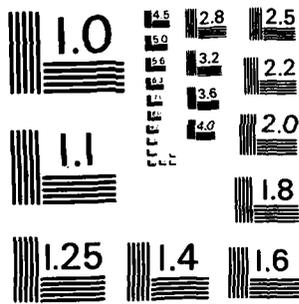


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Monitoring: Cognitive Processes and Performance

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Abstract

The findings of two laboratory experiments and three field studies conducted at the U.S. Coast Guard Academy dealing with the effects of self-monitoring are reported. The laboratory studies showed a significant relationship between self-monitoring, task persistence, and cognitive interference. The field studies showed significant differences between positive and negative self-monitoring with regard to how new Coast Guard Academy cadets respond to entry into a complex, stress-arousing organizational setting. The five studies reveal that positive self-monitoring has a salutary effect on performance, cognitive interference, and self-evaluation. The research suggests that both psychological theory and organizational effectiveness might be significantly advanced with an increase in knowledge about how people deal with self-related attentional cues.

Self-Monitoring: Cognitive Processes and Performance

Findings from several areas of research have shown the potency of manipulations that influence a person's cognitive set and expectations, on the one hand, and mood and affect, on the other (Bower, 1981; Clark & Fiske, 1982; & Kendall & Hollon, 1981). While these manipulations have often seemed to involve minor situational changes, their results have often been impressive and even dramatic. For example, institutionalized elderly adults respond in a significantly positive way simply to being given personal responsibility for the care of a plant. Rodin and Langer (1977) found in an 18 month followup that only half as many people who had been given an active responsibility (to care for a plant) had died as in a comparison group. Seemingly trivial events such as receiving a cookie, winning a computer game, or being presented with a gift of an inexpensive nail clipper have been demonstrated to significantly increase helping behavior and sociability (Isen, Means, Patrick and Nowicki, 1982). In the clinical sphere, increasing the positive events in a depressed person's life has been found to be effective in heightening positive affect and reducing dysphoria (Lewinsohn & Libet, 1972).

Understandably, these findings in diverse areas give rise to speculation about the mechanisms by which behavior change comes about. Cognitive processes seem to be of central importance in producing them. The elderly person given responsibility for keeping a plant alive may come to think, "I guess there are still some things that I can do." The person presented with a nail clipper and who then helps someone in trouble may have done so because the positive mood evoked by the gift led to a reduction in personal preoccupations and greater susceptibility to social stimuli. A depressed person who programs a

few pleasurable events into each day (such as inviting a colleague to have a mid-morning cup of coffee) may come to think, "Life isn't just a matter of one bad thing after the other."

Of course, hypothesizing that certain cognitive events intervene between environmental happenings and behavioral change requires research related to the specific mechanisms involved. From a cognitive perspective, what do taking care of a plant, receiving a nail clipper and going for a cup of coffee have in common? Each of these is capable of stimulating thoughts about either what one might reasonably expect of oneself or one's environment. From the standpoint of personal expectations, it might be said that manipulations of the type described above function as releasers of self-efficacy. Bandura (1982) has reviewed evidence supporting the idea that perceived self-efficacy refers to personal judgments about the ability to execute specific tasks. More information is needed concerning the specific circumstances and cognitive processes involved in the enhancement of behavioral competency and self-efficacy.

Past research has tended to focus disproportionately, perhaps, on factors related to behavioral deterioration. If recent trends in research and theory continue we may soon know much more about circumstances particularly conducive to performance enhancement and personal growth. Illustrative of this trend is a recent study by Turk and Sarason (1983) who studied the performance of subjects differing in test anxiety as a function of prior success or failure experiences. Half of the subjects began the experiment by working on either insoluble or easy anagrams. For each difficulty level, the subjects were given either achievement-orienting or neutral instructions. All subjects were asked to check "passed" on their test if they solved 3 of the 5 anagrams or

"failed" if they solved fewer than 3 problems (all the subjects who worked on the easy anagrams "passed"). They then filled out a questionnaire that dealt with their causal attributions. The questionnaire asked the subjects about the extent to which they interpreted their anagrams performance as being due to ability, effort, luck and task difficulty. Attributions were made on a Likert-type scale of 7 points.

In the next phase of the experiment, all subjects worked on a series of moderately difficult anagrams. Turk and Sarason (1983) found that following the failure condition the high test anxious group performed at a lower level than did all other groups in the experiment. This is consistent with previous work on test anxiety. However, following the success condition, the high test anxious group performed at a high level, indeed at a higher level than all other groups. When the subjects were categorized on the basis of their causal attributions, subjects who made internal attributions concerning the failure task (e.g. "I'm not good at solving problems") had poor subsequent performance on the anagrams regardless of their test anxiety scores. Following the success condition, the best performing group consisted of high test anxious subjects who made internal attributions (e.g. "I'm an intelligent person"). This study illustrates the need to know more about the effects of success experiences on performance and the antecedents and correlates of positive as well as negative attributions. Positive attributions might be particularly effective in countering the worrying and self-preoccupation that often cause poor performance and fostering self-efficacy.

The studies described in this report were based on the hypothesis that self-efficacy stimulates a task orientation and fosters the ability to become involved in activities outside of oneself. Two of the studies were laboratory

investigations and three were field investigations. All of the studies sought to influence self-efficacy and performance by means of the self-monitoring of thoughts consistent with self-efficacy and successful performance. In each of the laboratory studies, subjects were asked to note examples of their positive accomplishments, things of which they were proud and which reflected favorably on their personal effectiveness.

In the first two field studies, subjects were asked to report recent stressful events and their responses to those events. In the third field study, subjects listed the good things that had recently occurred, including those that occurred as a result of their own action.

These studies were based on the belief that one of the most powerful aspects of self-monitoring pertains to the direction of attention. Effective people in particular areas of life do not necessarily think of themselves as being effective people. Why people are attentive or inattentive to the realities of their lives and accomplishments is not clear, but it may be the case that self-consciously looking for the best in oneself has demonstrable benefits. As people expose themselves to their efficacious qualities they may experience decrements in personal inhibitions (as reflected in self-doubts and self-preoccupation) and their thinking may become directed along positive productive lines. The experiments reported here are concerned with the question of what happens when people are encouraged to accentuate the positive.

Study 1

The aim of this study was to assess whether or not directing subjects' attention to instances of their personal effectiveness would influence task persistence. All subjects were asked to review their experiences of the

previous week. In one group, the subjects were asked to think of incidents of which they were proud, while in another the subjects were asked to think about problematic and stressful situations that had arisen in the previous week. (Pilot work had indicated that subjects who did not engage in self-monitoring performed at a level intermediate between the positive and negative self-monitoring conditions.)

The subjects were divided into the four groups of a 2x2 factorial design. One of the factors was self-description with half of the subjects talking about positive and the other half talking about negative experiences. The second factor was sex of subject. After having focused on either positively or negatively tinged experiences, subjects were introduced to a task involving the solution of a maze. Unbeknownst to the subjects, the maze was insoluble. The dependent measures were the subject's persistence in attempting to find the solution to the problem and self-reported cognitive interference.

Method

Subjects

The subjects were 40 undergraduates taking an Introductory Psychology course at the University of Washington. They received course credit for participating in out-of-class experiments. There were 10 subjects in each of the four experimental groups.

Procedure

Upon the subjects entering the experimental situation, the experimenter communicated the following to the subject:

"I'm interested in getting an idea of how University students handle various types of situations. I am particularly interested in your experiences of the past week."

Subjects in the positive self-description group were told:

"Tell me about things that you have done in the past week that turned out favorably. What I'm most interested in hearing about are experiences that made you feel good. The things that you talk about don't have to be things that require super-human abilities. They could be little things or big things. I'm interested in hearing about things like an initiative you might have taken, a social encounter that you felt you handled well, a problem that you solved or a problem that you avoided. It could be something you did that made somebody else feel good. Review some of the positive things that have happened in the past week and tell me about them in your own words. I won't interrupt you or interfere in any way."

Subjects in the negative self-description group were presented with the same task except they were asked to direct their attention to upsetting things that had happened, mistakes they had made, situations that they felt they had not handled well, ones in which they wished they had functioned better.

Each subject talked for six minutes with the experimenter listening attentively and showing interest in any topic mentioned by the subject. The experimenter made such comments as "I can see why you felt that way about..." or "That must have made you feel pretty good." or "I can see where that upset you." The experimenter attempted to be an attentive, interested listener for all subjects.

After engaging in self-description, subjects were presented with the maze task. Each subject worked on a fairly easy maze after which he or she was presented with the insoluble one. Subjects were told that there was no

time limit and that they could terminate work on each maze by indicating to the experimenter their desire to do so. The dependent measure was the length of time spent in an effort to solve the insoluble maze problem.

After the maze task had been terminated, each subject completed the Cognitive Interference Questionnaire (CIQ; Sarason & Stoops, 1978) which provides a measure of self-preoccupying thoughts (e.g., "I thought about how poorly I was doing.") found to interfere with task performance

Results

In an analysis of variance of the subject's persistence on the maze task the only significant F was the effect for self-monitoring ($5.43(1,36)$ $p < .025$). Table 1 shows that for both males and females, positive self-monitoring was associated with greater persistence on the maze task.

Self-monitoring was also the only significant result in an analysis of variance of the Cognitive Interference Questionnaire scores. The F for self-monitoring was $5.61(1,36)$, $p < .025$. Table 2 presents the means for the CIQ analysis and shows that positive self-monitoring is associated with relatively low levels of cognitive interference.

Discussion

The results showed that having subjects focus their attention on self-efficacious thoughts and things that make them feel good is related to greater task persistence and less cognitive interference. These findings are consistent with the hypothesis that positive self-monitoring, i.e., talking about recent events that make one feel good and reflect well on oneself, stimulates thoughts about self-efficacy and allows for greater task involvement. It is possible that the positive

Table 1

Mean Time (in minutes) spent on Insoluble Maze Problem
(N=10 per group)

Sex of Subject	Self Monitoring	
	<u>Positive</u>	<u>Negative</u>
Male	12.6	9.0
Female	12.6	10.2

Table 2

Cognitive Interference Questionnaire (CIQ) Scores
(N=10 per group)

Sex of Subject	Self-Monitoring	
	<u>Positive</u>	<u>Negative</u>
Male	20.5	28.3
Female	19.0	26.3

self-monitoring subjects persisted longer than did the negative self-monitoring subjects because of their ability to become more absorbed in the task and therefore to experience less of the worry and self-preoccupation topped by the CIQ. The significance of subjects' self-monitoring the week's experiences may be in the way which the review directs their train of thought about themselves and the situations they confronted.

Study 2

This study employed the same experimental manipulation as was used in Study 1. However, instead of task persistence, the dependent measure was self-presentation. Following self-monitoring reports, the subjects were asked to provide personality sketches of themselves. Content analyses permitted scoring their self-descriptions in terms of positive and negative self-references. In addition to a self-monitoring group there was a control group which did not engage in self-monitoring prior to presenting a self-description. The purpose of the experiment was to determine the degree to which self-monitoring of specific events would influence general personality descriptions.

Method

Subjects

The subjects were 30 male and 30 female undergraduate students at the University of Washington. Because the subjects came from 2 different sections of the Introductory Psychology course, comparisons were made between subjects from the two sections.

Procedure

After engaging in the same self-monitoring task used in Study 1, the

subjects were asked to provide general descriptions of themselves which were tape recorded. A procedure developed by Sarason and Ganzer (1962, 1963) was employed to content analyze the tape recordings. Subjects were told:

"Everyone talks about college students and what they are like, but few people have actually tried to find out anything from the students themselves. I am interested in getting an idea of how students think and feel about themselves. I'd like to know what you are like as a person and I think the best way to do this is to simply ask you to talk about and describe yourself."

"So in this experiment your instructions are to describe yourself: what you think about yourself and how you feel about yourself. Naturally I'll say nothing to interrupt you since I'm interested in listening to you talk.

"I'm going to record your self-description here on this tape recorder. These tapes are identified by code numbers and used only for this project so no one will know who gave which self-description. You'll have about 5 minutes for this. I'll tell you when the time is up. Do you have any questions?...

"OK, let's begin now, please try to stay on the topic of yourself."

As described by Sarason and Ganzer (1962), the basic unit of analysis was defined as either a complete sentence including a subject and a verb or a grammatical unit expressing a thought. A self-reference was defined as a descriptive statement about the individual which tells something about him

or her or refers to experienced affect. Positive self-references were defined as describing favorable or desirable facts or characteristics about the speaker (for example, "I am a good student", "I am easy to get along with."). Negative self-references were defined as statements which reflect unfavorable assessments of the speaker, such as "below average" performance evaluations or the possession of socially undesirable characteristics ("I don't get along well with most people", "School is difficult for me.") Product moment reliability coefficients for this type of analysis have ranged between .83 and .95 when the ratings of 2 independent judges are correlated.

Results

The results were analyzed in terms of 2x2x3 analyses of variances (class section x sex x experimental conditions).

The analysis of positive self-references yielded only one significant result that for experimental conditions ($F(2,48)=4.51, p<.02$). The mean numbers of positive self-references were 5.1, 2.5, and 2.6 for the positive self-monitoring, negative self-monitoring and control groups. Thus, there seems to have been a carry-over effect from positive descriptions of recent events to general self-description. The analysis of variance for negative self-references yielded one significant result, that for experimental conditions ($F(2,48)=3.35, p<.05$). The mean numbers of negative self-references were 2.1, 4.3, and 2.4 for the positive self-monitoring, negative self-monitoring, and control groups. Thus, positive self-monitoring seems to carry-over to positive self references in general self-description and negative self-monitoring show a similar carry-over effect for negative self-description.

Discussion

In this and the preceding study, self-monitoring was related to the dependent variables. In Study 1, positive self-monitoring was related to task persistence and relatively low levels of cognitive interference. In Study 2 positive self-monitoring was linked to the emission of self-statements that reflect positively on the self and self-monitoring of negative experiences was linked to negative statements about the self. The findings of the two studies are consistent with the view that self-monitoring directs a person's train of thought in a predictable direction. Someone whose attention is drawn to recent personal successes may come to attend to positive personal qualities. The results of the two studies suggest the hazards of generalizing too broadly about the effects of self-monitoring. It may well be true in some very general sense that the more people are aware of what they are experiencing in their daily lives, the more aware they will be of their own role in determining their success. However, the specifics of the self-monitoring task (whether the task is to note positive or negative experiences) are of great importance.

The findings of studies 1 and 2 point to the possible benefits of applying and evaluating their experimental treatments in the complex world outside the laboratory. The following studies represent an attempt to do this.

Study 3

This study was a field experiment dealing with the role of self-monitoring in coping with stressful situations. The subjects were

cadets at the U.S. Coast Guard Academy. While smaller and considered to be less military, the Coast Guard Academy functions much the same way as the larger academies operated by the Department of Defense. Cadets enter the Academy at the beginning of the summer preceding their freshman year. This six week summer training period, called "Swab Summer", is intended among other things to be stressful and challenging. The purpose of Study 3 was to determine the relationship between cadet's monitoring of stressful and challenging experiences and their adjustment during Swab Summer and later on.

Method

Subjects

The subjects were drawn from the 351 cadets who began their Swab Summer in July, 1980. Of these cadets, 311 were men and 40 were women, ranging in age from 17 to 21, with the majority (236) being 18 at the time of their entry. Members of the cadet band were excluded from this and subsequent studies due to the fact that their training was systematically different from that received by other cadets. Cadets who resigned during Swab Summer were also excluded from the study. The remaining cadets were divided into three groups: Group A, with 105 cadets; Group B, with 114 cadets; and a control group of 75 cadets.

Procedure

The subjects were introduced to the study by means of group meetings held during their first week at the Coast Guard Academy. The study was described as an effort to gain information about their experiences during Swab Summer. It was explained that participation would be completely voluntary and that individual cadets would not be identified.

Cadets in Groups A and B were instructed to keep a daily record of stressful experiences. The subjects were asked to describe each event in the record, tell what he or she did in response to the stressful event, and describe the outcome of the action. The variety of stressors listed ranged widely from seemingly minor irritants, such as not being able to do laundry, to major role adjustments, such as former enlisted persons who had previously held positions of authority being treated the same as recent high school graduates. Events recorded by the subject were described as having various effects on them. Most of these effects fell into three categories: physical (aches and cramps, headaches, sleep disturbances), mental (anxiety, bewilderment, depression) and emotional (crying, anger, fear). The cadets' descriptions of responses to stress varied widely with some cadets demonstrating evidence of focusing effectively on tasks and others demonstrating a loss of direction and purpose. Non-adaptive responses to stress included withdrawal, denial, and malingering. Adaptive responses included goal-setting, seeking support from peers, humor, and "doing the best I can."

Stress diaries were collected from subjects at the end of each of the six weeks of Swab Summer. New diaries were issued for use for the following week when the preceding week's diaries were collected.

Cadets assigned to Group A were asked only to complete stress diaries. Cadets assigned to Group B completed stress diaries and had the additional task of meeting with sub-groups of four peers to discuss their diaries. Thus, participants in Group A did not engage in group meetings, whereas peer meetings were encouraged for Group B. Inclusion of a group that discussed the stress diaries was decided upon because of the possibility

that this treatment might increase social support networks and thus reinforce both the maintenance of stress diaries and ultimately adaptive functioning.

The control group consisted of cadets who were given no instructions and who kept no diaries.

Dependent Variables

Summer Training

A variety of dependent measures were obtained in this study, including a Summer Training Evaluation Questionnaire (STEQ), which is part of the Coast Guard Academy's regular procedure for Swab Summer. Eight of the 53 items on STEQ were identified as being relevant to the present study.

These included:

1. Swab Summer was much more physically demanding than anticipated (physical demands).
2. The most difficult aspect of Swab Summer is the psychological stress cadets must contend with (psychological demands).
3. If I really knew what to expect of Swab Summer I would never would have accepted my appointment (regrets).
4. As promised, the training experience during Swab Summer proved to be a continuous challenge to me (challenge).
5. I personally would have benefitted greatly from additional free time during Swab Summer (need for free time).
6. Swab Summer was so tough, I contemplated resignation almost every day (resignation).
7. Psychologically, Swab Summer has left me feeling strained and ill

prepared for the academic year (strain).

8. On the average, the level of stress you experience daily during the Swab Summer was...none to extreme (stress).

Items 1-7 were rated on a five point Likert scale from strongly disagree to strongly agree. Item 8 was rated on a seven point Likert scale from none to extreme.

Results

Soon after the study was begun it became apparent that very few subjects in Group B actually participated in group meetings. The reasons for this were the cadets' intense, complex schedules during Swab Summer, rotations in cadet leadership over the summer, and the disruption and dislocation resulting from their assignment to a sailing ship used in the training program. These facts of cadet life together with the voluntary nature of the study resulted in cadets not scheduling group activities. Yet, a number of subjects did find time for the individual activity of keeping their diaries. Therefore, while no comparisons could be made on the basis of meeting participation, it was possible to compare subjects who participated by keeping diaries with controls who kept no diaries. Given the difficulty of participating in the study, a minimum criterion level of three weeks participation was set as the lowest level consistent with the goal of increasing the cadets' self-monitoring activity over a significant proportion of the summer training program.

Comparisons were made between the 39 cadets who met the criterion of completion of three sets of diary entries and 73 members of the control group. Of the eight relevant STEQ items there were three on which participants and controls differed significantly. Cadets who kept stress

diaries rated the physical demands of Swab Summer as being greater than did members of the control group (\bar{X} s of 2.89 and 2.36 respectively, $t=2.52$, $df=109$, $p<.01$). The diary keepers also rated the challenge of Swab Summer as being greater than did the controls (\bar{X} s = 4.45 and 3.99 respectively, $t=2.53$, $df=109$, $p<.01$). Diary keepers also expressed a greater need than controls for more free time during Swab Summer (\bar{X} s = 4.13 and 3.74 respectively, $t=2.03$, $df=98$, $p<.05$). Thus, contrary to what might have been expected, participation in the self-monitoring component of the study seemed to increase the perception of environmental demands and stress level.

Discussion

Despite the methodological limitations of this study, one finding is related to and consistent with the findings of Studies 1 and 2 presented earlier. This is the fact that self-monitoring is not always beneficial and in fact may actually make matters worse. Why should subjects who engaged in self-monitoring in the form of diary keeping of stressful experiences and efforts to meet challenges perceive in retrospect that their recent experiences had been more stressful? One reason might well be that subjects asked to engage in "negative" self-monitoring (that is, monitoring unpleasant, unrewarding experiences) might focus their attention unduly on stressful, unpleasant events in their environment. This effect might be somewhat analogous to a physician instructing a patient to attend carefully to every indication of pain experienced during the day. In some sense, the more one looks for pain, the more one finds it. Similarly, the more one looks for stress, the more likely one is to find it, at least at a cognitive level.

Study 4

While subjects' participation in this study was voluntary, it was intended to improve the participation rate by providing more visible follow-up on the part of the experimenters as encouragement. While the experimenters in Study 3 left data collection to cadet leaders, in Study 4 experimenters themselves made weekly rounds of the cadet barracks to pick up diaries. Secondly, experimenters wanted verification of the unexpected findings of Study 3 that self-monitoring of efforts to deal with stressful events increased perceptions of the stressfulness of the training program.

Method

Subjects

The subjects in this study were drawn from the 396 cadets participating in the Swab Summer of 1981. Of the 245 cadets asked to engage in the self-monitoring task, 87 met the criterion of three returned weekly diaries. These subjects were compared with 67 controls who were not asked to engage in diary keeping but for whom dependent measures were available.

Procedure

The procedure was essentially the same as employed in Study 3, except that the item on the Summer Training Evaluation Questionnaire pertaining to stress ("On the average, the level of stress you experienced daily during Swab Summer was...not too extreme" was rated on a five point rather than a seven point scale).

Results

Of the eight STEQ items, participants scored higher on six. Using a

two-tailed test of significance, participants believed to a greater extent than did controls that psychological demands were the most difficult feature of the summer training program ($\bar{X} = 3.97$ and 3.55 , respectively, $t=2.22$, $df=152$, $p < .03$). The STEQ items which indicated physical demands and general stress levels associated with Swab Summer approached significance ($p < .08$) with more demands and stress reported by participants than controls.

Discussion

The findings of Study 4 echo those of Study 3. Subjects who kept stress diaries during a stressful 6 week summer program, were more likely at the end of the program to perceive the program as having been more stressful than did control subjects.

Study 5

This study differs from the other two field investigations in one critical respect. Instead of monitoring negative, unpleasant events, subjects were instructed to keep daily records of the good things that happened to them. Examples of positive events included in subject's diaries are: visit from folks or friends, favorable evaluations and inspections, getting along with cadet leaders, and learning new things. The fact that this task was less demanding and more pleasant than the one employed in Studies 3 and 4, was expected to result in a greater degree of participation. For this reason the criterion for self-monitoring was altered.

Subjects

A total of 250 cadets participated in Swab Summer in 1982, 87 of whom

were designated as no treatment controls for whom the relevant dependent measures could be obtained. After attrition caused by cadet's membership in the band, failure to complete Swab Summer, and failure to provide needed data, there were 27 cadets who provided self-monitoring diaries for each of the six weeks of the Swab Summer.

Results

Subjects in the diary keeping and control groups were compared on the eight STEQ variables. Results for six of the eight items were in the direction of greater satisfaction and fewer perceived demands for the treatment than for the control groups. Using a two-tailed test of significance, three of the items differentiated significantly between the treatment and control groups. The significant differences were on perceived psychological demands (\bar{X} s of 3.50 and 4.27 for the experimental and control groups, $t=2.96$, $df=84$, $p<.005$), considering resigning from the Academy (\bar{X} s of 1.45 and 2.05 for the experimental and control groups respectively, $t=3.07$, $df=61$, $p<.003$), feeling strained and ill prepared for the academic year (\bar{X} s of 2.20 and 2.82 for the experimental and control groups respectively, $t=2.17$, $df=84$, $p<.03$).

Discussion

What is most striking about the three field studies is that, in the midst of a complex demanding and frequently frustrating training experience, an intervention as brief as simply keeping a diary of noteworthy experiences had any impact at all. Field studies never obtain the level of methodological clarity possible in experimental studies, and, as we have pointed out, these three field studies are certainly not exceptions. They are consistent with the idea that what subjects are asked

to attend to in a self-monitoring task may do more than simply provide information about what has happened in their lives. In addition, the task may influence the way in which subjects think about their total experience.

If cadets' participation in the three field studies were a function of underlying personality or ability factors, then conclusions about the differences between experimental and control groups would require qualification. The Coast Guard Academy routinely administers to all incoming cadets the 16 PF, California Personality Inventory and Edwards Personal Preference Schedule. We compared cadets who met self-monitoring criteria with those who did not and found few differences. The cadets who complied with requests to participate in the research tended to be somewhat higher in conscientiousness and more affiliative than non-compliers. These differences were not large. Further more, these variables were not correlated with the dependent measures on which differences between participants and controls were obtained. There were no differences in either intellectual ability or academic performance.

General Discussion

Study 1 showed a significant relationship between carrying out a self-monitoring task and task persistence and cognitive interference. Study 2 dealt with self-monitoring as related to self-evaluation and self-description. Studies 3 through 5 concerned the relationship between monitoring positive and negative recent events and personal performance and stress experienced in a complex training program. Whereas self reports are usually viewed as dependent measures in psychological research, in the present study they (the cadet diaries) were used as an independent variable.

The nature of self-monitoring would seem to be a valuable entry point in the study of reactive processes, the processes by which people attend and are reactive to their personal attributes. Self-monitoring begins when people are provided with response categories to which their attention is directed. Knowing that certain response categories exist or certain possibilities are reasonable can change a person's train of thought. Of course, simply presenting people with response categories (such as stressful or unpleasant experiences) cannot be expected necessarily to change behavior. There must be a readiness to respond to the categories assigned for monitoring. The importance of individual differences in self-monitoring has been emphasized by several writers including Snyder (1979) and Carver and Scheier (1981). Over the past decade considerable attention has been given to person X situation interactions. From this point of view, people are seen as being differentially susceptible to certain types of situations. One might similarly think in terms of person X self-monitoring category interactions. In these interactions, people can be viewed as differing in their readiness to attend to certain classes of thoughts (such as, "I'm an effective person.")

When people attend to categories of personal behavior or thought, the categories are processed in some way and may become personally relevant. When this happens, the individual makes a link between particular categories of response and self-percepts. Thus, one avenue for achieving behavior change is attending to specific aspects of oneself and processing these aspects with, in some cases, the result that people come to view themselves in ways different from previous self-percepts.

More often implicitly than explicitly psychotherapy has dealt with the topic of self-monitoring. Most psychotherapists believe heightened self-awareness and deliberate attention to aspects of one's life are positive developments. Psychotherapists make efforts, often quite subtle ones, to get their clients to think about topics which do not seem meaningful at the time. An important question for self-monitoring researchers is identification of the factors within both the individual and the situation that are conducive to self-monitoring.

Several behavioral techniques have been found to be useful in this regard. Anxious people respond to exposure therapies in which they are required to do unpleasant things (such as, certain obsessive-compulsive's touching dirty things) by thinking about the facts that they have indeed survived the exposure experience and the experience was not as bad as they had originally envisioned. Similarly, in observational learning approaches to behavior change, the individual is encouraged to entertain certain ideas about himself or herself on the basis of observing a credible model either perform or talk in a certain way.

Social and organizational indoctrination methods can also bring about cognitive changes which mediate how people perform tasks. For example, the concept that one should strive for a high level of neatness may be a novel concept for green military recruits. However, organizational contingencies stimulate them not only to be neat but to think about ways of preserving neatness and enhancing good appearance. Organizations may differ in their productivity because of the cognitions they tend to evoke in their members. The findings of this report suggest the value of organizational units directing the attention of members to their personal growth experiences and positive personal attributes.

The practical importance of these findings should receive some further emphasis. In an effort to increase member perceptions that a sometimes distant organizational hierarchy is concerned about members it has become a not uncommon practice for leaders to hold "rap" sessions. In these informal meetings seniors usually give juniors an opportunity to express their concerns about what is wrong with the organization. Similarly, organizational effectiveness studies often search for evidence of stress or misunderstanding that may detract from productivity and satisfaction. Each of these techniques, as well as others more and less formal, can serve to set in motion self-monitoring with a negative focus which, it seems, can then exacerbate the difficulties that are under study. On the other hand, research and management efforts to seek out and keep track of excellence may have the opposite effect. For example, one reason behind the difficulty in translating quality circles from a Japanese cultural environment to the United States may be a penchant in our more combative society for self-monitoring inequity and fault. The quality circle in the United States may become just another grievance procedure unless the focus on the positive can be maintained.

Ways of stimulating self-efficacy would seem to be an important area for basic research and practical application (Bandura, 1982). Much of the anxiety and personal unhappiness found so often in modern life may be attributable to an overemphasis of the "don'ts" of life rather than the "do's". It is usually pleasanter and more productive to make approach rather than avoidance responses to situations. The research reported here suggests that both psychological theory and human welfare might be significantly advanced with an increase in knowledge about how people deal with self-related attentional cues.

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