1978

Closedmindedness as a Positive Behavior

Herbert Wax
University of Rhode Island

Follow this and additional works at: https://digitalcommons.uri.edu/oa_diss

Recommended Citation

Wax, Herbert, "Closedmindedness as a Positive Behavior" (1978). *Open Access Dissertations*. Paper 924.
https://digitalcommons.uri.edu/oa_diss/924

This Dissertation is brought to you for free and open access by DigitalCommons@URI. It has been accepted for inclusion in Open Access Dissertations by an authorized administrator of DigitalCommons@URI. For more information, please contact digitalcommons-group@uri.edu.

CLOSEDMINDEDNESS

AS A POSITIVE

BEHAVIOR

BY

HERBERT WAX

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN

PSYCHOLOGY

UNIVERSITY OF RHODE ISLAND

1978

ABSTRACT

The purpose of this study was to examine how males and females who were categorized as either open or closedminded would respond to a Slide Show followed by a True/False Test and the Human Assistance Distance Scale (HADS) constructed for this experiment.

A group of subjects took Rokeach's Dogmatism Scale which differentiated them into openminded and closedminded groups. Both groups were matched by sex. They then viewed the Slide Show which consisted of low and high stress pictures, taken from a variety of sources. The subjects were then given a True/False Test related to factual content of the slides. They were also asked to indicate how close they would get to the most upsetting aspect of a helping situation (HADS).

The specific concepts being investigated were: (1) in response to distressing stimuli, closedminded subjects will view them for a longer period of time than openminded subjects will, (2) in response to written descriptions of hypothetical situations depicting others in need of assistance, openminded subjects will place themselves closer (physically) to the most stressful aspects of the situation and

closedminded subjects will place themselves further from the most upsetting aspects, and (3) that on a True/False Test related to viewing both stressful and nonstressful slides the closedminded subjects will give more correct responses than the openminded subjects.

Parametric and non-parametric analyses of the results confirmed almost all of the predictions but with variations as to sex. The closedminded group viewed the slides longer. On the HADS the openminded males did behave in the predicted way, but the openminded females did not. On the True/False Test the closedminded group did give more correct responses.

The findings were compared to past empirical research and the theoretical implications with regard to this work were discussed. The findings were also examined in light of the methodology employed.

ACKNOWLEDGMENT

To my parents who said, "yes," when all others said, "no," who gave unconditional and unending love and support throughout my entire education; to both of you I owe all. This dissertation is dedicated to you in partial appreciation of what I feel for the two of you.

To my wife, Allita, I thank you for all the sacrifice, support, love and forgiveness that you unfailingly gave all those years. To Stacey Jo and Matthew Lee who taught me love, and who continue to teach me what is important.

To George Frank who said I should and who then helped make it happen. I want you to know that you live within me as a gentle, kind, tolerant, loving man with whom I have many special moments.

To Alan Willoughby who shared his clinical wisdom and skill and was most special to me. Who also gave me much more, for he carried me through this program in spite of the obstacles I placed before him. Without him I would have failed. So to you I owe two debts--you will always be my measure of what a clinician should be, and the very fact that I am a clinician.

To Lawrence Grebstein, my major professor, there is the special feeling that accompanies years of sharing and support. For the rest of my committee: Peter Merenda, Al Lott, Richard Travisano, you gave all the time and assistance that I requested and you have helped me learn to be a psychologist.

A special thank you goes to Stanley Berger who gave me my chance, who gave support, who cared, who always remembered. To my friend, Ira Silverman, who always gives the most special gift of all--friendship.

TABLE OF CONTENTS

	Page
LIST OF TABLES	ix
Chapter	
I. THEORETICAL/HISTORICAL/INTRODUCTION.	1
The Scientific Example	
Psychology and Closedness	
Closedness As a Psychological Habit	
Psychological Stress and Closedness	
A Review of the Dogmatism Scale	
Purpose of This Study	
Hypothesis	
Predictions	
II. METHOD	33
Pilot Study	
Development of Slide Show	
Development of Human Assistance Distance Scale	
Main Study-Part I	
Subjects	
Procedure	
Measures	
Main Study-Part II	
Slide Show and True/False Test	
Human Assistance Distance Scale (HADS)	
Order of Presentation	
Subject Assessment of Experimental Experience	
Statistical Treatment	
Slide Show	
HADS and True/False Text	
Setting	
Apparatus	

Chapter	Page
III. RESULTS	45
Slide Show	
Basic Scores	
Closed vs. Open	
Low Stress Slides vs. High Stress Slides	
Male vs. Female	
Closed vs. Open/Male vs. Female	
Slide Show Summary	
Human Assistance Distance Scale (HADS)	
Basic Scores	
Statistical Treatment	
Open vs. Closed	
Open Males vs. All Other Groups	
HADS Summary	
True/False Test (TFT)	
Basic Scores	
Open vs. Closed	
TFT Summary	
Summary of all the Findings	
IV. DISCUSSION.	55
Closedmindedness vs. Openmindedness	
Slide Show	
True/False Test	
Female vs. Male	
Human Assistance Distance Scale	
Male vs. Female	
Limitations of the Methodology	
Complexity as a Dual Phenomenon	
Summary of Findings	
Future Research	
BIBLIOGRAPHY.	65

	Page
APPENDICES	
Appendix A Slide Show Percents	67
Appendix B Slide Show References	69
Appendix C Development of the Slide Show	71
Appendix D Development of the HADS	74
Appendix E Correlation Matrix	76
Appendix F HADS Questionnaire	78
Appendix G Rokeach's Dogmatism Scale	80
Appendix H Reliabilities, Means, and Standard Deviations of Successive Forms of the Dogmatism Scale	83
Appendix I Means and Standard Deviations for the Viewing Times By Males/Females	84
Appendix J Human Assistance Distance Scale Frequencies For all of the Groups	85
Appendix K Voluntary Consent Form	86
Appendix L Feedback Form	87

LIST OF TABLES

Table		Page
1	Total Viewing Time for Males/Females By Seconds Viewed	45
2	Analysis of Variance for the Slide Show	47
3	Human Assistance Distance Scale By Closedminded and Openminded Groups	49
4	Human Assistance Distance Scale As Analyzed For Significance Using the X^2	50
5	True/False Test - Raw Data	51
6	True/False Test As Analyzed For Significance Using the X^2	53

CHAPTER I

THEORETICAL/HISTORICAL INTRODUCTION

It is a widely held belief among many members of the helping professions and intellectuals from a variety of disciplines that it is important to be open to new ideas, experiences and feelings, both for oneself and for others. Nevertheless, one of the most common occurrences of everyday life is the amount of closedmindedness one tends to encounter. And just as often is the idea that closedmindedness, when it is encountered, is usually seen as a negative phenomenon. This study is an attempt to explore the formulation that closedmindedness is, by definition, a negative behavior. Throughout this study closedmindedness will be understood to mean those behaviors which occur when a person does not see, feel or acknowledge some aspect of "reality", and in so doing changes the course of his or her subsequent behavior. These manifestations of closedmindedness have been studied by psychologists under the following categories: denial, repression, avoidance, dogmatism, etc. It is also taken to mean that if a behavior results in a positive outcome it is conceptually and semantically presented as something other than closedmindedness.

In summary, then, it has been the empirical assumption of psychology that closedmindedness is synonymous with negative outcomes and results. Bowers (1973, p.317) notes: "What a preferred method does not readily see can become less important to our conceptualization of the phenomena; what a method sees easily sometimes becomes the sole basis of our understanding." Given this formulation it remains to be seen, if, in fact, closedmindedness does possess some positive functions for people.

Rokeach (1960) has explored the concept of closedmindedness as it manifested itself in the areas of attitudinal dogmatism and on general learning tasks. He set out to show that there were underlying cognitive structures that predisposed an individual to be either open or closed. To establish his point, he developed a scale that validly categorized individuals into open and closedminded groups. His subsequent research and the research of others with his scale tended to confirm his hypothesis. In this experimental work, the proof of closedmindedness was based on some experimental situations in which the closedminded subject had performed poorly, (i.e., negatively), when compared to the openminded subjects. So while establishing his theoretical point of view about the existence of closedmindedness, he also established closedmindedness as a negative phenomenon. Despite this research, and other investigations like it, there is reason to believe that closedmindedness is not just a negative function in

people's lives but can, in fact, have positive, adaptive consequences for individuals. One group of researchers who believes this are Bernard, Ottenberg and Redl (1971, p.102) who, in their paper on "Dehumanization," conceptualize this phenomenon in very much the same way that both Rokeach and this study do and then go on to extrapolate the behavioral consequences of this phenomenon in a positive fashion. They make their point this way:

"Dehumanization as a defense against painful or overwhelming emotions entails a decrease in a person's sense of his own individuality and in his perception of the humanness of other people..... In our view, dehumanization is not a wholly new mental mechanism but rather a composite psychological defense which draws selectively on other well known defenses, including unconscious denial, repression, depersonalization, isolation of affect, and compartmentalization (the elimination of meaning by disconnecting related mental elements and walling them off from each other).....We recognize that many adaptive, as well as maladaptive, uses of self-protective dehumanization are requisite in multiple areas of contemporary life."

While they do not indicate the specific areas of contemporary life that may necessitate closedness as an adaptive response, they do recognize the duality of this phenomenon; i.e., closedness can serve a positive function. They are also

making the point that what we conventionally call defense mechanisms can easily be understood under some umbrella concept and that given this approach it then becomes possible to think positively about these mechanisms. Though Bernard, et al and Rokeach use slightly different language they are basically describing the same event.

Rokeach addresses himself to the same circumstance and answers it this way: (1960, p. 62)

"If a person feels strongly threatened or anxious in a given situation, he should above all be motivated to act so that the threat is reduced and the anxiety allayed. It is precisely because he is so motivated that the relatively closed person becomes highly attuned to irrelevant internal and external pressures and, accordingly, unable to evaluate information independent of source."

Rokeach makes it simple, under threat or anxiety closed individuals will behave in a negative manner. For Rokeach, then, closed becomes negative, and for the purposes of this research, Rokeach's definition of closedmindedness will be understood to be the convention that is being questioned. A negative behavior will then be understood, as any behavior that does not directly and adaptively deal with a given situation, be it, an emotional, cognitive or behavioral response.

At this point it seems too simple to say that dogmatic people are closed and that they will generalize this behavior across tasks with an inevitable negative result. The question here is not whether open and closedmindedness are legitimate dichotomous events, but rather, whether closed is by definition negative. This raises questions about the very nature of closedness such as, whether people are more closed to begin with, or what if closedmindedness is culturally or personally valuable in ways that we have not considered before? To expect all people to be as open as they can, in all situations defined as nonthreatening seems a bit utopian. There is an insidious implication that if we all became open then all things would be as they should be and all things would be good.

Many situations fall into a grey area; an area of life which is not overwhelmingly threatening, but is at the same time unpleasant enough so that many of us are made uncomfortable by it. Some of these situations that are unpleasant, but necessary, are also socially desirable because they reward the individuals who do them with prestige or money. In some instances the situation can be perceived as so stressful that the condition needed to perform in such a situation may very well be the ability to emotionally detach oneself. In other words an effective response may be dependent upon the ability to control one's own emotions. Bernard, et al (1971, p. 106) articulate this idea in the following way:

"Indeed, some degree of adaptive dehumanization seems to be a basic requirement for effective participation in any institutional process. Almost every professional activity has some specific aspect that requires the capacity for appropriate detachment from full emotional responsiveness and the curtailment, at least temporarily, of those everyday human exchanges that are not central to the task at hand or which might, if present, impede it. Thus, in crises such as natural disasters, accidents, or epidemics in which people are injured, sick, or killed, psychic mechanisms are called into play which divest the victims of their human identities, so that feelings of pity, terror, or revulsion can be overcome. Without such selective and transient dehumanization, these emotional reactions would interfere with the efficient and responsible performance of what has to be done, whether it be first aid, surgery, rescue operations or burial."

Stated differently, adaptive behavior in crisis or emergency situations often demands a singleness of purpose and a task-orientation that to an outside observer might appear to be excessively narrow, cold, unenlightened or closed. How much anyone gives of himself in these situations is problematical. In many communities the individuals who have to deal with these situations are often people who appear easy to

stereotype as "narrow," "closed," "bigoted," "insensitive," but they are the ones who drive the volunteer ambulance, run the volunteer fire department, and are the policemen, nurses, doctors, etc. It is then a question for research whether those persons who appear open, who speak the language of compassion and understanding could accomplish any of these demanding tasks, either as professionals or as volunteers. What if the people who do this kind of work or who are self-selectively able to do this kind of work, function only to the degree that they are closed? What if people who score as open on Dogmatism Scales merely indicate an abstract identification with openness, but are made ineffective by their own levels of compassion in real life situations? It seems possible that people who are highly sensitive in this way may very well be aware of their own pain and that this awareness is the basis for their being able to identify with the pain of others. Is it not then plausible that such self-awareness has to be controlled, or defended against, in certain situations? Can individuals remain functional at their jobs, especially emotionally upsetting jobs, if they are being flooded by their own feelings? Is it the task of all of those who work with "sick" people to learn to control their feelings? The relationship of perceiving pain in others and controlling our identification with this pain, seems essential if individuals in the "helping" professions are to remain effective. It then seems reasonable

to assume, that the individuals who gravitate toward these professions or who volunteer their involvement may have more control over their own emotions or can learn to have this control.

I, therefore, propose that some form of closedness is important to our survival and that it is probably a learned behavior. Like many such phenomenon the net result of its effect can be both good and bad, important or unimportant, necessary or unnecessary. Closedness, if it is to be understood, must be viewed as an event divorced from value judgments and under certain circumstances, closedness, can be viewed as an adaptive response and therefore as having positive consequences.

Just to say that closedness may be adaptive skirts the issue, for in fact, closedness and its allied behaviors may very well be the norm rather than the exception. Becker (1973, p. 187) notes, that, "After all, one of the reasons we narrow down too much is that we must sense on some level of awareness that life is too big and threatening a problem. And if we say that the average man narrows down 'just about right' we have to ask who this average man is."

However, the notion that man is more closed than open seems often unacceptable to us. Somehow our belief about the desirability of openness has made us blind to the possibility that people, under some conditions, may have good

reasons to remain closed. That this closedness is usually seen in others as self-defeating and negative does not mean that we can just label it and ignore all of its possible ramifications. "Habits cannot be mistaken; they can only be (un)adaptive." (Bowers, 1973 p. 333) Which still leaves the question of "unadaptive" from who's perspective.

Resistance to change and limited openness to new ideas occurs across the spectrum of our society from the most highly educated to those dominated by one-behavior lives, such as alcoholics and drug addicts. Our belief in the capacity of people to change eventuates in our astonishment concerning the low "cure" rate found in so many maladies. One only has to study the history of successful revolutions to see that entire generations are often eliminated to ensure that the new ways will take hold. That Western religions have often incorporated alien rituals in order to insure that the converts will accept the new religion. The rule of thumb appears to be that the old ways persist, and not necessarily because of inertia, for inertia appears to tame, to explain, the tenacity of this resistance. Given this, the mythology of change and of man reaching for "truths" gives way to an empiricism of stagnation and resistance to change.

The Scientific Example

The idea that we refuse to see closedness in all of its varied forms still needs further elucidation. To make a point, it is sometimes necessary to explore its existence in a specific group before we can move to a group occupying the middle ground. For while openness in its pure form, as an abstract ideal, has tremendous appeal, any study of man must contrast the intellectual ideal with the psychological reality in which this ideal must function. To develop this point further, let us examine a group of people generally believed to be in the forefront of openness to new ideas, namely scientists. This group is by its own definition committed to and trained in the use of the scientific method, which theoretically commits them to the search for knowledge (the truth) and towards this end they have struggled to develop methods which would ensure this goal. While it is evident that tremendous scientific advancements have been made, I believe that it can be shown that science and scientists suffer from the same resistance to change that other people do. Even though they are trained to be open and are almost the only organized group in our society to receive this training; they still, to a marked degree, show the quality of closedness. This notion should not be surprising, for scientists like any other group of individuals should be governed by the same psychological phenomena that governs us all.

While scientists have been quick to note the resistance of others to their work and in so doing have championed the idea of openness they have been derelict in exposing their own internal resistance to change. To document this point I will quote liberally from a paper by Professor Bernard Barber, a sociologist at Columbia University. This paper was delivered in New York in the year 1960. In quoting from Professor Barber's paper I am less interested in the reasons he proposes for "closed-mindedness" than I am in the mere existence of the paper and the documentation of closedness that it presents. This will also be true for the other sources I cite; for when one is dealing with a phenomenon which is so conspicuously avoided, it becomes necessary to indicate that it is there.

It is important to begin with Barber's (1960, p.598) definition of his task: "This article is an investigation of the elements within science which limit the norm and practice of "open-mindedness."

"My purpose is to draw a more accurate picture of the actual process of scientific discovery, to see resistance by scientists themselves as a constant (emphasis mine) phenomenon with specific cultural and social sources." Professor Barber quotes Helmholtz as saying, "the fact is that the greatest benefactors of mankind usually do not obtain full reward during their lifetime and that new ideas need the more

time for gaining general assent the more original they are." Barber further notes, ironically, one of those who resisted the ideas proposed in Plank's paper, according to Plank's account, was Helmholtz; "None of my professors at the University had any understanding for its contents...I found no interest, let alone approval, even among the very physicists who were most closely connected with the topic. Helmholtz probably did not even read my paper at all." Plank's interpretation of his experience was as follows:

"This experience gave me also an opportunity to learn a new fact-a remarkable one in my opinion: A scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die and a new generation grows up that is familiar with it."

Barber continues in the paper to list an impressive list of significant discoveries, that encountered generational resistance, starting with "...the very origins of modern science," the Copernian revolution, Mendel's theory of genetic inheritance, Pasteur's "discovery of the biological character of the fermentation process." He ends his paper:

"Nevertheless some resistance remains, and it is this we seek to understand and thus perhaps to reduce. If the edge of objectivity in science, as Charles Gillispie has recently pointed out, requires us to take physical and biological nature as it is, without

projecting (emphasis mine) our wishes upon it, so also we have to take man's social nature, or his behavior in society, as it is. As men in society, scientists are sometimes the agents, sometimes the objects, or resistance to their own discoveries."

In a similar vein Kuhn (1960, p. 24) states:

"Closely examined, whether historically or in the contemporary laboratory, that enterprise seems an attempt to force nature into the preformed and relatively inflexible box that the paradigm supplies. No part or the aim of normal science is to call forth new sorts of phenomena; indeed those that will not fit the box are often not seen at all. Nor do scientists normally aim to invent new theories, and they are often intolerant of those invented by others. Instead, normal-scientific research is directed to the articulation of those phenomena and theories that the paradigm already supplies."

Kuhn is arguing that in "normal science" a narrow or highly specific design is investigated intensely to the point of exclusion of other ideas or theories. What is striking about the preceding, is not that scientists can and will be closed, but that "as men in society" it is all they can do to struggle against being closed. Often, the only cure is death. The habit of closedness is so pervasive a phenomenon

that even those most priestly trained cannot help but fall victim to it. However, one may try to explain it, change it, or understand it, closedness prevails.

The important conclusion to be drawn from all of the preceding is not that you can find closedness in science, but rather that people, wherever they work, no matter what their stated goals or their specific training will display some of those characteristic behaviors associated with closedness. The specific reason that scientists were chosen is because, as individuals, they have been consciously trained to avoid the pitfalls of closedness, but even those scientists at the top of their profession display, very clearly, the behavior called closedness. The problem here has been the notion that the correct intention will somehow prove more powerful than the existence of a psychological "fact."

Psychology and Closedness

While we have been talking about science in general it is now necessary to relate the idea of closedness to psychology in particular. Historically, psychology has had little difficulty in recognizing the existence of closedness, rather it has created a paradoxical approach to it. On the one hand there are those psychologists who define closedness as necessary for survival of the group but detrimental for the individual. The other position defines closedmindedness

as negative and counter productive in general. What is central to both groups is that closedness comes out being viewed as negative. It is important to note that in the following passages closedness is understood as being synonymous with the defense mechanisms and that both are seen as sources of clinical neurosis. Given this state of affairs it is not difficult to understand why so much of the effort expended in clinical psychology shares a history with the ideas of closedness.

In a way the notion of closedness dates from the discovery of the unconscious as a psychological event rather than an intrigue of the gods. Once this acceptance had gained ground, the quibbling over definitions for the unconscious gave way to the investigation of the "what" and the "why" people are unaware of; and of why people seem to function at a lower level of efficacy than they have to, given their general abilities. Otto Rank (1941, p. 21) defines the problem this way:

"Neurosis is neither the result of social inhibitions which the majority seems able to accept nor is it caused by subsequent repression of impulses, but appears as the result of an excessive control on the part of the individual's will over his own nature. In brief, neurosis is the result of willing the spontaneous, which, in other words, amounts to an attempt

to solve the conflict between determinism and freedom in actual life instead of on paper. In this sense, the neurotic type of our time appears to be the caricature of our own over-rationalized psychology; in him is reached the climax of rational self-control (control of the natural self) at the breaking-point where the irrational forces get the upper hand."

In a sense he is saying that neurotic man has lost his spontaneity (his openness) and has over-rationalized (closed down) his life. People distrust their nature and have tried to reinvent a better one. So the closing down of the natural is negative.

In contradistinction to Rank's point of view, Herbert Marcuse (1955, p. 235) in his study of Freud, makes the following point:

"Behind all the differences among the historical forms of society, Freud saw the basic inhumanity common to all of them, and the repressive controls which perpetuate, in the instinctual structure itself, the domination of man by man. By virtue of this insight Freud's 'static concept of society' is closer to the truth than the dynamic sociological concepts supplied by the revisionist... The personality which the individual is to develop, the potentialities which he is to attain--they are regimented from the very beginning, and their

content can be defined only in terms of this regimentation. Freud destroys the illusions of the idealistic ethics; the 'personality' is but a 'broken' individual who has internalized and successfully utilized repression and aggression."

He goes on to note:

"...Fromm and the other revisionists (Rank, included) proclaim a higher goal of therapy: optimal development of a person's potentialities and the realization of his individuality. Now it is precisely this goal which is essentially unattainable--not because of limitations in psychoanalytic techniques but because the established civilization itself, in its very structure, denies it. Either one defines 'personality' and 'individuality' in terms of their possibilities within the established form of civilization, in which case their realization is for the vast adjustment, or one defines them in terms of their transcending content, including their socially denied potentialities beyond (and beneath) their actual existence; in this case, their realization would imply transgression, beyond the established form of civilization, to radically new modes of 'personality' and 'individuality' incompatible with the prevailing ones. Today this would mean 'curing' the patient to become a rebel or (which is saying the same thing) a martyr."

His point is that the "static" and the "regimented" are what people are all about; that this is how we must understand people in terms of their "closedness." For what he calls "illusion" is but another name for openness. Rank and Marcuse, then, represent the polarities of closedness; Rank sees the individual sacrificing his own nature in being closed and Marcuse sees the individual as having to be closed in order to serve the closed society. The resolution of this debate within clinical psychology is attempted by Ernest Becker, who is a student of both Freud's and Rank's; he defines the middle way: (Becker, 1973, p. 177)

"First, as a problem of personal character, when we say neurosis represents the truth of life we again mean that life is an overwhelming problem for an animal free of instinct. The individual has to protect himself against the world, and he can do this only as any other animal would: by narrowing down the world, shutting off experience, developing an obliviousness both to the terrors of the world and to his own anxieties. Otherwise, he would be crippled for action."

So here we have the resolution: "the individual has to protect himself," "otherwise he would be crippled for action;" close down and then you can fight another day. The narrowing down or closing down of the individual is

not then a black or white, either/or event. In a sense one can say that Becker has tried to remove the notion of open and closed from the arena of ideology to the investigation of a critical psychology.

The centrality of closedness in all of these positions also gives rise to the notion that what we believe about people not only expresses our psychology of man but also our ideology of man. That as much as we investigate psychological man we are also embedded in our own reflections, both culturally and personally; we are enclosed within our theories, our personalities and our cultural-historical heritage.

Closedness As a Psychological Habit

If one looks at the research that dominated the 1950's and 1960's, especially in the area of volitional vs. conditionable behavior, it is reasonable to conclude that people are not just the end result of innumerable conditioning experiences; rather persons, like animals, almost eagerly seek habituation of their behavior so as to maximize their potential. As Wachtel (1973, p. 329) notes:

"We must ask why for some people the situation is so rarely different. How do we understand the man who is constantly in the presence of overbearing women, or constantly immersed in his work, or constantly with weaker men who are

cowed by him and offer little honest feedback? Further, how do we understand the man who seems to bring out the bitchy side of whatever woman he encounters, or ends up turning almost all social encounters into work sessions, or intimidates even men who usually are honest and direct."

It would appear, then, that a habit, in the purest sense of the term, might be the most efficacious unit of behavior, along with the proviso that the habit in question is used in an appropriate situation. Is it not then theoretically possible that man with his superior brain carries this intuitive notion to its logical conclusion and substitutes the form of habituation for the content of an appropriate behavioral response. So, an habitual response is called forth because the individual believes that habits, more often than not, work so well. Is it not the accepted wisdom in almost all areas of life that it is essential to acquire good "habits" whether you are a football player or a concert violinist. The goal in all endeavors is to develop our habits in order to make our use of energies more efficacious. For an individual to produce a novel or thoughtful response requires an investment of energy, still more effort is needed just to stop the old habitual response. Given this definition of habitual responses, it then becomes reasonable to assume that any break in the flow of habitual responses, that a person is used to expressing, can create a stressful and

frustrating situation which is probably a negative experience for most people. That man then behaves in the "narrow" sense (habitual, closed) rather than in the "freer" sense (changeable, open) appears more reasonable and plausible. What has been said about the habits of individuals can also be said about groups. In the following quote a habit is called a "characteristic view" and it is understood as something that "just is." Sanford (1971, p. 141) in his work on ethnocentrism (an operationally defined form of closedmindedness), defines it like this:

"This way of thinking about group relationships is associated with characteristic views on politics, economics, religion, social relations, family and sex. This outlook didn't strike us as something that had been learned at school or taken over totally from any existing propaganda agency. Instead, we were led to the view that the ethnocentric outlook is generated and maintained primarily because it serves important needs within the individual personality."

He goes on to list a number of other studies that indicate a high correlation between ethnocentrism and negative behavioral traits: "rigidity, misanthropy, dogmaticism, punitiveness toward alcoholic patients, low tolerance for visual stimuli, and, under some conditions, rigidity in problem solving."

This research has interpreted both forms of habits (individual, group) to be a variation of closedmindedness. Both examples emphasize the negative aspects of closedness and see little value in this form of behavior. Historically, it has been possible to view closedness as a dynamic element in psychology but pushed into extreme positions. The polarization can almost be viewed as a hindrance to understanding more precisely how closedness functions as a complex behavior. It has been shown that closedness is both widespread and held to be negative. It has also been shown that closedness may be positive, but it has not been possible to find empirical research that would uphold this view. Given the current status of closedmindedness it appears inevitable that someone would attempt to show that closedness can be positive.

Psychological Stress and Closedmindedness

The theoretical and empirical traditions in psychology have always tried to find the antecedent events that provoke closedness in the individual. An important focus of this research has been the area of stress. Lazarus (1966, p. 1,2) indicates the overall importance of stress as a topic of psychological importance, this way:

"A huge quantity of research is performed within the overlapping subjects of conflict, frustration anxiety, defense, emotions (especially those of fear and anger), and disaster, to name some of the most important and obvious topics that fall under

the rubric of stress.....

The reasons for this voluminous activity is simply that stress, as a universal human and animal phenomenon, results in intense and distressing experience and appears to be of tremendous influence in behavior. It is also of the utmost importance in the effectiveness of adaptation."

With reference to closedmindedness and Rokeach's Dogmatism Scale, Lazarus (1966, p. 139) notes that: "One of the assumptions underlying this trait (anxiety) is that dogmatism or close-mindedness is a way of coping with anxiety or threat." Rokeach is in agreement with Lazarus on this interpretation of his scale. Rokeach (1960, p. 347) puts it this way:

".....to the extent a belief system is closed, it represents a cognitive network of defenses against anxiety. This leads to the simple hypothesis that those with relatively closed systems, should manifest more anxiety than those with relatively open systems."

So that, closedminded individuals, as defined by Rokeach's scale, tend to respond with a defensive closedness to stress; and open individuals tend to respond in a less defensive way. This theoretical position hypothesizes that stress will induce closedmindedness and that the closed individuals will be less effective or less adaptive. Implicit in all of this, is the idea that a closed response style is negative.

A Review of the Dogmatism Scale

The introduction thus far has tried to show that closedness, in a general way, is both widespread and not necessarily negative. It was also noted that even when researchers define closedness as necessary they also noted the negative consequences that it produced. But, if one looks at closedness across disciplines or in a broader historical context, it is often found to be the norm rather than the exception; and rather than treating it as an inherently negative and undesirable characteristic, it would probably be more beneficial to explore it as a neutral phenomenon. The opportunity to do this arrives with the work of Milton Rokeach, for he developed a scale that differentiates people into open or closed groups and his research has tended to show that closed individuals performed negatively in the experimental situations he devised.

Rokeach (1960, p. 60) defined the goal of his research in The Open and Closed Mind as follows:

"Our primary concern and commitment is to try to describe what is going on, and not going on, at the cognitive level."

The scale itself is a series of questions about social and personal opinions. It was originally developed to study individuals who were bigoted, prejudiced and dogmatic. He then evolved it into a scale that systematically separated people into two groups. Put another way: "It is not so

much what you believe that counts but how you believe."

Rokeach (1960, p. 6) The issue then for Rokeach was the connectedness between "narrow" thinking on social issues and how this reflected an underlying disposition to think in a closed way.

Since the Dogmatism Scale (DS) is one of the primary research tools used in the research presented here a review of the research using this tool is in order, so as to indicate the efficacy of the scale and its applicability to this research. Rokeach's DS has been demonstrated to be a reliable instrument (See Appendix H.)

A great deal of research in this area has used academic settings and students in social science courses. Ehrlich (1955, 1961a, 1961b) concluded:

"Subjects low in dogmatism entered the sociology classroom with a higher level of learning, learned more as a result of classroom exposure, and retained this information to a significantly greater degree than the more dogmatic subjects."

Costin (1965) in a replication of this work, using psychology students rather than sociology students, found no correlation between the DS scores and classroom performance, but did find a high correlation between the DS scores and the School and College Ability Test. From this finding he concluded: "that there was more than one kind of closedmindedness and/or that the content of learning was the crucial variable in the

differences between the studies." Frumkin (1961) and Zagana and Zucher (1965) confirmed the general finding that the low DS score tended to get higher classroom grades while Christensen (1963) found this not to be the case. While this area of the research has had mixed results the general thrust has tended to vindicate Rokeach's hypothesis about low and high DS people, that there is an underlying cognitive disposition, and that if one were closed in one's opinions why wouldn't one also be closed in a learning situation? That being closed is a style one brings to many different situations and not just opinion situations.

In other type situations Ehrlich and Bauer (1966, 1967) found that high DS subjects in a psychiatric hospital tended to be released over a longer period of time than lower DS patients. This situation can be seen as analogous to other learning situations. Getting out of a hospital may have something to do with "learning" how to be a healthier person, so that the learner leaves first and the closed individual stays on. In another quasi-medical situation Hallenbach and Lundstedt (1966) predicted that individuals who were low on the DS scale and who were gradually going blind would be found to be quite depressed while those who were high on the DS scale would be using denial and would not be depressed. Their findings confirmed this prediction.

In an extension of his research Rokeach developed the Denny Doodlebug Problem as a test of a complex problem solving

situation that had a neutral content. The findings over a number of studies indicated the following (1960, p. 211): "Those having a relatively open system take less time to solve the Doodlebug Problem....." Rokeach, Swanson and Denny (1960) tested and confirmed this finding in a study using chess and nonchess players and a conventional chessboard in a novel way. The importance of these studies is that they showed that low DS subjects dealt more successfully with novel situations than high DS subjects.

In the area of personality research Plant, Telford and Thomas (1965) compared high DS's and low DS's on the Allport, Vernon, Lindzey Study of Values and five scales of the California Psychological Inventory (CPI). They found high DS's to be psychologically immature, impulsive, defensive and stereotyped in their thinking, whereas low DS's were outgoing, enterprising, calm, mature and forceful, efficient and clear thinking, responsible and more likely to succeed in an academic setting. Giddan (1964) used three different scales from the CPI and found that the higher an individual scored on the Dogmatism Scale the less tolerant, flexible and secure he was.

The major thrust of all of this research is that the higher an individual scores on the DS scale the worse they will do in a given situation; be-it, academic, novel, adaptation to certain medical or physical problems or just in terms of their personality development. Closedness, then has come down to us as a negative attribute with few if any redeeming aspects.

Along this line of reasoning Kaplin and Singer (1963) showed that high DS reduces the sensory acuity and results in reduced self-awareness. So that not only is performance and personality diminished, but also contact and awareness of self.

Rokeach (1960, p. 62) in a similar vein notes that:

"If a person feels strongly threatened or anxious in a given situation, he should above all be motivated to act so that the threat is reduced and the anxiety allayed. It is precisely because he is motivated that the relatively closed individual becomes highly attuned to irrelevant internal and external pressures and, accordingly unable to evaluate information independent of source."

There is, thus, ample evidence that Rokeach's scale consistently differentiates people into the two groups, and that all of the successes he or others have had with the scale are dependent on the negative reactions of the closed individual. It can be said for his scale that it predicts the negative performance of the closed group with some accuracy. Since this research wants to make the opposite prediction: that closed individuals will do well on the chosen tasks, it behoved this researcher to use the strongest instrument with which to make this prediction.

The Rokeach Scale was chosen because it differentiates individuals into cognitive/personality types that have a long experimental and theoretical history in psychology. The

following quote from Rokeach (1960, p. 68) will show how clearly he has conceptualized the underlying questions and issues that direct so much activity in psychology:

"A person will be open to information insofar as possible, and will reject it, screen it out, or alter it insofar as necessary. In other words, no matter how much a person's system closes up to ward off threat and anxiety, it can still serve as a cognitive framework for satisfying the need to know. For the closed mind is subjectively experienced by the person who has it no differently from the way it is experienced by a person with an open mind. In this way the person's belief system may be thought of as a mechanism for having one's cake and eating it, too. One can distort the world and narrow it down to what ever extent necessary, but at the same time, preserve the illusion of understanding it. And if the closed or dogmatic mind is extremely resistant to change, it may be so not only because it allays anxiety but also because it satisfies the need to know."

In summary then, Rokeach addresses himself to the following issues:

- What is meant when we say that an individual is openminded
- What is meant when we say that an individual is closed-minded

--What is the "illusion of understanding"

--What do we mean when we say that an individual is
"resistant to change"

--What is the "need to know"

Rokeach then proceeds to formulate some answers:

--Closedmindedindividuals think they are openminded (have
more illusions about themselves)

--Openminded individuals think they are openminded (have
fewer illusions about themselves)

--Closedmindedindividuals have less of a need to know

--Openminded individuals have more of a need to know

--Closedmindedindividuals are more resistant to change
(their behaviors will tend to stay the same even though
the situation changes)

--Openminded individuals are less resistant to change
(their behaviors will tend to reflect the demands of
the changed situation)

Purpose of This Study

The review of the literature and the other sources cited tend to confirm the observation that closedness is both widespread and is often perceived as a negative behavior. What the review of the literature might very well indicate is a systematic bias wherein experimental situations are chosen because they would in fact produce a negative result. Argyris (1975, p. 475) has described this phenomenon:

"If the experiment is designed well, the choice is free in the sense that the subject makes it, but inevitable in that the experimenter designed the experiment to minimize other choices."

The purpose of this research, then, is to see if individuals who are "closedminded" as measured by previously validated instruments function in a more adaptive (positive) fashion than "openminded" persons when presented with a situation designed to elicit feelings of discomfort and stress.

Hypothesis

The major hypothesis to be tested is that closedmindedness, a behavior traditionally seen as being negative, can be an adaptive and positive response in a certain situation. If this is the case then closedmindedness can be said to be neither positive nor negative, but rather an attribute which is used differently in different situations.

Predictions

- In response to distressing slides, closedminded subjects will view them for a longer period of time than will the openminded subjects.
- In response to written descriptions of hypothetical situations depicting others in need of assistance, openminded subjects will place themselves closer (physically) to the most stressful aspects of the situation and closedminded

subjects will place themselves further from the most upsetting aspects of the situation.

--That on a True-False Test related to viewing both stressful and nonstressful slides, the closedminded subjects will give more correct responses than the openminded subjects.

CHAPTER II

METHOD

Pilot Study

Development of Slide Show. In order to determine if Closedmindedness could be shown to be a positive behavior, a slide show was developed which would depict scenes that ranged from "no discomfort" to "much discomfort." Slides were made of pictures that were found in Life magazine, Horizon, medical publications, art books and other publications. 62 slides were chosen by the experimenter. These slides ranged over many subject areas and discomfort levels. They included slides that depicted the assassination of former Governor George Wallace of Alabama and the birth of a baby to slides that just showed a man walking and a student studying. They were shown to a group of 166 University of Rhode Island undergraduate volunteers, who were enrolled in two separate psychology courses. These students were told that they were going to be shown 62 slides and that they were to indicate whether they found each of the slides to cause "no discomfort," for them, "little discomfort," "moderate discomfort," or "much discomfort." The 10 slides most frequently cited as having "no" or "little discomfort" and the 10 slides cited most frequently as having "moderate" or

"much discomfort," were selected for the main study. (See Appendices A, B and C.)

The slide show was constructed so as to provoke stress in all of the subjects. The term "discomfort" was used because it was felt that discomfort and stress could be seen as conceptually interchangeable and that subjects would be more forthcoming if asked to indicate their degree of discomfort rather than their degree of stress. In a more general way it was hoped that any "negative" stimuli, be they discomforting or stressful, would evoke the desired behavior. The slides were chosen precisely on the basis of whether they did or did not evoke discomfort. The content of the slides was held to be unimportant because we were interested only in their empirical ratings.

Development of Human Assistance Distance Scale. The Human Assistance Distance Scale (HADS) depicts five situations in which subjects can indicate how close they think they would get to the most upsetting aspect of a hypothetical helping situation. The themes of the five situations were: an automobile accident, a strike at a local hospital, a storm devastated town, a town without public service employees and a group of stranded individuals. More specifically all of the scenes were constructed in the following manner: (See Appendix D.)

Scene A

If you were a witness to an automobile accident
which of the following do you think you would be

most likely to do, irrespective of whether you were uncomfortable or not?

- Go and call for help
- Direct oncoming traffic
- Comfort those who hadn't been hurt
- Assist someone to aid the hurt victims
- Directly give aid to the hurt victims

The above example indicates the experimenter's proposed distancing order. It was then necessary to test whether there was agreement between his proposed ordering on the five-point scale and the subject's ordering. The same group of student volunteers, mentioned above, were asked to assign a rank order for each of the five behavioral options within each situation. They were told that they could either agree with the predetermined order or change it depending upon whether or not they believed the ordering accurately reflected the degree of closeness to the most upsetting aspect of the situations. Correlation matrices were run for each of the five situations and the range of agreement between the pre-selected rank order and those indicated by the students went from a low of 2:1 to a high of 6:1. This indicates that there was no change in the order at least 60% of the time, at the lowest level of agreement--to a high of about 80% agreement. Since all of the situations are constructed in a like manner, the behavioral options are matched as far as possible. The statistical procedure tended to confirm the ordering position across all five scenes. It also indicates

that it would be safe to assume that the preselected ordering of behavioral options accurately represents closeness to upsetting aspects of these situations. (See Appendices E and F.)

Main Study-Part I

Subjects. Forty male and forty female undergraduate students from the University of Rhode Island were utilized as subjects for the main study. These 80 subjects were drawn from a pool of 242 students who were given Form E of the Rokeach Dogmatism Scale. All of these students were volunteers and it was understood that if they were to receive extra credit they would have to participate in both parts of the main study. The twenty male and female subjects with the lowest scores on the dogmatism scale, along with the twenty male and female subjects with the highest scores, were selected to participate in the second part of the main study. The eighty subjects were not told why they were selected. The call for volunteers was made early in the semester in the hope that by involving students early it would minimize weighting the study with students who volunteered only because they needed the extra credit.

Volunteers were used rather than employing some other sampling technique, because the goal of this laboratory research is to establish the potential existence of closed-mindedness as a positive behavior. Thus, there will be no attempt to generalize the findings, other than to note their consequences for related areas of psychology.

Procedure. The call for volunteers was a verbal statement presented by the experimenter to a large undergraduate psychology class. It was brief and indicated that the experimenter was conducting a two-phase study and that their instructor had agreed to give extra credit to students who participated. They were told that the first phase would be a group testing session, given that very morning, which would take only about thirty minutes to complete. The second session would come later in the semester and would be an individual testing session given at a time which was convenient for both the experimenter and the subject. They were also told that participation in the first part demanded participation in the second part if they were to receive the extra credit. The volunteers were told that the exact nature of the study could not be told to them at that time, but after they had concluded both phases they would be informed of the exact purpose of the study.

Measures. Form E of Rokeach's Dogmatism Scale was then given to the 242 volunteers. They received the following instructions:

"There are no right or wrong answers to these questions. At this point in the experiment we are interested in how you as individuals answer differently from each other. The specific directions are on your answer sheets. If there are any questions, please ask."

The Rokeach Scale consists of 40 statements that the subjects can either agree with on a three point positive scale or disagree with on a three point negative scale. (See Appendix G for Form E. of the Rokeach Scale.) In order to simplify the scoring of this scale, a constant value of four was added to each score so as to yield a total positive score. All of the subjects used in the second part of the main study were selected to equalize the number of male and female participants and according to their score on the Dogmatism Scale. Each subject was contacted by phone and told that he/she had been selected to participate in the second phase of the study. If they asked why, they were told "that it was because of how they scored on part one." No further information was given to the subjects other than time and place for phase two. All of the subjects were tested by the same experimenter and in the same setting.

To arrange for the 20 most openminded males and for the 20 most openminded females, it was necessary to contact 54 individuals. Their score ranged from a low of 75 to a high of 106. The Mean score for the openminded males was 112.5 and their standard deviation was 11.4. The Mean score for the openminded females was 108.65 and their standard deviation was 9.7. The 40 most closedminded subjects had scores that ranged from a high of 214 to a low of 160, and it was necessary to contact 60 individuals to achieve the desired number of 20 males and 20 females. The Mean score for the

closedminded males was 187.45 and their standard deviation was 12.9. The Mean score for the closedminded females was 180.15 and their standard deviation was 12.57.

The cooperation level was about the same for each group but the point spread between the lowest and highest scores within a group was greater for the closedminded group. At the point of selection it was not known precisely whether this point spread within groups effected the trait homogeneity of the comparison groups. But, since the highest score in the openminded group had a score of 125 and the lowest scorer in the closedminded group had a score of 162 and there is a significant distance between these two scores it is felt that trait homogeneity was established, in that the groups did not overlap.

Main Study Part II

Slide Show and True/False Test. All of the subjects prior to receiving the slide show were read the following instructions:

"You are going to be shown some slides. After you have seen all of the slides you will be asked some questions about them. When you have completed viewing a slide push the button on the remote control device. Do not push the button again until you are instructed to."

After the instructions were read there was a rehearsal and a practice trial with the remote control. It was emphasized,

once again, that they must wait for instructions to push the remote button before the next slide would be presented. This presentation consisted of the 20 slides which had been prejudged as to the degree of discomfort they evoked. Ten of these slides had been judged to evoke "little" or "no" discomfort and the other 10 slides had been found to evoke "moderate" or "much" discomfort. The slides were alternated starting with a slide which belonged to the little/no group and then one belonging to the moderate/much group. This procedure yielded two time measures: total viewing time in seconds and a combined viewing time in seconds for each of the two different sets of slides.

Upon completion of the slide show each subject was asked 5 factual questions about the content of the slides. This yielded a score based on the number of correct responses each subject came up with.

Human Assistance Distance Scale (HADS). The subjects also received the HADS which is a device designed to elicit how close, in terms of direct physical contact, individuals said they would theoretically place themselves with regard to people who need assistance. The measure was derived by summing each of the 5 responses and then determining whether a subject had indicated a preference for being close or far away in terms of physical contact. Positions one and two were both taken to indicate a preference for being "furthest away." Positions four and five were understood to indicate

a preference for "nearest," and position three was understood to be an indecisive or neutral response between the two clearer response possibilities.

Order of Presentation. It was not known whether giving the slide show first would effect the response style on the HADS, or giving the HADS would effect the responses on the slide show. To minimize such a consequence the different tests were alternated for sub-groups of the subjects which were matched on the basis of male/female and open/closed. This procedure would then equalize sequential conditions for all of the subjects.

Subject Assessment of Experimental Experience. When a subject had finished all of Part II of the study he/she was handed a form which assessed their experience as a subject in a psychological experiment. This form was not shown to the experimenter, but was hand delivered by the subject to the Psychology Department. The subject was told that no portion of what he/she said would be shared with the experimenter and that all of his/her comments would be treated confidentially. (See Appendices K and L.)

Statistical Treatment

Slide Show. The data from the slide show were analyzed using a 2 x 2 x 2 analysis of variance used. The specific model of the analysis of variance used, was the fixed effects

model. As Edwards (1964, p. 301) notes:

"When the treatments, or levels of factors, are not randomly selected, the analysis of variance model is referred to as Model I or as a fixed effects model. This is important because, in using this model, you cannot generalize your findings beyond the levels or combinations of your particular study."

Since this study is primarily concerned with establishing the theoretical existence of closedmindedness as a positive behavior, no further generalization is needed.

Therefore, a test for the homogeneity of variance was run between the closed male and female. Samples and a score of 1.77 indicated that they were homogeneous at the .05 level of significance. The same test was run for the open male and female groups and their score of .98 indicated that they were homogeneous at the .01 level of significance. Given these scores it is reasonable to proceed with the analysis of variance because the assumption of homogeneity has not been violated.

HADS and True/False Test. The data from these tests were analyzed using a chi square. This statistic is used when the data consist of frequencies in discrete categories and is used to determine whether the differences between these groups are significant. Siegal (1956, p. 110) points out that:

"When the chi square test is used there is usually no clear

alternative and thus the exact power of the test is difficult to compute."

Setting. A windowless room on the main campus of the University of Rhode Island was used for Phase II of the experiment. The subjects sat on a student chair which afforded them the space to write. The chair faced a blank wall upon which the slides were projected. Embedded into the wall was a photo-sensitive cell which, though visible, did not provoke any comments or questions. The only other furniture in the room was a table upon which the slide projector was mounted along with the timing machinery. The experimenter also sat here. There was a dimmer control on the lights and during the slide presentation the darkness level was such that the photo-sensitive cell was not disturbed. Since the experiment was run during the day, it was necessary to use a room which was located in a very quiet part of the building so as to cut down on any extraneous noise.

Apparatus. A Kodak Carousel Auto-Focus Number 760H with a remote control device was used for the slide show. The slides were projected on a plain white wall. The size of the projected slide was approximately three feet in height and in the lower right hand corner of the image was a photo-sensitive cell connected to the timer. The photo-sensitive cell was fixed so that at the onset of a slide (which was controlled by the subject), a Lafayette Clock Counter was

started. The subject through the use of a remote control switch would disengage the timer by removing the slide from view. The experimenter then recorded the length of time the slide was viewed to the nearest .01 second, he then reset the timer and directed the subject to produce the next slide.

CHAPTER III

RESULTS

Slide Show. The slide show was developed to see if the closedminded group would, in fact, behave contrary to conventional notions. It was predicted that the closedminded group would look longer at the slides in general and specifically would look longer at the high stress slides. It was also predicted that the openminded group would look longer at the low stress slides and would have an overall shorter viewing time for all of the slides. Since the experimental literature did not indicate any differences for open and closedmindedness in terms of sex identity, no predictions were made along this parameter.

TABLE 1

Total Viewing Time For Males/Females
By Seconds Viewed*

	<u>Open</u>		<u>Closed</u>	
	High Stress	Low Stress	High Stress	Low Stress
Male	1295.41	1533.42	2172.14	2335.88
Female	<u>1338.16</u>	<u>1496.82</u>	<u>1440.02</u>	<u>1473.35</u>
	2633.57	3030.24	3612.16	3809.23
Total	5663.81		7421.39	

*Note Appendix I for Table showing Means and Standard Deviations.

Basic Scores. The scoring for the slide show is always given in seconds measured out to the hundredth of a second. (Table 1.)

--The closed group viewed all slides for 7421.39 seconds as compared to 5663.81 seconds for the open group.

--The closed group viewed the low stress slides for 3809.23 seconds as compared to 3612.16 seconds for the high stress slides.

--The open group viewed the low stress slides for 3030.24 seconds whereas they viewed the high stress slides for 2633.57 seconds. The basic scores from the slide show were subjected to a 2 x 2 x 2 analysis of variance. (Table 2.)

Closed vs. Open. When viewing time for all of the slides is looked at as a function of whether the subjects belong to the closed group or to the open group, a significant difference is found between their respective viewing times:

[$F(1,159)=7.60$ this $p. < .05$]. When a comparison is made between their respective means, it was shown that the closed subjects viewed all of the slides for a significantly longer amount of time than did the open subjects.

Low Stress Slides vs. High Stress Slides. An $F(1,152)=.84$, which is not significant, indicates that when the two different sets of slides are looked at, as an independent factor, they do not produce any significant differences in the subjects.

Male vs. Female. When viewing time for all of the slides is looked at as a function of whether the subjects are males or females, a significant differences is found between their

respective viewing times: [$F(1,152)=6.22$ is $p. < .05$]. When a comparison is made between their respective means, it was found that the male subjects viewed all of the slides for a significantly longer amount of time than did the female subjects.

TABLE 2

Analysis of Variance for the Slide Show

Source	SS	d.f.	MS	F	P
Open/Closed	19294.00	1	19294.00	7.60*	< .05
Low/High	2122.60	1	2122.60	.84	n.s.
Male/Female	15780.70	1	15780.70	6.22*	< .05
OC X LH	262.66	1	262.66	.10	n.s.
OC X MF	16100.16	1	16100.16	6.34*	< .05
LH X MF	288.91	1	288.91	.11	n.s.
OC X MF X LH	106.42	1	106.42	.64	n.s.
Error (within treatments)	<u>385802.05</u>	<u>152</u>	2538.17		
Total	439757.50	159			

*Denotes significance
n.s.=not significant

Closed vs. Open/Male vs. Female. When viewing time is looked at in terms of the possible female interaction a significant difference is found between their respective viewing times: $F(1,152)=6.34$ and this score is significant at the .05 level of significance. It has already been shown that the closedminded subjects had a significantly longer viewing time and that in this group the males contributed more than the females. Given this finding then it is possible to conclude

that closedmindedness in and of itself is not significant. In this study being both male and closedminded is significant. That given this stimulus situation (slide show), closed males differentiate themselves significantly from closed females, open males and open females.

The other interaction effects, open vs. closed over high stress slides vs. low stress slides, were not significant, $F(1,152)=.10$. High stress slides vs. low stress slides over male vs. female, was also not significant, $F(1,152)=.11$. This indicates that for this segment of the study the level of stress in the slides did not contribute to the different time score.

Slide Show Summary. The prediction that the closedminded group would look longer at all of the slides was supported. It had also been predicted that the closed group would look longer at the high stress slides and this they did not do. The open group did view the low stress slides for a longer amount of time, and this was also predicted. The statistical analysis indicated that being a closedminded male contributed more to the outcome of the results than did any other possible combination of factors. In summary then it can be said that the major prediction concerning closedness vs. openness was born out.

Human Assistance Distance Scale (HADS). It was hypothesized that the HADS would give the subjects a chance to

indicate how close they would place themselves to the most upsetting aspect of a helping situation. It was predicted that the openminded group would place themselves closer to the more stressful aspects of the situation and that the closedminded group would be more moderate in their behavioral choices. This part of the study was designed to contrast the actual behavior on the slide show with the reported behavior on the HADS.

TABLE 3

Human Assistance Distance Scale

By Closedminded and Openminded Groups

	<u>Most Stressful Aspect</u>		
	Furthest	Middle	Nearest
Openminded	40	40	120
Closedminded	58	35	107
Openminded males	14	17	69
Openminded females	26	23	51
Closedminded males	29	14	57
Closedminded females	29	21	50

Basic Scores. The scoring for the HADS is based on the number of responses given by the subjects for the different points on the five scales. The first two options on the scale are counted together and are called, "Furthest." The middle point on all of the scales is called, "Middle," and the last two points combined are called, "Nearest."

- The openminded group indicated that they would be closest 120 vs. 107 for the closedminded group.
- The openminded males indicated that they would be closest 69 times vs. 51 times for open females, 57 times for closed males and 50 times for closed females. (Note Table 3.)

Statistical Treatment. The basic scores from the HADS were analyzed for significance by means of a chi square. (Note Table 4.)

TABLE 4

Human Assistance Distance Scale

As Analyzed for Significance Using the χ^2 **

	χ^2	d.f	P
Total Open vs. Total Closed	4.38	2	n.s.
Open Males vs. Closed Males	6.68	2	<.05*
Open Females vs. Closed Females	.27	2	n.s.
Open Males vs. Open Females	7.20	2	<.05*
Closed Males vs. Closed Females	1.86	2	n.s.
Closed Males vs. Open Females	2.68	2	n.s.
Open Males vs. Closed Females	8.42	2	<.05*

*Denotes significance

n.s.=not significant

**Note Appendix J for Actual Frequencies

Open vs. Closed. When closedness to the most upsetting aspect of the situation is looked at for all of the subjects, the open and closed groups do not differ significantly:

$$\chi^2 = 4.38.$$

Open Males vs. All Other Groups. Open males chose the more stressful position over closed males, $\chi^2 = 6.68$ and this difference is significant at the .05 level. Open males vs. open female resulted in a significant difference with a chi square of 7.20 and open males vs. closed females resulted in a score of 8.42, which is significant beyond the .05 level. Closed females scored in a like manner with both the open males and females.

HADS Summary. The prediction that the open group would choose the most stressful aspect of the situations was not statistically supported. It should be noted that the raw scores do indicate a strong trend in the predicted direction. Within the open group, the open males did behave in the predicted way. It was the open females who responded to the test situation in a contrary way. In summary then it can be said that the predictions concerning closeness to the most upsetting aspects of these helping situations were partially born out.

TABLE 5
True/False Test

Raw Data

	Correct Responses	Incorrect Responses
Total Closed	139	61
Total Open	119	81
Closed Males	72	28
Open Males	66	34
Closed Females	67	33
Open Females	53	47

True/False Test (TFT). It was hypothesized that the TFT would indicate how well the subjects attended to the content of the slides; since one-half of the slides were stressful it was felt that if no incentive was given to prolong viewing time, many of the subjects would view the slides for the shortest period of time that they could. It was also felt that since so much of the research which has utilized the Rokeach Scale has included learning situations as their dependent variable that this test would allow for a dovetailing with some of this previous research. It was predicted that the closedminded subjects would achieve a higher number of correct responses than the openminded subjects. No predictions were made concerning sex differences or response levels to specific slides.

Basic Scores. The scoring for the TFT is based on the number of correct responses given by each group. (Note Table 5.) The entire closed group scored 139 correct responses as compared to only 119 correct responses for the open group. Closed males had 72 correct responses as compared to 66 for the open males and closed females had 67 correct responses as against only 53 for the open females. The basic score for TFT was analyzed for significance by means of a chi-square. (See Table 6.)

TABLE 6

True/False Test

As Analyzed For Significance Using the χ^2

	d.f.	χ^2	P
Total Closed vs. Total Open	1	4.38	<.05*
Closed Males vs. Open Males	1	.84	n.s.
Closed Females vs. Open Females	1	4.10	<.05*
Open Males vs. Open Females	1	3.50	n.s.
Closed Males vs. Closed Females	1	.58	n.s.
Open Males vs. Closed Females	1	.02	n.s.
Closed Males vs. Open Females	1	7.70	<.01*

*Denotes significance

n.s.=not significant

Open vs. Closed. All of the closed subjects had a significantly higher number of correct responses than did the open subjects: ($\chi^2 = 4.38$ and is significant beyond the .05 level.) The difference in the scores between closed and open males was negligible, (.84), whereas the score between closed females and open females indicated that the closed female group scored significantly more correct responses ($\chi^2 = 4.10$ and is significant beyond the .05 level). Closed males were most differentiated from open females with a chi-square of 7.70 and this is significant beyond the .01 level.

TFT Summary. The general prediction that closedminded subjects would do better on the TFT was supported. It can be said that the designation of closedmindedness, either for males or females (but most especially for females) contributed to a significantly better performance on the TFT. Being closed or open is less of a factor if you are male;

and more of a factor if you are female. On this test open and closed males behaved in a similar fashion while open and closed females behaved in a dissimilar way.

Summary of all the Findings. On the slide show there was partial support for the prediction that the closedminded subjects would view the slides for a longer period of time. While the closed males did view them for a longer period, the closed females did not. The classification of the slides was not found to be a factor. On the HADS there was also partial support for the predictions; the open males placed themselves in the most upsetting aspect of the different situations. The open females did not. Finally, on the TFT, the closed group did produce more correct answers than did the open group. Overall the outcome on the different aspects of the study tended to be a function of sex and openness, with different combinations of the two dominating the results.

CHAPTER IV

DISCUSSION

Closedmindedness vs. Openmindedness

In general past research in this area has noted that closedmindedness is a negative or defensive style of behaving. Closedmindedness was understood to be maladaptive and a less effective way of responding to either specific situations or life in general. While it was shown that there are either anecdotal or theoretical formulations concerning the efficacy (positiveness) of closedmindedness, there is little or no empirical evidence to support these claims.

In the introduction it was noted that openness has come to be a desired behavior. That irrespective of the behavioral demands or the called for real behavioral responses needed in a given situation, individuals have come to believe that the correct response or verbal response will suffice. Given that so much of what passes for life is only verbal comment or opinion, without any demand for a 'real' or actual behavior, it is not surprising that given verbal options people respond in terms of what they consider to be the correct open response. In the abstract there is no objection to individuals thinking and speaking of themselves in the

most positive or adaptive way. The problem arises when individuals think they are positive when in fact they are behaviorally negative (unadaptive). Right thinking and the correct intentions are not psychologically sound substitutes for the best possible response in a given situation.

The major thrust, then, of this research was to establish the possibility that closedmindedness is not by definition a negative or maladaptive behavioral response style, and that people who are classified as open will respond verbally in a giving and positive way, but will behave in a "closed" or less effective way when in a stressful situation.

Slide Show. The slide show was developed to test the prediction that individuals who score as closedminded on Rokeach's scale would look longer at the stressful slides in particular and would also look longer at all of the slides. It was also predicted that the openminded individuals would look longer at the less stressful slides and would also look at all the slides for a shorter period of time. The prediction that the closedminded group would look longer at all slides was supported, but they did not look longer at the high stress slides. Males viewed all of the slides for a longer period of time than females and closed males in particular viewed the slides much longer than any other group. Both the open males and females viewed the low stress slides for a longer period of time than the closed males or females.

The literature suggests that closedminded persons are supposed to try to avoid stressful situations. There is also evidence that they avoid or reject the content of situations. Yet in this study they viewed the slides for a longer period of time. Based on this result we can then say, that visual stressful stimuli do not necessarily produce a defensive withdrawal on the part of closedminded subjects. A possible explanation of their behavior could hypothesize that this group of closedminded subjects wanted to do better on the subsequent True/False test. But this explanation is in direct empirical contradiction of the closed/open research, which emphatically states that closed individuals are more concerned (motivated) with protecting themselves against anxiety-producing stimuli than in doing well. It is possible that, other things being equal, closed individuals are more willing to learn or stay with a situation longer under conditions where the stress is high, too high for openminded individuals.

These findings present another dilemma that is not infrequently found in experiments where stress is the unconditioned stimulus. Since the closed males viewed the low stress slides for a longer period of time than the high stress slides, it is possible to say that the slides may have been too stressful and that they actually suppressed differences between the groups. On the other hand it is possible to say that for the closed males the tolerance for stress carried over into their viewing time on the low stress slides. Given this view we can speculate that the slide show became undifferentiated and that

the separation into high and low stress slides is meaningless in that all of the slides were equally stressful. In furtherance of this argument is the fact that all of the subjects were viewing these slides with the knowledge that they would be tested on what they saw. There is also the added stress of just being in an experimental situation, so that there are several potential sources of stress in the situation.

True/False Test. The True/False Test was provided as a way to induce the maximum viewing time for the slide show. It also becomes an independent measure of how well the different groups attended to and learned the content of the slides. It was predicted that the closedminded group would score more correct responses on this test than the openminded group.

The general prediction that closedmindedness would positively influence the number of correct responses given was born out. This prediction stands in the face of the empirical notion that openmindedness is a general attribute which is demonstrable in learning situations. The added factor of stress directs us to the conclusion that possibly closedmindedness must be understood as an interaction between that classification and the qualities of the stimulus situation.

Female vs. Male. The females did better than the males on the True/False test. There is no ready answer or explanation for their superior performance. Closed males viewed

the slides for a longer period of time but the closed females scored more correct responses. It may be that closed males as part of their self-definition have to stay with (i.e., look at) stressful situations longer than others as a proof of something. Their added time did increase their knowledge of the slides.

Human Assistance Distance Scale. In the main phase of the study it was predicted that the openminded subjects would place themselves closer to the more upsetting aspects of the five (5) situations than the closedminded subjects. This prediction was based on the assumption that openmindedness is in some ways a "state of mind" rather than a faithful rendering of what their actual behavior would be. Given a situation that elicits thoughts rather than behavior it should produce "correct" thoughtful responses, i.e., more helpful responses. The statements that individuals make or the thoughts that they have, carry for them little or no consequence other than what they or others will think of them. This aspect of existence stands in greatest opposition to "real" behaviors. It is in this grey area between the private thoughts of individuals and their verbal representations and how they will actually behave in a real situation that we find the greatest disparities. It was predicted in this study that the consistencies that individuals strive for will be found between their responses on Rokeach's scale and the HADS (and the inconsistencies will be found on the slide show and the True/False Test). Since the subjects were

differentiated on a scale (Rokeach) which can be said to be asking them to rate themselves as how open they are to other individuals, it was predicted that, since this is a verbal response rather than a "real" test of how they would behave, their responses should remain consistent with their classification on the Rokeach scale.

The open males projected themselves as being closest to the most upsetting aspect of the helping situation. The open females did not; so that the prediction was only partially sustained. The responses of the closed group seem to indicate a conservatism or more realistic assessment of their abilities or their inclination to help. In an interesting way, these responses tend to conform to the political metaphors that people use to identify themselves. The open or more "liberal" subjects perceive helping as a necessity for themselves and therefore project themselves as helping as much as they can. The closed or more conservative group sees helping as something one does for oneself so they are more parsimonious with their projections in terms of their own giving. I am not trying to make a case for political prediction based on closed/open, but rather to emphasize the notion of verbal responses as metaphors about life which are not identical with "real" actions.

Male vs. Female. The females scored almost identically on the HADS, regardless of whether they were open or closed. The situations were initially rated for distance, but were

not rated in terms of sex stereotypic behavior. It is possible that in the scenes depicted, females perceived themselves performing more distant tasks independent of how upsetting the different tasks were set up to be. Therefore, any notion of helpfulness would be secondary to sex-appropriate behavior. But it is this very same notion of sex stereotypic response that may shape the open males in their choice of the most upsetting point of helping. The findings suggest that if this kind of instrument is to be effective, sex/role expectations should be built in as behavior options.

Limitations of the Methodology

Complexity as a Dual Phenomenon. A methodological weakness within the slide show was that individual slides in both the low stress group and in the high stress group were not matched for visual complexity. This kind of complexity is understood to be a function of the number of visual cues that subjects would have to attend to before they would feel comfortable in the knowledge that they could adequately answer factual questions concerning the slide. Therefore, independent of the stress level of the slide, different visual presentations demand different amounts of viewing time. Therefore, in the pilot study, the slides should have been matched for viewing time, and the slides selected should have had equal viewing times independent of their rated level of stress.

In the actual testing situation it was noted that several of the slides which were in fact visually simple, seemed to evoke longer viewing times. It almost appeared as if their very simplicity evoked more "curiosity." In a sense they were so plain as to have no focus. So that given the instructions which stated that questions would be asked, it appears that it became difficult for the subjects to quickly ascertain what was "meant" by the slide. In a sense then complexity presents itself as a paradoxical problem in that there can be too many cues or too few cues. Given that length of viewing time is a crucial measure, it then becomes imperative that complexity not be left to chance and that there must be some control for its effects in future work.

Summary of Findings

In general the Closed/Open groups behaved in the predicted manner. On the slide show the closed males viewed the slides for a longer period of time. On the HADS the open males saw themselves as being helpful in the more upsetting aspects of the situations. The closed group gave more correct responses on the True/False test than did the open group. While these findings did not sustain the predictions fully, they did give credence to the idea that closedmindedness as empirically understood has been misrepresented as an overly negative behavior.

The mixed findings also point up the importance of male/female differences. By now there is little argument with the

idea that males and females are culturally shaped and that how they will respond in given situations, and what they expect of themselves in given situations has a lot to do with culturally induced sets. The literature indicates a history of research wherein no one tried to find closedmindedness to be a positive response style so that it is not surprising that they did not try to find sexual differences either.

Maccoby and Jacklin (1973, p. 176) tested the notion that under stress girls tended to freeze (were unable to respond at all) more than boys. Their results concluded: "a finding directly contrary to the hypothesis that girls are more likely to become immobile under stress." They go on to note (p. 189) in a review of the literature concerning sex differences vis-a-vis stress and anxiety situation, that:

"Since boys are less willing to admit fears or anxious feelings (have higher scores on Lie and Defensiveness Scales), the sex differences on anxiety scales may be due to this factor."

The implication from both the Maccoby and Jacklin study and review and from this study, is that, actual experimentation in "real" situations tends to produce contrary findings with regard to paper and pencil tests. That the verbal responses of individuals may be more reflective of social stereotypes than their actual behavior.

Future Research

This research leaves many questions unanswered. A more detailed understanding of the interaction between response style and situation has to be developed. The stigma of closedmindedness has to be overcome so that individuals who possess this style will not respond to questionnaires in an open, and for them misleading, way. There is also a need to study individuals in real life situations where people perform upsetting tasks to find out what allows them to function in these situations. The research should really go backwards in that we should first find the individuals who are effective in certain situations and then we should see if they are closed or open.

In the helping professions we should study those individuals who can benefit from a closed style and those who can not. Researchers have tended to over-generalize their findings, so that a negative attribute in an experimental situation becomes a predictive cliché vis-a-vis that attribute and real life situations.

BIBLIOGRAPHY

- ARGYRIS, C. Dangers in applying results from experimental social psychology. American Psychologist, 1974, 54, 464-485.
- BARBER B. Resistance by scientists to scientific discovery. Science, 1961, 134, 596-602.
- BECKER, E. The Denial of Death. New York: The Free Press, 1973.
- BERNARD, VIOLA W., OTTENBERG, P. and REDL, F. Dehumanization. In Sanford, N., and Comstock, C. (ed.), Sanctions For Evil. Boston: Beacon Press, 1971.
- BOWERS, K. S. Situationism in psychology. Psychological Review, 1973, 80, 307-336.
- CHRISTENSEN, C. M. A note on "Dogmatism and Learning." Journal of Abnormal and Social Psychology, 1963, 66, 75-76.
- COSTIN, F. Dogmatism and learning. Journal of Educational Research, 1965, 59, 186-188.
- EDWARDS, A. L. Experimental Design In Psychological Research. New York: Holt, Rinehart and Winston, 1964.
- EHRLICH, H. J. Dogmatism and intellectual change. Unpublished Master's Thesis, Ohio State University, 1955.
- EHRLICH, H. J. Dogmatism and learning. Journal of Abnormal and Social Psychology, 1961, 62, 148-149 (a).
- EHRLICH, H. J. Dogmatism and learning. A five year follow-up. Psychological Reports, 1961, 9, 283-286 (b).
- EHRLICH, H. J. and BAUER, M. L. The correlates of dogmatism and flexibility in psychiatric hospitalization. Journal of Consulting Psychology, 1966, 1, 283-292.
- FRUMKIN, R. M. Dogmatism, social class, values and academic Achievement in sociology. Journal of Educational Sociology, 1961, 34, 398-403.

- HALLENBECK, P. N. and LUNDSTEDT, S. Some relations between dogmatism, denial, and depression. Journal of Social Psychology, 1966, 70, 53-58.
- KAPLAN, M. F. and SINGER, E. Dogmatism and sensory alienation: An empirical investigation. Journal of Consulting Psychology, 1963, 27, 486-491.
- LAZARUS, R. S. Psychological Stress and the Coping Process. New York: McGraw-Hill Book Company, 1966.
- MACCOBY, E. E. and JACKLIN, C. N. The Psychology of Sex Differences. Stanford: Stanford University Press, 1974.
- MARCUSE, H. Eros and Civilization. New York: Vintage Books, 1955.
- RANK, O. Beyond Psychology. New York: Dover Publications, Inc., 1941.
- ROKEACH, M. The Open And Closed Mind. New York: Basic Book, Inc., 1960.
- SANFORD, N. and COMSTOCK, C. Sanctions For Evil. In Sanford N., and Comstock, C. (ed.), Sanctions For Evil. Boston: Beacon Press, 1971.
- SIEGEL, S. Nonparametric Statistics. New York: McGraw-Hill Book Company, 1956.
- WACHTEL, P. L. Cognitive style and style of adaptation. Perceptual and Motor Skills, 1972, 35, 779-785.
- ZAGONA, S. U. and ZURCHER, L. A. The relationship of verbal ability and other cognitive variables to the open-closed cognitive dimension. Journal of Psychology, 1965, 60, 213-219.

APPENDIX A

SLIDE SHOW PERCENTS

Percent who viewed
these slides with

No

or

Little Discomfort

Description of Slides

(1)	99.4%	Man and a woman
(2)	98.8%	Hippie marriage
(3)	98.8%	Abstract painting by Leger
(4)	96.6%	Man walking
(5)	95.8%	Newborn with two nurses
(6)	95.7%	West Point Cadets
(7)	95.6%	Student studying
(8)	93.8%	Head of a bird
(9)	91.3%	Young man staring
(10)	91.0%	Women on knees banging ash cans

Percent who viewed
these slides with

Moderate

To

Much Discomfort

Description of Slides

(11)	93.4%	Person Burning
(12)	88.5%	Burned children running down a road in Vietnam
(13)	84.2%	Hand with index finger missing
(14)	83.8%	Deformed legs
(15)	83.7%	Woman having a baby
(16)	81.8%	Infected backside
(17)	77.7%	Gnarled hands
(18)	77.6%	Dead man lying in snow
(19)	75.9%	Back view of diseased body
(20)	69.3%	Attempted assassination of Governor Wallace

APPENDIX B

SLIDE SHOW REFERENCES

- (1) Man and a woman. Horizon, 1972, 14, #4, p. 49.
- (2) Hippie marriage. Horizon, 1968, 10, #2, p. 8.
- (3) Abstract painting by Leger. Horizon, 1972, 14, #4, p. 14.
- (4) Man walking. Horizon, 1972, 14, #4, p. 4.
- (5) Newborn with two nurses. Life Magazine, 1971, 71, #6, p. 22.
- (6) West Point Cadets. Life Magazine, 1972, 73, #15, p. 37.
- (7) Student studying. Horizon, 1967, 9, #1, p. 59.
- (8) Head of a bird. Life Magazine, 1971, 71, #8, p. 28.
- (9) Of unknown origin.
- (10) Of unknown origin.
- (11) Person burning. Life Magazine, 1955, 39, #23, p. 66.
- (12) Burned children running down a road in Vietnam. Life Magazine, 1972, 73, #25, p. 54.
- (13) Hand with index finger missing. Gibson, H. L. Clinical Photography: A Kodak Data Book. New York: Kodak Medical Publication, 1970, p. 57.
- (14) Deformed legs. Gibson, H. L. Clinical Photography: A Kodak Data Book. New York: Kodak Medical Publication, 1970, p. 65.
- (15) Woman having a baby. Life Magazine, 1971, 71, #21, p. 50.
- (16) Infected backside. Gibson, H. L. Clinical Photography: A Kodak Data Book. New York: Kodak Medical Publication, 1970, p. 16.
- (17) Gnarled hands. Gibson, H. L. Clinical Photography: A Kodak Data Book. New York: Kodak Medical Publication, 1970, p. 98.

- (18) Dead man lying in snow. Life Magazine, 1972, 72, #6,
p. 8.
- (19) Back view of diseased body. Gibson, H. L. Clinical
Photography: A Kodak Data Book. New York: Kodak
Medical Publication, 1970, p. 81.
- (20) Of unknown origin.

APPENDIX C

Development of the Slide Show

You are going to see a number of slides, each slide will be seen for several seconds. I want you to note the degree of discomfort you feel upon viewing each slide.

Slide
Number

	No Discomfort	Very Little Discomfort	Moderate Discomfort	Much Discomfort
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
12.	_____	_____	_____	_____
13.	_____	_____	_____	_____
14.	_____	_____	_____	_____
15.	_____	_____	_____	_____
16.	_____	_____	_____	_____

Slide
Number

No Discomfort	Very Little Discomfort	Moderate Discomfort	Much Discomfort
------------------	------------------------------	------------------------	--------------------

17.	_____	_____	_____	_____
18.	_____	_____	_____	_____
19.	_____	_____	_____	_____
20.	_____	_____	_____	_____
21.	_____	_____	_____	_____
22.	_____	_____	_____	_____
23.	_____	_____	_____	_____
24.	_____	_____	_____	_____
25.	_____	_____	_____	_____
26.	_____	_____	_____	_____
27.	_____	_____	_____	_____
28.	_____	_____	_____	_____
29.	_____	_____	_____	_____
30.	_____	_____	_____	_____
31.	_____	_____	_____	_____
32.	_____	_____	_____	_____
33.	_____	_____	_____	_____
34.	_____	_____	_____	_____
35.	_____	_____	_____	_____
36.	_____	_____	_____	_____
37.	_____	_____	_____	_____
38.	_____	_____	_____	_____
39.	_____	_____	_____	_____
40.	_____	_____	_____	_____

Slide
Number

No
Discomfort

Very
Little
Discomfort

Moderate
Discomfort

Much
Discomfort

41.	_____	_____	_____	_____
42.	_____	_____	_____	_____
43.	_____	_____	_____	_____
44.	_____	_____	_____	_____
45.	_____	_____	_____	_____
46.	_____	_____	_____	_____
47.	_____	_____	_____	_____
48.	_____	_____	_____	_____
49.	_____	_____	_____	_____
50.	_____	_____	_____	_____
51.	_____	_____	_____	_____
52.	_____	_____	_____	_____
53.	_____	_____	_____	_____
54.	_____	_____	_____	_____
55.	_____	_____	_____	_____
56.	_____	_____	_____	_____
57.	_____	_____	_____	_____
58.	_____	_____	_____	_____
59.	_____	_____	_____	_____
60.	_____	_____	_____	_____
61.	_____	_____	_____	_____
62.	_____	_____	_____	_____

APPENDIX D

Development of the HADS

- A. If you were a witness to an automobile accident which of the following do you think you would be able to do, irrespective of whether you were uncomfortable or not?
- ☐ 1. Go and call for help
 - ☐ 2. Direct oncoming traffic
 - ☐ 3. Comfort those who hadn't been hurt
 - ☐ 4. Assist someone to aid the hurt victims
 - ☐ 5. Directly give aid to the hurt victims
- B. If there was a strike at your local hospital and you volunteered to help, which of the following do you think you would be able to do, irrespective of whether you were comfortable or not?
- ☐ 1. Answer the information phone
 - ☐ 2. Assist with meals and other such chores
 - ☐ 3. Deal with family contacts through the social work office
 - ☐ 4. Assist either a doctor or a nurse in direct service
 - ☐ 5. Directly give assistance to patients either in the emergency room or throughout the hospital
- C. If you lived in a town which was being devastated by a storm which of the following would you be able to do, irrespective of whether you were uncomfortable or not?
- ☐ 1. Man the telephone system
 - ☐ 2. Assist with meals and other such chores
 - ☐ 3. Deal with families and any special needs they might have
 - ☐ 4. Assist those who bring in new arrivals who may have been hurt by the storm
 - ☐ 5. Directly go to the assistance of those who have been injured by the storm
- D. If you lived in a town in which there wasn't any money for public service jobs and each individual had to perform one such task--which of the following would you be able to do, irrespective of whether you were uncomfortable or not?
- ☐ 1. Man the telephone system
 - ☐ 2. Be a school crossing guard
 - ☐ 3. Deal with individuals who have inquiries or complaints about town services
 - ☐ 4. Belong to the volunteer Fire or Police service
 - ☐ 5. To drive the emergency ambulance and to administer direct first aid

E. If you were with a group of individuals who were stranded in a remote area and each of you would have to perform a task that was new for you--which of the following would you be able to do irrespective of whether you were comfortable or not?

- ☐ 1. Man the emergency transmitter
- ☐ 2. Do general chores such as prepare meals, gather firewood, etc.
- ☐ 3. Comfort those who were upset
- ☐ 4. Assist whoever was attending to those who were injured
- ☐ 5. Directly help those who were injured

APPENDIX E

Correlation Matrix

Correlation A

	Var. 1	Var. 2	Var. 3	Var. 4
Var. 1				
Var. 2	.0637			
Var. 3	.0034(-)	.0920		
Var. 4	.2828(-)	.5085(-)	.1606(-)	
Var. 5	.3814(-)	.5708(-)	.2196(-)	.3365

Correlation B

	Var. 7	Var. 8	Var. 9	Var. 10	Var. 11
Var. 7					
Var. 8	.1047				
Var. 9	.0067(-)	.0709(-)			
Var. 10	.5263(-)	.3341(-)	.0335(-)		
Var. 11	.5426(-)	.3236(-)	.0869(-)	.4407	
Var. 12	.0143(-)	.0016(-)	.0649(-)	.0174	.0209

Correlation C

	Var. 13	Var. 14	Var. 15	Var. 16	Var. 17
Var. 13					
Var. 14	.2181				
Var. 15	.0144(-)	.0442(-)			
Var. 16	.4976(-)	.3288(-)	.0573(-)		
Var. 17	.6962(-)	.4876(-)	.0140(-)	.3912	
Var. 18	.0662(-)	.0054(-)	.0574(-)	.0299	.0478

Correlation D

	Var. 19	Var. 20	Var. 21	Var. 22	Var. 23
Var. 19					
Var. 20	.0615				
Var. 21	.0872(-)	.0508(-)			
Var. 22	.3162(-)	.3027(-)	.0221(-)		
Var. 23	.3186(-)	.2221(-)	.0448(-)	.1239	
Var. 24	.0995(-)	.0927(-)	.0157(-)	.0886	.0360

Correlation E

	Var. 25	Var. 26	Var. 27	Var. 28	Var. 29
Var. 25					
Var. 26	.0484				
Var. 27	.0873(-)	.0041(-)			
Var. 28	.2827(-)	.2300(-)	.0473(-)		
Var. 29	.3600(-)	.4327(-)	.0473(-)	.1833	
Var. 30	.0186(-)	.0079	.0727(-)	.0172(-)	.0326

APPENDIX F

HADS Questionnaire

It is necessary that you answer each of the following:
choose only one answer and place an X on the line next to
your choice.

- A. If you were a witness to an automobile accident which
of the following do you think you would be most likely
to do, irrespective of whether you were uncomfortable
or not?
- ☐ Go and call for help
 - ☐ Direct oncoming traffic
 - ☐ Comfort those who hadn't been hurt
 - ☐ Assist someone to aid the hurt victims
 - ☐ Directly give aid to the hurt victims
- B. If there was a strike at your local hospital and you
volunteered to help, which of the following do you
think you would be most likely to do, irrespective
of whether you were comfortable or not?
- ☐ Answer the information phone
 - ☐ Assist with meals and other such chores
 - ☐ Deal with family contacts through the social work
office
 - ☐ Assist either a doctor or a nurse in direct service
 - ☐ Directly give assistance to patients either in the
emergency room or throughout the hospital
- C. If you lived in a town which was being devastated by
a storm which of the following would you be most likely
to do, irrespective of whether you were uncomfortable
or not?
- ☐ Man the telephone system
 - ☐ Assist with meals and other such chores
 - ☐ Deal with families and any special needs they might
have
 - ☐ Assist those who bring in new arrivals who may have
been hurt by the storm
 - ☐ Directly go to the assistance of those who have been
injured by the storm

- D. If you lived in a town in which there wasn't any money for public service jobs and each individual had to perform one such task--which of the following would you be most likely to do, irrespective of whether you were uncomfortable or not?

_____ Man the telephone system
_____ Be a school crossing guard
_____ Deal with individuals who have inquiries or complaints about town services
_____ Belong to the volunteer Fire or Police service
_____ To drive the emergency ambulance and to administer direct first aid

- E. If you were with a group of individuals who were stranded in a remote area and each of you would have to perform a task that was new for you--which of the following would you be most likely to do, irrespective of whether you were comfortable or not?

_____ Man the emergency transmitter
_____ Do general chores such as prepare meals, gather firewood, etc.
_____ Comfort those who were upset
_____ Assist whoever was attending to those who were injured
_____ Directly help those who were injured

APPENDIX G

Rokeach's Dogmatism Scale

Scale E

Instructions:

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one.

Write +1, +2, +3, or -1, -2, -3, depending on how you feel in each case.

+1: I agree a little.	-1: I disagree a little.
+2: I agree on the whole.	-2: I disagree on the whole.
+3: I agree very much.	-3: I disagree very much.

- ___ 1. The United States and Russia have just about nothing in common.
- ___ 2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.
- ___ 3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.
- ___ 4. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.
- ___ 5. Man on his own is a helpless and miserable creature.
- ___ 6. Fundamentally, the world we live in is a pretty lonesome place.
- ___ 7. Most people just don't give a "damn" for others.
- ___ 8. I'd like it if I could find someone who would tell me how to solve my personal problems.
- ___ 9. It is only natural for a person to be rather fearful of the future.

- ___10. There is so much to be done and so little time to do it in.
- ___11. Once I get wound up in a heated discussion I just can't stop.
- ___12. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.
- ___13. 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.
- ___14. It is better to be a dead hero than to be a live coward.
- ___15. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.
- ___16. The main thing in life is for a person to want to do something important.
- ___17. If given the chance I would do something of great benefit to the world.
- ___18. In the history of mankind there have probably been just a handful of really great thinkers.
- ___19. There are a number of people I have come to hate because of the things they stand for.
- ___20. A man who does not believe in some great cause has not really lived.
- ___21. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.
- ___22. Of all the different philosophies which exist in this world there is probably only one which is correct.
- ___23. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.
- ___24. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.
- ___25. 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.

- ___26. In times like these, a person must be pretty selfish if he considers primarily his own happiness.
- ___27. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.
- ___28. 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.
- ___29. A group which tolerates too much differences of opinion among its own members cannot exist for long.
- ___30. There are two kinds of people in this world: those who are for the truth and those who are against the truth.
- ___31. My blood boils whenever a person stubbornly refuses to admit he's wrong.
- ___32. A person who thinks primarily of his own happiness is beneath contempt.
- ___33. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.
- ___34. 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.
- ___35. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.
- ___36. 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.
- ___37. The present is all too often full of unhappiness. It is only the future that counts.
- ___38. If a man is to accomplish his mission in life, it is sometimes necessary to gamble "all or nothing at all."
- ___39. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.
- ___40. Most people just don't know what's good for them.

APPENDIX H

Reliabilities, Means, and Standard Deviations of Successive Forms of the Dogmatism Scale*

Form	Number of Items	Group	No. of Cases	Relia- bility	Mean	Standard Deviation
A	57	Mich. State U. I	202	.70	182.5	26.2
B	43	New York colleges	207	.75	141.4	27.2
C	36	Mich. State U. II	153	.73	126.9	20.1
		Mich. State U. III	186	.71	128.3	19.2
		Purdue U.	171	.76	—	—
D	66	English colleges I	137	.91	219.1	28.3
E	40	English colleges II	80	.81	152.8	26.2
		English workers	60	.78	175.8	26.0
		Ohio State U. I	22	.85	142.6	27.6
		Ohio State U. II	28	.74	143.8	22.1
		Ohio State U. III	21	.74	142.6	23.3
		Ohio State U. IV	29	.68	141.5	27.8
		Ohio State U. Va	58	.71	141.3	28.2
					143.2	27.9
		Mich. State U. IV	89	.78	—	—
		VA domiciliary	80	—	183.2	26.6
			24	.93	—	—
			17	.84	—	—

*The Ohio State U. V reliability was obtained by a test-retest, with five to six months between tests. The reliability of .84 for the VA group was obtained in the same way with at least a month between tests.

APPENDIX I

Means and Standard Deviations For the Viewing Times

By Males/Females

		Total	High Stress		Total	Low Stress	
			Mean	SD		Mean	SD
Female Closed	(20)	1440.02	72.00	45.12	1473.35	73.67	47.80
Female Open	(20)	1338.16	66.91	44.00	1496.82	74.84	43.82
Male Closed	(20)	2172.14	108.61	65.03	2335.88	116.79	78.15
Male Open	(20)	1295.41	64.77	29.93	1533.42	76.67	30.03

APPENDIX J

Human Assistance Distance Scale

Frequencies For All of the Groups

	Furthest	Middle	Nearest
Total Open	40	40	120
Total Closed	58	35	107
Open Males	14	17	69
Closed Males	29	14	57
Open Females	26	23	51
Closed Females	29	21	50
Open Males	14	17	69
Open Females	26	23	57
Closed Males	29	14	57
Closed Females	29	21	50
Closed Males	29	14	57
Open Females	26	23	57
Open Males	14	17	69
Closed Females	29	21	50

APPENDIX K

Printed Name of S: _____

Psychology Course: _____

Section: _____

VOLUNTARY CONSENT FORM

Name of Experimenter _____

Faculty Sponsor _____
(for students)

Title of Study _____

Participation time _____ Credits earned _____

I freely consent to participate in the study indicated above. I am at least eighteen (18) years of age. To the best of my knowledge I have no physical or mental difficulties which would affect my participation in this study.

Signature _____

Date _____

APPENDIX L

Feedback Form

These headings should be completed by the experimenter before this form is given to the subject.

Name of Experimenter _____

Faculty Sponsor _____
(for students)

Title of Study _____

This questionnaire is to be completed by the subject anonymously after leaving the experiment, and is to be returned by the subject directly to the Psychology Department Office.

1. When I consented to participate in this study I was told enough about the nature of the study to make an informed choice.

Circle one: Agree Uncertain Disagree

2. If I was deceived about the nature of this study prior to participation in it, I have now been fully satisfied by the experimenter's explanation of the need for this deception. (Check here if not deceived____).

Circle one: Agree Uncertain Disagree

3. Participation in this study, including the debriefing afterwards, was a valuable educational experience.

Circle one: Agree Uncertain Disagree

4. Participation in this study placed me, personally, under a great deal of stress and discomfort.

Circle one: Agree Uncertain Disagree

5. The debriefing following the study was effective at dealing with any concerns the study raised for me. (Check here if the study raised no concerns for you____).

Circle one: Agree Uncertain Disagree

6. I feel I was coerced into participation in this experiment by my instructor, who did not allow me any other reasonable options.

Circle one: Agree Uncertain Disagree

Thank you for your help in assuring the safety and value of research participation for future subjects.