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March, 1975.



AN ANALYSIS OF SOME FACTORS RELEVANT TO INTEREST IN,  
AND THE ADOPTION-REJECTION OF, TRANSCENDENTAL MEDITATION  
BY COLLEGE STUDENTS

By

Sunday Adefemi Sonaïke

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# ABSTRACT

## AN ANALYSIS OF SOME FACTORS RELEVANT TO INTEREST IN, AND THE ADOPTION-REJECTION OF, TRANSCENDENTAL MEDITATION BY COLLEGE STUDENTS

By

Sunday Adefemi Sonaike

This thesis centred upon two questions not usually addressed in contemporary studies of innovation diffusion:

- \* Are there systematic differences between persons who demonstrate interest in adopting an innovation and other persons who show no such interest?
- \* Are there systematic differences between interested persons who go on to adopt an innovation and interested persons who end up rejecting the innovation?

The innovation used in this study was transcendental meditation(TM), the experiential aspect of the Science of Creative Intelligence(SCI). Ninety-six students of Michigan State University took part in the study.

To answer the first question, students who attended a set of introductory lectures on TM in October and November, 1974, were compared on 15 variables with students who were aware of TM but have never attended an introductory lecture, nor had dealings with the TM organization in any other way. Attending an introductory lecture then, was taken as a demonstration of interest, an act that implied taking a further step from mere awareness to seeking more information on the utility of adopting transcendental meditation. This sample was referred to as coming from the population of potential adopters of transcendental meditation.

The second question involved only this sample of potential adopters, that is, students who attended the TM introductory lectures in October and November, 1974, and who consented to participate in this study. Of this group, some actually adopted TM while others rejected it. These two final groups were also compared on the same variables as before. The measure or indicator of adoption was the payment of a specified course fee; non-payment of this fee was taken as a decision not to adopt TM.

For this part of the study, the analysis employed nonparametric tests with two independent samples, equivalent to the parametric F-test in one-way analysis of variance. Further in-depth analysis of the data was carried out with several single-sample tests using the SPSS "Fastabs" computer program. This provided a breakdown of adopters-nonadopters, and interest-nointerest groups on the variables which included measures of religiosity and dogmatism, period and channel of first knowledge of transcendental meditation, reasons for interest in TM, and demographic data. Each breakdown included a chi-square test of significance of the score-distribution.

## ACKNOWLEDGEMENTS

My gratitude goes to Prof. Bill Herzog without whom this project may never have been successfully executed. I also thank Professors Lawrence Sarbaugh, Jack Bain, and Alfred Opubor for general procedural and statistical advice which they gave me at critical times. In addition, I should express my appreciation to my wife, Yetunde, for being strong and understanding in the face of overwhelming odds.

## TABLE OF CONTENTS

	<u>Page</u>
Introduction .....	1
Chapter One: Innovations and Social Systems .....	5
Stages In The Innovation-Decision Process:	
Literature .....	5
Application to TM .....	8
Stages in TM adoption .....	8
Nonadopters and Disadopters .....	9
Idea-specific versus object-specific innovations .....	10
Social Systems and Innovation Behavior:	
The social system theme .....	12
Social systems .....	12
Systems effect .....	14
Personality-related Variables .....	15
TM as an Instrument for Social Change .....	15
Chapter Two: History of Transcendental Meditation In America .....	16
Background .....	16
Meditation .....	17
Initiation .....	18
The Appeal .....	19
Chapter Three: Methodology .....	20
Samples:	
Sampling: The problem of randomizing potential adopters .....	20
Solution: simple random sampling .....	21
Procedure .....	22
Principal variables .....	23





## LIST OF TABLES

	<u>Page</u>
Table 1: Mann-Whitney U test comparing the Interest group and the No-Interest group on eight variables .....	32
Table 2: Mann-Whitney U test comparing Adopters and Nonadopters on 10 variables .....	34
Table 3(a): Fastab run: Interest by Expectation .....	36
Table 3(b): Fastab run: Interest by Opinion of TM .....	36
Table 3(c): Fastab rn: Religiosity by Interest .....	36
Table 3(d): Fastab run: Attitude to God by Interest .....	36
Table 4(a): Fastab: Adoption by Expectation .....	42
Table 4(b): Fastab: Adoption by Attitude to God .....	42
Table 4(c): Fastab: Adoption by Age .....	42
Table 4(d): Fastab: Age by Adoption .....	42
Table 5(a): Major correlations: No-Interest group .....	52
Table 5(b): Major correlations: Adopters .....	53
Table 5(c): Major correlations: Nonadopters .....	53

## LIST OF FIGURES

	<u>Page</u>
Fig. 1 : Comparison of three adoption paradigms .....	6

## INTRODUCTION

### The Innovativeness Continuum

The usual differentiation of the adopters of an innovation follows the classification scheme standardized by Rogers, which partitions the continuum of innovativeness into five broad categories: innovators, early adopters, early majority, late majority and laggards (Rogers, 1969, p294). This classification scheme describes an adopter in terms of his social system. It assesses his innovativeness, defined as the degree to which he is relatively earlier (or later) in adopting the new idea than the other members of his social system.

That the description of individual adopters is made within a sociological, rather than a psychological, framework should surprise no one, considering the pattern of development of innovation diffusion research. Rogers notes that the oldest diffusion tradition was anthropology and involved research centred on the connections between culture and social change (Rogers with Shoemaker, 1971, p 48). These earliest anthropological concerns greatly influenced several sociological approaches to diffusion studies that followed them from about the late 1920's.\* The latest comes to the diffusion research traditions such as extension education, medical sociology, marketing, and communication, while focussing on different aspects of the diffusion phenomenon, have, not surprisingly inherited the social or group paradigm of their ancestors.

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\* Kroeber, 1937, is characteristic of the early anthropological tradition. Of the early sociologists and rural sociologists, we can mention Bower (1937, 1938), McVoy (1940), and Ryan and Gross (1943) to name a few.

## INTRODUCTION

### The Innovativeness Continuum

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The overall implication of this fact is that the adopter categorization that has emerged is meaningful only when adoption is considered within the context of the social system and across time. Although the immediate unit of analysis in some cases are individual units (e.g. in marketing, rural sociology and communication), adoption by the individual is still defined in relation to the total length of time the innovation in question has been in a social system, what we can, for convenience, refer to as the DIFFUSION HISTORY (or just "history") of that innovation. Thus we usually speak of A being an "earlier" or "later" adopter than B, which suggests a difference in the points in an innovation's history, at which A and B adopted it.

While this adopter category provides an adequate framework within which history-related questions could be addressed, it is of minimal use in examining questions on the other dimension of adopter differentiation, that of differences between adopters at the same time periods. Of even more importance to this study, it does not directly confront the obvious question of why, at any point in time, some people in the social system, while being aware of an innovation, make no move to either adopt or reject it. What diffusion researchers have done is to get at this question in an indirect fashion by concluding that the differences between adopters at different points in time answers the question. However, it is obvious that not all innovations are adopted by all the members of a social group; in fact, many innovations, throughout their history, are adopted only by a small proportion of the population. Thus the questions relating to probable differences between adopters/rejectors of an innovation and persons who show no interest in the innovation, is not fully answered by differences along the innovativeness continuum. A principal concern of this thesis is to directly seek answers to this question. In short, we will be asking the simple question: to what type of people does a specific innovation appeal, and why?

The dichotomy of "persons interested in" adopting an innovation and persons with no such interests, may suggest that all of the former group end up adopting the innovation. Actually, this is not so and the classical explication of the adoption process regards the decision to adopt or reject an innovation as an independent act that follows interest in the innovation.

Because "decision" could go in either direction, change agents have always endeavored to play a part in the series of actions through which a potential adopter ultimately resolves to adopt an innovation or reject it. One common way by which this is done is by guiding potential adopters through a number of pre-adoption activities that may, or may not, include small-scale trial of the new idea, with the objective of making their first impressions of the innovation as favorable as possible.

However, when the adoption of an innovation is preceded by such introductory activities, a new problem may arise in that at any stage during the "trying-out" period, a potential adopter may reject the innovation, clearly to the discomfort of the change agent. As its second main objective, this study takes an in-depth look at this aspect of the adoption-rejection phenomenon, henceforth referred to as the INNOVATION-DECISION PROCESS.\*

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\* This follows the tradition of Rogers with Shoemaker(1971). The innovation-decision process is defined as "the mental process through which an individual passes from first knowledge of an innovation to a decision to adopt or reject (it)". The innovation-decision process is synonymous with the "adoption process", a more popularly used term, and one which was in fact employed by Rogers in a previous publication(Rogers,1962b). His rejection of the term in this case is based on the argument that "adoption process" too strongly suggests that all potential adopters finally adopt new ideas, rather than adopt OR reject. My opinion, slightly different from this, is that the term may be interpreted as implying that the diffusion phenomenon is relevant only to the adoption of innovation, not to both their adoption and rejection. Either way, the term "adoption process" may not adequately portray the true situation.



The problem now goes beyond probing the general appeal of transcendental meditation; our goal is to find out why TM appeals more to certain potential adopters(who then go on to adopt), than to others. We are asking, as Barnett did, for "which individuals in a given group are more likely than others to accept a particular novelty?"\*

That TM has some measure of general appeal for all potential adopters goes without saying; the transition from mere knowledge of its existence to physical search for further information clearly denotes the presence of such an appeal. What systematic differences, then, can be associated with potential adopters of TM who go on to adopt(adopters), and potential adopters who do not(rejectors)\*\*

The first chapter of this thesis explores the broad areas relevant to the study, namely the innovation-decision process, and the concept of social change, and relate both to acceptance and rejection of transcendental meditation. The second chapter lays out historical information on transcendental meditation and its introduction into the American society. Stages in the adoption of TM are also explained. In the third chapter, the methodology for the study is outlined in detail and the hypotheses or expectations of the study presented. The final chapter contains the findings of the study, discussion of their implications, and a summary and conclusions.

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\* H.G.Barnett: Innovation:The Basis of Cultural Change. McGraw Hill, 1953, p 378

\*\* The terms "adopters" and "rejectors" of innovation apply here in the sense that Barnett(1953) used "acceptors" and "rejectors" (Ch.14). Their meaning go beyond the simple decision to try or not to try a new idea, to the more committing decision to use, or not to use, the innovation on a permanent basis.

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An equally wide variety of terms have been used to describe these stages among them, attention, exposure, information, initial knowledge, acceptance, desire, application, conviction, decision, deliberation, and persuasion. The traditional view of the adoption process recognized five stages to the process: awareness, interest, evaluation, trial, and adoption.\* Now well-known is the four-stage AIDA "formula" in marketing: awareness, interest, desire, action (Zaltman, 1964). More recently, Rogers, and others, in the field of communication, developed a modified, four-stage model of the adoption process: knowledge, persuasion, decision, and confirmation, all referred to as FUNCTIONS in the innovation-decision process (Rogers with Shoemaker, 1971, p 103). There are nevertheless, important similarities between these three interpretations of the adoption-rejection process:

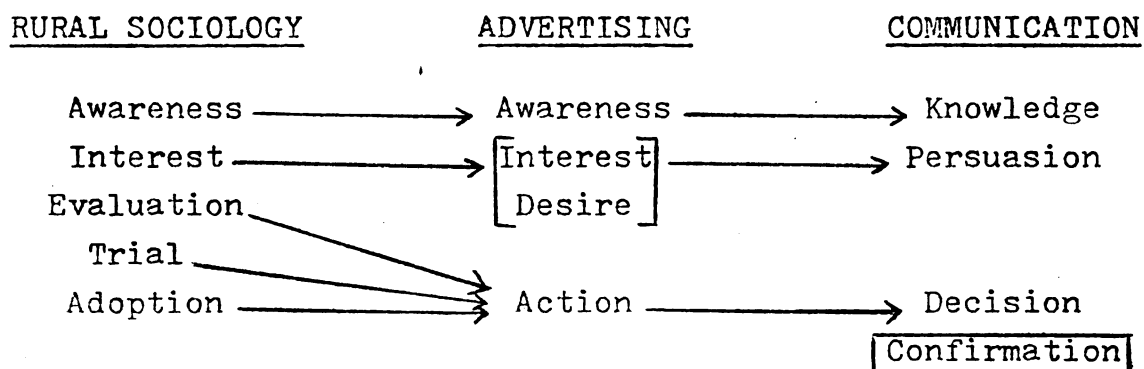


FIG 1: Comparison of Three Adoption Paradigms

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by Emery and Oeser(1958). Following the tradition of Ryan and Gross(1943), Wilkening(1953), and Rahim(1961a) utilized four stages. Beal and others (1957) and also Copp and others(1958), proposed five stages, while Lavidge and Steiner(1961) put forward six stages. Even an eight-stage model was postulated by Singh and Pareek(1968).

\* The postulation of the "traditional view" is attributed to The North Central Rural Sociology Sub-Committee for the study of diffusion of farm practices, United States of America, 1955.

The arrows indicate stages that may be considered similar under the three views of the adoption-rejection process. Awareness is comparable to knowledge. The awakening of interest and the creation of desire are stages closely related to persuasion. "Action" embraces evaluation, trial and adoption, and also describes the final decision to accept or reject, under Rogers' classification scheme. The addition of the confirmation function to the Rogers' model merely demonstrates a new tendency to extend research interest in the adoption-rejection process beyond acceptance of an innovation. The confirmation function emphasises<sup>Z</sup> the distinction between the immediate and the long-term success of an innovation. It involves the seeking of reinforcement for the decision already taken, and as a result of which an adopter finally resolves to settle into the use of the innovation, or reverse his previous decision to adopt.

Recent studies have determined that the innovation-decision stages laid out above often do not occur in the specified order, and some of them are skipped by some adopters (See Beal and Rogers, 1960; Rahim, 1961a). However, it is clear that a minimum of two stages can be differentiated in the adoption process: an awareness or knowledge stage, at which a potential adopter first learns about, or is introduced to, the innovation, and a decision stage, at which he decides to adopt or reject the innovation. The awareness stage will **always** occur before the decision stage, although the difference in time between the two stages may vary from only a few minutes (as in the case of a highly persuasive salesman), to many days, or even many years. However, it is clearly more realistic to consider the innovation-decision process under at least three stages: awareness, interest and decision, since we don't always act on every new idea that we are aware of. Interest may arise as a result of a totally personal experience or through the engineering of external forces (e.g. sales gimmicks). Decision may or may not be preceded by persuasion, evaluation and/or trial, in any order.

## Application to TM

Of prime importance to this study is the question: what determines the leap from awareness to interest on the one hand, and from interest to decision on the other? Can we isolate at least a few of the variables that accompany this leap? In seeking answers to these questions, we will compare a sample of students interested in TM with a sample of students with no such interest. In the second stage of the analysis, we will also examine possible differences between adopters and rejectors, both of whom had earlier demonstrated interest in TM by attending the introductory lectures.

## Stages in TM adoption

Officially, the decision to adopt (or reject) TM should come only after the following set of activities: an introductory lecture, a preparatory lecture and a personal interview.<sup>\*</sup> The two lectures are public. Persons still interested in TM after the preparatory lecture arrange personal interviews with a "change agent", usually a teacher in transcendental meditation.

For this study, the persuasion stage will be represented by the series of actions through which a potential adopter forms a favorable or unfavorable attitude to transcendental meditation(TM). Primary among these are his pre-decision information-seeking behavior. This will usually take the form of discussion of TM with friends or neighbors etc, and may begin either before or after attendance of the introductory lecture, but certainly after initial knowledge of TM. Decision of course, should come only after persuasion(or lack of it).

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\* The TM organization expects every potential adopter to go through the lectures and have an interview but there is no evidence that some fervent adopters do not skip one or more of these stages. Clearly, so long as the decision made is favorable, such an action would not be frowned upon by the organization.

However, we realise that people may seek information on an innovation even after adopting or rejecting it, and such activities are usually aimed at acquiring reinforcement for the decision taken.\* In addition, it is not always easy to tell the point at which persuasion activities end and decision is made. To get around this problem, we are taking as a specific "measure" of decision to adopt TM, the payment of a "course fee", after the personal interview, and without which a potential adopter is not guided through the actual training in transcendental meditation. Failure to pay this fee then, will constitute a decision to reject TM, at least for the moment.

### Non-adopters and Disadopters

"Disadoption" describes a discontinuance, that is a decision to cease the use of an innovation after previously adopting it. It usually occurs as a "confirmation" function of the innovation-decision process as conceptualized by Rogers with Shoemaker(1971). Disadoption necessarily occurs after adoption, and perhaps as a result of post-adoption information unfavorable to the innovation.

This study focusses on the decision to accept or reject transcendental meditation, a decision that comes after the persuasion stage, and that does not extend into the confirmation stage. Rejection, in our sense, refers to non-adoption, that is a decision not to adopt, rather than a decision to terminate adoption.

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\* Ehrlich and others(1957), for instance, found that buyers of new cars sought information, after the purchase, supportive of the model they bought. Other evidence in this regards is provided by Mason(1962b,1963, 1964), and by Francis and Rogers(1962).

## Idea-Specific versus Object-Specific Innovations

We accept Rogers and Shoemaker's definition of an innovation as "an idea, practice, or object perceived as new by an individual". Newness does not stop with mere knowledge of the existence of an innovation. A practice continues to be new to an individual until he changes from his neutral position and either becomes involved in the practice or develops a negative attitude to it.

Just as every idea has to be an innovation at some point in time, so every innovation must start as an idea. Furthermore, involvement in an innovation must be preceded by an awareness of "the idea" of the innovation, the awareness or knowledge stage. This then is the IDEA component which is essential to all innovations.

However, innovations differ in the extent to which they emphasise the idea component. For example, with ideologies, religion and rumors, acceptance of the idea is the ultimate goal. By contrast, many innovations "sell" the idea only as a means of paving the way for the main "ware", usually more physical than mental. These innovations have physical referents; their idea component is accompanied by an OBJECT component whose acceptance is the ultimate goal.

Most of the innovations considered in Rogers and Shoemaker(1971) are of the latter type. Agricultural diffusion ultimately demands that the adopter purchases, borrow or rent, modern farming equipment, and/or hybridized seeds etc etc. Health officials not only ask that their clients keep their environments clean but may also demand that they dig deep, expensive wells, boil their water, and wear neat clothing. Adoption of these innovations involve not only acceptance of the ideas but also extra expenses.



When an innovation has only an idea component or emphasises the idea component considerably more than the physical component, its adoption may not be physically observable to the extent of innovations with strong physical referents. Rogers and Shoemaker describe the adoption of innovations with only idea components as essentially symbolic decision. In contrast, innovations that have and emphasise the object components call for action adoption(p.21).

The descriptions "symbolic" and "action" seem to us to be inadequate because they do more than distinguish "idea-only" innovations from innovations with both idea and object components; they also suggest that the latter are more active, more lasting and generally better innovations than the former. Of course this is not the case. Religions and ideologies are no less important innovations than farm tractors and hybrid seeds.

The critical difference clearly, is in the extent to which each emphasizes the idea-component or the object component, and this should be the key to differentiating them. Rather than symbolic-action innovations we suggest idea-specific versus object specific innovations, where the former is reserved for innovations with only idea components or emphasizing the idea components, and the latter for innovations with also physical referents which are the centre of attention.

It is not totally clear into which of the two categories transcendental meditation fits. It will appear to qualify for description as idea-specific innovation since it has no object referent. However, institutional conditions imposed on the adoption of TM require adopters to pay a course fee of considerable amounts(see footnote, page 19 ). Additional expenses of this type are typical of object-specific innovations. Nevertheless, since the emphasis in TM is clearly on the idea, we still think it should be classified idea-specific- subject to the extra cost restraint

## Social Systems and Innovation Behavior

### The Social System Theme:

The "social system" theme is central to the diffusion of innovations. Rogers with Shoemaker(1971) named the crucial elements in the diffusion process as: the communication of an innovation through certain channels, over time, and among members of a social system.<sup>\*</sup> A lot has been written on the role of each of these five elements in the diffusion of new ideas. For our purpose however, we will concentrate on the effects of the social system on innovation behavior and the corresponding aspect of the extent to which an innovation may represent an instrument for social change.

Although optional decisions concern the acceptance or rejection of an innovation by individuals, the overall success or failure of an innovation typically is assessed in terms of the social system. Recent studies of "systems effects" indicate that an individual's innovation behavior can be explained partly by psychological and personality variables, and partly by the nature of his social system.<sup>\*\*</sup> Let us look at each of these sets of influences on the individual adopter.

Social Systems: Social systems come in all shades and sizes but can broadly be described at two levels: one, as a concrete, interactive unit, (e.g. a family, a local church congregation, a football team); two, as a more abstract, loosely defined unit(e.g. a tribe, The Catholic Church,

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\* Other and more elaborate conceptual frameworks of the diffusion process, also employing the social system theme, have been used. Katz and others (1963), for instance, listed seven elements: the acceptance over time, of some specific item, by some adopting unit, linked to specific channels of communication, to a social structure, and to a given system of values or culture. The Rogers' framework disregards the first element and collapses the others into a five-element definition.

\*\* See, among others, Van den Ban(1960), Davis and others(1961) and Qadir(1966).

a nation, an agricultural extension service etc). What then constitute the common elements of such diverse human groupings?

Loomis and Beegle name eight such elements: the presence of certain ends or objectives, norms, status-roles, power and power structure, social rank, sanctions, facilities, and territoriality.<sup>\*</sup> These features are neatly combined by Rogers and Shoemaker(1971) in their conceptualization of a social system as "a collectivity of units which are functionally differentiated and engaged in joint problem-solving with respect to a common goal." (p.28)

The common goals or ends of a social system may be explicit or implicit(compare a bank with a nation). In some cases, the objectives of the system may be limited to maintaining the association between members or protecting the status quo. Whether the units are individuals or collectivities, each unit in a social sytem can be functionally differentiated from the other units. Statuses are assigned to the units-or achieved by them. Each status carries an expectation or role, based upon which the rank of the holder is determined.

Activities within the system are limited by norms, the guiding standards prescribing what is socially acceptable or unacceptable, and which are reinforced by sanctions. Facilities are the means applied by the system to attain its goals. These include physical facilities such as land, property, mechanical equipment, and human facilities such as technology, knowledge and skills. While common territory may characterise a social system, it is not essential to its definition. Concrete social systems tend to share common territory but the more abstract social units may or may not have common <sup>physical</sup> boundaries.

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\* Charles P. Loomis and J.Allan Beegle: Rural Sociology: The Strategy of Change. Prentice-Hall, 1957. Chapter 1.

## Systems Effect

The relationship between social systems and innovation behavior of the individual now becomes easy to see. At one level, we can say, in the words of Rogers and Shoemaker(1971), that "the social system constitutes a set of boundaries within which innovations diffuse"(p.29) But even more pertinent is the latent influence of social norms, hierachy and roles on the decision of the individual to adopt or reject an innnovation. Clearly, the more rigid the norms of a social system are, the less tolerant will be that system towards acknowledging ideas and behaviors different from the established ones.\* Furthermore, the more an individual adheres to the norms of his society, the less likely he is to accept a new idea or new behavior as a substitute for the one, or ones, approved by his society. Rogers and Shoemaker summarize this argument in one generalization: "The social structure acts to impede or facilitate the rate of diffusion and adoption of new ideas" (p.29).

This study does not directly assess or compare systems effects in the manner of the typical investigation in that area.\*\* However, a major part of the study concerns the pattern of interpersonal influences on persons interested in TM, compared to persons who have not exhibited such interests.

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\* It is typical to associate rigid norms with "traditional" systems and relatively flexible norms with "modern" systems (see, e.g. Van den Ban, 1960, 1963a; Qadir, 1966; Eibler,1965). This distinction is however of no significant interest to this study.

\*\* See, for instance, Eibler(1965), Campbell and Holik(1960), Van den Ban(1963b), Davis(1965) and Rogers with Svenning(1969)

## Personality-Related Variables

Psychological and personality variables that have been explored in diffusion studies have included education, cosmopolitaness, mass media exposure, attitudes, and size of farm of adopters along the innovative-ness continuum. For this study, personality-related variables considered relevant are educational level, sex, age, predisposition, dogmatism, religious attitude, and attitude to the concept of God. The rationale for the choice of these variables are presented in the chapter on methodology.

## TM As An Instrument For Social Change

Social change is defined as the process by which alterations occur in the structure and function of a social system. The structure of a social system is the sum of the individual and group statuses which compose it. The dynamic element within this structure of statuses are the roles, or set of behaviors expected of the units within the system. When a unit accepts a pattern of behavior outside of this prescribed set, the impact of this deviant behavior sets into motion disturbing waves that may reach far into the fabric of the system. Hence revolutions and wars, inventions, and the simple act of acceptance of birth control devices by a family- all have potentials for bringing about social change (Loomis and Beegle

The practice of transcendental meditation reportedly results in changes, for some persons drastic, in the habits and life styles of its practitioners. In this sense, the acceptance of transcendental meditation may indirectly affect the social system. This effect will become more and more obvious if, and as, transcendental meditation becomes common usage among students, or in the larger context of the American society.

## CHAPTER TWO

### HISTORY OF TRANSCENDENTAL MEDITATION IN AMERICA

#### Background

It is impossible to divorce transcendental meditation from its founder, Maharishi Mahesh Yogi. It was Maharishi, a Hindu monk, who in the second half of the 1960's, and in the course of a prolonged mission to "bring transcendental meditation to the entire world", first introduced this experiential aspect of the Science of Creative Intelligence (SCI) into the United States of America.\* He eventually decided to concentrate his efforts on the United States because "Americans are creative and open to new things". His hunch paid off. In less than six years, an estimated total of 175,000 people in America had taken up transcendental meditation.\*\* By all standards, the American experience of TM is the most remarkable and most worthy of examination.

The Science of Creative Intelligence is an appealing blend of oriental spiritualism and western paganism, a situation that is perhaps explained in part by the background of its chief proponent. Maharishi's earliest training was as a physicist. He graduated from Allahabad University in his native India as a physics major, then studied aspects of the ancient Vedic tradition of India for many years, under a spiritual teacher named Brahmananda Saraswati Shankaracharya of Jyotir Math, known in the TM movement simply as GURU DEV, a parallel of "Divine Teacher".

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\* The "Science of Creative Intelligence" is the term used by Maharishi to describe his study of meditation. No doubt, its crisp, scientific undertone had an appeal for his audience in Europe and America, and this may have influenced his choice of the term-perhaps with a little help from some American friends.

\*\* These are 1972 figures. It was reckoned then that an average of 10,000 new meditators were initiated into TM in the USA every month.



Maharishi's scientific training clearly stood him well in adapting his spiritual learning to common use. Leaders of the International Meditation Society, the TM organization in the United States of America, are quick to point out that TM is "practical and scientifically verifiable".\* Evidence from research on the physiological and psychological consequences pile up daily.\*\* So far, all the evidence are favorable to TM. Research and interview reports of the "benefits" of TM range from "reduction of stress", through "enhancement of my mental and physical capabilities", to "improvement of academic grades" and "reduction of drug usage". Transcendental meditation seems to attract all classes of people: young and old, college students and college professors, businessmen and housewives.

Meditation: The actual meditation is a twice-daily affair during which the meditator sits in a comfortable, upright position, with his eyes closed, and lets his mind dwell on a "mantra" for about 20 minutes. The mantra is a divine chant that is assigned to the individual meditator by a trained teacher or initiator.\*\*\*

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\* This statement is credited to Janet Hoffman, co-ordinator of TM activities in New York city. It is contained in the article: "Thousands Finding Meditation Eases Stress" carried in The New York Times, December 11, 1972.

\*\* The most recent and complete report of these findings are contained in a pamphlet entitled: Fundamentals of Progress: Scientific Research Findings on Transcendental Meditation. It is published by the Maharishi International University, 1974. The administration centre of the university is at 1015 Gayley Av., Los Angeles, Cal. 90024 (December, 1974).

\*\*\* It is impossible (and improper) to be more explicit on the "mantra" or any of the other rituals of transcendental meditation because of the total secrecy that surrounds the teaching of transcendental meditation. Officials of the movement claim that the secrecy is necessary to guide against improper teaching of TM by "unauthorized persons".

Much interest has been shown in the working of the mantra and the meditation process but little is known for sure. Meditators however agree, and scientific research appear to confirm, that the technique brings about deep rest and relaxation. The effect of TM has been described as "the fourth state of consciousness", fourth that is to waking, dreaming and deep sleep. However, unlike the other states, transcendental meditation is reputed to bring about deep relaxation, comparable to deep sleep, while the meditator remains "psychologically alert", that is, in a wakeful state and aware of whatever is going on around him.\*

Initiation: The procedures for initiation into transcendental meditation in the United State of America and elsewhere are fairly standardized. They begin with two public lectures, specifically referred to as an introductory lecture and a preparatory lecture. At the introductory lecture, potential adopters are formally introduced to the physical and mental gains they may expect from TM. Information material are handed out. These usually include "Fundamentals of Progress", the organization's pamphlet reporting scientific research findings on transcendental meditation. The audience is firmly told that TM is "not an ideology, nor a drugless high", and that it is compatible with any and all religious beliefs.

At the preparatory lecture, more details on the nature of TM are given and specific questions, usually on possible side effects of meditation, are answered. After these lectures, persons who are still interested arrange, on an individual basis, interview with an instructor in TM. Problems unique to the individual are discussed and demographic data collected, based on which the appropriate mantra is determined.

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\* Among the best known research in this area are those by Dr.R.Keith Wallace, physiologist, and Dr.Herbert Benson, cardiologist and associate professor at Harvard Medical School. See, for example, Wallace and Benson(1972): "The physiology of meditation", Scientific American, Vol.226, No.2, pp 84-90, Feb.1972. Also, Wallace, Benson and Wilson(1971): "A wakeful hypometabolic physiological state", American Journal of Physiology, Vol.221, No.3, pp 795-799, Sept.1971. Both references and many others are contained in "Fundamentals of Progress", earlier mentioned.

Beyond this point, each person decides whether or not he would like to go through the actual learning of transcendental meditation techniques. If he wishes to take instruction, he is required to pay a specified fee.\* The TM movement is incorporated in California as a non-profit educational organization and its officials say all its income goes<sup>es</sup> back into the training of instructors and for the general running of the organization.\*\*

The Appeal: What, one may ask, is the appeal of transcendental meditation? A number of answers have been put forward to explain the TM phenomenon. One<sup>e</sup> is that the timing, to put it simply, is right. Transcendental meditation has come at a time when interest in Eastern and Oriental mysticism has reached an all-time high in America, particularly among the youth. In the Science of Creative Intelligence, Maharishi presented Eastern culture and mysticism in a form compatible with western values and life styles. Furthermore, by contrast to the other spiritual disciplines, TM is much more accessible, easier to learn, and meditators claim that its effects or results are obvious almost from the first meditation.

The goal of Maharishi is to take transcendental meditation to all parts of the world, a project now seriously handled by the World Plan Executive Council (of TM) in Los Angeles, California. Maharishi sees no end to the good that TM can do on a global basis: world peace through drastic reduction in stress and war, renewed vigor and health for all mankind, eradication of poverty from the face of the earth, to mention a few. His followers, like all faithful disciples, have no doubt that this global dream would some day be realized.

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\* In 1972, the cost of taking the course was \$75 for adults, \$45 for college students, and \$35 for high school students. These fees have gone up considerably and the cost at the moment (Dec. 1974) is \$125 for adults, \$65 for college students and \$55 for high school students. Other categories of initiates are also accepted. These are persons aged 10-14 (\$35), and families (husband, wife and children under 15) all starting on the same day (\$200). The course fee is paid in one instalment.

\*\* At late 1972 figures, qualified teachers of TM in the USA were 2,400 with nearly 400 chapters of the Student International Meditation Society active on USA campuses.

## CHAPTER THREE

### METHODOLOGY

#### Samples

Samples from two populations were used. The first is from the population of "potential adopters" of transcendental meditation. These are students from Michigan State University who have demonstrated interest in TM by attending the introductory lectures held on campus in October and November, 1974 by the Students International Meditation Society (SIMS). The second sample is from the population of students uninterested in transcendental meditation. These students (also from Michigan State University) have shown no interest in TM by attending an introductory lecture nor had any dealings with the SIMS in any other way.

Sampling: The Problem of Randomizing Potential Adopters: The ideal sampling procedure would be to take the population of potential adopters of TM in Michigan State University and randomly select from this population, the Subjects for this study. However, the process by which membership of SIMS is acquired makes this procedure impossible.

At irregular times, SIMS runs introductory lectures "for anyone interested in taking the course in transcendental meditation". No conditions are set and the lectures are public. No projections are made as to how many persons will attend each lecture and a SIMS official said attendance has ranged from "one person to over 40".\* In view of this, it is impossible to carry out, within the population of potential adopters, random selection of subjects in the usual manner.

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\* The official, Mr. Jeff Tully, is an instructor in TM and was a student at MSU up to Summer, 1974.

Solution: Simple Random Sampling. Samples, not individuals, are the units of randomization for this stage of the study.\* In a strict sense, the population of potential adopters relevant to this study is that of POTENTIAL ADOPTERS AND POTENTIAL REJECTORS OF TRANSCENDENTAL MEDITATION IN MICHIGAN STATE UNIVERSITY IN OCTOBER AND NOVEMBER, 1974. The exhaustive number of samples from this population is the number of introductory lectures run by SIMS during the period. From this list of 11 lectures, a simple random sampling was carried out to select four introductory lectures. The sampling procedure was literally drawing blindfolded from a hat. Persons who attend the lectures and were willing to participate, constituted this proportion of the subjects for the study.

To select the sample for the "No Interest" group, a systematic sampling of students was made using the On-Campus Student\$ Directory, which is the only current student\$ directory issued in Fall term. The students so drawn were contacted on the phone and asked if they had attended a SIMS introductory lecture or had dealings with SIMS in any other way. Students who said "Yes" to either or both questions(7 out of 42 contacted in two waves of sampling), were dropped from the sample. Of the remaining,

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\* The distinction made here between "random selection of subjects" and "simple random sampling" is important. With random selection of subjects, individual members of a known population are selected in such a manner that each member has an equal chance as any other of being selected into the sample or samples. Such a procedure is described for instance, by a lottery draw, or by the act of drawing names or numbers, blindfolded, from a hat. With random sampling, samples rather than individuals, are the focus, and each possible sample is regarded as having an equal chance of being selected. With simple random sampling, sample units selected at each draw are not replaced. In effect, simple random sampling is "random selection"- but of samples rather than persons. If this procedure is coupled with random selection within the samples, the effect is still the same as direct random selection from the population. By asking for 'volunteers' at the introductory lectures randomly selected, I am relying on a "natural" process of random selection within samples.

For more information on this, see Moser and Kalton, Survey Methods in Social Investigation. Basic Books, 2nd American Ed. 1972, Chs 4,5.

those who consented to participate in the study(32 out of 35), had questionnaire sent to them. The "return rate" was better than expected: 27 out of 32 (over 80%)

### Procedure

After each lecture, potential adopters who consented to participate in the study (about a third of total attendance) were given questionnaires to complete. Because the greater proportion of these potential adopters were not expected to go further than the introductory lecture, the researcher kept in touch with the SIMS for names of other students who attended the four introductory lectures, had shown a desire to go beyond these lectures, but who were not in the first wave of subjects.\* This procedure was pursued to bring about two comparable groups of potential adopters: interested persons who did not go beyond the introductory lectures(rejectors), and interested persons<sup>s</sup> who actually went on to adopt(adopters).

Since the "No Interest" group was picked from the on-campus directory, comparison of this group with the "Interest" group will be made using only the proportion of potential adopters(who attended TM lectures) who indicate that they live on campus.

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\* Although the official expectation (naturally) is that "everyone who attends the introductory lecture will practice transcendental meditation", a TM teacher told me, off-the-record, that less than a quarter of the persons who attend the introductory lectures actually go beyond this stage of initial interest.

## Principal Variables

This study is interested in exploring some variables that are presumed relevant to interest in, and the acceptance or rejection of, transcendental meditation. Some of these variables are intuitively obvious: e.g. age, sex, and educational level, all of which are demographic. Other social and personality-related variables that call for our attention are dogmatism, attitude towards religion and towards the concept of God, and interpersonal influences. We shall examine the relevance of each of these variables.

Age: The evidence on the relationship of age to innovativeness is inconclusive (see Rogers and Shoemaker, 1971, p.185). However, the "generation gap" and the attendant problems resulting from differences in perceptions between persons of different ages should not be ignored in a study of innovation diffusion. Like all innovations, TM, as I have argued, has a potential for triggering social change; this may represent an added appeal for the "young generation".

Sex: Sex has for long been a controversial variable in persuasion research. As with age, empirical evidence on persuasibility attributable to sex differences is inconsistent. However, the customary, man-on-the-street belief is that women are more persuasible than men. Since the persuasion stage is of prime importance in the innovation-decision process, it <sup>may be</sup> ~~is~~ useful, and certainly not harmful, to include sex as a variable in this study.

Education: Diffusion research has paid much attention to differences in educational levels of "earlier adopters" in contrast to "later adopters" (Rogers and Shoemaker, 1971, p.186). Relatively less attention has been given to differences in educational levels of adopters and rejectors of innovations at the same point in time.

Predisposition: This is a term which I am using to describe interest in transcendental meditation arising from a general tendency to be interested in all forms of meditation. A predisposed person, in this sense, would have practiced at least one other form of meditation in the past, and must hold some opinion, favorable or otherwise, of the experience. He is also likely to be interested in TM for strictly spiritual reasons than for material or semispiritual considerations.

Religious Attitude: One of the attacks on the TM movement has been that it has a religious undertone and is providing haven for persons with shaky (organized) religious beliefs. This study will test for systematic differences in religious attitude between persons to whom TM appeal<sup>s</sup> and those to whom it does not, and also between adopters and rejectors of TM.

Attitude to God: All religions are rooted in a belief in God. However, in today's world, the reverse- that all beliefs in God have a base in some religion- no longer holds. People now distinguish religious belief from "organized religion", and "deism" describes a belief in God without the corresponding belief in God's control over man-the basis of organized religion. It will be interesting to see how well (or how poorly) the religious attitudes of subjects correlate with their attitudes to the concept of God.

Dogmatism: The dogmatic personality, according to Rokeach, is "excessively concerned with need for power and status" (Rokeach, 1960, p 69). On one dimension, we see him confusing the communicator of a message with the communication, that is, reacting to messages more as a result of his feelings for the source of information than the substance of the information. On another dimension, the dogmatic person may be "rigid-conservative", tending to hold strongly to a set of beliefs and giving little room for new ideas. Rokeach's conceptualization of authoritarianism embraces both dimensions of dogmatism. Authoritarianism is a key concept



in differentiating between "open" and "closed" belief systems, and the dogmatic or authoritarian person is said to have a relatively closed belief system.

Dogma and dogmatism have for long been associated with religious orthodoxy. Today, it is defined in terms not only of the church, but of all systems of belief that demand total, unflinching support. The proponents of transcendental meditation insist that it is non-religious, and non-ideological. Nevertheless, TM has developed around an authority figure, Maharishi, and its practice, for some people, has led to "a new way of life". For these reasons, some attention will be paid to possible dogmatic influences <sup>on</sup> in interest in, and the adoption-rejection of transcendental meditation.

Interpersonal Influences: Interpersonal influences represent one latent but powerful way by which social systems ensure adherence to their norms. To differing extent, we all endeavor to remain in the good graces of those whose relationships we value, e.g. family members and close friends. Consciously or otherwise, we listen to their opinions and seek their approval for important decisions we wish to take or have taken. This study will examine interpersonal influences in the decision to explore TM and the ultimate decision to accept or reject it.

Other variables used in the study are:

- Expectation from TM (material versus spiritual gains)
- Opinion of TM
- Discussion of TM with others(nominal)
- Number of persons discussed TM with(ordinal)
- Assessment of TM introductory lecture
- Fraternity ties

## Measurement Scales

Predisposition and interpersonal influences were scored as the composite of four responses each to simple and direct questions. Although untested, the measurement scales must have more than average reliability because many of the responses were dichotomies. The composite score was the average of the scores for the relevant responses.

Measures of religious attitude and attitude to God were taken from tested measurement scales. Only the items measuring the dimensions of interest to the study were used. The measure of religious attitude was from the "Religious attitude and philosophy of life scale" (Shaw and Wright, p.348). Focus was on the two dimensions of "religious orthodoxy" and "religious philosophy". For the measurement of attitude to the concept of God, items from Form A of the "Religionism Scale" were used (Shaw and Wright, p.331). Items chosen measured the dimension of attitude to God. For the authoritarian measure, the short-form dogmatism scale of Trodahl and Powell, was used. The 15-item condensation of Rokeach's original scale has a reliability coefficient(cross-validation) of .73. (Trodahl and Powell, 1965). Other variables involved single questions with nominal or ordinal measurements.

## Nonparametric Tests

In analysing these data, we have shown a preference for nonparametric statistical tests over their parametric counterparts for the following reasons:

1. Nonparametric tests are "distribution-free". They make no assumptions about the parameters of the population from which the research sample is drawn. They do not assume for example, that the scores under analysis come from a population with a normal distribution. The only assumptions made in using nonparametric statistics are that the observations are independent and that the variable has underlying continuity.

Probability statements from most nonparametric statistical tests are exact probabilities regardless of the shape of the population distribution from which the random sample was drawn. Nonparametric tests are thus highly suited to analysis of field study data where no empirical evidence of the population parameters exist and where lack of control and problems of sampling might lead to violation of some of the assumptions underlying parametric tests.

2. Nonparametric tests can be applied to "rank" scores from ordinal variables and even to variables differentiated only by signs. No parametric technique applies to such data. Siegel recommends nonparametric statistical tests as the only appropriate tests for analysis of data on nominal or ordinal scales (Siegel, 1956, p.30).
3. Nonparametric statistical tests are especially useful with small samples. When sample sizes are as small as  $n=6$ , and unless the exact nature of the population distribution is known, there is no alternative to a nonparametric test. When samples are large, the power of the nonparametric test is increased even more.
4. Most nonparametric tests are easy to compute even by hand. With the increasing availability of computer programs for nonparametric tests (e.g. those in version 5.8 SPSS), they have become still easier to use.

## Problem of Unequal n's

Most statistical tests comparing two or more independent samples require the same number of observations for each of the samples compared. This requirement is imposed in both parametric and nonparametric tests. With "laboratory" experiments where the researcher determines the number of Ss in each of his conditions, it is easy to fulfill this requirement for equal n's. However, in this study as in all field studies, that level of control on number of observations per treatment group or sample is not possible.

I have already mentioned the problems that were encountered in sampling adopters and nonadopters randomly and how they were resolved. Nevertheless, the final proportion of adopters to nonadopters still turned out to be 11 to 12 (33 adopters, 36 nonadopters). The problem then was how to fulfill the requirement for equal n's in comparing the samples.

To resolve this problem, we used a procedure suggested by Edwards for coping with random loss of subjects in factorial designs (Edwards, 1950, p.216). The procedure simply is to take the smallest (or smaller) sample as the "baseline" and randomly discard observations from the larger samples until they are brought to the same size as the smallest one. This can be accomplished with a table of random numbers. Alternatively, it can be done with the "lottery" method we used in randomly selecting introductory lectures. We used the latter method for consistency and also because the sample was small and easy to cope with.

The same procedure was employed to select 27 Interested persons, from a list of 42 adopters and nonadopters residing on campus, for comparison with the 27 Nointerest students. The "random rejection" was carried out separately for on-campus adopters(17) and nonadopters(25). This was to ensure that the differences in proportion of adopters to nonadopters is reflected in the composition of the Interest group of 27.

## Hypotheses

The overriding hypotheses of this study are as follows:

- A. The median of the No-Interest group is significantly less than the median of the Interest group for the variables:

- H<sub>1</sub>: Expectation from TM
- H<sub>2</sub>: Opinion of TM
- H<sub>3</sub>: Discussion of TM with others
- H<sub>4</sub>: No. of persons discussed TM with
- H<sub>5</sub>: Interpersonal Influences
- H<sub>6</sub>: Dogmatism

- B. The median of the No-Interest group is significantly greater than the median of the Interest group for the variables:

- H<sub>7</sub>: Religiosity
- H<sub>8</sub>: Positivity of attitude to the concept of God

- C. The median of Nonadopters is significantly less than the median of adopters for the variables:

- H<sub>9</sub>: Expectation from TM
- H<sub>10</sub>: Opinion of TM
- H<sub>11</sub>: Discussion of TM with others
- H<sub>12</sub>: No. of persons discussed TM with

H<sub>13</sub>: Interpersonal influences

H<sub>14</sub>: Assessment of TM introductory lecture

H<sub>15</sub>: Dogmatism.

D. The median of Nonadopters is significantly greater than the median of Adopters for the variables:

H<sub>16</sub>: Religiosity

H<sub>17</sub>: Positivity of attitude to the concept of God

H<sub>18</sub>: Age

These hypotheses involve one-tailed tests (nonparametric) with two independent samples. The Mann-Whitney U test will be employed to test these hypotheses. In each case, the null hypothesis is that the two samples being compared (Interest-No-Interest, Adopters-Nonadopters) are from populations with the same median, hence from the same distribution. The null hypothesis of no difference in median will be rejected only for significance at .05 level and lower.

## Guiding Propositions

"fastabs" runs will be made to reveal the distribution of scores on the variables. Guiding propositions rather than strict hypotheses will govern the interpretation of this aspect of the analysis.

\* Greater proportion of adopters:

- \* -heard of TM in the last two years
- \* -heard of TM through interpersonal media(e.g. friends and family members)
- \* -asked SIM for information on TM
- \* -had practiced at least one other form of meditation

\* Greater proportion of freshmen and sophomores adopted than rejected TM;

\* Greater proportion of freshmen and sophomores than other classes adopted TM;

\* Greater proportion of female than male adopted TM;

\* Greater proportion of the students under 21 years old adopted TM than rejected it;

\* Greater proportion of the students under 21 than students over 21 adopted TM.

\* Greater proportion of Interest Group members expect spiritual benefits from TM than expect nonspiritual benefits;

\* Greater proportion of Interest group members hold favorable opinion of TM than hold indifferent and unfavorable TM opinion;

\* Greater proportion of female than male in the No-interest group discussed TM.

## CHAPTER FOUR

### ANALYSIS OF DATA AND DISCUSSION OF RESULTS

#### ANALYSIS

#### Tests of Hypotheses

TABLE 1

Mann-Whitney U test comparing the  
Interest Group and the No-interest Group on 8 variables

	<u>Rank Sum</u>			
	No-interest Group (n=27)	Interest Group (n=27)	U	Significance level
Expectation from TM	596	889	218	.0052*
Opinion of TM	499	986	121	.000'*
Discussed TM	675	810	297	.173
No.of persons discussed TM with	685	801	307	.280
Interpersonal influences	663	823	285	.135
Dogmatism	729	756	351	.738
Religiosity	948	537	159	.000*
Attitude to God	891	594	216	.003*

\* Significant at .05 level



The null hypothesis is rejected for  $H_1$  (Expectation),  $H_2$  (Opinion),  $H_7$  (Religiosity) and  $H_8$  (Attitude to God). Not only are the two groups significantly different (at .05 level) on these variables but the directions of difference hypothesized are supported. Students who have attended a TM introductory lecture (whether or not they ultimately adopted TM) expected significantly more spiritual benefits from involvement in transcendental meditation, than students who have demonstrated no such interest in TM; the former also hold significantly more favorable opinion of transcendental meditation. By contrast, students who have shown no interest in TM are significantly more religious and hold more positive attitude to the concept of God.

Although the difference in the extent to which interested students and non-interested students discussed TM with others is not significant at .05 level, the expected direction of difference is borne out. There is absolutely no difference between the two groups on their measures of dogmatism.

TABLE 2

Mann-Whitney U test comparing  
Adopters and Nonadopters on 10 variables

	Rank Sum			
	Nonadopters (n=27)	Adopters (n=27)	U	Significance level
Expectation from TM	912	1300	351	.0054*
Opinion of TM	1072	1138	512	.395
Discussed TM	1056	1155	495	.382
No. of persons discussed TM with	1044	1167	483	.385
Interpersonal influences	1062	1149	501	.513
Assessment of TM introductory lecture	1085	1127	524	.730
Dogmatism	1089	1121	528	.767
Religiosity	1185	1026	465	.240
Attitude to God	1244	968	407	.042*
Age	962	1249	401	.041*

\* Significant at the .05 level

The null hypothesis of "no difference" is rejected for the variables Expectation, Attitude to God, and Age. The directions of the one-tail tests are supported for the hypotheses on the first two variables( $H_9$  and  $H_{17}$ ) but not for Age( $H_{18}$ ).

Students who adopt TM show significantly greater spiritual expectations than material expectations. The converse holds for students who fail to adopt TM after attending the lectures.

Adopters and nonadopters differ in the extent of their religiosity but not significantly so. In contrast, the two groups are significantly different in the positivity of their attitude to God. Nevertheless the direction of difference in religiosity is consistent with the hypothesis and with the direction of difference in attitude to God. The Kendall correlation of religiosity and attitude to God for adopters and nonadopters combined is .64, which is just above the .50 mark but positive and significant at the .001 level.

The result of the test on age differences between adopters and nonadopters poses an interesting problem. While the null hypothesis should be rejected, the actual direction of difference makes it impossible for us to accept our research hypothesis. The rank sum on age for adopters is higher than that for nonadopters. This is the opposite of the direction stipulated by Hypothesis 18. Therefore, while we reject the null hypothesis, we cannot accept the research hypothesis that nonadopters have greater median in age than adopters. Nevertheless, we will like to take note of the significance of the difference in age between adopters and nonadopters and comment on it during later breakdown of the data,

There is no support for the hypotheses that adopters and nonadopters differ significantly on the variables Opinion of TM( $H_{10}$ ), Discussed TM ( $H_{11}$ ), No. of Persons discussed TM with( $H_{12}$ ), Interpersonal influences( $H_{13}$ ) Assessment of lecture( $H_{14}$ ), Dogmatism( $H_{15}$ ), and Religiosity( $H_{16}$ ). For these variables, we cannot reject the null hypothesis. However, the direction of difference on dogmatism should be noted as indicative of slightly greater dogmatism measures for adopters.

# Fastab Runs: Interest Group versus No-Interest Group

TABLE 3(a)

Fastab run: Interest by Expectation

	Non-spiritual	Moderate spirit.	High spirit.
No-Interest (n=27)	18 (67%)	7 (26%)	2 (7%)
Interest (n=27)	7 (26%)	16 (59%)	4 (15%)

Raw chi-square=9.03 with 2 df  
Significance=.011; Kendall r=.369

TABLE 3(b)

Fastab run: Interest by TM opinion

	Unfav. orable	Indiffe- rent	Fav
No-Interest (n=27)	1 (3%)	18 (67%)	8 (30%)
Interest (n=27)	0	1 (4%)	26 (96%)

Chi-square=25.7 with 2 df  
Signif.=.000; Kendall r=.68

TABLE 3(c)

Fastab Run: Religiosity by Interest

Religiosity	No-Int.	Interest
Low (n=5)	2 (40%)	3 (60%)
Moderate (n=33)	9 (27%)	24 (73%)
High (n=16)	16 (100%)	0

Raw chi-square=23.02 with 2 df  
Signif.=.000; Kendall r= -.548

TABLE 3(d)

Fastab Run: Attitude to God by Interest

Positivity of attitude to God	No-Int	Interest
Low (n=0)	0	0
Moderate (n=27)	8 (30%)	19 (70%)
High (n=27)	19 (70%)	8 (30%)

Chi-square(corrected)=7.41 with 1 df  
Signif.=.0065; Kendall r= -.408

Fastab runs were made for the four variables that were significant in the two-sample test of differences between the Interest and Non-Interest groups.

Expectation from TM: Seventy-four percent (20 out of 27) of the students who attended the TM lectures (thereby demonstrating their interest) indicated that they expected spiritual benefits from practicing TM. Only 26% of this group (7 out of 27) gave non-spiritual benefits as their reasons for

interest in TM. In contrast, 67% of the No-Interest group(18 of 27) reported non-spiritual or material benefits as reasons that would warrant<sup>\*</sup> their interest in TM, and only 33% (9 of 27) gave spiritual gains as reasons that would justify such interest. Pre-coded responses in the non-spiritual category included: "to help my financial situation and/or business", "to keep me occupied", "to satisfy my curiosity", while responses in the spiritual category included: "help me know more about God" and "help me find inner peace". These findings support the proposition that the greater proportion of the interest group expect spiritual rather than material benefits from TM.

Opinion of TM: Sixty-seven percent of the No-Interest group(18 of 27) were indifferent to transcendental meditation. Thirty percent ( 8 of 27) expressed favorable opinion of TM while one of the 27 gave an unfavorable opinion of TM. By comparison, all but one of the 27 students in the Interest group(96%) expressed favorable opinion of TM. One was indifferent to TM and none gave an unfavorable opinion of TM. This also supports the proposition that the greater proportion of persons interested in TM will express favorable opinion of the practice.

Religiosity: All 16 persons who scored high on the religiosity measure were in the No-Interest group. Seventy-three percent of those with moderate religiosity scores(24 of 33) and 60% of those with low religiosity scores(3 of 5) were in the Interest group as compared with 27% (moderate) and 40%(low) for those in the No-Interest group. A greater proportion of the students who had shown no interest in TM had higher religiosity scores in comparison to students who had shown such an interest.

Positivity of attitude to God: Seventy percent of Ss with moderately positive attitude to God scores(19 of 27), and only 30% with highly positive God-attitude(8 of 27) were in the Interest group. For the No-Interest group, the situation is reversed: 70% have high positive scores and 30% have moderately positive scores.

Fastab runs were also made to understand the score distribution for a number of other variables.

Time of first Knowledge of TM: Fifty-seven percent of the Interest group(15 of 27) heard of TM only within the last two years. Half as many(7) first heard of TM two to four years ago, and 15%(4 of 27), heard more than four years ago. Of the No-Interest group, 48%(13 of 27) first heard of TM between 2 and 4 years ago, 19%(5 of 27) heard more than four years ago, and 33%(9 of 27), first heard of TM in the last two years. This indicates that more students with expressed interest in TM heard of the practice more recently than their counterparts with no interest in TM.

This finding aroused our curiosity as to possible influence of age differences between members of the Interest and No-Interest groups. Seventy percent of the Interest group(19 of 27) and 82% of the No-Interest group(22 of 27) were under 21. Fifteen percent of each group(4 of 27) were between 21 and 23, while 15%(Interest) and 4%(No-Interest) were 23 and older. These differences in age were not significant at the .05 level (chi-square significance=.364). Furthermore, the Kendall correlation of Age and Interest is only .144.

It appears that the difference in time of first knowledge of TM between the Interest and the No-Interest groups is merely random. It is not significant at the .05 level(chi-square significance: .183).

Furthermore, if the proportion of students who heard of TM during the last four years is combined in each group, there is little difference between the remaining proportion who first heard of TM more than four years ago (18% for No-Interest, 15% for Interest).

Medium of First Knowledge of TM: About half the proportion of both groups (14 of 27), first heard of TM through the mass media. However, twice as many of the Interest group as the No-Interest group (11 to 6), first heard of TM from interpersonal, face-to-face sources (family, close friends and neighbors). The mass media sources were print (newspaper, magazines, pamphlets, books etc), and electronic (radio, television, telephone etc).

Discussion of TM: About 50% of each of the Interest and No-Interest groups did not discuss TM with anyone. However, twice as many persons in the Interest group as in the No-Interest group (18 to 9) discussed TM with at least one person. Eleven persons in the Interest group (40%), and 9 in the No-Interest group (33%) discussed TM with two or more persons.

Proof of Appropriateness of No-Interest Group Selection: The breakdown of the Interest and No-Interest groups on Educational Level (Class) and Age provided good proof of the appropriateness and randomness of the procedure used in selecting the No-Interest group for comparison with the Interest group. There is no significant difference between the two groups in Age and Education-which is to be expected since both samples were from the same educational institution. The chi-square test of the difference in Age was significant at .364 level while that for Education was significant at .544 level.

### Further breakdown of the No-Interest Group

The sample comprised 12 male and 15 female students. Twenty-two of these were under 21 years of age, four were between 21 and 22, and one was 23 and above. The educational level of the Ss corresponded closely with their age: 22 were freshmen or sophomore, three were junior or senior, and the remaining two were graduate students.

There is no significant difference between male and female No-Interest students, proportion-wise, in their scores on dogmatism, religiosity, and positivity of attitude to God. About 75% in each category had moderate dogmatism score(significance: .78). Roughly half of the high religiosity scores went to each sex(significance: .26), while 53% of the males (10 of 19) and 47% of the females(9 of 19) had high attitude-to-God scores(significance: .37).

In line with expectation (see propositions), greater proportion of female than male(62% to 38%) in the No-Interest group had discussed TM with someone. In addition, of the 8 who discussed TM with two or more persons who were close friends or relatives, 5 were female.

In the No-Interest group as a whole, three(out of 27) discussed TM with two or more close friends or relatives who were TM meditators. Four had discussed TM with close friends or relatives who were not TM meditators.

Eleven of the 18 persons who saw only non-spiritual benefits from interest in TM had talked to no one about TM. Surprisingly, neither of the two persons who felt high spiritual benefits accrue from involvement in TM had discussed the practice with anyone. However, six of the seven Ss who saw moderate spiritual gains from TM had discussed TM with at least one person.



Thirteen of 18 persons with views of non-spiritual benefits from TM were indifferent to the practice while four expressed favorable opinion of TM. Of the seven who saw moderate spiritual gains from TM, four held favorable opinion of the practice and three were indifferent to it. Of some importance, the two persons who saw high spiritual expectation from involvement in TM still expressed neutral, indifferent opinion of the practice.

# Fastab Runs: Adopters versus Nonadopters

TABLE 4(a)

## Fastab: Adoption by Expectation

	Non-spiritual	Moderate spirit.	High spirit.
Nonadopters (n=33)	13 (39%)	18 (55%)	2 (6%)
Adopters (n=33)	5 (15%)	19 (58%)	9 (27%)

\* Chi-square: 8.04 with 2 df. Signif. = .018  
Kendall r: .33

TABLE 4(b)

## Fastab: Adoption by Attitude to God

	Negative	Moderate Positive	High Positive
Nonadopters (n=33)	0	12 (36%)	21 (64%)
Adopters (n=33)	1 (3%)	19 (58%)	13 (39%)

\* Chi-square: 4.46 with 2 df. Signif. = .107  
Kendall r: .25

TABLE 4(c)

## Fastab: Adoption by Age

	Under 21	21-22	23 & above
Nonadopters (n=33)	22 (67%)	7 (21%)	4 (12%)
Adopters (n=33)	14 (42%)	10 (30%)	9 (27%)

\* Chi-square: 4.23 with 2 df. Signif. = .12  
Kendall r: .241

TABLE 4(d)

	Nonadopt.	Adopters
Under 21 (n=36)	22 (61%)	14 (39%)
21-22 (n=17)	7 (41%)	10 (59%)
23 & above (n=13)	4 (31%)	9 (69%)

## Fastab: Age by Adoption

Expectation from TM: More than twice as many nonadopters as adopters (13 to 5) indicated that they were interested in TM for nonspiritual reasons. By contrast, 27% of the adopters(9 of 33) and only 6% of the nonadopters(2 of 33) had high spiritual expectations of TM. About half the proportion in each group had moderate spiritual expectations.

Positivity of Attitude to God: Sixty-four percent of the nonadopters (21 of 33) had high positive scores on the attitude to God scale, compared to 39% (13 of 33) of the adopters. None of the nonadopters had a negative score while one of the adopters did. However, 58% adopters (19 of 33) compared to 36% Nonadopters(12 of 33), had moderate positive scores.

Age: The greater proportion in each group is of students under 21 years of age, while the smallest proportion are over 22. (see Table 4(c) ). This tallies with the educational level distribution of the Interest group most of whom were freshmen and sophomores (see page 40).

However, of all the students under 21, 61% (22 of 36) did not adopt TM while 39% (14 of 36) adopted it (Table 4(d) ). By contrast, 69% of the students over 22 (9 of 13) adopted TM while 31% (4 of 13) did not. Thus while about twice as many students under 21 rejected TM than adopted it, more than twice as many students over 22 adopted TM than rejected it.

Fastab runs were made for a number other major variables.

Time and Medium: Sixty-seven percent(22 of 33) adopters heard of TM in the last two years as against 61%(19 of 32) of the nonadopters. Forty-two percent of the adopters(14 of 33) heard of TM through interpersonal, face-to-face medium, as compared with 52% (17 of 33) of the nonadopters. Forty-six percent adopters (15) and 42% nonadopters(14) first heard of TM through the mass media(radio,television, print)

Use of official sources(SIMS): Only six adopters(18%) and 8 nonadopters (24%) indicated that they had ever contacted SIMS, the official organ of TM in Lansing, to ask for information on transcendental meditation.

Practice of other meditation forms: Contrary to expectation, only two persons out of the total sample of 66 adopters and nonadopters(3%) had practiced any other kind of meditation. Both persons had favorable opinion of their experience with the other meditation forms but only one adopted TM. The measure of "predisposition" which was a composite of scores on past meditation and expectation from TM showed that 63% of the adopters(20 of 33) as against 52% of the nonadopters(17 of 33) were moderately predisposed to TM. In addition, 42% nonadopters as compared with 31% adopters had no noticeable predisposition to TM.

Discussion of TM: Fifty-one of the 66 adopters and nonadopters(77%) had discussed TM with at least one person. Fifty-three percent of these (27 of 51) adopted TM. Fifty-eight percent of the adopters(19 of 33) versus 49% nonadopters(16 of 33) talked to two or more persons on TM.

Close to twice as many adopters as nonadopters(15 to 9) discussed TM with persons who were relatives or close friends. Also, about twice as many adopters as nonadopters(11 to 6) discussed TM with two or more persons who were already practicing transcendental meditation. On the whole, 24 of the 66 adopters and nonadopters(36%) discussed TM with relatives or friends, and 39 (60%) had discussed TM with at least one person who was a TM meditator.

Interpersonal Influences: On the interpersonal influence measure, which is a composite of the scores on the four variables that have to do with discussion of TM, 67% of the adopters(22 of 33) had high scores as compared with 60% of the nonadopters(20 of 33). Fifteen percent adopters as

against 12% nonadopters(4) had moderate interpersonal influence scores while 18% adopters(6 of 33) versus 27% nonadopters(9 of 33) had no noticeable 'interpersonal influence'. Thus adopters appear to have a slightly higher measure of interpersonal influence than nonadopters.

Opinion of TM and Assessment of Lecture: Interestingly, not one of the 66 adopters and nonadopters expressed an unfavorable opinion of TM. This seems consistent with the reasoning that attendance of a TM introductory lecture was indicative of at least a partial interest in transcendental meditation. Thirty-one adopters(94%) and 29 nonadopters(88%) were favorable to the practice of TM while the remaining were indifferent.

Twenty-five of the 33 adopters(76%) as against 23 of the nonadopters (70%) assessed the introductory lectures that they attended as 'convincing! Twelve percent adopters and 6% nonadopters evaluated the lectures as 'unconvincing'; while 12% adopters and 24% nonadopters were indifferent.

Religiosity: Although 61% of both adopters and nonadopters(20 of 33) scored low on the religiosity measure, a greater proportion of nonadopters than adopters(33% to 24%) had high religiosity scores. Nonadopters seem to be more religious than adopters but not significantly so.

### Further Breakdown of Adopters Group

The 33 adopters consisted of 20 males(61%) and 15 females(39%). Of the 33, fourteen(42%) were under 21, 10(30%) were between 21 and 22, and 9(27%) were 23 and older.

None of the adopters younger than 23 had heard of TM before 4 years ago. Eighteen of the 24 adopters in this age group(75%) heard of TM for the first time, during the last two years.

Of the 22 in all age groups who heard of TM in the last two years, eight(36%) heard of the practice through the mass media(radio, television etc), while 11 or 50% heard of TM from friends, relatives or neighbors.

Twenty-seven of the adopters(82%) had talked to someone about TM before attending the introductory lectures. Of these, 17 were males, more than half of whom had first heard of TM from friends, relatives or neighbors. About the same proportion of the females who discussed TM(10) had also first heard of the practice in face-to-face situations.

None of the adopters who expressed neutral opinion of TM had heard of the practice in face-to-face circumstances. By contrast, over half of the 31 adopters who held favorable opinion of TM had first heard of TM in face-to-face situations.

Ninety-four percent of the males(16 of 17) and 90% of the females (9 of 10) who discussed TM with someone, also held a favorable opinion of TM. Eighty percent of the males who discussed TM had such discussion with persons who were TM meditators, as compared with 60% of the females.

Over 80% of each sex expressed interest in TM for moderate to high spiritual reasons. Twenty-six of the 28 adopters(84%) who expected moderate or high spiritual benefits from TM also held favorable opinion of TM.

There was high correspondence between opinion of TM held by adopters and their assessment of the introductory lectures that they attended. Twenty-three of the 31 adopters who had favorable opinion of TM(74%) also assessed the lectures as convincing. Thirteen percent(4 of 31) were neutral or indifferent, and the same proportion assessed the lectures as unconvincing.

About 75% of each sex had moderate dogmatism scores. None of the females had a low score on either the religiosity or the attitude to God scales. However, 25% of the males(5 of 20) had low religiosity scores and five percent of the males(1 of 20) also had a low attitude to God score.

#### Further Breakdown of the Nonadopters Group

The 33 nonadopters consisted of 21 males(64%) and 12 females(36%). Twenty-one of the 23 (66%) were under 21, seven(22% were 21-22, while four(12%) were 23 or older.

The largest proportion of the nonadopters under 23(61%) heard of TM in the last two years while half of the over-23's heard of TM for the first time more than four years ago.

Sixty-three percent of the nonadopters who heard of TM in the last two years(12 of 19) did so through friends, relatives or neighbors. Only half of this proportion first heard of TM through the mass media. In contrast, 67% of the nonadopters who first heard of TM more than four years ago(4 of 6), heard through the mass media(radio, television, books, newspapers etc) and half this proportion heard from friends, relatives or neighbors. These figures, interestingly, agree closely with those for the adopters: 63% of the adopters who heard of TM only in the last

two years(14 of 22) did so in face-to-face situations, while 67% of the adopters who had known of TM for four or more years heard of TM through the mass media. It would appear that the most common channels involved in the propagation of TM had shifted from mass before the 70's, to the more interpersonal media in recent years.

Seventy-two percent of the nonadopters(24 of 33) had discussed TM prior to attending the introductory lectures. Fifteen of these(63%) had discussed TM with two or more persons. Six of these 15(40%) had discussed TM with two or more persons who were TM meditators.

Eighty-eight percent of the nonadopters who heard of TM in face-to-face situations(15 of 17) and all 14 who heard of TM first via the mass media, held favorable opinion of TM. This distribution is significant on a chi-square test at .0003.

All nine female and 13 of 15 male nonadopters who discussed TM also held a favorable opinion of the practice. Twelve of the 21 male nonadopters(57%)were interested in TM for moderate to high spiritual reasons compared to 8 of the 12 female nonadopters(67%). .

Ninety-two percent of the nonadopters who expressed no substantial spiritual interest in TM(12 of 13) nevertheless still held a favorable opinion of the practice. Over 70% of the nonadopters who held favorable opinion of TM(21 of 29)assessed the introductory lectures as convincing, 20%(6 of 29) were indifferent and 7%(2 of 29) evaluated the lectures as unconvincing.

About 85% of each sex had moderate dogmatism scores and 9% scored high on the dogmatism scale. Fifty-eight percent of the female nonadopters(7 of 12) and 19% of the males(4 of 21) had high religiosity scores while 76% of the males(16 of 21) and 33% of the females(4 of 12) also



had moderate religiosity scores. In addition, 75% of the females(9 of 12) and 57% of the males(12 of 21) had high attitude to God scores. Dogmatism and religiosity appear to discriminate between adopters and non-adopters but not significantly so.

# Important Correlations

No-Interest Group (n-27)

## Key to Variable Labels

TIME= Time of first know-  
ledge of TM  
MEDIUM= Medium of first  
knowledge of TM  
SEX= Sex of respondents  
AGE= Age of respondents  
TMOPIN= Opinion of TM  
ADOPTN= Whether adopted  
or rejected TM  
WHYTM = Expectation  
from TM  
ASSESS= Assessment of  
TM lectures

RELIGN= Religiosity  
GOD= Positivity of  
attitude to God  
DOGMA = Dogmatism  
EDUC = Education level  
(class)  
TALKTM= whether or not  
respondent discu-  
ssed TM with some-  
one  
MANY = How many persons  
respondents discu-  
ssed TM with  
CLOSE= How close a rela-  
tionship responder  
had with persons  
discussed TM with  
TMMED= How many of MANY  
are TM meditators

TABLE 5(a)

## Major Correlations: No-Interest Group

Corr. of Variable	with Variable	Corre- lation
WhyTM	Sex	.33
Relign	God	.78*
God	Dogma	.31
TalkTM	Many	.91*
Many	Close	.84*
Close	TMOPIN	.50*
TMOPIN	Dogma	-.39
Relign	Dogma	.38
TalkTM	Close	.77*

Corr. of Variable	with Variable	Corre- lation
Many	TMmed	.51*
Time	Age	-.37
TalkTM	TMmed	.54*
Many	TMopin	.37
Educ	Age	.77*
TalkTM	TMopin	.41*
TMmed	TMopin	.41*
Close	TMmed	.39

\* Correlation of .50 and above. All correlations are Kendall nonparametric.

Adopters (n=33)

TABLE 5(b)

Major correlations: Adopters

Corr. of Variable	with	Variable	Corre- lation	Corr. of Variable	with	Variable	Corre- lation
Medium		Assess	-.42	Dogma		Close	-.40
Medium		TMmed	.36	TalkTM		Many	.72*
Age		Educ	.57*	TalkTM		Close	.54*
TMopin		God	-.31	TalkTM		TMmed	.50*
Assess		God	.31	Many		Close	.58*
Relign		God	.69*	Many		TMmed	.54*
God		Dogma	-.31	Close		TMmed	.35

\* Correlations of .50 and above. All correlations are Kendall nonparametric.

Nonadopters (n=33)

TABLE 5(c)

Major correlations: Nonadopters

Corr. of Variable	with	Variable	Corre- lation	Corr. of Variable	with	Variable	Corre- lation
Time		TMmed	-.42	Dogma		TMmed	-.38
Medium		TalkTM	.33	TalkTM		Many	.79*
Sex		Relign	.33	TalkTM		Close	.56*
Sex		Educ	-.32	TalkTM		TMmed	.63*
Age		Relign	-.33	Many		Close	.58*
WhyTM		Close	.31	Many		TMmed	.63*
Assess		God	-.48	Close		TMmed	.52*
Relign		Educ	-.35				

\* Correlations of .50 and above. All correlations are Kendall nonparametric.

Open-Ended Questions.

Q.3 (No-Interest Group questionnaire):

"Why have you never attended a TM lecture(introductory lecture on TM held on campus and in town?"

Responses:

- Never knew of any
- No distinct interest
- No interest
- Couldn't make the scheduled times
- No time
- Didn't feel it was worth the money
- Never heard where lectures held
- There was never one held when I had free time
- Didn't know that much about it
- Not curious enough
- No time; never really thought much about it
- TM is merely a false form of release from everyday problems and responsibility (John 14:6)
- Lack of time and money kept me away
-

## DISCUSSION

Adopters and nonadopters differed most in their expectations from TM. More of the adopters than the nonadopters expressed interest in TM for spiritual rather than non-spiritual(material) reasons (Mann-Whitney U test significant at .005). Both groups held favorable opinion of TM and felt that the introductory lectures which they attended were convincing. About equal number of adopters as nonadopters had discussed TM with at least one person prior to attending the introductory lectures. However, twice as many adopters compared to nonadopters had such discussion with persons who were relatives or close friends, rather than mere acquaintances.

The impact of mass and interpersonal media in disseminating information on TM was comparable for both adopters and nonadopters: about half of each group first heard of TM via radio, television, print etc(mass media), while the other half first heard of TM in face-to-face encounters, mainly with friends and relatives(interpersonal media). However, stronger interpersonal influences on adopters are indicated at the persuasion-decision stages: twice as many adopters as nonadopters discussed TM with close friends and relatives more than 70% of whom were already practicing transcendental meditation. Thus while both mass and interpersonal media were active in disseminating initial information on TM (knowledge stage), the interpersonal channels appear to have played a more important role at the

persuasion and decision stages. This finding is consistent with the literature on the diffusion of innovations (see Rogers and Shoemaker, p.382, generalization 8-1).

The comparison of the Interest and No-Interest groups showed that the two groups were statistically most different in their opinion of transcendental meditation and on the religiosity measures (Mann-Whitney U test significant at .00 for both variables). While 18 of the 27 subjects in the No-Interest group were indifferent to TM, all but one of the 27 subjects in the Interest group held favorable opinion of the practice. All 16 subjects who had high scores on the religiosity measure were in the No-Interest group, while all the 27 members of the Interest group had low or moderate religiosity scores. Thus the subjects in the Interest group were systematically more favorable to TM but showed less preference for conventional religions.

The Interest and No-Interest groups also differed significantly in their expectation from TM and their attitude to God, with the Interest group showing greater preference for TM for spiritual rather than nonspiritual reasons but less willing to accept conventional precepts on God.

As in the comparison of adopters and nonadopters, both mass and interpersonal media played important part in first knowledge of TM reported by both the Interest and No-Interest groups. However, twice as many of the subjects in the Interest group as compared with the No-Interest group had discussed transcendental meditation (TM) with one or more persons.

\* \* \*

The findings of this study raise several important questions. First, considering the similarity of TM opinion and assessment of introductory lectures by both adopters and nonadopters, how can we explain the difference in ultimate decision by the two groups?

In an attempt to answer this question, we decided to contact again a cross-section of the nonadopters. We encountered some problem in this regard. Many of the subjects had changed residence since November and only a few had left forwarding addresses. We finally located eight nonadopters contacted in a random order from the list of nonadopters.

Six of the eight indicated they could not "afford" the \$65 course fee needed for initiation into TM. Three of these added that taking up TM was "not worth the money" asked for, but said they might be willing to pay "a maximum of 20 to 30 dollars" for initiation. Five of the eight were still favorable to TM while three were neutral. Only one had talked to someone about TM after the lectures. Could it be that the adopters had more money to spend than the nonadopters? Alternatively, was the financial question merely hiding some other factor, for example, differences in depth of initial interest in TM?

The second line of reasoning was particularly intriguing to us because in the statement "TM is not worth the money", "worth" could be interpreted in terms of how much "gain" or benefit a subject expected from taking up TM. If this reasoning is correct, the "worth" perceived in taking up TM should be closely related to the depth of interest in TM indicated before final decision to adopt or reject was made. To clarify this issue, we re-examined adopters and nonadopters on the depth of their interest in TM.

A substantially greater proportion of the students who had indicated high spiritual interest in TM adopted TM than rejected it (83% compared to 18%). By contrast, a substantially greater proportion of those who had expressed no noticeable spiritual interest in TM rejected rather than adopted TM (72% compared to 28%). It will appear that what we have here is not a case of adopters having more money to spend but of adopters having MORE WILLINGNESS than nonadopters to spend money on TM to the tune required. This alternative explanation makes more sense to us.

Second, the traditional notions of religion and of God seem to appeal less to most of the subjects with spiritual interest in transcendental meditation. Does interest in TM reflect a search by the college students concerned for a substitute to present definitions of organized religion and the popularly held concepts of God?

We are inclined to give an affirmative answer to this question. We note that some of the subjects in the No-interest category indicated that they are not interested in TM precisely because they were satisfied with their present religions. In response to the question: "Why have you never attended a TM lecture?", one subject even directly affirmed that TM was "a false religion" and cited the Bible as his authority. Conversely, subjects who were highly interested in TM for spiritual rather than nonspiritual reasons at the same time felt less willing to <sup>accept</sup> traditional religious concepts. It seems to us that all the subjects were expressing a need for spiritual satisfaction but seeking fulfilment in different ways: for adopters and nonadopters, in TM, for the No-interest group, in the more conventional religious practices.



This is not to say that the sole reason for meditation by students is lack of interest in conventional religions. Certainly, an adopter of TM who finds his or her expectations from TM fulfilled is likely to settle into TM as a good and useful practice in itself. Nevertheless, it seems to us that a rejection, or perhaps a questioning, of organized religious practices coupled with a search for alternative media for spiritual fulfillment, may play an important part in these subjects' initial interest in transcendental meditation, as perhaps, in other forms of meditation.

A third interesting issue arising from the findings that we will like to discuss concern the use of official TM sources. Only 14 of the 66 adopters and nonadopters indicated that they had ever contacted SIMS, the official TM organization in Lansing, to ask for information on transcendental meditation. Thus about 80% of the subjects got involved in TM following "passive" information from SIMS rather than through their own active effort. This suggests a greater demand on SIMS to "take TM to the people". This finding is compatible with the role of the change agent as defined by Rogers and Shoemaker, which includes creating in clients awareness of the need for change while pointing out the suitability of his suggested solution (p.229).

We will also like to give some thought to the methodology used in this study with particular attention to the randomness of the samples and the generalizability of the findings. Most diffusion studies use descriptive statistics in analysing their data. We are aware of the appropriateness of descriptive statistics for field studies but we have consciously applied both inferential and descriptive statistics in analysing these data to demonstrate the utility of the former in non-laboratory research. This then raises the question of a possible violation of the randomness assumption made in using inferential statistics.

In a strict statistical sense, the randomness of our adopters and nonadopters groups can be questioned. In choosing these groups, we have relied on what we shall call "natural", rather than "manipulative" procedures. While this is unconventional, we nevertheless feel that the effect of sampling bias, if at all present, is very minimal. Our rationale for making this claim is as follows: lectures on TM are given from fall term through spring term. While the size of attendance may differ, we see no reason to believe that students attending a set of lectures during any one term could differ non-randomly from those in any other terms with regards to our main variables, such as opinion of TM, expectation from TM, dogmatism, religiosity and interpersonal influences. Also, the choice of the specific lectures from which the subjects were "picked" was randomly made, and only students who volunteered were used in the study. In addition, we feel that the size of our samples gives us an adequate measure of confidence in the data.

Two aspects of generalizability arising from this deserves comments. First, generalizability to student population; second, generalizability to non-student population. Our third sample, that of the No-Interest group, was picked from the students' directory using a procedure described by Moser and Kalton(1972) as "quasi-random sampling" in that the name list in the students' directory, although systematic, was ordered alphabetically, a dimension of no relevance to our study. Quasi-random sampling usually produces a more even spread of ~~the~~ the sample over the population list than does total random sampling. We thus feel that our samples are not biased and our findings are generalizable to the student population in Michigan State University. Confidence in generalizing the findings to college students in the United States of America in general, can of course, come only through support from replications of this study elsewhere.

The question of generalizability to non-student populations poses a more fundamental problem, more so because few diffusion studies have been done with student populations. For one thing, most students live in dormitories and therefore have greater probability of interacting with others, than non-students. It is possible that this increase in likelihood of interaction may be partly responsible for the strong interpersonal influences observed in this study, and by inference, for the opinion of TM held by the subjects. For another thing, willingness to run the expenses for adopting TM may in part be a function of income, suggesting that a higher proportion of adoption will occur with a non-student, working population. These are major limitations in generalizing our findings to non-student populations, but again, the questions involved can be resolved empirically.

Finally, we will like to raise an issue that concerns the type of innovation studied, namely, an idea-specific innovation. Since object-specific innovations "sell" material as well as their idea components, we typically think of them as more expensive to adopt than idea-specific (or non-material) innovations. However, a substantial fee is required to adopt TM, introducing a strong material dimension to what should properly be a non-material innovation. The financial demand of TM takes on even greater prominence with a student population. Nevertheless, we have shown that under this financial constraint, adoption proved to be a function of depth of spiritual interest in TM. The issue became one of asking oneself: "Am I interested in TM enough to spend this much money on it? Is it worth this much to me?"

It is conceivable that more of the nonadopters would have adopted TM if the financial constraint was not present. However, by the same reasoning, absence of the financial demands could only increase the number of adopters, not eliminate the group of nonadopters. It is reasonable to assume that some of the subjects with no spiritual interest in TM would still not adopt the practice even if they could do so without any financial expenses.

Important questions arise from this conclusion. If the likelihood of adoption or rejection of TM is determined largely prior to attending the introductory lectures (in the form of Interst), what role then does information acquired at these lectures play in decision? Is it in fact superfluous? Both adopters and nonadopters judged the lectures as "convincing" but only the former went beyond this initial stage. Would highly interested persons have adopted TM even without the introductory lectures?

This reasoning has serious implications for change management. It suggests that for many who attend them, the introductory lectures may only reinforce already-formed tendencies and desires, rather than persuade them; or alternatively, that the lectures were persuasive only with the segment of the audience that was still "sitting on the fence", unsure of whether or not to get involved in TM. Whatever the case, we are talking of decision, or attempts at decision, occurring prior to formal persuasion effort by the TM organization. This issue clearly deserves attention in further studies of the innovation-decision process.

## Some Generalizations

Only a few of the 103 generalizations from diffusion research contained in Rogers and Shoemaker(Appendix A) are applicable to this study. This is because nearly all the contemporary studies of diffusion have focussed on differences between adopters at different time periods in a social system, rather than between adopters and nonadopters at the same time period which is the objective of this study. The following are the generalizations from the list that directly bear on this study:

- \* "Earlier knowers of an innovation have greater change-agent contact than late knowers" (generalization 3-5).

Rogers and Shoemaker reported overwhelming support for this generalization but this is not borne out by our findings. Of the 14 subjects who asked SIMS for information on TM, only two had heard of TM for the first time prior to four years ago. Seven first heard of TM between two and four years ago, and the remaining five, first heard in the past two years. This is a direct converse to the generalization, i.e. late knowers appeared to have had greater change agent contact than earlier knowers.

- \* "Mass media channels are relatively more important at the knowledge function and interpersonal channels are relatively more important at the persuasion function."(generalization 8-1)

This is compatible with our findings and has already been discussed.

- \* "Change agent success is positively related to the extent of change agent effort"(generalization 7-1).

If we define change agent effort in terms of arranging lectures and supplying information on TM in other ways, our findings support this generalization. Only a small proportion of our samples had themselves made the effort to acquire information about TM directly from the change agency.

- \* "Change agent success is positively related to his credibility in the eyes of his clients" (generalization 7-11)

Only one study was reported supportive of this generalization. Our findings do not support this generalization. Both adopters and nonadopters felt that the introductory lectures were convincing, but only the former went beyond this initial stage.

- \* "Change agent success is positively related to the degree to which his program is compatible with clients' needs" (generalization 7-3)

If we accept the argument that involvement in TM, for many adopters, is aimed at fulfilling a need for spiritual satisfaction, then this generalization is supported by our findings.

\* \* \*

Besides these generalizations, our findings also suggest a number of general propositions. Until further evidence for or against these loose generalizations are available however, they should be regarded as applicable mainly to transcendental meditation, or at best, to idea-specific innovations.

- \*\* "persons with no interest in TM are more likely to hold conventional beliefs about religion and God than persons who have demonstrated interest in TM"  
(Strong evidence in support).
  
- \*\* "Persons with no interest in TM are more likely to hold neutral, uncommitted, rather than favorable or unfavorable, opinion of TM, than persons with demonstrated interest in TM."  
(Strong evidence in support).

- \*\* "Persons with no interest in TM are more likely to expect non-spiritual, rather than spiritual, benefits from engaging in TM, than persons with demonstrated interest in TM".  
(Strong evidence in support)
- \*\* "Adopters expect more spiritual benefits from TM than nonadopters".  
(Strong evidence in support)
- \*\* "Adopters hold more favorable opinion of TM than nonadopters".  
(Data indicate support for this generalization but the evidence is weak and not statistically significant).
- \*\* "Adopters experience greater interpersonal influence in decision than nonadopters."  
(Weak evidence- not statistically significant).
- \*\* "Younger students are more likely to reject TM than to adopt it."  
(Although the evidence in support of this proposition is statistically significant, the variance in Age is too restricted to permit more than weak confidence in this generalization).
- \*\* "Decision on TM, for adopters and nonadopters alike, involves a mental process of balancing reward against cost."  
(Evidence in support of this proposition is inferred from the data)
- \*\* "For many adopters and nonadopters of TM, the introductory lectures merely reinforce decision already made, rather than serve persuasive purposes."  
(Evidence in support of this generalization is also inferred from the data).



## SUMMARY OF RESULTS AND RECOMMENDATIONS

The most significant difference between adopters and nonadopters is in their expectations from TM. A greater proportion of adopters than nonadopters expressed high spiritual interest in TM prior to decision to adopt or reject. It would appear that the depth of pre-decision interest in TM was the critical factor in final decision with adopters showing more willingness to make the financial sacrifices needed to adopt TM. The two groups also differed significantly in Age and positivity of attitude to God. A greater proportion of the under-21's rejected TM while a greater proportion of the over-23's adopted it. In addition, a greater proportion of the nonadopters had high positive attitude-to-God scores than the nonadopters. The difference between adopters and nonadopters on discussion of TM, and dogmatism, although not statistically significant, was in the direction suggesting that a greater proportion of adopters than nonadopters engaged in discussion of TM and scored slightly higher on dogmatism scale. Also, many more of the adopters than the nonadopters had discussed TM with close friends and relatives. The two groups did not differ noticeably in their opinion of TM (both held positive opinion), nor on the religiosity measures. However, slightly more adopters than nonadopters expressed favorable opinion of TM and scored less on the religiosity measures.

The Interest group differed significantly from the No-Interest group in the depth of the members' spiritual expectations from TM, in their opinion of TM, and on measures of religiosity and positivity of attitude to God.

Significantly more of the members of the Interest group expressed more spiritual interest in TM than members of the No-Interest group. Significantly more of the former than the latter also hold favorable opinion of TM but scored less on the religiosity and attitude-to-God measures. The two groups showed no significant difference in the extent to which members discussed TM with other people prior to attending the introductory lectures, nor on the measures of dogmatism. Nevertheless, the direction of difference on these variables suggest that a greater proportion of the Interest group than the No-Interest group engaged in such discussion.

Future research should be directed at throwing light at the implications of these findings for the general population of college students. In spite of the assertions of the TM organization to the contrary, do most college students see transcendental meditation as directly opposed to organized religion? To what extent is students' interest in TM based on this assumption? What specific aspects of meditation are perceived as incompatible with religion? How is information on these aspects acquired? Answers to these and similar questions will be invaluable contribution to the understanding of motivational aspects of innovation-decision behavior.

A replication of this study with non-student population will also be desirable. There is a need to determine whether or not the inverse relationship observed between religiosity and interest in transcendental meditation is confined to student populations. Furthermore, with a working class population, will financial consideration, vis-a-vis interest, show up as a critical factor in decision on TM?

Finally, the influence of the type of innovation studied, namely a spiritual, idea-specific innovation, still needs to be clarified, especially in cross-cultural context. What part, if any, does emotional involvement, usually inherent in spiritual issues, play in the decision on TM? Will the patterns of first knowledge of TM and interpersonal influences on decision observed in this study be confirmed in a replication on a university campus in Europe, Asia or Africa? These are a few of the questions that still need to be answered.

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## APPENDIX

MICHIGAN STATE UNIVERSITY

COLLEGE OF COMMUNICATION ARTS  
DEPARTMENT OF COMMUNICATION

EAST LANSING, MICH. 48824

Dear Participant:

We are interested in a few of the communication-related issues involved in the adoption and practice of transcendental meditation by college students. We know that you, as a potential adopter of transcendental meditation, can help us in this regard.

The attached questionnaire asks for your opinion on these issues. We will appreciate it if you complete the questionnaire without assistance from anyone.

Thanks a lot for giving your time to help us on this study.

Sincerely yours,

*S. Femi Sonaike*

S. Femi Sonaike

Graduate Assistant  
Department of Communication



ID# 74 1-3  
Group# 4  
Exh# 1 5  
Card 1 6

INSTRUCTION: For each question, please put a circle around the number by the response you consider appropriate.

COL.

- 7 1. When did you first hear about transcendental meditation(TM)?
1. 4-8 years ago
  2. 2-4 years ago
  3. In the last 2 years
- 8 2. How did you first hear about TM?
1. print media(newspaper,magazine,pamphlet,book,etc)
  2. electronic media (television,radio,telephone,etc)
  3. family member (includes distant relative)
  4. friend or neighbor
  5. business colleague
  6. acquaintance (e.g.other student,ca-commuter,etc)
  7. high school course or college program
  8. other sources (please specify Poster 3)
- 9 3. Before attending this introductory lecture, did you ask SIMS/IMS for material on TM(e.g.brochure,pamphlet)?
0. No 1. Yes
- 10 4. Besides TM, have you ever practiced any other kind of formal meditation (i.e.one involving an organization)?
0. No 1. Yes
- (If you answered "No" to this question,go to Question 7)
- 11 5. Which kind? (Please include name of organization)
- 12 6. What is your opinion of the other kind(s) of meditation (besides TM) that you have practiced?
1. highly unfavorable
  2. more unfavorable than favorable
  3. undecided
  4. more favorable than unfavorable
  5. highly favorable

For this question, pick THREE responses that you consider most appropriate to your situation. Do this by putting 1, 2 and 3 in the spaces by the responses.

- Put:
1. for the foremost appropriate response
  2. for the next most appropriate response(that is less appropriate than number 1)
  3. for the third most appropriate response.

7. "I am interested in transcendental meditation because I feel it will-

- 13/14
- ☐ help my financial situation and/or business"
  - ☐ keep me occupied"
  - ☐ satisfy my curiosity"
  - ☐ help me understand myself"
  - ☐ help improve my relations with others"
  - ☐ improve my mental and psychological health"
  - ☐ help me know more about God"
  - ☐ help me find inner peace"
  - ☐ serve me as a tool for exploring the spiritual and the metaphysical"
  - ☐ Other reason(please specify\_\_\_\_\_

15/16 COMPOSITE- PREDISPOSITION

8. Before you decided to attend this introductory lecture, did you discuss TM with anyone?

- 17
0. No
  1. Yes
- (If you answered "No" to this question, go to Q.13)

9. With how many persons did you discuss TM?

- 18
1. only one person
  2. 2-3 persons
  3. 4-5 persons
  4. more than 5 persons

10. How many of these were friends or family members(including cousins and distant relatives)?

- 19
0. none
  1. only one
  2. more than one (i.e. two and above)

11. If you discussed TM with only one person, was he/she a TM meditator?

- 20
0. No
  1. Yes



12. If you discussed TM with more than one person, how many of these were TM meditators?

- 0. none
- 1. only one
- 2. more than one

21

22/23

COMPOSITE-INTP/PRE

13. What is your assessment of the introductory lecture you have just attended?

- 1. highly convincing
- 2. more convincing than unconvincing
- 3. undecided
- 4. more unconvincing than convincing
- 5. totally unconvincing

24

14. Do you belong to any fraternity?

- 0. No
- 1. Yes

25

15. Do you presently live in a fraternity house or hope to do so soon?

- 0. No
- 1. Yes

26

27/28

COMPOSITE-FRAT/TIE

16. How will you describe your opinion today, of transcendental meditation (TM)?

- 1. highly favorable
- 2. more favorable than unfavorable
- 3. undecided
- 4. more unfavorable than favorable
- 5. highly unfavorable

29

PLEASE TURN TO NEXT PAGE

The following statements were made by people as their opinion on the topics concerned. You may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about some. Whether you agree or disagree with any statement, you can be sure that many other people feel the same as you do. \* Good

Please read all the statements very carefully and respond to all of them on the basis of your own true belief. Respond to each item by writing in the space provided at its left, ONLY ONE of the following numbers, 1, 2, 3, 4, 5. These numbers mean:

- 1: I strongly agree with this statement
- 2: I agree with this statement more than I disagree
- 3: I am undecided on this statement
- 4: I disagree with this statement more than I agree
- 5: I strongly disagree with this statement

Where multiple-choice type responses are given, put a circle around the number by the response that you consider appropriate to you.

17.

- ☐ I believe firmly in the teachings of my church.
- ☐ I believe that religious faith is better than logic for solving life's important problems.
- ☐ I believe that our fate in the hereafter depends on how we behave on earth.
- ☐ I attend church(or mosque, synagogue etc)-
  - 1. at least once a week
  - 2. about once a month
  - 3. less than once a month
- ☐ I believe that religion is of little use in present day society.
- ☐ I do not believe in any particular religion; instead I have a philosophy of life
- ☐ If you are a strong person you do not need religion
- ☐ Promoting a better world is more important to me than religion is

Remember, mark-

- 1: I strongly agree
  - 2: I agree more than disagree
  - 3: I'm undecided
  - 4: I disagree more than agree
  - 5: I strongly disagree
- 

18.

- ☐ I am quite convinced of the reality of God
- ☐ The idea of God gives me a sense of security
- ☐ I trust in God to support the right and condemn the wrong
- ☐ There is a far better way of explaining the working of the world than to assume any God
- ☐ I haven't yet reached any definite opinion about the idea of God
- ☐ The ideas of God are so confusing that I do not know what to believe

32/33 COMPOSITE-GD/ATT

19.

- ☐ 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
- ☐ My blood boils whenever a person stubbornly refuses to admit he is wrong
- ☐ There are two kinds of people in this world; those who are for the truth and those who are against the truth.
- ☐ Most people just don't know what's good for them.
- ☐ Of all the different philosophies which exist in this world there is probably only one which is correct.
- ☐ The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.
- ☐ The main thing in life is for a person to want to do something important.
- ☐ I'd like it if I could find someone who would tell me how to solve my personal problems.
- ☐ Most of the ideas which get printed nowadays aren't worth the paper they are printed on

(continued next page)

- 1: I strongly agree
- 2: I agree more than disagree
- 3: I'm undecided
- 4: I disagree more than agree
- 5: I strongly disagree

- 
- \_\_\_\_ Man on his own is a helpless and miserable creature.
- \_\_\_\_ It is only when a person devotes himself to an ideal or cause that life becomes meaningful
- \_\_\_\_ Most people just don't give a "damn" for others.
- \_\_\_\_ To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.
- \_\_\_\_ 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.
- \_\_\_\_ The present is all too often full of unhappiness; it is only the future that counts.

34/35 COMPOSITE-ATHO

20. What is your educational level at the moment?

36

- 1 Freshman or sophomore
- 2 Junior or senior
- 3 Graduate student, master's degree
- 4 Doctoral student
- 5 Post-doctoral student
- 6 Other (specify \_\_\_\_\_)

21 Your sex, please?

37

0. Male                      1. Female

22 What is your age bracket?

38

- |                       |            |
|-----------------------|------------|
| 1. under 20 years old | 4. 25-30   |
| 2. 21-22              | 5. Over 30 |
| 3. 23-25              |            |

Thank you very much. We will like to contact you again in about a month from now. This will be for a short follow-up to this questionnaire and will require only a minute or two of your time. We will appreciate it if you give us your name (only a first name if you so desire), and an address at which we can get in touch with you.

Please be assured that this and all other information in this questionnaire will be treated in strict confidence. Once again, thank you.

Your name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

(completed by No-Interest  
Group)

- \* Questions with single asterisk were adjusted.
- \*\* Questions with double asterisks were removed from original.

GR2/Exh.1

MICHIGAN STATE UNIVERSITY

COLLEGE OF COMMUNICATION ARTS  
Department of Communication

East Lansing, Mich . 48824

Dear Participant:

As you are already aware, you were chosen in a random sampling of students in the "Temporary on-campus student directory" for fall term, 1974. For the successful execution of this study, it is essential that the responses you give on this questionnaire are YOUR OWN OPINION on the issues raised.

IT IS IMPORTANT THAT YOU COMPLETE THIS QUESTIONNAIRE WITHOUT ASSISTANCE FROM ANYONE.

Please spare the few minutes you need to complete this questionnaire this weekend so that we can have it back by Monday.

Thank you very much for giving your time to help us on this study. If you are interested in the results of the study, put an "X" in the box at the bottom left hand corner of this page.

Once again, thanks.

Sincerely yours,

*Adekunle Sonaike*  
S Femi Sonaike

Graduate Assistant  
Dept of Communication

Room 219 S. Kedzie Hall  
Office: 355-1866  
Home: 355-9755







Card 1 6

\_\_\_\_\_

1 highly unfavorable  
2 more unfavorable than favorable  
3 undecided  
4 more favorable than unfavorable  
5 highly favorable

For this question, pick THREE responses that you consider most appropriate to your situation. Do this by putting 1, 2 and 3 in the spaces by the three most appropriate responses.

- Put: 1: for the foremost appropriate response  
 2: for the next most appropriate response (that is less appropriate than number 1)  
 3: for the third most appropriate response.

\* 7. "If I ever attend a TM lecture or practice TM, I will be doing so in the hope that it will:-

- \_\_\_ help my financial situation and/or business"  
 \_\_\_ keep me occupied"  
 \_\_\_ satisfy my curiosity"  
 \_\_\_ help me understand myself"  
 \_\_\_ help improve my relations with others"  
 \_\_\_ improve my mental and psychological health"  
 \_\_\_ help me know more about God"  
 \_\_\_ help me find inner peace"  
 \_\_\_ serve me as a tool for exploring the spiritual and the metaphysical  
 \_\_\_ Other reason (please specify \_\_\_\_\_)

13/14

15/16 COMPOSITE-FREDIS (please ignore)

8 Have you ever discussed TM with anyone?

17 0 No 1 Yes

(If you answered "No" to this question, go to Q.14)

9 With how many persons did you discuss TM?

- 18 1. with one person  
 2. 2-3 persons  
 3 4-5 persons  
 4 more than 5 persons

10 How many of these were friends or family members(including cousins and distant relatives)?

- 19 0 none  
 1 one only  
 2 more than one (i.e. two or more)

11 If you discussed TM with only one person, was he/she a TM meditator?

20 0 No 1 Yes

12. If you discussed TM with more than one person, how many of these were TM meditators?

0. none  
1. only one  
2. more than one

22/23 COMPOSITE-INTP/PRE (please ignore)

24 \*\* 13. N/A (Ignore)

14. Do you belong to any fraternity?

0. No 1. Yes

15. Do you presently live in a fraternity house or hope to do so soon?

0. No 1. Yes

27/28 COMPOSITE-FRAT/T

16. How will you describe your opinion today of transcendental meditation (TM)?

- 1 highly favorable  
2 more favorable than unfavorable  
3 undecided-indifferent  
4 more unfavorable than favorable  
5 highly unfavorable

PLEASE TURN TO NEXT PAGE

(NOTE: Questions 17 to 22 were the same as in original questionnaire. The name and address section was cancelled since there was no intention to contact this group a second time.)

## APPENDIX B

Project Title: TM Study  
Project No.: 75/1  
Directed by: Sonaike, S.A.  
Full Title: An anlysis of some factors relevant  
to interest in, and the adoption-rejection  
of, Transcendental Meditation by college students.  
Objective : M.A. Thesis.

### CODEBOOK

<u>No.</u>	<u>Variable</u>	<u>Col.</u>	<u>Label</u>	<u>Coding</u>
	ID#	1-3		
	Group#	4		
	Exhibit#	5		
	Card#	6		
1	Time first heard of TM?	7	TIME	Score as in questionnaire
2.	How first heard?	8	MEDIUM	print = 1 electronic acquaintance = 2 high school family member friend/neighbor = 3 business colleague
3.	Ask SIMS for material?	9	ASKSIM	No.=0; Yes= 1
4.	Ever practiced other meditation?	10	OTHER	No. = 0; Yes = 1
5.	Which kind?	11	KIND	(open ended) 0 if "No" to Q.4 1 if Western kind (e.g. Christian) 2 if Oriental
6.	Opinion of other medi- tation?	12	OPIN	"No" to Q.4 = 0 Unfavorable = 1 Undecided/ indifferent = 2 Favorable = 3

Q.NO.	variable	Col.	Label	Coding
7	Why Interest in TM (expectation from TM)	13-14	WHYTM	<p><u>Treat</u> first 3 responses as "Nonspi- -ritual" second 3 resp. as "moderate spiritual" remaining responses as "high spiritual"</p> <p><u>Score:</u> Nonspiritual as 1 mod.spiritual as 2 high spirit. as 3</p> <p><u>Multiply:</u> by: 3 if 1st choice 2 if 2nd 1 if 3rd.</p> <p><u>Code:</u> 0-9 as 0 10-14 as 1 15 &amp; above as 2</p>
Composite: Predisposition				<p>15-16 PREDIS Sum scores for Qs. 4-7 <u>Code:</u> Less than 2 as 0 (none) 2-3 as 1 (low) 4 &amp; above as 2 (high)</p>
8	Discussed TM with anyone	17	TALKTM	No. = 0; Yes = 1
9	With how many persons discussed TM?	18	MANY	None=0; Only one=1; more than one=2
10	How many of these were friends etc?	19	CLOSE	None=0; Only one=1; more than one=2
11.	If discussed with one person, was he/she a TM meditator?	20	TMMED	No. = 0; Yes = 1
12	If discussed with more than one person, how many were TM meditators?	21	TMMED	None=0; One=1; more than one=2
Composite: Interperso- nal influence:				<p>22-23 INTERP Sum scores for Qs. 8-11/12</p>
13	Assessment of introduct- -ory lecture attended	24	ASSESS	<p><u>Treat</u> responses 1 &amp; 2 as "Convincing 3 as undecided/ indifferent 4,5 as "Unconvincing"</p> <p><u>Code:</u> Convincing = 3 undecided/ indifferent = 2 Unconvincing = 1</p>
14	Belong to any fraternity?	25	FRATER	No.= 0; Yes = 1
15	Live in frat.house or hope to?	26	FRAHOM	No.= 0; Yes = 1
Composite: Fraternity ties				<p>27-28 FRATIE Sum scores for Qs.14 and 15.</p>

<u>Q.No.</u>	<u>Variable</u>	<u>Col.</u>	<u>Label</u>	<u>Coding</u>
16	Your opinion of TM	29	TMOPIN	<u>Treat:</u> resp.1 & 2 as favorable 3 as undecided/ indifferent 4 & 5 as unfavorable <u>Code:</u> Favorable=3 indifferent= 2 unfavorable= 1
17	Religiosity	30-31	RELIGN	<u>Scoring:</u> reverse scoring for first 4 items(i.e.5's as 1, 4's as 3's as 3, 2's as 4, 1's as 5) Code items 5-8 as on question -naire. <u>Sum</u> all scores and divide by 8; <sup>multiply by 10</sup> Reverse first three items and treat as for above variable. Sum and divide by 6; by 10
18	Attitude to God	32-33	GOD	Score all items as on questionnaire Sum and divide by 15; by 10
19	Dogmatism	34-35	DOGMA	<u>FOR QUESTIONS 17,18 and 19,:</u> <u>Code:</u> 0-15 as 0 16-32 as 1(low) Over 32 as 2(high)
20	Educational level (Class)	36	EDUC	<u>Code:</u> Resp.1 as 1 2 as 2 Above 2 as 3
21	Your Sex	37	SEX	Male=1; Female=2
22	Age bracket	38	AGE	<u>Code:</u> Response 1 as 1 2 as 2 Above 2 as 3

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