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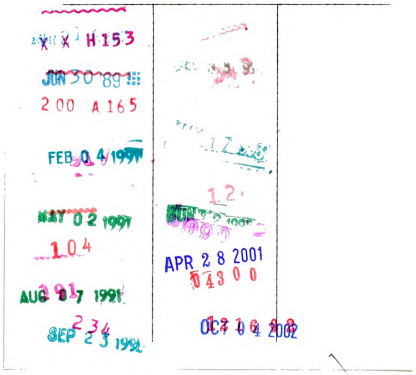

ASSOCIATION OF TYPE A BEHAVIOR PATTERN WITH NARCISSISM, ACHIEVEMENT MOTIVATION, AND DOGMATISM

By

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ABSTRACT

ASSOCIATION OF TYPE A BEHAVIOR PATTERN WITH NARCISSISM, ACHIEVEMENT MOTIVATION AND DOGMATISM

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Associations between Type A behavior pattern (TABP) and three psychological variables were examined in undergraduate students enrolled in introductory psychology courses. Significant positive associations were found between Type A behavior, Narcissism, and Achievement Motivation. Dogmatism was not significantly associated with any of the variables. Upon separating Achievement Motivation into its three component factors, significant positive associations were found between TABP, Mastery, and Competitition.

Although the findings indicated that the TABP was related to Narcissism, the relationship was unexpectedly mild. The contribution of theoretical differences underlying development of the measurements used was considered as one possible explanation for these results. The findings also support prior research indicating that the TABP is aimed at gaining control and mastery over the environment. Ways in which achievement motives may actually undermine Type A success are discussed.

TO THOSE WHO INSPIRE HOPE

Many thanks go to the following
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CHAPTER 1

INTRODUCTION AND REVIEW OF THE LITERATURE

MEDICAL RISK FACTORS FOR CORONARY HEART DISEASE

Coronary heart disease (CHD) is one of the leading causes of death in the United States. Major risk factors currently identified for CHD include smoking, high blood pressure, high serum cholesterol, and diabetes (Friedman & Rosenman, 1974; Kaplan & Kimball, 1982). Men with three of these risk factors are six times more likely to develop CHD resulting in a major heart attack than men with none of the identified risk factors (Inter-Society Commission for Heart Disease Resources, 1970). However, a large number of people with one or more of these risk factors never suffer from CHD, while others, who have none of these risk factors, do. Marmot and

Winklestein (1975) found that 86% of the men with three medical risk factors did not suffer from CHD during a 10-year follow-up period. Seventeen percent of those individuals who did suffer coronary attacks during that period had three risk factors, while 58% had two. These findings suggest that many people develop CHD for reasons other than the established risk factors.

PSYCHOPHYSIOLOGICAL RISK FACTOR FOR CORONARY HEART DISEASE

One additional risk factor that is gaining considerable attention is the Type A behavior pattern. Friedman and Rosenman (1974) define this behavior pattern as:

> An action-emotion complex that can be observed in any person who is aggressively involved in a chronic, incessant struggle to achieve more and more in less and less time, and if required to do so, against the opposing efforts of other things or persons...It is a socially acceptable - indeed often praised - form of conflict. Persons possessing this pattern are also quite prone to exhibit a free-floating but well-rationalized hostility...Moreover, because the pattern represents the reaction that takes place when particular personality traits of an afflicted individual are challenged or aroused by a specific environmental agent, the behavior pattern may not be felt or

> or exhibited in an environment that presents no challenge. In short, for Type A behavior pattern to explode into being, the environmental challenge must always serve as the fuse for this explosion (p. 84).

RELATIONSHIP BETWEEN MEDICAL AND PSYCHOPHYSIOLOGICAL RISKS

A large body of evidence supports the association between Type A behavior and CHD (Friedman & Rosenman, 1974; Glass, 1977; Matthews, 1982). The most widely publicized research comes from the Western Collaborative Group Study (WCGS) (Rosenman et al., 1975). Thirty-five hundred men were recruited between the ages of 35 and 59 for this study. They were employed at one of 11 California companies, which enabled them to be followed for a period of eight-and-a-half years beginning in 1960. Initially, each man was classified as either Type A or Type B. This determination of respective susceptibility or relative immunity to future heart attacks was based in part upon an interview procedure developed by the researchers. Nearly half of the sample group was classified as Type A and the other half as Type B. While Type B behavior has typically been defined as the relative absence of Type A characteristics, it has more recently been viewed as an alternative coping style by some authors (Matthews & Glass, 1984). At the conclusion of the WCGS study, the researchers found that Type A men were two to three times more likely to suffer heart attacks than Type

B men. This risk differential remained even after statistically controlling for the influence of the other major risk factors.

Recent studies have elaborated upon these initial findings. Several studies have shown that while Type A and Type B individuals have similar baseline levels, Type As respond to challenge with greater elevations in blood pressure and heart rate (Dembroski, MacDougall, Shields, Petitto, & Lushene, 1978; Van Egeren, 1979; Van Egeren, Fabrega, & Thornton, 1983). In addition, Type As have been shown to have greater elevations in plasma levels of catecholamines during stressful and competitive situations as compared to Type Bs (Friedman & Ulmer, 1984). Excessive discharge of the catecholamines epinephrine and norepinephrine contribute to the pathogenesis of CHD through: elevation of blood pressure and heart rate; increase in blood platelet aggregation; and increase in levels of cholesterol, lipoproteins, triglycerides and free fatty acids. All of these factors accelerate the rate of damage to the inner layers of the coronary arteries through atherosclerotic plaque formation, narrowing of peripheral blood vessels, and provocation of ventricular arrhythmias (Friedman & Rosenman, 1974; Herd, 1984).

Although more is being learned about the physiological aspects of the Type A behavior pattern, an understanding of its psychological components lags far behind (Matthews,

1982). The present study attempts to address this issue by investigating several psychological variables and their relationship to the Type A behavior pattern. The three variables under study are Narcissism, Achievement Motivation, and Dogmatism. If one or more of these variables is shown to be associated with Type A behavior, a better understanding of the correlates of this risk factor for CHD will be possible. A review of the Type A literature will put each of these variables in context before discussing them independently.

CHARACTERIZATION OF THE TYPE A BEHAVIOR PATTERN

After years of treating Type A patients, Friedman and Rosenman (1974) suggest that the Type A behavior pattern develops as a result of deep insecurity of status, and lack of an intrinsic measure of self-worth. They propose that Type As base their inner security and character value upon the number of achievements they attain, and in doing so become caught up in a ceaseless struggle to attain a maximal number of achievements in a minimal amount of time. Likewise, Matthews (1982) suggests that Type As learn to value productivity in their development, but fail to acquire a clear sense of acceptable performance levels.

In a recent study, Houseworth (1985) investigated the experience of reported pleasure upon achieving a goal in Type A and B groups who were either given the opportunity to

persist at a task or not. Results showed that if Type As were given the opportunity to persist, they reported significantly less pleasure upon achieving a personal goal than As without the opportunity to persist, or than Type Bs in either condition. Houseworth (1985) concluded from these results that Type As are motivated by the belief that they are inferior, and therefore are more likely to perceive events in their environment as challenges or threats to their self-esteem. In an attempt to control these feelings of chronic self-doubt, Type As become engaged in a continuous struggle to prove their self-worth. In an environment of limitless opportunity and challenge, however, this attempt becomes manifest in the pursuit of ever-escalating goals. In sum, for Type As to feel fulfilled, they must be actively engaged in the pursuit of a goal.

CONTROLLING BEHAVIOR

Friedman and Rosenman's hypothesis that Type A behavior stems from covert insecurity of status is consistent with Glass's (1977) hypothesis that Type A is a style of coping aimed at gaining control over aspects of the environment that are perceived as likely to cause harm. By constantly reassuring themselves that they can assert and maintain control over their environment, Type As may enjoy momentary feelings of efficacy, mastery, and competence, all of which serve to raise self esteem (Matthews, 1982).

Glass (1977) investigated the effects of prolonged deprivation of mastery and control in Type A and Type B subjects. In a series of experiments, subjects were exposed to either controllable or uncontrollable tasks. In the controllable task situation, a contingency existed between behavior and outcome, in the uncontrollable situation, no such contingency existed. For example, in phase one of a study, Glass exposed subjects to 35 loud noise bursts that were either controllable or not controllable by the subject. In the second phase, subjects were again exposed to loud noise bursts, but this time the noise was controllable for all subjects.

Results showed that after brief exposure to an uncontrollable task, Type As performed the same or better than on the original task. After prolonged exposure to uncontrollable tasks however, Type As performed more poorly and appeared to give up. Glass described this Type A pattern of responding as hyperresponsiveness followed by hyporesponsiveness. He suggested that the pathophysiological effects of the chronic rise and fall of catecholamines resulting from this pattern help explain the link between Type A behavior and CHD. Glass also found that Type As transfer hyporesponding after prolonged exposure to uncontrollable stress to subsequent tasks that are controllable.

AGGRESSION AND HOSTILITY

Type As are known to manifest several other behavioral characteristics which also pose potential risks for CHD. Several researchers have demonstrated that Type As react with greater aggressiveness and hostility when confronted by a challenging situation (Friedman & Rosenman, 1974; Strube & Turner, 1984; Van Egeren, 1979). It appears that Type As elicit aggressive behavior from others, which in turn, leads them on to greater aggressiveness themselves. In a study by Ortega and Pipal (1984) the extent to which Type As actually seek or avoid challenging situations was assessed. Their investigation attempted to answer two questions: Is Type A challenge-seeking stimulated by precedent activity level? Do inactive Type As experience distress and seek challenge to reestablish an optimal level of stimulation? The experimental design called for Type A and Type B subjects to engage in tasks that required varied levels of activity before an assessment of their challenge-seeking behavior. Three activity conditions were used including a relaxed condition, where subjects were given guided imagery instructions for fifteen minutes, a passive condition, where subjects sat quietly for fifteen minutes, and an active condition, where subjects listened to a tape-recording that presented three-letter words every four seconds for fifteen minutes. In the latter condition subjects had to press a key each time the

first letter of a word preceded the third letter alphabetically. After the activity period, the subjects had the opportunity to select problems to solve, varying in their degree of challenge (i.e., from easy to extremely difficult).

Results showed that the relaxed Type As selected easy problems to solve, as did the relaxed Type Bs. The passive Type As, however, chose more challenging problems than the relaxed Type As or Type Bs at any activity level. The active Type As chose extremely difficult problems that most likely could not have been solved accurately. For Type Bs in general, the precedent activity level had little impact on their challenge-seeking behavior. For Type A subjects, however, precedent activity level significantly affected their challenge-seeking behavior. In light of previous evidence suggesting deleterious effects of chronic cardiovascular response to challenging situations, an ongoing search for challenge by Type As could easily create feelings of overload, resulting in a cumulatively negative physiological impact on the heart.

However, Type As could develop a tolerance to tensions associated with being overloaded as a way of maintaining their challenge-seeking behavior. Indeed, it has been noted that in addition to working hard to succeed, Type As suppress subjective states that might interfere with their task performance (Carver, Coleman, & Glass, 1976; Friedman & Ulmer, 1984; Matthews, 1982). In a relevant study, Keenan

and McBain (1979) investigated the relationship between role stress and psychological strain in 90 middle-level managers. The measures of role stress included: ambiguity (insufficient information to carry out a job); conflict (incompatible demands from two or more people and/or differences between internal standards and job demands); and role overload. The variables were Type A, intolerance of ambiguity, and locus of control. Intolerance of ambiguity was defined as the tendency to perceive ambiguous situations as sources of threat.

Results of the study showed a significant association between role ambiguity and job dissatisfaction for Type As, but not for Type Bs. In addition, Type A was positively correlated with amount of role overload, yet Type A tension at work was no higher than Type B tension. Based upon these results, it was suggested that perhaps Type As work in jobs that generate overload, and/or create overload in whatever job they're in. It was also suggested that perhaps overload is only tension producing for Type As when it interferes with their achievement striving (e.g., by acting as a barrier to successful job performance, or when there is so much to do, they cannot perform effectively). This is consistent with the finding that Type As experienced more tension and lower job satisfaction when ambiguity was high, which constituted a barrier to successful job performance.

ACHIEVEMENT STRIVING

The competitive achievement-striving component of the Type A pattern has also been well documented. Friedman and Rosenman (1974) report that Type As strive to accomplish more and more in less and less time. Consequently they exhibit impatient tendencies, set inordinately high goals and suppress feelings that may hinder their performance. Positive associations are reported for Type A and higher educational levels (Waldron, Zyzanski, Shekelle, Jenkins, & Tannenbaum, 1977), receipt of rewards for work (Matthews, Beane, Helmreich, & Lucker, 1980), and higher occupational status (Waldron, 1978). Similarly, Type A undergraduate students reportedly have higher need achievement scores (Matthews & Saal, 1978), higher grade point averages (Helmreich & Spence, 1978), and report spending more time studying and less time sleeping than Type Bs (Waldron, Hickey, McPherson, Butensky, Gruss, Overall, Schmader, & Wohlmuth, 1980).

Burnam, Pennebaker, and Glass (1975) conducted a study in which achievement striving and the time-urgent behaviors of Type As were investigated. In the first stage of their experiment, undergraduate subjects were asked to read a technical article aloud until they estimated that one minute had elapsed. It was predicted that Type As would report the lapse of one minute sooner than Type Bs. In the second stage, subjects were asked to solve a series of math prob-

lems. In the deadline condition, subjects were told that they had 5 minutes to work on as many of the problems as they could. In the no-deadline condition, subjects were not given a time limit. In reality, all subjects were allowed only 5 minutes to work on the task. It was predicted that Type As would work on approximately the same number of items in both conditions, whereas Type Bs were expected to complete fewer items in the no-deadline condition.

Results of the study supported both hypotheses. Type As signaled the passage of one minute sooner than Type Bs. The mean number of seconds that elapsed before signaling was 52.6 for Type As and 75.0 for Type Bs. Performance on the arithmetic problems showed that As attempted more problems than Bs under the no-deadline condition, whereas there was no difference between groups under the deadline condition. In essence, As attempted an almost identical number of problems under both conditions while Bs attempted significantly more problems only under the deadline condition. This experiment demonstrated that Type As work at near maximum capacity regardless of the goal demand of the task. Type Bs on the other hand, responded more closely to the precise nature of the task requirements.

Type As were also shown to perform closer to the limits of their endurance relative to Type Bs on a treadmill task. Carver, Coleman, and Glass (1976) conducted a study to determine whether Type A subjects suppress subjective fatigue

in order to persist at a tiring but challenging task. Subjects were required to walk continuously on a motorized treadmill and report their level of fatigue on an 11-point scale at two minute intervals throughout the test. The subjects were told that the experimenter would terminate the session after a predetermined amount of time unless the subject signaled a desire to stop. In actuality, there was no set time and all subjects ultimately terminated the session by themselves. In addition to the primary question, the authors were also interested in whether Type As would exert greater effort on the treadmill than Type Bs, and work closer to the limits of their endurance. This variable was measured by a physiological index of aerobic capacity.

The results showed that, compared to Type Bs, Type As performed at a level closer to the limits of their endurance. This should have resulted in Type As experiencing more fatigue than their Type B counterparts. An examination of the last four ratings of fatigue made by each subject, however, showed that Type Bs reported significantly more fatigue than Type As. The authors interpreted these results as supporting the notion that Type As suppress subjective states that would interfere with their achievement of goals and their mastering of the environment. Because of this tendency to suppress feelings of fatigue that may interfere with persistence at a task, the Type A individual has been described as confidently believing that any goal

can be attained with sufficient effort.

PERFORMANCE GOALS

In an effort to expand upon the previous research, Snow (1978) designed a study to assess the goal-setting behavior of Type A and Type B undergraduate males. The goal-setting patterns for each subject were assessed by means of five puzzles in which the subject was required to connect numbers from 1 to 80 in consecutive order as quickly as possible. Subjects were given 15 seconds to examine each puzzle before working on it for 60 seconds. After examining each puzzle, the subject was asked to write at the top of the page the number he would try to reach in the allotted time. Overall, four measures were obtained from these scores: (a) total level of aspiration - the mean sum of puzzle aspiration scores; (b) total attainment discrepancy - the mean sum for a subject's attainment minus his level of aspiration for each puzzle; (c) total goal discrepancy - the mean sum of the level of aspiration for a puzzle minus the attainment score on the previous puzzle; and (d) total puzzle performance - the mean sum of puzzle attainment scores. It was predicted that Type A subjects would show a pattern of elevated aspirations and large total attainment and goal discrepancies for the entire series of puzzles. Type Bs, on the other hand, were expected to show a more moderate goal setting pattern with a lower level of aspiration, and smal-

ler attainment and goal discrepancy scores.

The results generally confirmed these hypotheses. Type As set significantly higher goals on the initial puzzle than Type Bs. This difference remained marginally significant for the remainder of the series. In addition, Type A males showed significantly greater total attainment and total goal discrepancies than Type Bs. These results indicated that Type As set unrealistically high goals and continued to do so in the face of failure to attain them. In this study, the discrepancy in goal setting behavior occurred despite the fact that there was no difference in absolute performance level between Type A and Type B groups. In essence, not only do Type A males initially approach tasks with relatively high aspirations, but they also do not learn from early failure and realistically modify their inordinately high goal-setting behavior.

Ward (1985) also found evidence that Type As exhibit maladaptive achievement strivings. Once again, Type As were found to set unrealistic performance goals and to exhibit an inability to modify these goals in a manner consistent with performance feedback. Subjects classified as Type A, Type X, (moderately Type A individuals), and Type B were required to perform two general information tests. Before taking each test, subjects were asked to indicate how well they thought they would do. After each test, subjects were given feedback on their performance. It was predicted that Type

As would set higher personal performance goals than Type Xs or Type Bs, while performing approximately the same, resulting in a reduced likelihood of achieving personal performance goals. Secondly, it was predicted that the Type A tendency of failing to attain personal goals would be directly related to a failure to modify unrealistically high goals based on the first achievement test. Type Bs on the other hand, were expected to achieve their goals on test two as a result of modifying their goals in a manner consistent with achievement outcomes on test one.

A secondary purpose of Ward's study was to examine the information used by Type As in setting personal performance goals. It has been hypothesized that Type As lack established, internal standards by which to evaluate their performance (Matthews, 1982). Lacking an intrinsic measure of self-worth might lead to a tendency to base personal goals on external standards of excellent performance. To test this hypothesis, subjects were presented with a performance-standard scale during the introduction of the experiment. This scale consisted of 12 scores representing the raw score equivalents for excellent, good, marginal, and poor performance for separate population categories of doctoral students, college seniors, and high school honor students. It was predicted that information about excellent performance would have a greater impact on Type As than on Type Bs, as demonstrated by more accurate post-test recog-

nition.

The results supported the above hypotheses. Type As set significantly higher performance goals than Type Bs, yet both groups performed about equally. It was also found that Type As persisted in setting goals that were unrealistically high despite receiving feedback that their goals were excessive relative to their actual performance on test one. Type Bs, however, made substantial adjustments in their personal performance goals consistent with their performance on test one. Type As were also found to recognize significantly more excellent performance standards on a recognition test than Type Bs. Furthermore, trend analyses on personal performance goals, achievement discrepancy, and recognition of excellent performance showed significant linear relationships between these respective scores and severity of the Type A behavior pattern. In essence, individuals scoring at the middle of the Type A behavior pattern distribution approached achievement situations in a manner consistent with an individual possessing mild Type A characteristics. Overall, these results suggest that Type A's achievement striving is characterized by repeated failure to achieve personal goals due to a tendency to set high performance standards and to inadequately modify these standards based upon achievement feedback.

SUMMARY

The evidence reviewed thus far suggests that Type As respond with greater hostility and aggressiveness to challenging and threatening situations. It appears that situations involving interpersonal competition, blocking of achievement, and/or psychological harm generate a high degree of saliency for Type As. In addition, it appears that Type A individuals seek out challenging situations, especially when previously engaged in a high degree of activity, or when frustrated by inactivity. Other research points out that Type As base personal performance goals upon external standards of excellence, and then fail to modify these unrealistically high standards in the face of failure. In an attempt to accomplish whatever goals they do set, however, Type As perform at near maximum capacity, suppressing subjective states of fatigue in order to persist at tiring but challenging tasks. As a whole, this evidence generally supports the description of the Type A individual as one who is aggressively involved in achieving more and more in less and less time, against the opposing efforts of other things or people. Because maladaptive achievement striving is a major component of the Type A behavior pattern, a more precise characterization of its multifactorial structure may be a useful addition to the understanding of the Type A behavior pattern.

PSYCHOLOGICAL VARIABLES RELATING TO TYPE A BEHAVIOR

ACHIEVEMENT

Spence (1979) and Helmreich (1982) define achievement as task-oriented behavior which allows an individual's performance to be evaluated according to some internally or externally imposed criteria, and that involves some standard of excellence. In this definition, they have departed from earlier conceptions of achievement motivation describing it as a unitary construct involving mainly intrinsic motivational factors (Atkinson & Raynor, 1974; McClelland, Atkinson, Clark & Lowell, 1953; Raven, Malloy, & Corcoran, 1972). They have become progressively more interested in the effects of extrinsic motives and their relationship to both performance and intrinsic motives. They consider intrinsically motivated behavior to be that which is pleasurable in its own right and is not undertaken only to obtain some external reward. Extrinsically motivated behavior, on the other hand, is that which is enacted to obtain some tangible reward such as increased pay, promotion, or prestige.

Helmreich and Spence (1978) developed a measure of achievement motivation based upon their multi-factorial definition of achievement. The questionnaire measures several factors designated as work orientation, mastery, competitiveness, and personal unconcern. The work orientation factor represents an effort dimension-- the

desire to work hard and do a good job. The mastery factor consists of items describing a preference for difficult, challenging tasks and the meeting of internal standards of excellence. The competitiveness factor describes enjoyment of interpersonal competition and the desire to win over others. Personal unconcern is conceptually similar to fear of success; a high score indicating a lack of concern with the negative reactions of others to personal achievement. In studying the relationship between achievement motive scores and achievement behavior, Helmreich and Spence (1978) measured diverse populations with differentially relevant dependent variables. These populations consisted of college students, businessmen, and scientists, with GPA, annual salary, and scientific citations for published work as the respective measures of achievement. For each of these samples, a linear relationship existed between degree of work and mastery and level of achievement.

An unexpected finding was that in each of these groups, the individuals attaining the highest levels of achievement were those who scored high on the work and mastery components, but low in competitiveness. This finding suggested that a high degree of competitiveness lowered the quality of performance, particularly when combined with a high level of work and mastery. Spence (1979) and Helmreich (1982) concluded that competitiveness was related more to extrinsic motives and goals, and that individuals high in this compo-

nent viewed their activities as an instrumental means to gain a future pay-off, which in turn may lead to less effective behavior. Kohn (1986) elaborates upon this point: "Many studies have shown that we do best at the tasks we enjoy--those for which motivation is internal or 'intrinsic.' An outside or 'extrinsic' motivator--such as money, grades or the trappings of competitive success--simply cannot make us perform as well as we do when we find an activity rewarding in itself," (p. 28).

This statement has direct relevance to the Type A behavior pattern. Many studies indicate that while Type As strive harder to achieve, they do not necessarily outperform their Type B counterparts (Pardine, Napoli, Eustace, & Calicchia, 1985; Snow, 1978; Ward, 1985). In the present study an investigation into the association between Type A behavior and achievement motivation as measured by Helmreich and Spence's (1978) multi-dimensional questionnaire will be undertaken. The particular focus will be upon the work, mastery, and competitive components of achievment and how they interrelate to overall Type A scores.

COGNITIVE PROCESSES

Friedman and Rosenman (1974) propose that excessive physiological reactivity, in response to the perception of environmental stress and challenge, translates Type A behavior into CHD. Kaplan and Kimball (1982) state that the reception and processing of stimuli from the environment has

a profound effect on the development of CHD. What both of these statements suggest is that what one believes about oneself and the world one lives in can lead to behavior that contributes to the breakdown of functional systems (Hinds, 1983). To date, little work has been done in the area of cognitive processes and the Type A behavior pattern.

Attention Allocation

In one line of cognitive research, Pardine et al. (1985) have found that, in their chronic efforts to succeed, Type A persons devote their full attention to central environmental cues. As a result, they are less likely to attend to peripheral events that are not immediately relevant to task performance (e.g., internal bodily states and physical symptoms). Several studies lend support to this finding (Matthews, Brunson, Scheier, & Carducci, 1980; Strube, Turner, Patrick, & Perillo, 1983).

Matthews and Brunson (1979) conducted an illustrative investigation of attention allocation in Type A and Type B subjects. They used a dual-task paradigm to test the hypothesis that Type As focus their attention on central aspects of the environment and attend less to peripheral cues than Type Bs do. According to the authors, focusing of attention occurs when performance on the secondary task is poor, and performance on the central task is the same as or better than a referent. In the Matthews and Brunson study

(1979) the primary task was a color-naming procedure, while the secondary task consisted of depressing a telegraph key upon the onset of a light located in the subject's right peripheral visual field. Results indicated that relative to Type Bs, Type As performed more poorly on the secondary task and better on the primary task.

Matthews and Brunson (1979) conducted a second experiment to investigate whether peripheral events were simply inconsequential for Type As or whether they actively inhibited their attention to them. They hypothesized that if Type As attend less to peripheral events than Type Bs simply because they are attending to the central task, the central color-naming task should not be affected by the presence of a distractor. However, if Type As actively inhibit their attention to peripheral events, their performance should be facilitated by the presence of a distractor. In the latter case, the distractor would serve as a primer for Type As to actively ignore task-irrelevant cues which would detract from their performance.

Results indicated that Type As did in fact perform better with a distractor than without, while there was no difference in performance for Bs. Without the distractor there was no difference in performance between Type As and Type Bs. The authors felt that these results provided a systematic documentation of Type A's policy for allocating attention to the environment; they attend less to peripheral

aspects of their environment than Type Bs because they focus more of their attention on central environmental information. Type As, therefore, actively inhibit their attention to peripheral events that might distract them from performing well on a task. These attentional findings help to explain Type A's lack of response to uncontrollable phenomena of low salience. Low salience events are likely to be perceived as peripheral events to Type As. These findings also suggest that because Type As inhibit attention to peripheral events, they cannot use symptoms or other secondary cues to alter maladaptive behavior to a less stressful form. As a consequence, Type As would be more likely to delay seeking medical attention.

Matthews and Brunson (1979) also note that individuals who exhibit superior ability to focus their attention also show increased sympathetic nervous system activity. If sustained, however, this increase can subject the cardiovascular system to substantial stress on a daily basis. Thus, the attentional style of Type As may allow them to ignore distractions and focus their attention on a task, but they risk an increased potential for CHD in later years.

An Attentional Model

Much of the work on the attentional features of the Type A individual is consistent with a model proposed by Jennings (1983). Like Matthews and Brunson (1979); Pardine et al.

(1985); and Strube et al. (1983), Jennings believes that Type A individuals are predisposed to allocate full attentional capacity to central tasks. As a result, important peripheral information which could protect them against CHD, is lost. His thesis stems from work by Lacey, Kagan, Lacey, and Moss (1963) whose work suggests that the direction of cardiac change is influenced by the allocation of attentional processing capacity. These investigators discovered that tasks eliciting a deceleration in heart rate shared a requirement to note and detect environmental occurrences. Tasks producing acceleration, on the other hand, required mental work rather than sensitivity to environmental input. In essence, heart rate acceleration occured when attentional capacity was allocated to central, ongoing processes, whereas deceleration occured when processing capacity was held available for impending events and actions.

Illustrating this distinction in an anticipation procedure, Schell and Catania (1975) recorded the heart rates of subjects primed to detect a tachistoscopically presented stimulus following a warning tone. Results showed that greater heart rate deceleration was associated with correct signal detection, indicating that greater anticipatory acuity occurred with greater degrees of heart rate slowing.

In contrast to situations where processing capacity is held available, a different pattern of cardiovascular response occurs when full capacity is allocated to the

processing of ongoing thoughts and actions. Physiological changes occur similar to those accompanying physical exercise. In essence, heart rate, blood pressure, blood flow, and catecholamine levels are increased (Williams, Friedman, Glass, Herd, & Schneiderman, 1978). As reviewed earlier, excessive blood pressure changes and catecholamine response are among several factors implicated in the development of atherosclerosis and CHD.

In sum, Jennings (1983) maintains that, unlike individuals who maintain spare capacity, tolerate distraction and are willing to take ample time to complete a task, Type A individuals allocate full processing capacity to tasks at hand while actively ignoring distracting information. This processing style, in turn, engenders chronic physiological reactivity which, over the long run, predisposes Type As to CHD. In addition to ignoring health cues because of their tendency to allocate full attention to central tasks, Jennings asserts that Type As also ignore social cues, and this may be one reason why they have been found to have poor social networks (Burke & Weir, 1980).

Category Formation

The work of Jennings (1983), Matthews and Brunson (1979), Pardine et al. (1985), and Strube et al. (1983) demonstrates that Type As and Type Bs differ in the way in which they allocate their attention to tasks. Humphries, Carver, and

Neumann (1983) reasoned that if Type As gravitate to a focus on central events, this allocation of attention should have an influence on the ways in which Type As and Type Bs create and utilize categories. Essentially, they argued that because Type As focus attention on central events and suppress attention to peripheral ones, it is reasonable to extrapolate that an analogous A/B difference exists in the tendency to selectively attend to central attributes during the formation of cognitive categories. Because Type Bs do not ignore peripheral attributes to as great an extent as Type As do, they should attend to more of the full range of stimulus variability that is presented to them during category formation.

To test this theory, the authors used a recognition-memory task. In this paradigm, subjects are exposed to an acquisition set of stimuli; each stimulus representing an array of attributes that occur frequently, others less frequently, and others rarely. This acquisition set is used to create a category. It was hypothesized that Type As would attend more to frequently appearing central attributes than Type Bs and thus encode them more often. The results supported these hypotheses and provided evidence that Type As generate restrictive categories by focusing on centrally important events, while suppressing attention to peripheral events and stimuli.

Attributions of Success and Failure

Other cognitive research has focused upon the thought processes that accompany exposure to uncontrollable challenge by Type A and Type B subjects. In one study, Rhodewalt (1984) exposed subjects to noise bursts and informed them that control over the noise could be obtained by solving a set of problems. Half of the subjects were given success feedback, indicating that they had correctly solved some of the problems. The other half were given failure feedback. In actuality, all subjects were subsequently exposed to the same amount of aversive noise regardless of the feedback they received. In postexperimental measures, both Type A and Type B subjects attributed success to their own performance. In the failure feedback condition, however, Type As attributed failure to themselves, while Type Bs attributed it to factors in the situation.

In another study, Brunson and Matthews (1981) asked subjects to solve a number of problems while verbalizing their thoughts out loud. The experimenters manipulated the salience of the task by giving the subjects moderate or high-salience feedback. In the moderate condition, subjects were simply told about the correctness of their responses. In the high salience condition, subjects were told about the correctness of their choices, and were required to keep a written record of them. After exposure to four solvable

problems, subjects were given unsolvable problems to work on. In a postexperimental phase, attributions for success and failure were measured.

Results showed that Type As in the high salience condition displayed deterioration in performance and consistently used ineffectual problem-solving strategies when working on the unsolvable problems. This was accompanied by pessimistic statements and annoyance at their 'stupidity.' On post-experimental measures, Type As attributed their performance outcomes to a lack of ability and effort. Type Bs, on the other hand, only temporarily shifted to poorer problem-solving strategies, expressing unhappiness with the task, but later expressed optimism about performing better in the future. In the post-experimental measure, Type Bs related their failure to solve problems to external qualities of chance, task difficulty, and to the experimenter.

SUMMARY

In summary, cognitive studies with Type A individuals reveal that they use ineffectual problem-solving strategies and give up responding after experiencing prolonged exposure to failure. This is attributed to a perceived state of helplessness brought on by the Type A's conviction that noncontingency between behavior and outcome is a direct reflection of his/her lack of ability and effort.

Glass (1977) interpreted these findings in terms of the "learned helplessness" paradigm developed by Seligman (1975). This paradigm suggests that a psychological state of helplessness results when individuals encounter aversive events over which they perceive themselves as having little control. Control in this sense refers to the ability to escape, avoid, or modify threatening stimuli (Seligman, 1975).

Research has also shown that Type As devote full attention to central environmental events. This attentional style results in the development of generally restrictive cognitive categories and allows Type A individuals to actively ignore peripheral environmental events. As a result, they experience increases in heart rate, blood pressure and catecholamine levels, but cannot use these somatic cues to reduce stressful behavior. For the same reason, they are less likely to use social cues to enhance interpersonal relations. In essence, it appears that Type

As exhibit a rigid cognitive style of functioning that allows them to remain intensely focused on a central task. The cost of this rigid style, however, is cognitive flexibility and a broader coping repertoire.

DOGMATISM

This rigid cognitive style closely resembles what Rokeach (1960) defined as a "closed" and "dogmatic" system in his seminal work, The Open and Closed Mind. The construct of dogmatism as developed by Rokeach (1960) is defined as the openness or closedness of an individual's cognitive framework. Rokeach (1960) suggested that an individual is either open-minded or closed-minded depending upon:

> evaluate, and act on relevant information received from the outside on its own intrinsic merits, unencumbered by irrelevant factors in the situation arising from within the person or from the outside (p.57).

Irrelevant factors arising from within the person that distort reception, understanding, and action in response to incoming stimuli are "unrelated habits, beliefs, perceptual cues, irrational ego motives, power needs, the need for self-aggrandizement, and the need to allay anxiety"

(Rokeach, 1960, p.57). Irrelevant external factors consist primarily of "the pressures of reward and punishment arising from external authority" such as parents, peers, reference groups and other authority figures (Rokeach, 1960, p.57).

Rokeach (1960) suggested that highly dogmatic individuals exhibit a closed way of thinking, a tendency to distort incoming messages and meanings, an intolerant attitude toward those with dissimilar values or beliefs, and an authoritarian perspective. In addition, closed-minded individuals are generally more anxious and defensive, and less permissive in their relationships with others. On the other hand, low dogmatic or open-minded individuals have a lesser need to defend against thoughts and beliefs unlike their own, and are less likely to distort and narrow the messages and meanings expressed by others. Open-minded individuals are more likely to consider incoming information on its own merits, and are more tolerant in interpersonal relationships.

Rokeach (1960) organized his construct of dogmatism around several dimensions, the first of which is the "belief-disbelief" dimension. The belief dimension represents all beliefs, expectancies, sets and hypotheses - both conscious and unconscious - that a person holds at a given time and accepts as true of the world. The disbelief

dimension is composed of a series of subsystems which contain all the disbeliefs, expectancies, hypotheses and sets- both conscious and unconscious - that a person rejects as false to one degree or another.

A second dimension is labeled the "central-peripheral" dimension, and consists of three regions. The central region represents primitive beliefs. These beliefs are thought to be formed early in life and include content about the physical and social environments, with the latter comprising the self-concept and the person's conception of others. Essentially, these primitive beliefs relate to physical reality and physical properties of the world, as well as to whether the world is a friendly or unfriendly place to live in; whether people should be trusted or feared; whether authority figures are punishing or loving; and whether the future is regarded with security or apprehension. In addition, these beliefs concern self-identity, self-worth, and independence.

An intermediate region contains nonprimitive beliefs concerning authorities to whom we turn for information and to check information we already possess. A third region is referred to as the peripheral region and contains beliefs and disbeliefs derivable from one's intermediate beliefs. By way of explanation, Rokeach (1960) states that:

> Favorable or unfavorable beliefs about such things as birth control, the New Deal and the theory of repression are considered peripheral beliefs because they are derivable from the formal content of one's beliefs about the Catholic church, Roosevelt and Freud. The latter, according to our view, would be represented as part of the intermediate region rather than the peripheral region (p.47).

The third dimension is the "time-perspective" dimension which refers to a person's beliefs about the past, present, and future, and their relationship to one another. Time perspectives are conceived as varying from broad to narrow. A broad perspective incorporates past, present, and future in an interrelated way. A narrow perspective, on the other hand, overemphasizes or fixates on one time frame without an appreciation for the continuity that exists between them.

These dimensions and their attributes combine to produce a system of cognitive functioning which can be characterized as relatively "open" or "closed." This distinction can be quantified by an instrument developed by Rokeach (1960). The Dogmatism Scale (Rokeach, 1960) was developed in a deductive fashion with items designed to tap the various dimensions described.

Important parallels appear to exist between the attentional and attributional styles of Type A individuals and a closed style of cognitive functioning. While an active inhibition of peripheral information might allow Type A individuals to be unencumbered by irrelevant factors, it also appears to put them at risk for ignoring relevant information as well.

Because of the apparent similarities between the cognitive functioning of Type A and closed-minded individuals, the present study will also investigate the relationship between Type A behavior and Dogmatism as measured by Rokeach's (1960) Dogmatism Scale. The finding that Type As are generally more dogmatic than Type Bs would shed light on the rigidity and stability of their behavior. This information would be useful for any program aimed at modifying this destructive behavior pattern.

CULTURAL FACTORS AND DEVELOPMENT OF TYPE A BEHAVIOR

While most research efforts into the Type A behavior pattern have been aimed at the level of the individual, it is important to note environmental contributions as well. Margolis, McLeroy, Runyan, & Kaplan (1983) have attempted to analyze Type A behavior within an ecological framework by examining how environments at the interpersonal, institutional, and cultural levels promote Type A behavior.

At the intrapersonal level, the intense achievement

striving of Type As implies social comparison of their performance to some standard. Research has shown that Type As tend to adopt very high performance standards that rarely can be met, leaving them constantly striving to improve (Snow, 1978; Ward, 1985). It has been suggested that perhaps the Type A individual cannot decide on an explicit performance standard and strives to improve because no performance is ever satisfactory (Houseworth, 1985; Matthews, 1982).

On the interpersonal level, Type A behavior seems to involve a long-term pattern of responding to competitive situations initiated early in life and developed through interaction with siginificant others. Matthews (1977) suggests that escalation of parental performance standards may play an important developmental role in Type A behavior. Margolis et al. (1983) suggest that while competitive, threatening situations elicit Type A behavior in some individuals, the behavior also influences the nature, structure, and content of interpersonal relationships. Several authors have noted that Type A individuals may initiate competition in otherwise noncompetitive situations (Friedman & Rosenman, 1974; Strube & Turner, 1984). Strube and Turner (1984) also suggest that Type As are more likely to define intimate relationships as competitive, subsequently enjoying less intense relations, and having greater difficulty with intimacy. For these reasons, they suggest that

Type As are likely to have weaker and less reciprocal social networks.

On the cultural level, Margolis et al. (1983) contend that Western civilization has created a value structure which promotes competitive achievement striving, time urgency, hostility, and aggressiveness. They note four prevalent characteristics of social institutions that promote Type A behavior: (a) reward systems that foster aggressive competition and achievement striving; (b) limited controllability and/or predictability of success or failure, accompanied by little tolerance for error; (c) numerous role demands resulting in both time and opportunity conflicts; and (d) time demands that encourage time-urgent and/or aggressive behavior. These characteristics extend from Little League institutions to corporate management. Individuals are taught to continually try harder and successfully compete to get ahead in the world. When the limits of competition are clear and reachable, they are less promotive of Type A behavior. Unfortuantely, it is rarely clear how good a grade point average or how many publications are sufficient for promotion.

A CULTURE OF NARCISSISM

There is an interesting parallel between characteristics of the Type A behavior pattern and the recently defined Narcissistic Personality Disorder. Salient features of this

disorder include: responding to criticism, indifference, or defeat at the hand of others with aloofness or rage, accompanied by feelings of inferiority, humiliation, or emptiness; exploitativeness; preoccupation with fantasies of success and power; and an overdependence on external admiration and acclaim (Solomon, 1982). Lasch (1979) describes the narcissistic individual as being fiercely competitive and demanding of approval and acclaim; as having acquisitive cravings that know no limits, accompanied by demands for immediate gratification and; as having a dependency upon others to validate their self-esteem (i.e., overcoming insecurities by seeing a grandiose self reflected in the attentions of others). Lasch (1979) comments that many of these traits make for success in bureaucratic institutions. There, a premium is placed on the ability to manipulate interpersonal relations in an environment that provides the narcissist with the conditional approval necessary to validate his/her self-esteem.

DEVELOPMENT OF THE NARCISSISTIC PERSONALITY

The original psychoanalytic concept of narcissism introduced by Freud (1914) described it as an economic libidinal investment of the ego. Freud reasoned that a withdrawal of libidinal cathexis from objects must be accompanied by an increased libidinal cathexis of the self. In essence, he thought of narcissism as a reservoir, de-

pleted to the extent that an individual loves others. A narcissistic person, therfore, does not love others because he or she loves themselves too much. According to this view, both normal self-esteem and self-aggrandizement are narcissistic phenomena, the only difference being one of quantity.

Horney's (1950) view of narcissism represents a departure from Freud's economic conceptualization. She saw persons with narcissistic trends as being alienated from and therefore incapable of loving either themselves or others. Horney (1950) contended that narcissistic trends were not the deriviative of instinctual properties, but rather, the representation of a neurotic attempt to cope with self and others by way of self-inflation. The difference between self-esteem and self-inflation, therefore, was not quantitative, as in Freud's view, but rather qualitative. The primary distinction being that true self-esteem rests upon qualities that a person actually possesses, while self-inflation involves the presentation of qualities and achievements to self and to others which have no adequate foundation. Ultimately, Horney (1950) saw narcissism not as an expression of self-love, but rather as an alienation of the self: "In rather simplified terms, a person clings to illusions about himself because, and as far as, he has lost himself" (Horney, 1950, p.100).

Like Horney, most contemporary theorists believe that narcissistic activity functions as a defense against

object-related conflicts. Stolorow (1975) proposed the following functional definition of narcissism: "Mental activity is narcissistic to the degree that its function is to maintain the structural cohesiveness, temporal stability and positive affective colouring of the self-representation" (p. 179). In essence, narcissism embodies those mental operations that function to regulate self-esteem and to maintain the structural foundation upon which self-esteem rests. Stolorow (1975) likens the relationship between narcissism and self-esteem to the relationship between a thermostat and room temperature. The thermostat functions to regulate and stabilize room tempertaure in the face of extraneous forces which threaten to destabilize it. Likewise, under threatening conditions, narcissistic activities are called into play to protect, restore, and stabilize self-esteem.

Developmentally, disordered narcissistic activity hypothetically begins with disturbances in the separation-individuation phase of infancy (Eisnitz, 1969). The shifting relationship between primary caretaker and infant during this phase forms a model used to conceptualize experiences of relatedness between self and others. These shifts require an empathic and welcoming environment (Urist, 1980). In some cases, an infant's attempts at independence are thwarted or undermined, which can lead to an inadequate separation phase. As a result, the infant may become

enmeshed in an active inner conflict stemming from an inability to be his/her own self (DeRosis, 1981). Subsequently, the child misuses imagination to create a fantasized self that is free from limitations. Unfortunately, without knowing limitations, the child is not able to create an authentic relationship to the world of things and people. Instead, this sense of infinite freedom promotes an endless search for the absolute, which in turn encourages the formation of an equally imaginary self-love. Ultimately, the narcissist ends up not being in love with the self of reality, but rather with a fantasized image (Horney, 1950; Lowen, 1983).

According to this view, the narcissist's constant need for admiration and affirmation of self-worth stems from a need to master. This dynamic is very similar to the one that theoretically underlies Type A behavior. Combining a belief that mastery is essential to one's life with an unclear sense of acceptable performance levels, could very well lead to excessive striving for achievement and acclaim, aggressiveness, and free-floating hostility, all characteristic signs of both narcissistic and Type A behavior patterns.

NARCISSISM AND TYPE A BEHAVIOR

From both theoretical and sociocultural perspectives, the clinical pictures of the narcissistic individual and the Type A individual are strikingly similar. Chesney, Black, Chadwick, and Rosenman (1981) report that, like the narcissist, the Type A male is one characterized by many of the traits thought to be strengths in today's world. There are a number of studies that lend indirect support to an association between Type A behavior and narcissism.

Scherwitz, McKelvain, Luman, Patterson, Dutton, Yusim, Lester, Kraft, Rochelle, & Leachman (1983) found that self-references elicited from questions in the structured interview assessment of Type A behavior were significantly correlated with manifestations of CHD. Total self-references correlated positively with history of a previous heart attack, number of occluded arteries, and severity of heart disease. Additional analyses showed that these findings were not due to retrospective bias (i.e., a tendency for those with a long history of CHD to become more self-involved). These authors believe that the use of first person pronouns in speech reflects a self-focus and self-involvement, two of the hallmarks of the narcissistic personality. Although their correlations were not strong, they consistently pointed to an association between disease morbidity and self-references.

In another study, Pittner and Houston (1980) studied the

effect of differential threat on Type A and Type B subjects. The authors exposed Type As and Type Bs to conditions of either low stress, self-esteem threat, or shock threat, and measured physiological and cognitive differences. No physiological differences occurred for Type As or Type Bs in situations involving low stress and shock threat, but in the threat to self-esteem condition, Type As showed significantly higher blood pressure than Type Bs. Type As also tended to report significantly less subjective distress relative to their level of psychophysiological arousal than Type Bs.

Admittedly, these studies are only suggestive of a relationship between Type A behavior and a narcissistic personality trait. However, the abundance of shared behavioral manifestations and the dramatically similar theoretical underpinnings outlined above, make an investigation of this relationship worthwhile. The final aim of the present study, therefore, will be to investigate the association between Type A behavior and Narcissism.

CHAPTER 2

SUMMARY AND STATEMENT OF THE PROBLEM

The Type A behavior pattern has been identified as a significant risk factor for CHD. Research has shown that Type As respond to threat and challenge with potentially harmful elevations in blood pressure, heart rate, and catecholamine levels. All of these factors contribute to atherosclerotic plaque formation, which can result in fatal heart disease. In an effort to achieve many things in a limited amount of time, Type As have been shown to signal the passage of time sooner than Type Bs; suppress subjective states that might interfere with their achievement; work at near maximum capacity regardless of the goal demands of the task; set high performance standards which rarely can be met, and to exhibit a failure to modify these standards based upon performance feedback. In addition, precedent activity levels significantly affect Type A's challenge-seeking behavior.

Cognitively, Type As have been shown to focus more on central aspects of their environment and to actively inhibit attention to peripheral events that might distract them from performing well. As a result, Type As have been shown to

develop more restrictive cognitive categories than Type Bs. Other research has shown that Type As initially put forth greater effort, but then give up trying in response to prolonged exposure to an uncontrollable task. In addition, Type As experience more tension and lower job satisfaction under conditions of ambiguity than do Type Bs.

Friedman and Rosenman (1974) suggest that the Type A behavior pattern develops as a result of an insecurity of status and from a lack of an intrinsic measure of self worth. Margolis et al. (1983) contend that institutions of Western society play a role in the development and maintenance of this pattern by encouraging hostility, competitive achievement striving, and time urgency from a very early age. Lasch (1979) and Lowen (1983) agree that social institutions have given increasing prominence to these values, which they see as contributing primarily to the development of a narcissistic personality. In addition to being fiercely competitive, the narcissist depends upon others for validation of his/her self-esteem and self-worth.

In order to investigate associations between the Type A behavior pattern and other psychological variables, a correlational study is proposed. This study will investigate whether or not positive associations exist between the Type A behavior pattern and Narcissism, as measured by the Narcissistic Personality Inventory (NPI) developed by Raskin

and Hall (1979); Dogmatism, as measured by the Dogmatism Scale developed by Rokeach (1960); and Achievment Motivation as measured by the Work and Family Orientation Questionnaire (WOFO) developed by Helmreich and Spence (1978).

HYPOTHESES

The hypotheses under study are as follows:

1. There will be a significant positive association between Type A behavior and a measure of narcissistic personality disorder.

2. There will be a significant positive association between Type A behavior and a measure of achievement motivation.

3. There will be a significant positive association between Type A behavior and a measure of dogmatism.

CHAPTER 3

METHODS AND PROCEDURES

SUBJECTS

Subjects were 183 undergraduate subjects enrolled in introductory psychology courses at Michigan State University (132 females and 51 males). Subjects were classified as Type A or Type B on the basis of their scores on the Jenkins Activity Survey (JAS), (Jenkins, Rosenman, & Zyzanski, 1974), revised for students by Glass (1977). Subjects were given course credit for participating in the study.

INSTRUMENTS

All instruments used in this study required subjects to respond in a forced-choice format. Four questionnaires were administered to all subjects: (a) the revised student version of the Jenkins Activity Survey; (b) the Rokeach Dogmatism Scale; (c) the Narcissistic Personality Inventory; and (d) the Work and Family Orientation Questionnaire. Each of the four instruments are reprinted in Appendix A.

The Revised Jenkins Activity Survey

The Jenkins Activity Scale (JAS) is a 44-item questionnaire developed by Jenkins, Rosenman, and Friedman (1967) to identify individuals posessing the Type A behavior pattern. The original validation study for the adult JAS was carried out in the Western Collaborative Group Study (WCGS), (Jenkins, Rosenman & Friedman, 1967). The questionnaire accurately identified overall behavior patterns in 73% of the sample, using the Standardized Diagnostic Interview (Rosenman et al., 1966) as the criterion. Agreement with the interview was reached in 68% of men classified as Type A and 78% of men classified as Type B. The A/B scale scores significantly discriminated between coronary and matched non-coronary controls (Jenkins, Zyzanski, & Rosenman, 1971). It is important to note, however, that while overall agreement between the two techniques is statistically significant, it is far from perfect, suggesting that the two techniques may be measuring different aspects of Type A and B behaviors (Matthews, 1982). This notion is supported by research indicating that the JAS and the Structured Interview generally measure the same content but that the interviewer, in making a final classification, tends to downplay the content but weigh heavily the interviewee's speech characteristics (Scherwitz, Berton, & Leventhal, 1977).

While the Standard Interview and the JAS both allow

identification of Type A behavior, there is some evidence suggesting that the Standard Interview suffers from a lack of specificity (Matthews, Krantz, Dembroski, & MacDougall, 1982). Studies of middle-class samples reveal a preponderance of individuals classified as Type A with relatively few classified as Type B (Chesney, Black, Chadwick, & Rosenman, 1981). The Standard Interview has also been criticized on the grounds that not all individuals can adequately learn to observe and interpret the particular features of the Type A behavior pattern. For these reasons, and because it is slower and less economical for large-scale studies (Jenkins, Rosenman, & Friedman, 1967), the Standard Interview was not used in the present study. On the other hand, experimental studies have largely confirmed that the JAS validly identifies Type A individuals in an efficient and economical manner for large scale use (Matthews, 1982). Test-retest correlations for the JAS have ranged from .60 to .70 across one to four year time intervals (Jenkins, 1978).

The JAS items have been modified for use with college students (Glass, 1977). Form T, the student version, is essentially the same as the original version validated in the WCGS, except that items concerning job involvement are deleted (Krantz, Glass, & Snyder, 1974).

Rokeach Dogmatism Scale

The Rokeach Dogmatism Scale is an evaluative measure of the openness of one's belief system. Subjects respond to a six-point, 40-item scale according to their degree of agreement or disagreement with each statement. The scale was designed so that strong agreement with the statements represents closed-mindedness, while disagreement is scored as representative of open-mindedness. Reliabilities for the Rokeach Dogmatism scale typically range from .68 to .93 (Rokeach, 1960). Zagona and Zurcher (1965) reported test-retest reliability of .697 with over 500 college freshmen and sophomores, and found the high dogmatic student to be leader-oriented, preferring lectures to discussion. The Dogmatism scale was shown to significantly differentiate between highly dogmatic and low dogmatic individuals in a validation study by the method of known groups (Rokeach, 1960). Lee (1978) also confirmed the reliability and validity of the Dogmatism scale in her research on the relationship between dogmatism and college performance of liberal arts students.

Narcissistic Personality Inventory

The Narcissistic Personality Inventory (NPI) was developed by Raskin and Hall (1979) and consists of 54 pairs of statements to which an individual may or may not identify. This inventory measures the degree to which an individual may be considered narcissistic as defined by the following

DSM-III (APA, 1980) characteristics: (a) grandiose sense of ones self-importance; (b) preoccupation with fantasies of unlimited success; (c) exhibitionism; (d) responds to criticism, indifference, or defeat either with cool indifference or with marked feelings of rage, inferiority, shame, humiliation, or emptiness; (e) entitlement, expecting special favors without assuming reciprocal responsibilities; (f) exploitativeness; (g) relationships vacillate between the extremes of overidealization and devaluation; and (h) lack of empathy.

Several studies have employed the NPI. Raskin and Hall (1981) report an 8-week alternate form reliability of .72, and found the NPI to be positively related to Eysenck's Extraversion and Psychoticism scales. Emmons (1981) investigated the relationship between narcissism and sensation-seeking and obtained significant correlations between the NPI and disinhibition, experience seeking, and boredom susceptibility. In a later study, in which he investigated the relationship between narcissism and basic personality dimensions, Emmons (1984) obtained significant correlations between the NPI and dominance, exhibitionism, extraversion, self-esteem, and self monitoring. Negative correlations were found between the NPI and abasement, deference, and social anxiety. Using a psychiatric sample, Prifitera and Ryan (1984) reported a correlation of .66 between the NPI and the narcissism scale of the Millon

Clinical Multiaxial Inventory (MCMI). When classified into high and low groups, there was 74% agreement between the NPI and the narcissistic scale of the MCMI.

Work and Family Orientation Questionnaire

The Work and Family Orientation Questionnaire (WOFO) was developed by Helmreich and Spence (1978). It is a two-part, 32-item measure of general achievement attitudes and specific life goals. The first part contains 23 motivational items dealing with attitudes toward work and achievement-oriented activities. The second part is used primarily with student groups and contains mixed items dealing with educational desires; the importance of work vs. marriage and; number of children desired. In addition there are items dealing with extrinsic goals, such as the desire for pay, prestige, and job advancement. Overall factor analyses identified four major components parts of the WOFO that contribute to an achievement score. These factors are work orientation, mastery, competition, and personal unconcern. The personal unconcern factor, purportedly a measure of something similar to "fear of success" has not proven useful in other research (Helmreich & Spence, 1978). Therefore it was not included in this research. The reliability of the three WOFO scales is adequate: The alpha coefficients for all three scales are above .62 in a sample of 1,300 college students. The WOFO scores have predicted such achievement

outcomes as grades in school, income among businessmen, and scientific attainment in several studies (Helmreich & Spence, 1978; Spence, 1979).

PROCEDURE

Subjects were recruited from several large undergraduate psychology courses. Sign-up sheets were posted in the back of the auditorium specifying the time, date, and location of the experimental session. Subjects were asked to leave their name and phone number and to specify which psychology class they were enrolled in so that proper credit could be awarded at the conclusion of the study. At the specified date and time, subjects gathered in a well lighted classroom and were asked to wait until all other subjects were present and seated.

Subjects completed a battery composed of four questionnaires (Appendix A). They were asked to read the instructions carefully (Appendix A), to answer all questions, and to work quickly and independently. Names were not required on any of the questionnaires. All subjects were verbally apprised of their rights as volunteer participants and were given consent forms to sign (Appendix A). Subjects were divided into eight groups of approximately 22 students each. The battery was administered to each group on alternate days. The order of the questionnaires varied from group to group so that each individual questionnaire was presented in

the first, second, third, and fourth positions twice. In addition to the instructions, each battery included a section containing questions designed to obtain demographic information regarding age and sex of the subject.

CHAPTER 4

RESULTS

The mean scores and standard deviations for the Type A (JAS), Narcissism (NAR), Dogmatism (DOG), and Achievement Motivation (ACH) scales, as well as Achievement Motivation subscales are presented in Table 1.

Table 1: Means and Standard Deviations of Variables

VARIABLE	MEAN	STANDARD DEVIATION
JAS	13.20	5.43
NAR	20.75	7.31
DOG	91.75	19.19
ACH	82.91	8.91
WORK	21.38	2.45
MAST	18.93	4.46
COMP	13.81	3.33

HYPOTHESIS I

There is a significant positive association between Narcissism and the Type A Behavior Pattern.

Results of a correlational analysis revealed a significant positive correlation of .25 ($p < .001$) between Narcissism and the Type A Behavior Pattern (see Table 2). The correlation indicates that there is a low to moderate relationship between Narcissism and the Type A Behavior Pattern. The square of the correlation coefficient (.06) indicates that 6% of the variation in the Type A score can be accounted for by the Narcissism score.

Table 2: Correlation of Type A Behavior (JAS), Narcissism (NAR), Dogmatism (DOG), and Achievement Motivation (ACH).

Factors	JAS	DOG	NAR	ACH
JAS	---			
DOG	.14	---		
NAR	.25**	-.02	---	
ACH	.39**	.02	.45**	---

** Significant at the alpha = .001 level

Table 3 presents correlations of the four major variables for males and females separately. (Valid comparisons cannot be made between samples due to differences in sample sizes).

Table 3: Correlation of Type A Behavior (JAS), Narcissism (NAR), Dogmatism (DOG), and Achievement Motivation (ACH) for Men (lower diagonal, N=51) and Women (upper diagonal, N=132)

Factors		JAS	DOG	NAR	ACH	
						W
						O
JAS		----------	.13	.28**	.39**	M
DOG	M	.15	----------	.01	.08	E
NAR	E	.18	-.15	----------	.50**	N
ACH	N	.37*	-.09	.33*	----------	

* Significant at the alpha = .01 level

** Significant at the alpha = .001 level

HYPOTHESIS 2

There is a significant positive association between Achievement Motivation and the Type A Behavior Pattern.

Results of a correlational analysis revealed a significant positive correlation of .39 ($p < .001$) between Achievement Motivation and the Type A Behavior Pattern (see Table 2). The correlation indicates that there is a moderate to strong relationship between Achievement Motivation and the Type A Behavior Pattern. The square of the correlation coeffeicient (.15) indicates that 15% of the variation in the Type A score can be accounted for by the Achievement Motivation score.

HYPOTHESIS 3

There is a significant positive association between Dogmatism and the Type A Behavior Pattern.

A non-significant correlation of .14 ($p > .05$) was found between Dogmatism and the Type A Behavior Pattern. The correlation indicates that there is no relationship between Dogmatism and the Type A Behavior Pattern.

The correlational analysis depicted in Table 2 was also used to determine whether the variables Narcissism, Dogmatism, and Achievement Motivation were independent. A significant correlation of .45 was found between Narcissism and Achievement Motivation ($p < .001$). The correlation indicates that there is a moderate to strong relationship between Narcissism and Achievment Motivation. The square of the correlation coefficient (.20) indicates that 20% of the variation in the Narcissism score can be accounted for by the Achievement Motivation score.

ADDITIONAL ANALYSES

A manual step-wise multiple regression analysis was conducted to determine whether the combined variables would significantly predict Type A Behavior (see Table 4). Results indicated that the Achievement Motivation score is the best single predictor of Type A Behavior, accounting for 15% of the variation in the Type A scores. Multiple R Squared (.18) indicates that 18% of the variation in the Type A score can be accounted for by all three factors combined.

Table 4: Prediction of Type A Behavior by Means of Achievement

Variables	B Weights	p(B)	Multiple R
Achievement Motivation	.21	.001	.39
Dogmatism	.04	.061	.41
Narcissism	.08	.172	.42
Constant	-8.95		

In an effort to further explore the relationship between Achievment Motivation and the Type A Behavior Pattern, Achievement Motivation scores were broken down into three Achievement Factors: Work, Mastery, and Competition. Table 5 shows the simple Pearson correlations between Type A Behavior and Achievment Factor Scores. Type A Behavior is substantially and positively associated with Mastery and Competition scores ($p < .001$). In essence, the more Type A the individual, the more likely he/she is to prefer challenging tasks, and to be competitive in his/her orientation.

Table 5: Correlation of Type A Behavior with Achievement Motivation Factor Scores (N = 183)

Achievement Motivation Factors	JAS
Work	.11
Mastery	.36**
Competition	.34**

** Significant at the alpha = .001 level

After separating Achievement Motivation into its three component factors, a final regression analysis was conducted to determine how well these three factors would predict Type A Behavior. Results indicated that Mastery and Competition are the best predictors of Type A Behavior, with a multiple r of .46, accounting for 21% of the variation in the Type A score (see Table 6). The addition of Work did not account for any additional variance.

Table 6: Prediciton of Type A Behavior by Means of Achievement Motivation Factors: Work, Mastery, and Competition (N = 183)

Variables	B Weights	p(B)	Multiple R
Mastery	.36	.000	.36
Competition	.48	.000	.46
Work	.10	.51	.46
Constant	-.37		

CHAPTER 5

DISCUSSION

General Findings

As Table 2 illustrates, two of the three hypotheses under investigation received support in this study. There is a low but significant association between the Type A behavior pattern and Narcissism as defined by the DSM III (1981). There is a moderately significant association between the Type A behavior pattern and Achievement Motivation as measured by the WOFO (Helmreich & Spence, 1978). The third hypothesis, there is a significant association between the Type A behavior pattern and Dogmatism, as measured by the Rokeach (1960) Dogmatism Scale, did not receive support in this study. These results were largely maintained when the subject sample was divided by sex (see Table 3). The one correlation that did not remain significant was that between TABP and Narcissism for males. This is not surprising, however, given the relatively small size of the male sample and the low overall association between these two variables within the total sample. (Reasons for this mild association

in the total sample are discussed below).

The fact that significant correlations were obtained between TABP and Achievement for both females and males supports research indicating that the TABP is prevalent among females (see Table 3). Several investigators have suggested that the TABP and its relationship to CHD in females appears to parallel the rise in employment and vocational equality among men and women (Burish, 1980; Waldron, 1978; Waldron, Zyzanski, Shekelle, Jenkins, & Tannenbaum, 1977).

Narcissism and Type A Behavior

The significant association between Narcissism and Type A (.25) was not reflected in a multiple regression analysis due to the influence of a neighboring factor (i.e., Achievement). Essentially, when added after Achievement in the regression equation, Narcissism did not account for enough unique variance to make a significant contribution. The relatively strong correlation between Narcissism and Achievement Motivation (.45) suggests that the achievement component common to both Type A and Narcissism contributed to the observed relationship between them.

Although several features reported to characterize both Narcissism and Type A behavior are strikingly similar, (i.e., achievement-striving, fragile self-esteem, disturbed interpersonal relations), only a mild association was found

between the two. One possible explanation for this result is that the instruments used in this study for their respective measurement emphasize rather discrete indices, reflective of different theoretical considerations.

On the one hand, the NPI was designed to measure Narcissism as it relates to an overall personality disorder characterized by the distress and/or disability that it brings to an individual. This distinction is clarified in DSM-III (APA, 1980).

> In DSM-III each of the mental disorders is conceptualized as a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is typically associated with either a painful symptom (distress) or impairment of one or more important areas of functioning disability, (Pg.6).

In general, then, an individual is considered to be suffering from a Narcissistic Personality Disorder only if he/she exhibits an inflexible and maladaptive trait causing either significant impairment in socio-occupational functioning, or subjective distress. Coupled with Stolorow's (1975) functional definition, Narcissism may be viewed in the present context as a maladaptive trait functioning to regulate and maintain self-esteem at some overt cost to the individual.

The JAS, on the other hand, measures overt behavior elicited from susceptible individuals by an appropriately challenging environment (Matthews, 1982). While Type A behavior has also been conceptualized as a maladaptive means of regulating self-esteem, (Friedman & Rosenman, 1974; Glass, 1977; Matthews, 1982), the costs to the individual appear to be more covert (Dembroski, MacDougall, Shields, Petitto, & Lushene, 1978; Friedman & Rosenman, 1974; Friedman & Ulmer, 1984; Glass, 1977; Herd, 1984; Matthews, 1982; Van Egeren, 1979; Van Egeren, Fabrega, & Thornton, 1983).

In essence, the JAS measures Type A behaviors that research has shown to be overtly adaptive, especially in difficult situations that call for endurance or persistence such as fatigue (Carver, Coleman, & Glass, 1976), external distractions (Matthews & Brunson, 1979; Pardine et al., 1985; Strube et al., 1983), and/or brief salient failure (Brunson & Matthews, 1981; Glass, 1977).

In summary, one should consider the mild association observed between Narcissism and Type A Behavior in light of the possible contribution of theoretical differences underlying development of the instruments used in their measurement. Where the JAS measures relatively rewarding overt behaviors, the NPI measures a personality trait associated with impairment in adaptive functioning.

While the NPI represents one of the most valid and

reliable measures of Narcissism currently available, it may be limited in its research applications. Although it is useful for identifying Narcissism in clinical populations, it may not be a sensitive index of Narcissism as it relates to adaptive functioning in nonclinical populations. What is needed for future study is a measure that is more sensitive to the nonclinical Narcissistic trait distribution.

Achievment Motivation and Type A

The significant association between Achievement Motivation and Type A behavior supports much of the research on the achievement striving component of the Type A behavior pattern (Burnam, Pennebaker, & Glass, 1975; Carver, Colemen, & Glass, 1976; Friedman & Rosenman, 1974; Friedman & Ulmer, 1984; Keenan & McBain, 1979; Matthews, 1982; Matthews et al., 1980; Waldron, 1978; Waldron et al., 1977; Waldron et al., 1980; Snow, 1978; Ward, 1985). Furthermore, identification of those achievement factors which significantly predict Type A Behavior, highlights the utility of treating achievement as a multidimensional component.

For the most part, the findings of the present study are consistent with those obtained by Matthews et al. (1980). Significant positive associations were obtained between JAS Type A scores and WOFO Mastery and Competitiveness scores. That Mastery was found to significantly contribute to the prediction of Type A scores, supports Glass' (1977) hypothe-

sis that Type A is a response style aimed at asserting and maintaining control over potentially uncontrollable events. Likewise, the finding that Competitiveness significantly contributed to the prediction of Type A behavior, supports findings that Type A individuals respond competitively to threatening situations and are also instrumental in eliciting competitive interactions (Friedman & Rosenman, 1974; Ortega & Pipal, 1984; Strube & Turner, 1984; Van Egeren, 1979).

The Work factor, representing a desire to work hard, was not found to be significantly correlated with Type A behavior. This finding is discrepant with that of Matthews et al. (1980). In studying the responses of over 100 male members of the Society of Experimental and Social Psychology (SESP), they found all three achievement motivation factors to be significantly associated with Type A scores.

While the reasons for this discrepancy are not clear, it is important to be aware of the possible contribution of sample differences. For example, 72% of the subjects in the present sample were female, whereas the Matthew's et al. (1980) sample consisted solely of men. The possibility that this factor significantly contributed to the difference between studies is not likely, however, as separate analyses failed to reveal any substantial differences between male and female students with regard to achievement and Type A (see Table 3).

Secondly, the mean age of Matthew's et al. (1980) sample was 42.9 and the average number of years since completion of their Ph.D.'s was 15.2. The sample population in the present study consisted of 183 undergraduate students enrolled in Introductory Psychology courses. Seventy-five percent of the students were below the age of 20. Possibly, age and number of years in a stable profession contribute to a positive identification with work.

Alternatively, one might examine these findings in terms of an intrinsic vs. extrinsic motivation for achievement. Johnson and Johnson (1985) report that competitive individuals frequently regard themselves as being extrinsically motivated. In this light, the present results may reflect an extrinsic motivational bias on the part of Type A students. In essence, Type A students with a strong desire for the tangible rewards that accompany educational success might have less intrinsic interest in their course work --viewing it as merely a means to an end-- than students with less concern about these aspects of their future lives. This possibility was given some credence by the significant positive associations between Type A and educational aspiration ($p < .01$), and Type A and competition ($p < .001$), while no association was found between Type A and desire to work hard.

Implications for Future Research

The possibility that an extrinsic bias adversely influences work motivation in Type A students may benefit from further research. It has been clearly established that competitive achievement striving enjoys strong cultural support in Western societies (Lasch, 1979; Lowen, 1983; Margolis et al., 1983; Spence, 1983). Social, educational, and industrial institutions fuel an extrinsic motivation toward work by providing tangible rewards to those who accomplish the most in the least amount of time. Unfortunately, this is often at the expense of family members, fellow students, coworkers, etc. In such a social system, Type A students may find themselves narrowly focused upon obtaining external rewards. Such a focus, however, often undermines the enjoyment of activities that are intinsically motivating (Deci, 1971).

This effect was clearly seen in a study by Deci et al. (1981) wherein two groups of undergraduate students worked at solving a spatial-relations puzzle. In the experimental group, students were encouraged to solve the puzzle more quickly than the students sitting next to them. Students in the control group were not encouraged to compete with fellow students. In a later stage of the study, the subjects were observed as they sat alone in a room containing a similar puzzle to the one they had previously worked on. Students were evaluated on the time spent voluntarily working on the

second puzzle and on a self-report of their interest level. These factors constituted the dependent measure of intrinsic interest.

Results showed that the students who had been competing were less intrinsically motivated than those who had originally worked on the puzzle in a non-competitive manner. Deci et al. (1981) concluded:

> It appears that when people are instructed to compete at an activity, they begin to see that activity as an instrument for winning rather than an activity which is mastery-oriented and rewarding in its own right. right. Thus, competition seems to work like many other extrinsic rewards in that, under certain circumstances, it tends to be perceived as controlling and tends to decrease intrinsic motivation (pp. 82-83).

In conjunction with past research, the present results suggest that such a conflict may be reflected in the work orientation of Type A students. In essence, the motivational factors underlying Type A student's achievement striving may actually be at cross-purposes to doing well. Indeed, research has shown that, although Type As strive harder to achieve, they do not necessarily outperform their Type B

counterparts (Pardine et al., 1985; Snow, 1978; & Ward, 1985). The possibility exists that this result may reflect not only the alienating and threatening effect that highly competitive Type A students may have on those in a position to assist and support them (Burke and Weir, 1980; Spence, 1983; Strube and Turner, 1984), but may also reflect the effects of diminished intrinsic motivation. The deleterious effects of this combination of factors is uniquely summarized by Kohn (1986):

> First, success often depends on sharing resources efficiently, and this is nearly impossible when people have to work against one another. Cooperation takes advantage of all the skills represented in a group as well as the mysterious process by which that group becomes more than the sum of its parts. By contrast, competition makes people suspicious and hostile toward one another and actively discourages this process...Second, competition generally does not promote excellence because trying to do well and trying to beat others simply are two different things...The fact that these two goals are quite different and reflect different types of motivation helps to explain why competition may actually make us less successful than we could be (pp. 55-65).

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APPENDIX

Departmental Research Consent Form

Instructions to Subjects

Jenkins Activity Survey

Narcississtic Personality Inventory

Rokeach Dogmatism Scale

Work and Family Orientation Questionnaire

DEPARTMENTAL RESEARCH CONSENT FORM

1. I have freely consented to take part in a scientific study being conducted by Tim Cefai, B.A. (Dept. of Psychology), under the supervision of Larry Van Egeren, Ph.D. (Dept. of Psychiatry). The study is designed to investigate the relationship between personality, values, and achievement-oriented behavior, and will require approximately ninety minutes of my time.

2. The study has been explained to me and I understand the explanation that has been given and what my participation will involve.

3. I understand that I am free to discontinue my participation in the study at any time without penalty.

4. I understand that I may refuse to answer any particular question without penalty.

5. I understand that the results of the study will be treated in strict confidence, and that I will remain anonymous. Within these restrictions, results of the study will be made available to me at my request.

6. I understand that my participation in the study does not guarantee any beneficial results to me.

7. I understand that, at my request, I can receive additional explanation of the study after my participation is completed.

8. I understand that no individual scores, including my own, will be reported to anyone. Only group scores will be utilized and no individual scores will be traceable from reported group results.

DATE:_____ NAME:_____

INSTRUCTIONS TO SUBJECTS

The following inventories and questionnaires will be used to study the attitudes and values of various groups to a variety of statements. In some instances you may discover that you agree strongly with some of the statements, disagree just as strongly with others, and perhaps are uncertain about others. In such cases, select the one you most strongly believe to be characteristic of your thoughts. We would ask that you be as honest as possible in responding to each statement.

You will discover that each of the instruments contained here will have individual instructions to help you in responding to the statements therein. Please do not omit any item even though it is difficult for you to decide, just select the more characteristic response. Remember to read each statement, decide how you feel about it, and then mark your answer on the answer sheet.

JENKINS ACTIVITY SURVEY

Please answer the questions on the following pages by marking the answers that are true for you in the corresponding spaces on the attached computer answer sheet. Each person is different, so there are no "right" or "wrong" answers. Please work independently. It is your personal opinion that we want. Thankyou for your assistance.

For each of the following items, please darken the corresponding circle on the answer sheet that represents the ONE best answer for you.

1. Do you ever have trouble finding time to get your hair cut or styled?

   0. Never 1. Occasionally 2.Almost always

2. Does college "stir you into action?"

   0. Less often than most college students
   1. About average
   2. More often than most college students

3. Is your everyday life filled mostly by:

   0. Problems needing solution
   1. Challenges to be met
   2. A rather predictable routine of events
   3. Not enough things to keep me interested or busy

4. Some people live a calm, predictable life. Others find themselves often facing unexpected changes, frequent interruptions, inconveniences or "things going wrong." How often are you faced with these minor (or major) annoyances or frustrations?

   0. Several times a day
   1. A few times a week
   2. About once a day
   3. Once a week
   4. Once a month or less

5. When you are under pressure or stress, do you usually:
   0. Do something about it immediately
   1. Plan carefully before taking any action

6. Ordinarily, how rapidly do you eat?

   0. I'm usually the first one finished
   1. I eat a little faster than average
   2. I eat at about the same speed as most people
   3. I eat more slowly than most people

7. Has your spouse or some friend ever told you that you eat too fast?

   0. Yes, often
   1. Yes, once or twice
   2. No one has told me this

8. How often do you find yourself doing more than one thing at a time, such as working while eating, reading while dressing, figuring out problems while driving?

   0. I do two things at once whenever practical
   1. I do this only when I'm short of time
   2. I rarely or never do more than one thing at a time

9. When you listen to someone talking, and this person takes too long to come to the point, do you feel like hurrying them along?

   0. Frequently 1. Occasionally 2. Almost never

10. How often do you actually "put words in someone's mouth" in order to speed things up?

   0. Frequently 1. Occasionally 2. Almost never

11. If you tell your spouse or a friend that you will meet them somewhere at a definite time, how often do you arrive late?

   0. Once in a while 1. Rarely 2. I am never late

12. Do you find yourself hurrying to get places even when there is plenty of time?

   0. Often 1. Occasionally 2. Rarely or never

13. Suppose you are to meet someone at a public place (street corner, building lobby, restaurant) and the other person is already 10 minutes late. Will you:

   0. Sit and wait?
   1. Walk about while waiting?
   2. Usually carry some reading matter or writing paper so you can get something done while waiting?

14. When you have to "wait in line," such as at a restaurant, a store, or the post office, do you:

    0. Accept it calmly?
    1. Feel impatient but do not show it?
    2. Feel so impatient that someone watching could tell you were restless?
    3. Refuse to wait in line, and find ways to avoid such delays?

15. When you play games with young children about 10 years old, how often do you purposely let them win?

    0. Most of the time
    1. Half the time
    2. Only occasionally
    3. Never

16. Do most people consider you to be

    0. Definitely hard-driving and competitive?
    1. Probably hard-driving and competitive?
    2. Probably more relaxed and easy going?
    3. Definitely more relaxed and easy going?

17. Nowadays, do you consider yourself to be

    0. Definitely hard-driving and competitive?
    1. Probably hard-driving and competitive?
    2. Probably relaxed and easy going?
    3. Definitely more relaxed and easy going?

18. How would your spouse (or closest friend) rate you?

    0. Definitely hard-driving and competitive?
    1. Probably hard-driving and competitive?
    2. Probably more relaxed and easy going?
    3. Definitely more relaxed and easy going?

19. How would your spouse (or best friend) rate your general level of activity?

    0. Too slow. Should be more active.
    1. About average. Is busy much of the time.
    2. Too active. Needs to slow down.

20. Would people who know you well agree that you take your work too seriously?

    0. Definitely yes
    1. Probably yes
    2. Probably no
    3. Definitely no

21. Would people who know you well agree that you have less energy than most people?

    0. Definitely yes
    1. Probably yes
    2. Probably no
    3. Definitely no

22. Would people who know you well agree that you tend to get irritated easily?

    0. Definitely yes
    1. Probably yes
    2. Probably no
    3. Definitely no

23. Would people who know you well agree that you tend to do most things in a hurry?

    0. Definitely yes
    1. Probably yes
    2. Probably no
    3. Definitely no

24. Would people who know you well agree that you enjoy "a contest" (competition) and try hard to win?

    0. Definitely yes
    1. Probably yes
    2. Probably no
    3. Definitely no

25. Would people who know you well agree that you get a lot of fun out of your life?

    0. Definitely yes
    1. Probably yes
    2. Probably no
    3. Definitely no

26. How was your "temper" when you were younger?

    0. Fiery and hard to control
    1. Strong but controllable
    2. No problem
    3. I almost never got angry

27. How is your "temper" nowadays?

    0. Fiery and hard to control
    1. Strong but controllable
    2. No problem
    3. I almost never get angry

28. When you are in the midst of studying and someone interrupts you, how do you usually feel inside?
    0. I feel O.K. because I work better after an occasional break.
    1. I feel only mildly annoyed.
    2. I really feel irritated because most such interruptions are unnecessary.

29. How often are there deadlines in your courses? (if deadlines occur irregularly, please choose the closest answer below).

    0. Daily or more often
    1. Weekly
    2. Monthly
    3. Never

30. Do these deadlines usually

    0. Carry minor pressure because of their routine nature?
    1. Carry considerable pressure, since delay would upset things a great deal?

31. Do you ever set deadlines or quotas for yourself in courses or other things?

    0. No
    1. Yes, but only occasionally
    2. Yes, once per week or more

32. When you have to work against a deadline is the quality of your work

    0. Better? 1. Worse?
    2. The same? (Pressure makes no difference)

33. In school do you ever keep two projects moving forward at the same time by shifting back and forth rapidly from one to the other?

    0. No, never
    1. Yes, but only in emergencies
    2. Yes, regularly

34. Do you maintain a regular study schedule during vacations such as Thanksgiving, Christmas, or Easter?

    0. Yes 1. No 2. Sometimes

35. How often do you bring your work home with you at night or study materials relative to your courses?
    0. Rarely or never
    1. Once a week or less often
    2. More than once a week

36. How often do you go to the University when it is officially closed, (such as night or weekends)? If this is not possible, leave blank.
    0. Rarely or never
    1. Occasionally (less than once a week)
    2. Once or more a week

37. When you find yourself getting tired while studying, do you usually:

    0. Slow down for a while until your strength comes back
    1. Keep pushing yourself at the same pace in spite of the tiredness

38. When you are in a group, do the other people tend to look to you to provide leadership?

    0. Rarely
    1. About as often as they look to others
    2. More often than they look to others

39. Do you make youself written lists of "things to do" to help you remember what needs to be done?

    0. Never 1. Occasionally 2. Frequently

FOR EACH OF THE FOLLOWING QUESTIONS, PLEASE COMPARE YOURSELF TO THE AVERAGE STUDENT AT THE UNIVERSITY.

40. In amount of effort put forth, I give

    0. Much more effort
    1. A little more effort
    2. A little less effort
    3. Much less effort

41. In sense of responsibility, I am

    0. Much more responsible
    1. A little more responsible
    2. A little less responsible
    3. Much less responsible

42. I find it necessary to hurry

    0. Much more of the time
    1. A little more of the time
    2. A little less of the time
    3. Much less of the time

43. In being precise (careful about detail), I am

    0. Much more precise
    1. A little more precise
    2. A little less precise
    3. Much less precise

44. I approach life in general

    0. Much more seriously
    1. A little more seriously
    2. A little less seriously
    3. Much less seriously

DOGMATISM SCALE

The following statements reflect what the general public thinks and feels about a number of important social and personal questions. The best answer to each statement is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Mark each statement on your answer sheet according to how much you agree or disagree with it. Please mark every one.

Write 0, 1, 2, or 3, 4, 5, depending on how you feel in each case.

0: I AGREE A LITTLE	3: I DISAGREE A LITTLE
1: I AGREE ON THE WHOLE	4: I DISAGREE ON THE WHOLE
2: I AGREE VERY MUCH	5: I DISAGREE VERY MUCH

45. The United States and Russia have just about nothing in common.

46. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.

47. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.

48. It is only natural that people would have a much better acquaintance with ideas they believe in than with ideas they oppose.

49. Man on his own is a helpless and miserable creature.

50. Fundamentally, the world we live in is a pretty lonesome place.

51. Most people just don't give a "damn" for others.

52. I'd like it if I could find someone who would tell me

how to solve my personal problems.

53. It is only natural for a person to be rather fearful of the future.

54. There is so much to be done and so little time to do it in.

55. Once I get wound up in a heated discussion I just can't stop.

56. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.

57. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.

58. It is better to be a dead hero than to be a live coward.

59. While I don't like to admit this even to myself, my secret ambition is to become a great person, like Einstein, or Beethoven.

60. The main thing in life is for a person to want to do something important.

61. If given the chance I would do something of great benefit to the world.

62. In the history of mankind there have probably been just a handful of really great thinkers.

63. There are a number of people I have come to hate because of the things they stand for.

64. A person who does not believe in some great cause has not really lived.

65. It is only when a person devotes him or herself to an ideal or cause that life becomes meaningful.

66. Of all the different philosophies which exist in this world, there is probably only one which is correct.

67. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.

68. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.

69. When it comes to differences of opinion in religion we must be careful not to compromise with those who

believe differently from the way we do.

70. In times like these, a person must be pretty selfish if she/he considers primarily her/his own happiness.

71. The worst crime a person could commit is to attack publicly the people who believe in the same thing he/she does.

72. In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposing camp.

73. A group which tolerates too much differences of opinion among its own members cannot exist for long.

74. There are two kinds of people in this world: those who are for the truth and those who are against the truth.

75. My blood boils whenever a person stubbornly refuses to admit she/he is wrong.

76. A person who thinks primarily of his/her own happiness is beneath contempt.

77. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.

78. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.

79. It is often desirable to reserve judgement about what's going on until one has had a chance to hear the opinions of those one respects.

80. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.

81. The present is all too often full of unhappiness. It is only the future that counts.

82. If a man or woman is to accomplish their mission in life it is sometimes necessary to gamble "all or nothing at all."

83. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.

84. Most people just don't know what's good for them.

NARCISSISTIC PERSONALITY INVENTORY

INSTRUCTIONS: This inventory consists of a number of pairs of statements with which you may or may not identify. Consider this example: A) I like having authority over people, versus B) I don't mind following orders. Which of these two statements is closer to your own feelings about yourself? If you identify more with "liking to have authority over other people" than with "not minding following orders," then you would choose option "A".

You may identify with both "A" and "B". In this case you should choose the statement which seems closer to your personal feelings about yourself. Or, if you do not identify with either statement, select the one which is least objectionable or remote. In other words, read each pair of statements and then choose the one that is closer to your own feelings. Indicate your answer by darkening alternative (a) or (b) on your answer sheet. Please do not skip any items.

85. 0) I am a fairly sensitive person.
    1) I am more sensitive than most other people.

86. 0) I have a natural talent for influencing people.
    1) I am not good at influencing people.

87. 0) Modesty doesn't become me
    1) I am essentially a modest person.

88. 0) Superiority is something that you acquire with experience.
    1) Superiority is something you are born with.

89. 0) I would do almost anything on a dare.
    1) I tend to be a fairly cautious person.

90. 0) I would be willing to describe myself as a strong personality.
    1) I would be reluctant to describe myself as a strong personality.

91. 0) When people compliment me I sometimes get embarrassed.
    1) I know that I am good because everybody keeps telling me so.

92. 0) The thought of ruling the world frightens the hell out of me.
    1) If I ruled the world it would be a much better place.

93. 0) People just naturally gravitate towards me.
    1) Some people like me.

94. 0) I can usually talk my way out of anything.
    1) I try to accept the consequences of my behavior.

95. 0) When I play a game I don't mind losing once in a while.
    1) When I play a game I hate to lose.

96. 0) I prefer to blend in with the crowd.
    1) I like to be the center of attention.

97. 0) I will be a success.
    1) I'm not too concerned about success.

98. 0) I am no better or no worse than most people.
    1) I think I am a special person.

99. 0) I am not sure if I would make a good leader.
    1) I see myself as a good leader.

100. 0) I am assertive.
     1) I wish I were more assertive.

101. 0) I like having authority over other people.
     1) I don't mind following orders.

102. 0) There is a lot that I can learn from other people.
     1) People can learn a great deal from me.

103. 0) I find it easy to manipulate people.
     1) I don't like it when I find myself manipulating people.

104. 0) I insist upon getting the respect that is due me.
     1) I usually get the respect that I deserve.

105. 0) I don't particularly like to show off my body.
     1) I like to display my body.

106. 0) I can read people like a book.
     1) People are sometimes hard to understand.

107. 0) If I feel competent, I am willing to take responsibility for making decisions.
     1) I like to take the responsibility for making decisions.

108. 0) I am at my best when the situation is at its worst.
     1) Sometimes I don't handle difficult situations too well.

109. 0) I just want to be reasonably happy.
1) I want to amount to something in the eyes of the world.

110. 0) My body is nothing special.
1) I like to look at my body.

111. 0) Beauty is in the eyes of the beholder.
1) I have good taste when it comes to beauty.

112. 0) I try not to be a show off.
1) I am apt to show off if I get the chance.

113. 0) I always know what I am doing.
1) Sometimes I'm not sure of what I am doing.

114. 0) I sometimes depend on people to get things done.
1) I rarely depend on anyone else to get things done.

115. 0) I'm always in perfect health.
1) Sometimes I get sick.

116. 0) Sometimes I tell good stories.
1) Everybody likes to hear my stories.

117. 0) I usually dominate any conversation.
1) At times I am capable of dominating a conversation.

118. 0) I expect a great deal from other people.
1) I like to do things for other people.

119. 0) I will never be satisfied until I get all that I deserve.
1) I take my satisfactions as they come.

120. 0) Compliments embarrass me.
1) I like to be complimented.

121. 0) My basic responsibility is to be aware of the needs of others.
1) My basic responsibility is to be aware of my own needs.

122. 0) I have a strong will to power.
1) Power for its own sake doesn't interest me.

123. 0) I don't very much care about new fads and fashions.
1) I like to start new fads and fashions.

124. 0) I am envious of other people's good fortune.
1) I enjoy seeing other people have good fortune.

125. 0) I am loved because I am lovable.
1) I am loved because I give love.

126. 0) I like to look at myself in the mirror.
1) I am not particularly interested in looking at myself in the mirror

127. 0) I am not especially witty or clever.
1) I am witty and clever.

128. 0) I really like to be the center of attention.
1) It makes me uncomfortable to be the center of attention.

129. 0) I can live my life in any way I want to.
1) People can't always live their lives in terms of what they want.

130. 0) Being an authority doesn't mean that much to me.
1) People always seem to recognize my authority.

131. 0) I would prefer to be a leader.
1) It makes little difference to me whether I am a leader or not.

132. 0) I am going to be a great person.
1) I hope I am going to be successful.

133. 0) People sometimes believe what I tell them.
1) I can make anybody believe anything I want them to.

134. 0) I am a born leader.
1) Leadership is a quality that takes a long time to develop.

135. 0) I wish someone would someday write my biography.
1) I don't like people to pry into my life for any reason.

136. 0) I get upset when people don't notice how I look when I go out in public.
1) I don't mind blending into the crowd when I go out in public.

137. 0) I am more capable than other people.
1) There is a lot that I can learn from other people.

138. 0) I am much like everybody else.
1) I am an extraordinary person.

WORK AND FAMILY ORIENTATION QUESTIONNAIRE

The following statements describe reactions to conditions of work and challenging situations. For each item, indicate how much you agree or disagree with the statement as it refers to yourself, by choosing the appropriate letter on the scale, A, B, C, D, or E, and then darkening that choice on your answer sheet.

139. I would rather do something at which I feel confident and relaxed than something which is challenging and difficult.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

140. It is important for me to do my work as well as I can even if it isn't popular with my co-workers.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

141. I enjoy working in situations involving competition with others.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

142. When a group I belong to plans an activity, I would rather direct it myself than just help out and have someone else organize it.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

143. I feel that good relations with my fellow workers are more important than performance on a task.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

144. I would rather learn easy fun games than difficult thought games.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

145. It is important to me to perform better than others on a task.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

146. I worry because my success may cause others to dislike me.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

147. I find satisfaction in working as well as I can.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

148. If I am not good at something I would rather keep struggling to master it than move on to something I may be good at.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

149. I avoid discussing my accomplishments because other people might be jealous.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

150. Once I undertake a task, I persist.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

151. I prefer to work in situations that require a high level of skill.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

152. There is satisfaction in a job well done.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

153. I feel that winning is important in both work and games.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

154. I more often attempt tasks that I am not sure I can do than tasks that I believe I can do.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

155. I sometimes work at less than my best because I feel that others may resent me for performing well.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

156. I find satisfaction in exceeding my previous performance even if I don't outperform others.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

157. I like to work hard.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

158. Part of my enjoyment in doing things is improving my past performance.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

159. It annoys me when other people perform better than I do.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

160. I like to be busy all the time.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

161. I try harder when I'm in competition with other people.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

162. It is important for me to get a job in which there is opportunity for promotion and advancement.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

163. Assuming that I get (or am) married, I would like my husband or wife to have a job or career that pays well.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

164. It is important to my future satisfaction in life to have a job or career that pays well.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

165. Assuming that I get (or am) married, I would like my husband or wife to have a job or career that brings recognition and prestige from others.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

166. It is important to me to have a job or career that will bring me prestige and recognition from others.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

167. Assuming that I get (or am) married, it wouldn't bother me if my spouse had a better job than I do.

0	1	2	3	4
Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree

168. What is the least amount of education that will satisfy you?

0. graduate from high school.
1. some special vocational training beyond high school.
   (electronics, auto mechanics, nursing, secretarial school,etc.).
2. some college .
3. graduate from college.
4. advanced professional degree (Ph.D., MD, Law degree, etc.).

169. How important do you think marriage will be to your satisfaction in life, in comparison to a job?

0. the most important thing; I will work primarily for financial reasons
1. marriage relatively more important than my work.
2. marriage and my work equally important.
3. marriage relatively less important than my work.
4. marriage is unimportant; I would be reasonably content if I did not marry.

170. How many children would you ideally like to have?

0. 0
1. 1
2. 2
3. 3
4. 4 or more