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The Influence of Valence of Additional Information and Affective State on Regret and Subsequent Decision Making Behavior

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The Influence of Valence of Additional Information and
Affective State on Regret and
Subsequent Decision Making Behavior

A Thesis

Presented to the
Department of Psychology
and the Faculty of the Graduate College
University of Nebraska

In Partial Fulfillment of the Requirements
for the Degree
Master of Arts
University of Nebraska at Omaha

by

Rhonda A. Stutzman

May, 1994

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THESIS ACCEPTANCE

Accepted for the faculty of the Graduate College,
University of Nebraska, in partial fulfillment of the
requirements for the degree Master of Arts, University
of Nebraska at Omaha.

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Abstract

To date, there is little research on the phenomena of decisional regret. Most of the literature contains speculation about the antecedents, moderators, processes and consequences of regret rather than offering empirical evidence. This study looked at temporary affective states and the moderating effect of the valence of additional information in terms of the amount of post-decisional regret experienced, confidence levels, ratings of decision alternatives and subsequent choice. A 2 X 2 factorial design was used to examine the influence of affective state (positive vs neutral) and the valence of additional information (neutral vs negative) on regret and the evaluation of decision alternatives. Results demonstrate a significant interaction of affect and additional information on the second decision task rating of the initially chosen alternative. Valence of additional information also had significant effects on the alternative choice and most of the alternative ratings. Affect, on the other hand, did not significantly affect any of the dependent variables. Future research can build on this and explore better measurement methods to more clearly ascertain the effects of the valence of additional information on regret and decision evaluation.

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The Influence of Valence of Additional Information
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Decision Making Behavior

Decision making in an organizational setting is a major determinant of that company's success or failure (Hickson, 1987). Board members, executives, upper and lower level management, and their subordinates are frequently faced with important decisions that could potentially affect the organization's productivity and, ultimately, its survival.

Research on decision making in organizations tends to focus on single decision making tasks or "one-shot" decisions. Despite the enormous body of research in the area of decision making, most of the studies have been concerned with predicting decision processes, strategies and final choices (for review, see Bell, 1983, 1985; Brehm & Wilklund, 1970; Cohen & Jaffray, 1988; Dahlback, 1990; Einhorn & Hogarth, 1981; Fagley & Miller, 1987; Johnson, 1986; Kahneman, 1991; Kahneman, Slovic & Tversky, 1982; Keeney & Raiffa, 1976; Lindzey & Aronson, 1985; Payne, Bettman, Johnson, 1992; Pitz & Sachs, 1984; Schoemaker, 1982; Wilson & Schooler, 1991; Wofford & Goodwin, 1990) or group decision making (Miller, Shain & Pasta, 1991a, 1991b) rather than individual decision making. One exception to the "one-

shot" studies in decision making is a study done by Walster (1964). Walster's subjects rated ten jobs in a decision task. They believed they would be assigned to one of these jobs for the next two years. Subjects were then told that two of the jobs had been selected for them to choose between. Both jobs had been rated previously as only being moderately desirable to the subjects. After the subjects chose which one of the two jobs they preferred, Walster again had them rate all ten positions. She was interested in the second decision task and how the subjects rated these jobs after being told they were assigned to one. She found that past decisions did indeed affect future decision making tasks.

The fact that decisions affect subsequent decisions is very important. As individuals make decisions and experience their outcomes, they learn from their successes and failures and subsequently choose to alter or not to alter their future decision making processes. These past decisions, as well as the many other variables that influence decisions, are ever present when faced with a decision task.

Anderson (1983), along with many other researchers, state that organizational decision making is more complex than it seems. Decision making in

organizations not only necessitates the use of cognitive information processing but it also requires social information processing. The decision maker receives information regarding decision alternatives and consequences from others who also have the ability to influence his or her ultimate choice.

In reality, decision making does not occur in an emotional vacuum, and yet the research often treats it as such. Decision making research needs to focus more attention on the effects of decision making activities and outcomes on decision makers' emotional states and their subsequent decision choices and strategies. There are a few exceptions in the research in which decision outcomes are studied and found to affect subsequent decision choices and strategies such as psychological entrapment research (Strube, 1988; Strube, Deichmann & Kickham, 1989), sunk cost research (Garland, 1990; Garland & Newport, 1991; Garland, Sandefur & Rogers, 1990; Simonson & Nye, 1992) and escalation of commitment research (Brockner, 1992; Garland, Sandefur & Rogers, 1990; Schoorman, Bobko & Rentsch, 1991). Still, we need to broaden our knowledge of decision making and investigate its affective aspects, both before and after the decision making task.

Janis and Mann (1977a) were two pioneer researchers in the area of cognitive processing who included an affective component in cognitive decision making. Other researchers had ideas similar to those of Janis and Mann but, unfortunately, these ideas were not studied further (Epstein & Clark, 1970; Janis, Lumsdaine, & Gladstone, 1951; Staub & Kellett, 1972). It is important to realize that there are many different variables, besides cognitive processes, that could potentially influence the decision making process. One of these variables is the decisional regret felt by the decision maker. In the next section I will discuss the construct of decisional regret in more detail.

Decisional Regret Defined

A precise definition of regret is difficult to find. Bell's (1985) definition of regret states that it is the psychological reaction one has after having made a wrong decision, with wrongness being based on the outcomes of that decision rather than the adequacy of the decision processes. Sugden (1985) states that regret occurs when "what is" does not match up to "what might have been." He states that regret requires an individual to believe that he or she is to blame for the decision error, and the regret experienced is a

function of the amount of blame the individual places upon him or herself. Somewhat in the same vein, Yates (1990) asserts that regret occurs when an individual assesses alternatives to an action already taken and finds that one of these alternatives would have led to better outcomes. Janis & Mann (1977a) state that regret occurs when "bolstering and other defensive avoidance tactics no longer succeed in preventing acute post-decisional conflict" (pg 310). When these attempts to reduce the feelings of regret fail, the individual may attempt to reverse the error by blindly rushing into a course of action that is directly the opposite of the previous choice. Another definition of regret is offered by Festinger (1964). His definition of regret, which is consistent with, but more general than the ideas of Kurt Lewin (1951), is explained a bit differently than those previously. He states that regret occurs during the process of "spreading." Spreading is defined as the process of convincing oneself that the attributes of a chosen alternative are more attractive than those of an alternative that was rejected. The process of spreading allows dissonance reduction to occur. Festinger postulates that, during the process of dissonance reduction, an individual will focus his or

her attention on the dissonance inducing variables in order to find ways of justifying the decision. During this process, though, the individual will also be exposed to negative qualities of the chosen alternative and positive qualities of the rejected alternative. Festinger believes that the individual will, at some point, wish that he or she had chosen the competing alternative. This is what he terms "regret." Finally, Epstein, Lipson, Holstein and Huh (1992) define regret as the "result of post-outcome processing of information and imagining counterfactual alternatives," (p. 337) which they define as alternative decision possibilities that were not chosen.

One problem with these definitions of regret is the tendency to exclusively view regret as an outcome occurring after a decision is made. Paradoxically, many decision making scholars have viewed regret as a predecisional consideration. For example, Yates (1990, p. 360) states that the decision makers' representation of a decision situation and their subsequent processing of alternatives may "take into account potential regret from the available alternatives." Bell (1982, 1985) and Loomes and Sugden (1982) claim that "anticipated regret" is a common element of decision makers' representations of alternatives and thus influences

their choices.

Further complicating the definitional issue is that post-decisional regret, or regret as an outcome, may be the factor causing anticipated regret in a subsequent similar decision task. Alternatively, it is possible that anticipated regret could occur independently of the decision maker having any prior negative experience with a similar type of decision.

A third problem inherent in the above definitions is the failure to distinguish what regret is, independent of its antecedents. One possible definition excluding the antecedents is that regret is the cognition or thought that an unchosen alternative would have been superior to a chosen alternative (Festinger, 1964). However, this interpretation totally ignores the emotional aspect of regret.

At the other extreme there is the possibility that regret is a negative emotional reaction or a negative affective state that happens to result from the post-decisional preference for an unchosen alternative. A similar type of definition was offered by Janis & Mann (1977a) but given a different name. They termed their definition "spontaneous regret." They state that "spontaneous regret" is an internal, completely emotional reaction that may overtake an individual

inadvertently simply by the mention of some "reminder" of a loss. However, this affective definition denies the cognitive component of regret, relegating it to the role of an antecedent.

A third viewpoint is represented by Landman (1987a, 1993), who states that regret is associated with a set of negative emotional characteristics requiring more cognitive assessment and elaboration of an event than other negative emotions such as fear and anger. Landman's interpretation is a hybrid of the two above definitions in that she defines regret as an emotion possessing a heavy cognitive component. This is congruent with classic theories of emotion (e.g., Schachter, 1964) which have long acknowledged that cognition is integral to the experience of emotion.

Similar to, but more specific than Landman's interpretation of regret, was a definition recently offered by Scherer and Stutzman (1994) which will be used for purposes of this research. Scherer and Stutzman (1994) argue that regret is a psychological state characterized by both negative affectivity and the cognition that an unchosen alternative may have been preferable to the chosen alternative. The affective components of decisional regret are proposed to vary in quality, intensity and duration. Negative

affectivity could include depression, frustration, anger, or disappointment and its intensity could range from mild to strong affective reactions. Its duration could be fleeting to long lasting. The cognition associated with regret can be placed on a continuum of definitiveness regarding the superiority of an unchosen alternative. That is, the cognition could range from an acknowledgment that an unchosen alternative may have been preferable to the definitive conclusion that an unchosen alternative should have been chosen. Scherer and Stutzman also constrain their conceptualization of regret to a specific decision that is irrevocable. If this decisional regret is a consequence of a decision that was already made, it is termed post-decisional regret. If, on the other hand, it is an antecedent of a decision that is to be made, it is termed anticipated decisional regret.

Antecedents of Decisional Regret

There is no single cause of regret; it appears to be multiply determined. Below I will outline a few possible causes of such decisional regret.

Age, negative attitudes and the future. According to Miller, Shain, and Pasta (1990, 1991a, 1991b), there is no single cause of regret; instead, they found various predictors of regret. These researchers

studied regret among individual members of couples that had had either tubal sterilization or a vasectomy. Through interviews conducted annually for two to five years, they found post-sterilization regret to be related to many different variables including: relatively young age at the time of sterilization, ambivalence about future childbearing, and negative attitudes toward sterilization (Miller, Shain, & Pasta, 1991b). These variables affected the individual decision makers such that if one member of the couple had one of the above characteristics, that member was more likely to experience post-sterilization regret than the other member.

Decision conflict. Payne, Bettman, and Johnson (1992) state that in decision tasks it is often the case that two alternatives are similar. That is, all alternatives to a decision are often comprised of both positive and negative features and no one alternative best meets all of the objectives. When choosing between these alternatives, the individual will feel conflict when attempting to select the best of the two. After the choice is made and the outcome becomes salient to the decision maker, he or she may experience decisional regret if the outcome is not favorable.

If the outcome due to the chosen alternative is far worse than the decision maker believes the outcome would have been had the other alternative been chosen, that individual will experience extreme regret (Sugden, 1985). Drawing from the above research, it seems likely that the more conflict an individual experiences when making a decision, the more regret that person will experience if the chosen alternative has a negative outcome. If the intensity of the feeling of regret is very high, future processing of information, decision processes, and behavior will be altered. If, on the other hand, the intensity of the feeling of regret is very low, the impact on the individual may also be low. He or she may choose to ignore the processes leading up to the consequences and "chalk it up to experience."

Weighting of decision dimensions. A study by Billings and Scherer (1991) suggests that post-decisional regret may be experienced by decision makers who place too much weight on one dimension or category of information when evaluating a set of decision alternatives. In this study, subjects examined various categories of information (e.g. salary, travel advancement opportunities) for different jobs and then chose which job they would prefer to accept. Across

the four sets of jobs and the corresponding four choices, most subjects examined every available piece of information for each job. After completing the task, all information for the jobs and the choices they made were displayed in matrix format for the subjects to review. The subjects were then asked to indicate their satisfaction with and regret over each of their four job choices and whether they would choose a different job within any of the decision sets. Results demonstrated that subjects who changed their decisions tended to replace their original job choices with lower-paying jobs having other amenities. These subjects reported more regret and less satisfaction with their original choices. Further examination of the data indicated that these subjects heavily weighted salary information in arriving at their original job choices. The authors suggested that undesirable decision outcomes and decisional regret may be more likely when decision makers place too much weight on one dimension of information in evaluating and choosing among alternatives. Again, these subjects evaluated all of the dimensions of the alternatives available to them but weighted one dimension more heavily than the other dimensions. It is possible that, at times, individuals may skip over some of the information that

is available to them when presented with a decision task. This too can lead to poor decisions and subsequently, post-decisional regret.

Failing to access all available information. It is possible that when faced with a decision, although all the pertinent information needed to optimize the decision is available, the decision maker may choose to ignore some of this information. In some situations, it may seem more efficient to skip some of the available information regarding a decision in order to expedite the decision process. Individuals may find that if they examine most of the information, they will have a good understanding of the problem and be able to make a suitable decision. Often times, though, it is pertinent that all the information be examined when dealing with a problem. If it so happens that the one piece of information that was skipped in order to expedite the decision process is a vital piece of information that would have caused the decision maker to choose a different decision alternative, that individual will experience decisional regret.

Lack of access to all pertinent information. In many organizational decision tasks, all the pertinent information is not always available before a decision needs to be made. When this occurs, the potential for

an undesirable outcome is always present. Thus, the potential for the decision maker to both anticipate and experience decisional regret, both before and after the decision, is also always present. Although the decision maker knows that the information was not available at the time of the decision, he or she may also feel some self-doubt that will make it seem that a correct decision was still possible, if not obvious. When one is confronted with all the information, it is very easy to feel that the information that was not available at the time of the decision could have been easily deduced, if not retrieved. Although there is no empirical research regarding exposure to negatively valenced additional information that was not available prior to the decision leading to decisional regret, it seems to be a logical assumption. Although the decision maker was not aware of this additional information when making the decision, he or she will still feel as though, had the information been available, a better decision could have been made. The decision maker will feel as though he or she has failed and, regardless of whether or not that person is at fault, he or she will experience regret.

Again, decisional regret can be caused by a number of different variables leading to the decision. These

antecedents could include, but are not limited to, conflicting decision alternatives, the weighting of decision dimensions, failing to assess all the available information regarding the alternatives, or not having access to all the pertinent information regarding the alternatives. All of the above may be causes of regret which, in turn, hold consequences for the decision maker.

Consequences of Decisional Regret

It is difficult to completely divorce the discussion of the antecedents of decisional regret from its consequences, because consequences of regret may be expected to vary as a function of what factors gave rise to it. However, it is plausible that characteristics of the decision maker, the decision task and the situation could also influence the consequences of decisional regret.

Most past research was conducted using hypothetical scenarios in which regret was measured by asking subjects to read a vignette and choose which actor they believed would feel more regret for his or her actions. An example of one of these vignettes follows:

Ms. Smith and Ms. Jones were scheduled to leave the airport at the same time, but on different flights, to attend important business meetings. Each of them drove the same distance to the

airport, was caught in a traffic jam, and arrived at the airport 30 minutes after their flights were scheduled to depart. Ms. Smith was told at her gate that her flight left on time. Ms. Jones was told at her gate that her flight was delayed and had just left three minutes prior. They both had dawdled for ten minutes before leaving home. Which one of the two felt more regretful for her actions? (Adapted from Kahneman & Tversky, 1982).

This type of vignette can tell researchers what subjects believe a hypothetical other is feeling regarding an action. This approach does not explain how individuals themselves would react; rather, it represents perceptions of how someone else might feel.

Walster (1964) was one of the only researchers to empirically test the decisional consequences of regret. She asked subjects to rate ten jobs. She then told them that they would be assigned to one of two specified jobs for the next ten years. She then had subjects re-rate the ten jobs again. Walster measured the changes in ratings as regret. She found that ratings changed after the receipt of future job information.

Emotional consequences of regret. Janis and Mann (1977a) propose that post-decisional regret can lead to feelings of remorse, self-doubt or lack of confidence, feelings of weakness, foolishness and depression. This is, though, speculation on their part as they do not support this statement with empirical evidence. They

do, however, use this statement to explain the measures that people use to decrease these feelings of remorse, self-doubt, depression, etc. that are associated with regret. They postulate that people, when feeling the emotional effects of regret, will attempt to shift the responsibility, or use bolstering or procrastination defenses, for example, in order to put an end to "the acute emotional shock of the disruptive crisis" (Janis & Mann, 1977a, p. 312).

Regret-minimizing decision behavior. Decisional regret may lead to alterations in an individual's normal decision making processes in subsequent decision tasks. One potential alteration may be the explicit consideration of and avoidance of regret in subsequent decision tasks. That is, decision makers who experience regret may be more likely to anticipate regret and attempt to avoid it in future decisions. Regret avoidance may lead to good or poor choices, depending on the intensity of the need to avoid feelings of regret and the characteristics of the decision context, the decision task and the decision maker. A study by Josephs, Larrick, Steele and Nisbett (1992) provides evidence that characteristics of the decision maker as well as the task interact to influence the degree of regret-minimizing behavior.

The researchers conducted three experiments to test whether or not subjects' motive to protect self-esteem from the threat of regret would affect their decisions. Threat of regret was induced by telling subjects that they would receive feedback about their decision. Control subjects were told they would not receive feedback about their decision. The researchers found that subjects who had low self-esteem made regret-minimizing choices when they expected feedback about their decision as opposed to subjects who did not have low self-esteem. The second study showed that when subjects did not expect to receive feedback about their decision, there was no difference in decision strategies between high and low self-esteem. In the third study, the researchers manipulated the amount of feedback the subjects expected to receive. They found that as the amount of feedback expected increased, regret minimizing choices also increased in the low self-esteem subjects but not in the high self-esteem subjects. This study suggests that not only is objective information utilized in decision making, but also the perceived consequences to self-esteem from poor decisions especially for those individuals with low self-esteem.

Irrational choices. Bell (1982) asserts that

irrational choices, or choices violating expected utility maxims, are a function of regret. In the gambling paradigm used by Bell, anticipated regret is taken into account by decision makers contemplating pairs of gambles causing them to make choices which violate expected utility. According to the expected utility prediction of assets alone, people given a choice between two gambles, with one alternative having a 10% chance of \$5 million, an 89% chance of \$1 million, and 1% chance of nothing and the other guaranteeing a \$1 million dollar payoff, subjects should choose the gamble that gives them a 10% chance of \$5 million dollars. However, Bell (1982) found that subjects actually chose the "\$1 million dollars for sure." He explains that if the person chooses the other gamble and the 1% chance of winning nothing occurs, that person will be devastated. Therefore, although the expected utility theory of assets alone predicts that subjects will choose the first gamble of a 10% chance of \$5 million, subjects will actually choose the \$1 million for sure option in order to avoid the possibility of experiencing extreme regret.

The problem with Bell's study is his post-hoc use of regret to explain choice behavior. He does not present empirical evidence for this claim. Lee (1971)

and Sugden (1985) also claim that anticipated regret causes irrational choice behavior, but they do not support this claim with empirical evidence either.

Regret and dissonance reduction. Another probable consequence of regret is dissonance reduction. According to Festinger's (1957) theory of cognitive dissonance, when individuals experience tension or dissonance because two thoughts or beliefs are psychologically inconsistent, they will attempt to adjust their way of thinking in order to decrease their tension. In decision making, when the decision maker learns that a decision has led to an undesirable outcome, he or she will attempt to reduce the feelings of dissonance which arise from the conflict that was previously experienced when attempting to choose between decision alternatives. Festinger postulates that as the amount of conflict (the difficulty in making the decision) before a decision increases, the greater the dissonance after the decision.

Festinger's theory of cognitive dissonance was tested by Festinger and Carlsmith in 1959. These researchers had subjects perform a boring task for an hour (turning wooden knobs) and then asked them to tell the next subject (a confederate) waiting to do the experiment that the experiment was fun and exciting.

The researchers either paid the subjects \$1.00 or \$20.00 for their assistance. When the subjects told the confederate that the task was exciting, the confederate in turn told the subject that he or she heard from a friend that this was actually a very boring task. The subject, who had promised to be convincing, explained that he or she really did enjoy the task. As the subjects left the building, another confederate asked the subjects how they enjoyed the experiment in which they had participated (the subjects were told that this individual was doing a survey for the psychology department on student reactions to experiments). Results demonstrated that the subjects that were paid \$1.00 expressed greater enjoyment of the experiment than those who were paid \$20.00. The authors concluded that the subjects that were paid \$1.00 experienced greater cognitive dissonance because they did not have a justifiable reason to lie to the previous confederate. In contrast, the subjects that were paid \$20.00 did not experience as much cognitive dissonance as they had justifiable reason to lie (they were paid well).

Festinger (1964) later postulated that before engaging in cognitive dissonance reduction, individuals will focus their attention on the unfavorable qualities

of the chosen alternative and the favorable qualities of the unchosen alternative. At some point between the decision and subsequent dissonance reduction, these individuals will tend to prefer the unchosen alternative. At this point, the individual experiences regret. Walster (1964) tested Festinger's (1964) idea of regret occurring during the dissonance reduction processes.

Walster (1964) used subjects that had just been drafted into the Army and had them rate a number of different work assignments on a scale asking "How much would you like to work at this job in the Army for the next two years?" Walster told the subjects that they would be assigned to one of the ten rated jobs for the next two years, so they should be as accurate in their ratings as possible. Each of the jobs had both positive and negative features. After the subjects had rated all the jobs, Walster sent them to another room to fill out a background information questionnaire. She then selected two of the previously rated jobs to offer the subjects. Jobs were chosen carefully to ensure that they had both been previously rated as moderately desirable by the subjects. She then told the subjects that these two jobs seemed to be best suited to them based on their past experience,

background information, current needs of the army, and the subject's previous preference ratings. After subjects chose which one of the two jobs they wanted, Walster again had them rate all ten positions. She manipulated the time between the choice of position and the second rating. She found that decisional regret was more prominent at four minutes after receiving information about their assignment; however, after fifteen minutes, cognitive dissonance reduction occurred.

The efficacy of dissonance reduction in wiping out regret, especially when subsequently faced with a similar decision, remains unclear. It is possible that the decision situation may dictate the amount of dissonance reduction experienced. If the decision and its subsequent consequences are very important to the decision maker, decisional regret may not be wiped out by dissonance reduction. In fact, the regret may linger longer and affect subsequent, similar decisions. It is also unclear from the cognitive dissonance research whether even successful dissonance reduction completely replaces regret or merely reduces it. Moreover, lingering memory of past regret with or without some reduction of dissonance may produce attempts to avoid such feelings again, such that

decision makers utilize different decision strategies for making the decision at hand. This could also be the case in situations in which the decision maker makes a sound choice which is accompanied by a bad outcome. The feeling of regret may occur from the one bad outcome even though the decision maker knows that logically he or she made a good choice.

Alterations in subsequent decision strategies.

Regret may encourage decision makers to be more systematic in their information searches before making future decisions. They may scrutinize more carefully both the kind of information they choose to investigate, from whom they receive their information, and how they weight the various pieces of information given them. A common assumption in the decision making literature is that thorough information processing leads to superior decisions (e.g. Beach & Mitchell, 1978; Abelson & Levi, 1985). On the other hand, regret may lead to a hypervigilant search of information that may have negative consequences. A decision maker who previously made a hasty decision without looking at all the facts may, in the future, go to the other extreme. This may cause an increase in the amount of time needed to reach a decision. Another possibility is that the increased information load may cause an increased use

of heuristics and shortcuts in processing the information. Third, regret-induced information gathering may be associated with a decreased ability or motivation to discriminate among the quality or relevance of the information collected prior to making a decision.

Negative self-perceptions and failure to make optimal choices. Regret stemming from poor decision making may cause the decision maker to lose confidence in his or her decision making capabilities. These negative self-perceptions about decision making capabilities can lead to subsequent poor decision making which confirms the negative self-perception. This cyclical process can continue indefinitely. The social psychology literature contains examples of this type of cyclical decision making such as dieting (Haemmerlie & Montgomery, 1982, 1984), states of depression, shyness, loneliness, and anxiety (Mendonca & Brehm, 1983). According to the literature (e.g. Sherman, 1980; Haemmerlie & Montgomery, 1982, 1984), people tend to experience self-fulfilling prophecies when it comes to self-perceptions and decisions. Those who have low self-perceptions tend to have a difficult time ending these vicious cycles of dieting, shyness, loneliness, depression, or anxiety. For example, an

individual may initially make a poor choice to break a diet for a special occasion. This bad choice will, after the party, lead to feelings of regret. These feelings of regret will lead to negative self-perceptions (Haemmerlie & Montgomery, 1982, 1984) such that the individual feels that he or she "can never stay on a diet," "will be fat forever," and is an "inadequate person because of lack of self-control." When confronted with the temptation of dessert at another time, that individual may decide that there is no reason to try to avoid the temptation since, being an inadequate person, he or she would give in eventually and eat the dessert anyway.

Summary of Decisional Regret

In summary, there are many potential antecedents and consequences of decisional regret. Some of the causes of regret are conflicting alternatives, failing to assess all available information, weighting some dimensions of alternatives more than others, and not having access to all information pertinent to that decision. Possible consequences of regret include negative affectivity such as sadness or anger, regret-minimizing behavior, dissonance reduction, negative self-perceptions, poor choices, and changes in the gathering and processing of information. To date, most

studies have looked at decisional regret as a "one-shot" decision. Few have examined decisional regret as it affects multiple decisions. Those studies that have looked at multiple decision tasks (e.g. Walster, 1964) failed to include moderators in their studies which may interact with decisional regret.

In the next section, I will review variables that can potentially moderate the amount of regret decision makers may experience.

Moderators of Regret

Situational Differences

Magnitude of the discrepancy. The subjective magnitude of the discrepancy between "what is" and "what could have been" (Sugden, 1985) has an effect on the amount of regret a person experiences. The outcome of a decision plays a large role in this determinant of regret. A student who expected an "A" on an exam but earned a "C-" will experience more regret for his or her actions (i.e., deciding to go out the night before the exam, choosing to watch a favorite television show instead of studying, not rereading the test and answers, etc.) than the student who expected an "A" but received a "B". This is because the discrepancy between an "A" and a "C-" is greater than that of an "A" and a "B". Both students could have made the same

decisions prior to the exam and engaged in the same behaviors, and yet the former will experience more regret than the latter due to the magnitude of the discrepancy between expected and actual outcomes. Sugden also states that the amount of blame the decision maker places upon him or herself for the original decision will also affect the amount of regret experienced. Therefore, in the above example, if the student who received a "C-" on the test does not blame him or herself for the lack of studying ("My roommate was up all night partying and I couldn't concentrate"), then the feeling of regret will be less than if that person believes he or she is at fault.

Sugden's (1985) theory of regret is just that, a theory. He does not have empirical evidence to back up his ideas. Instead, he uses scenario examples of situations in which the actor makes a decision and loses. He then leads the reader to an understanding of why a particular scenario would elicit particular regret feelings. Sugden also examines utility theory models and attempts to explain, in his terms, why people tend to violate these models. Although he is complete in his review of many of the models, again, he does not have empirical evidence to support his claims.

Decision atypicality and alternatives. Kahneman

and Miller (1986) state that the more abnormal or atypical a decision is, relative to the way a similar decision is often carried out, the more extreme the feeling of regret will be when the decision outcome is negative. Moreover, they claim that the greater the number of "counterfactual alternatives" that are available, the more abnormal the event will seem and the greater the subsequent regret will be. For example, if a man chooses to take a different route home from work than he usually does (abnormal event) and gets into an accident, he will feel more regretful of his decision than if he would have taken his usual route home. This same man will feel even more regretful of his actions, however, if there were many different routes that he could have chosen instead of the one he did (number of counterfactual alternatives).

Kahneman and Miller propose their "norm theory" based on results of past research using vignettes to assess feelings of regret (see Kahneman & Tversky, 1982). Kahneman and Miller use these results together to support their theory of norms; they did not, however, examine their "norm theory" directly.

Findings of Simonson (1992) demonstrate, though, that decision atypicality may be moderated by decision strategy. According to Simonson, the effect of

multiple alternatives on feelings of regret can be diminished if the decision maker uses "default options" in choosing one of the alternatives. Simonson found that decision makers who anticipated what they would feel if they made a wrong decision were more likely to choose a lower priced, less well-known alternative. Simonson also found that upon making a decision error, those subjects who chose the less well-known and least expensive alternative experienced a greater feeling of responsibility for their choice but also experienced less regret.

Active versus passive decisions. Several researchers have found that subjects feel greater regret following action versus inaction on their part (Epstein et al., 1992; Kahneman & Tversky, 1982; Landman, 1987b). Epstein et al. (1992) found support for this statement. Subjects were asked to read different pairs of vignettes regarding the behavior and consequences of another person. After reading the vignettes, the subjects rated which situation would have caused them to feel more foolish or regretful. General results indicated that subjects were more upset about unusual acts that were accompanied by unfortunate outcomes than those normal, routine acts that were followed by the same, unfortunate outcomes. According

to Landman (1987b), this is because people view normal, everyday actions as "non-action" on their part, but they perceive an abnormal, unusual action as "action" on their part.

Takemura (1992) also found the above to be true in non-interpersonal situations, but found evidence to suggest that this predication does not hold true in more interpersonal situations. Takemura had 58 university students complete questionnaires which described different hypothetical situations; non-interpersonal and interpersonal situations with negative outcomes stemming from an action (active decision) or non-action (passive decision) on the part of the actor. Subjects judged the amount of regret they believed the actor experienced from this situation. In the non-interpersonal decision, subjects associated more regret with action on their part than non-action, but in the interpersonal decision, subjects associated more regret with non-action than action.

Near versus far misses. Epstein et al. (1992) assert that it is typical for individuals to feel that a near miss is more significant than a far miss. They imply here that an individual will be more upset if the unfortunate outcome of his or her decision could have been easily altered (near miss) than if the outcome

would have been more difficult to change (far miss). For example, a person who misses a flight by five minutes will find it more easy to construct alternatives for his or her actions than an individual who misses a flight by thirty minutes. This is because there are many ways in which five minutes could have been cut from the travel time to the airport. However, the individual who misses a flight by thirty minutes will find it difficult to imagine cutting thirty minutes from the travel time to the airport.

Individual Differences

Imagination. Sugden (1985) states that imagination is a necessary component in the experience of regret because a person must be able to construct decision alternatives aside from the decision direction actually taken. Again, this is speculation as he does not have empirical evidence to support this claim.

Conversely, Scherer and Stutzman's (1994) model proposes that imagination or creativity will have little effect on regret for those tasks in which the decision maker regrets not choosing a previously considered alternative from a well-defined set (e.g., buying a car with or without automatic windows). Alternatively, Scherer and Stutzman claim that regret stemming from more complex, unstructured decision tasks

will be more influenced by individual differences in decision making ability to imagine or generate decision alternatives. Depending on the particular type of task, the decision maker's imagination, creativity or even cognitive complexity could influence post-decisional generation of alternatives and the subsequent regret experienced.

Affective state. The decision maker's initial affective state may also moderate the amount of decisional regret that a person subsequently experiences following a negative decisional outcome. Research shows that people in positive affective states tend to recall more positive aspects of past situations and gloss over the negative aspects (Blaney, 1986; Bower & Cohen, 1982). Isen, Shalcker, Clark, & Karp (1978) found that positive affect increases positive judgments by subjects and increases the tendency for subjects to rate a situation more positively than they would otherwise. Thus, not only do people in positive affective states recall past events as more favorable than those people in neutral affective states, but they also perceive present situations more favorably. The implication of this is that individuals in initially positive affective states may not perceive unsatisfactory decision outcomes as unfavorably as

those in neutral affective states; hence positive affect may lessen the amount of regret experienced by decision makers.

Summary of Moderators

There are many potential moderators of the amount of regret experienced by a decision maker. A complete listing would be impossible but among those would include: magnitude of the discrepancy between "what is" and "what might have been," decision atypicality and alternatives, active versus passive decisions, near versus far misses, imagination, and affective state. This is especially true in the case of affect as a moderator since decisional regret contains an affective component.

Affect

Little research has been done regarding the influence of temporary, affective states on decision making processes; and none has examined whether affect has a moderating effect on the amount of regret felt by decision makers. It is well known that affective states or moods influence behavior. It seems that these affective states would have an influence on decision making processes and on the amount of regret a person would experience regarding a past decision.

Affect is defined as a feeling state, our "state

of mind" (Webster, 1981). Breckler (1984) defines affect as an "emotional response, a gut reaction, or sympathetic nervous activity" (p. 1191). Clark and Isen (1982) have stated that "feelings have important effects on cognition and behavior, and...because these states occur so frequently, understanding their effects is extremely important to our understanding of behavior" (p. 76).

Studies have found that people in positive affective states tend to avoid situations that will decrease this state (Arkes, Herren & Isen, 1988; Isen, Nygren, & Ashby, 1988). So when faced with risky situations, subjects in positive affective states tend to increase risk taking behaviors when the stakes are low and decrease risk taking behaviors when the stakes are high as compared to controls (Arkes, Herren & Isen, 1988; Deldin & Levin, 1986; Isen & Geva, 1987; Isen & Patrick, 1983). This behavior may be explained by research showing that individuals in positive affective states have a greater negative subjective utility for losses than do controls (Isen, Nygren & Ashby, 1988); thus, they are motivated to avoid losses or bad outcomes. It seems that individuals in positive affective states have more to lose in a decision task than do controls; not only may they make a bad

decision, but they also run the risk of decreasing their positive feelings. (Arkes et al., 1988; Isen et al., 1988; Isen & Simmonds, 1978; Mischel, Ebbeson, & Zeiss, 1976). This research leads me to believe that decision makers who are in positive affective states will increase their use of cognitive dissonance reduction tools in order to remain in good moods. This is because if a decision maker experiences regret, he or she will also experience negative affect.

Other researchers have found that positive affect increases subject's recall of positive memories and attitudes (Blaney, 1986; Bower & Cohen, 1982; Carver & Scheier, 1990; Clark, Milberg, & Ross, 1983; Clark & Waddell, 1983; Deldin & Levin, 1986; Isen et al., 1978; Turving & Pearlstone, 1966). When asked to recall an event from the past, subjects in positive affective states tend to focus more on the positive aspects of the situation and to gloss over the negative aspects. This could have implications with regard to regret and subsequent decision making. When recalling past outcomes of similar decisions, the individual may not completely assess the pros and cons of the past behavior and thus may not learn from past mistakes. The individual may feel confident that he or she is able to make a good decision regardless of past

outcomes.

In the same vein, Isen et al. (1978) found that positive affect increases the tendency for subjects to rate a situation more positively than they would otherwise. These researchers manipulated affect in subjects and then asked them to rate the performance and service records of household products (i.e., automobiles and television sets). They found that those who had received free gifts, and thus were higher in positive affect, rated these household items higher than control subjects. Again, this could affect both feelings of regret and decision making. For example, individuals in positive affective states may assess situations much more positively than those in neutral affective states. Those people in positive affective states may see situations much more optimistically; they may not even consider the negative attributes of their choices or may weight the positive aspects more than the negative. If there is a link between positive affect and cognitive dissonance reduction, we may find that positive affect can cause the individual to skip directly to dissonance reduction techniques and not even dwell on possible mistakes in reasoning.

In conclusion, affective states have been demonstrated to affect behavior, memories and

attitudes, and evaluation of situations. It is very possible that affective states may also affect the evaluation of negatively valenced additional information and thus, affect feelings of regret.

Summary

In general, it is assumed that an individual's affective state will moderate the effect of the valence of additional information regarding decision alternatives in terms of the amount of post-decisional regret experienced, confidence levels, ratings of decision alternatives and subsequent choice. Individuals in positive affective states who are given negatively valenced additional information will not be influenced by this information to the same degree as those subjects in the neutral affective states. Those in a positive affective state are motivated to maintain this positive state (Arkes et al., 1988; Isen et al., 1988), tend to recall the more positive rather than the negative aspects of their previous decision (Blaney, 1986; Bower & Cohen, 1982; Clark et al., 1983; Deldin & Levin, 1986), and tend to rate the situation more positively than they would otherwise (Isen et al., 1978). They will tend to rationalize their decision or distort the additional information in order to maintain this positive state. On the other hand, those subjects

in the neutral affective state do not have this affective buffer. They will simply act as the regret research suggests; they will experience post-decisional regret and low confidence, and they will have a high likelihood of changing ratings of decision alternatives and subsequent choice.

This Investigation

To date, there is little research on the phenomenon of decisional regret. It seems that most of the literature contains speculation about the antecedents, moderators, processes and consequences of regret rather than offering empirical evidence. There are many unanswered questions in the area of decisional regret as there are various factors that could affect and/or moderate the amount of regret experienced and how that regret will affect the individual and future behaviors.

This investigation examined some variables that influence the amount of decisional regret experienced and changes in subsequent decision processes and choices. Specifically, the study examined the moderating effect of affective state on the amount of regret experienced by the decision maker given either negatively or neutrally valenced additional information regarding a prior decision choice.

Little, if any, research has been done regarding the valence of additional information and its effects on future decision making. Again, Walster (1964) tested the affect of additional information (jobs subjects were to be assigned) on subsequent ratings, but the valence of information was not manipulated between subjects.

Hypotheses

Hypothesis 1. Affect and information valence will have an interactive effect and two separate main effects on amount of regret experienced.

a: When given negatively valenced additional information regarding a past choice, subjects in neutral affective states will experience significantly more post-decisional regret than subjects in positive affective states. When given neutrally valenced additional information, differences in regret for positive and neutral affect subjects will be relatively smaller.

b: Across both levels of information, positive affect subjects are predicted to report less regret than neutral affect subjects.

c: There will be a main effect for information, with negatively valenced information causing more regret than neutral valenced information.

Hypothesis 2. Affect and information valence will have an interactive effect and two separate main effects on amount of confidence experienced.

a: When given negatively valenced additional information regarding a past choice, subjects in neutral affective states will experience significantly less confidence in their decision than subjects in positive affective states. When given neutrally valenced additional information, differences in regret for positive and neutral affect subjects will be relatively smaller.

b: Across both levels of information, positive affect subjects are predicted to report more confidence than neutral affect subjects.

c: There will be a main effect for information, with negatively valenced information causing less confidence than neutrally valenced information.

Hypothesis 3. Affect and information valence will have an interactive effect and two separate main effects on changes of ratings of originally chosen alternative.

a: When given negatively valenced additional information regarding a past choice, subjects in neutral affective states will change ratings of originally chosen alternative significantly more than subjects in positive affective states. When given neutrally valenced additional information, differences in ratings of originally chosen alternative for positive and neutral affect subjects will be relatively smaller.

b: Across both levels of information, positive affect subjects are predicted to change ratings of originally chosen alternative less than neutral affect subjects.

c: There will be a main effect for information, with negatively valenced information causing subjects to change ratings of originally chosen alternative more than neutrally valenced information.

Hypothesis 4. Affect and information valence will have an interactive effect and two separate main effects on change of average ratings of original non-chosen alternatives.

a: When given negatively valenced additional information regarding a past choice, subjects in neutral affective states will change average ratings of original non-chosen alternatives significantly more than subjects in positive affective states. When given neutrally valenced additional information, differences in average ratings of original non-chosen alternatives for positive and neutral affect subjects will be relatively smaller.

b: Across both levels of information, positive affect subjects are predicted to change average ratings of original non-chosen alternatives less than neutral affect subjects.

c: There will be a main effect for information, with negatively valenced information causing subjects to change average ratings of original non-chosen alternatives more than neutrally valenced information.

Hypothesis 5. Affect and information valence will have an interactive effect and two separate main effects on changes of ratings of subsequently chosen alternative (time two, after manipulations).

a: When given negatively valenced additional information regarding a past choice, subjects in neutral affective states will show a change in ratings of subsequently chosen alternative significantly more than subjects in positive affective states. When given neutrally valenced additional information, differences in ratings of subsequently chosen alternative for positive and neutral affect subjects will be relatively smaller.

b: Across both levels of information, positive affect subjects are predicted to show a change in ratings of subsequently chosen alternative less than neutral affect subjects.

c: There will be a main effect for information, with negatively valenced information causing subjects to show a change in ratings of subsequently chosen alternative more than neutrally valenced information.

Hypothesis 6. Affect and information valence will have an interactive effect and two separate main effects on change of average ratings of subsequently non-chosen alternatives (time two, after manipulations).

a: When given negatively valenced additional information regarding a past choice, subjects in neutral affective states will show a change in average ratings of subsequently non-chosen alternatives significantly more than subjects in positive affective states. When given neutrally

valenced additional information, differences in average ratings of subsequently non-chosen alternatives for positive and neutral affect subjects will be relatively smaller.

b: Across both levels of information, positive affect subjects are predicted to show a change in average ratings of subsequently non-chosen alternatives less than neutral affect subjects.

c: There will be a main effect for information, with negatively valenced information causing subjects to show a change in average ratings of subsequently non-chosen alternatives more than neutrally valenced information.

Hypothesis 7. Affect and information valence will have an interactive effect on the frequency of changes in choice of alternative from time one to time two. Specifically, neutral affect subjects given negatively valenced additional information will be more likely to make a different alternative choice at time two than the other three conditions.

Methods

The major purpose of this experiment was to determine whether affective state moderates the effect of the valence of additional information regarding a past decision on the decision maker's regret, confidence and subsequent ratings of alternatives and choice.

Pilot Experiments

Four pilot studies were conducted prior to the main study in order to determine appropriate manipulations of the independent variables. Psychology students from the University of Nebraska at Omaha were used as subjects in all pilot studies.

Studies Testing the Manipulation of Additional Information

Two pilot studies were conducted to appropriately manipulate the "valence of additional information" factor. In the first study, 37 students were asked to simply list the various characteristics of professors they liked and disliked. The list of characteristics generated by subjects is included in Appendix A.

In a second study, 64 subjects were presented with the list of professor attributes generated in the first study and asked to rate them on a five point scale. The scale points were anchored as follows: 1 = "Like

very much in a teacher", 3 = "Doesn't affect liking one way or another", and 5 = "Dislike very much in a teacher". See questionnaire in Appendix B. Eleven characteristics were found to have the greatest effect on students' likes or dislikes of professors. These characteristics, their means, standard deviations and the ranges can be found in Table 1. From these 11 characteristics, the following four were used as the additional information in the final experiment:

Negatively valenced additional information = "Frequently unprepared for class" and "Has little patience with students," neutrally valenced additional information = "Arrives to class on time" and "Teaches in a very professional manner."

Studies Testing the Effectiveness of Affect Manipulation

The purpose of this study was to test the effectiveness of the affect manipulation. Thirty-two subjects were used in the first test of the affect manipulation. Sixteen of these subjects were exposed to the positive affect manipulation; reading comics. These subjects were left in a room and allowed to read "The Indispensable Calvin and Hobbes" (Watterson, 1992) and "The Official College Quiz Book" (Ahern, Bretwalte, Bridgeman, Gray, Jones, Kinzer, Oatman,

Table 1

Descriptive Statistics for Ratings of Professor Characteristics

Professor Characteristics	<u>M</u>	<u>SD</u>	<u>Range</u>
1. Seems bored with job.	4.60	.768	1,5
2. Speaks in very monotone manner.	4.64	.650	2,5
3. Frequently unprepared for class.	4.51	.564	3,5
4. Has little patience with students.	4.70	.500	3,5
5. Does not review before exam	4.40	.750	2,5
6. Dresses sloppily.	3.33	.780	2,5
7. Arrives to class on time	2.69	.790	1,3
8. Teaches in very professional and businesslike manner.	2.68	.960	1,4
9. Tests are mix of essay, multiple choice, and fill-in.	2.61	1.02	1,5
10. Lectures very slowly.	3.43	.92	2,5
11. Gives more than 3 exams.	2.49	.90	1,4

Note. N = 64.

Based on a scale of 1 to 5 with 1 being "like very much in a professor" and 5 being "dislike very much in a professor."

Taylor, Warwick, & Zirkie, 1990). This method has been shown to be highly reliable in various other studies and situations (Baron, 1983, 1984; Carnevale & Isen, 1986). The other sixteen subjects (neutral affect condition) were simply left alone in the experiment room. After the experimenter returned, subjects in both conditions were asked to complete a survey for the presumed purpose of determining the general affective state of college students in the country. There were asked to be as accurate as possible. The questionnaire required subjects to complete the scale for the following three items: "How do you feel at the present moment," "How have you felt in the past few weeks?" and "How do you generally feel?". See questionnaire in Appendix C. The latter two time frames were included in order to conceal the fact that the experimenter was only interested in the "moment" affective state. Embedded in the survey was the affective state question which asked subjects how they felt "right now." Subjects responded to the question on a semantic differential scale consisting of four bipolar adjectives. Factor analysis evidence from both Scherer (1989) and Whigham and Scherer (1991) indicate that all items loaded on one factor, which they interpreted as a measure of a "happiness/sadness" affective state. In

this analysis, all other items were disregarded and only the "moment" items were used. Unfortunately, results demonstrate that there was not a significant difference between conditions, $F(4,27) = .72, p > .05$.

In an attempt to find a effective manipulation, a second pilot study was conducted. Sixty subjects were used in this experiment. In this study, positive affect was induced by allowing subjects ($n = 30$) to read the book "The Indispensable Calvin and Hobbes" (Watterson, 1992) and a comic book entitled "The Official College Quiz Book" (Ahern, et al., 1990). Subjects in the neutral condition ($n = 30$) were asked to read an article entitled "Canada's Support of the United Nations Peace-Keeping Operations" (Sheikh, 1969). See Appendix D. This article was chosen specifically for this experiment and has not been used for the purpose of inducing neutral affect in the past.

The subjects in the positive affect condition were first told by the experimenter that she was in the middle of an experiment with another subject and that she must finish before beginning their experiment. The room in which the subjects were waiting had the two comic books in it. The experimenter told the subject that the comics were left behind by another experimenter and that they were more than welcome to

read them while they waited for her to return. Subjects in the neutral condition were told that they would be participating in a reading comprehension study and would be asked to read an article and then answer some questions. Upon returning to the subjects, the experimenter gave the subjects the same affect scale as was used in the previous pilot study (see Appendix C). Multi-variate analysis of variance results demonstrated that the affect manipulations were very powerful with those subjects in the positive affect condition reporting significantly more positive affective states than those in the neutral affect condition, $F(4,55) = 13.80, p < .05$. Thus, these manipulations were used in the final experiment to induce positive and neutral affective states.

Primary Experiment

Subjects

One hundred and thirty-two students from the University of Nebraska participated in this study. Subjects were volunteers who received extra academic credit in their psychology classes in exchange for their participation. All subjects signed an informed consent (Appendix E). Subjects ranged in age from 18 to 50 with a mean age of 25.8. There were 47 (36%) male participants and 85 (64%) female participants. Of

the total subject pool, psychology majors accounted for 27%, medical profession majors accounted for 22%, education majors accounted for 10% and the various other majors accounted for the remaining 41%. Subjects included 19 freshmen, 35 sophomores, 35 juniors, 36 seniors and 7 graduate students.

Design

Subjects were randomly assigned to one of four cells of a 2 X 2 factorial design, with affective state (positive vs neutral) and the valence of additional information (neutral vs negative).

Prior to the exposure to the affect and valence of additional information treatments, the following covariate measures were taken: regret, confidence, and ratings of decision alternative. This was done in order to utilize covariate analysis of variance in the data analysis. Covariate analysis of variance is a very powerful design that will increase the power of a test when all assumptions are met. According to Arvey, Cole, Hazucha and Hartanto (1985) and Kirk (1986), designs that adjust for pre-existing differences tend to decrease the standard error of the statistic and thus increase power. They suggest using analysis of covariance when sample size is greater than 100 because in these situations ANCOVA is more powerful

than post-test or gain-score analysis.

Kirk (1986, p. 719-720) states that covariates must meet the following assumptions: (a) they must be extraneous sources of variation that are irrelevant to the objectives of the experiment, (b) experimental control of these sources of variance are not possible or feasible, (c) the covariate observation is gathered before the treatment conditions are administered, (d) and the covariate is unaffected by the treatment. The covariate variables in this experiment met all of the above assumptions since we were not interested in the regret and confidence of the subjects prior to the introduction of the independent variables. Thus, in order to increase the power of the tests, covariate analysis of variance was used in this study.

Task

Subjects were asked to rate and choose (vote) among four candidates for an assistant professor position at the university using information they were given via a computer regarding the alternatives. See Appendix D. The computer was programmed so that it appeared to be an official, University of Nebraska at Omaha project (Appendix F). The purpose of the project was explained and the instructions for using the "voting and tabulation program" were given. Subjects

were shown four different candidates and a matrix of their qualifications. These qualifications fell under four different categories: graduate school attended, courses taught, research completed, and memberships and committees served. Subjects were encouraged to carefully read and evaluate the information for each candidate, provide their ratings of each candidate using the five-point scale provided and then choose the candidate they would prefer the university hire. Once they made these decisions, they "clicked" on the ENTER button on the screen and their decision was transmitted and tabulated at a central university location. At that point, the computer led them to believe that their decision was transmitted and was irrevocable. A message on the computer screen was displayed that thanked the subjects for helping the university evaluate the candidates and hire a professor. This message also displayed the package name and version number. The version number was an indicant to the experimenter as to which professor the subject chose. For example, "Version 3.1" indicated that the subject chose Professor A, "Version 3.2" indicated that the subject chose Professor B, etc.

Subjects also completed a similar task of rating and choosing alternatives but without the use of the

computer. The computer was not used for this task because the experimenter did not want the subjects to know that this task was related to the previous computer task. The information they were given in this task was the same as they received on the computer but also included additional information about each alternative that was not previously available on the computer task. See Appendix G.

Subjects also completed a task in which they were to report their feelings of regret based on a five point scale (1 = "Definitely change my decision," 2 = "Probably change my decision," 3 = "Possibly change my decision," 4 = "Probably not change my decision," and 5 = "Definitely not change my decision." Subjects then completed a similar scale asking them to report their confidence level based on a seven point scale (1 = "I am 100% confident that I made the right decision," 2 = "I am 85% confident that I made the right decision," 3 = "I am 70% confident that I made the right decision," 4 = "I am 55% confident that I made the right decision," 5 = "I am 30% confident that I made the right decision," 6 = "I am 15% confident that I made the right decision," and 7 "I have no confidence what-so-ever in my decision."

Finally, subjects completed the same affect

questionnaire which was used in the pilot study. They simply reported how they were feeling "At this present moment," "In the past few weeks," and "In general."

See Appendix D.

Dependent Measures

The dependent variables in this study consisted of regret ratings (Appendix H), confidence ratings (Appendix I), ratings of initially chosen candidates at time two (Appendix J), average ratings of initially unchosen candidates at time two (Appendix H), ratings of subsequently chosen candidates at time two, average ratings of subsequently unchosen candidates at time two, and choice of candidates (Appendix J). These measures were taken after the subjects were exposed to the independent variables; affect condition and additional information condition.

The regret data were gathered at two different times, once before the introduction of the independent variables and once after the introduction of the independent variables. Subjects were asked to report their feelings of regret after making each decision (Appendix H). Subjects were also asked to report their confidence levels after each decision task (Appendix I).

Another dependent variable was the ratings of the

chosen alternative. This measure was based on the rating of the initially chosen candidate on the second rating task. The other dependent variable was similar, but was the rating of the subsequently chosen candidate on the second rating task.

Similarly, average rating of the unchosen alternatives was another dependent variable. The ratings of the initially unchosen alternatives on the second rating task were used here. The other dependent variable was based on the average rating of the subsequently unchosen candidates on the second rating task.

Finally, the change in alternative choice from decision task one to decision task two was another dependent variable.

Procedures

Before beginning the experiment, the experimental conditions were randomly determined. This was done previous to meeting subjects in order for the experimenter to prepare the experiment room for the appropriate condition before the arrival of the subjects.

The subjects were greeted individually in the hall outside the experiment room. Subjects were told that they were participants in a variety of different

studies which were being conducted at one time to save the subjects' time. Subjects were first asked to sign a consent form before beginning the experiment (Appendix E). They were told that their first task was to complete a university sponsored evaluation of faculty applicants that was being conducted via computer. The experimenter began the computer program to get the subjects started (Appendix F). Subjects were then left alone to complete the computer task. Subjects were then asked to complete a confidence scale (Appendix I) and a regret scale (Appendix H) regarding the decision they made on the computer.

Upon completion of the computer task, the subjects were then given either the reading comprehension task if in the neutral affective condition (Appendix K) or the comic book task if in the positive affective condition (Appendix L). When subjects finished this task, the experimenter began the next study.

In the next study, the experimenter told the subjects that she was interested in how past student evaluations of professors affect the perceptions of other students of those professors. Subjects were then given the appropriate additional information for the condition to which they were assigned (Appendix G).

After rating and choosing the candidate they would most like to see hired, the experimenter again asked subjects to rate their confidence level (Appendix I) and their amount of regret (Appendix H) for their decision. The experimenter then gave the subjects the last task which they were told was a study to determine the global affective state of college students (Appendix D). After completing the above tasks, subjects were debriefed, given their participation credit and released.

Results

Overview and Preliminary Analyses

The purpose of this experiment was to determine if affective state would moderate the effects of the valence of additional information on post-decisional regret, confidence, subsequent candidate ratings and choice. It was proposed that analysis of covariance be used to partial out the effects of ratings at time one before examining the hypothesized relationship between affect, additional information and the dependent variables. Unfortunately, the assumption of homogeneity of regression for performing analysis of covariance was not satisfied (see Kirk, 1986, p. 732). Specifically, the data violated the assumption that the within-group regression coefficients are homogeneous for treatment levels. See Table 2 for within-group coefficients. The F-ratios for all covariates, except the rating of the previously chosen candidate at time two, were all significant. Thus, the assumption of homogeneity of regression coefficients was violated in all but one case. Since the correlations within treatment levels were not homogeneous, the analysis of covariance would result in biased estimates of the treatment effects and conceal true differences among the dependent variable means (Kirk, 1986, p. 732,

Table 2

Regression Coefficients for Each Dependent Variable
Regressed on Its Corresponding Covariate Within Each
Treatment Level

Treatments	DV1	DV2	DV3	DV4	DV5	DV6
Main Effects Affect						
Positive	.07	.40	.09	.30	.44	.15
Neutral	.52	.68	-.02	.28	.33	.25
Main Effects Valence of Information						
Neutral	.41	.60	.33	.14	.55	.09
Negative	.18	.50	-.21	.46	.23	.29
Interactions						
Positive affect by neutral info.	.29	.30	.52	.24	.72	.15
Positive affect by negative info.	-.06	.38	-.25	.37	.16	.17
Neutral affect by neutral info.	.57	.73	.02	.03	.26	.02
Neutral affect by negative info.	.52	.65	-.23	.57	.39	.45

Note. DV1 - Regret, DV2 - Confidence, DV3 - Rating of originally chosen candidate at time two, DV4 - Average ratings of originally unchosen candidates at time two, DV5 - Rating of subsequently chosen candidate at time two, DV6 - Average ratings of subsequently unchosen candidates at time two.

Keppel, 1982, p. 503) or result in a loss of power (Atiqullah, 1964). Thus, analysis of variance was used to evaluate the hypotheses.

In the following section, I will discuss results of the descriptive statistics and evaluate each of the hypotheses of this study in order.

Descriptive Statistics

Descriptive statistics were calculated both for information and to check the data for errors in data-entry. Means, standard deviations and ranges for the dependent variables can be found in Table 3.

Affect Manipulation Check

As a manipulation check for the effect of the affect manipulation, subjects were asked to report their affective states at the end of the experiment. Multivariate analysis of variance found that the affect manipulation had a significant effect on subjects' affective states, $F(1, 128) = 4.39, p < .05$. This provides evidence that the affect manipulation influenced subjects' affective states and that these states endured through the duration of the experiment.

Evaluation of Hypotheses

Results for regret. The first hypothesis stated that there would be a main effect of both affective state and valence of additional information and an

Table 3

Means, Standard Deviations, Ranges and Intercorrelations Among Variables

Dependent Measure	M	SD	Range	DV1	DV2	DV3	DV4	DV5	DV6	DV7
Regret	3.96	.89	1, 7	--						
Confidence	2.33	1.26	1, 5	.65	--					
Rating of Previous Chosen Candidate At Time Two	3.58	1.48	1, 5	.30	.30	--				
Rating of Previous Unchosen Candidate At Time Two	3.42	.69	1, 5	.26	.26	.36	--			
Rating of Subsequent Chosen Candidate At Time Two	4.32	.90	1, 5	.19	.14	-.04	.17	--		
Rating of Subsequent Unchosen Candidate At Time Two	3.12	.74	1, 4	.13	.08	.45	.21	.19	--	
Candidate Choice	2.29	1.04	1, 4	.03	.01	-.11	-.05	.13	.07	--

NOTE. N = 132.

Regret: 1 = "Definitely Change Decision", 2 = "Probably Change Decision", 3 = "Possibly Change Decision", 4 = "Probably Not Change Decision", 5 = "Definitely Not Change Decision"
 Confidence: 1 = "No Confidence", 2 = "15% Confident", 3 = "30% Confident", 4 = "55% Confident", 5 = "70% Confident", 6 = "85% Confident", 7 = "100% Confident"
 Ratings: 1 = "Dislike a Lot", 2 = "Dislike a Little", 3 = "No Preference", 4 = "Like a Little", 5 = "Like a Lot"
 Choice: 1 = "Candidate 1", 2 = "Candidate 2", 3 = "Candidate 3", 4 = "Candidate 4"

interaction between the two on self-reported regret. Contrary to this hypothesis, none of these effects were obtained. The interaction of affect and valence of information was non-significant, $F(1, 128) = .010$, ns. In addition, affect did not have a significant main effect on regret, $F(1, 128) = 0.24$, ns, nor did valence of additional information have a significant effect on regret $F(1, 128) = 2.16$, ns. Means and standard deviations are presented in Table 4.

Results for confidence. The second hypothesis stated that there would be an interaction effect of affect and valence of additional information and two main effects, affect and valence of additional information, on confidence level. Again, none of the predicted relationships for self-reported confidence were significant. The interaction effect of affect by information was not significant with $F(1, 128) = 1.40$, ns. The main effect of affect on confidence was also non-significant, $F(1, 128) = .12$, ns. The effect of valence of information on confidence was not significant, although it was marginal and in the predicted direction, $F(1, 128) = 3.03$, $p = .08$. Means and standard deviations for confidence by condition are presented in Table 5.

Table 4

Means and Standard Deviations for Regret at Time Two

Breakdowns	Regret at Time Two	
	<u>M</u>	<u>SD</u>
Main Effect Affect		
Positive	3.92	.98
Neutral	4.00	.78
Main Effect Valence of Information		
Neutral	4.10	.75
Negative	3.85	1.00
Interactions		
Positive affect by neutral info.	4.03	.81
Positive affect by negative info.	3.82	1.13
Neutral affect by neutral info.	4.12	.70
Neutral affect by negative info.	3.88	.86

Note. N = 132.

Scale: 1 = "Definitely Change Decision", 2 "Probably Change Decision", 3 = "Possibly Change Decision", 4 = "Probably Not Change Decision", 5 = "Definitely Not Change Decision"

Table 5

Means and Standard Deviations for Confidence at Time Two

Breakdowns	Confidence at Time Two	
	<u>M</u>	<u>SD</u>
Main Effect Affect		
Positive	5.71	1.31
Neutral	5.64	1.21
Main Effect Valence of Information		
Neutral	5.86	1.01
Negative	5.49	1.45
Interactions		
Positive affect by neutral info.	6.03	.85
Positive affect by negative info.	5.39	1.60
Neutral affect by neutral info.	5.70	1.13
Neutral affect by negative info.	5.58	1.30

Note. N = 132.

Scale: 1 = "No Confidence at all", 2 "15% Confident", 3 = "30% Confident", 4 = "55% Confident", 5 = "70% Confident", 6 = "85% Confident", 7 = "100% Confident"

Results for rating of originally chosen candidate at time two. The third hypothesis stated that there would be an interactive effect of affect and valence of additional information on ratings of originally chosen candidate at the time two measurement. In addition, a main effect of affect and a main effect for valence of additional information on this variable was hypothesized. Although there was not a main effect of affect, both the main effect for valence of information and the interaction effect of affect and valence of information were significant (See Table 6). It was predicted that subjects in neutral affective states given negatively valenced additional information regarding their previous choice would change ratings of the originally chosen candidate significantly more than subjects in positive affective states. It was further predicted there would be a relatively small difference in change of ratings of originally chosen candidates between positive and neutral affective states when additional information was neutrally valenced. The data revealed partial support for the form of the interaction. Subjects in the positive affect condition who received neutral information tended to give the highest ratings to the previously chosen candidate. Contrary to the

Table 6

Analysis of Variance Table of Rating Candidate Chosen
in First Rating Task on Subsequent Ratings by Affect,
Information, and Affect by Information

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>DF</u>	<u>Mean Square</u>	<u>F</u>	<u>p</u>
Main Effects	88.79	2	44.39	29.36	.00
Affect	3.67	1	3.67	2.43	.12
Information	85.12	1	85.12	56.30	.00
Interaction	5.94	1	5.94	3.93	.05
Affect by Info.	5.94	1	5.94	3.92	.05
Explained	94.72	3	31.58	20.89	.00
Residual	193.52	128	1.51		
Total	288.24	131	2.20		

Note. N = 132.

hypothesis, though, subjects in the positive affect condition who received negative information tended to give the lowest ratings to the previously chosen candidate (See Figure 1). The main effect for additional information was in the predicted direction with subjects receiving negatively valenced additional information giving lower ratings to the previously chosen candidate in the second rating task than those subjects receiving neutrally valenced additional information. For means and standard deviations see Table 7.

Results for average of originally unchosen candidates at time two. The fourth hypothesis stated that there would be an interaction effect of affect by valence of information and two main effects, affect and valence of information, on the average rating of the originally non-chosen candidates in the second rating task. Results show that there was no significant main effects and no significant interaction effect. The interaction, affect by valence of information, had a non-significant effect of $F(1, 128) = .22, ns$. Affect as an independent variable had a non-significant effect of $F(1, 128) = .00, ns$. Information valence as an independent variable had a non-significant effect of $F(1, 128) = 1.04, ns$. All means and standard

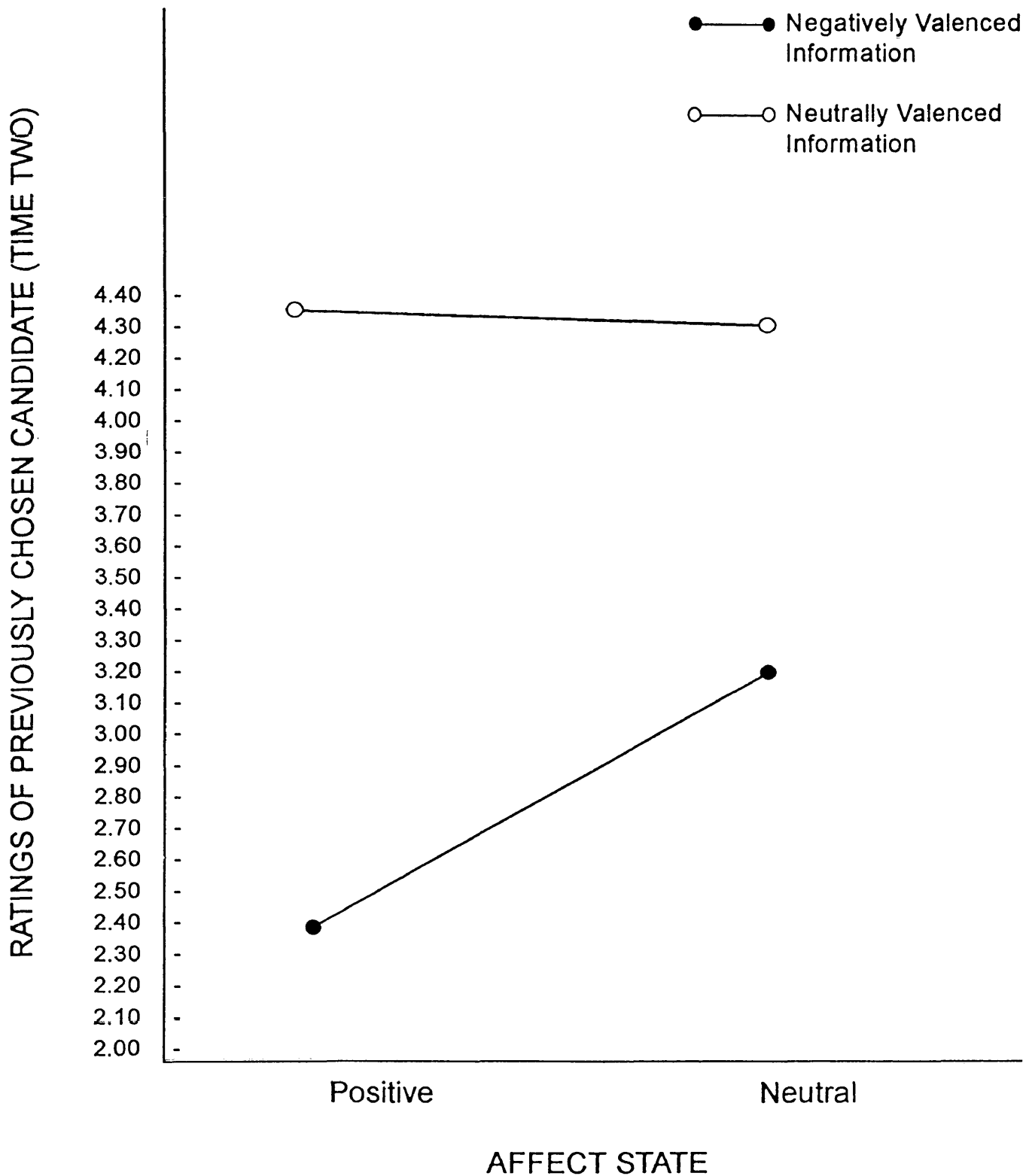


Figure 1. Ratings of previously chosen candidate at time two as a function of affect and information

Table 7

Means and Standard Deviations for Ratings of Time One
Chosen Candidate at Time Two

Breakdowns	Rating of Time One Chosen Candidate at Time Two	
	<u>M</u>	<u>SD</u>
Main Effects Affect		
Positive	3.41	1.62
Neutral	3.74	1.32
Main Effect Valence of Information		
Neutral	4.38	.92
Negative	2.77	1.51
Interactions		
Positive affect by neutral info.	4.42	1.09
Positive affect by negative info.	2.39	1.44
Neutral affect by neutral info.	4.33	.74
Neutral affect by negative info.	3.15	1.50

Note. N = 132.

Scale: 1 = "Dislike a lot", 2 "Dislike a little", 3 =
"No preference", 4 = "Like a little", 5 = "Like a lot"

deviations can be found in Table 8.

Results for rating of subsequently chosen candidate at time two. The fifth hypothesis stated that there would be an interaction effect, affect by valence of information, and two main effects, affect and valence of information, on subsequently chosen candidate rating at time two. Results show that the interaction effect of affect by valence of information was non-significant with $F(1, 128) = 1.49, ns$. Affect, as a main effect, did not significantly affect the candidate rating, $F(1, 128) = .61, ns$. As predicted, though, valence of additional information had a significant effect on the rating of the candidate chosen at time two, $F(1, 128) = 3.82, p < .05$. Subjects given negatively valenced additional information after the first rating gave a lower rating to the candidate chosen at time two. Means and standard deviations can be found in Table 9.

Results for average of subsequently unchosen candidates at time two. According to hypothesis 6, affect and valence of additional information should have both main effects and an interaction effect on average ratings of subsequently unchosen candidates at time two. Again, results show that the interaction was not significant, $F(1, 128) = 1.07, ns$. And, although

Table 8

Means and Standard Deviations for Ratings of Time One
Unchosen Candidates at Time Two

Ratings of Time One Unchosen Candidates at Time Two		
Breakdowns	<u>M</u>	<u>SD</u>
Main Effects Affect		
Positive	3.37	.73
Neutral	3.37	.75
Main Effect Valence of Information		
Neutral	3.30	.78
Negative	3.43	.68
Interactions		
Positive affect by neutral info.	4.03	.81
Positive affect by negative info.	3.82	1.13
Neutral affect by neutral info.	4.12	.70
Neutral affect by negative info.	3.88	.86

Note. N = 132.

Scale: 1 = "Dislike a lot", 2 "Dislike a little", 3 =
"No preference", 4 = "Like a little", 5 = "Like a lot"

Table 9

Means and Standard Deviations for Ratings of Time Two
Chosen Candidate at Time Two

	Ratings of Chosen Candidate at Time Two	
	<u>M</u>	<u>SD</u>
Main Effect Affect		
Positive	4.21	1.17
Neutral	4.24	.86
Main Effects Valence of Additional Information		
Neutral	4.44	.86
Negative	4.02	1.13
Interactions		
Positive affect by neutral info.	4.52	.94
Positive affect by negative info.	3.91	1.31
Neutral affect by neutral info.	4.36	.78
Neutral affect by negative info.	4.12	.93

Note. N = 132.

Scale: 1 = "Dislike a lot", 2 "Dislike a little", 3 = "No preference", 4 = "Like a little", 5 = "Like a lot"

the main effect of affect was not significant, $F(1, 128) = .31$, ns, the valence of information main effect was significant, $F(1, 128) = 5.68$, $p < .05$. Those subjects who received negatively valenced additional information after their first decision gave lower ratings to their unchosen alternatives at time two compared to those receiving neutrally valenced additional information after their first decision. See Table 10 for means and standard deviations.

Results for change in candidate choice. Finally, Hypothesis 7 stated that there would be an interaction effect and two main effects of affect, valence of information, and affect by valence of information on the choice of the alternative candidate. Specifically, frequency of subjects changing their choices from time one to time two were analyzed using multi-way frequency analysis. Multi-way frequency analysis is related to the loglinear analysis and tests the association of discrete variables. Unlike the Chi-Square test, though, multi-way frequency analysis can calculate the association of more than two discrete variables. This analysis is "like a multiple regression or a nonparametric analysis of variance with a discrete" (Tabachnick & Fidell, 1989, p. 237) dependent variable as well as discrete independent variables. Results of

Table 10

Means and Standard Deviations of Time Two Unchosen
Candidate at Time Two

	Ratings of Unchosen Candidate at Time Two	
	<u>M</u>	<u>SD</u>
Main Effect Affect		
Positive	3.09	.77
Neutral	3.16	.71
Main Effect Valenced Additional Information		
Neutral	3.27	.79
Negative	2.97	.66
Interactions		
Positive affect by neutral info.	3.30	.84
Positive affect by negative info.	3.87	.65
Neutral affect by neutral info.	3.24	.76
Neutral affect by negative info.	3.07	.67

Note. N = 132.

multi-way frequency analysis give the researcher both the confidence intervals and multi-way frequency coefficients which are parameters or deviations from the grand mean. These deviations are derived from natural logarithms of the proportions of expected frequencies divided by N (Tabachnick & Fidell, 1989). These parameter estimates are then converted in a three step process to standard scores to compare relative contributions of the various parameters to the frequency in a cell (See Haberman, 1978).

Confidence intervals obtained from multi-way frequency analysis demonstrate significant associations if the interval does not include zero. The confidence interval for the interaction of affect by information was not significant (Coefficient = .194941, Lower Confidence Interval = -.10512, Upper Confidence Interval = .31500). The main effect of affect on ratings was also non-significant (Coefficient = .54248, Lower Confidence Interval = -.15581, Upper Confidence Interval = .26431). Consistent with the hypothesis, the main effect of information was significant (Coefficient = .666943, Lower Confidence Interval = .45688, Upper Confidence Interval = .87700). Those given negatively valenced additional information changed their choices from time one to time two

significantly more compared to those given neutrally valenced additional information. Of the 66 subjects in neutrally valenced additional information condition, 16 (24%) changed their candidate choice, whereas 55 (83%) of the 66 subjects in negatively valenced additional information condition changed their candidate choice.

Reported F Values

Because, at first glance, many of the reported F values were less than one, an analysis was done to determine if a significant number of these values were too low. If a significant number of F values fall below one, it is possible that the F test assumptions may not be tenable. Overall, there were 18 F tests in this study, seven of which were less than one. The inverse of these seven F 's were computed and the resulting value was compared to critical F 's of the F distribution. For the tests of regret, two F tests were less than one. The obtained F value for the effect of affect on regret was .01. Analysis demonstrates that this value is significantly less than one $F(1,128) = 100, p < .05$. Also, the obtained F value for the effect of affect by valence of additional information was .24. Analysis demonstrates that this value was not significantly less than one $F(1,128) = 4.16, p > ns$.

For the tests of confidence, one F test was less than one. The obtained F value for the effect of affect on confidence was .12. Analysis demonstrates that this value is significantly less than 1.0, $F(1,128) = 8.343$, $p < .05$.

For the tests of average ratings of originally unchosen candidates at time two, two F tests were less than one. The obtained F value for the effect of affect on the average ratings of originally unchosen candidates at time two was .00. This value is obviously significantly less than 1.0, $F(1,128) p < .05$. Also, the obtained F value for the effect of affect by valence of additional information was .22. This value was not significantly less than one $F(1,128) = 4.54$, $p > ns$.

For the tests of the rating of the subsequently chosen candidate at time two, one F test was less than 1.0. The inverse of the F value for the influence of affect on rating of subsequently chosen candidate at time two was .61. This value is not significantly less than 1.0, $F(1,128) = 1.64$, $p = ns$. For the tests of the average ratings of the subsequently unchosen candidates at time two, one F test was less than one. The inverse of the F value for the effect of affect on average ratings of subsequently unchosen candidates at

time two was .31. This value is not significantly less than one $F(1,128) = 3.23$, $p = ns$.

In conclusion, only three of the seven F values less than 1.0 were statistically significantly lower than 1.0. Thus 3 of the 18 F -tests conducted in this study, or 16%, were significantly lower than 1.0. All three of the F values less than 1.0 were tests of the affect main effect. Two of these three occurred when a one-item measure of a dependent variable was used (regret and confidence). Also, in all three situations, the obtained means for each affect level were virtually identical and the standard deviations were larger. This is an unusual situation but the lower proportion of these results suggests that the assumptions of the F -test were not violated. Furthermore, Keppel (1982) downplays the importance of obtaining F values that are larger than 1.0. He states that when F values are lower than 1.0, the researcher need only to report $F < 1.0$ since no F value lower than 1.0 can be significant.

Discussion

The general purpose of this experiment was to determine if an individual's affective state would moderate the effect of valence of additional information in terms of the amount of post-decisional regret experienced, confidence levels, decision ratings and choices.

Overall, there were no significant effects of affective state on self-reports of regret or confidence; nor were there any significant results for ratings of alternatives or changes in alternative decision. However, the data showed strong support for the influence of the valence of additional information on changes in ratings of decision alternatives and on decision choice. Only one significant interaction was obtained (the rating of a previously chosen alternative after exposure to the independent variables).

Although results showed that the affect manipulation was effective and lasted for the duration of the experiment, it did not seem to affect the dependent variables in the main study. It is possible that the failure of the affect manipulation to produce significant effects was due to the task itself. The task of rating and choosing a new professor may not have carried personal relevance for these subjects.

Deldin and Levin (1986) found significant mood effects for very personal decisions but not for less personal decisions. This could have implications relating to the present study. Although it was intended that the decision task in this study would be seen as important to the subjects individually, the majority of the subjects were not psychology majors and, thus, probably did not anticipate taking another psychology course in the future. This fact would have made the decision less personal to them and, according to Deldin and Levin, the affect condition would have less impact on their candidate ratings as well as their confidence and regret ratings.

Although affective state did not have a main effect on any of the dependent variables, it did interact with valence of additional information in the rating of a previously chosen candidate following exposure to the independent variables. There are a few possible explanations for this interaction. First of all, it is possible that subjects in the positive affect/negatively valenced additional information condition did not want to be perceived as having made a wrong decision and thus, when they had a chance to change their rating, they did. If this is the case, one would expect to find the same effect in the

decision choice variable. It is possible, though, that subjects believed that changing their candidate choice would have been more obvious to others and then it might appear as though they were admitting fault for the poor decision. Again, research shows that subjects in positive affective states tend to avoid situations which could possibly decrease their affective state (Arkes, et al., 1988; Isen, et al., 1988) and so, avoid being perceived as wrong.

On the other hand, subjects in the neutral affect/negatively valenced additional information condition decreased their ratings of the previously chosen candidate less than those in the positive affective state. Subjects in the positive and neutral affect/neutrally valenced additional information conditions may have had no reason to change their ratings or choices. Those in the positive affect condition may have been happy with their previous decision and so were consistent in the second rating task. Those in the neutral affect condition may not have changed their ratings because that would take time and effort that they did not want to expend.

A plausible reason for this type of interaction not occurring in the case of regret and confidence ratings is the fact that if subjects were to admit that

they had lost confidence and had feelings of regret because of a decision, they would be admitting to themselves and others that they had indeed made a wrong decision. If they do not admit to high regret and low confidence, they will feel that the decision error was not due to their own negligence and thus, they can maintain positive affect.

Another explanation for this interaction lies in the fact that people tend to judge others less severely if they are seen as similar to that judge (Burger, 1981). In this case, those in positive affective states would perceive themselves as possessing positive characteristics (Isen et al., 1978). They will then, after learning of the negative characteristics of the candidate they initially chose, perceive that candidate as less similar to themselves and consequently rate that candidate much lower than their initial rating and the rating of those subjects in the neutral affect condition. It is possible that those in the neutral affect condition did not recall as many positive characteristics of themselves and thus their perceptions of the candidate's characteristics were more similar to their own.

Also, Cialdini and Richardson (1980) and Amabile and Glazebrook (1982) found that when subjects are made

to feel insecure or if their self-esteem is threatened, they will judge others more harshly and judge themselves or their group more leniently. In this experiment, those subjects in the positive affective condition may have felt their self-esteem was being threatened and consequently drastically lowered their rating of the previously chosen candidate. Finally, it is reasonable to assume that the subjects in the positive affect/negatively valenced additional information condition simply did not re-process the information regarding the candidate of their choice after receiving the feedback. Research shows that positive affect acts to motivate decision makers to avoid effortful processing of information as a means of mood maintenance (Isen, 1984). Also, Isen (1984, 1987) and Schwarz (1990) found that when faced with a decision, subjects in positive affective states tend to reach decisions more quickly, use less information, avoid demanding systematic processing of information and are more confident about their decision than those in negative affective states. Thus, subjects in the present study who were in the positive affect condition may have re-examined the old information about the candidate they previously rated after receiving negative information about that candidate. Instead,

they simply may have used the new information as a means of rating the candidate in the subsequent rating task. Conversely, the subjects in the neutral affect condition may have re-examined the characteristics of the candidate they had chosen previously after they received the negatively valenced additional information about that candidate. They subsequently integrated the new information with the original information and made their decisions accordingly. Thus, it is possible that they were not as harsh in their ratings as those subjects who simply used the new information in the rating task.

Discussion of Hypotheses

The predicted interaction of affect and valence of additional information on regret was not supported. Also, the main effects were not found to be significant. Although the reported feelings of regret were in the direction of the hypothesis with subjects in the negatively valenced additional information condition reporting more regret than those in the neutral information condition, these differences were not significant. It is possible that because subjects had no control over the information they were provided in the beginning, they did not regret making the wrong decision because they could not have known at the

time that they were making the wrong decision. According to Sugden (1985), one factor of regret is self-blame. The subjects in this experiment may have not blamed themselves for making the wrong decision since, in actuality, it was not their fault that they did not have all the information when they made the decision.

Another possible reason that subjects did not experience post-decisional regret when exposed to negatively valenced additional information was explained by Bell (1983). According to Bell, the degree of regret experienced by a decision maker depends upon whether or not the "lottery," or in this case the hiring of a new professor, is carried out or brought to the attention of the decision maker. Subjects in the negatively valenced additional information condition may not have experienced feelings of regret because they did not know for sure whether or not their vote for the "poor" candidate actually contributed to the hiring of that candidate. In fact, it is highly possible that the subjects, in order to avoid feelings of regret for choosing the wrong candidate, engaged in the act of "diffusion of responsibility" (Latane & Darley, 1970). This may have been done by making themselves believe that their vote

would not have affected the final choice for professor since there were so many other people voting. In other words, since the subjects were not told which candidate was ultimately hired, the outcome of their decision was left to speculation. Therefore, it was made possible for the subjects to engage in this "diffusion of responsibility" and not experience regret for their decision.

Next, the predicted interaction of affect and valence of additional information on confidence was not supported. Although the main effect of affect on confidence was non-significant, there was a marginal effect of additional information on confidence. There was a slight difference in confidence levels between those subjects in the different information conditions. Those in the negatively valenced additional information condition reported slightly less confidence in their decision than those in the neutrally valenced additional information condition. Again, this was not a significant effect but it was marginal. In actuality, the mean confidence levels of all conditions were between "100% confident" and "70% confident." These are somewhat high confidence levels given the negatively valenced additional information that some subjects were exposed to. There are a few possible

explanations for these high and stable confidence ratings. First of all, according to Gioffre and Lawson (1992), subjects tend to report more confidence in themselves and feel there is less risk involved in a decision when they believe the outcome will only affect them and not others. It is possible that the subjects believed that their one vote would not affect the hiring process of the new professor and thus their vote would not affect any other students. Therefore, they felt more confident in their decisions. Also, Zakay (1985) demonstrated that post-decisional confidence ratings following cognitively simple decision processes were significantly higher than those ratings preceded by cognitively complex decision processes. The decision task involved in this study may have been cognitively simple for these subjects. Subjects were simply asked to review information provided to them and choose which candidate they preferred. If subjects did not feel personally involved in this decision, it may have been very simple for them. Thus, according to Zakay, confidence ratings should be higher in this situation.

Snizek, Paese and Switzer, III (1990) found that confidence ratings are generally inflated due to the methods of gathering this information. Most often

questions that are positively framed ("What is the probability that your choice is correct?") tend to elicit more positive responses than if the question is negatively framed ("What is the probability that your choice is wrong?"). The confidence statements in this study were positively framed and therefore could have caused reports of higher confidence levels in subjects.

Although results show that confidence ratings were in the hypothesized direction, with subjects in the negatively valenced additional information condition reporting slightly less confidence in their choice and ratings than those in the neutrally valenced additional information condition, this was not a significant difference. This could be due to the fact that subjects are committed to maintain a somewhat consistent image. Geller and Pitz (1968) found that following disconfirming information regarding a previous choice, subjects demonstrated a definite resistance to decreasing their confidence ratings because of this commitment component. It is also possible that subjects did not take the task as seriously as anticipated and thus did not judge their confidence levels accurately. According to Janis and Mann (1977b) and Pflum and Brown (1984), if subjects are not under very much stress in the decision task,

the task may not generate enough interest for the decision maker. This finding would explain interest problems of this study. It is highly unlikely that subjects experienced stress when making this decision. Thus, they did not have the interest level that would be desirable to make an accurate assessment of their confidence.

The third hypothesis, which predicted an interaction of affect and valence of additional information on the rating of the originally chosen candidate in the second rating task, was supported. As predicted, subjects in the positive affect and neutrally valenced additional information conditions tended to rate the previously chosen candidate the highest in the second decision task. Contrary to prediction, though, subjects in the positive affect and negatively valenced additional information conditions tended to rate the previously chosen candidate the lowest in the second decision task. There are a few possible explanations for this behavior. First, the negatively valenced additional information may have come as a complete surprise to subjects in the positive affective state. They were in a good mood and were not expecting such a let down. Thus, they may have been caught off guard.

Affect, as a main effect, was not significant. There was, however, a significant main effect of valence of additional information. Subjects in the negatively valenced additional information condition rated the previously chosen candidate lower in the second decision task, and subjects in the neutrally valenced additional information condition rated the previously chosen candidate higher in the second decision task. This suggests that the neutrally valenced additional information may have given support to the subject's initial evaluation of the candidate's credentials. The negatively valenced additional information, however, did not support the subject's initial evaluation of the candidate's credentials. This information caused the subjects to believe that the candidate of their choice had some negative characteristics that outweighed those credentials that were initially rated very highly.

The fourth hypothesis predicted an interaction of affect and valence of additional information on the average rating of the originally non-chosen candidates in the second rating task. This prediction was not supported. Although mean ratings of the unchosen candidates are in the hypothesized direction, they did not reach significance. It seems that, although

valence of information had a main effect on the rating of the originally chosen candidate, the subjects may not have re-evaluated the other candidates but simply chose the next best candidate with a few minor adjustments in ratings. These results are not consistent with some past research. Research has found that positive affect motivates decision makers to avoid effortful processing (Isen, 1984), use less information, avoid demanding systematic processing and reach decisions more quickly (Isen, 1984, 1987; Schwarz, 1990). Also, Clark & Isen, (1982) have found that negative affect motivates decision makers to search for information in order to alleviate the negative feeling. Also, past research has shown that response mode affects information search when making decisions (Billings & Scherer, 1991). Although the previous research does not support the findings of this study, there is some research that can explain the results of this study. It is highly possible that the negatively valenced additional information acted like negative feedback. Research has shown that subjects that receive negative feedback tend to lose intrinsic motivation for a task and place less importance on succeeding at the task (Deci & Ryan, 1980; Jussim, Coleman & Nassau, 1989).

The predicted interaction of affect and additional information on the rating of the candidate chosen in the second rating task was not supported. There was, however, a significant main effect of valence of information on ratings. Subjects who had previously received negatively valenced additional information regarding a past decision rated the subsequently chosen candidate lower than those who had previously received neutral information regarding a past decision. There was not a main effect, however, of the affect condition. This suggests that negatively valenced additional information regarding a past decision affects future decision making.

The sixth hypothesis predicted an interactive effect of affect and valence of information on average ratings of those candidates not chosen in the second rating task. This interaction prediction was not supported. The prediction of a main effect of affect was also not supported, however, there was a significant effect of valence of additional information. Those subjects who received negatively valenced additional information rated the subsequently non-chosen candidates in the second rating task significantly lower than those in the neutrally valenced additional information condition. Again, this

suggests that decisional regret regarding a past decision affects future decision making. Subjects may have been afraid to give high ratings after receiving negative information in the past. They may have been concerned that, again, they did not have all the information available and thus were attempting to avoid regret in the future.

Finally, the predicted interaction of affect and additional information on the choice of candidate was not significant. Results demonstrated a significant main effect of the valence of information manipulation but not of the affect manipulation alone. This demonstrates that after receiving negatively valenced additional information, a significant number of subjects changed their recommendation for professor as compared to those who received neutrally valenced additional information regardless of their affective state. This result suggests that subjects, when given negatively valenced additional information regarding a past decision realized that their initial candidate choice was wrong and changed that choice when given the opportunity. According to Festinger (1957), the amount of dissonance present after making a decision is a direct function of the amount of conflict present before making that decision. Therefore, the more

difficulty an individual has in making a decision between alternatives because of competing positive and negative characteristics, the greater the tendency to engage in cognitive dissonance reducing activities such as attempting to justify the previous decision. In this study, the subjects may not have had difficulty making the decision since, as was explained earlier, the decision task probably was not very personal to them and thus not very important.

In review, there was only one significant interaction effect of affect and additional information. This interaction was associated with the rating of the originally chosen candidate rated in the second decision task. The main effect of valence of additional information did not affect either regret or confidence levels but it did affect the final choice and all ratings of candidates except the average rating, in the second decision choice, of those candidates that were not chosen in the first decision choice. Finally, results demonstrate that affect did not have a significant main effect on any of the dependent variables.

There was no effect of any variable, main or interactive, on either regret or confidence ratings. In fact, there was little difference between these

ratings in any condition. The mean regret rating for all subjects was 3.96 with a standard deviation of only .89 and the mean confidence rating for all subjects was 2.24 with a standard deviation of 1.26. Some reasons for these differences, along with other limitations of this study are discussed in the following section.

Limitations

The primary goal of this study was to determine whether affect, or temporary mood, moderated the amount of post-decisional regret experienced by decision makers receiving additional information after making an irrevocable decision. It must be noted that individual trait affect may affect post-decisional regret and subsequent decision making differently than individual state affect.

Although pilot studies demonstrated that the comic strips induced positive affect states in subjects, some may argue that the subjects in the final experiment may have viewed the comic book task of reading the comics and noting on a piece of paper which comics they found to be the most amusing as a job. Research shows that a task that was once an enjoyment to the performer may not carry the same enjoyment level when the performer is told to carry out the task. In other words, if the researcher asks the subjects to perform a "job" which

includes a task that carries intrinsic rewards for the subject, that task will be seen as "work" and thus lose its rewarding factor to the subjects (Deci, 1975; Deci, Nezlek, & Sheinman, 1981; Lepper & Greene, 1975). This fact was not found to be a problem in this study. Analysis shows that, in fact, subjects in the positive affect condition were in significantly more positive affective states after both neutrally valenced and negatively valenced additional information than those in the neutral affect condition. It is suggested, however, that future research avoid this potential problem by insuring that pilot studies and final experiment are exactly alike.

Another problem with the induction of positive affect and effectiveness of the comic strips may lie simply in the measurement of affective state. It would have been preferable to measure the affective state of each individual twice; once after the affect induction manipulation and once after the subjects are given the additional information. As it was, we only measured affective state after the additional information was given. This was done to avoid sensitization of the subjects. It was assumed that, as was shown in the pilot study, the affect induction manipulation actually changed the affective state of the subjects in the

direction of the manipulation. Thus measuring affective state one time seemed sufficient given the problems that may have surfaced had the subjects "caught on" to the purpose of the experiment. As was stated earlier, subjects in the positive affect condition reported significantly higher affective states than those in the neutral affect condition, but it is advised that future research use an affect measure twice if at all possible.

Another measurement problem inherent in this study was that of regret and confidence. It is likely that the experiment did not utilize the optimal method of measurement for regret and confidence. Neither of these measures were created in a manner that allowed for the measurement of reliability. Both measures were single-item measures, thus, internal consistency was not appropriate. Both measures were given to subjects at two different times but two different manipulations were present between the measures. Thus, test-retest reliability was also inappropriate.

Thus far in the literature there has been no direct measure of regret. This is not surprising as there is still no definite, agreed upon definition of regret. Once regret is identified specifically, it will become more clear as to how to measure this

concept. Until that time, we must utilize our research and knowledge to attempt to find the best measure of regret as we understand it.

Another problem with the measurement of regret stems from the fact that it is possible that people in different affective states deal with regret differently rather than feel regret differently. We may all feel regret in the same manner, but some may deal with it through verbalization or actions whereas others may keep their feelings to themselves and thus "stew" in their feelings of regret. These different processes of dealing with regret may have caused subjects to respond differently on the questionnaire. Some may have chosen to hide their feelings in an attempt to "save face" whereas others may have verbalized their feelings of regret in order to relieve themselves of this feeling.

Aside from measurement problems and affect state induction problems, the "main task" of this study, rating and choosing candidates for professor, may itself pose a problem. First of all, the difference between the computer information given and the information given to subjects on cards may be a factor in subjects' decisions. Subjects were first asked to review candidate credentials via a computer program. The candidates and their credentials were presented

in a computer display. In the second task, subjects were asked to review the credentials of the candidates which were given to them on a typed 8 1/2 x 11 piece of paper. "Although this might be a minor difference, task and display effects can be powerful and it is important to show that response mode effects are robust" (Payne, 1982). Future research should attempt to keep response mode effects equal to ensure that the minor details do not bias the results of the experiment.

Secondly, the subjects' involvement with the task may have also played a role in their decision making. Although an attempt was made to create an important decision task, the fact remains that this was a laboratory study and it is highly possible that the subjects did not take the study as seriously as the experiment intended. It is also possible that the subjects did not believe the task of selection of a professor was very important. Although all of the subjects were enrolled in a psychology course, many were not psychology majors and it is possible that many did not anticipate taking another psychology course again and thus, the decision would lack personal importance and consequence. Also, the task was anonymous. The subjects knew that their decision could

not be linked to them and thus did not feel pressured to make a sound decision. Had this been a highly important personal decision to subjects, I believe there would have been a significant effect of affective state and additional information condition on post-decisional regret. The more involved the subjects were in this decision, the more regret they would have experienced.

Because this decision may not have been important to subjects, this study may lack ecological validity. Although this may be the case, the study will still have internal validity. Because of the use of random assignment, it is safe to say that all conditions were equal. It is most likely that all subjects had a lower effect from the independent variables but the direction or effect of these independent variables on the dependent variables was different between conditions. All groups should have been affected the same and thus, although the magnitude of the effect may be more modest, the directions should all be the same as if the task was regarded as highly important.

The question remains - had the subjects believed this was indeed an important decision, would they have been affected more by the affect and information conditions? According to the research, in this type of

study where many people are involved in making a single decision and where the subjects know that others are involved in making that decision, subjects will not feel regret or remorse for poor decision making (Brown, 1986). Brown (1986) states that when people have "done things their own consciences could not approve" (p. 173), they will engage in self-serving bias techniques. They will deny any responsibility for their actions or the outcome and blame the situation. Also, researchers have found that when working within groups, not unlike the situation of this study, individuals will engage in diffusion of responsibility (Darley & Latane, 1968). Their production, or in this case, the effort they put into a task, will decrease because they know that their individual production or effort cannot be identified (Williams, Harkins, & Latane, 1981). Also, although they made a poor decision, they may not necessarily be held accountable for that decision (Burger, 1981; Brown, 1986; Harkins & Jackson, 1985; Kerr & Bruun, 1981; Simonson & Nye, 1992). According to Brown (1986), although an actor's actions led to a particular negative outcome, if that person did not intend for that outcome to occur, he or she may not be held accountable. In the case of this study, subjects may have not experienced post-decisional regret for the

mere fact that they did not feel they were responsible for their previous poor decision. They had, after all, made the best decision they could have made given the information available at the time of that decision. Even though they realized that the "wrong" candidate may be chosen for professor partially due to their vote, they also realized that they could not be held accountable for their poor decision.

Also, it is possible that if the outcome of the decision were made more salient to the subjects, the negatively valenced additional information may have produced significant results as far as post-decisional regret and confidence ratings are concerned. In order for subjects to experience post-decisional regret, they must experience a negative outcome. It was assumed in this study that the negatively valenced additional information would work as a negative outcome, but it is possible that subjects were able to talk themselves out of the feeling of regret for making a "wrong" decision by making themselves believe that the choice they made did not affect the final professor choice.

On the other hand, according to the data, the valence of the additional information did not operate via the regret/confidence mechanism. Since no effect was found for the independent variables on self-

reported feelings of regret and confidence, but effects were found for candidate ratings and choice, it is apparent that feedback affects future decision making although, not through regret and confidence. A note of caution should be taken with these results, though, since regret and confidence ratings were self-report ratings. It is possible that subjects, for reasons of ego, self-esteem, self-presentation, etc., did not accurately report their feelings of regret and confidence. Therefore, these variables may have actually been involved in the change in decisions but not accurately reported. On the other hand, it is highly possible that decision changes were actually direct results of the negative feedback given. According to most drive theories, decisions concerning present behavior are based primarily on the consequences of past behavior (see Allport, 1954; Thorndike, 1911). These theories state that if past actions lead to negative consequences or punishment, individuals will tend to avoid repeating them. Researchers soon began introducing concepts to explain this behavior such as "homeostasis" (Cannon, 1939) "law of effect" (Thorndike, 1911), and "drive" (Woodworth, 1918). The basic premise of all these explanations is that people have goals or drives. When

these goals aren't met, they experience a state of disequilibrium and do what needs to be done in order to return to their normal state. Thus, when feedback is negative, people will automatically (instinctively) change their decision in order to reach their goals (Woodworth, 1918).

Finally, subjects' involvement in the study and their affective states may also have affected their information search processes. In fact, it is possible that rather than moods affecting post-decisional regret and decision making directly, they may affect information gathering directly, thus affecting the decision itself indirectly. For example, subjects in one condition may study the candidate credentials more carefully than others. Through their thorough search of information, those subjects may actually uncover some characteristics that would lead them to choose a different candidate than those who quickly review the credentials. This may, in turn, cause those subjects who reviewed the candidate credentials thoroughly to not change candidate ratings and choice regardless of the type of additional information they received because of their thorough understanding of each of the candidate's credentials.

Conclusions

The results of this study lead to several different conclusions. First of all, when making a decision similar to or the same as a previous decision given additional information regarding that decision, if the additional information is negatively valenced, it is very likely that the decision maker may alter his or her previous opinions about aspects of that decision and make the decision at hand differently. Also, an individual will tend to be more conservative in their future decision making because of the past decisional consequences experienced. Whether or not this is a long-lasting effect still needs to be examined, but for purposes of constant decision making, it seems apparent that the experience of negatively valenced additional information has an effect on the individual's future decision processes.

Although the decision maker receives negatively valenced additional information regarding the previous decision, results demonstrate that the decision maker will not significantly lose confidence in his or her decision making capabilities. Although, this could be due to the measurement used in this study. Had a more valid measure of confidence been used, we may have found confidence to decrease upon receipt of negatively

valenced additional information in the neutral affective states. Since it was found that ratings change and tend to decrease in subsequent decision tasks when given negatively valenced additional information, it seems that there would be some confidence loss also. This is a variable that must be studied further in order to get to the truth. Also, results suggest that simply because the decision maker changed his or her opinions about the aspects of the decision task and changed his or her decision if given the chance, this does not mean that the decision maker will report decisional regret. I do believe, though, had the regret measure been more reliable and valid, regret would have been found to be a significant effect of negatively valenced additional information.

One possible explanation for the small number of significant effects found is that the levels of the independent variables were somewhat subtle. For example, the difference between levels of affective state were neutral versus positive. It is very difficult to distinguish between two such levels. Had we utilized positive, neutral and negative affective states, I believe that we would have found more significant main effects of affective state and also more significant interaction effects. One complication

with using negative affective states is that there are many different types of negative affectivity. We would have to ensure that all subjects were experiencing the same negative affectivity, anger or sadness, since it is more than likely that these different negative states produce different behaviors.

Also, the additional information level differences were very subtle. The levels were neutral versus negative. Again, had we been able to utilize negative, neutral, and positive, I believe we would have found more significant effects.

Implications for Future Research

A follow-up study to this would, in my opinion, lead to more significant effects if the following precautions were taken. First of all, it is important that the decision task presented to the subjects is of high importance to those subjects. It must also be an irrevocable decision. Also, it is important that the decisions are made as soon as possible after the manipulations, especially that of affect, to insure that the manipulations are still affecting the subjects during the decision task. As far as the measurement of dependent variables is concerned, there must be a better measurement of regret and confidence utilized in following research. With these problems

controlled, the chances of finding significant effects will be greatly increased.

Also, Sugden (1985) states that regret is partially a function of the amount of blame individuals place on themselves. It is possible that subjects in this experiment did not experience a strong feeling of regret because additional information was not available to them at the time of the original decision. Future research could attempt to manipulate the culpability aspect in the original decision (provide a lot of information about alternatives that subjects would choose to search or not). Thus, subjects would be more likely to blame themselves, and experience regret, for a poor decision if they did not search all the available information.

As for the whole area of post-decisional regret, there is much room for further research. Very little research has focused on decisional regret along with other variables. It would be very interesting to see how subjects would react to a situation similar to the one presented in this study but while utilizing a decision task that is very personal and important to the subjects. If using college students as subjects, some ideas that come to mind are decisions that affect the following: class grades, year of graduation, and

chances of getting a job in their major area of study. These would be difficult tasks to carry out but would be much more personal to the subjects. Also, it would be interesting to see if subjects who are in positive affective states would remain in positive affective states after receiving negatively valenced additional information about a very personal and important decision.

Again, it would be useful to use more distinct levels of the independent variables such as positive, neutral and negative affectivity and positive, neutral, and negatively valenced additional information. The more specific researchers can be with the independent, and also dependent variables, the better able we will be to detect differences in confidence, decisional regret, and decision choices. Once we are able to perfect the manipulations and measurements in the labs, we can then move into the field.

A field study could be more helpful and practical if it were within the organizational setting itself. It would be very interesting to go into the field and be able to manipulate affective state and additional information regarding a past decision while observing how it affects the decision maker's future affective states and future decision making effectiveness. It

would also be interesting to see if the subjects lose confidence in their decision making abilities and if so, if their future decision making ability is actually affected.

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APPENDIX A

Teaching Characteristics Generated

Allows students to take make-up exams.
Seems to be bored with his or her job.
Reviews material before exam.
Requires a lot of reading.
Allows for extra credit.
Gives difficult exams.
Grades on a curve.
Speaks in a very monotone manner.
Likes to joke around with the class.
Lectures in addition to the book assignments.
Asks for class participation in discussions.
Gives essay examinations.
Has no attendance requirements.
Less than three exams throughout the semester.
Drops lowest test score.
Grades are based on more than test scores (attendance, assignments, participation)
Uses examples in lecture.
Comes to class prepared.
Lectures are easy to understand.
Lectures directly from his notes.
Gives long exams.
Talks about himself and his family.

Tests are a mixture of essay, multiple choice, and fill in the blank.

Gives quizzes between exams.

Has no attendance requirements.

Requires students to write a research paper.

Does not review before exams.

Assigns little out of class reading.

Gives multiple choice examinations.

Seems to be excited about subject matter.

Writes out lecture outlines for students.

Lectures completely over the book.

Lets class out early.

Is a hard grader.

Grades based on exam scores only.

Dresses professionally.

Lectures are boring.

Lectures very quickly.

Lectures very slowly.

Has strict attendance requirements.

Does not use a curve for grading.

Willing to help students outside of class.

Keeps class past scheduled class time.

Gives more than three exams during the semester.

Chooses interesting books for class.

Is friendly.

Tests are representative of class material.

Dresses sloppily.

Is knowledgeable about subject matter.

Lets class out at its scheduled time.

Repeats important points in different ways.

Talks in technical terms.

Is frequently late for class.

Gives out home phone number.

Has flexible office hours.

Asks difficult test questions.

Does not review before exams.

Is responsive to student suggestions.

Arrives to class on time.

Is frequently unprepared for class.

Does not use a curve for grading.

No extra credit is allowed.

Has little patience with students.

Teaches in a very professional and businesslike manner.

Gives essay examinations.

Lectures only, no class participation is required.

Is an easy grader.

Enjoys his or her job.

APPENDIX B

Teacher Characteristic Rating Scale

Please read the following characteristics of teaching assistants personalities, teaching methods, grading methods, etc. and rate them using the scale given below.

Do not put your name on this form. You may quit this survey at any time.

_____ What is your age?

1. Like very much in a teacher
2. Like a little in a teacher
3. Doesn't affect liking one way or another
4. Dislike a little in a teacher
5. Dislike very much in a teacher

_____ Allows students to take make-up exams.

_____ Seems to be bored with his or her job.

_____ Reviews material before exam.

_____ Requires a lot of reading.

_____ Allows for extra credit.

_____ Gives difficult exams.

_____ Grades on a curve.

- _____ Speaks in a very monotone manner.
- _____ Likes to joke around with the class.
- _____ Lectures in addition to the book assignments.
- _____ Asks for class participation in discussions.
- _____ Gives essay examinations.
- _____ Has no attendance requirements.
- _____ Less than three exams throughout the semester.
- _____ Drops lowest test score.
- _____ Grades are based on more than test scores (attendance, assignments, participation)
- _____ Uses examples in lecture.
- _____ Comes to class prepared.
- _____ Lectures are easy to understand.
- _____ Lectures directly from his notes.
- _____ Gives long exams.
- _____ Talks about himself and his family.
- _____ Tests are a mixture of essay, multiple choice, and fill in the blank.
- _____ Gives quizzes between exams.
- _____ Has no attendance requirements.
- _____ Requires students to write a research paper.
- _____ Does not review before exams.
- _____ Assigns little out of class reading.
- _____ Gives multiple choice examinations.

- _____ Seems to be excited about subject matter.
- _____ Writes out lecture outlines for students.
- _____ Lectures completely over the book.
- _____ Lets class out early.
- _____ Is a hard grader.
- _____ Grades based on exam scores only.
- _____ Dresses professionally.
- _____ Lectures are boring.
- _____ Lectures very quickly.
- _____ Lectures very slowly.
- _____ Has strict attendance requirements.
- _____ Does not use a curve for grading.
- _____ Willing to help students outside of class.
- _____ Keeps class past scheduled class time.
- _____ Gives more than three exams during the semester.
- _____ Chooses interesting books for class.
- _____ Is friendly.
- _____ Tests are representative of class material.
- _____ Dresses sloppily.
- _____ Is knowledgeable about subject matter.
- _____ Lets class out at its scheduled time.
- _____ Repeats important points in different ways.
- _____ Talks in technical terms.
- _____ Is frequently late for class.

- _____ Gives out home phone number.
- _____ Has flexible office hours.
- _____ Asks difficult test questions.
- _____ Does not review before exams.
- _____ Is responsive to student suggestions.
- _____ Arrives to class on time.
- _____ Is frequently unprepared for class.
- _____ Does not use a curve for grading.
- _____ No extra credit is allowed.
- _____ Has little patience with students.
- _____ Teaches in a very professional and businesslike manner.
- _____ Gives essay examinations.
- _____ Lectures only, no class participation is required.
- _____ Is an easy grader.
- _____ Enjoys his or her job.

APPENDIX C

College Students: How They Are Feeling

This survey is intended to assess the general affective state of average college students. Please be as truthful as possible as these results will be used in future descriptive analyses.

Please do not put your name on this form as it is intended to be completely anonymous. You may quit this survey at any time.

Please indicate to what extent you feel this way right now, that is, at the present moment, using the scale provided below. Please mark your answer sheet with the number which corresponds to your present feelings. For example, if you are feeling extremely happy, you would mark a "10".

1. Sad	1 2 3 4 5 6 7 8 9 10	Happy
2. Depressed	1 2 3 4 5 6 7 8 9 10	Upbeat
3. Displeased	1 2 3 4 5 6 7 8 9 10	Pleased
4. Disappointed	1 2 3 4 5 6 7 8 9 10	Delighted

Please indicate to what extent you have felt this way during the past few weeks using the scale provided below.

1. Sad	1 2 3 4 5 6 7 8 9 10	Happy
2. Depressed	1 2 3 4 5 6 7 8 9 10	Upbeat
3. Displeased	1 2 3 4 5 6 7 8 9 10	Pleased
4. Disappointed	1 2 3 4 5 6 7 8 9 10	Delighted

Please indicate to what extent you generally feel this way, that is, how you feel on the average, using the scale provided below.

1. Sad	1 2 3 4 5 6 7 8 9 10	Happy
2. Depressed	1 2 3 4 5 6 7 8 9 10	Upbeat
3. Displeased	1 2 3 4 5 6 7 8 9 10	Pleased
4. Disappointed	1 2 3 4 5 6 7 8 9 10	Delighted

(Based on Scherer, 1989)

APPENDIX D

CANADA'S SUPPORT OF THE UNITED NATIONS
PEACE-KEEPING OPERATIONS

BY

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WHAT the United Nations can amount to or what it is capable of doing ultimately rests upon the governments of its member states. Since its inception, only a very small number of its members have identified themselves very closely with the cause of UN peace-keeping. This close identification has developed to the point where it will not be wrong to say that the success of UN peace-keeping is regarded in these countries as a source of satisfaction of national interest.

It is submitted that the Canadian record of UN peace-keeping operations' support in general, and its financial support in particular, provides sufficient evidence to place Canada in the list of those very few countries to whom the UN owes much. The record indicates the Canadian policy on the financing of the UN peace-keeping operations has been almost exclusively guided by its deep and unremitting conviction that UN peace-keeping activities have much to contribute towards maintaining international peace and security. Out of this conviction has emerged a national policy of strong support of the UN in this area—a policy which is largely principle-oriented, which aims at a sharp delineation of a few important principles, while allowing considerable latitude in their application.

It is further submitted that over the past dozen years or so Canada has also consistently pursued a policy towards UN peace-keeping which is not only aimed at preserving the UN but also at satisfying the interests of the international community, as these are perceived by Canada. In doing so, Canada feels that the interests of its own citizens are also satisfied.

What follows in this brief article is an attempt to provide some documentary evidence from the Canadian foreign policy pronouncements as recorded in the official records of the United Nations and elsewhere, in support of the contention that Canada has a strong interest in seeing the UN continue its peace-keeping activities, and has provided strong support to the UN towards maintaining and enlarging this area of activity. Canada has done this largely by emphasising frugality and financial fairness for the benefit of its national citizens, while at the same time warning the member states that frugality cannot be purchased at the expense of abdication from crucial international duties—the most important of which, from the Canadian point of view, is their role in helping the United Nations, financially, to keep the peace.

CANADA'S SUPPORT OF U.N. PEACE-KEEPING OPERATIONS

EVIDENCE

A recent debate in the Canadian House of Commons indicated that the Government has now arrived at the conclusion that an inflexible adherence to the principles of sound international law or the law of the UN Charter leads to risky international politics when it comes to forcing the nations to contribute towards financing those international peace-keeping operations that they opposed. This conclusion resulted in Canada's announcement on 21 June 1965 that it will no longer insist that all UN members be forced to pay their full share of the assessed cost of UNEF and ONUC operations.¹ It further announced that the Government would donate \$4 million to help liquidate the Organization's deficit incurred because of the Russian and French refusal to honour their obligations.²

This announcement virtually meant the reversal of an earlier policy which Canada had followed for almost a decade. The Canadians made no secret of the fact that this change was caused by their fear that a rigorous application of the principle of compulsory payment for these two operations might force the Soviet Union, its allies, and France to withdraw from the UN and thus cause its destruction.³

The financial history of the UN peace-keeping operations can be roughly divided into three phases for analytical purposes:

1. *1946 to 1955*: During this period all UN 'peace-keeping operations' (a term which did not actually come into common usage until the 1956 Suez crisis) were supposedly financed under the rule of compulsory assessment of all UN members. There were objections to this rule, however, even during this period by some nations. It is interesting to note that the single enforcement action during this time—the Korean conflict—was financed completely through voluntary contributions, mostly American.
2. *December 1956 to December 1962*: This period can be readily classified as one of permanent trouble in this area. Here one finds the beginning of the challenges to the rule of compulsory payment by a number of states. It ended with the formal and overwhelming acceptance by the General Assembly of an Opinion by the International Court upholding the defenders of this principle.
3. *1962 to the present*: This period can be characterised by a reluctant and grudging abandonment of this principle by the United States and other Western allies in the face of Franco-Russian pressure and the reluctance of smaller countries to force the issue in the General Assembly through the application of Article 19. However, there is no mutually acceptable agreement or solution in sight.

The main emphasis of this analysis, therefore, will largely fall upon an examination of the financial aspects of Canadian peace-keeping policy during the crucial years of the second period, that is, from 1956 to 1962, and the third period from 1962 to the present.

Since the establishment of the United Nations, two major principles have guided Canadian policy toward UN finances. With the establishment of UNEF in 1956, a third principle was added. The three principles are: (i) frugality, which means that the

United Nations should spend moderately in the light of its modest resources, (ii) fair shares, which means that the member states' shares of UN expenses be fairly assessed in the light of their capacity to pay, (iii) universal and compulsory payments for peace-keeping operations. It is possible to analyse the Canadian-policy through the interaction and consequences of these three principles.

As early as 1946 the Canadian delegate to the UN concluded his speech with the advice that the Organization should practice economy by operating within its means.⁴ Soon after that the Canadian Government sent a letter to the UN pleading that the UN should be protected from financial bankruptcy by keeping its costs 'as low as possible', and by tightening its rules of procedure dealing with the Organization's financial aspects.⁵ Canada further argued that there was a certain amount of financial irresponsibility exhibited in actual UN procedures,⁶ and reminded the Organization that according to the provisional regulations of the United Nations,⁷ all but one of the UN's policy-making bodies were distinctively forbidden to make any decisions or commitments involving financial obligations, without a comprehensive prior knowledge of the extent of such commitments and the precise source of funds to meet them.⁸ Still later, it was Canada that took the initiative in proposing that just such restrictions should also be extended to the General Assembly.⁹ Without any significant changes or opposition the Canadian proposal was adopted by the UN.¹⁰ Consequently, since 1948 the United Nations has had strict regulations governing the authorisation of UN operations in any field which were to be financed through a compulsory assessment of the entire membership.¹¹ In the area of 'maintenance of peace and security' a concession was made, that is, an amount of \$2 million may be spent on a 'peace-keeping' operation without the prior approval and appropriation of the General Assembly (if the Assembly is not in session) provided the Secretary-General certifies the fact that the funds are urgently needed for the purpose stated.¹² For an amount in excess of this, he is required, under all circumstances, to obtain prior approval of the Advisory Committee on Administrative and Budgetary Questions. In the years that followed, Canada continued to point out the weaknesses in the Organization's financial procedures which have been periodically corrected.¹³ Despite its own economy drive, it is interesting to note that Canada was the first country to scold big and rich nations such as the USSR, the United Kingdom, and France for not providing ample funds to the UN in its effort to promote peace and stability in the developing nations.¹⁴

Arriving at the 1956 Suez crisis, it is again interesting to note that it was a Canadian leader who proposed the concept of a United Nations police force, and it was the Canadian delegate who contended that despite the expensiveness of the UNEF it must be strongly supported, for there is no activity more crucial to the spirit of the Charter and the purposes of the UN than the establishment and maintenance of peace in any part of the world.¹⁵ In 1960, at the time the ONUC was being set up, the Canadian delegate supported it and pointed out that \$60 million for the Congo operation—though larger than the entire regular budget of the Organization for that year—was a

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very small sum compared to the cost of a real war if it was to break out should the ONUC not be established.¹⁶ During the initial stages of the UNEF, it was again Canada who urged the member states donating troops to the Force to be extremely modest in their financial claims on the Organization in order not to burden the UN machinery beyond its financial capability.¹⁷ In other words, Canada favoured a policy of frugality but not to the point of restricting the expanding use of the UN in the area of peace-keeping. It was Canada's belief that if the UN was to survive, it must meet the challenge of international conflicts such as the Suez crisis by raising 'expensive' UN forces under the concept of 'necessary expenditures' and Canada supported the UN in this endeavour, while the other countries, according to Canada, are still lagging behind on this point even today.¹⁸ Canada's strong desire to support the UN in the UNEF operation was also manifested by its principle of flexibility. Therefore, in 1956, Mr Pearson was able to argue: 'surely... the most urgent and immediate duty for us is to get the UNEF into Egypt without delay'.¹⁹ Following Mr Pearson's declaration, the Canadian delegate was able to advise the UN Budget Committee that Canada was extremely interested in seeing the UN develop its peace-keeping capacity and 'did not wish financial considerations to interfere with the harmonious working' of the UNEF or the UN as a whole in this area.²⁰

Following the establishment of the UNEF, the Secretary-General proposed that all those expenses for the Force which are not borne by the states donating the troops and equipment should be financed outside the normal budget of the UN. It was Canada who pointed out the inherent dangers in such a proposal—namely, some nations might find it easier to refuse to pay a special assessment than their regular share of the assessment for running the Organization. But, reluctantly, with some reservations, the Canadians accepted the Secretary-General's proposal and voted for it, hoping the nations would after all pay their shares in the interest of international peace.²¹ It was the first mistake Canada made in this area, for, as it turned out, the Canadians' strong convictions of international peace through UN peace-keeping were not shared by many. The Secretary-General's proposal was adopted by a General Assembly resolution which Canada supported.²² The actual appropriations which established the special account and stated its initial size were made several weeks later and had Canadian support.²³ Some three to four years later when it became clear that the Soviet Union and many other countries were not willing to pay their share of UNEF expenses, it was the Canadian delegate who first admitted that the UN financial formula of special funds was a mistake.²⁴ But the precedent was set and it was too late for the ONUC not to have a special fund as well. It will be remembered that ONUC was also financed through a special account with all the weaknesses inherent in the financing of UNEF, primarily because of the UNEF precedent. Despite the efforts of the Secretary-General to include the first year's expenses of the ONUC in the regular budget as an item in the supplementary estimates,²⁵ the General Assembly refused to do so.²⁶ In the meantime the problem of a 'just' scale of assessment for the expenses of these two forces became crucial, and worst of all was the fact that even those countries

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who promised to pay took their own time in doing so, thus multiplying the financial problems of the UN.²⁷

In the years that have followed these two operations, UN debates have usually centred around the question: Who shall pay, and how much? Since 1956, many suggestions have been made—suggestions such as: 'The aggressors should pay';²⁸ 'the permanent members of the Council should pay';²⁹ 'the countries profiting economically from an operation should pay';³⁰ 'the rich nations should pay';³¹ and so on. Three points should be noted with regard to suggestions for the payment of UN peace-keeping operations: (i) the fact that UN decisions to establish peace-keeping forces have been supported by vast majorities because of the need for urgent action should not be taken to mean that the vast majority of states feel equally willing to pay for these operations; (ii) several members have been able to rationalise their opposition to compulsory payment by arguing that since it was necessary to create special accounts for these two operations it seems fair that contributions to these accounts should not have the same strong compulsory obligation as the regular assessment for annual budget; (iii) some poor countries have argued that since these expenses are considered extraordinary and special, a special scale of assessment (obviously benefiting only the poor) should be considered.

In the face of the above, an analysis of Canada's record indicates that that country has vigorously and consistently argued that peace and security is a collective responsibility and therefore the cost of UN peace-keeping operations must be shared on a compulsory payment basis. The Canadian Prime Minister warned in the strongest terms that the UN would be rendered useless if the principle of compulsory payment was to be abandoned. Mr Pearson argued:

The real issue... is that, if the United Nations decides in accordance with recognized and legal procedures to engage in peace-keeping operations, the expenses should be borne collectively by the whole membership in accordance with Assembly decisions on apportionment. There is surely no other acceptable way. If we do not give the Organization the financial support which it needs for discharging its responsibilities, its very existence will be endangered... The first concern of the United Nations... is the keeping of peace. If we were to fail in that, the whole brave human experiment would have failed; we would go down for good.³²

Canada's support of UN peace-keeping operations, as exemplified by statements such as the above, failed to persuade the majority of the members to accept compulsory payments. In fact, the present writer would argue that the voting pattern on financial resolutions for the UNEF and the ONUC clearly indicates that a great many members, while supporting the UN peace-keeping programme in general, are not as strongly motivated in their financial support as Canada has been over the years.³³ Realising this, in fact, the Canadian Foreign Minister once clearly stated that Canada attached a high degree of significance to UN peace-keeping operations which is not to be found in many other countries.³⁴

CANADA'S SUPPORT OF U.N. PEACE-KEEPING OPERATIONS

It is interesting to note that once it became apparent that the concept of compulsory payment was doing more harm than good to future UN peace-keeping operations, Canada's strong support of this principle began to change. By 1961, Canada was ready to support a specific proposal put forward by Mexico and Brazil asking for an authoritative statement on this matter. In fact, it was Canada which introduced a resolution for that purpose.³⁵ At the same time Canada conducted a vigorous campaign in favour of submitting the issue to the International Court of Justice, suggesting that the only course open to the member states, if they wished to save the Organization from further disunity, was to submit the issue to the Court.³⁶ It was disappointing for Canada to see that the General Assembly decided to do that only by a small majority, a vote of 52 for and 43 either voting against the proposal or abstaining.³⁷ Canada was also one of the twenty-three nations who submitted written statements to the Court and it was one of eight nations which made oral presentations before the Court. The Court's Opinion provided Canada with new incentive to support the concept of compulsory payments and, once again, it was Canada, who, with a handful of states, introduced the draft resolution³⁸ in the General Assembly which put the Assembly on record as accepting the Court's Opinion.³⁹

In the years that followed the passage of this resolution there has been a great deal of controversy on the question of compulsory payments. It is interesting to note that the experience of the UN in this area has been a mixed one. For example, since 1955 only one of the six operations carried out—the United Nations Observation Group in Lebanon—was financed as a part of the regular budget (that is, in keeping with the compulsory payment principle). The payments for the other five have been made from mixed sources—the ONUC and UNEF were financed by a combination of voluntary contributions and compulsory assessments. The UN Temporary Executive Authority and the UN Yemen Observation Mission were financed by the parties in dispute, and the Cyprus operation had a unique financing system, that is, a large portion of the operating cost was borne by the nations donating troops and the small remaining portion was paid from voluntary donations.⁴⁰

Canada has responded remarkably to the post-1962 financial controversy, apparently always with a view to helping the UN in its efforts to maintain peace through peace-keeping operations, in the following ways:

- (i) It waived all its bills for services rendered to the United Nations in connection with the UNEF peace-keeping operations it participated in;⁴¹
- (ii) On a number of occasions it made voluntary financial contributions;⁴²
- (iii) It lent money to the UN by purchasing United Nations bonds;⁴³
- (iv) It even agreed to help make good the debts of other nations by offering millions of dollars as gifts to the United Nations.

CONCLUSION

What conclusions are possible from the records of Canada's strong financial

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and moral support of United Nations peace-keeping activities? Most importantly, it lends support to the major contention of this article. Canada's strong interest in maintaining and enhancing the United Nations' capacity to perform its peace-keeping operations was equally matched by Canada's financial and other support. The strong commitment to the principle of compulsory payments at the establishment of the UNEF, without the realisation that many nations might not want to go along with it, caused Canada some frustration, and a later change of policy abandoning this principle meant some loss of prestige, a small price to pay, according to Canadians, for attempting to save the international Organization from possible disintegration.

NOTES

1. Canada, *House of Commons Debates*, 21 June 1965, 2639.
2. Canada, House of Commons, *Standing Committee on External Affairs, Minutes of Proceedings and Evidence*, 21 June 1965, 160.
3. *Ibid.*, 154.
4. L. S. St. Laurent, *GAOR* (I:2) 1946, Plen. Mtg. 41, 823.
5. Letter by Canadian Government of 24 September 1946, UN Doc. A-92, *GAOR* (I:2) 1946, Gen. Committee, Annexes, Annex 16, 97-98.
6. Senator L. P. Lambert, *GAOR* (II) 1947, Fifth Committee Meeting 84, 3 November 1947, 318.
7. Regulation No. 25, *Provisional Financial Regulations* of the United Nations.
8. Under these regulations the only policy-making UN body which was not restrained by a similar rule was the General Assembly.
9. Proposal by the Canadian Government of 24 October 1947. UN Doc. A/C.5/130, *GAOR* (II) 1947, Fifth Committee, Annexes, Annex 42, 315-6. New Rule 41, 316, para. 3.
10. General Assembly Resolution 173 (II) 17 November 1947. Text to be found in UN Doc. A/520, printed separately.
11. Regulations 5-9 of the *Provisional Financial Regulations*, 20 November 1947. Now regulations 3.4-3.9 of the *Financial Regulations and Rules of the United Nations*, January 1960.
12. It may be noted that the first of these authorisations on the certification of the Secretary-General was granted in GA Resolution 68C(1) 14 December 1946. See *GAOR* (I:2) 1946, *Resolutions* (UN Doc. A/64/Add. 1), 130.
13. J. H. Dickey, *GAOR* (V) 1950-1951, Fifth Committee Meeting 254, 24 October 1950, 103, para. 26.
14. Canada's first scolding of the Soviet Union and the United Kingdom took place as early as 1947. See Lambert, *GAOR* (II) 1947, Fifth Committee Meeting 50, 26 September 1947, 10.
15. Sidney Smith, *GAOR* (SII) 1957, Plen. Mtg. 720, 22 November 1957, 494, para. 14.
16. Lt.-Gen. E. L. M. Burns, *GAOR* (XV) 1960-61, Fifth Committee 803, 5 December 1960, 270-1, para. 14.
17. Sidney Pollock, *GAOR* (XI) 1956-57, Fifth Committee Mtg. 541, 3 December 1956, 43, para. 25.
18. Paul Martin, Canada, H.C., *External Affairs Committee*, 21 June 1965, 159.
19. For a detailed statement of Canada's position given by Lester Pearson, see *GAOR* (ES-1) 1956, Plen. Mtg. 566, 7 November 1956, 94, para. 23.
20. Pollock, *loc. cit.*
21. Second and final report of the Secretary-General on the plan for an emergency International United Nations Force requested in Resolution 998 (ES-1), adopted by the General Assembly on 4 November 1956, UN Doc. A/3302, 6 November 1956, para. 15, *GAOR* (ES-1) 1956 *Annexes*, Agenda Item 5, 19-23. He did not, however, indicate how the money was to be raised.

CANADA'S SUPPORT OF U.N. PEACE-KEEPING OPERATIONS

22. General Assembly Resolution 1001 (ES-1).
23. General Assembly Resolution (XI), paras. 1 and 2. It will be remembered that the Soviet Union and its allies voted against this resolution. It was the first time the Organization created a special account for peace-keeping activities and demanded compulsory payments for any special account.
24. Burns, *loc. cit.*
25. 'Report of the Secretary-General', UN Doc. A/C.5/836, 24 October 1960, para. 5, GAOR (XV) 1960-61, Annexes, Agenda Items 49/50, 1-8.
26. GA Resolution 1583 (XV) 20 December 1960, para. 1. See text in GAOR (XV) 1960-61, Supplement No. 16 (UN Doc. A/4684), 52.
27. For a picture of the sad UN financial position in this area, compare Annexes II-V of UN Doc. A/C.5/974, 14 May 1963. GAOR (S-IV) 1963, Annexes, Agenda Item 7, 81-7.
28. This has been the favourite answer of the Soviet Union and its allies. See, for instance, the same statement frequently made by the Soviet Union on peace-keeping operations, starting with that by its Deputy Foreign Minister V. V. Kuznetsov that the 'aggressors' should be made to pay. See GAOR (XI) 1956-57, Plen. Mtg. 596, 26 November 1956, 338, para. 159.
29. This argument has been a favourite of the representatives of the Latin-American and some western European countries such as Spain.
30. Several of the Latin-American and Asian countries have used this argument. See for example the statement made by the Cambodian delegate as early as 1956. GAOR (XI) 1956-57, Fifth Committee Mtg. 545, 6 December 1956, 70, para. 16.
31. This argument has been used by nearly all the poor countries.
32. L. B. Pearson, GAOR (XVIII) 1963, Plen. Mtg. 1208, 19 September 1963, 10, paras. 76-7.
33. Note that according to the official records of the Canadian Government, while the combined negative and abstentive voting records on the regular budget are below 12 per cent of the tabulated vote, in the case of resolutions dealing with the financing of peace-keeping operations, the combined negative and abstentive voting records are as high as 36 per cent of the tabulated votes. For details of these voting records, see 'The Cost of Keeping the Peace', 15 *External Affairs* (1963), 125.
34. Canada, H.C. *External Affairs Committee*, 21 June 1965, 159.
35. See GAOR (XVI) 1961-62, Fifth Committee Mtg. 897, 289, para. 2.
36. Brig.-Gen. J. H. Price, GAOR (XVI) 1961-62, Fifth Committee Mtg. 897, 289, para. 3.
37. GA Resolution 1731 (XVI) 20 December 1961, adopted by 52:11:32. Text in GAOR (XVI) 1961-62, Supplement No. 17 (UN Doc. A/1500), 54-5.
38. UN Doc. A/C./L.760 and Add. 104 introduced by the Canadian delegate, GAOR (XVII) 1962, Fifth Committee Mtg. 961, 3 December 1962, 276, para. 7.
39. GA Resolution 1854A (XVII) 19 December 1962, adopted by an overwhelming majority of 76:17:8. Text is to be found in GAOR (XVII) 1962, Supplement No. 17 (UN Doc. A/5217), 54-5.
40. SC Resolution S/5575 adopted unanimously on 4 March 1964, para. 6. A complete text of this resolution can be found in *United Nations Review* (1964), 81.
41. 'Report of the Secretary-General', UN Doc. A/3694, 9 October 1957, para. 48, GAOR (XII) 1957, Annexes, Agenda Item 65, 1-16.
42. P. Tremblay, GAOR (S-IV) 1963, Fifth Committee Mtg. 1001, 21 June 1963, 98, para. 22.
43. Canada, Department of External Affairs, *Canada and the United Nations 1961* (Ottawa, 1962), 97.

UNIVERSITY OF NEBRASKA AT OMAHA

APPENDIX F

Click here for: Regent's Amendment #4.283	----- 4.283 -----
Click here for: Admissions Bill 314	----- 314 -----
Click here for: I/O Professor Candidate	----- I/O -----
Click here for: UNO Regent Candidate	----- Regent -----

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SCREEN 1

UNIVERSITY OF NEBRASKA AT OMAHA

INSTRUCTIONS

1. Review each credential provided for each candidate carefully.
2. Review and rate each candidate using the 5 point rating scale provided below. Use the mouse to "click" your response, 1 through 5, in the appropriate cell.
3. Once all responses are made, "click" on the "FINISHED" button.
4. Follow the instructions. The computer will ask you to choose which candidate you would suggest the university hire. Please review the credentials again and choose one candidate. Please follow the directions carefully.

RATING SCALE

1. Dislike credentials very much.
2. Dislike credentials a little.
3. Credentials do not affect liking one way or another.
4. Like credentials a little.
5. Like credentials very much.

CONTINUE

SCREEN 2

CANDIDATE INFORMATION

	Candidate A	Candidate B	Candidate C	Candidate D
UNIVERSITY ATTENDED	Northern Illinois State	Portland State University	Colorado State University	University of Wisconsin
COURSES TAUGHT	Intro Psychology Sensation/Perception Learning Lab Intro to Statistics	Intro Psychology Research Methods Intro to Statistics Intro to Statistics	Intro Psychology Social Psychology Human Behavior Environmental Psych	Intro Psychology Personality Cognitive Psych
RESEARCH COMPLETED	"Long Term Memory - The Bin Theory - A Replication"	"Effects of Differing Methods of Info Survey Collection"	"Differential Effects of Neutral Feedback on Job Satisfaction"	"Affective States Based on TAT Scores"
	"Effects of Membrane Manipulation on Nicotating Reflex"	"Survey Development Processes for Increased Internal Consistency"	"Weather Effects of Productivity and Job Satisfaction"	"Lighting Effects Learning of LD Children"
COMMITTEES, MEMBERSHIPS SERVED	APA Society for I/O Psychologists Society of Cognitive Psychologists Institutional Review Board	APA Society for I/O Psychologists Society of Psychometric Studies President of Psi Chi	APA Society for I/O Psychologists Society of Social Psychologists Vice President of Psi Op	APA Society for I/O Psychologists Society of Cognitive Psychologists Regents Affiliate
RATING = --- CANDIDATE A	1 2 3 4 5	RATING = --- CANDIDATE B	RATING = --- CANDIDATE C	RATING = --- CANDIDATE D
1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

--- | SHOW SCALE | ---
 --- | FINISHED | ---

SCREEN 3
 (If "FINISHED", go to screen 4. If "SHOW SCALE", show rating scale)

	Candidate A	Candidate B	Candidate C	Candidate D
UNIVERSITY ATTENDED	Northern Illinois State	Portland State University	Colorado State University	University of Wisconsin
COURSES TAUGHT	Intro Psychology Sensation/perception Learning Lab Intro to Statistics	Intro Psychology Research Methods Intro to Statistics	Intro Psychology Social Psychology Human Behavior Environmental Psych	Intro Psychology Personality Cognitive Psych
RESEARCH COMPLETED	"Long Term Memory - The Bin Theory - A Replication"	"Effects of Differing Methods of Info Survey Collection"	"Differential Effects of Neutral Feedback on Job Satisfaction"	"Affective States Based on TAT Scores"
	"Effects of Membrane Manipulation on Nicotating Reflex"	"Survey Development Processes for Increased Internal Consistency"	"Weather Effects of Productivity and Job Satisfaction"	"Lighting Effects Learning of LD Children"
COMMITTEES, MEMBERSHIPS SERVED	APA Society for I/O Psychologists Society of Cognitive Psychologists Institutional Review Board	APA Society for I/O Psychologists Society of Psychometric Studies President of Psi Chi	APA Society for I/O Psychologists Society of Social Psychologists Vice President of Psi Op	APA Society for I/O Psychologists Society of Cognitive Psychologists Regents Affiliate
	RATING = --- CANDIDATE A	RATING = --- CANDIDATE B	RATING = --- CANDIDATE C	RATING = --- CANDIDATE D
1	3	4	3	4
2	4	5	4	3
3	5	1	5	1
4	1	2	1	2
5	2	3	2	3
	5	4	5	4
	1	5	1	5

PLEASE REVIEW YOUR RATINGS? ARE THESE CORRECT?

| YES | | NO |

SCREEN 4

(If yes, go to screen 5. If no, go to screen 3.)

	Candidate A	Candidate B	Candidate C	Candidate I
UNIVERSITY ATTENDED	Northern Illinois State	Portland State University	Colorado State University	University of Wisconsin
COURSES TAUGHT	Intro Psychology Sensation/Perception Learning Lab Intro to Statistics	Intro Psychology Research Methods Intro to Statistics	Intro Psychology Social Psychology Human Behavior Environmental Psych	Intro Psychology Personality Cognitive Psych
RESEARCH COMPLETED	"Long Term Memory - The Bin Theory - A Replication"	"Effects of Differing Methods of Info Survey Collection"	"Differential Effects of Neutral Feedback on Job Satisfaction"	"Affective States Based on TAT Scores"
	"Effects of Membrane Manipulation on Nicotating Reflex"	"Survey Development Processes for Increased Internal Consistency"	"Weather Effects of Productivity and Job Satisfaction"	"Lighting Effects Learning of LD Children"
COMMITTEES, MEMBERSHIP SERVED	APA Society for I/O Psychologists Society of Cognitive Psychologists Institutional Review Board	APA Society for I/O Psychologists Society of Psychometric Studies President of Psi Chi	APA Society for I/O Psychologists Society of Social Psychologists Vice President of Psi Op	APA Society for I/O Psychologists Society of Cognitive Psychologists Regents Affiliate

PLEASE CHOOSE WHICH CANDIDATE YOU WOULD RECOMMEND THE UNIVERSITY HIRE

CANDIDATE A CANDIDATE B CANDIDATE C CANDIDATE D

| | | | |

YOU CHOSE CANDIDATE _____ IS THIS CORRECT? | YES | | NO |

SCREEN 5
(If yes, go to screen 6. If no, go to screen 4)

THANK YOU FOR YOUR PARTICIPATION!!!

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SCREEN 6

APPENDIX G

NEGATIVELY VALENCE ADDITIONAL INFORMATION

	Candidate A	Candidate B	Candidate C	Candidate D
UNIVERSITY ATTENDED	Northern Illinois State	Portland State University	Colorado State University	University of Wisconsin
COURSES TAUGHT	Intro Psychology Sensation/Perception Learning Lab Intro to Statistics	Intro Psychology Research Methods Intro to Statistics	Intro Psychology Social Psychology Human Behavior Environmental Psych	Intro Psychology Personality Cognitive Psych
RESEARCH COMPLETED	"Long Term Memory The Bin Theory - A Replication"	"Effects of Differing Methods of Info Survey Collection"	"Differential Effects of Neutral Feedback on Job Satisfaction"	"Affective States Based on TAT Scores"
	"Effects of Membrane Manipulation on Nicotating Reflex"	"Survey Development Processes for Increased Internal Consistency"	"Weather Effects of Productivity and Job Satisfaction"	"Lighting Effects Learning of LD Children"
COMMITTEES, MEMBERSHIPS SERVED	APA Society for I/O Psychologists Society of Cognitive Psychologists Institutional Review Board	APA Society for I/O Psychologists Society of Psychometric Studies President of Psi Chi	APA Society for I/O Psychologists Society of Social Psychologists Vice President of Psi Op	APA Society for I/O Psychologists Society of Cognitive Psychologists Regents Affiliate
STUDENT EVALUATIONS	Very Characteristic	Very Uncharacteristic	Very Uncharacteristic	Very Uncharacteristic
Often unprepared for class				
Has little patience with students	Very Characteristic	Very Uncharacteristic	Very Uncharacteristic	Very Uncharacteristic

NEGATIVELY VALENCEED ADDITIONAL INFORMATION

	Candidate A	Candidate B	Candidate C	Candidate D
UNIVERSITY ATTENDED	Northern Illinois State	Portland State University	Colorado State University	University of Wisconsin
COURSES TAUGHT	Intro Psychology Sensation/Perception Learning Lab Intro to Statistics	Intro Psychology Research Methods Intro to Statistics	Intro Psychology Social Psychology Human Behavior Environmental Psych	Intro Psychology Personality Cognitive Psych
RESEARCH COMPLETED	"Long Term Memory The Bin Theory - A Replication"	"Effects of Differing Methods of Info Survey Collection"	"Differential Effects of Neutral Feedback on Job Satisfaction"	"Affective States Based on TAT Scores"
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COMMITTEES, MEMBERSHIPS SERVED	APA Society for I/O Psychologists Society of Cognitive Psychologists Institutional Review Board	APA Society for I/O Psychologists Society of Psychometric Studies President of Psi Chi	APA Society for I/O Psychologists Society of Social Psychologists Vice President of Psi Op	APA Society for I/O Psychologists Society of Cognitive Psychologists Regents Affiliate
STUDENT EVALUATIONS	Often unprepared for class	Very Uncharacteristic	Very Characteristic	Very Uncharacteristic
	Has little patience with students	Very Uncharacteristic	Very Characteristic	Very Uncharacteristic

NEGATIVELY VALENCEED ADDITIONAL INFORMATION

	Candidate A	Candidate B	Candidate C	Candidate D
UNIVERSITY ATTENDED	Northern Illinois State	Portland State University	Colorado State University	University of Wisconsin
COURSES TAUGHT	Intro Psychology Sensation/Perception Learning Lab Intro to Statistics	Intro Psychology Research Methods Intro to Statistics	Intro Psychology Social Psychology Human Behavior Environmental Psych	Intro Psychology Personality Cognitive Psych
RESEARCH COMPLETED	"Long Term Memory The Bin Theory - A Replication"	"Effects of Differing Methods of Info Survey Collection"	"Differential Effects of Neutral Feedback on Job Satisfaction"	"Affective States Based on TAT Scores"
	"Effects of Membrane Manipulation on Nicotating Reflex"	"Survey Development Processes for Increased Internal Consistency"	"Weather Effects of Productivity and Job Satisfaction"	"Lighting Effects Learning of LD Children"
COMMITTEES, MEMBERSHIPS SERVED	APA Society for I/O Psychologists Society of Cognitive Psychologists Institutional Review Board	APA Society for I/O Psychologists Society of Psychometric Studies President of Psi Chi	APA Society for I/O Psychologists Society of Social Psychologists Vice President of Psi Op	APA Society for I/O Psychologists Society of Cognitive Psychologists Regents Affiliate
STUDENT EVALUATIONS	Very Uncharacteristic	Very Uncharacteristic	Very Characteristic	Very Uncharacteristic
Often unprepared for class				
Has little patience with students	Very Uncharacteristic	Very Uncharacteristic	Very Characteristic	Very Uncharacteristic

NEGATIVELY VALENCEED ADDITIONAL INFORMATION

	Candidate A	Candidate B	Candidate C	Candidate D
UNIVERSITY ATTENDED	Northern Illinois State	Portland State University	Colorado State University	University of Wisconsin
COURSES TAUGHT	Intro Psychology Sensation/Perception Learning Lab Intro to Statistics	Intro Psychology Research Methods Intro to Statistics	Intro Psychology Social Psychology Human Behavior Environmental Psych	Intro Psychology Personality Cognitive Psych
RESEARCH COMPLETED	"Long Term Memory - The Bin Theory - A Replication"	"Effects of Differing Methods of Info Survey Collection"	"Differential Effects of Neutral Feedback on Job Satisfaction"	"Affective States Based on TAT Scores"
COMMITTEES, MEMBERSHIPS SERVED	"Effects of Membrane Manipulation on Nicotating Reflex"	"Survey Development Processes for Increased Internal Consistency"	"Weather Effects of Productivity and Job Satisfaction"	"Lighting Effects Learning of LD Children"
STUDENT EVALUATIONS	APA Society for I/O Psychologists Society of Cognitive Psychologists Institutional Review Board	APA Society for I/O Psychologists Society of Psychometric Studies President of Psi Chi	APA Society for I/O Psychologists Society of Social Psychologists Vice President of Psi Op	APA Society for I/O Psychologists Society of Cognitive Psychologists Regents Affiliate
Often unprepared for class	Very Uncharacteristic	Very Uncharacteristic	Very Uncharacteristic	Very Characteristic
Has little patience with students	Very Uncharacteristic	Very Uncharacteristic	Very Uncharacteristic	Very Characteristic

NEUTRALLY VALENCED ADDITIONAL INFORMATION

	Candidate A	Candidate B	Candidate C	Candidate D
UNIVERSITY ATTENDED	Northern Illinois State	Portland State University	Colorado State University	University of Wisconsin
COURSES TAUGHT	Intro Psychology Sensation/Perception Learning Lab Intro to Statistics	Intro Psychology Research Methods Intro to Statistics	Intro Psychology Social Psychology Human Behavior Environmental Psych	Intro Psychology Personality Cognitive Psych
RESEARCH COMPLETED	"Long Term Memory The Bin Theory - A Replication"	"Effects of Differing Methods of Info Survey Collection"	"Differential Effects of Neutral Feedback on Job Satisfaction"	"Affective States Based on TAT Scores"
COMMITTEES, MEMBERSHIP SERVED	"Effects of Membrane Manipulation on Nicotating Reflex"	"Survey Development Processes for Increased Internal Consistency"	"Weather Effects of Productivity and Job Satisfaction"	"Lighting Effects Learning of LD Children"
STUDENT EVALUATIONS	APA Society for 1/0 Psychologists Society of Cognitive Psychologists Institutional Review Board	APA Society for 1/0 Psychologists Society of Psychometric Studies President of Psi Chi	APA Society for 1/0 Psychologists Society of Social Psychologists Vice President of Psi Op	APA Society for 1/0 Psychologists Society of Cognitive Psychologists Regents Affiliate
Arrives to Class on time	Very Characteristic	Very Uncharacteristic	Very Uncharacteristic	Very Uncharacteristic
Teaches in Professional Manner	Very Characteristic	Very Uncharacteristic	Very Uncharacteristic	Very Uncharacteristic

NEUTRALLY VALENCED ADDITIONAL INFORMATION

	Candidate A	Candidate B	Candidate C	Candidate D
UNIVERSITY ATTENDED	Northern Illinois State	Portland State University	Colorado State University	University of Wisconsin
COURSES TAUGHT	Intro Psychology Sensation/Perception Learning Lab Intro to Statistics	Intro Psychology Research Methods Intro to Statistics	Intro Psychology Social Psychology Human Behavior Environmental Psych	Intro Psychology Personality Cognitive Psych
RESEARCH COMPLETED	"Long Term Memory The Bin Theory - A Replication"	"Effects of Differing Methods of Info Survey Collection"	"Differential Effects of Neutral Feedback on Job Satisfaction"	"Affective States Based on TAT Scores"
COMMITTEES, MEMBERSHIPS SERVED	Effects of Membrane Manipulation on Nicotating Reflex"	"Survey Development Processes for Increased Internal Consistency"	"Weather Effects of Productivity and Job Satisfaction"	"Lighting Effects Learning of LD Children"
STUDENT EVALUATIONS	APA Society for I/O Psychologists Society of Cognitive Psychologists Institutional Review Board	APA Society for I/O Psychologists Society of Psychometric Studies President of Psi Chi	APA Society for I/O Psychologists Society of Social Psychologists Vice President of Psi Op	APA Society for I/O Psychologists Society of Cognitive Psychologists Regents Affiliate
Arrives to Class on time	Very Uncharacteristic	Very Characteristic	Very Uncharacteristic	Very Uncharacteristic
Teaches in Professional Manner	Very Uncharacteristic	Very Characteristic	Very Uncharacteristic	Very Uncharacteristic

NEUTRALLY VALENCE ADDITIONAL INFORMATION

	Candidate A	Candidate B	Candidate C	Candidate D
UNIVERSITY ATTENDED	Northern Illinois State	Portland State University	Colorado State University	University of Wisconsin
COURSES TAUGHT	Intro Psychology Sensation/Perception Learning Lab Intro to Statistics	Intro Psychology Research Methods Intro to Statistics	Intro Psychology Social Psychology Human Behavior Environmental Psych	Intro Psychology Personality Cognitive Psych
RESEARCH COMPLETED	"Long Term Memory - The Bin Theory - A Replication"	"Effects of Differing Methods of Info Survey Collection"	"Differential Effects of Neutral Feedback on Job Satisfaction"	"Affective States Based on TAT Scores"
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STUDENT EVALUATIONS

Arrives to Class on time	Very Uncharacteristic	Very Uncharacteristic	Very Characteristic	Very Uncharacteristic
Teaches in Very Professional Manner	Very Uncharacteristic	Very Uncharacteristic	Very Characteristic	Very Uncharacteristic

NEUTRALLY VALENCEED ADDITIONAL INFORMATION

	Candidate A	Candidate B	Candidate C	Candidate D
UNIVERSITY ATTENDED	Northern Illinois State	Portland State University	Colorado State University	University of Wisconsin
COURSES TAUGHT	Intro Psychology Sensation/Perception Learning Lab Intro to Statistics	Intro Psychology Research Methods Intro to Statistics	Intro Psychology Social Psychology Human Behavior Environmental Psych	Intro Psychology Personality Cognitive Psych
RESEARCH COMPLETED	"Long Term Memory - The Bin Theory - A Replication"	"Effects of Differing Methods of Info Survey Collection"	"Differential Effects of Neutral Feedback on Job Satisfaction"	"Affective States Based on TAT Scores"
	"Effects of Membrane Manipulation on Nicotating Reflex"	"Survey Development Processes for Increased Internal Consistency"	"Weather Effects of Productivity and Job Satisfaction"	"Lighting Effects Learning of LD Children"
COMMITTEES, MEMBERSHIPS SERVED	APA Society for I/O Psychologists Society of Cognitive Psychologists Institutional Review Board	APA Society for I/O Psychologists Society of Psychometric Studies President of Psi Chi	APA Society for I/O Psychologists Society of Social Psychologists Vice President of Psi Op	APA Society for I/O Psychologists Society of Psychologists Regents Affiliate
STUDENT EVALUATIONS				
Arrives to Class on time	Very Uncharacteristic	Very Uncharacteristic	Very Uncharacteristic	Very Characteristic
Teaches in Very Professional Manner	Very Uncharacteristic	Very Uncharacteristic	Very Uncharacteristic	Very Characteristic

APPENDIX H

Regret Rating Scale

After some thought about my decision, I would:

- _____ Definitely change my decision.
- _____ Probably change my decision.
- _____ Possibly change my decision.
- _____ Probably not change my decision.
- _____ Definitely not change my decision.

APPENDIX I

Confidence Rating Scale

Please indicate your level of confidence in the decision you just made.

_____ I am 100% confident that I made the right decision.

_____ I am 85% confident that I made the right decision.

_____ I am 70% confident that I made the right decision.

_____ I am 55% confident that I made the right decision.

_____ I am 30% confident that I made the right decision.

_____ I am 15% confident that I made the right decision.

_____ I have no confidence what-so-ever in my decision.

APPENDIX J
CANDIDATE RATING

1. Dislike credentials of candidate very much
2. Dislike credentials of candidate a little
3. Credentials of candidate don't affect liking one way or another
4. Like credentials of candidate a little
5. Like credentials of candidate very much

CANDIDATE A CANDIDATE B CANDIDATE C CANDIDATE D

WHICH CANDIDATE WOULD YOU SUGGEST THE UNIVERSITY HIRE?

CANDIDATE _____

APPENDIX K

CANADA'S SUPPORT OF THE UNITED NATIONS
PEACE-KEEPING OPERATIONS.

Please read the questions and circle the one, best answer.

1. Peace-keeping efforts in the UN are regarded as:
 - a. the duty of all nations involved.
 - b. an attempt to revitalize the UN.
 - c. a source of satisfaction of national interest.
 - d. necessary to the continuing development of the individual, national commonwealths.
2. The announcement of June 1965 by Canada regarding payment for UNEF and ONUC operations:
 - a. caused great concern regarding the stability of the UN.
 - b. was a complete reversal of an earlier stated policy.
 - c. allowed the countries the option of bi-annual payment.
 - d. was introduced in an effort to increase collection of funds.
3. In fear of causing the Soviet Union, its allies, and France to withdraw from the UN and thus cause its destruction, Canada:
 - a. withdrew the requirement of compulsory payment for operations.
 - b. allowed these countries full membership in all UN negotiation processes.
 - c. gave these countries options of payment schedules.
 - d. offered a temporary solution to their financial difficulties.
4. When the Secretary-General proposed financing for troops and equipment outside the normal budget, Canada:
 - a. believed this would increase the national interest of international peace.

- b. believed some nations would refuse to pay.
 - c. accepted the proposal as the best route for financing the effort.
 - d. refused to accept the proposal.
5. The Canadian Prime Minister strongly felt that the national payment stipulations:
- a. were necessary if the UN were to continue to be instrumental in its peace keeping efforts.
 - b. were too strict in light of the overwhelming national debts.
 - c. should be amended to consider national wealth.
 - d. were the only means of collecting debts owed to the UN for its peace-keeping efforts.
6. The main purpose of this article is to:
- a. instruct the reader in the financial developments of the UN over the past few decades.
 - b. submit a new financial proposal of the UN to the public.
 - c. document the support and dissonance of UN members in the area of peace keeping.
 - d. examine the financial aspect of Canadian peace-keeping policy during crucial changing periods.

