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I am submitting herewith a thesis written by Anne Chrismond Henly entitled "Cognitive and Behavioral Responses to Potentially Frustrating Situations: Self-Reports of Type A and Type B Individuals." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Educational Psychology.

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COGNITIVE AND BEHAVIORAL RESPONSES TO POTENTIALLY
FRUSTRATING SITUATIONS: SELF-REPORTS OF
TYPE A AND TYPE B INDIVIDUALS

A Thesis
Presented for the
Master of Science
Degree
The University of Tennessee, Knoxville

Anne Chrismond Henly

August 1984

DEDICATION

This thesis is dedicated to my parents, Margaret and Richard Henly, in recognition of their love and support and to Mark A. Thomas for believing in my ability to complete it.

ACKNOWLEDGMENTS

I am indebted to Dr. Robert L. Williams, who served as my mentor and major professor, for the fine education I received in his classes as well as the time and effort he so generously granted me in consulting on this thesis. I also acknowledge with thanks the assistance of my committee members, Professors Naomi Meara and Mark Hector, for their criticism and encouragement in the preparation of this manuscript.

In addition I wish to express appreciation to my fellow students, Holly Berman, David Emanuel, Carol Moore and Allan Philp, for their excellent work as Independent Raters in this study.

ABSTRACT

The Type A or coronary-prone behavior pattern has been significantly linked to the development of coronary heart disease; however, the psychological and affective aspects of this multidimensional pattern have only recently begun to be investigated. This study, conducted at the University of Tennessee, Knoxville, from the Spring of 1983 through the Spring of 1984, was designed to elicit Type A and Type B individuals' cognitive and behavioral responses to potential day-by-day frustrations. Data were collected from 181 adults in the Knoxville area, and Ss were divided according to their scores on the Type A Scale of the Jenkins Activity Survey into two groups of 40 extreme Type A (those scoring in the top 30% of the distribution based on national norms) and 40 extreme Type B Ss (those scoring in the lower 30% of the distribution). The 80 Ss' responses to a self-report, 16-item questionnaire entitled, "What Pushes Your Button?," were classified by independent raters into the categories of Negative/Nonnegative Affect and Blaming/Nonblaming Response in the Cognitive Division and Nonassertion, Aggression, Assertion, Problem-Solving, Neutral and Other in the Behavioral Division. These results were analyzed using a series of Correlated Samples and Independent Samples t-tests as well as the Two-Way ANOVA and Chi-Square.

The results showed that Type A Ss employed significantly more Negative than Nonnegative Affect and significantly more Negative Affect than their Type B counterparts. Both Type A and B Ss reported significantly more Blaming than Nonblaming responses, and

Type A and B Ss did not differ significantly in the amount of Blaming they employed. The two groups did not differ significantly in their self-reported Behavioral responses. It was concluded that excessive use of Negative Affect may characterize the Type A individual, and that such habitual negative-thinking strategies could play an important role in the subsequent development of stress-related diseases.

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CHAPTER I

INTRODUCTION

Very few people have been spared the shock of knowing someone, seemingly healthy and in the prime of life, who suddenly collapses and dies of a heart attack. In fact, coronary heart disease (CHD) is the "leading cause of death in the Western world" (Diamond, 1982, p. 423). Nearly every adult has some degree of coronary artery disease--a "symptomless disorder characterized and identified by a thickening and deterioration of the blood-supply conduits to the heart" (Friedman & Rosenman, 1974, p. 29). It is only when this disease worsens to the point that the arteries can no longer supply the heart with enough oxygen and nutrients to function that it is considered to have developed into CHD.

Unfortunately, coronary artery disease is very difficult to detect and usually goes unnoticed in a routine check-up. Two tests can be used to determine if this disease is present: the coronary arteriography in which a special substance is injected into an artery allowing the doctor to view the degree of blockage present and an electrocardiogram taken while the patient is exercising. The first is somewhat dangerous and they are both expensive; therefore, these tests are usually not administered unless the doctor has a strong reason to suspect that the condition is severe (Friedman & Rosenman, 1974).

Since coronary artery disease is relatively symptomless until it has progressed into CHD, most doctors review a patient's history to

determine if reason exists to suspect this problem. Some of the conditions that are known causes of coronary artery disease are diabetes mellitus, hypertension, hypercholesterolemia, and hypothyroidism. Most people affected by one of these conditions are aware of it and are under a doctor's care. Some other probable causes of coronary artery disease include excessive intake of cholesterol, animal fat, and simple sugars, cigarette smoking, physical inactivity, hereditary factors and obesity. However, "at least half of the people who get heart attacks can be linked to none of the known and suspected causative factors" (Friedman & Rosenman, 1974, p. 14).

Identification of the Type A Behavior Pattern

In the mid-1950s, cardiologists Meyer Friedman and Ray Rosenman treated many coronary patients whose conditions could not be explained by diet, disease, or heredity. Through systematic observation and in-depth interviews with the patients and their families, they reached the conclusion that "the major cause of coronary artery and heart disease is a complex of emotional reactions" (Friedman & Rosenman, 1974, p. 69). This group of characteristics was originally designated the Type A Behavior Pattern and has more recently come to be known as the coronary-prone behavior pattern.

Type A behavior is a response to environmental stress. Characteristics of individuals exhibiting this pattern include "extreme competitiveness, striving for achievement, aggressiveness, impatience, haste, restlessness, and feelings of being challenged by responsibility

and under the pressure of time" (Jenkins, Zyzanski & Rosenman, 1978, p. 3). Type B behavior, the converse of Type A, is identified by a lack of the Type A characteristics. The Type B individual may be just as intelligent and ambitious as the Type A person and may be found in the same occupational positions; however, he or she "is rarely harried by desires to obtain a wildly increasing number of things or participate in an endlessly growing series of events in an ever decreasing amount of time" (Friedman & Rosenman, 1974, p. 85).

Assessment of Type A Behavior

Most individuals can be classified into either the Type A or Type B group, though to varying degrees ranging from moderate to fully-developed. In today's fast-paced society, "Type A persons are by and large more common" (Friedman & Rosenman, 1974, p. 99). A few people, "about 10 percent of an urban population" (Friedman & Rosenman, 1974, p. 105), fall into a middle group exhibiting both A and B traits.

Two methods of assessing Type A behavior are currently experiencing widespread use in the scientific community. The first test devised by Friedman and Rosenman, and still the best, is the Structured Interview in which a trained professional orally administers a standardized questionnaire to one person at a time. The answers that people give are not as important as the way in which they answer. One of the most common signs of a Type A individual is a "sharply aggressive manner of speech" (Friedman & Rosenman, 1974, p. 98).

In reading aloud a monologue containing strongly emotional passages, the Type B tends to speak with only moderate inflection while the Type A person "throws himself into the project with a certain violence. . . . [using] . . . harsh, explosive speech rhythms" (Friedman & Rosenman, 1974, p. 98). When these two speech patterns are recorded and displayed on an oscilloscope, the Type A speaker "sends the needle flipping wildly" (Friedman & Rosenman, 1974, p. 98). Interviewers are also trained to notice certain types of body language which are indicative of a Type A individual such as clenched fists, pounding the hand upon the table or into the other palm for emphasis, and teeth grinding. While the Structured Interview has been found to have "statistically and clinically significant associations with coronary heart disease, both retrospective and prospective" (Jenkins et al., 1978, p. 4), it is both expensive and difficult to administer.

A more efficient and standardized measurement for assessing the Type A personality was developed by C. D. Jenkins in close cooperation with Friedman and Rosenman. The Jenkins Activity Survey (JAS), first prepared in 1964, is a self-report instrument which can be either hand or machine scored. Form C of the JAS--and the one used in this study--is the fifth edition and the first available for use in the general scientific community (Jenkins et al., 1978).

The JAS has been found to approximate the results of the Structured Interview and has also been tested alone as a predictor of CHD. For persons scoring a standard deviation above the mean on the JAS,

there is a 91% agreement with the Structured Interview; for those scoring a standard deviation below the mean--or in the Type B direction--there is an 88% likelihood of identical typing with the Structured Interview (Jenkins, Zyzanski, & Rosenman, 1971). A score falling near the center of the continuum, a standard score of 0 or a percentile rank near 50, "represents an indeterminate range, which is hard to classify as either Type A or Type B" (Jenkins et al., 1978, p. 10). In a prospective study using the JAS, Type As scoring in the top third of the distribution developed 1.7 times the incidence of CHD over a four-year period compared to Type Bs scoring in the bottom third of the range (Jenkins et al., 1978).

Statement of the Problem

The coronary-prone behavior pattern is multidimensional, encompassing both overt behaviors and affective states. It is also a relatively new construct whose psychological components have been studied only since the 1970s (Matthews, 1982). Hostility seems to be the "one characteristic that appears most fruitful in predicting degree of atherosclerosis" (Price, 1982, p. 11), but there is a "paucity of self-report data on the anger component" (Matthews, 1982, p. 302). Much of the work which has been done on the psychological aspects of this behavior pattern was confined to the clinical setting, and various authors such as Price (1982) and Dembroski (1978) have cited a need to study the naturalistic behavior of Type A and B subjects in the context of real-life activities and challenges. Dembroski (1978)

questioned whether Type As and Bs might "differ in the manner in which they interpret or process information in response to the occurrence of the same or similar environmental events" (p. 99). A more intensive investigation into the affective or emotional aspects of this behavior pattern is needed to better understand the Type A individual and his or her propensity for early development of CHD. While the coronary-prone behavior pattern emerged as a behavioral phenomenon, the key to its physiological ramifications may well lie in the cognitive-affective realm.

Purpose of Study

This study was conducted in an attempt to add to the information available on the psychological aspects of the coronary-prone behavior pattern, specifically the anger and hostility subcomponents. Self-report data on cognitive and behavioral responses to potentially frustrating situations were elicited from Type A and B individuals. These responses were then categorized and analyzed to determine if Type As and Bs do, in fact, differ in the kind of self-talk and subsequent behaviors they employ when confronting day-to-day frustrations inherent in our environment.

Assumptions

The basic assumption made was that a population of Type A and B individuals exists, and that these two groups are subject to the same types of environmental stimuli. The physiological differences

between these groups which make Type A individuals more likely candidates for CHD are "directly related to thoughts, attitudes, beliefs, and philosophies they have regarding their relationship to the world around them" (Gentry, 1978, p. 227). As Price (1982) stated, "cognitions--and, in particular, personal beliefs--form the core of the behavior pattern" (p. 63). It was also assumed that thought processes can be brought into the conscious realm and articulated by the owner of those thoughts; that is, "cognitive processes potentially can be observed by the person experiencing them" (Price, 1982, p. 30).

Thoughts interact with emotions to influence the physiological state. Diamond (1982) defined emotional behavior as a "complex sequence of reactions that include cognitive evaluations, subjective changes, physiological changes (autonomic arousal), and action tendencies with both instrumental and expressive qualities" (p. 410). He stated that "emotional behavior can serve as a basic construct linking psychological factors to pathophysiological processes" (p. 410), and Schwartz, Weinberger & Singer (1981) described "individuals' autonomic emotional responses . . . [as] . . . primary links between psychosocial functioning and proneness to various physical diseases" (p. 343). Given that Type As "respond to day-to-day environmental challenges with greater sympathetic arousal" (Dembroski, Caffrey, Jenkins, Rosenman, Spielberger & Tasto, 1978, p. 51) than Type Bs, it may be that they think about and analyze emotional responses differently as well.

Finally, it was assumed that Type As engage in more negative thinking than Type Bs, and these "negative thoughts compete with a

state of relaxation . . . [and] . . . build up physical tension" (Gentry, 1978, p. 227). This negativity manifests itself in feelings of anger and frustration which Type As "often externalize . . . by attributing responsibility to someone or something else" (Price, 1982, p. 188). The result is that Type As often "report feeling victimized and, therefore, justified in ensuring that justice occurs; that is, they seek revenge" (Price, 1982, p. 189).

Hypotheses

1. Type A individuals perceive that they encounter significantly more frustrating situations in their daily lives than do Type Bs.

2. Type As employ significantly more negative-thinking strategies when encountering potentially frustrating situations than Type Bs.

3. Type A individuals tend to react with significantly more blaming responses to frustrations and to blame others more often than do Type Bs.

4. Type As respond to frustrations with significantly more aggressive and assertive behaviors than Type Bs.

5. Type As perceive that problem situations are significantly more frustrating than do Type B individuals.

6. When frustrated, Type As tend to remain so for a significantly longer period of time than Type Bs.

Limitations

The use of self-report instruments in this study may have been one of its major limitations. Their validity depends on the individual's self-knowledge and ability to report responses accurately and honestly. Since Type As are known to be "particularly lacking in insight regarding their own style of behavior" (Jenkins et al., 1978, p. 5), they may also be unable to assess and describe their cognitive processes.

Another potential problem may have been the Type A measurement itself. Matthews (1928) questioned whether Type As "actually behave in a manner consistent with the original description of their behavioral characteristics, which was based on clinical observation of cardiac patients" (p. 294). It would also have been better to use the Structured Interview to determine behavior type since the "JAS scores might be unable to predict hostility--which is a major descriptor of Pattern A--because . . . items on anger are markedly underrepresented" (Matthews, 1982, p. 304).

CHAPTER II

FINDINGS OF RELATED STUDIES

Research on the Type A psychological state is still in its infancy, and there is little consensus among authors as to what aspects contribute significantly toward the development of CHD. Affective states which have come under investigation include depression, anxiety, hostility, anger, and aggression. Since these conditions rarely occur alone and their differentiation, especially among the latter three, is not clear-cut, it is difficult to study any one of them in isolation. A number of different instruments have been used with varying results to assess the affective states associated with coronary-prone behavior.

Depression

A few studies have explored the role of depression in the coronary-prone behavior pattern. Francis (1981) found that the "mean 'state' depression . . . scores of Type A subjects were consistently elevated above those of the Type B subjects during the majority of the weeks" (p. 185) in two separate experiments. State depression refers to a condition that is related to a particular set of stimuli and is differentiated from a trait which is a consistently manifested behavior pattern. Dimsdale, Hackett, Block and Hutter (1978) also found a significant association between Type A and depressive mood. Reports from family members have indicated that a disproportionate number of coronary victims were "severely depressed in the period preceding death" (Schneiderman, 1978, p. 175).

Cardiovascular responses of subjects to sadness, an emotion associated with a depressed state, were studied by Schwartz et al. (1981). While the increase in systolic blood pressure did not differ significantly among the conditions of sadness, fear, anger, or happiness, diastolic blood pressure in the sadness condition was significantly lower than in the anger condition and its changes were "virtually identical to those in the control condition and not significantly different from relaxation" (Schwartz et al., 1981, p. 349). Systolic pressure refers to the maximal pressure reached in the arteries when the heart is actively contracting, and diastolic pressure is a measurement of this force when the heart is relaxed and filling with blood--between the first and second heart sounds. The study also found that heartrate during exercise in the sadness and relaxation conditions increased by less than half the amount it did during normal exercise. Findings of these studies on depression and its effects upon the human organism indicate that it is an area worthy of future research in the exploration of Type A behavior and CHD.

Anxiety

The relationship of anxiety to the development of CHD has been the focus of a number of studies. Evidence indicates that Type As and Bs do not differ on trait anxiety (Francis, 1981) and that trait anxiety does not "bear a significant association to the presence of angiographically-documented CHD" (Blumenthal, Thompson, Williams & Kong, 1979, p. 18). Low correlations between the JAS and various

trait anxiety scales would indicate that these are independent factors (Nielson & Dobson, 1980). The Framingham Study also found that "the tension and anxiety scales . . . were not significantly associated with CHD incidence when controlled for the other risk factors" (Haynes, Feinleib & Kannel, 1980, p. 52). However, Type As have shown "significant elevations of 'state' anxiety" (Francis, 1981, p. 187) over Type Bs when confronted with stressful situations. A need for further research on state anxiety and the Type A individual is indicated to determine the importance of this subcomponent to the coronary-prone behavior pattern.

Hostility

In their early work with coronary patients, Friedman and Rosenman (1974) noted that Type As are "quite prone to exhibit a free-floating but extraordinarily well-rationalized hostility" (p. 84). Cook and Medley (1954) defined hostility as amounting to "chronic hate and anger" (p. 418). Subsequent studies have found that Type As are more hostile than Type Bs (see Francis, 1981; Glass, Krakoff, Contrada, Hilton, Kehoe, Mannucci, Collins, Snow & Elting, 1980; and Hicks & Hodgson, 1981), and that increased hostility is significantly associated with coronary atherosclerosis.

A study by Williams, Haney, Lee, Kong, Blumenthal and Whalen (1980) used the Ho scale developed by Cook and Medley (1954) to measure hostility levels in CHD patients. About half of the Ss scoring 10 or less exhibited a significant coronary occlusion while those

scoring at every level above 10 showed a 70% incidence rate. By comparing the answers of the group scoring 10 or less with those in the next group (scoring 11 to 15), the researchers discovered that the critical difference was the latter group's willingness to see others as "inconsiderate, immoral, selfish and deserving to be punished or hurt" (p. 544). Patients in the lowest risk category (about 12% had significant occlusion) were non-Type A females scoring 10 or less on the Ho scale, while those at the highest risk (about 83% had significant occlusion) were Type A males scoring 11 or higher on the Ho scale. Hostility level was found to be independent of and a stronger predictor of coronary atherosclerosis than the Type A behavior pattern.

Anger

The affective state of anger is very subjective in nature and difficult to isolate and study apart from its behavioral manifestations. One study, using the Profile of Mood States, found a significant correlation between Type A and anger (Dimsdale et al., 1978). Anger has also been shown to elicit physiological responses which have been implicated in CHD. Using emotive imagery, Schwartz et al. (1981) found that the anger condition was especially predictive of increased blood pressure, and exercising in anger produced a significantly higher heartrate than the other conditions under investigation. The affective state of anger has also been associated with the production of norepinephrine which may "promote myocardial and/or arterial lesions" (Price, 1982, p. 144).

Although Type As may experience more anger than Type Bs, "such feelings are often kept under extreme cover" (Carver, Coleman & Glass, 1976, p. 461). Various studies have shown that Type As exhibit more suppression and denial than Type Bs. In a study on women, Weidner and Matthews (1978) found that Type As failed to report a variety of symptoms during task performance although they experienced physiological changes. Type As have also been found to suppress feelings of fatigue when tested on a treadmill (Carver et al., 1976). Pittner and Houston (1980) determined that Type As employed more suppression in both threat of shock and threat to self-esteem and more denial in threat to self-esteem than Type Bs. Suppression of anger has been independently linked to subsequent development of CHD. Haynes et al. (1980), in looking at the role of psychosocial factors and CHD in the Framingham Study, concluded that not showing anger was a "significant predictor of CHD among white-collar men and working women" (p. 56).

Aggression

Aggressiveness is another of the key factors in Type A behavior. Friedman and Rosenman (1974) identified "competitive overdrive" (p. 74) as one of the basic components of the Type A behavior pattern; however, they noted that the "Type B person may also have a considerable amount of 'drive'" (p. 85). Aggression has also been closely associated with hostility; in fact, Friedman and Rosenman (1974) stated that "most Type A subjects possess so much aggressive drive that it frequently evolves into a free-floating hostility" (p. 95).

The continuum of behavior appears to range from competitiveness to hostility with aggression falling somewhere in between. Type A and B individuals share the lower part of that range. Type Bs can become aggressive in competitive situations, and simple competition has not been found to cause Type A individuals to exhibit increased levels of systolic blood pressure, heartrate and plasma epinephrine (Glass et al., 1980). However, the presence of a hostile opponent elicits significantly greater physiological arousal in Type As than in Type Bs (Glass et al., 1980). It is difficult to determine the motives and emotions behind this aggressive quality of Type A individuals. It may stem from anger, or it may simply be a way of regaining control over the environment (Carver & Glass, 1978). It appears that aggression alone may not be detrimental to the human body, but when this aggressiveness becomes extreme and is accompanied by feelings of anger and hostility, it may then create the physiological arousal associated with development of CHD.

Research on the affective subcomponents of the Type A personality has been far from exhaustive. The multidimensional nature of the Type A pattern has made it difficult to determine which aspects of the psychological components are important contributors to the development of CHD. While all of the psychological states reviewed in this paper appear to merit further study, existing evidence does point to anger and hostility as significant contributors to the development of CHD.

CHAPTER III

METHOD

Questionnaire Development

Other research which has explored the affective realm of the coronary-prone individual has used existing instruments such as the Profile of Mood States and the MMPI. However, no instruments were available to elicit the cognitive processes or self-talk which individuals employ in analyzing and formulating responses to potentially frustrating situations. The questionnaire "What Pushes Your Button?" was designed as a prototype instrument to meet this need; a copy of this questionnaire may be found in Appendix A.

An open-ended format was used in an attempt to avoid socially desirable responses, and the questionnaire is composed of sixteen potentially frustrating scenarios designed by the author and members of a research group. Since Type As have been shown to exhibit the coronary-prone behavior most readily in situations over which they feel they have no control (see Carver & Glass, 1978; Glass et al., 1980), the questionnaire items provide examples of common frustrations which could encourage the recipient to feel victimized or experience perceived loss of control. The situations were designed--using logical construction--to reflect various aspects of life. Half are business or school oriented and the rest are set in the general or social climate. Within these two broad categories exists an equal representation of situations in which the probable antagonist is either present or absent. Each of

these four categories contains four situations which portray the antagonist as being either the subject's peer, subordinate, superior, or self/object. A graphic presentation of this categorization may be found in Table 4, Appendix B.

To insure that the situations actually did reflect the categories for which they were intended, copies of the questionnaire were given to a group of five graduate students who were instructed to categorize each item under the appropriate heading (see Table 4, Appendix B). The situations were then refined until a group of five previously untested graduate students were able to arrive at the intended categorization of all the items.

The questionnaire was designed to be self-administered (see Appendix A). Following the reading of each potentially frustrating situation, the S was instructed to indicate first what he or she might think if confronted by that situation and then to list the probable behavioral response. Next the S was asked to rate the level of frustration and determine how long he or she might think about the situation after it occurred. In addition, Ss were asked to circle the number of each item to which they could personally relate from having experienced a similar situation in their own lives. For further clarity, a completed sample situation was provided at the beginning of the questionnaire.

In order to discover if the placement of an item might affect Ss' responses, that is, to see if frustration might build during completion of the questionnaire, two separate forms were designed. Form 1

contains situations 1 through 16 while Form 2 contains the same situations in reversed order.

As a trial run, the questionnaire was distributed to students in a graduate-level educational psychology class. From the results of this preliminary study, definitions were developed for classifying the responses into categories. A detailed copy of the finalized definitions with examples may be found in Appendix C; however, a brief summary is provided here.

Following the reading of each situation, Ss were first asked to describe what they would think if confronted by that situation. This cognitive, or self-talk, response was classified into one of two categories: Negative Affect or Nonnegative Affect. Negative Affect was identified by the presence of name-calling, use of strongly emotional words, absolute terminology, etc. Nonnegative Affect was represented by a lack of highly-charged terms and an indication that emotional arousal was not invoked by the situation. The cognitive response was further divided into Blaming or Nonblaming. In the case of a Blaming response, it was subdivided into four categories: (a) intra/specific--blame directed at self, situationally specific; (b) intra/global--blame directed at self, general or broad-based in nature; (c) inter/specific--blame directed outside self, specific; and (d) inter/global--blame directed outside self, general.

Behavioral responses were classified into six categories:

1. Nonassertion--cognitive response indicates Negative Affect (or Nonnegative Affect with a high frustration level), but the Negative

Affect or high frustration level is not expressed in the behavioral response.

2. Aggression--Negative Affect is indicated in the cognitive response and is expressed by an angry or harmful behavioral response.

3. Assertion--affect may be either Negative or Nonnegative, and the behavioral response deals directly with the antagonist in a non-aggressive manner.

4. Problem-solving--affect may be either Negative or Nonnegative and is accompanied by a coping response.

5. Neutral Reaction--affect is Nonnegative and indicates no problem is perceived; thus, no behavioral solution is necessary.

6. Other--reserved for any response which cannot be classified into one of the other five categories.

One undergraduate senior and three graduate students were recruited and trained to rate the Ss' responses according to the method just described. "What Pushes Your Button?" questionnaires completed by students in a graduate-level educational psychology class were used to train and test the raters. Definitions and categories were further refined and explained to the raters until at least a 75% average agreement was obtained between the experimenter and each of the raters on two sample questionnaires. Raters were further tested against each other until an 89% average agreement was obtained among the four raters on two sample questionnaires.

Data Collection and Categorization

Ss for this study were recruited from Knoxville, Tennessee, area businesses and postsecondary schools. Potential Ss were given a packet containing Form C of the JAS, a computerized answer sheet, either Form 1 or 2 of "What Pushes Your Button," a release form, and detailed instructions on how to complete the instruments. The JAS is a multiple-choice questionnaire containing 52 questions which are appropriate to both adult males and females. Ss were asked to identify themselves with the last four digits of their social security number and the location through which they received the packet--the name of the business or class--in order to receive feedback on their Type A scores. A breakdown of the Ss used by location may be found in Table 5, Appendix D. Altogether 181 Ss were tested. The Type A scale of each JAS form was hand-scored by departmental work-study students. Only the 21 items of the Type A scale were considered since the purpose of using the JAS in this study was to divide Ss into two groups of extreme Type As and Bs. A letter of feedback (see Appendix E) containing his or her JAS Type A score and information on how to interpret it was distributed to each of the 181 Ss.

A quota sample including 40 extreme Type As and 40 extreme Type Bs made up the population for this study. Half of each group completed Form 1 of "What Pushes Your Button?" while the other half completed Form 2. Only those individuals who scored in the top 30% of the JAS Type A distribution were used as Type A Ss, and those scoring in the bottom 30% were used as Type B Ss. Other studies

(see Carver & Glass, 1978; and Humphries, Carver & Neumann, 1983) have used the top and lower thirds as cut-off points for Type A-B determination. Jenkins et al. (1978) also found that men scoring in the top third of the distribution were more likely to develop CHD than those scoring in the lowest third.

Form 1 of "What Pushes Your Button?" was completed by 111 Ss. Of those, 35 scored in the top 30%, or Type A range, 28 in the bottom 30%, or Type B range, and 48 in the mid-range. From the Type A group, three were eliminated because they did not complete the forms correctly. Six were used in training and testing the raters and were not included in the study. Of the remaining 26, all five of the male Ss' forms were used, and 15 of the 21 female Ss' forms were chosen randomly to complete the quota of 20 extreme Type As using Form 1 of the questionnaire.

In the Type B group, one questionnaire had to be deleted because the S did not follow directions. Six were used in training the raters. Again, a stronger representation of female Ss dictated that all eight of the male Ss be included in the study. Twelve of the remaining 13 female Ss were chosen at random to complete the quota of 20 Type Bs using Form 1 of "What Pushes Your Button?"

Fewer Ss had to be tested with Form 2 of "What Pushes Your Button?" to obtain the desired quota. Of the 70 Ss who completed this form, 23 scored in the top 30%, 21 in the lower 30%, and 21 in the mid-range. This difference in distribution may have been due to the age difference between the groups which will be discussed in greater

detail in the following paragraph. All six of the Type A males were used, and 14 of the 17 Type A females were selected at random for inclusion in the study. In the Type B group, one questionnaire was not completed properly leaving nine males and 11 females to comprise the quota of 20.

The mean JAS Type A score of the 40 Type A Ss was 83.88%, and the Type B mean was 18.75%. The ages of the Type A Ss who completed Form 1 ranged from 19 to 49 with a mean of 29.1 and a median of 27. Three of the Type Bs completing Form 1 did not report their ages; the remaining 17 had a mean age of 31.8 and ranged from age 20 to 49 with a median of 33. Two of the Type A Ss completing Form 2 did not report their ages. The other 18 Type As ranged in age from 20 to 56 with an average age of 36.7 and a median of 33. In the Type B group, the mean age was 34.5 with a median of 31.5. The range was even broader, extending from age 22 to 62. For more detailed information on Ss' ages, refer to Table 5, Appendix D.

Once the extreme Type A and B Ss were determined from the JAS Type A scores, their completed "What Pushes Your Button?" questionnaires were distributed to the four raters who categorized each response on a Rating Sheet (see Appendix F). Although a concerted effort was made toward standardizing the rating system for classifying the responses, it was still very subjective in nature. Thus, it was determined that having four raters categorize each response would result in more accurate information than the standard practice of using only two raters. The response classifications upon which at least

three of the four raters agreed were used as data in the study. Raters were unaware of the Ss' JAS scores and also did not know how the other raters had classified the responses.

After collecting the rating sheets from all raters, a composite sheet was drawn up for each S's responses (see Appendix F). As stated previously, only those responses which received 75% or better agreement among the raters were used as data. Upon completion of all composites, the Ss' I.D. numbers were matched with their Type A scores, and they were divided into two groups of extreme Type As and Bs for analysis.

Interrater Agreement

Once the composites were completed, interrater agreement was calculated for each of the three classification divisions: Negative/Nonnegative Affect, Blaming/Nonblaming, and the Behavioral category (see Table 6, Appendix G). Computing agreement for the Negative/Nonnegative Affect division was relatively straightforward since each response was classified into one of two categories. When all four raters agreed upon the classification of a response, agreement was considered to be 100%. If three of the four raters chose one category, agreement was 75%. When a split occurred and two of the raters chose one category while the others chose another, it was considered 50% agreement. Given 80 Ss who each made 16 responses, the possible number of responses to be categorized in one division was 1,280. In the Negative/Nonnegative division, the raters attained 100% agreement

on 825 of the responses, or 64.5%; 75% agreement occurred on 338 responses, or 26.4%; and 50% agreement was obtained on 105, or 8.2%, of the responses. No response was given on 12 of the items; thus, the raters could not rate .9% of the responses. The overall interrater agreement for the Negative/Nonnegative Affect division was 88% when counting the no-responses as 0% or 89% when the no-responses were not counted.

The Blaming/Nonblaming category was more complex since raters had to decide what type of Blaming response occurred: intra/specific, intra/global, inter/specific, or inter/global. Also, in a few cases, raters categorized a certain response in more than one category. For example, the cognitive response, "How could I have done that? I always screw things up!" could be classified both as intra/specific and intra/global blaming. In situations where raters categorized a response as more than one type, one agreement percentage was computed for the response by averaging the two. For example, if two raters classified a response as intra/global, one classified it as both intra/global and intra/specific, and the fourth classified it as nonblaming, the agreement was computed as follows: $75\% + 25\% = 100\% / 2 = 50\%$. Since only responses with 75% or better agreement were used in analyzing the data, this response would not have been included.

Despite the complications inherent in this process, interrater agreement remained high in the Blaming/Nonblaming division. On 651 of the possible 1,280 responses, the raters agreed 100%; they achieved

75% agreement on 430 of the responses. Less than 75% agreement occurred on 187 responses, and there were 12 no-responses. These data are presented in greater detail in Table 6, Appendix G. The overall interrater agreement for this division was 83.16% when no-responses were counted as 0% agreement and 83.95% when these were not included.

The Behavioral division suffered from the same complexities as the Blaming/Nonblaming division since there were six different categories from which to choose. In this division, the raters agreed 100% on 616 of the 1,280 responses and 75% or better on 393 responses. Less than 75% agreement was obtained on 258 responses, and there were 13 no-responses. Overall agreement for this division was 81.17% when no-responses were counted as 0% agreement and 82% when these were omitted.

CHAPTER IV

RESULTS

The majority of the data generated by this study were analyzed by a series of t-tests. Correlated Samples t-tests were used in determining differences within either the Type A or Type B groups. Independent Samples t-tests were used in finding differences between the Type A and B groups since they were mutually-exclusive. In a few instances, the Chi-Square and Two-Way Analysis of Variance (ANOVA) procedures were employed when appropriate for data analysis. Because of the number of statistical tests applied to the data, a probability level of .005 was used throughout (unless otherwise noted in the text) to reduce the problem of chance significance occurring across comparisons.

Relevance of Items

To determine if the situations presented by the 16-item questionnaire, "What Pushes Your Button?" represented frustrations which both Type A and B individuals would commonly encounter, Ss were asked to circle the number of each item to which they could personally relate from having experienced a similar situation in their own lives. The mean numbers of As and Bs who indicated they had encountered similar situations were 12.8 and 9.6 per item respectively (see Table 7, Appendix H). The results of an Independent Samples t-test (Champion, 1981, p. 172) failed to find any significant difference

between the two means ($t = 1.608$, $df = 30$). Fourteen of the 40 Type A Ss and 15 of the 40 Type Bs (approximately 35% of each group) failed to circle any of the 16 items.

Negative-Nonnegative Affect

Under the Cognitive Division, Type As employed more than twice as much Negative as Nonnegative Affect (see Table 8, Appendix H). The Type A Negative Affect mean of 10.3 was found to be significantly greater than the Type A Nonnegative Affect mean of 4.325 ($t = 7.4442779$, $df = 39$) using the Correlated Samples t-test (Popham & Sirotnik, 1976, p. 145). The Type B Ss' responses were much more balanced (see Table 9, Appendix H). Results of a Correlated Samples t-test found that the Type B Negative Affect mean of 7.55 was not significantly different from the Type B Nonnegative Affect mean of 6.9 ($t = 0.9084648$, $df = 39$).

An Independent Samples t-test was used to compare the amount of Negative Affect employed by Type A and B Ss. The Type A Negative Affect mean of 10.3 was significantly greater than the Type B Negative Affect mean of 7.55 ($t = 4.66$, $df = 78$). Therefore, it was found that Type As employed significantly more Negative than Nonnegative Affect and, significantly more Negative Affect than the Type B group.

Blaming/Nonblaming Responses

Cognitive responses were also analyzed to determine the amount and type of Blaming responses given by Type A and B Ss. Results of

a Correlated Samples t-test (see Table 10, Appendix H) found that the mean number of Blaming responses, 10.5, employed by Type A individuals was significantly greater than the mean Type A Nonblaming response, 3.275 ($t = 9.8002017$, $df = 39$). As indicated in Table 11, Appendix H, the mean Type B Blaming response, 9.165, was also greater than the Type B Nonblaming response, 4.475 ($t = 3.1385909$, $df = 39$). Independent Samples t-tests found that Type As and Bs did not differ in the amount of Blaming they employed ($t = 1.6638$, $df = 78$), nor did they differ in number of Nonblaming responses ($t = 2.3408$, $df = 78$).

Type As and Bs followed a similar pattern in the kinds of Blaming responses they used (see Table 12, Appendix H). The highest frequency of Blaming response for both groups was classified under the Inter/specific category with a Type A mean of 7.63 and a Type B mean of 6.98. According to the results of an Independent Samples t-test, these means were not significantly different ($t = 1.3265$, $df = 78$). The least frequently employed type of Blaming response for both groups was Intra/global with Type A and B means of .03 and .00, respectively.

Behavioral Response

In the Behavioral Division, Type As and Bs again made very similar responses (see Table 13, Appendix H). Problem-solving was the response employed most frequently by both groups, and an Independent Samples t-test found that the Type B mean of 8.3 did not

differ significantly from the Type A mean of 7.8 ($t = 0.8992$, $df = 78$). Assertion was the second most common response by both Type As and Bs, and again their respective means of 3.3 and 2.9 did not differ significantly according to the results of an Independent Samples t-test ($t = 1.147$, $df = 78$).

Level of Frustration

Ss were asked to indicate the Level of Frustration they might experience for each situation. The responses ranged from 0 (not at all frustrated) to 5 (extremely frustrated). The mean levels of frustration indicated by Type A and B Ss for each of the 16 items on the questionnaire are presented in Table 14, Appendix H. The Type A grand mean of 3.24375 did not differ significantly from the Type B grand mean of 2.74375 at the .005 level of significance ($t = 2.1467971$, $df = 78$) according to the results of an Independent Samples t-test; however, these means were significantly different at the .025 level.

Duration of Frustration

Since responses to Duration of Frustration were left open-ended, they had to be categorized in order to compare the answers of Type A and B Ss. Table 1 explains the seven categories into which the responses were classified. Nonspecific responses such as "until finished," or "every time I saw him," were not included in the data analysis. Of the total 1,280 potential responses, only 66 (5%) were not categorized under the headings presented in Table 1.

Table 1

Categories Used in Classifying Duration of Frustration Responses to "What Pushes Your Button?" Questionnaire Including Examples of Nonnumerical Responses

Category	Duration	Example
1	zero to less than a minute	includes a dash
2	one minute to less than an hour	few minutes several minutes
3	one hour to less than a day	several hours many hours hours few hours
4	one day to less than a week	few days days
5	one week to less than a month	several days weeks many days
6	one month to less than a year	several months several weeks months
7	one year or longer	years

As shown in Table 15, Appendix H, Type A and B Ss responded very much the same in the Duration of Frustration Division with the highest percentage of responses from both groups falling into the category of "one minute to less than an hour." No clear direction of response was found in this division with Type As indicating a higher frequency of response than Type Bs in categories 2, 5, and 6 and Type Bs responding with a higher frequency than Type As in categories 1, 3, and 4.

Antagonist Present/Absent and Work/School or General/Social Orientation

Half of the sixteen items on "What Pushes Your Button?" presented situations in which the antagonist was present while in the other half the antagonist was absent. Items were also divided equally into the categories of Work/School or General/Social Orientation. As seen in Table 16, Appendix H, the mean Negative Affect and Blaming responses of both Type A and B Ss differed little among these four types of situations. A series of Single-Sample Chi-Square tests (Champion, 1981, p. 223) found no significant differences between pairs of means for either the Type A or B groups when their responses were divided according to these categories.

Source of Frustration

Responses were also divided into groups according to the potential Source of Frustration in a given situation: peer, superior, subordinate, or self/object. As shown in Table 17, Appendix H, Type As expressed Negative Affect most frequently when the frustration was with a subordinate ($\bar{X} = 29$) while Type Bs were most negative when frustrated by a superior ($\bar{X} = 25.3$). Type A responses varied little across the four categories with the lowest mean number of Negative Affect responses ($\bar{X} = 22$) occurring when the frustration was with self or object. Type Bs also indicted the lowest mean Negative Affect ($\bar{X} = 12.8$) when the frustration was with self/object.

Results of a Two-Way ANOVA (Champion, 1981, p. 209), as presented in Table 2, found a significant main effect for Factor 1, Type, on Negative Affect scores at the .01 level ($F = 8.541$, $df = 1$).

Table 2

Two-Way ANOVA Summary Table for Negative Affect Scores of Type A and Type B Subjects Divided According to Source of Frustration

Source of variation	SS	df	MS	F
Between				
Factor 1 (Type)	378.13	1	378.13	8.541 ($p < .01$)
Factor 2 (Source of Frustration)	358.62	3	119.54	2.700 n.s.
Interaction				
1 x 2	73.62	3	24.54	.554 n.s.
Within	<u>1062.51</u>	<u>24</u>	44.27	
	1872.88	31		

Blaming responses were also analyzed according to Source of Frustration (see Table 17, Appendix H). Both Type As and Bs indicated the highest frequency of Blaming response when a peer was the Source of Frustration and the lowest frequency of Blaming when self/object was the Source of Frustration. A Two-Way ANOVA performed on these results, as seen in Table 3, found that Source of Frustration acted upon Blaming scores as a main effect at the .01 level of significance ($F = 6.0219489$, $df = 3$).

Table 3

Two-Way ANOVA Summary Table for Blaming Responses of Type A and Type B Subjects Divided According to Source of Frustration

Source of variation	SS	df	MS	F
Between				
Factor 1 (Type)	38.2815	1	38.2815	.948883 n.s.
Factor 2 (Source of Frustration)	728.844	3	242.948	6.0219489 (p < .01)
Interaction				
1 x 2	23.5935	3	7.8645	.1949373 n.s.
Within	<u>968.25</u>	<u>24</u>	40.34375	
	1758.969	31		

Since Type did not have a significant effect on Blaming scores, Type A and B means were combined for the post hoc analysis. Results of the Newman-Keuls procedure found that both the Peer as Source of Frustration mean of 29.125 and the Subordinate as Source of Frustration mean of 27.75 were significantly greater than the Self/object Source of Frustration mean of 17.125. Therefore, Type A and B Ss were more Blaming towards both peers and subordinates than they were towards themselves or an object.

Placement of Item

An item-by-item analysis of Negative/Nonnegative Affect and Blaming/Nonblaming responses revealed that placement of the item in the questionnaire (at the beginning or end) did not appear to affect frequency of Negative and Blaming responses. As seen in Table 18,

Appendix H, both Type As and Bs were relatively stable in the amount of Negative Affect and Blaming they employed for a majority of items across both forms of the questionnaire. In fact, the fluctuation of response by Type A Ss which was present seemed to occur because those Ss completing Form 1 of "What Pushes Your Button?" were slightly but not significantly more Negative and Blaming than those completing Form 2. For Type B Ss, more fluctuation of response appeared to be found in the mid-range items rather than in those placed at either end of the questionnaire. Results indicate that placement of the item on the questionnaire does not influence response for either the Type A or B Ss.

CHAPTER V

DISCUSSION

One of the main problems encountered in studying the psychological aspects of the Type A behavior pattern is that the concept encompasses an aggregate of states among which are anxiety, depression, anger, hostility, and aggression. Cognitive style may be the underlying factor linking together various psychological aspects of the behavior pattern. Most events in and of themselves are neither positive nor negative. This is evidenced by people's ability to interpret and react to the same environmental stimulus in a variety of ways. It appears that a value judgment is placed upon an event as a result of an individual's personal beliefs and expectations. Results of this study found that Type A and B Ss reacted to the same stimuli with significantly different cognitive styles. Type A Ss employed more Negative Affect than Nonnegative Affect and more Negative Affect than did Type B Ss. Habitual use of such negative-thinking strategies could lead to a state of arousal which might manifest itself in the various forms of increased anxiety, hostility, etc.

It may be argued that someone who cognitively interprets an event as a negative stimulus would be likely to respond with a different overt reaction than someone who does not view that event as negative. While Type A Ss in this study did react to the events with more Negative Affect than Type B Ss, they did not differ in their reported behavioral responses. If the responses given do reflect actual

behaviors, an accumulation of such experienced but unexpressed negativity could lead to the phenomenon of "free-floating hostility" which is one identifying characteristic of the Type A behavior pattern. Tension created by unexpressed negativity could also be detrimental physiologically.

It was hypothesized that Type A Ss would encounter more frustrating situations, employ more Negative Affect, be more Blaming (especially of others), report a higher frequency of aggressive and assertive behavioral responses, rate the situations as more frustrating and be frustrated for a longer period of time than Type B Ss. The only hypothesis which was supported was that Type A Ss reacted with significantly more Negative Affect than did their Type B counterparts.

Several explanations may be advanced for the failure to find more definitive differences between Type A and B Ss. Since this study used self-report data instead of direct observation, it may be that the responses obtained do not accurately reflect the behaviors the Ss would exhibit were they actually confronted by such frustrating situations. Social desirability is an obvious drawback in a study of this type since most people are aware of taboos against expressing anger and casting blame. It is interesting to note, however, that this social sensitivity did not extend to the use of Negative Affect. Also both Type A and B Ss reported significantly more Blaming than Nonblaming responses. If Ss were, in fact, covering up hostile reactions, it would seem likely that such censorship would apply to the cognitive as well as the behavioral realm and that Blaming responses would also have been repressed.

Another possible reason why more differences were not found between Type A and B Ss is that the situations presented by the questionnaire would generally be frustrating to anyone. Type B individuals are not immune to feelings of anger. They too can become aggressive under certain conditions. However, if Type B Ss were excessively aroused by the situations, it would seem likely that such arousal would extend to the cognitive realm. Since Type Bs were less negative than Type As, some differentiation was elicited.

A third possible explanation for the similarity of response by Type A and B Ss is perhaps the simplest. It may be that, in their natural environment, Type As do not, in fact, differ dramatically from Type B individuals in the manner in which they overtly respond to problematic situations. Type As may, however, experience physiological arousal, due to increased use of negative-thinking strategies, which is not expressed behaviorally.

Another interesting point found in this study was that the situation, item 14, which Type B Ss indicated would be most frustrating ($\bar{X} = 3.8$ out of 5) was one which no Type B S reported having ever encountered. Item 14 described a situation in which an employer lowered all employees' wages by 10% because of financial difficulties in the company. The fact that Type B Ss would rate as most frustrating a situation they had never experienced may imply that real frustrations, ones which they frequently encounter, are not perceived to be extremely frustrating.

For Type A Ss, however, the most frustrating situation, item 6 ($\bar{X} = 4.2$ out of 5), had been experienced by 45% of the Ss in the total Type A group. Item 6 dealt with having poor repair work done on one's car. Since only 26 of the 40 Type A Ss indicated they had experienced any of the frustrating situations, the percentage of those who circled item 6 out of the 26 Ss who responded is actually much higher--69%. While no definitive conclusions can be drawn from this example, it may be that Type A individuals perceive the day-to-day problems which they encounter as being extremely frustrating.

As a whole, the results of this study did not indicate that Type A and B individuals were significantly different from one another except in the amount of Negative Affect they employed; in fact, their responses appeared to reflect merely varying degrees along the same continuum. The therapeutic implications of these results are encouraging. Through examining personal beliefs and expectations, Type As may be able to bring their thinking strategies into closer alignment with those of Type B individuals, and with a healthier way of life.

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APPENDIXES

APPENDIX A

COPY OF "WHAT PUSHES YOUR BUTTON?" QUESTIONNAIRE

I.D. # _____

After reading the potentially frustrating situations described below, give an example of how you might react in each.

1. First, briefly describe what you might think.
2. Then, indicate the actual behavior you might exhibit.
3. Next, rate the level of frustration you would probably experience in the situation (0 being not at all frustrated and 5 being extremely frustrated).
4. Then, as specifically as possible, estimate the length of time you might periodically continue to think about the situation (number of minutes, hours, days, etc.).
5. Finally, circle the number beside each item to which you can personally relate because you have encountered a similar situation in your own life.

Please use a pen to fill out the questionnaire; using a pencil makes it difficult to read.

Example

- (17.) I'm at a party and someone spills a drink on my clothes. I might think:

What a stupid thing to do. I'm embarrassed.

Then I might respond by:

Telling them not to worry about it.

I would rate that a 2.
(0 to 5)

I might think about it periodically for 30 minutes.
(no. of minutes, hours, days, etc.)

1. I'm in a conference with a client who requests a copy of an important document. My secretary informs me that the only copying machine in the building is out of order. I might think:

Then I might respond by:

I would rate that a .
(0 to 5)

I might think about it periodically for .
(no. of minutes, hours, days, etc.)

2. I'm working on a project at home and can't find a tool I need. I know I've put it in a "safe" place, but where? I might think:

Then I might respond by:

I would rate that a .
(0 to 5)

I might think about it periodically for .
(no. of minutes, hours, days, etc.)

3. I have given a person who is under my supervision at work a job to complete. He or she turns it in at the last minute and has not done it properly. I might think:

Then I might respond by:

I would rate that a .
(0 to 5)

I might think about it periodically for .
(no. of minutes, hours, days, etc.)

4. After seeing a movie, I return to the parking lot to find that someone has left his or her car parked behind mine, blocking my car in. I might think:

Then I might respond by:

I would rate that a .
(0 to 5)

I might think about it periodically for .
(no. of minutes, hours, days, etc.)

5. I'm reviewing a presentation for an important meeting which will take place in a few minutes. I realize that some of the data upon which I've based my figures are contradictory. I might think:

Then I might respond by:

I would rate that a .
(0 to 5)

I might think about it periodically for .
(no. of minutes, hours, days, etc.)

6. I have paid to have my car repaired. From what I can tell, the car runs no better as a result of the repair work. I might think:

Then I might respond by:

I would rate that a .
(0 to 5)

I might think about it periodically for .
(no. of minutes, hours, days, etc.)

7. Near the end of a busy day, my boss gives me a time-consuming task and wants it done immediately. I might think:

Then I might respond by:

I would rate that a .
(0 to 5)

I might think about it periodically for .
(no. of minutes, hours, days, etc.)

8. My television set goes on the blink the day a program I really want to watch is scheduled. I might think:

Then I might respond by:

I would rate that a .
(0 to 5)

I might think about it periodically for .
(no. of minutes, hours, days, etc.)

9. My staff and I have been working on an important project. On the day we are required to have it completed, I arrive at the office and find that my assistant has called in sick. I might think;

Then I might respond by:

I would rate that a .
(0 to 5)

I might think about it periodically for _____.
(no. of minutes, hours, days, etc.)

10. A friend calls at the last minute and cancels an outing which we had planned. I might think:

Then I might respond by:

I would rate that a 4.
(0 to 5)

I might think about it periodically for _____.
(no. of minutes, hours, days, etc.)

11. I'm driving along the interstate in the flow of traffic and become aware of blue lights behind me. When I pull over, the officer informs me that I was speeding. I might think:

Then I might respond by:

I would rate that a 4.
(0 to 5)

I might think about it periodically for _____.
(no. of minutes, hours, days, etc.)

12. I'm busy trying to finish up an important assignment at work and my co-workers are laughing and talking. I might think:

Then I might respond by:

I would rate that a 4.
(0 to 5)

I might think about it periodically for _____.
(no. of minutes, hours, days, etc.)

13. I'm trying to buy some popcorn before the movie starts. There is a crowd, and the person behind the counter ignores me while waiting on others who have not been standing there as long as I have. I might think:

Then I might respond by:

I would rate that a 4.
(0 to 5)

I might think about it periodically for _____.
(no. of minutes, hours, days, etc.)

14. The Board of Trustees of the company where I work has decided to lower all the employees' wages by 10% due to financial difficulties. I might think:

Then I might respond by:

I would rate that a 4.
(0 to 5)

I might think about it periodically for _____.
(no. of minutes, hours, days, etc.)

15. I park for a few minutes in a "No Parking" zone and return to find that the city has towed away my car. I might think:

Then I might respond by:

I would rate that a .
(0 to 5)

I might think about it periodically for _____.
(no. of minutes, hours, days, etc.)

16. A co-worker makes a negative comment about me behind my back and I find out about it after work that day. I might think:

Then I might respond by:

I would rate that a .
(0 to 5)

I might think about it periodically for _____.
(no. of minutes, hours, days, etc.)

APPENDIX B

GUIDELINES FOR CLASSIFYING ITEMS

Definition of Terms:

Work/School Orientation--potential frustration is related to place of employment or school.

General/Social Orientation--potential frustration is not related to work or school.

Antagonist Present--potential frustration occurs in presence (either verbal or physical) of instigator. (Note: instigator may be an inanimate object).

Antagonist Absent--potential frustration does not occur in presence of instigator.

Peer--potential source of frustration is of equal status to subject (i.e., friend, co-worker or general public).

Superior--potential source of frustration is of higher status than or has power over subject.

Subordinate--potential source of frustration is of lower status than subject (includes people hired to perform services).

Self/object--potential source of frustration is subject or an inanimate object.

Table 4

Classification of Items

Orientation	Source of Frustration	Item Number	
		Antagonist Present	Antagonist Absent
Work/school	Peer	12	16
	Superior	7	14
	Subordinate	3	9
	Self/object	5	1
General/social	Peer	10	4
	Superior	11	15
	Subordinate	13	6
	Self/object	8	2

APPENDIX C

DEFINITIONS AND EXAMPLES FOR CATEGORIZATION OF RESPONSES

Cognitive Responses

Each response will be categorized under either A or B below:

1. A. Negative Affect--Cognitive response indicates emotional arousal. If two or more of the following cues are present, the response would be considered negative. Note: The two cues may be within the same category.

1. exclamation mark
2. absolute terms and phrases such as "always," "never," and "I'm not going to do it."
3. negative emotional terms such as "wrong," "bad," "hate," "ruined," "unfair," "frustrated," "mad," "jealous," "cry," and "hurt"
4. sarcasm
5. underlining for emphasis or use of all capitals in words
6. negatively-charged terms such as curse words or mild expletives such as "oh no," "no way," "what in the world," "sure," "typical," "I can't believe this," "hey," "forget it," "boy," "why me," and "what now"
7. statements or questions expressing dissatisfaction with the situation or with self such as "I wish," "why don't they," "how could I," "who does he think he is," "why should I," "what can I do," "we need," "they can't do that," "I'll have to," "he must want," "I would like to," "that makes me," "why can't I," and "couldn't he have"
8. name-calling
9. phrases indicating dislike, distrust, suspicion, fear, anxiety, etc., such as "is she really sick," "what will my husband say" and "was I taken advantage of"
10. frustration level of 3 or higher.

- B. Nonnegative Affect--Cognitive response does not express emotional arousal. Some cues would be:

1. a period or lack of punctuation at the end of a statement
2. lack of highly-charged terms
3. low level of frustration--usually a nonnegative response would be accompanied by a 0-2 level of frustration. Note: a low level of frustration does not always indicate a nonnegative response. If two or more of the cues listed in 1.A. are present, the cognitive response would be categorized as negative even if accompanied by a low frustration level.

4. simply questioning the situation without the presence of any cues listed in 1.A. would be nonnegative unless there are 2 other cues present to indicate negative affect, ex. "I wonder if I was going too fast?"

Each response will be categorized either as Blaming or Nonblaming. Within the Blaming category there are four possible categories to use.

2. A. Blaming--Cognitive response expresses blame directed either to self or other. The CR may be either negative or nonnegative affect. Blaming involves making a negative value judgment about self, other, system, object or situation. Blaming often involves feeling victimized or "put upon" by someone or something. Note: the cognitive response may be negative without indicating blame, ex. "How did that happen!" This would be nonblaming.

There are four subcategories of response. Occasionally more than one category may be indicated such as "It was stupid of me to depend on him, but he was irresponsible not to come in today." Such a response would be categorized both as "intra/specific" and "inter/specific."

1. Intra/Specific--Blame is directed at self and is situationally specific. Example: "I shouldn't have done that." (Note: A similar comment, "I won't do that again," would not be categorized as blaming. It implies a constructive, future-directed course to be taken, while the former comment simply berates the individual for a past action.)
2. Intra/Global--Blame is directed at self and is general in nature. Example: "I always mess everything up." (Note: Sometimes the response will use a general term but apply it to a specific situation. Example: "Dummy. Why did I do that?" In this case, the response would be categorized as "intra/specific." If only the general term is used, example: "Stupid," the response would be rated as "intra/global.")
3. Inter/Specific--Blame is placed on a specific person or persons, object, entity or situation. Example: "they really messed us up," or "that really hurts me." (Note: Sometimes a comment will indirectly indicate blame by expressing anger or frustration with a person. Example: "If I had the nerve, I would slap the hell out of you." This would be classified as "inter/specific.")
4. Inter/Global--Blame is directed outside of self and is general in nature. Example: "Why do these things always happen to me?" or "The world is out to get me."

- B. Nonblaming--Cognitive response does not express blame either of self or other. Responses where individual accepts responsibility for a situation without indicating negative self-feelings would fall into this category. Example: "I really was speeding but hoped I wouldn't get caught." Also responses that indicate the individual will behave differently in the future but do not express negative feelings about past behavior would be categorized as nonblaming. Example: "I'll not depend on you so fully next time." Simply questioning or wondering about the situation would not constitute blaming. Example: "Was I speeding?" or "Was I taken advantage of?" Some responses are statements disguised as questions, such as "Why don't they quieten down." In this case, the subject is making a value judgment and the response would be classified as blaming.

Behavioral Responses

Each response will be classified under the categories listed below. On rare occasions a response will contain two or more types of responses. In order to count as two responses, the response should contain two separate behaviors, ex. "Kicking the TV, then going to a friend's house to watch the show." This response would be dually classified under "aggression" and "problem-solving."

1. Nonassertion--Cognitive expression indicates negative affect (or nonnegative affect with a frustration level of 3 or higher) and behavioral response indicates either (1) lack of expression of negative affect; (2) counter expression; (3) nonspecific, non-verbal behavior, or (4) misdirected behavioral expression. Non-assertion would exist if subject is angry or frustrated but does not express these feelings to the person or persons involved in such a way that might constitute a solution to the problem. An "ignoring" or "accepting" response accompanied by a frustration level of 3 or higher would fall under this category. A "crying" response might fall under this category as would a response of "no comment."

Examples: a. CR: "How can I tell him that I know the real motive?"

BR: "Doing nothing."

b. CR: "What a dumb choice they made."

BR: "Offering congratulations."

c. CR: "Why didn't he give this to me earlier?"

BR: "Putting aside any other work and get on it."

2. Aggression--Cognitive expression indicates negative affect and is accompanied by an angry or sarcastic behavioral response, either verbal, physical, or written. An aggressive response would probably prompt the recipient to feel hurt, angry, upset, etc.

Examples: a. CR: "Damn it! Shit!"
BR: "Yelling, 'Damn it! Shit' then keep working"

b. CR: "Why doesn't he care about us?"
BR: "Saying 'thanks buddy.'"

c. CR: "Some people really have their nerve."
BR: "Writing a dirty note, and kicking their tire, then calling a wrecker."

3. Assertion--Cognitive expression indicates either negative or non-negative affect and is accompanied by a verbal or written non-aggressive response which deals directly with the person or persons causing the frustration or a nonaggressive expression of emotion directed to the source of frustration. Assertion involves standing up for one's own rights without violating the rights of others. Some types of assertive responses include making an effective complaint and having a direct, personal confrontation in a nonaggressive manner. Note: Asking someone who is not the cause of frustration to do something would be "problem-solving," not "assertion."

Examples: a. CR: "My instructions could have been unclear, but it is irritating to have the project turned in incorrectly."
BR: "Explaining the directions and pointing out the errors."

b. CR: "Why didn't they let me respond?"
BR: "Talking to them later and telling them I'm hurt."

c. CR: "Was I taken advantage of?"
BR: "Calling the repairman to inquire about the problem." or "Taking the car back to be fixed." (Note: This response would have to involve a direct confrontation.)

4. Problem-Solving--Cognitive expression indicates either negative or nonnegative affect and is accompanied by an attempted behavioral solution to the problem. An "ignoring" or "accepting" response with a frustration level of 0-2 would fall under this category.

Examples: a. CR: "Oh, I'm so embarrassed; what will they think?"
BR: "Calling and setting up another appointment."

- b. CR: "Why'd the TV have to break now?"
BR: "Reading."
 - c. CR: "How disappointing."
BR: "Saying I'm sorry he or she can't go."
- 5. Neutral Reaction--Cognitive expression indicates no dissatisfaction with the situation and the behavioral response is not designed to solve a problem. To categorize a response as neutral, the response should indicate no frustration with the situation (0 level). In other words, no problem exists so no behavioral solution is necessary.

Examples: a. CR: "Oh, well."
BR: "That's o.k."

b. CR: "I don't need any popcorn anyway."
BR: "Enjoying the movie."

c. CR: "It really works out better for me not to go today."
BR: "Studying."
- 6. Other--If the response does not fit into any of the above categories, it would be classified under "other." Use this category only when necessary.

Duration of Frustration

In recording duration of frustration you would usually just copy the response. If a range is given, 30-60 minutes, copy that exact response. Occasionally you may need to make a judgment in the case of a nonspecific response. For example, "all day" would be recorded as "1 day," "a couple of weeks" would be recorded as "2 weeks," and "the rest of the day" would be recorded as "1 day."

If the response is even less specific, such as "weeks," or "several days," simply record the exact response. If the response gives one specific time and also a vague time, such as "20 minutes or until it is finished," record only the specific part of the response. If no response is indicated, draw a line in the column on the record sheet.

APPENDIX D

BIOGRAPHICAL DATA ON SUBJECTS

Table 5

Information on Subjects by Location

Location	I.D.#	Gender	Age	Type A %	"WPYB" Form
St. Mary's Hospital (staff)	8604	F	33	95%	Form 1
	9986	F	26	90	"
	1559	F	?	95	Form 2
	7993	F	?	90	"
	4792	F	46	80	"
	2364	M	56	85	"
	4595	M	45	80	"
	7876	F	43	30	Form 1
	1387	F	?	5	"
	2916	F	44	1	"
	9650	F	30	25	Form 2
	8817	F	28	20	"
	1247	F	59	15	"
	1392	M	62	20	"
Tennessee Valley Authority	5050	F	33	90%	Form 1
	0894	M	?	20	"
	2994	M	41	15	"
Intuitive Awareness Group	4687	F	55	75%	Form 2
	2867	F	35	30	"
	7048	M	49	30	Form 1
	2828	M	31	25	"
	1652	M	30	3	Form 2
	6387	M	29	10	"
	1196	M	30	1	"
LeLeche League	4602	F	33	90%	Form 2
	6735	F	33	15	"
	5045	F	33	25	"
	4796	F	36	20	"
Oak Ridge National Laboratories	6402	F	52	90%	Form 2
	4390	F	33	80	"
	7145	M	33	80	"
	2120	F	38	20	"

Table 5 (continued)

Location	I.D.#	Gender	Age	Type A %	"WPYB" Form
TRIO Programs	6002	F	28	99%	Form 2
	9679	F	28	85	"
	5866	F	37	85	"
	0174	F	46	80	"
	6694	F	29	70	"
	5530	M	43	95	"
	9342	M	20	97	"
	2407	F	33	20	"
	5776	M	28	10	"
	1826	M	48	5	"
Lakeshore Mental Health Institute (staff)	7652	F	23	90%	Form 2
	3068	F	26	90	"
	6042	M	27	70	"
	5687	F	22	30	"
	8618	F	26	30	"
	1353	M	28	20	"
	6311	M	35	25	"
	8338	M	27	25	"
State Technical Institute (students)	5365	F	19	90%	Form 1
	4882	F	31	85	"
	4304	M	21	90	"
	0074	M	34	85	"
	3141	M	23	70	"
	3881	F	20	15	"
	2774	F	26	15	"
	3027	M	34	25	"
	3603	M	23	20	"
Undergraduate course in Behavior Modification	5275	F	49	95%	Form 1
	5108	F	36	75	"
	4858	F	25	30	"
	9422	F	22	25	"
	8194	F	34	20	"
	2078	F	22	15	"
	7139	F	23	10	"
Undergraduate course in Advanced Psychology	8605	F	22	90%	Form 1
	0040	F	22	80	"
	2636	F	26	70	"
	0398	M	21	99	"
	3871	M	27	85	"
	0335	M	?	25	"
	1151	M	33	10	"

Table 5 (continued)

Location	I.D.#	Gender	Age	Type A %	"WPYB" Form
Graduate course in Advanced Classroom Behavior Modification	0740	F	35	90%	Form 1
	5764	F	35	85	"
	5621	F	27	80	"
	0492	F	35	80	"
	1051	F	27	70	"
	0982	F	35	25	"
	4285	F	35	20	"

APPENDIX E

LETTER OF FEEDBACK ON JENKINS ACTIVITY SURVEY TYPE A SCORES

I.D.# _____ Birthdate _____ Location _____ Type A % _____

Thank you for your participation in a study of Type A and B personalities. Hopefully this feedback will be both interesting and useful to you.

As with any self-report questionnaire, the accuracy of the score depends upon the ability of the individual to honestly and correctly evaluate his or her personal characteristics and behavior. It's not always a simple matter to be objective about ourselves. If your answers did reflect a true picture of you, the following information may be helpful.

The percentile score indicates the percent of people in the reference group (2,588 men, aged 48-65, employed in middle and higher level occupations) who scored below you. The lower scores are in the Type B range. For example, if your score is 75%, that means that 75% of the people in the reference group scored below you, or in the Type B direction. A score falling in the middle does not indicate a balanced personality. Scores close to 50% simply represent a range in which it is difficult to classify the person as either Type A or Type B.

The Type A score is an estimate of the coronary-prone behavior pattern which is characterized by extreme competitiveness, aggressiveness, haste, striving for achievement, impatience, commitment to job and feeling one is under the pressure of time and responsibilities.

"Extreme" is the key word for the Type A personality. The Type B person may also be committed to a career and be an achiever, but he or she tends to be more relaxed, unhurried and mellow.

Most of the research in this area has been done with male subjects who are employed and are between the ages of 25-65. The scores for women, students and self-employed workers may not be as valid.

The Type A pattern is only one of several important risk factors associated with coronary heart disease; and none of these factors, including serum cholesterol, blood pressure, cigarette smoking, family history, diabetes and obesity, is sufficiently predictive when viewed alone. Knowledge of these factors, however, may be useful in your personal health management.

For further information, you may wish to read, Type A Behavior and Your Heart by Meyer Friedman and Ray Rosenman, MDs.

APPENDIX F

SAMPLE RATING SHEET

I.D.#: 2994 Gender: M Birthdate: 8/42 Form: 1 Rater: Composite

Item	COGNITIVE RESPONSE						BEHAVIORAL RESPONSE						Frustration Level	Frustration of Frustration	
	Blaming			Non-Blaming			Non-Assertion	Assertion	Aggression	Assertion	Problem-Solving	Neutral			Other
	Intra/specific	Inter/global	Inter/specific	Inter/global	Non-Blaming										
1	///	///	///	///	///	///			///		///			1	30 min.
2	///	///	///	///	///	///			///		///			2	1 hr.
3	///	///	///	///	///	///			///		///			2	2 days
4	///	///	///	///	///	///			///		///			1	2 days
5	///	///	///	///	///	///			///		///			2	1 wk.
6	///	///	///	///	///	///			///		///			2	1 wk.
7	///	///	///	///	///	///			///		///			2	1 wk.
8	///	///	///	///	///	///			///		///			1	no resp.
9	///	///	///	///	///	///			///		///			2	1 hr.
10	///	///	///	///	///	///			///		///			2	1 day
11	///	///	///	///	///	///			///		///			1	1 day
12	///	///	///	///	///	///			///		///			3	1 day
13	///	///	///	///	///	///			///		///			2	1 hr.
14	///	///	///	///	///	///			///		///			2	30 min.
15	///	///	///	///	///	///			///		///			2	1 wk.
16	///	///	///	///	///	///			///		///			4	3 days
	///	///	///	///	///	///			///		///			1	1 wk.

APPENDIX G

CALCULATION OF INTERRATER AGREEMENT

Table 6

Percent and Frequency of Interrater Agreement

Division	% of Agreement	# of Responses	% x #	% of Total
<u>Cognitive Response</u>				
Negative/Non-negative	100	825	825.00	64.45
	75	338	253.50	26.41
	50	105	52.50	8.20
	NR	12	0.00	.94
		1,280	1,131.00 ^a	
Blaming/Non-blaming	100	651	651.00	50.86
	75	430	322.50	33.50
	62.5	1	.625	.08
	50	180	90.00	14.06
	37.5	1	.375	.08
	0	5	0.00	.39
	NR	12	0.00	.94
		1,280	1,064.50 ^b	
<u>Behavioral Response</u>				
	100	616	616.00	48.13
	87.5	2	1.75	.16
	75	391	293.25	30.55
	62.5	14	8.75	1.09
	50	236	118.00	18.43
	41.6	1	.42	.08
	37.5	5	.78	.39
	0	2	0.00	.16
	NR	13	0.00	1.01
		1,280	1,038.95 ^c	

Note. . NR = no response.

^aOverall agreement for Negative/Nonnegative Division is $1131 / 1280 = 88.36\%$ when NR counted as 0%; agreement is 89.20% when NR omitted ($1131 / 1268$).

^bOverall agreement for Blaming/Nonblaming Division is $1064.5 / 1280 = 83.16\%$ when NR counted as 0%; agreement is 83.95% when NR omitted ($1064.5 / 1268$).

^cOverall agreement for the Behavioral Division is $1038.95 / 1280 = 81.17\%$ when NR counted as 0%; agreement is 82% when NR omitted ($1038.95 / 1267$).

APPENDIX H

TABLES CONTAINING RAW SCORES USED FOR STATISTICAL ANALYSIS
IN CHAPTER IV, RESULTS

Table 7

Numbers of Type A and Type B Subjects Who Circled Individual Items
on "What Pushes Your Button?" Questionnaire

Item	Type A	Type B
1	9	3
2	20	20
3	12	10
4	10	7
5	7	4
6	18	16
7	15	8
8	11	11
9	9	3
10	19	19
11	13	12
12	18	17
13	18	17
14	4	0
15	7	2
16	15	9
	$\bar{X} = 12.8$	$\bar{X} = 9.6$

Table 8

Frequency of Negative and Nonnegative Affect Cognitive Responses of
Type A Subjects to Sixteen-Item Questionnaire "What Pushes Your
Button?"

Type A subject	Frequency of response	
	Negative affect	Nonnegative affect
1	11	5
2	12	2
3	12	4
4	10	6
5	13	3
6	9	6
7	13	3
8	13	1
9	8	3
10	9	6
11	11	3
12	9	6
13	14	1
14	11	5
15	8	7
16	9	5
17	11	3
18	12	3
19	13	1
20	13	1
21	5	6
22	8	5
23	11	5
24	5	11
25	13	1
26	12	3
27	6	5
28	7	8
29	4	10
30	10	5
31	9	5
32	10	6
33	14	1
34	16	0
35	10	4
36	8	5
37	9	7
38	8	7
39	14	2
40	12	3
	412	173
	$\bar{X} = 10.3$	$\bar{X} = 4.3$
	$s = 2.7568097$	$s = 2.494995$
	$r = -0.8682173$	

Table 9

Frequency of Negative and Nonnegative Affect Cognitive Responses of
Type B Subjects to Sixteen-Item Questionnaire "What Pushes Your
Button?"

Type B subject	Frequency of response	
	Negative affect	Nonnegative affect
1	7	6
2	7	7
3	11	5
4	13	3
5	5	10
6	5	8
7	10	4
8	6	6
9	8	8
10	8	7
11	6	8
12	8	7
13	7	6
14	9	5
15	7	7
16	0	14
17	11	3
18	7	8
19	13	2
20	9	5
21	7	7
22	8	6
23	7	8
24	1	15
25	5	10
26	8	7
27	8	6
28	6	7
29	8	5
30	4	10
31	8	6
32	8	7
33	9	7
34	9	6
35	10	4
36	7	9
37	9	4
38	11	5
39	5	10
40	7	8
	302	276
	$\bar{X} = 7.55$	$\bar{X} = 6.9$
	$s = 2.6209217$	$s = 2.6292243$
	$r = -0.4857034$	

Table 10

Frequency of Blaming and Nonblaming Cognitive Responses of Type A Subjects to Sixteen-Item Questionnaire "What Pushes Your Button?"

Type A subject	Frequency of response	
	Blaming response	Nonblaming response
1	11	0
2	11	3
3	12	4
4	11	2
5	11	2
6	9	4
7	8	5
8	14	2
9	10	4
10	8	6
11	11	3
12	10	5
13	11	2
14	13	3
15	11	2
16	5	4
17	12	2
18	12	2
19	14	0
20	14	1
21	5	6
22	10	3
23	10	4
24	5	5
25	14	0
26	9	4
27	9	1
28	8	6
29	9	7
30	9	5
31	9	4
32	11	4
33	13	1
34	12	1
35	8	4
36	7	5
37	11	4
38	7	6
39	12	0
40	6	5
	<u>402</u>	<u>134</u>
	$\bar{X} = 10.05$	$\bar{X} = 3.275$
	$s = 2.4904947$	$s = 1.9079792$
	$r = -0.9757921$	

Table 11

Frequency of Blaming and Nonblaming Cognitive Responses of Type B Subjects to Sixteen-Item Questionnaire "What Pushes Your Button?"

Type B subject	Frequency of response	
	Blaming response	Nonblaming response
1	10	2
2	8	1
3	8	5
4	13	2
5	12	3
6	8	5
7	10	3
8	8	2
9	9	2
10	8	5
11	7	6
12	9	5
13	8	7
14	12	2
15	6	9
16	6	8
17	14	1
18	11	4
19	10	2
20	8	3
21	7	5
22	13	1
23	5	8
24	6	7
25	8	6
26	11	5
27	8	8
28	9	6
29	8	4
30	6	8
31	12	1
32	7	7
33	10	5
34	8	6
35	11	5
36	8	7
37	12	3
38	13	2
39	10	5
40	10	3
	367	179
	$\bar{X} = 9.175$	$\bar{X} = 4.475$
	$s = 2.2745808$	$s = 2.3203393$
	$r = -0.749754$	

Table 12

Frequency and Means of Blaming and Nonblaming Cognitive Responses of Type A and Type B Subjects Categorized According to Type of Blame

Category	Type A	Mean	Type B	Mean
Blaming (total)	402	10.05	367	9.18
Intra/specific	65	1.63	67	1.68
Intra/global	1	0.03	0	0.00
Inter/specific	305	7.63	279	6.98
Inter/global	31	0.78	21	0.53
Nonblaming	134	3.35	179	4.48

Table 13

Frequency and Means of Behavioral Responses of Type A and Type B Subjects to the Questionnaire "What Pushes Your Button?"

Category	Type A	Mean	Type B	Mean
Nonassertion	36	0.9	35	0.9
Aggression	21	0.5	19	0.5
Assertion	130	3.3	115	2.9
Problem-solving	313	7.8	333	8.3
Neutral	2	0.05	3	0.08
Other	0	0.0	2	0.05

Table 14

Mean Level of Frustration of Type A and Type B Subjects Across the Sixteen Items on the Questionnaire "What Pushes Your Button?"

Item	Type A	Type B
1	2.5	2.0
2	3.0	2.7
3	3.3	1.6
4	3.8	3.6
5	3.9	3.3
6	4.2	3.6
7	3.3	3.1
8	2.2	2.1
9	3.2	2.4
10	2.4	2.1
11	3.5	3.5
12	2.7	2.2
13	2.9	2.0
14	3.6	3.8
15	4.0	3.4
16	3.4	2.5
	$\bar{X} = 3.24375$ $s = 0.5932608$	$\bar{X} = 2.74375$ $s = 0.7183024$

Table 15

Frequency and Percentage of Duration of Frustration Responses by Type A and Type B Subjects to "What Pushes Your Button?" Questionnaire

Category	Type A	Percentage	Type B	Percentage
1	5	0.8	18	2.9
2	250	41.6	193	31.5
3	161	26.8	170	27.7
4	108	18.0	180	29.4
5	53	8.8	41	6.7
6	19	3.2	6	1.0
7	5	0.8	5	0.8

Table 16

Mean Frequencies of Negative Affect and Blaming Responses for Type A and B Subjects When Antagonist Was Present or Absent and Orientation Was Work/School or General/Social

Division	Mean negative affect		Mean blaming	
	Type A	Type B	Type A	Type B
Antagonist present	25.5	16.8	25.5	20.6
Antagonist absent	26.0	21.0	24.8	25.3
Work/school orientation	26.3	18.3	25.4	22.5
General/social orient.	25.3	19.5	24.9	23.4

Table 17

Frequencies and Means of Negative Affect and Blaming Responses of Type A and Type B Individuals Divided According to Source of Frustration

Source of frustration	Item number	Frequency of response			
		Negative affect		Blaming	
		Type A	Type B	Type A	Type B
Peer	12	25	11	35	29
	16	25	16	32	31
	10	18	12	22	18
	4	32	31	36	30
		$\bar{X} = 25$	$\overline{17.5}$	$\overline{31.3}$	$\overline{27}$
Subordinate	3	33	18	37	27
	9	23	21	20	21
	13	25	10	26	20
	6	35	31	35	36
		$\bar{X} = 29$	$\overline{20}$	$\overline{29.5}$	$\overline{26}$
Superior	7	30	25	31	22
	14	21	22	14	23
	11	26	26	24	18
	15	31	28	20	25
		$\bar{X} = 27$	$\overline{25.3}$	$\overline{22.3}$	$\overline{22}$
Self/object	5	31	24	18	16
	1	22	9	16	11
	8	16	8	11	15
	1	19	10	25	25
		$\bar{X} = 22$	$\overline{12.8}$	$\overline{17.5}$	$\overline{16.8}$

Table 18

Frequencies of Negative/Nonnegative and Blaming/Nonblaming Responses by Item for Type A and Type B Subjects Across Forms 1 and 2 of the Questionnaire "What Pushes Your Button?"

Item	Category	Type A		Type B	
		Form 1	Form 2	Form 1	Form 2
1/16	Negative	11	11	5	4
	Nonnegative	6	7	12	14
	Blaming	8	8	5	6
	Nonblaming	7	7	10	12
2/15	Negative	10	9	5	5
	Nonnegative	9	10	14	12
	Blaming	15	10	13	12
	Nonblaming	2	7	2	4
3/14	Negative	19	14	12	6
	Nonnegative	1	4	7	11
	Blaming	19	18	17	10
	Nonblaming	0	1	0	6
4/13	Negative	18	14	16	15
	Nonnegative	2	2	3	3
	Blaming	18	18	17	13
	Nonblaming	0	1	1	4
5/12	Negative	15	16	12	12
	Nonnegative	4	2	6	4
	Blaming	9	9	6	10
	Nonblaming	10	9	12	8
6/11	Negative	17	18	18	13
	Nonnegative	1	1	1	6
	Blaming	18	17	17	19
	Nonblaming	1	0	0	0
7/10	Negative	14	16	10	15
	Nonnegative	4	3	9	2
	Blaming	16	15	11	11
	Nonblaming	2	2	4	4
8/9	Negative	7	9	3	5
	Nonnegative	10	10	14	14
	Blaming	6	5	7	8
	Nonblaming	7	12	9	11
9/8	Negative	13	10	9	12
	Nonnegative	6	5	10	6
	Blaming	13	7	10	11
	Nonblaming	6	9	7	8

Table 18 (continued)

Item	Category	Type A		Type B	
		Form 1	Form 2	Form 1	Form 2
10/7	Negative	10	8	7	5
	Nonnegative	10	11	12	15
	Blaming	10	12	9	9
	Nonblaming	7	6	9	9
11/6	Negative	16	10	13	13
	Nonnegative	2	7	2	6
	Blaming	15	9	9	9
	Nonblaming	1	4	4	8
12/5	Negative	18	7	10	1
	Nonnegative	1	12	5	17
	Blaming	18	17	18	11
	Nonblaming	0	2	1	9
13/4	Negative	15	10	5	5
	Nonnegative	4	9	12	13
	Blaming	14	12	9	11
	Nonblaming	2	3	6	6
14/3	Negative	10	11	11	11
	Nonnegative	9	6	7	7
	Blaming	8	6	10	13
	Nonblaming	10	10	7	6
15/2	Negative	15	16	14	14
	Nonnegative	2	4	5	6
	Blaming	14	6	12	13
	Nonblaming	1	4	2	4
16/1	Negative	13	12	7	9
	Nonnegative	3	6	10	11
	Blaming	17	15	15	16
	Nonblaming	0	1	3	3

VITA

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