Me 4	True of Me 5
---------------------	--------------------------------	------------------------------	---------------------------	--------------------

**7. Even with jobs that require little else except sitting down and doing them, I find they seldom get done for days.**

False of Me 1	Not Usually True of Me 2	Sometimes False/True 3	Mostly True of Me 4	True of Me 5
---------------------	--------------------------------	------------------------------	---------------------------	--------------------

**8. I usually make decisions as soon as possible.**

False of Me 1	Not Usually True of Me 2	Sometimes False/True 3	Mostly True of Me 4	True of Me 5
---------------------	--------------------------------	------------------------------	---------------------------	--------------------

**9. I generally delay before starting on work I have to do.**

False of Me 1	Not Usually True of Me 2	Sometimes False/True 3	Mostly True of Me 4	True of Me 5
---------------------	--------------------------------	------------------------------	---------------------------	--------------------

**10. When travelling, I usually have to rush in preparing to arrive at the airport or station at the appropriate time.**

False of Me 1	Not Usually True of Me 2	Sometimes False/True 3	Mostly True of Me 4	True of Me 5
---------------------	--------------------------------	------------------------------	---------------------------	--------------------

**11. When preparing to go out, I am seldom caught having to do something at the last minute.**

False of Me 1	Not Usually True of Me 2	Sometimes False/True 3	Mostly True of Me 4	True of Me 5
---------------------	--------------------------------	------------------------------	---------------------------	--------------------

**12. In preparing for some deadlines, I often waste time by doing other things.**

False of Me	Not Usually True of Me	Sometimes False/True	Mostly True of Me	True of Me
1	2	3	4	5

**13. If a bill for a small amount comes, I pay it right away.**

False of Me	Not Usually True of Me	Sometimes False/True	Mostly True of Me	True of Me
1	2	3	4	5

**14. I usually return an "R.S.V.P." request very shortly after receiving it.**

False of Me	Not Usually True of Me	Sometimes False/True	Mostly True of Me	True of Me
1	2	3	4	5

**15. I often have a task finished sooner than necessary.**

False of Me	Not Usually True of Me	Sometimes False/True	Mostly True of Me	True of Me
1	2	3	4	5

**16. I always seem to end up shopping for birthday gifts at the last minute.**

False of Me	Not Usually True of Me	Sometimes False/True	Mostly True of Me	True of Me
1	2	3	4	5

**17. I usually buy even an essential item at the last minute.**

False of Me	Not Usually True of Me	Sometimes False/True	Mostly True of Me	True of Me
1	2	3	4	5

**18. I usually accomplish all things I plan to do in a day.**

False of Me	Not Usually True of Me	Sometimes False/True	Mostly True of Me	True of Me
1	2	3	4	5

**19. I am continually saying "I'll do it tomorrow".**

False of Me 1	Not Usually True of Me 2	Sometimes False/True 3	Mostly True of Me 4	True of Me 5
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**20. I usually take care of all the tasks I have to do before I settle down and relax for the evening.**

False of Me 1	Not Usually True of Me 2	Sometimes False/True 3	Mostly True of Me 4	True of Me 5
---------------------	--------------------------------	------------------------------	---------------------------	--------------------

Adult Inventory of Procrastination  
Questionnaire

**Instructions**

The statements below are concerned with your opinions on different situations. On a scale of 1 (strongly disagree) to 5 (strongly agree) please answer each of the items below. No two statements are exactly alike, so please consider each statement carefully before responding. Answer as honestly as possible. Remember, there are no right or wrong answers. This information, as mentioned in the informed consent, is **completely confidential**.

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**1. I pay my bills on time.**

Strongly Disagree 1	Disagree 2	Sometimes Disagree\Agree 3	Agree 4	Strongly Agree 5
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**2. I am prompt and on time for most appointments.**

Strongly Disagree 1	Disagree 2	Sometimes Disagree\Agree 3	Agree 4	Strongly Agree 5
---------------------------	---------------	----------------------------------	------------	------------------------

**3. I lay out my clothes the night before I have an appointment so I won't be late.**

Strongly Disagree 1	Disagree 2	Sometimes Disagree\Agree 3	Agree 4	Strongly Agree 5
---------------------------	---------------	----------------------------------	------------	------------------------

**4. I find myself running later than I would like to be.**

Strongly Disagree 1	Disagree 2	Sometimes Disagree\Agree 3	Agree 4	Strongly Agree 5
---------------------------	---------------	----------------------------------	------------	------------------------

**5. I don't get things done on time.**

Strongly Disagree 1	Disagree 2	Sometimes Disagree\Agree 3	Agree 4	Strongly Agree 5
---------------------------	---------------	----------------------------------	------------	------------------------



**6. If someone was teaching a course on how to get things done on time, I would attend.**

Strongly Disagree	Disagree	Sometimes Disagree\Agree	Agree	Strongly Agree
1	2	3	4	5

**7. My friends and family think I wait until the last minute.**

Strongly Disagree	Disagree	Sometimes Disagree\Agree	Agree	Strongly Agree
1	2	3	4	5

**8. I get important things done with time to spare.**

Strongly Disagree	Disagree	Sometimes Disagree\Agree	Agree	Strongly Agree
1	2	3	4	5

**9. I am not very good at meeting deadlines.**

Strongly Disagree	Disagree	Sometimes Disagree\Agree	Agree	Strongly Agree
1	2	3	4	5

**10. I find myself running out of time.**

Strongly Disagree	Disagree	Sometimes Disagree\Agree	Agree	Strongly Agree
1	2	3	4	5

**11. I schedule doctor's appointments when I am supposed to without delay.**

Strongly Disagree	Disagree	Sometimes Disagree\Agree	Agree	Strongly Agree
1	2	3	4	5

**12. I am more punctual than most people I know.**

Strongly Disagree	Disagree	Sometimes Disagree\Agree	Agree	Strongly Agree
1	2	3	4	5

**13. I do routine maintenance (e.g., changing the car's oil) on things I own as often as I should.**

Strongly Disagree	Disagree	Sometimes Disagree\Agree	Agree	Strongly Agree
1	2	3	4	5

**14. When I have to be somewhere at a certain time my friends expect me to run a bit late.**

Strongly Disagree	Disagree	Sometimes Disagree\Agree	Agree	Strongly Agree
1	2	3	4	5

**15. Putting things off until the last minute has cost me money in the past year.**

Strongly Disagree	Disagree	Sometimes Disagree\Agree	Agree	Strongly Agree
1	2	3	4	5

Decisional Procrastination  
Questionnaire

**Instructions**

People differ in how they go about making decisions. Please indicate how you make decisions by selecting the response from 1 (not true) to 5 (true) to each question that best fits your personal style. No two statements are exactly alike, so please consider each statement carefully before responding. Answer as honestly as possible. Remember, there are no right or wrong answers. This information, as mentioned in the informed consent, is **completely confidential**.

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**1. I waste a lot of time on trivial matters before getting to the final decision.**

Not True 1	Often Untrue 2	Sometimes True\False 3	Often True 4	True 5
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**2. Even after I make a decision I delay acting upon it.**

Not True 1	Often Untrue 2	Sometimes True\False 3	Often True 4	True 5
------------------	----------------------	------------------------------	--------------------	-----------

**3. I don't make decisions unless I really have to.**

Not True 1	Often Untrue 2	Sometimes True\False 3	Often True 4	True 5
------------------	----------------------	------------------------------	--------------------	-----------

**4. I delay making decisions until it is too late.**

Not True 1	Often Untrue 2	Sometimes True\False 3	Often True 4	True 5
------------------	----------------------	------------------------------	--------------------	-----------

**5. I put off making decisions.**

Not True 1	Often Untrue 2	Sometimes True\False 3	Often True 4	True 5
------------------	----------------------	------------------------------	--------------------	-----------

## Appendix F

Principal Components Correlation Matrix for the Inception Stage

Components		1	2	3	4	5	6
1		1.00					
2		-.07	1.00				
3		-.23	.03	1.00			
4		.10	.08	-.08	1.00		
5		-.11	.22	.14	.04	1.00	
6		.14	.29	-.14	.17	.07	1.00

Principal Components Correlation Matrix for the Planning Stage

Components		1	2	3	4	5	6
1		1.00					
2		-.10	1.00				
3		-.21	.09	1.00			
4		-.04	.11	.23	1.00		
5		-.18	-.18	.11	.02	1.00	
6		-.16	-.26	.10	-.00	-.26	1.00

Principal Components Correlation Matrix for the Action Stage

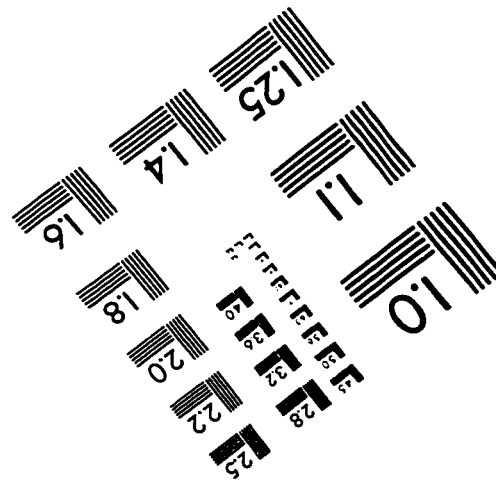
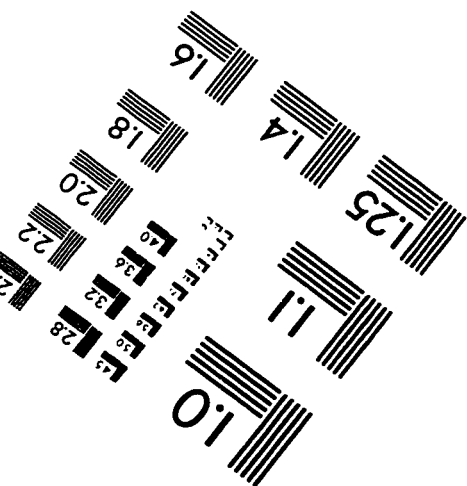
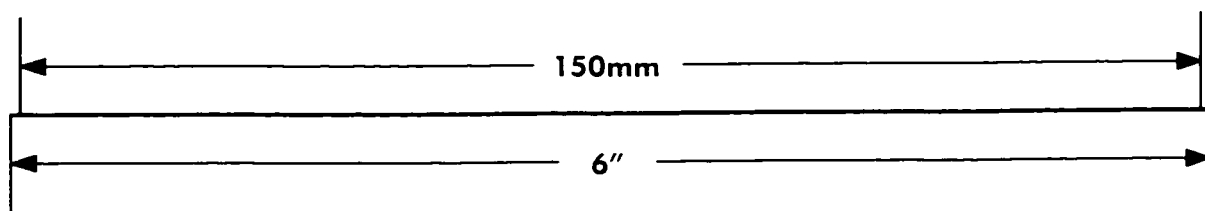
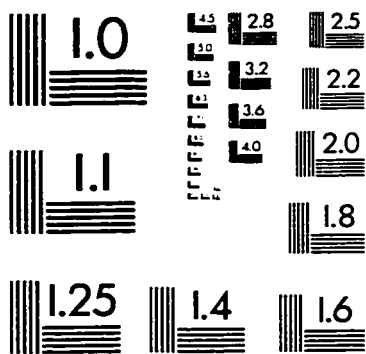
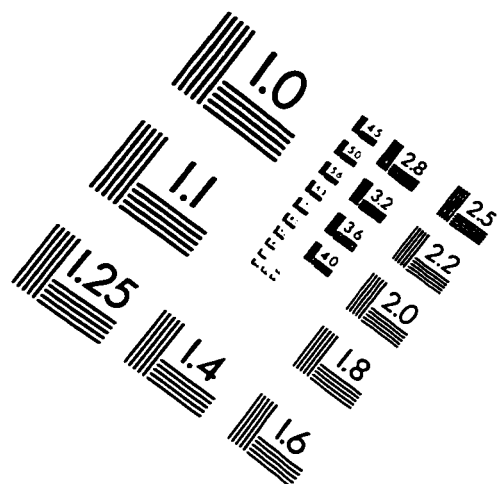
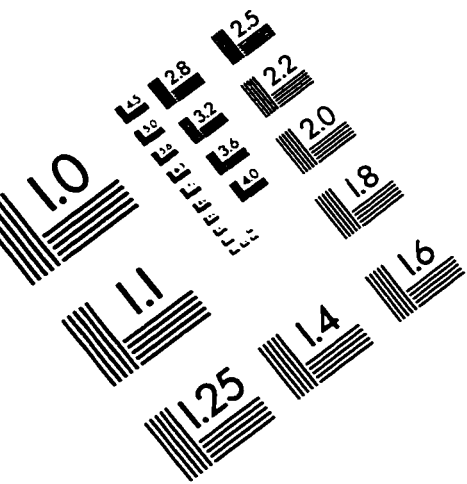
Components		1	2	3	4	5
1		1.00				
2		-.08	1.00			
3		.28	-.07	1.00		
4		-.03	.20	.18	1.00	
5		-.30	.24	-.08	.20	1.00

**Principal Components Correlation Matrix for the Termination Stage**

Components		1	2	3	4
1		1.00			
2		.01	1.00		
3		-.22	-.16	1.00	
4		-.06	.24	.08	1.00



# IMAGE EVALUATION TEST TARGET (QA-3)



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