

A STUDY OF THE RELIGIOUS VIEWS OF STUDENTS
AT THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

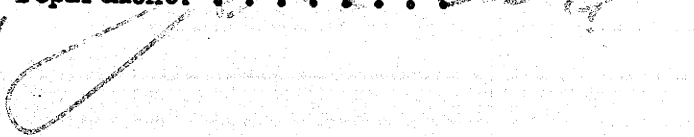
by
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Submitted in Partial Fulfillment of
the Requirements for the Degree
of
Bachelor of Science
from the
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Department of General Science and
General Engineering,
Massachusetts Institute of Technology,
Cambridge 39, Massachusetts,
May 25th, 1953.

Professor Earl B. Millard,
Secretary of the Faculty,
Massachusetts Institute of Technology,
Cambridge 39, Massachusetts.

Dear Sir:

The thesis entitled "A STUDY OF THE RELIGIOUS VIEWS OF
STUDENTS AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY" is hereby sub-
mitted in partial fulfillment of the requirements for the degree of
Bachelor of Science in General Engineering.

Respectfully submitted,

Allen Potter

Allen Potter

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S U M M A R Y

Progress in the various fields of science and increases in man's understanding of physical relationships and phenomena may have some relationship to the secularism which is often alleged to be characteristic of modern thought; if modern man gives no credence to superstition and is firmly confident in his own powers of understanding, he may also be unwilling to adopt any religious beliefs or to feel that such have any value.

This study was conducted among students at the Massachusetts Institute of Technology to investigate the religious beliefs and practices of students in a school of higher technical education. It was felt that this period of scientific training in some aspects reproduces in the individual certain stresses which may exist in a society newly-oriented to technology. If an analysis can be made of the effects, if any, which this training has produced upon the convictions of these students, it may add somewhat to an understanding of the clash between religion's requirement of faith and science's demand for verification.

From both the first-year and fourth-year classes at M. I. T. random samples were chosen and questionnaires distributed, to the freshmen in several classes and to the seniors by mail. The instrument used was a slightly modified version of a questionnaire devised and used in a study at Harvard College in 1946 by Gordon W. Allport, James M. Gillespie, and Jacqueline Young. The results of this study can therefore be directly compared with their findings at Harvard,

which have also been shown to hold very well for other college student populations. We may therefore observe changes in attitude from first- to fourth-year students and compare the attitudes of technical and liberal arts students.

Of the questionnaires distributed, 55.9% were returned. No means were available for encouraging a larger return, and no alternative means of polling a large sample seemed practical. This rather poor return seriously weakens the results of this study, so that few conclusions can be drawn with certainty. It is quite conceivable that those who are more religious -- or, perhaps more likely, those who are more interested in religion, either pro or con -- would also be more likely to have returned the requested information.

Making ample allowance for these returns, at least one finding is strongly indicated: The students at M. I. T. have an interest in matters of religion and the problems which it seeks to solve; they have not become indifferent to such topics because of their pre-occupation with technical matters, more probably their interest has increased during the period they spent at M. I. T. This finding alone, however, is undoubtedly of significance.

Studies of the changes in the religion of students during a liberal arts college course are not available. However, in a comparison with the situation found at Harvard in 1946 there is no evidence of a truly significant difference between religious attitudes at M. I. T. and those at non-technical schools of an approximately equivalent status. Very nearly the same fraction of the students polled at M. I. T. and at Harvard -- seven out of ten -- feel that

they need some form of religious belief in order to achieve a mature philosophy of life. Most of these accept one of the established religious faiths as being satisfactory.

Although 70% feel the need for some religious belief, students are not as orthodox in their beliefs as this might suggest. Those accepting a given system of belief often depart from its teachings on specific points. Most of the students polled were Christians, for example, but only a minority accept the divinity of Christ. Belief in personal immortality is somewhat more frequent, held by approximately half the students polled. The institution of the Church was both defended and strongly criticized; a frequent comment was that it was a desirable social force and necessary for weak or emotional personalities but not for the student replying.

The student's background in religion seems to be of primary importance. Less than half of those polled presently accept the same system of belief which influenced them in their childhood; but there is a very marked correlation between the student's present belief and conduct and the strength of religious influences in his childhood. With a few minor reservations, the more strongly the student was influenced by religion as a child the more likely he is at present to require some belief, the closer his beliefs are to orthodox positions, and the more likely he is to pray, attend church, and experience feelings of reverence, devotion, or dependence. The correlation with present religious practices is particularly strong.

Very few students report that religious influences were completely absent in their childhood, and even a majority of these feel

at present that they do need some form of religious belief.

More than half of the students polled report they have at some time reacted against the beliefs taught them as children; usually this reaction occurred while they were attending high school. Those who have modified their beliefs almost always have moved to more "liberal" systems of belief or to uncertainty about the need for religion. The more "orthodox" faiths have held their membership more closely, however. This finding is identical to that of the survey made at Harvard.

When questioned on the conflict of religion and science, less than one student in twelve felt that such a conflict was irreconcilable; well over half the students felt that the conflict, if any, was of negligible proportions. Few mentioned any conflict of attitudes; most felt either that religion and science were entirely separate and unrelated fields or that there was a definite possibility of the two drawing closer and being reconciled in the future. M. I. T. students thought the conflict somewhat less serious than did Harvard students.

It seems clear that college-level education encourages independent thought and criticism and thereby reduces somewhat the uniformity and orthodoxy of religious belief. It is not at all apparent, however, that a distinctly technical education has any unique effects in this regard. In fact, it seems very definitely to increase interest in the questions and problems of religion.

INTRODUCTION

During the past four centuries, man's understanding of nearly all aspects of his physical surroundings has increased greatly. Many of his statements about natural phenomena and physical relationships have changed from hypotheses and theories to what are commonly accepted as facts — elements of knowledge rather than of conjecture. He has sought everywhere to generalize these relationships to fundamental laws with a view not only to understanding past occurrences but also to predicting future events. Increasing emphasis has been placed on mathematical and quantitative reasoning. This has been extended almost to the point of a fashionable belief that all things which are really factual can be mathematically proved or at least statistically substantiated.

This progress in scientific and intellectual history may quite possibly have had much to do with an apparently increasing trend toward secularism and abandonment of any supernatural religion.

The factual findings of science, such as the ever finer divisions of matter and the ever increasing complexities of its interrelationships, may themselves add to the arguments of either skeptic or believer. Reasoning from these alone has never seemed to demonstrate convincingly the view of either side. The one may doubt that any God would have created a world so complex and difficult to understand and control, which at the same time was consistent with natural laws; the other may doubt that consistent and proper relationships could be maintained between such complex components without the ordering of some Almighty Being.

The heavy reliance of science on rational and mathematical reasoning, the demand for theoretical and experimental proof, and the quite firm belief in certain fundamentals have, however, produced in some cases rather significant effects. As an indication of what may be an important trend, the very word "supernatural" has itself fallen into disrepute and is commonly regarded in the same light as the superstition and ignorance which science has dispelled. Even when understood in its broadest true meaning, anything super-natural may always be suspect of being also somewhat ridiculous.

This feeling, where it may exist, is undoubtedly merely the limit of an historical process. Astrology has been, in general, refuted by the findings of scientific, mathematical astronomy. The discovery that all visible celestial occurrences are ordered, predictable, and usually periodic has largely destroyed a belief that such happenings can influence or foretell earthly events. As modern science has subsequently expanded into other segments of physical nature, magic, witchcraft, and countless superstitions have been rendered ridiculous to the twentieth-century mind. The demonstration that these notions become untenable in the light of widely-accepted "factual" concepts has led in many cases to the exaggerated conclusion that nothing is true which cannot be successfully subjected to observational, experimental, and mathematical proof.

At the same time as man has been learning more and expanding his insights into the working of the universe, he has found that his world is very complex indeed. Each new bit of research to solve a present question reveals new areas where knowledge can be sought, so

that the ultimate goal of complete knowledge seems to retreat before him as a horizon which one never reaches. This unfolding complexity has made it apparent that no one man can ever in this world know and understand everything. It has also made some persons despair of mankind as a whole ever being able to terminate its quest for knowledge.

It is thus freely admitted that there are some things which man cannot now explain and that there will most probably arise out of these still further questions which will not be readily understood. However, even among many who now doubt whether mankind will ever reach the end of this sequence, the belief seems quite widespread that any individual item, when subjected to sufficient study, will be found to have a rational explanation which can be deduced from general scientific principles. In fine then, this view holds that all things can be explained and fully understood by humans; man can know anything, and whether he will ever know everything is reduced merely to a quantitative rather than a qualitative question. The limiting viewpoint here would seem to be one which placed humanity in the supreme position and believed that all things can be made subject to its understanding and perhaps ultimately to its control.

A quite different stand may be taken by those who feel that perhaps man can never know everything — or at least quite certainly that they personally will never be able to perceive a great many things. They may logically reason that if there is a God He certainly must be above and beyond all that which now seems formidable to the human mind. They therefore despair of ever understanding Him or even of being able to solve the question of His existence. Having

realized their ignorance on other puzzling matters, they plead ignorant to the greatest of questions.

It is probably true that the development of science has tended to slant men's views away from religion and toward secularism. However, it is presumptuous to attempt any prediction of which way the pendulum may swing between these two in the next century. The only truly significant answer will be the historical record of that period.

Precise observations can be made at this time only on particular individuals in regard to their religious orientations and tendencies. As critical periods in which change may be taking place and which may be worth serious study one can select those times when an individual's present convictions or sentiments are seriously challenged, when he is required to make adjustments to new conditions, or when he is made to consider matters which are new to him or familiar topics from a new viewpoint. Such, after all, were the fundamentals of the conditions imposed upon our civilization by the relatively swift advent of modern science -- the challenge of old beliefs, an unsettling influence on society, and a new way of viewing old facts as well as some startling new facts to consider.

All of these elements combine in the lives of certain individuals at least, and perhaps only, once -- during the years they spend in college. For many students this period will be the first major break from the home life of their family with its conventional ties and influences; they are encouraged to be, and to some extent must be, reliant upon themselves both materially and intellectually;

and they are encouraged and even required to think critically about matters which previously may have been taken for granted or allowed to slip by unnoticed. One important defect in the significance of any study of college influences is the fact that not all segments of society are included among college students; they tend instead to be drawn from a rather select social and financial class within the population. This means that not all social strata are affected by the college environment nor are the internal conditions of that environment influenced by all strata.

Especially pertinent to any discussion of the effects of science on religious beliefs is the effect which a technical education in a largely scientific atmosphere has on the individual. Here we see intensified on a personal level an impression similar to the one which science in general has produced on our society. The student is presented with orderly, completely rational scientific reasoning; he finds that simple everyday events conform to certain natural laws; he comes quite often to a more or less sudden subjective awareness that all manner of objects and situations can be analyzed, their components calculated, the findings utilized and controlled. In such a situation we can ask not only what effects are produced by critical study and today's college environment, but also what are the effects of an introduction to the scientific methods of reasoning and to the recent findings of technology, and what are the beliefs of those who show an aptitude for, and an interest in, these specialized lines of thought.

The following study was conducted among students at the Massa-

chusetts Institute of Technology to gain information on two points: what are the religious views and beliefs of these students, each studying some branch of science or engineering, and what changes are noticeable in these attitudes during the four years spent as students at M. I. T. It was hoped that this would reveal any particular influence which might be attributed to technical studies as differing from other types of higher education. Any definite and appreciable differences might be taken as meaningful evidence on the question of the conflict between science and religion.

THE SURVEY

Aims

This investigation into the religious beliefs, practices, and backgrounds of students in a technical school sought information which would provide some insights on three major points:

- (1) The effects of technical training at the undergraduate college level and of a scientific or technical outlook upon the individual's religious opinions and practices.
- (2) The importance of certain background factors, such as previous religious training and socio-economic status, in shaping these opinions and practices.
- (3) The differences existing between the opinions and practices of a group of undergraduate technical students and those of a group of undergraduate liberal arts students, as nearly alike in other respects as possible.

The period which the average student spends in his undergraduate college studies may quite often be a critical stage in the formation of his personality and philosophy. Various complex factors and influences are probably significant during this period, so that the establishment of a definite relationship between the individual's educational and professional environment and his personal beliefs and religious orientations should be considered a difficult task at best. However, if evidence of such a relationship between technical training and religious development were to be found, it might well provide some further insight into the problem of the relationship between scientific thought and religious principles; it would at least

add to the present information on the interaction of these two elements in the individual personality during a stage of its development.

Since the action of factors and influences extraneous to this first point cannot be controlled for purposes of this study, it is also necessary to evaluate their importance. Factors which might prove significant in the formation of religious opinions and the religious development of the student include any previous religious training or religious influences in his childhood, or the lack thereof, the socio-economic background to which he belongs, the community in which he has resided, and his residential environment while attending school. Some or all of these items and others may have influences upon the individual which completely outweigh those of his educational experiences, or they may modify the manner or degree in which his training and professional environment will influence him. The consideration of such factors as these is necessary both to understand the group which we are studying, and also to evaluate their influence as compared with that of training and a technical outlook.

Obviously, what is sought here is some distinction between the influences and effects of technical education as such and the influences and effects which are common to higher education in general. The most practical means of observing such differences as may exist between the two would be to compare similar studies of religious attitudes and backgrounds made on a group of technical students and on a group of non-technical, liberal arts students or a mixed group from a university. The two groups should in all other aspects be as

nearly alike as possible, that is, the two educational institutions in which the studies are made should be of approximately the same intellectual rank, their students should be drawn from the same population segment, and their standards in their respective fields should be approximately equivalent. Any differences between the two in extra-curricular environment or other background factors such as those discussed above should not be overlooked in the evaluation of the findings.

From a consideration of these three points, any decided and unique relationship between technical training and environment and religious viewpoints should be discernible. Fine points and more subtle distinctions may be obscured by the difficulties of securing information, the interaction of a great many forces, and -- as in all social sciences -- the impossibility of controlling any of the experimental conditions.

The Proposed Investigation

The method of approach decided upon was a survey of a sample of both the freshman and the senior classes at the Massachusetts Institute of Technology. The questionnaire used was a modified version of an instrument devised for a survey at Harvard in 1946. Items were added to cover the socio-economic backgrounds of those polled.

The Massachusetts Institute of Technology in Cambridge contains a student population of approximately five thousand, somewhat more than half of these being undergraduates. The fact that the school is, by any standards, rather expensive prevents the student body from including many members of the lowest income groups, although this

survey has indicated that the range and distribution of incomes is fairly broad. (see Table II) Students represent numerous foreign countries and all areas of the United States, although a disproportionately large number quite naturally come from the eastern half of the country. Their curricula represent twenty departments, covering various branches of engineering, science, architecture, and business. Normally a student spends four years in undergraduate school if he is preparing for a bachelor's degree only. (Architecture is the single exception, requiring five years for a bachelor's degree.)

The most effective method of determining the changes which occur over this four year period would be to obtain information on a group of first-year students and re-check the same group of students at about the time of graduation, three or four years later. Here we could observe with certainty where actual changes had occurred.

The necessity of initiating and completing this study within the period of one school year made this approach entirely impossible. Any attempt to question seniors for a recollection of their beliefs and practices as freshmen and of any changes since then would leave very serious possibilities of inaccuracy. The most practicable method seemed to be the polling of samples of both the present first-year and the present fourth-year students. This quite obviously is inferior to a four year study of one sample. The individuals within the samples are different, which necessitates the use of a large statistical sample to achieve any degree of certainty that there actually is a difference between first- and fourth-year students. The present seniors and the present freshmen will also have an average

age difference of three years; one group will therefore reach any given age, presumably representing on the average one stage of development, at a point in time three years later. Any differences over this three year period in the general external environment -- social attitudes, economic and foreign affairs, for example -- might therefore produce some dissimilarities between the two groups. In this particular instance the seniors ranged in age from 9 to 15 during the period of World War II, while the freshmen ranged from 6 to 12.

Despite this obvious disadvantage, a poll of both freshmen and seniors was chosen as the most feasible and a reasonably effective approach. No strong dissimilarities in background or other important differences are known to exist between the two classes; considering samples that are adequate in size, distinct differences might, therefore, quite reasonably be taken to indicate an over-all change which occurs during the period a student spends at M. I. T.

As in selecting the samples which we are to study, the choice of a means of inquiry requires some compromise between effectiveness and ease of application. A standardized, printed questionnaire is an often-used instrument for this type of study, although it has certain obvious shortcomings. A uniform poll-type question cannot fully reflect the many shades of opinion and combination of views that will exist on a topic such as this one. To sample a large group, however, there is probably no other means which is reasonably reliable and also admits of easy application and evaluation within a relatively short time. A well-constructed and carefully worded instrument can usually reflect the major opinions and trends within the

group studied.

Two problems arose here, however: the difficulty of formulating a satisfactory questionnaire with little personal experience to draw upon and insufficient time for any pre-testing, and the desire to be able to check results obtained in this study with those observed at other colleges or universities. Fortunately a survey similar to this one had been conducted by Gordon W. Allport, James M. Gillespie, and Jacqueline Young at Harvard College in 1946.¹ Permission was obtained from Dr. Allport to use a slight modification of their instrument in this survey, making possible direct comparisons of the findings at the two schools. According to Dr. Allport, surveys in other colleges made since 1946 indicate that their findings "hold surprisingly well" for other college populations as well.² We therefore have a solid basis against which to compare the findings at M. I. T.

To obtain information on background factors, several items were added relating to the individual's economic status, home town, residence while at school, and professional course of study. For a complete discussion of the modifications made in the original questionnaire used at Harvard, see Appendix B.

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1. Allport et al "The Religion of the Post-War College Student" The Journal of Psychology, Vol. 25, 1948, pp. 3 - 33
 2. Allport, Gordon W. The Individual and His Religion (New York, 1950) p. 36

Procedure Followed

To initiate this survey it was first necessary to formulate and reproduce the questionnaire to be used. Samples of the first-year and fourth-year classes were then constructed. Distribution and collection of these questionnaires presented a serious problem; distribution in the classroom was considered and was actually used in the case of the freshmen. It was necessary, however, to poll the seniors by means of a mail distribution.

Three considerations were taken as guides in the task of modifying Dr. Allport's questionnaire: the questions used should be planned to elicit information pertinent to the aims of our study, the content and wording of the instrument used at Harvard should be altered as little as possible to permit a valid comparison between the two surveys, and the total length of the questionnaire should be kept to a minimum consistent with the above in order not to discourage complete and prompt replies by the students polled.

The study made at Harvard was concerned with the religion of college students immediately after World War II. The present study has slightly different purposes and the samples to be taken were not expected to include more than a very few veterans; the question asked at Harvard about the effect of war experiences upon religion and interest in the problems of religion was therefore dropped. Instead, a similarly-worded question on the effect of experiences while at M. I. T. was added. Items employed at Harvard asking for a self-comparison of the student's religious convictions with those of his parents and those of his colleagues were not considered vitally

important to this survey; in the interests of a shorter questionnaire, they were also eliminated. Six items on economic background, residence, and professional field were added, however, in line with the second aim of this study.

The key question in the instrument used at Harvard read: "Do you feel that you require some form of religious orientation or belief in order to achieve a fully mature philosophy of life?" It was felt that the use of "orientation" might be interpreted by some to include within an affirmative answer any reasonably firm attitude toward religion, either favorable or unfavorable. The words "orientation or" were therefore eliminated from this question. For a more complete discussion of the changes made in the questionnaire, see Appendix B. The complete instrument as used is reproduced in Appendix A.

Dr. Allport very kindly gave his permission for the use of this modified form of the questionnaire. Copies for distribution to the students were mimeographed; legal size paper was used to keep pages to a minimum and reduce the document's formidable thickness, and also to reduce the likelihood of the questionnaire's being lost among other papers on the desk of a well-meaning but procrastinating student who had not yet returned it.

To prevent the inclusion of a few widely divergent individuals within the sample, it was decided to restrict the present study to American males. (It was found at Harvard that women appear definitely more religious on some items than men. The inclusion of foreign students would introduce the effects of other cultures as well as a

few instances of widely varied religious systems.)

In order to make a sample of fixed size somewhat more efficient, the possibility of stratifying the sample was considered. This could be done by making the sample polled proportionate to the total student population in respect to either professional course, residence at school, or religious affiliation. Stratification by more than one of these parameters would be extremely difficult to achieve. Both residence while at school and religious affiliations are difficult to determine and subject to certain changes. It was decided therefore to stratify at least the senior sample by professional course of study, although this may not be of such prime significance as the other two possibilities. It was felt that distinctions between professional fields might be of some significance, however, in the case of fourth year students; it is less important in the case of entering first year students, whose choice may as yet be largely tentative.

(For a fuller discussion of the above points, see Appendix E.)

To facilitate the mechanical handling of questionnaires some method of distributing and collecting them in the classroom seemed desirable. More important, it was felt that an instructor's approval and assistance in this might aid appreciably in producing a high percentage of returns. This plan was actually employed in the case of first-year students. As noted above, the choice of professional fields is probably not significant in the case of freshmen; all are required to enroll for the same course of study and are divided at random into sections of twenty-odd members. Members of the faculty in the English and History Department agreed to assist in the survey by distributing questionnaires and collecting returns in their

first-year humanities classes. For all practical purposes, therefore, the freshman sample polled was completely random. (See Table I for the distribution of the freshman returns by choice of professional course.) Attached to each questionnaire was a letter explaining the survey and requesting the student's assistance in completing and returning the questionnaire. (Appendix C)

By the time a student reaches his fourth year he is enrolled in a program of studies which is virtually unique for his particular professional field. Many students may not have enrolled for any humanities courses, having fulfilled their requirements in this respect prior to their last year. Among those who are enrolled for one of these courses, it was felt that their particular choice might in some cases be evidence of a bias in regards to the content of this survey. As a result, it was not considered possible to construct a random sample of seniors within their humanities courses, as had been done with the freshmen.

Within nearly every course of study there are one or two professional subjects required of every senior in that department. By selecting a number of professional courses, distributed among the departments having the greatest senior enrollment, which would contain fourth-year students almost exclusively, it was hoped that a sample roughly stratified by professional field could be constructed. A number of such courses were chosen from those offered at the time, and the faculty members in charge of these courses were approached for assistance in conducting the poll. Several were willing to give the requested aid, some were quite enthusiastic, but a significant

fraction of those asked questioned the wisdom of using official or quasi-official channels to administer a survey of this very personal nature. Rather than lose these elements of the senior population and make the sample more disproportionate, it was decided to abandon this plan altogether.

Although appreciably lower returns might be expected, the only alternative means of distribution to a large sample was by mail. This had one advantage, however: a stratified sample could now be obtained by exactly proportioning the students polled by their professional field of study. Accordingly, a sample by professional course was chosen from the student directory using a random number table, and questionnaires mailed to this group, using Institute mail service for those living in the M. I. T. dormitories and U. S. mail for those living off campus. (Table I gives the distribution by course of those polled and those returning completed questionnaires.) To combat the problem of returns, a self-addressed stamped envelope was enclosed with each. A letter was also enclosed explaining the survey and requesting the student's cooperation. (Appendix D)

(For a more detailed discussion of sample construction and questionnaire distribution, see Appendix E.)

The time at which a student is approached for information is probably important in determining his response. An effort was made to distribute these questionnaires at a time when students would be under the least pressure from examinations, theses, and other academic requirements. The time selected was during the second week of the second school term, about the middle of February, 1953. Personal

observations would indicate that this is one of the least "pressured" times in the year. Students have returned from mid-year vacations and have begun spring courses, but are not yet overly concerned about impending quizzes or term papers. Their potential cooperation might therefore be the best at this time.

Returns

Of the questionnaires distributed, 49.5% of the freshmen and 62.6% of the seniors were returned. Having replies from only slightly more than half the sample chosen reduces the strength of any conclusions which can be drawn. It is not certain just how the sample may be biased, but an evaluation of this data must be to some extent only tentative.

In the freshman sections, 299 copies of the questionnaire were distributed. Of these 148, or 49.5%, were returned. One of these was from a third-year student (apparently enrolled in a first-year humanities course), one was from a woman student, and ten were from foreign students. In accord with the restriction of our survey to American males, these twelve were not considered; our tabulated freshman sample therefore totals 136 individuals, 45.5% of the number of questionnaires distributed.

Questionnaires mailed to seniors numbered 300. Nine of these were later returned as not being delivered. The total actually distributed (as nearly as is known; others may also have remained undelivered) is therefore 291. Those returned 182, or 62.6%. One of these was returned too late to be included in the tabulations, three

were from graduate students (It is not apparent how this occurred, since they were mailed only to men listed as class of 1953 — or architects, class of 1954.), eight were from foreign students, and one was clearly not a serious reply, being a rather poor attempt to be humorous. Eliminating these thirteen from consideration, the senior sample tabulated numbers 169, 58.0% of the number distributed.

Although only a little more than half of the seniors contacted returned their questionnaires, the distribution of these returns by professional course very closely followed that of the sample chosen. In this respect, therefore, our senior sample is a true cross section of the student population; that is, each professional field is represented in nearly direct proportion to its enrollment. The freshman returns followed the same over-all pattern with some slight differences, which are probably not significant. See Table I for the percentage distribution of both samples by courses.

That returns were definitely better from seniors than from freshmen is a fact for which it is rather difficult to account. The methods of distribution were originally expected to produce the opposite result. The impersonal nature of returning the questionnaire by mail may have served to reassure the seniors, however, while the freshmen may have had some reservations about returning this type of information directly to their instructors. The seniors might also be expected to feel a greater sympathy for the research problems of another thesis writer than would the freshmen. It was learned quite by chance that at least one senior did not return his questionnaire, despite the best intentions, simply because he found the questions

asked too difficult to answer. If this was true in general to any appreciable extent, it is conceivable that freshmen may have experienced even greater difficulty. Undoubtedly the greatest losses in returns were due simply to procrastination, a wish not to be bothered, or indifference to this whole topic.

The fact that indifference may be a cause seriously reduces the strength of any conclusions which may be drawn from the data obtained. The sample may be somewhat biased in favor of religion, or it may be that both those supporting and those rejecting religion are adequately represented, but opinions on a middle ground of indifference are under-represented. In any event, the conclusions drawn in most cases must be rather tentative in nature.

RESULTS OF THE SURVEY

Composition of the Sample

As noted in the previous section, returns were nearly in direct proportion to the senior enrollment in each course of study. (see Table I) As to age, the freshman mode was 18; the senior mode, 21. Nearly all freshmen (97.0%) and 81.5% of the seniors were unmarried. Among freshmen the modal family income was between \$5000 and \$10000; among seniors this was \$2000 to \$5000. (The mean would not be greatly different for the two samples, however.) For both samples, more students came from cities of over 100,000 population than from any of the other size ranges used, and more lived in the M. I. T. dormitories during most or all of the time they spent at school than in any of the other residence groups mentioned. For a percentage analysis of the samples in all these respects, see Table II.

Any comparison which is to be made with the results found at Harvard must consider the composition of the samples taken at the two schools. The group polled at Harvard consisted of a class in Social Relations which included members of all four undergraduate years. 70.3% of the total sample were veterans of the armed services. 73.5% of these veterans were aged 21 or over, while only 6.5% of the non-veterans were 21 or over. This supports the hypothesis that first- and second-year students may have been proportionately more numerous than upperclassmen. The fact that the survey was taken in an introductory course in Social Relations would make this seem likely. At M. I. T. it was found that 86.4% of the seniors and only

1.5% of the freshmen were 21 or over.

It was found at Harvard that veterans were in general noticeably less religious on nearly all counts than non-veterans.³ In general, the M. I. T. findings show seniors to be "less religious" than freshmen. On most questions that can be compared it is found that the groups rank: M. I. T. freshmen, Harvard non-veterans, M. I. T. seniors, and Harvard veterans in a descending order of religiousness. The first three groups here, significantly, are also probably in order of increasing average age and educational level; the veterans' experiences seem to have had a greater disruptive effect on their religiousness or to have accelerated the process of maturing.

Thus it seems that on those questions where Harvard veterans and non-veterans differ the non-veterans would serve as the best basis for comparison. The composition of the three samples in question, especially in regard to age and educational level, should be kept in mind in evaluating these comparisons.

Need for Religion and Choice of Religious System

In reply to question #9, 72% of the entire M. I. T. sample stated that they felt they needed some form of religious belief in

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3. It is interesting to note, however, that in a survey taken in 1945 army veterans generally agreed their army experiences had increased their faith in God. Those with combat experience were about equally divided between saying they had become "more" and "less" "religious", while those without combat experience were more likely to say that they had become "less religious". Stouffer, S. A., et al The American Soldier: Combat and Its Aftermath Vol II (Princeton, 1949) p. 187

order to achieve a fully mature philosophy of life; 16% said they did not, and 12% were doubtful. Among the freshmen, 77% said they needed some belief; 10%, that they did not. In the senior sample, 68% needed a belief; 21% did not. The Harvard non-veterans fall between these two groups, 76% saying they needed a belief, 14% that they did not, and 10% being doubtful. (see Table III)

Of those who felt they needed some form of religious belief, 13% of the seniors and 11% of the freshmen felt that a substantially new type of religion was needed. It was found in general that those who accepted Catholicism or one of the orthodox faiths were more likely to be members of the corresponding church than were those holding more liberal views. Those who had been brought up under the influence of more orthodox faiths were also more likely to presently hold to these same beliefs. The greatest number of disagreements between childhood influences and present beliefs were found among those raised under Protestant or Judaistic influences. Although these faiths lost more members, the shift from childhood to present beliefs was almost always toward more "liberal" faiths. There were no instances of present Roman Catholics reporting a childhood influence of some other type. See Table IV for a percentage tabulation of those accepting various systems of belief at present and those raised under the influence of each. Table V presents the percentage of those accepting each faith who are presently members. The same general result was found at Harvard in 1946: the more "orthodox" Christian faiths hold their membership more firmly, but the shift in beliefs is

nearly always toward a more "liberal" viewpoint.

No appreciable correlation whatsoever was found between the student's present beliefs or background and his reply as to whether or not he sometimes felt embarrassed or isolated because of his beliefs; 75.4% of the seniors and 67.9% of the freshmen reported that they did not.

Religious Background and Development

Question 11 listed several possibilities and requested the student to check those factors which he consciously recognized to have been contributing reasons for his being religious. The results of this item are summarized in Table VI. Parental influence was checked most frequently by both M. I. T. samples, as well as in the Harvard survey. 65% of the seniors and 72% of the freshmen recognize this to be one of the influences contributing to their religiousness. The second factor was different in each of the three cases, each being marked by less than half of the sample. Second for the seniors was the personal influence of people other than parents (39%); for the freshmen, conformity with tradition (49%); and at Harvard, fear or insecurity (43%). (The inclusion of the veterans is probably responsible for this finding at Harvard; less than 25% of the M. I. T. sample checked fear or insecurity.) Also frequently chosen in all three groups were church teachings, reading outside of school and college, and gratitude. Aesthetic appeal was selected more often at Harvard, less by the M. I. T. groups; while studies in school and college were chosen more frequently at M. I. T. and less frequently

at Harvard. Sorrow or bereavement and mystical experiences were cited only infrequently by all groups, and sex turmoil ranked very low with all (especially M. I. T.).

Religion in some form exerts an influence in the growth of nearly all the persons polled. Only twelve students from the entire sample reported no religious influence at all in childhood. (7 seniors and 5 freshmen, 3.9% of the total sample) The most common reply in both groups was that there had been a "moderate" degree of religious influence in their childhood.

As noted in considering present religious beliefs, students who have been influenced by Catholicism or one of the "orthodox" faiths were more often found to have retained those beliefs taught in childhood. Those influenced by Protestantism and Judaism most frequently now preferred some other system. Although the more orthodox faiths held their childhood members in many more cases, they did not gain any new adherents from the other categories (nor did Judaism). Present beliefs which differed from the teachings of childhood almost uniformly were more "liberal". (This can be seen by referring to the tabulation of results from question 19, Appendix M, sheet 2. As the columns are arranged, shifts from childhood influence to present belief have almost without exception been downward.)

The estimated degree of religious influence corresponds more nearly to the student's present conduct than the type of influence does to present beliefs. As we consider those with progressively stronger childhood influences we find the majority to be increasingly more frequent in church attendance, in prayer, and in feelings of

reverence, devotion, and dependence. (see Table VII) It is interesting to note, however, especially among the seniors, that there are a larger number of students reporting a very marked influence who do not practice the more outward acts of church attendance and prayer, than there are students of this same category who report only rarely feeling reverent.

When asked if some inner experience had made religion a distinctly subjective and personal matter, a majority of both M. I. T. samples replied in the affirmative. (55% of the seniors; 72% of the freshmen) Of those reporting such an experience, most stated that it had occurred sometime during high school. Very few report that these experiences were definite crises; 81% of both classes regard them as gradual processes. (see Table VIII)

There is a curious difference between the replies of the freshmen and those of the seniors to this question. Markedly more freshmen than seniors reported such an awakening; of those who recognized such an experience, 95% of the freshmen placed it before age 18 but 43% of the seniors reported the occurrence after 18. (65% of the freshman replies reported the experience while in high school; 80% of the senior replies were quite evenly distributed over the years in high school and those since then. see Table VIII) Unless there is some reason for the freshmen experiencing such an awakening more frequently and earlier in life than the seniors (World War II had been over a short while at the time reported by most.), the only obvious interpretation is that the seniors have somewhat different views on what constitutes such an experience. If as freshmen they would have

given reports similar to those received from the present freshmen, they must since that time have concluded that their experiences were really not of this type or that their emotions at the time were misleading. Conclusions of any degree of certainty on this point would require further inquiry.

When asked if they had at any time reacted against the beliefs which they were taught in childhood, 64% of the seniors and 46% of the freshmen reported such an experience. The difference in these two figures is approximately accounted for by the seniors who reported such a reaction since leaving high school. A few more freshmen than seniors reported a reaction before age 12; in all other respects, however, the freshman replies could very well represent the report which seniors would make of their life up to an equivalent age and educational level. A greater number of reactions are reported during high school than any other time span offered, as was true in the case of subjective awakenings. The end result of these reactions was reported as substantial agreement with the beliefs taught by 18% of the seniors and 33% of the freshmen; 64% of the seniors and 58% of the freshmen at present partially agree with these beliefs, while 19% of the seniors and 9% of the freshmen wholly disagree with them. (see Table IX)

As might be expected from the fact that present Roman Catholics had all been raised under Roman Catholic influence, we find that those in this group who report a reaction are nearly all in complete agreement with the beliefs originally taught. A majority (67%) of others who feel they need some religious belief at present partially agree

with the beliefs taught. Although none of those who are now doubtful or do not need religious beliefs stated that they were in substantial agreement with the beliefs which they were originally taught, 63% of them reported they still partially agreed with them. Those who presently doubt or need no beliefs also uniformly reported a reaction against the beliefs taught at an earlier age than did others. (see Table IX)

Question 21 asked the student to check any of the six alternatives offered which they recognized to have contributed to their reaction, and also to list any other factors which contributed. The most frequently chosen alternative was selected by less than half of those who replied to the question. The factors which were offered, then, may not have adequately represented those which the students feel were actually responsible. In order of decreasing frequency of selection by the M.I.T. sample as a whole these factors were: disapproval of conformity and tradition (48%), reading outside of school and college (35%), studies in school and college (27%), personal influence of other individuals (25%), disapproval of certain individuals holding these beliefs (21%), and disappointment or lack of reward in religious experience (21%). Seniors more often selected both reading and studies than did freshmen. (see Table X) For a listing of the other factors written in by students, see Appendix J.

In response to question 23*, less than 13% of all those replying

* Unfortunately, question 23 required two answers, but did not make this obvious at first glance. Only 4.3% of the sample did not indicate the effect on their religiousness, but 16.4% did not indicate the effect on their interest. Probably many merely overlooked the second part of question 23. (For a specimen of the questionnaire, see Appendix A)

in every category into which the sample was subdivided said that their experiences while at M. I. T. had made them less interested in the problems which religion seeks to answer. 63% of the seniors said they were made more interested, 29% reported no effect, and 8% were made less interested. Of the freshmen, 51% reported no effect (easily understood, since they had been at M. I. T. only about five months when the poll was taken), 45% were made more interested, and 4% were made less interested. Those who had greater childhood religious influences and those who presently felt a need for religious belief were more likely to report an increase in their interest, but in no case were those reporting a decrease an appreciable fraction of the subsample. (see Tables XI, XII, and XIII)

Reports of the effects of experiences during the period spent at M. I. T. on the student's religiousness were considerably more diverse. 26% of the seniors reported they were made more religious, 39% reported no effect, and 35% were made less religious; 60% of the freshmen reported no effect, while 22% were made more, and 18% less, religious. (see Table XI) Considering only the senior sample, we find that with decreasing strength of religious influences in childhood a uniformly smaller percentage of students reported that they were made more religious and a larger percentage stated that they were made less religious. The type of religion which exerted this influence does not seem to bear a very striking relationship to the effect at M. I. T., except that those groups which generally reported a stronger influence (Roman Catholics the strongest) are more likely to have been made more religious. (Only one group is strikingly

different from the others, however; of those raised under the influence of Judaism, only 2 out of 27 reported an increase in their religiousness at M. I. T. (see Table XIII) Of those who presently feel a need for religious beliefs, 38% reported an increase in religiousness; 36%, no effect; and 26%, a decrease. Of those needing no religion, 3% reported an increase; 56%, no effect; and 41%, a decrease. (see Table XII)

Although the reports on the effects of M. I. T. from the seniors do not vary noticeably by professional field, roughly twice as many students of engineering reported subjective awakenings and reactions against the beliefs taught while at M. I. T. as did students in other courses. In reply to question 12, 15.2% of the senior engineers and 7.6% of all other seniors reported that a subjective awareness of religion had come while they were at M. I. T. In answering question 20, 16.2% of the senior engineers and 6.7% of other seniors said that a reaction against the beliefs taught them in childhood had started while at M. I. T. In estimating the net effect of experiences while at M. I. T. (question 23), however, there is not such a noticeable difference between courses.

Items of Belief

Questions 14 through 17 investigated the student's opinions on four specific points. The first, inquiring as to attitudes toward the Church, was identical to a question used in the survey at Harvard. Replies from M. I. T. and Harvard were quite similar, the percentages of M. I. T. students choosing alternatives favorable to the institution of the Church and those electing to write in

different attitudes rather than select one of the alternatives offered were slightly larger than the corresponding percentages at Harvard. As might have been expected, freshmen generally replied more favorably to the Church than did the seniors. 6% of the seniors and 12% of the freshmen felt the Church to be "the one sure and infallible foundation of civilized life . . ."; 39% of the seniors and 45% of the freshmen felt that "on the whole the Church stands for the best in human life . . ." At the other end of the scale, 7% of the seniors and 2% of the freshmen considered it "a stronghold of much that is unwholesome and dangerous . . ." 30% of the seniors and 24% of the freshmen chose to write in their own comments rather than choose one of the six offered. (20% of the Harvard sample did so.) (For a more complete tabulation, see Table XIV.)

On questions 15 and 17 such write-ins were much less frequent, about 10% of the totals, although exactly the same opportunity was given to those who did not wish to accept one of the statements provided. This might indicate a poorer selection or wording of the alternatives provided on question 14, but they do not seem — at least in the author's opinion — to be more restricted or in any other way less acceptable to a large proportion of the population than do those of questions 15 and 17. (In each case, students were asked to check the view that "best expresses" their own attitude.) Another possible explanation is that students are more aware of, are more concerned about, or have thought more about, the Church as an institution than they have about the more philosophic aspects of belief; and are therefore less willing to represent their exact opinions by one of

the relatively few statements offered.

Those who presently accepted some religious faith, especially adherents of the more orthodox groups, were most likely to select statements supporting the Church. This trend is clearly evident in Table XIV. All Roman Catholics who selected one of the alternatives offered chose one of the first two; except for one, Protestants were confined to the first three. None of those who felt they did not need any religious belief selected the first statement.

A popular attitude among those who wrote separate comments was that an organized Church was unnecessary for them, but undoubtedly valuable for weaker personalities. As one senior put it, "The Church (especially the Catholic Church) still supplies an excellent code of conduct and outlook on life for the many millions of people throughout the world who are not yet capable of formulating a consistent philosophy of their own (e.g., the European peasant)."

In replying to question 15 on the Deity, a majority of both freshmen and seniors reported that they believed in the existence of some Supreme Being, selecting either the first ("theistic") or the second ("deistic") of the alternatives provided. Once again, more of those who accept the more orthodox religious systems reported a more personal and benevolent conception of the Supreme Being while those who are doubtful or feel they need no belief most often indicate an agnostic viewpoint. The principal difference between the freshmen and seniors is the greater percentage of the seniors selecting this agnostic opinion (#4, Table XV) and a smaller percentage believing in a personal God and Creator who may be reached by prayer (#1, Table XV).

Except for this difference (about 15%) in acceptance of the concept of a personal God, the freshman and senior responses follow the same general outline quite closely, which is also very similar to the findings in the survey at Harvard. (The percentage of the Harvard non-veterans accepting each alternative differs from the corresponding percentage of M. I. T. seniors by less than 5% in every case. see Table XV)

Although the majority of our sample reported an acceptance of one of the Christian faiths, the reported opinions on the person of Christ do not strongly support the orthodox acceptance of Jesus as divine. 28% of the seniors and 44% of the freshmen accept this belief, while 47% of the seniors and 29% of the freshmen prefer to regard him merely as a great (a few chose to qualify the use of either "great" or "merely") prophet or teacher. Only 2% of the seniors and 1% of the freshmen believe that he probably never even lived. 23% of the seniors and 26% of the freshmen say that none of these positions expresses their views. (They were not asked in this question to elaborate further.) This question shows a very marked difference between the two classes. As on other points, the Harvard sample of mixed class structure gave a report intermediate to these two; among non-veterans there, 30% considered Christ divine, 51% regarded him as a great teacher, 4% felt he probably was mythical, and 15% did not accept any of these alternatives. Naturally, those accepting one of the Christian systems more frequently accepted the divinity of Christ, but this was not universal. (41% of the Protestant seniors, for example, did not.) (For a more complete

tabulation, see Table XVI.)

On the matter of immortality we also find a difference between seniors and freshmen, although it is not as marked. The most frequent choice of both groups was personal immortality, the continued existence of the soul as an individual and separate entity -- selected by 31% of the seniors and 47% of the freshmen. Next most popular among both groups was the opinion that the individual could be "immortal" only through his influence upon his children and society -- selected by 29% of the seniors and 24% of the freshmen. A large proportion -- 16% of the seniors and 16% of the freshmen -- stated that they had no view at all about this matter. 10% of the seniors and 5% of the freshmen chose to write in expressions of their belief rather than accept one of the alternatives given. On this point also there is a greater, but not universal, acceptance of immortality by adherents of one of the Christian faiths. A lesser belief in personal immortality was found at Harvard; among non-veterans there, 28% chose this alternative, while 34% believed one could merely influence his children and social institutions. (For a more complete tabulation, see Table XVII.)

When questioned on the alleged conflict between the findings of science and the principal contentions of religion, M. I. T. students considered this conflict less serious than did the students polled at Harvard. Freshmen saw considerably more agreement between the two than did seniors, and in both groups the majority seeing little or no conflict were adherents of one of the Christian faiths, more frequently of the more orthodox denominations. In all, 26% of the

seniors, 40% of the freshmen, and 21% of the Harvard group felt religion and science actually supported one another; 31% of the seniors, 32% of the freshmen, and 32% of the Harvard students felt the conflict was negligible, more apparent than real. Only 8% of the seniors and 6% of the freshmen -- but 16% of those at Harvard -- felt the conflict was definitely irreconcilable. In general, more seniors than freshmen recognized a conflict, but only a very few more considered it irreconcilable. Students who are more "religious" at present and those raised under stronger religious influences tended quite uniformly to think the conflict less serious than others. (See Table XVIII for a more complete tabulation.)

Conduct

Students in both the present sample and the group at Harvard were questioned on three specific points of conduct or devotional practice: church attendance, prayer, and feelings of reverence, devotion, or dependence -- each considered for the six months prior to the survey. The classifications of frequency supplied on the three questions are not subject to simple direct comparisons; however, it seems that, among the freshmen polled at M. I. T., all three items have roughly the same general frequency of practice (Individuals are often not so consistent in their own practice, however.) 18% of the freshmen reported never having attended church in the past six months, 17% never prayed, and 17% never experienced a feeling of reverence. Each of these three practices is less frequent among the seniors, but the more outward practices show the greatest decrease. 33% of the seniors never attended church, 27% never prayed, and 26% never experienced feelings of devotion. Although reports from the

mixed group of non-veterans at Harvard usually fall between those of freshmen and seniors at M.I.T. on matters of opinion or belief, the trend at M. I. T. in this case appears to be reversed at Harvard; the more outward aspects of religious conduct were less frequently disregarded at Harvard. 20% of the non-veterans never attended church, 24% never prayed, and 30% never experienced a feeling of reverence. (See Table XIX for a more complete tabulation.)

As mentioned above, there is a very striking correspondence between the degree of religious influence which is reported during childhood and present religious practices. For example, among seniors, the most frequently chosen response to the question of prayer for those with a very marked religious influence in childhood was "daily"; for those with a moderate degree of religious influence, it was "occasionally"; and for both those with only a slight influence and those having none at all, it was "never". This is typical of both freshmen and seniors on all three practices. (see Table VII)

As observed by Dr. Allport at Harvard, in comparing beliefs on the Deity, opinions on immortality, and the practices of church attendance, prayer, and reverence, there is an obvious progression: by all these indications, Roman Catholics are most religious, Protestants next, Jews less, and those advocating a new type of religion the least religious of these four groups.

EFFECT OF THE PERIOD A STUDENT SPENDS AT M. I. T.

The Cause - Effect Relationship

It would unquestionably be very desirable, in any survey such as this, to be able to point with certainty to definite factors or influences as causes of specific situations or conditions; it is almost as universally impossible to do so. In general, the difficulty in studies of social phenomena results from the investigator's inability to hold constant, to control, or even accurately to determine those factors extraneous to his study which nevertheless also affect the condition in which he is interested. In this particular instance, the major problems were two: the fact that separate freshman and senior samples were polled, not the same people during their first and fourth years; and the numerous influences and events, other than educational training and environment, which may have important effects upon the student's religion during this period. These and other difficulties tend to obscure relationships and enforce a certain tentative quality upon any conclusions which are drawn from this data.

Although the first-year and the fourth-year students surveyed here were not the same people, there is no reason to believe the compositions of the two samples differed in any significant respect. Foreign students and women students were excluded from both, and very few war veterans (if any) were included. World War II and atomic power entered the lives of the two groups at different age levels, but it does not seem probable that either exerted a really appreciable influence on the religious thought of a significant number

from either class. Otherwise the two groups do not seem to be dissimilar in any way; certainly if the views of either sample could be taken to represent fairly for a period of three or four years the opinions of students in that year of study at M. I. T., then there is equal validity in comparing the two samples at hand.

Even assuming that these samples are representative, we are not justified in assigning any and all changes to the student's "education". Most students entering M. I. T. as freshmen are 17 or 18 years of age; probably many have previously spent only brief, infrequent periods of time away from their homes and the families in which they were raised. The student's coming of age -- legally, mentally, and emotionally -- and his new enforced independence of family ties may exert influences altogether distinct from the concurrent academic ones. Certain aspects of student life should also be kept distinct from studies as such: Between extra-curricular and social activities the student's spare time may be remarkably full, in some cases perhaps more so than it was previously or will be subsequently. The community in which he now lives is to some extent artificial and isolated; certain aspects of community life may not be present here, while other problems and activities may currently assume new significance.

In some cases conclusions from this survey must therefore be largely speculative; the assignment of causes to certain situations will often be tentative. Some changes which can be observed can only be said to be products of this period; any or all of the influences mentioned above may be significant. There may, however, be instances

in which some evidence or the reasoning of common logic will indicate that one factor is of prime significance.

Religious Consciousness

The major finding of this survey which can be stated most definitely and be clearly substantiated, despite the rather poor return of questionnaires, is that consciousness of religion and interest in the problems which it considers is not decreased by the experiences of students while they are at M. I. T. A majority of the replies, in fact, report an increase in such interest, and there is obvious elsewhere in the returns an awareness of the social role and problems of religion. There is not evident, however, a very deep consideration of the philosophical and theological aspects; some replies indicate a retention of rather immature thinking.

Since there is a very great deal to occupy the average student's time and attention, some observers might a priori have expected him to lose interest in the matter of religion when placed in an environment which lays so much emphasis upon man's accomplishments. Organized religion exerts no official influence and plays a very minor role in student activities at M. I. T. It is commonly believed and, judging from this survey, apparently true that religious practices become less common and opinions less orthodox during a student's years here. To judge from this that he simply loses interest seems, however, to be entirely false.

To base any evaluation upon the students' own opinions of the effect of experiences while at M. I. T., it would be best to consider only the replies of the senior sample. Of these, 63% report they

have become more interested in the problems which religion seeks to answer; only 8% say they have become less interested. (29% reported no effect.) The senior replies tabulated comprise only 58% of the questionnaires distributed to seniors; this poor return is a rather serious weakness in many of our findings. In this case, however, if all 122 persons polled who are not tabulated had replied that they were made less interested — an event which is at least very highly improbable — the total reporting a decrease in interest would still be only 46% of the sample polled. Thus, allowing more than adequately for our poor returns, it seems quite certain that fourth-year students feel they have not become less interested in religious problems while at M. I. T. It would seem very likely that a majority feel that their interest in this regard has increased.

The replies and comments which were written in on many of the questionnaires (see Appendices G - I) would indicate that a considerable number of the students have given at least some thought to many topics in the field of religion. Seniors, on the whole, often seem unwilling to accept blindly the judgments of others or even those of society; their replies frequently indicate attempts to form some personal evaluation of their own on such a topic as this. (Returns may have come from a rather select group, however, as far as the extent of thought on religious topics is concerned.)

That this independent thought increases during the period which a student spends at M. I. T. also seems clear, both from the greater number and less stereo-typed character of the comments given by seniors and also from the generally less orthodox beliefs and

practices of seniors as compared with freshmen. Individual personalities differ immensely; if we may discount direct personal revelation as a factor which would produce standardized beliefs, it would seem to follow naturally from greater independent thought that there would be a correspondingly less uniform body of opinion on a matter such as this.

There may quite possibly be some connection here with the student's professional training. Independent thought on the part of the individual could be stated as one of the goals of all types and levels of education. Technical training, however, may frequently lay special emphasis upon a certain type of open-mindedness. Any hypothesis or theory which cannot be verified and supported by observation or experiment is given, at best, only a tentative acceptance. Explanations of this qualified, tentative nature are often employed — they comprise a large part of modern science — but there is always a search for greater certainty, for a more adequate and more easily verified theory. Applied to religion, it would seem that this type of thinking might sometimes be emotionally disruptive; one is faced with the dilemma of accepting some hypothesis temporarily and also seeking a more valid complete understanding in a field where experimentation and observation are seriously restricted and a reliance upon them can be frustrating. It is perhaps noteworthy, however, that this survey reported so few definite crises leading to a subjective religious awareness and so few reactions producing complete disagreement with the beliefs taught; apparently emotional crises have not played a significant part in these students' religious

lives.

A feeling of the necessity of observation and experimentation which is conditioned by any technical training may in part be responsible for another observation from this survey. In discussing their opinions most students restrict themselves largely to tangible entities, such as the social institution of the church, or to superficial fact, such as Biblical and scientific accounts of the creation. There was much less discussion on matters which did not have some relationship to observable phenomena or accepted fact. (Note, for example, the difference in the number of comments on the Church and those on the Deity. Appendices G and H, respectively.) Virtually no mention was made of any conflict between religious and scientific attitudes, such as that mentioned in the introduction to this paper; conflict was seen, if at all, in various "facts" which the two systems upheld. Surprisingly enough, this was even more frequently true of seniors than of freshmen.

Apart from this slant to thinking, the general increase in interest in religion during this period may be attributed to greater maturity and independence from parental influence as well as to the student's educational environment. However, the fact that there is such an increase seems quite clear.⁵ If this results in a more

5. The word "orientation" was used in question 9 at Harvard; it was omitted at MIT for fear of its being interpreted to mean any opinions whatsoever on religion. If the word had been retained and this interpretation were common, we should expect a much greater affirmative answer to #9 because of this high degree of interest in religion. However, since the results obtained agree so closely with those at Harvard where the word "orientation" was used and with findings at other schools, it

careful consideration by the individual of this whole problem, this one finding, at least, might be viewed favorably by both the advocates and the opponents of organized religion.

Need for Religious Belief

There is a definite decrease from freshmen to seniors in the number of students who feel they need some form of religious belief. (77% of the freshmen and 68% of the seniors replied they did.) There is a more striking increase in the number who positively state that they do not need such a belief -- 10% of the freshmen and 21% of the seniors. There is a corresponding decrease in the frequency of various religious practices and the orthodoxy of belief on specific items. Independent thinking is stimulated by the school environment, and some individuals are undoubtedly led to reject their past beliefs. There is very little in the environment at M. I. T. to provide a counteracting influence which would foster religious convictions in those not previously holding them. Even among those professing a need for some belief, religion is quite frequently considered as a field distinct from other areas of life and there is little indication of individuals basing their entire philosophies of life and codes of action upon their accepted religion.

A significant number of students report the occurrence while they were at M. I. T. of a reaction against the beliefs taught them in childhood. (13% of the seniors replying) In general, the student is probably led to re-examine these beliefs, and quite naturally

is likely that such an interpretation is not common. More probably, the persons polled to not usually notice the exact wordings, but instead the precise nature of a question is often inferred from its general content.

in some cases will find them inadequate. Except for possible personal acquaintances, there is usually no agency in the school environment to provide alternative religious views or to support the beliefs which are now questioned. The result is unquestionably the loss by some students of their previous religious convictions. Because no intellectual defense is offered for religion although criticism may be encouraged by a critical and basically secular environment, there is probably not an equal likelihood that students not holding religious convictions will acquire them while at M. I. T.

To be sure, 12% of the seniors reported that a subjective awareness of religion began while they were at M. I. T. However, the great majority of all such awakenings were described as a gradual process, and those students with a stronger religious influence in their background more frequently report such an occurrence at some time in their lives. (69% of those with very marked, 62% with moderate, 39% with slight, and 14% with no religious influence in childhood) It seems likely, therefore, that these instances of a subjective awareness were based upon earlier beliefs and teachings which merely became more meaningful and personal to the individual while he was at M. I. T. Also, as Table XII illustrates, those subject to less religious influence in childhood more frequently report that experiences while at M. I. T. have made them less religious.

The most noticeable specific points in this trend toward less religious belief are: (1) the greater number of seniors, as compared to freshmen, choosing an agnostic view on the question of the Deity at the expense of the group believing in a personal God (see Table XV),

and (2) the smaller number of seniors who accept the divinity of Christ (see Table XVI). As mentioned previously, there is less acceptance of most orthodox positions by seniors. (see Tables XIV - XVIII) Our senior sample also considers religion and science to be in greater conflict than do the freshmen, but only a very few more believe this conflict to be irreconcilable. (see Table XVII) Religious practices are less frequent among seniors (see Table XIX), and church membership is rarer, among both those who feel a need for religion and those who do not.

If professional training has any significant bearing upon religious development and beliefs, it was expected that there might be some noticeable distinctions between students enrolled in the various courses of study. Since freshman choices are so tentative, these should be looked for in the senior sample. The sample taken was not large enough to give a fair representation of all groups, however; the seniors included 100 engineers but only 27 scientists. Little weight can therefore be attached to the differences noted: there were no scientists choosing Roman Catholicism or a substantially new religion, and larger percentages of engineers reported both awakenings and reactions while at M. I. T.

A fairly common attitude apparently was expressed by one senior who remarked, "I don't see how science and religion can be compared at all. They deal with two unrelated fields." Another complained, "The two are separate fields of activity. You are asking me to relate tomato soup with Japanese lanterns." It is perhaps rash to generalize too much from the evidence at hand, but there seems to be

some support in the comments given for concluding that this attitude carries over to a separation of religion from most other, more "practical" aspects of life. Students are definitely interested in religion but as an abstract separate rather than as a potential key to all of life. This, too, relates to the greater number of comments given on the Church, which presents practical problems, than on the Deity and other such items; it may also be due to the rather pragmatic viewpoint found here which concerns itself primarily with problems that are more susceptible to observation and control.

This belief in a dichotomy between religion and other affairs may partially explain another finding. The students polled, almost regardless of belief, very seldom reported that they ever felt isolated or embarrassed because of their belief (15% of both freshmen and seniors reported they were). A more intensive survey would certainly be necessary before making any assertive statement, but it seems likely that relatively few students have attempted to construct a positive philosophy upon their religious beliefs or to expand these beliefs very far into conscious attitudes and actions.

Social Awareness

As previously indicated, there seems to be evident throughout a large part of the replies received an almost paramount concern with the social implications of religion. This is particularly apparent in the comments made on the institution of the Church; the question probably was framed in rather "social" terms, it is true, but it is still significant that nearly all statements attacked or defended the Church on the basis of its social record -- very few students

discussed it in terms of their belief alone, as God's organization on earth, as an evangelical emissary, or as a basically pointless agency for unbelievers. (See Appendix G for a listing of the comments made.) In fact, some students who accepted no religious beliefs defended the Church as a positive and worthwhile social force. There also seems to be some tendency to see religion as a product of the particular society and culture. Most frequently reported as factors which contributed to the students' religiousness were the influence of parents and the pressures for conformance with tradition and convention. (See Table VI) There was also some reference made to dogmas and teachings of the Church as products of, or as anachronisms in, some particular culture or period of time.

Our understanding of these points, also, is undoubtedly aided by a consideration of the student's academic training. In general, observed phenomena call for some explanation from the scientist, a definite determination of causes or at least a working explanation which fits well with all observed data. Problems to be dealt with should be separated from extraneous considerations but viewed in the light of all possibly relevant circumstances and with consideration given to all possible relationships. Organized religion has certainly manifested itself through society, and it is in this context that the scientist will view it. In considering its causes and implications, the more concrete and more easily observed factors are once again the most likely ones to receive attention.

THE INFLUENCE OF BACKGROUND

The relationship which the student's childhood religion and previous training in religious matters bears to virtually all of his present religious beliefs and practices is indeed striking. The two do not always correspond -- there is an appreciable shifting of beliefs, which is almost always toward more "liberal" systems -- but the importance of past influences seems to be very considerable. No correlation seems to be indicated with other elements of the socio-economic background or environment, except for a few slight geographical trends.

Childhood Religion and Present Belief

Nearly all students polled reported the existence of some religious influence in their childhood. Less than half presently accept the system of beliefs corresponding to that childhood belief; changes which have occurred are nearly all toward more "liberal" beliefs. Those who report lesser degrees of influence more frequently have changed their views. The precise elements of belief which are normally associated with a given system frequently do not have a blanket acceptance even by those who classify themselves within that system.

Only twelve students from the entire sample (3.9%) reported no religious influence whatsoever in their childhood. Of these, only four now feel that they need no religious belief. Of those reporting some religious influence, 40% of the seniors and 52% of the freshmen presently accept the same system of beliefs. (see Table IV) Those

who reported that the influence was only "slight" more frequently have changed their views than those who were subject to "moderate" or "very marked" influences. Since religious influences in childhood are usually fostered by the parents, this finding agrees well with the very high rating of "parental influence" among the factors contributing to religiousness. (see Table VI)

The most frequent losses from the organized system of beliefs which exerted an influence in childhood have occurred in the cases where that influence was Protestantism or Judaism. Catholicism, by contrast, has held its childhood members relatively well. The more orthodox faiths, however, have not gained members from those raised under other influences. In general, the shift from childhood influence to present belief is always toward a more liberal position (e.g., moving from Catholicism toward Protestantism, Liberal Protestantism, and ethical Christianity, in that order); these more "liberal" systems have not done as well, however, in holding their childhood members. It should be noted, though, that these systems were more often reported to have exerted a lesser degree of influence. (This shift from childhood influence to present belief is well illustrated in the tabulation of question 19 in Appendix M, sheet 2.)

Even among those who have retained a stated belief in their childhood religion, however, there is considerably less acceptance of the individual items of belief which are usually associated with these systems. Not all Protestants, or even Roman Catholics, accept the divinity of Christ, for example. (see Tables XIV - XVII)

In general it can also be noted that those who reported a strong religious influence in their childhood are likely to see less serious

conflict between religion and science. Quite likely, a fuller background and more complete training in religion have better equipped these people to handle the challenge which arises when another system of thought occupies their main attention.

Childhood Influence and Religious Development

Quite uniformly, these reports indicate that persons with a greater degree of religious influence in their childhood more often have experienced a subjective awareness of religion, less often have rejected the beliefs which they were taught, and are not as likely to have been made less religious by experiences while at M. I. T.

Of the seniors reporting a very marked religious influence in childhood, 69% also reported an experience leading to a subjective awareness of religion; 73% of these describe this experience as a gradual process. Of the seniors reporting only a slight religious influence in childhood, 39% reported such an awakening to a subjective awareness; of these, 65% describe it as gradual. Although all groups reported that most experiences of this type were gradual, in both samples a steady progression is apparent between those who were strongly influenced and those who were subject to no such influence; the stronger such a childhood influence the more frequently this experience of subjective awakening was reported. It would seem quite natural that this should be so; those who have been frequently confronted with religious matters and strongly influenced by them are probably more conscious of religion and certainly more familiar with it, so that there is a greater opportunity for this to become a con-

sciously personal matter. Those who presently are members of, or previously were influenced by, the more "orthodox" religious systems also report this awakening more frequently than others. It is difficult to evaluate this, however, since these systems are usually reported to have exerted a stronger influence than the more "liberal" faiths.

Of the seniors reporting a very marked childhood influence, 69% also reported a reaction at some time against the beliefs taught them, but only 9% of these at present are in virtually complete disagreement with those beliefs. Of the seniors reporting only a slight degree of influence, 67% reported a reaction against its teachings, but 30% of them at present completely disagree with these beliefs. Those now accepting the beliefs of a more "orthodox" faith less frequently reported a reaction against its teachings, but there seems to be little difference between the various degrees of childhood influence in the frequency of such reactions. The noticeable difference comes in the reported outcome of such reactions. Here there is again a steady progression; those subject in childhood to stronger religious influences react against these teachings about as often as others, but they more frequently continue to accept those teachings after the period of reaction.⁶

6. 67% subject to slight influence report a reaction; 59% subject to moderate; and 69% subject to very marked influence. There is further evidence (see following section on "Childhood Influence and Present Conduct") to support the theory that some of those subject to very strong religious influences have since reacted sharply against them. Apparently one can impress religion upon children too strongly. Quite possibly it is not simply a matter of strength, but, rather,

The approximate mean age at which reactions began for the entire sample was 15. There is only one significant deviation from this for the sub-groups within the sample; those who presently feel no need for religion reacted at a mean age of about 13.

Similar to the reports on reactions against teachings are the findings in regard to the effect of experiences while at M. I. T. 25% of the seniors reporting a very marked religious influence in childhood stated that they were made less religious; of those reporting only a slight influence 42% said they were made less religious. This is not as great a difference as exists on other points, but there still is evident a steady progression; those subject to greater religious influences as a child are less likely to have their religiousness decreased while they are at M.I.T. There does not seem to be any significant tendency similar to this in regard to changes in the student's interest in the problems of religion while he is at M. I. T.

To summarize the above, a stronger religious influence in childhood seems to produce four results:

(1) The individual is more likely to experience a subjective consciousness of religion, which becomes a meaningful personal element in his life. This is probably due to the more continual presence of a religious context for all experiences.

some of these "very marked" influences may have been too dogmatic, too inflexible, or too demanding for the individual to revise later on; his recourse then may have been a complete rejection of these teachings and practices.

(2) A reaction against the beliefs which are taught will not occur as early in life, although by the time the student reaches college such a reaction is just as likely to have occurred at some time. This probably is due to the deeper impression made by religious training, which is therefore not as easily and quickly challenged seriously.

(3) The individual is more likely to return to his original beliefs (those taught him) after this reaction, or to retain a greater portion of them. Apparently the impression made early in life is able to withstand a great deal and is extremely important in shaping the adult personality.

(4) Similarly, the individual is more likely to go through other challenging experiences (those at M.I.T.) with less loss of his religious beliefs.

Brief mention should be made of the very few students -- only twelve in all -- who reported that no religious influence at all had existed in their childhood. None of these reported an experience causing a subjective awareness of religion, but only four now feel that they do not need any religious beliefs. Exactly as Dr. Allport found at Harvard, religious background is of very great importance but is not the only source of religious convictions; the few students who have not been subject to some religious influence still quite frequently have acquired a feeling of need for some form of belief.

Childhood Influence and Present Conduct

Perhaps the most striking set of figures from this survey are those presented in Table VII. There is a very marked increase in the

frequency of the three religious practices investigated with an increase in the strength of childhood religious influences. There is, however, a significant fraction of those reporting a very marked influence who apparently have rebelled against these teachings at least to the extent of abandoning these three practices. Church attendance has suffered the most in this regard, and is in general less frequent among all groups than prayer and feelings of reverence, devotion, or dependence.

Disregarding those who reported no childhood religious influences, since they are too small a group (7 seniors, 5 freshmen) for the percentage figures to be meaningful, we find that 2% of those reporting slight, 21% reporting moderate, and 36% reporting very marked influence attend church weekly. However, among those never attending church we find 64% of those having had only slight influence, 18% of those having moderate, and 21% of those having had very marked religious influence. As noted in the footnote to the previous section, some persons having been subject to very strong religious influences apparently reject their teachings almost completely and abandon the practices taught. An identical pattern is seen in the reports on the frequency of prayer. However, on the matter of feelings of reverence, devotion, and dependence, by far the smallest percentage never experiencing these feelings is those who had a very marked influence in childhood. On the other hand, a larger percentage (26%) of those in this category than in the other two reported these feelings only rarely. (see Table VII)

The more outward aspects of conduct are more often completely

disregarded. In all three categories of childhood influence, there are more seniors who never pray than there are those who never experience feelings of reverence, devotion, or dependence; and there are more who never attend church than there are who never pray.

Nevertheless, we find that, of those saying they do not need any religious belief, 43% of the seniors and 69% of the freshmen still retain membership in some religious organization. Since the church attendance figures were relatively low (especially for this group) and the Church was often severely criticized on question 14 (see Table XIV and Appendix G), this would seem rather surprising. It may be explained in part by the few professing no religious beliefs who nevertheless felt the Church was a positive and constructive social force. A more probable and adequate explanation undoubtedly is offered by mere inertia and mild social pressures. Probably many accepted church memberships in childhood and have never bothered to break those relationships.

Factors Other Than Childhood Religion

The income of the student's family group seems to bear no observable relationship either to his present religious beliefs or to the degree of influence which religion exerted in his childhood. Little correlation could be made between the student's residence while in school and his beliefs or lack of them, although a larger sample might have shown some trends. In general, Roman Catholics tended to come from large cities and Protestants from smaller communities; this, however, is quite probably due to the relatively large Roman Catholic population of some cities in New England and the

preponderance of Protestantism in many small towns in this area. Those students who feel they need no religion also tended to come from the larger communities, possibly because of a lack of any community life centered about the church or the lack of social compulsion to be a church member.

Appendix M presents a tabulation of the student's family income by his present belief and by the degree of religious influence in his childhood. The figures are widely scattered and no patterns or trends are evident. From this survey we definitely can not state that any economic strata is more or less religious than any other, nor can we state that families at one income level exert more religious influence on their children than those at any other.

While attending M. I. T., a larger percentage of Roman Catholics than of any other group live at home with their parents. This undoubtedly is only because the Boston area is predominantly Roman Catholic, and commuters chosen at random will therefore tend to be Roman Catholic.

A smaller percentage of the students living in fraternities than of those in other living groups feel they do not need any religious belief (26% of those living in dormitories, 10% of the fraternity members, 30% of those in outside apartments, and 14% of those living with their parents). Further study would be necessary to establish an explanation for this; the smallness of the sample taken here even makes the conclusiveness of this finding somewhat doubtful.

For the entire sample polled, the median home town population falls within the range of 20,000 to 100,000. The medians of both the

Protestant and Roman Catholic groups also fall in this range; but a larger percentage of Protestants than of the whole sample come from smaller communities, and a larger percentage of Roman Catholics come from cities of more than 100,000 population. (see Appendix M, sheet 1) The large Roman Catholic population of Boston previously mentioned is probably a partial explanation of the latter trend. A fairly large fraction of the student body is drawn from the northeastern area of the United States; many of the smaller communities here are quite largely Protestant, which fact may account for the smaller home towns of the Protestants in this sample.

Those who feel they do not need any religious belief reported a median home town size over 100,000. This is a rather definite difference from the rest of the sample and may be explained by differences in community life. In smaller towns the church most probably forms a center for more of the community social activity than it does in larger cities. There may be more social pressure for the individual to be a church member and participate to some extent in church activities; larger communities offer a wider choice of activities and acquaintances, so that the influence of the church may be considerably less.

COMPARISON OF M. I. T. AND OTHER SCHOOLS

Dr. Gordon Allport has stated that unpublished surveys made in other colleges and universities indicate that the findings of the survey at Harvard in 1946 hold remarkably well for other college populations as well.⁷ For the purpose of comparing the results of the present study with student beliefs at other colleges and universities, the findings of Dr. Allport and his colleagues at Harvard will therefore be cited as representative.

In general, great similarity was found between the Harvard and the M. I. T. surveys. Roughly the same percentages feel that they need some religious belief, and approximately the same fractions of these choose each of the alternative systems of belief offered. Approximately the same changes have occurred in belief since childhood, and the students hold similar opinions of what influences caused these changes. The survey at M. I. T. indicates a somewhat greater frequency of religious emotions than at Harvard and a slightly greater belief in personal immortality. M. I. T. students also tend to consider any conflict existing between religion and science as less serious than the Harvard sample did.

Similarities

As noted above in discussing the composition of samples (section on "Results of the Survey"), the sample polled at M. I. T. was divided

7. Allport, Gordon W. The Individual and His Religion
(New York, 1950) p. 36

into two groups, first-year and fourth-year students; the survey at Harvard in 1946 was made in one class composed of students from all four undergraduate years, although there is some evidence that the class was relatively weaker in upperclassmen. In most of our findings, the generalization can be made that seniors are less religious and less orthodox than freshmen; on nearly all of these items the reports of the Harvard non-veterans fall between the two groups at M. I. T., somewhat closer to the first-year students. Such would obviously be the precise case for a mixed sample which was otherwise identical to the total sample at M. I. T. In this report all tables giving data which was taken in both surveys and which can be meaningfully compared include the corresponding figures for the non-veteran group polled at Harvard in 1946.

In examining the key question (#9) we find that 77% of M. I. T. freshmen, 76% of Harvard non-veterans, and 68% of M. I. T. seniors feel that they need some form of religious belief. (Table III) As shown in Table III, these students are distributed among the various types of belief in about the same pattern at both schools. On specific items of belief, there is a close similarity in the two groups' opinions of the Church and the Deity.

From all that can be observed here, the choice between a technical school and a liberal arts school (both on approximately the same level in their fields) does not seem to indicate a difference in the student's acceptance of religious belief nor in the general outlines of his religious philosophy.

Differences

Three differences, although not appreciable in magnitude, were noticeable between the samples at the two schools: on matters of religious practices, immortality, and conflicts of religion and science.

The percentages never attending church, never praying, and never feeling reverence are equal for M. I. T. freshmen, but decrease in that order for M. I. T. seniors; that is, more seniors completely neglect the more outward religious practices than neglect the more personal, subjective ones. At Harvard, the opposite trend was seen; more students never prayed than never attended church and still more never experienced feelings of devotion or reverence. In church attendance and prayer the Harvard non-veteran percentages fall between the M. I. T. freshmen and seniors, as in most matters covered by both surveys, but in the matter of reverence, devotion, and dependence they do not. 19% of the M. I. T. freshmen, 13% of the Harvard non-veterans, and 13% of the M. I. T. seniors experienced such feelings daily; 17% of the M. I. T. freshmen, 30% of the Harvard non-veterans, and 26% of the M. I. T. seniors never experienced them. Even on the matter of prayer, the frequency reported at Harvard seems to fall somewhat lower in comparison to the M. I. T. reports than do figures on the items of belief covered by the surveys. (see Table XIX) Nothing can be definitely concluded from this isolated and relatively slight trend. An hypothesis can be proposed that the students at M. I. T. are slightly more frequent in their purposeful practice of religion; they are, however, often critical of the church

and may not attend services merely as a social activity as frequently as Harvard students do. This could certainly not be substantiated without further investigation.

Slightly more of the students at M. I. T. than at Harvard believe in some type of personal immortality. Replying to question 17, 47% of the M. I. T. freshmen and 31% of the seniors, but only 28% of the Harvard non-veterans, chose the first alternative -- the continued existence of the soul as an individual and separate entity. In contrast, 24% of the M. I. T. freshmen, 29% of the M. I. T. seniors, and 34% of the Harvard non-veterans chose the statement that one's immortality consisted only of his influence upon his children and social institutions. (see Table XVII) Just why this difference should exist is not apparent. (It may possibly seem more improbably to a scientist that such a vital force as a human personality should ever simply cease to exist. This conjecture does not seem too well-founded, however.)

Presumably, students at M. I. T. should have a clearer idea of the true nature of science and its mode of thinking than students at Harvard. It may, therefore, be significant that a smaller percentage of M. I. T. students than of Harvard students feel that religion and science are definitely irreconcilable and a larger percentage feel that the two clearly support one another. 6% of the M. I. T. freshmen, 8% of the M. I. T. seniors, and 16% of the Harvard sample feel that the two are irreconcilable; 40% of the M. I. T. freshmen, 26% of the M. I. T. seniors, and 21% of the Harvard sample feel that they support one another. (see Table XVIII) Apparently students at

M. I. T. more frequently voiced the opinion that religion and science are entirely separate and can not possibly conflict. In only a very few instances was mention made of the conflict in attitudes between the two. (Freshmen mentioned this more frequently.)

There is somewhat insufficient evidence to support the point, but it seems likely that M. I. T. students in general tend to compartmentalize the two — and it might be suspected that most of their practical affairs would be assigned the same category as science rather than the same as religion. As mentioned previously, religious convictions quite possibly have not been incorporated into most students' views of life in general nor have their broad philosophies been built upon their religion. This, if true, would account for fewer M. I. T. students seeing an irreconcilable conflict, but certainly not for a greater number believing that religion and science support one another.

Relative to the total scope of this survey, the three differences noted above are certainly fine points. The differences themselves are not of very large magnitude, and a satisfactory explanation of them is rather difficult with the evidence at hand. In the main points covered by this study, there are no significant differences between the two schools. It seems evident that "technical" and "liberal arts" backgrounds do not produce distinctly different attitudes toward the question of religion.

CONCLUSIONS

To generalize somewhat, the main inquiry of this study has been answered in the negative. Insofar as a judgment can be based on one survey of students at one technical school, there does not seem to be any distinct relationship between technical education and attitudes toward religious matters. Changes in the student's outlook on these topics do take place during his years of study, some of which seem to be due largely to the education he is acquiring, but there is no basis for assuming that these same changes do not occur among students in non-technical fields. In general, religious orthodoxy and conformity decrease during the student's college years, but interest in the problems with which religion deals increases.

Virtually the same fraction of the students -- seven out of ten -- as at other universities feel that they need some form of religious belief to have a fully mature philosophy of life. Most of these feel that one of the major religious systems now in existence is satisfactory; only one student in twelve feels that a substantially new religion is needed.

Interest in the problems considered by religion is much more widespread than is acceptance of religious doctrine and belief. Although the incidence of belief and the orthodoxy of opinions normally decreases during the student's stay at M. I. T., interest in this whole topic shows a definite increase. This interest and the encouragement of critical thought by studies and environment causes much more independent thinking about religious matters, which in turn

probably contributes to the decrease in orthodoxy.

Students therefore often have obviously independent opinions on the several topics covered in this survey. They may frequently accept one of the major religious faiths as being adequate on the whole, but depart from its views on specific items of belief. Apparently the tendency, during the entire maturing process as well as college years, is to reject any blind acceptance of religion and to question seriously the beliefs previously held. Slightly more than half of the students at some time between childhood and their fourth year in college have abandoned the religious denomination of their childhood. This change in belief is virtually always toward a more "liberal" system or toward no belief whatsoever -- although the liberal faiths lose more of their juvenile membership than do the more orthodox churches, and do not have members who are as active in religious practices or as uniform in belief.

This loss of orthodoxy and shift toward more liberal systems of belief which occurs from childhood on, is identical to the trends found at Harvard. We do not have specific information to indicate whether or not students there experience a decrease in belief and orthodoxy and an increase in interest in religious matters from their first to their fourth years, but there certainly is no information to indicate that this may not be so. As nearly as can be told, therefore, these changes are the result of increasing maturity, of critical thought, and possibly of higher education in general -- but not of a technical education as such.

Although a very definite independence and individuality can be

observed, childhood influences still are of prime importance in determining the young adult's religious orientation. If that influence on religious matters was only slight, the student at the college level is less likely to believe as he was taught or to practice any of the customs associated with such belief. Still, four out of ten students polled accept the same religious faith which exerted an influence upon them as children.

The influence upon present conduct is even more striking; in general, the more strongly a child is influenced by religion the more likely he is to come to a personal, subjective awareness of religion, to attend church, and to pray. A minor, but significant, fraction of those exposed to the strongest religious influences have rebelled against their teachings, however, and virtually abandoned such religious practices.

In general, the more "orthodox" faiths have exerted stronger influence on children and have therefore retained their adherents more often; it seems likely, however, that the intensity and not the doctrine of the childhood influence is the most important factor.

Students of science do not usually believe that it is in serious conflict with the principles of religion. Those who feel that an appreciable conflict exists, are usually inclined to allow that it may well be resolved in the future; very few (7%) feel that these two systems are irreconcilable.

Apparently very few have personally experienced a conflict within themselves because of the two teachings. The attitudes and expectations of the two philosophies are seldom mentioned in discussing

their relationship; a large part of the students feel that religion and science deal with completely different spheres and can not conflict.

Few students concern themselves with theological problems and attempt to build their working philosophy of life upon their theology. Taking a rather pragmatic view, most are concerned with more tangible matters and often make contact with religion at a rather superficial level, dealing with the social implications and physical inferences of religious doctrines.

A more integrated set of convictions might be possible for the student if he more clearly understood the inter-relationships which exist between religion and what he considers distinctly different fields and if he were given greater access to intelligent discussions of religious philosophy and to presentations both of the alleged conflicts between religion and other bodies of thought and of their attempted resolutions. Students are frequently dissatisfied with, and even distrustful of, the organized Church; they may feel it has failed in bringing such discussions to their level. It is likely that some, at least, would be mistrustful of obvious attempts by organized religion to initiate intellectual "discussions" on campus, and would prefer a more "impartial" sponsor. Although it does not fall within the various professional fields, perhaps it is the role of the school itself to provide strictly optional courses in comparative religion or religious philosophy. Certainly sufficient student interest seems to exist.

In summary, it cannot be established that the technical student

differs from other students at his own level in religious matters. Background seems to be of very great significance. Further study might be valuable to determine whether technical students compartmentalize religion more than others and whether religious convictions form as meaningful a part of life for them.

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TABLES

TABLE I
DISTRIBUTION OF SAMPLES BY COURSE

(Percentages)

<u>Course</u>	<u>Course Number</u>	<u>Senior Enrollment & Questionnaires Sent</u>	<u>Senior Returns</u>	<u>Freshman Returns</u>
Civil Engineering	I	7.0	7.1	4.4
Mechanical Engineering	II	12.7	11.2	11.8
Metallurgy	III	3.8	4.1	2.9
Architecture & City Planning	IV	7.8	5.3	2.2
Chemistry	V	2.9	4.1	5.9
Electrical Engineering	VI	17.3	17.2	17.7
Biology	VII	1.3	1.8	5.1
Physics	VIII	7.6	7.7	10.3
General Science & Gen. Eng.	IX	4.3	4.1	1.5
Chemical Engineering	X	9.2	10.1	19.1
Sanitary Engineering	XI			
Geology	XII	2.1	2.4	
Naval Arch. & Marine Eng.	XIII	1.4	0.6	0.7
Economics & Engineering	XIV	1.3		1.5
Business & Eng. Administration	XV	9.9	10.6	6.6
Aeronautical Engineering	XVI	5.1	5.3	3.7
Building Eng. & Construction	XVII	2.4	2.4	0.7

(Continued on next page)

TABLE I (Cont.)

<u>Course</u>	<u>Course Number</u>	<u>Senior Enrollment & Questionnaires Sent</u>	<u>Senior Returns</u>	<u>Freshman Returns</u>
Mathematics	XVIII	2.3	2.4	2.2
Meteorology	XIX	1.1	0.6	
Food Technology	XX	0.5	1.2	
(Course not given)			1.8	3.7

TABLE II

COMPOSITION OF THE SAMPLE

(Percentages of each sample)

	Percentage of whole	<u>Age</u>			<u>Marital</u>		
		20 or under	21 or over	not known	Married	Single	not known
Seniors (N 169)	55.4	13.0	86.4	0.6	18.3	81.1	0.6
Freshmen (N 136)	44.6	97.8	1.5	0.7	2.9	97.1	
Entire Sample (N 305)	100.0	50.8	48.5	0.7	11.5	88.2	0.3
<u>Harvard, 1946:</u>							
Veterans (N 291)	70.3	26.5	73.5		10.0	90	
Non-vets (N 123)	29.7	93.5	6.5		0.0	100	
Entire Sample (N 414)	100.0	46.5	53.5		7.0	93	

Course**

	Engi- neering	Science	Busi- ness	Miscel- laneous	not known
Seniors	59.2	16.0	10.7	12.4	1.8
Freshmen	61.0	23.5	8.1	3.7	3.7
Entire Sample	60.0	19.4	9.5	8.5	2.6

** "Engineering" is defined to include: Civil Engineering, Mechanical Engineering, Metallurgy, Electrical Engineering, Chemical Engineering, Naval Architecture & Marine Engineering, Aeronautical Engineering, Building Engineering & Construction, and Food Technology.

"Science" is defined to include: Chemistry, Biology, Physics, and Mathematics.

"Business" is defined to include: Economics & Engineering, and Business & Engineering Administration.

"Miscellaneous" is defined to include: Architecture & City Planning, General Science & General Engineering, Geology, and Meteorology.

(Table II continued on next page)

TABLE II (Cont.)

	<u>Residence</u>					
	Dormi- tories	Frater- nities	Outside apartment	With parents	Other	not known
Seniors	37.3	29.6	13.6	16.5	2.4	0.6
Freshmen	59.6	24.2	2.9	13.3		
Entire Sample	47.2	27.2	8.9	15.1	1.3	0.3

	<u>Home Town Population</u>					not known
	up to 5,000	5,000 - 20,000	20,000 - 100,000	100,000 and over		
Seniors	10.1	19.5	27.8	40.8	1.8	
Freshmen	9.5	20.6	26.5	41.9	1.5	
Entire Sample	9.8	20.0	27.2	41.4	1.6	

	<u>Income of Family</u>						not known
	up to \$2,000	\$2,000 - \$5,000	\$5,000 - \$10,000	\$10,000 - \$20,000	\$20,000 - \$50,000	\$50,000 and over	
Seniors	1.8	38.4	34.3	14.2	8.3	1.8	1.2
Freshmen	0.7	25.8	39.0	27.2	2.9	0.7	3.7
Entire Sample	1.3	32.8	36.4	20.0	5.9	1.3	2.3

TABLE III

NEED FOR RELIGION QUESTION 9

"Do you feel that you require some form of religious belief in order to achieve a fully mature philosophy of life?"

(Percentages)

	Harvard Survey*					
	Seniors (N 169)	Freshmen (N 136)	Entire Sample (N 305)	Veterans (N 289)	Non-vets (N 123)	Entire Sample (N 412)
Yes	68.1	77.2	72.2	64	76	68
No	20.7	9.6	15.7	22	14	19
Doubtful	11.2	13.2	12.1	14	10	13

* Question on Harvard survey was: "Do you feel that you require some form of religious orientation or belief in order to achieve a fully mature philosophy of life?" See Appendix B for a discussion of alterations in the instrument.

TABLE IV
PRESENT BELIEF AND RELIGIOUS BACKGROUND

(Percentages of those replying)*

	<u>Seniors</u>		<u>Freshmen</u>		<u>Harvard Survey</u> (N 389)	
	<u>Choice</u> (N 169)	<u>Background</u> (N 165)	<u>Choice</u> (N 136)	<u>Background</u> (N 134)	<u>Choice</u>	<u>Background</u>
Roman Catholic	9.5	18.2	16.2	20.0	11	16
Anglo-Catholic	1.8	5.1	5.9	5.0	2	4
Eastern Orthodox						
Protestant	20.1	44.9	21.3	38.6	18	44
Liberal Protestant	5.9	5.1	4.4	4.3	6	7
Ethical Christian	6.5	4.0	4.4	1.4	11	4
Judaism	6.5	15.9	10.3	27.1	6	17
Other	8.9	2.8	6.6	0.7	5	8
New type needed	8.9		8.1		11	
Doubtful	11.2		13.2		17	
No religion needed	20.7	4.0	9.6	2.9	13	

* All questionnaires returned answered the question on present choice of belief. 3 seniors and 2 freshmen, 1.6% of the total sample, did not respond to the question on childhood influences.

TABLE V

CHURCH MEMBERSHIP BY CHOICE OF BELIEF

(Percentages of those expressing a choice of each system who presently belong to a church of that system, and the percentages belonging to any church at all)

		<u>Seniors</u>		<u>Freshmen</u>	
		belong to same church	belong to any church	belong to same church	belong to any church
Roman Catholic	(N 16)	93.8	93.8	(N 22)	100.0 100.0
Anglo-Catholic Eastern Orthodox	(N 3)	100.0	100.0	(N 8)	100.0 100.0
Protestant	(N 34)	85.4	85.4	(N 29)	79.4 79.4
Liberal Protestant	(N 10)	40.0	60.0	(N 6)	50.0
Ethical Christian	(N 11)		63.6	(N 6)	100.0
Judaism	(N 11)	54.6	54.6	(N 14)	100.0 100.0
Other	(N 15)	53.4	66.7	(N 9)	55.6 66.7
New type needed	(N 15)		80.0	(N 11)	54.5
Doubtful	(N 19)		84.3	(N 13)	77.8
No religion needed	(N 35)		42.9	(N 13)	69.3

TABLE VI

FACTORS ACTING AS RELIGIOUS INFLUENCES QUESTION 11

"If at any time you have felt yourself to be religious, which factors in the following list do you consciously recognize to have been contributing reasons? Check as many as apply."

(Percentages of those replying)*

	Seniors (N 167)	Freshmen (N 128)	Harvard survey (N 414)
Parental influence	64.7	71.9	51
Personal influence of people other than parents	38.9	41.4	36
Conformity with tradition	35.3	49.2	35
Church teachings	35.3	46.1	24
Fear or insecurity	25.2	22.7	43
Reading outside of school and college	21.0	21.9	20
Gratitude	19.8	26.1	23
Studies in school or college	19.2	24.2	17
Aesthetic appeal	16.8	16.4	25
Sorrow or bereavement	10.2	10.9	17
A mystical experience	6.6	8.6	10
Sex turmoil	4.2	0.8	8

* 8 freshmen and 2 seniors, 3.3% of the total sample, did not respond to this question.

TABLE VII

DEGREE OF CHILDHOOD INFLUENCE AND PRESENT BELIEF AND CONDUCT

(Percentages of those reporting each degree of influence)*

		<u>Seniors</u>				<u>Freshmen</u>				
		<u>Degree of influence</u>								
			Very marked (N 32)	Moderate (N 82)	Slight (N 45)	None at all (N 7)	Very marked (N 26)	Moderate (N 63)	Slight (N 41)	None at all (N 5)
<u>Need religion</u>	Yes		72.2	81.2	47.9	42.8	96.2	84.9	46.7	100.0
	No		11.1	10.6	37.5	57.2	3.8	3.0	28.9	
	Doubtful		16.7	8.2	14.6			12.1	24.4	
<u>Church attendance</u>	once / week		36.4	20.8	2.2	14.3	73.2	27.4	5.0	
	once / 2 wks.		9.1	9.7	6.7		11.5	16.1	5.0	
	once / month		9.1	19.5	8.9		3.8	17.7	17.5	
	once or twice		24.2	31.7	17.8	28.6	11.5	30.7	35.0	20.0
	never		21.2	18.3	64.4	57.1		8.1	37.5	80.0
<u>Prayer</u>	daily		34.4	14.6	2.5		52.0	25.8	7.3	
	fairly frequently		21.9	19.5	5.0	14.3	24.0	27.4	7.3	
	occasionally		9.4	26.8	10.0	14.3	12.0	22.6	19.5	
	rarely		15.6	22.0	27.5	28.6		16.1	36.6	40.0
	never		18.7	17.1	55.0	42.8	12.0	8.1	29.3	60.0

(Continued on next page)

* 1 freshman and 3 seniors, 1.3% of the total sample, did not respond to the question on degree of childhood religious influence.

TABLE VII (Cont.)

<u>Feeling of reverence, etc.</u>	<u>Degree of influence</u>	<u>Seniors</u>				<u>Freshmen</u>			
		Very marked (N 32)	Moderate (N 82)	Slight (N 45)	None at all (N 7)	Very marked (N 26)	Moderate (N 63)	Slight (N 41)	None at all (N 5)
daily		35.5	12.2			48.0	18.6		20.0
fairly frequently		22.6	21.9	6.8		28.0	23.7	20.0	20.0
occasionally		9.7	29.3	15.9	14.3	12.0	37.3	25.0	
rarely		25.8	23.2	22.7	14.3		15.3	17.5	40.0
never		6.4	13.4	54.6	71.4	12.0	5.1	37.5	20.0

TABLE VIII

AWAKENING TO SUBJECTIVE CONSCIOUSNESS OF RELIGION QUESTION 12

"Generally speaking, religion in childhood is marked by its external character; it is simply "there", to be believed along with the traditions and codes of the family and culture. This situation often changes so that at some time there is an inner experience which makes religion a distinctly subjective and personal matter. Does this statement characterize your own development?"

(Percentage of those replying)*

	Seniors (N 166)	Freshmen (N 133)	Entire sample (N 299)
Yes	55.4	72.2	62.9
No	44.6	27.8	37.1

"If yes, was this: (Percentages of those reporting awakening)*

	Seniors (N 91)	Freshmen (N 96)	Entire sample (N 187)
<u>Age</u>			
0 - 15	30.8	45.2	38.2
15 - 18	26.4	49.5	38.2
18 & up	42.8	5.3	23.6
Prior to high school	19.8	25.0	22.5
During high school	29.7	64.6	47.6
After high school (but not at MIT)	28.6	7.3	17.6
While at, MIT	21.9	3.1	12.3

(Continued on next page)

TABLE VIII (Cont.)

	Seniors (N 91)	Freshmen (N 96)	Entire sample (N 187)
Definite crisis	7.8	2.1	4.9
Emotional stimulus	11.1	17.2	14.2
Gradual	81.1	80.7	80.9

- * 3 freshmen and 3 seniors, 2.0% of the total sample, did not respond to the question on awakening at all. Of those who reported such an experience, 1 senior did not further describe it.

TABLE IX

REACTIONS AGAINST BELIEFS TAUGHT AS A CHILD QUESTION 20

"If you were brought up under some religious influence, has there been a period in which you have reacted either partially or wholly against the beliefs taught?"

(Percentages of those replying)*

	<u>Entire Sample</u>				
	Seniors (N 161)	Freshmen (N 127)	Roman Catholics (N 37)	Others needing religious belief (N 173)	Those not needing religious belief
Yes	64.0	46.4	35.1	51.5	76.9
No	24.8	39.4	56.8	33.5	14.1
Doubtful	11.2	14.2	8.1	15.0	9.0

"If you reacted against the beliefs taught did the doubt start:

(Percentages of those reporting a reaction)

	<u>Entire Sample</u>				
<u>A g e</u>	Seniors (N 103)	Freshmen (N 59)	Roman Catholics (N 13)	Oth. needing rel. belief (N 89)	Not needing rel. belief (N 60)
0 - 12	15.7	31.0		18.4	30.0
12 - 15	24.5	36.3	23.1	25.3	35.0
15 - 18	28.4	31.0	46.2	32.2	21.7
18 & up	31.4	1.7	30.7	24.1	13.3

(Continued on next page)

TABLE IX (Cont.)

	Seniors (N 103)	Freshmen (N 59)	<u>Entire Sample</u>		
			ROMAN Catholics (N 13)	Oth needing rel. belief (N 89)	Nor needing rel. belief (N 60)
Prior to h. school	24.3	42.4	23.1	24.7	41.7
During high school	38.8	52.5	46.2	47.2	38.3
After high school (but not at MIT)	17.5	5.1	7.6	14.6	11.7
While at MIT	19.4		23.1	13.5	8.3
Present status with regard to beliefs taught:					
Substantially agree	17.7	33.3	84.6	29.2	
Partially agree	63.7	57.9	15.4	67.4	63.1
Wholly disagree	18.6	8.8		3.4	36.9

* 9 freshmen and 8 seniors, 5.6% of the total sample, did not respond to the question on reaction against beliefs taught in childhood. Included in this number, however, are those who report no childhood religious influence at all. (12 students)

TABLE X

FACTORS CONTRIBUTING TO A REACTION AGAINST BELIEFS TAUGHT IN CHILDHOOD
QUESTION 21

"If at any time you have reacted against the beliefs taught, which factors in the following list do you consciously recognize to have contributed to this reaction? Check as many as apply."
 "List any other recognized factors which contributed."

(Percentages of those replying)*

	Seniors (N 114)	Freshmen (N 65)	Entire sample (N 179)
Disapproval of conformity and tradition	46.5	50.8	48.0
Reading outside of school and college	39.5	27.7	35.2
Studies in school or college	31.6	20.0	27.4
Personal influence of other individuals	21.9	29.2	24.6
Disappointment or lack of reward in religious experience	21.0	20.0	20.7
Disapproval of certain individuals holding these beliefs	18.4	26.2	21.2

* 71 freshmen and 55 seniors, 41.3% of the total sample, did not respond to the question on the factors contributing to reaction. From this should be discounted those who did not report any reaction, a total of 90. Of those who reported a reaction, a total of 16.7% did not reply to this question.

NOTE: For a compilation of additional factors listed on the questionnaires see Appendix J.

TABLE XI

REPORTED EFFECT OF EXPERIENCES WHILE AT M. I. T. QUESTION 23

"Kindly check the ways in which your experiences during the period spent at MIT seem to have affected you."

(Percentages of those replying)*

<u>Religion:</u>	Seniors (N ₁ 162) (N ₂ 142)*	Freshmen (N ₁ 130) (N ₂ 113)*
on the whole made me more religious	25.9	22.3
no effect in this regard	38.9	60.0
on the whole made me less religious	35.2	17.7
<u>Problems which religion seeks to answer:</u>		
On the whole made me more interested	62.7	45.1
no effect in this regard	28.9	50.5
on the whole made me less interested	8.4	4.4

* 6 freshmen and 7 seniors, 4.3% of the total sample, did not respond to the question on the effect on their religiousness.

23 freshmen and 27 seniors, 16.4% of the total sample, did not respond to the question on the effect on their interest in the problem. This undoubtedly was explained, at least in part, by the positioning of this section so as to make it appear, at first glance, to be only one question rather than two.

NOTE: For a compilation of the different comments written in see Appendix L.

TABLE XII

EFFECT OF PERIOD AT M. I. T. BY DEGREE OF CHILDHOOD
INFLUENCE AND BY PRESENT NEED FOR RELIGION

SENIORS ONLY:

(Percentages of those replying)*

		<u>Childhood influence</u>				<u>Present belief</u>		
		Very marked (N 32)	Moderate (N 78)	Slight (N 43)	None at all (N 7)	Need religion (N 109)	Do not need religion (N 34)	Doubtful (N 17)
<u>Religiosity</u>	More	37.5	28.2	13.9		37.6	2.9	
	No effect	37.5	34.6	44.2	71.4	35.8	55.9	26.3
	Less	25.0	37.2	41.9	28.6	26.6	41.2	73.7
		Very marked (N 27)	Moderate (N 69)	Slight (N 39)	None at all (N 5)	Need religion (N 95)	Do not need religion (N 32)	Doubtful (N 15)
<u>Interest in problems of religion</u>	More	70.4	68.1	48.7	40.0	69.5	46.9	53.4
	No effect	22.2	23.2	41.0	60.0	22.1	46.9	33.3
	Less	7.4	8.7	10.3		8.4	6.2	13.3

* 7 seniors, 4.1% of the senior sample, did not respond to the question on the effect on their religiosity.

27 seniors, 16.0% of the senior sample, did not respond to the question on the effect on their interest in the problem.

TABLE XIII

EFFECT OF PERIOD AT M. I. T. BY TYPE OF CHILDHOOD INFLUENCESENIORS ONLY:

(Percentages of those replying)*

		<u>Type of childhood religious influence</u>					
		Roman Catholic (N 31)	Anglo-Catholic Eastern Orthodox (N 8)	Protestant (N 77)	Judaism (N 27)	Other (N 17)	None at all (N 7)
<u>Religiousness</u>	More	35.5	12.5	33.8	7.4	23.5	
	No effect	22.6	37.5	33.8	48.1	53.0	71.4
	Less	41.9	50.0	32.4	44.5	23.5	28.6
<u>Interest in problem of religion</u>		(N 25)	(N 7)	(N 69)	(N 26)	(N 16)	(N 5)
	More	68.0	57.1	60.9	73.1	50.0	40.0
	No effect	20.0	28.6	27.5	23.1	43.8	60.0
	Less	12.0	14.3	11.6	3.8	6.2	

* 7 seniors, 4.1% of the senior sample, did not respond to the question on the effect on their religiousness.

27 seniors, 16.0% of the senior sample, did not respond to the question on the effect on their interest in the problem.

NOTE: For purposes of this tabulation, each instance of a childhood influence is considered as one case. Thus, the few persons who reported more than one type of influence will comprise more than one statistic in the above table. Such instances were not numerous and they were scattered in all significant respects; it is not believed, therefore, that this influences any trends which might otherwise appear.

TABLE XIV

ATTITUDES ON THE CHURCH QUESTION 14

"(Check the view that best corresponds to your own attitude.)

#1 The Church is the one sure and infallible foundation of civilized life. Every member of society ought to be educated in it and required to support it.

#2 On the whole the Church stands for the best in human life, although certain minor shortcomings and errors are necessarily apparent in it, as in all human institutions.

#3 There is certain doubt concerning the nature of the total influence of the Church. It is possible that the Church may do a good deal of harm.

#4 While the intentions of most individual church members are no doubt good, the total influence of the Church may be on the whole harmful.

#5 The Church is a stronghold of much that is unwholesome and dangerous to human welfare. It fosters intolerance, bigotry, and ignorance.

#6 Insufficient familiarity with the problem.

#7 A different attitude, as follows:" (see NOTE below)

(Percentage tabulation on next page)

NOTE: For a compilation of the different opinions written in see Appendix G.

TABLE XIV (Cont.)

(Percentages of those replying)*

	<u>Entire Sample</u> (By present choice of belief)							
	Roman Catholic (N 38)	Protestant (N 63)	Others needing religion (N 118)	Doubtful (N 36)	No religion (N 48)	All Seniors (N 167)	All Freshmen (N 136)	Harvard survey (N 170)
#1	44.7	12.7	0.8			6.0	11.8	6
#2	31.6	63.5	47.5	36.1	10.4	38.9	44.8	36
#3		4.7	11.9	13.9	16.7	11.4	8.1	18
#4		1.6	2.5	13.9	8.3	4.2	4.4	6
#5			3.4	2.8	20.8	7.2	2.2	10
#6			5.1	5.6	4.2	2.4	4.4	4
#7	23.7	17.5	28.8	27.7	39.6	29.9	24.3	20

* All freshmen replied, but 2 seniors, 0.7% of the total sample, did not respond to the question on the Church.

TABLE XV

OPINIONS ON THE DEITY QUESTION 15

"(Check the one statement which most nearly expresses your belief.)

#1 There is an infinitely wise, omnipotent Creator of the universe and of natural laws, whose protection and favor may be supplicated through worship and prayer. God is a personal God.

#2 There is an infinitely intelligent and friendly Being, working according to natural laws through which He expresses His power and goodness. There is the possibility of communication with this Deity in the sense that prayer may at least affect our moral attitude toward nature and toward our own place in the scheme of things.

#3 There is a vast, impersonal, spiritual source or principle throughout nature and working in man, incapable of being swayed or communicated with through prayer.

#4 Because of our necessary ignorance in this matter, I neither believe nor disbelieve in a God.

#5 The only power is natural law. There is neither a personal creator nor an infinite intelligent Being. Nature is wholly indifferent to man. Natural law may be spoken of as "spiritual force", but this in no way adds to or changes its character.

#6 The universe is merely a machine. Man and nature are creatures of cause and effect. All notions of a Deity as intelligent Being or as "spiritual force" are fictions, and prayer is a useless superstition.

#7 A different attitude, as follows: (see NOTE below)

(Percentage tabulation on next page)

NOTE: For a compilation of the different opinions written in see Appendix H.

TABLE XV (Cont.)

(Percentages of those replying)*

	<u>Entire Sample</u> (By present choice of belief)					All seniors (N 166)	All freshmen (N 133)	Harvard non-veterans (N 123)
	Roman Catholics (N 37)	Protestant (N 63)	Others needing religion (N 115)	Doubtful (N 36)	No religion (N 48)			
#1	89.2	46.0	20.0	2.8		20.5	39.1	25
#2	8.1	44.4	43.5	16.7	10.4	30.7	30.8	27
#3		3.2	6.9	11.1	6.3	7.2	3.8	10
#4		1.6	8.7	47.2	37.5	19.3	10.5	17
#5			6.1	8.3	20.8	8.4	4.5	7
#6			0.9	2.8	14.6	3.0	3.0	2
#7	2.7	4.8	13.9	11.1	10.4	10.9	8.3	12

* 3 freshmen and 3 seniors, 2.0% of the total sample, did not respond to the question on the Deity.

TABLE XVI

OPINIONS ON THE PERSON OF CHRIST QUESTION 16

"(Check the position that best corresponds to your own view.)

#1 Christ, as the Gospels state, should be regarded as divine -- as the human incarnation of God.

#2 Christ should be regarded merely as a great prophet or teacher, much as the Mohammedans accept Mahomet, or as the Chinese accept Confucius.

#3 In all probability Christ never lived at all, but is a purely mythical figure.

#4 None of these positions expresses my views well enough to justify a choice.

(Percentages of those replying)*

	<u>Entire Sample</u>					All Seniors (N 168)	All Freshmen (N 135)	Harvard non-veterans (N 122)
	(By present choice of belief)							
	Roman Cathol. (N 37)	Protestants (N 63)	Oth. needing religion (N 118)	Doubtful (N 37)	No religion (N 48)			
#1	91.9	66.7	22.9	5.4	2.1	28.0	43.7	30
#2	2.7	12.7	49.1	62.2	60.4	47.0	29.7	51
#3				5.4	4.2	1.8	0.7	4
#4	5.4	20.6	28.0	27.0	33.3	23.2	25.9	15

* 1 freshman and 1 senior, 0.7% of the total sample, did not respond to the question on the person of Christ.

TABLE XVII

OPINIONS ON IMMORTALITY QUESTION 17

"(Check the position that best corresponds to your own view.)

#1 I believe in personal immortality, i.e., the continued existence of the soul as an individual and separate entity.

#2 I believe in reincarnation -- the continued existence of the soul in another body.

#3 I believe in the continued existence of the soul merely as part of a universal spiritual principle.

#4 I believe that a person's immortality resides merely in his influence upon his children and upon social institutions.

#5 I disbelieve in immortality in any of these senses.

#6 I have no view at all about this matter.

#7 A different attitude, as follows:" (see NOTE below)

(Percentage tabulation on next page)

NOTE: For a compilation of the different opinions written in see Appendix I.

TABLE XVII (Cont.)

(Percentages of those replying)*

	<u>Entire Sample</u> (By present choice of belief)							
	Roman Catholics (N 37)	Protestants (N 63)	Others needing religion (N 117)	Doubtful (N 37)	No religion (N 48)	All Seniors (N 167)	All Freshmen (N 135)	Harvard non-veterans (N 123)
#1	94.6	66.7	27.3	8.1	4.2	30.5	46.6	28
#2			2.6		2.1	1.2	1.5	2
#3	5.4	9.5	10.3		2.1	8.4	5.2	11
#4		4.7	30.7	48.7	52.1	29.3	24.4	34
#5		1.6	1.7	5.4	10.4	4.8	1.5	5
#6		14.3	17.1	29.7	16.6	16.2	15.6	20
#7		3.2	10.3	8.1	12.5	9.6	5.2	**

* 1 freshman and 2 seniors, 1.0% of the total sample, did not respond to the question on immortality.

** This alternative was not offered on the questionnaire used at Harvard.

TABLE XVIII

VIEWS OF THE CONFLICT BETWEEN RELIGION AND SCIENCE QUESTION 22

"How do you feel about the frequently mentioned conflict between the findings of science and the principal (basic) contentions of religion?"

- #1 To my mind religion and science clearly support one another.
 #2 The conflict is negligible (i.e. more apparent than real).
 #3 The conflict is considerable, but probably not irreconcilable.
 #4 The conflict is very considerable, perhaps irreconcilable.
 #5 The conflict is definitely irreconcilable.

"Explain your answer briefly: " (see NOTE below)

(Percentages of those replying)*

	<u>Entire Sample</u> (By present choice of belief)							Harvard survey (N 386)
	Roman Catholics (N 33)	Protestants (N 62)	Others needing religion (N 108)	Doubtful (N 34)	No religion (N 42)	All Seniors (N 157)	All Freshmen (N 122)	
#1	78.8	50.0	26.9	8.8	2.4	26.1	40.2	21
#2	15.1	30.6	41.7	32.4	16.6	30.6	32.0	32
#3	6.1	19.4	17.6	26.5	19.0	21.6	13.1	17
#4			9.2	29.4	31.0	14.0	9.0	14
#5			4.6	2.9	31.0	7.7	5.7	16

* 14 freshmen and 12 seniors, 8.5% of the total sample, did not respond to the question on the conflict between religion and science.

NOTE: For a compilation of the explanations written in see Appendix K.

TABLE XIX

CONDUCT DURING THE PAST SIX MONTHS QUESTION 18

"Check the one statement in each part which most nearly describes your conduct during the past six months:"

	(Percentages of those replying)*			
	Seniors (N 169)	Freshmen (N 135)	Harvard veterans (N 290)	Harvard non-vets (N 123)
<u>"I have gone to church:</u>				
about once a week	18.3	28.9	14	25
about every other week	8.3	11.1	7	7
on an average once a month	14.2	14.8	11	20
once or twice	26.0	27.4	34	28
not at all	33.2	17.8	34	20
<u>"I have prayed:</u>				
daily	15.4	24.6	13	22
fairly frequently	15.4	19.4	10	14
occasionally	17.8	18.7	15	14
rarely	24.2	20.1	22	26
never	27.2	17.2	40	24
<u>"I have experienced a feeling of reverence, devotion, or dependence upon a Supreme Being:</u>				
daily	13.2	18.6	8	13
fairly frequently	16.8	23.2	13	14
occasionally	20.9	27.1	19	26
rarely	22.7	14.0	20	17
never	26.4	17.1	40	30

* All seniors replied to the first two parts. 1 freshman did not respond to the first, and 2 did not to the second. 7 freshmen and 2 seniors, 3.0% of the total sample, did not respond to the third.

APPENDICES

8. Was the average annual income of your family group during the years which you spent at home:

- less than \$2000
 \$2000 - \$5000
 \$5000 - \$10,000
 \$10,000 - \$20,000
 \$20,000 - \$50,000
 above \$50,000

9. Do you feel that you require some form of religious belief in order to achieve a fully mature philosophy of life?

- yes
 no
 doubtful

a) If yes, do you think that on the whole the tradition and literature of some great religious system now existing satisfactorily meets your own religious needs, or do you think a substantially new type of religion is required?

The following religious system strikes me on the whole as adequate:

- Roman Catholicism
 Anglo-Catholicism or Eastern Orthodoxy
 Protestant Christianity
 Liberalized Protestantism
 (e.g. Unitarianism, Universalism)
 Ethical but not theological Christianity
 (e.g. humanism, ethical culture)
 Some form of Judaism
 other: (please specify) _____

or a substantially new type of religion is required.

10. Regardless of your opinions and beliefs, are you at present a recognized member of some church body or religious organization?

___ yes

___ no

If so, which system or larger body does this group represent or form a part of?

___ Roman Catholicism

___ Anglo-Catholicism or Eastern Orthodoxy

___ Protestant Christianity

___ Liberalized Protestantism
(e.g. Unitarianism, Universalism)

___ Some form of Judaism

___ other: (please specify) _____

11. If at any time you have felt yourself to be religious, which factors in the following list do you consciously recognize to have been contributing reasons? Check as many as apply.

___ parental influence

___ conformity with tradition

___ personal influence of people other than parents

___ fear or insecurity

___ sorrow or bereavement

___ gratitude

___ sex turmoil

___ a mystical experience (perhaps not fully understood)

___ studies in school or college

___ reading outside of school and college

___ church teachings

___ aesthetic appeal

12. Generally speaking, religion in childhood is marked by its external character; it is simply "there", to be believed along with the traditions and codes of the family and culture. This situation often changes so that at some time there is an inner experience which makes religion a distinctly subjective and personal matter. Does this statement characterize your own development?

___ yes

___ no

If yes,

- a) At what age did the subjective awareness come?

___ before age 10

___ 10 - 12

___ 12 - 15

___ 15 - 18

___ 18 - 20

___ after 20

- b) Was this

___ prior to high school

___ during your high school years

___ since high school, before coming to MIT

___ while at MIT

- c) One investigator defined three types of subjective religious awakening. Kindly check the type that best includes your own case.

___ 1. Definite crisis "A real crisis is reached and passed in which a definite change of attitude seems to have taken place." This type corresponds to what is commonly considered a distinct religious conversion.

___ 2. Emotional stimulus awakening Here the emotional upheaval is much reduced in intensity, or even entirely absent, but the subject looks back to some event which served as a stimulus to awaken the religious consciousness.

- ___ 3. Gradual awakening Here there are no single or specifiable occasions that are as decisive as those defined above. The religious sentiment has developed gradually.

13. Do you feel that your views regarding religion, no matter what they are, in any way mark you off from your contemporaries, so that you sometimes feel embarrassed or isolated because of these views?

___ yes

___ no

___ doubtful

14. The Church. (Check the view that best corresponds to your own attitude.)

___ 1. The Church is the one sure and infallible foundation of civilized life. Every member of society ought to be educated in it and required to support it.

___ 2. On the whole the Church stands for the best in human life, although certain minor shortcomings and errors are necessarily apparent in it, as in all human institutions.

___ 3. There is certain doubt concerning the nature of the total influence of the Church. It is possible that the Church may do a good deal of harm.

___ 4. While the intentions of most individual church members are no doubt good, the total influence of the Church may be on the whole harmful.

___ 5. The Church is a stronghold of much that is unwholesome and dangerous to human welfare. It fosters intolerance, bigotry, and ignorance.

___ 6. Insufficient familiarity with the problem.

___ 7. A different attitude, as follows:

15. The Deity (Check the one statement which most nearly expresses your belief.)

___ 1. There is an infinitely wise, omnipotent Creator of the universe and of natural laws, whose protection

and favor may be supplicated through worship and prayer. God is a personal God.

- ___ 2. There is an infinitely intelligent and friendly Being, working according to natural laws through which He expresses His power and goodness. There is the possibility of communication with this Deity in the sense that prayer may at least affect our moral attitude toward nature and toward our own place in the scheme of things.
- ___ 3. There is a vast, impersonal, spiritual source or principle throughout nature and working in man, incapable of being swayed or communicated with through prayer.
- ___ 4. Because of our necessary ignorance in this matter, I neither believe nor disbelieve in a God.
- ___ 5. The only power is natural law. There is neither a personal creator nor an infinite intelligent Being. Nature is wholly indifferent to man. Natural law may be spoken of as "spiritual force", but this in no way adds to or changes its character.
- ___ 6. The universe is merely a machine. Man and nature are creatures of cause and effect. All notions of a Deity as intelligent Being or as "spiritual force" are fictions, and prayer is a useless superstition.
- ___ 7. A different attitude, as follows:

16. The Person of Christ. (Check the position that best corresponds to your own view.)

- ___ 1. Christ, as the Gospels state, should be regarded as divine -- as the human incarnation of God.
- ___ 2. Christ should be regarded merely as a great prophet or teacher, much as the Mohammedans accept Mahomet, or as the Chinese accept Confucius.
- ___ 3. In all probability Christ never lived at all, but is a purely mythical figure.
- ___ 4. None of these positions expresses my views well enough to justify a choice.

17. Immortality (Check the position that best corresponds to your own view.)

1. I believe in personal immortality, i.e., the continued existence of the soul as an individual and separate entity.
2. I believe in reincarnation — the continued existence of the soul in another body.
3. I believe in the continued existence of the soul merely as part of a universal spiritual principle.
4. I believe that a person's immortality resides merely in his influence upon his children and upon social institutions.
5. I disbelieve in immortality in any of these senses.
6. I have no view at all about this matter.
7. A different attitude, as follows:

18. Check the one statement in each part which most nearly describes your conduct during the past six months:

- a) I have gone to church about once a week
 about every other week
 on an average once a month
 once or twice
 not at all
- b) I have prayed daily
 fairly frequently
 occasionally
 rarely
 never

c) I have experienced a feeling of reverence, devotion, or dependence upon a Supreme Being

- ___ daily
 ___ fairly frequently
 ___ occasionally
 ___ rarely
 ___ never

19. To what degree has religion been an influence in your upbringing?

- ___ very marked
 ___ moderate
 ___ slight
 ___ none at all

a) What was the character of this influence (if there was any at all)?

- ___ Roman Catholicism
 ___ Anglo-Catholicism or Eastern Orthodoxy
 ___ Protestant Christianity
 ___ Liberalized Protestantism
 (e.g. Unitarianism, Universalism)
 ___ Ethical but not theological Christianity
 (e.g. humanism, ethical culture)
 ___ Some form of Judaism
 ___ other: (please specify)

20. If you were brought up under some religious influence, has there been a period in which you have reacted either partially or wholly against the beliefs taught?

- ___ yes
 ___ no
 ___ doubtful

a) If you reacted against the beliefs taught did the doubt start

- before age 10
 10 - 12
 12 - 15
 15 - 18
 18 - 20
 after 20

b) Was this

- prior to high school
 during your high school years
 since high school, before coming to MIT
 while at MIT

c) If you have reacted against the beliefs taught, would you say that at the present time you

- are in substantial agreement with the beliefs taught
 partially agree with them
 wholly disagree with them

21. If at any time you have reacted against the beliefs taught, which factors in the following list do you consciously recognize to have contributed to this reaction? Check as many as apply.

- disapproval of certain individuals holding these beliefs
 personal influence of other individuals
 disapproval of conformity and tradition
 disappointment or lack of reward in religious experience
 studies in school or college
 reading outside of school and college

List any other recognized factors which contributed:

22. How do you feel about the frequently mentioned conflict between the findings of science and the principal (basic) contentions of religion?

To my mind religion and science clearly support one another.

The conflict is negligible (ie. more apparent than real)

The conflict is considerable, but probably not irreconcilable

The conflict is very considerable, perhaps irreconcilable

The conflict is definitely irreconcilable

Explain your answer briefly:

23. Kindly check the ways in which your experiences during the period spent at MIT seem to have affected you

on the whole made me more religious

on the whole made me less religious

no effect in this regard

on the whole made me more interested in the problems religion seeks to answer

on the whole made me less interested in the problems religion seeks to answer

no effect in this regard

Please state in your words the principal type of effect experiences at MIT have had (if any at all) upon your religious views. (Use back of page or attach statement)

Name _____
(see note on attached page)

APPENDIX B

MODIFICATIONS FROM QUESTIONNAIRE
USED BY ALLPORT, GILLESPIE, AND YOUNG AT HARVARD, 1946

In initiating a study such as the current one, an extremely important step is the formulation of the instrument to be used. Little time was available in this case for any pre-testing procedures, and the author had no experience in the construction of such questionnaires. It was therefore decided to use the questionnaire which had been devised and used in a survey at Harvard College in 1946 by Gordon W. Allport, James M. Gillespie, and Jacqueline Young. Its use also gave the important advantage of making possible valid comparisons between the findings at M. I. T. and those at Harvard.

Some modification was made, however, to suit the particular aims of this survey. Additions were made to obtain the student's evaluation of the effects upon his religion during the time he had spent at M. I. T., and to gather data on his socio-economic background and environment with the hope of evaluating the influence of these factors. Some questions were dropped from the original instrument to keep the length to a minimum, since a shorter questionnaire undoubtedly has a better chance of being returned.

Questions 1, 2, 3, 6, 7, and 8 were added to provide the background and environmental information.¹ Question 10 was added to obtain explicit information on the student's membership in some religious organization, expecting that some might have retained membership in groups which no longer represented their beliefs.

Three questions were dropped from the instrument used at Harvard in order to minimize the length of the questionnaire. These dealt with the student's opinion of the strength of his religious faith as compared with that of others and with his reaction to certain quotations on religion. These items were felt not to be vital to the purposes of this study.

The key question in the Harvard survey read: "Do you feel that you require some form of religious orientation or belief in order to achieve a fully mature philosophy of life?" For this survey the words "orientation or" were omitted. This was done to eliminate the possibility of "orientation" being interpreted to include any more or

-
1. Question 3 was meant to find out how long the student had actually been at M. I. T. The returns, however, showed that it had been poorly worded and was frequently interpreted as meaning total years of formal education. The replies to it, therefore, were not tabulated.

less fixed opinion on the general topic of religion, e.g., firm agnosticism. If such interpretations had been made at Harvard, the affirmative replies would have been deceptively numerous and a smaller number might be expected in this survey from this factor alone.²

Question 23 was an adaptation of a question asked of veterans at Harvard on the effect of their war experiences. Very few veterans were expected in the samples at M. I. T., but it was desired to obtain the student's own evaluation of the effects of his college years on his religion.

Question 21 was added to obtain information on the factors which prompted reactions against religious beliefs; if schooling were significant, this might become apparent here.

Questions 12 and 20 were modified to include part (b) asking at what point in the student's schooling these changes had occurred. Questions 15 and 17 were altered to give an opportunity for the student to express an opinion different from those offered (alternative #7 in each case.)

The directions at the head of the questionnaire were also altered. The Harvard survey was completely anonymous. In this study, it was hoped that a few personal interviews might later be conducted with individuals selected from those returning questionnaires; therefore the questionnaire was mimeographed with a space requesting the student's name.

This attempt to secure names was abandoned when some members of both faculty and student body expressed the opinion that it would be unwise. This was decided before the poll was conducted. Rather than risk seriously curtailed returns, a statement that names need not be given was included in the letter enclosed with the questionnaires mailed to seniors, and instructors in the freshman sections were asked to explain that no names were requested.

In general, a conscious attempt was made throughout to retain the tone, content, and as far as possible the exact wording of the instrument used at Harvard in order to facilitate a comparison of the findings.

2. Such does not seem to be the case at all. Affirmative replies at the two schools were practically identical.
See "Results of the Survey"

APPENDIX C

LETTER ATTACHED TO QUESTIONNAIRES DISTRIBUTED TO FRESHMEN

As it inevitably falls out in one's senior year, I am faced with the problem of writing my bachelor's thesis. Fortunately, however, I have chosen a topic which I believe will prove very interesting and informative, but I shall have to request your assistance, and a small portion of your time. I realize, of course, that scarcity of time is something we all have plenty of; but for the sake of some information on a very interesting question and as a favor to a fellow sufferer, may I ask you to supply a part of my data?

My thesis takes the form of a survey of religious opinion at MIT. The attached questionnaire will be given to approximately 600 students here and the results tabulated and analysed. Don't let the length of the questionnaire frighten you. Some of the questions are explained at considerable length or offer a choice of several moderately lengthy replies. In point of fact, however, it should take up relatively little time to read and answer it completely. There are a total of only 23 questions, most offering multiple choice answers. In all, you are asked to check 27 blanks, give 2 or 3 brief comments, plus 8 very short items of personal data.

NOTE A space is given in which your name is requested. This is desired merely in the event that further inquiries have to be made as the thesis progresses. Naturally, no names will be used in any write-ups or reports, all information will be completely confidential, and no one but I will have access to any of the questionnaires. (Name is put on the last page to guard against any stray glances noticing a name.) I will not use any of this as personal information about any individual and am willing to take strict precautions to keep it all confidential. The most important thing, however, is to obtain complete, honest, and un-influenced replies. Therefore please be honest and complete; if you object to giving your name, you are free to omit it, and remain strictly anonymous.

It's extremely important; please return your questionnaires.
My sincerest thanks for your assistance.

Al Potter
Burton House

APPENDIX D

LETTER ENCLOSED WITH QUESTIONNAIRES MAILED TO SENIORS

To 300 fourth-year students at MIT:

The prospect of writing a thesis now faces all of us, and many, myself included, are now in that long stage of collecting data. The field in which I am working is not universally recognized as truly scientific, but will probably come closer to that status as further progress is made. That field is sociology or social psychology. Obtaining correct, carefully compiled data is just as essential here as in any other field, but in order to do this I shall have to ask your assistance. For the sake of some information in a relatively new area and as a favor to a fellow sufferer, may I ask you to supply a part of my data?

I realize, of course, that time is scarce for all of us, so I shall try to take up as little of yours as possible.

My thesis takes the form of a survey of religious opinion at MIT. The attached questionnaire is being sent to 300 fourth year students and the results tabulated and analyzed. Don't let the length of the questionnaire frighten you. Some of the questions are explained at considerable length or offer a choice of several moderately lengthy replies. In point of fact, however, it should take relatively little time to read and answer it completely. There are a total of only 23 questions, most offering multiple choice answers. In all, you are asked to check 27 blanks, give 2 or 3 brief comments, plus 8 very short items of personal data.

To select my sample, I have made use of the Student Directory and a random number table. Your name occurs in my mailing entirely by chance; no personal factors whatsoever are involved. Names, as such, are of no interest to me and all returns will be anonymous.

When the questionnaire was printed, a space for name was provided at the end. You are free, however, to completely ignore this. I do not desire personal information on any individuals but only statistical data on a fairly large group. It is most important that returns be complete and that replies be honest and unbiased. Please give honest and complete answers, bearing in mind that you are completely anonymous. I am enclosing a return envelope; would you please drop your completed questionnaire in the mail by February 21.

My sincerest thanks for your much-needed assistance.

Al Potter IX-B
Burton House

APPENDIX E

CONSTRUCTION OF SAMPLE

To increase the effectiveness of the sample chosen, it seemed worthwhile to stratify it by some parameter which might be significant in the study. Several possibilities existed, such as religious affiliation, place of residence, or course of study.

Entering students are asked to return to the Technology Christian Association a card giving, among other information, their religious affiliation, if any. The alternatives offered on this card had been revised between the times that present fourth-year students entered M. I. T. and the beginning of the current school year. Frequently, a senior's beliefs and affiliation may also have changed in the past three years. Approximately 10% of the entering students never complete and return these cards. Since this 10% might be a significant group and because of the factors mentioned above, plans to proportion the sample by belief were abandoned.

The term addresses of students are readily obtainable from the Student Directory. However, it is virtually impossible to distinguish those presently living with their parents from those having private apartments, and students may frequently change their residence from one academic year to the next. For these reasons, it was considered impractical to achieve an effective proportioning by residence.

The professional course in which a student is registered may not be quite so meaningful for the purposes of this study, but it was felt that there might be some distinctions at least between science and business students, for example. Proportioning the samples by course presented no practical problems, and was therefore selected. Enrollment figures were obtained from the Registrar's Office for seniors and the mailing list selected from the Student Directory.

Freshmen were polled in their humanities classes, through the cooperation of faculty members in the Department of English and History. The first-year sample was therefore completely random.

It did not prove practical to poll seniors in class and a mail distribution was therefore used as the only available means. Poorer returns were expected although self-addressed envelopes were enclosed, those sent by U.S. mail being stamped.

Quotas were assigned for each course of study (30 men for each 79 enrolled in the course), and selection was made from the Student Directory. A random number table was used to select page number and order of listing on the page. If the name selected was not that of

a senior or if it was that of a senior enrolled in a course where the proportionate quota had already been filled, the name was disregarded and the next number taken.

This method obviously became less efficient as more seniors were added to the mailing list and more course quotas became filled. It was therefore dropped when 130 members of the sample had been chosen. Thereafter, every third senior not already selected from the alphabetical listing was considered, and selected if he came from a course which did not already have a full quota.

Those living on campus, 167, were distributed by Institute mail service; the 143 living off campus were sent by U.S. mail.

Table I gives a percentage breakdown of the total senior enrollment by course (percentage composition of the mailing list was identical) and the percentage composition of the sample returning questionnaires.

APPENDIX F

INTERPRETATIONS USED IN TABULATING RETURNS

The answers to all other questions on the questionnaire were tabulated by the student's answer to question 9 (regarding the need for some religious belief and his choice of a system of belief). Those items which were considered significant were then also tabulated by the strength of the religious influence in the student's childhood and by the type of professional course in which he was enrolled. Appendix M gives all this data in tabular form.

Included in this tabulation under the heading of "Other" systems of belief are all those who said that some form of religious belief was necessary, but checked more than one of the alternative systems as being adequate. Five freshmen and twelve seniors did this. Also included here are three freshmen who said religious belief was necessary but did not indicate a choice of system. (Two commented that they were unable to choose.)

Although one alternative offered on the questionnaire for residence was "outside apartment with other students", in tabulating the returns all apartments and independent residences were included under "apartment". (Including apartments with other students, private apartments, or residence with wife.) The M.I.T. Cooperative House was included as a fraternity; although not strictly belonging to this category, it was felt to be closest in all important aspects.

Question 13 asked if the student sometimes felt "isolated or embarrassed". Undoubtedly many students interpreted this in the sense of "either . . . or"; therefore, all who indicated they sometimes felt one but not the other were included in the tabulations as affirmative answers.

A few students reported more than one type of religious influence in their childhood. These were all tabulated; one individual may therefore appear as more than one statistic on these items. Such instances were rather rare, however. If one influence were indicated as having been predominant, it alone was recorded.

APPENDIX G

DIFFERENT OPINIONS EXPRESSED ON THE CHURCH QUESTION 14

(The following is a complete list of the comments written in under alternative #7, "A different attitude, as follows: ". No revising or paraphrasing has been done whatsoever. An attempt has been made to list them in order of decreasing favorableness to the organized Church. Such a ranking obviously can not be precise. Parentheses give the student's choice of belief. Comments of freshmen and seniors are listed separately.)

SENIORS:

The Roman Catholic Church is a divine society, divine in origin, and supernatural in its end and means therefore its infallible in matters of doctrine. The Church is at the same time a human society, because it consists of human members therefore subject to human errors and scandals. (Roman Catholic)

I consider the Church as a Divine institution founded by God. The Human element naturally produces "certain minor shortcomings and errors" in human matters. (Roman Catholic)

The Church itself is good. Many of Its members, however, are not willing to keep Its covenants. Beyond this, some of the philosophy of the Church is outmoded, and particularly in the realm of human relations, and population control, actually a bit harmful. But this is a transitory condition, and does not effect the bases of the Church. (New religion needed)

A compromise between 1 and 2. The 1st applies to the church while the 2nd may well apply to some administrators. (Roman Catholic)

The church encourages the best in human life. Realizing the shortcoming and errors of man, it strives to find improvement by presenting the social laws of nature. Every member of society ought to support and be educated in it. (Protestant)

Science has never disproved the Bible -- instead each year it more diligently tries to support it. (Protestant)

The Church is an institution whose fundamental objective is to promote the brotherhood of mankind. It is subject to shortcomings as any institution is, but, on the whole, it has done much good, but has a lot further to go. (Other)

"Christianity is a wonderful religion. It's a shame nobody practices it." (Doubtful)

Essentially #2 with an emphasis on the errors due to trying to standardize a personal attitude. The lesser the standardization the better, I feel, the church. (Protestant)

All organized religions of the world are a means of organizing society. All - except possibly the Dobu, see *Patterns of Culture* by Ruth Benedict - preach that one should not steal, kill & usually adultery is included. If the churches used a rational approach to these points, I would be satisfied. When they start to expand from those basic elements, they often appeal to the emotions; and that type of approach to a problem has never appealed to me. Also, organized religions often prevent - in a democracy anyway - the enactment of legislation. This latter point can be harmful. I admit that they do do some good - esp. in relief work. (No religion needed)

The Church represents a chance for people to meet together and quietly enjoy each others presence. The beliefs of the Church exist for the bulk of the congregation merely to be tolerated, but are fully accepted by people who have had deep emotion experiences that they can't explain and hence must accept something metaphysical. The aesthetic appeal is the common binding element. (Doubtful)

Religion is a way of life. Church then is the center but not the bounds of religion. Each person must work out his own salvation and, therefore, religious activity must result from desire to learn rather than from compulsion. (Other)

My attitude is that the Church has produced some good and worthwhile results. The men dedicated to their work in religious fields undoubtedly are sincere. The Church as a promulgator of religion has done good since some people obviously need and want religious experience in its outward form such as ritual etc. I also believe that the various Churches have done harm by setting up yet another classification which tends to separate man into groups. (Doubtful)

On the whole the Church stands for the best in human life, but major shortcomings occur when the great moral and ethical ideas are lost or hidden in the background by theatrics, ritual and sensuous appeal. Unfortunately, statement five above has been shown to apply in at least one case to a Church which professes statement one. (Judaism)

The Churches on the whole stand for the best in human behavior (as expressed in 2), but some teachings of some Churches, it seems to me, are very prejudicial to the best interests of humankind. This is not the result of evil, but of sincere, if perhaps misguided, belief. (No religion needed)

In my observations, some type of religions, notably Catholic, tend toward the regimentation of the human mind and discourage individual

thinking & freedom of feeling. If this is considered a "minor short-coming", #2 would be applicable. (Liberal Protestant)

#2 comes closest to my views. The Church should be modified somewhat. It should, if successful, bring out true goodness in its followers, instead of simple fulfillment of duties which is often without sincerity. (New religion needed)

Although unfamiliar with the problem to a large degree, I think as follows.

Much good can & does come from many religious institutions. Many churches - including synagogues as churches - play an important community role in organizing activities & keeping the community together; in this way the church is a type of social institution or club. Churches often cooperate and teach brotherhood (but maybe they also create the need for "brotherhood" week)

Church officials often are community leaders, their advice often being sought, given, and frequently useful, both personally and in group affairs.

The solace & comfort individuals feel they receive from the church is probably good psychologically. Emotional upheavals may indeed be solved in church, but I think the good to the individual may be of his own mental processes merely engendered by feeling the church can help him.

On the other hand, I think churches can harbor the forces against welfare. The hierarchy in some churches I think is unfortunate & bad. I don't really see how a religion can set certain peoples above others in the eyes of an abstract, mythical, or real God. Evils can & do come from such hierarchies & although the failings are probably human, I don't think religion should perpetuate such an institution and should not be a means for glorification of individuals, or for wielding political or other powers.

Certain churches are based on doctrine which I don't believe individuals should be required to accept. I think there is plenty of hoodwinking in much doctrine. Doctrine is also a means of perpetuating the hierarchy.

I believe religion is a personal matter & insofar as the church attempts to take advantage of the individual's need for emotional stability, it is bad. (Judaism)

Being Roman Catholic I believe my "Church is the one sure and infallible Church." However, I feel that the existence of other churches, be they Protestant, Jewish, etc. are fine by me. Each man to his own beliefs. I do not believe "every member of society ought to be educated" in what he does not believe in and be required to support it. If he can't be convinced by what he encounters in his life and what contact he has with the various churches I say leave him to his own devices. (Roman Catholic)

I would say that the Church is the one sure and infallible foundation of civilized life when everyone is educated in it and supports it because of his own desire to do so. (Other)

The Church is not necessarily infallible since it is organized and run by humans like myself, but its teachings are right morally. Everyone should be educated by it but not particularly required to support it. (Protestant)

I believe the R. Catholic Church to be the true Church however I respect the rights of others to believe whatever they damn please. (Roman Catholic)

The Roman Catholic Church is the one sure and infallible foundation of civilized life. Every member of society should be aware of its teachings. "Required to support" implies, to me, difficulties in the area of personal liberty. (Roman Catholic)

The Church is a divine institution infallible in matters of faith & morals, whose laws if followed willingly by any person will lead that person to a "successful" life. Forcing these laws on a person may defeat its purpose, that is, the willing submission of the human being to God's will which is as defined above synonymous with the Church's views on faith & morals. (Roman Catholic)

The definition of the Church is not made clear. An institution is inseparable from the attitudes, interests, ideals, etc. of people concerned - hence, other than checking #6, the only all inclusive statement I would be willing to check with would be All religions should be respected so long as they do not interfere with the correlative rights of others. (Liberal Protestant)

At its highest level, the Church represents the collective outcome of the subjective emotions of its members. This is not bad.

In my own case, my emotions have manifested themselves in "institutions" outside of the Church - such as the arts, music, nature, etc. (No religion needed)

The Church is beneficial in relieving the troubles of those people who have faith in the Church's power. (New religion needed)

The church serves three purposes:

1. It provides a means of answering questions about the physical world around us that men, as yet, cannot answer rationally.
2. It serves as a crutch for those weak-minded individuals who can not face the fact that they are on this cold cruel world all alone, that there is no supernatural being looking out for them, and that their success or failure, life or death depends solely upon their own actions.
3. It provides a means of answering the question - what is death? Men cannot seem to conceive of the fact that when they are dead there is nothing more for them but eternal blackness and void, and that they are not going to a second life either in a heaven or in a hell. (No religion needed)

The Church and the faith provided by it is good for many people because they have no other faith or ideal to work toward and faith in the church gives them a purpose in life which they otherwise would not have. The church is bad when its influence extends outside providing this faith and purpose. To other people the church is bad in that it may hinder the progress of ideas. (No religion needed)

The Church (especially the Catholic Church) still supplies an excellent code of conduct and outlook on life for the many millions of people throughout the world who are not yet capable of formulating a consistent philosophy of their own (e.g. the European peasant) In general, though, the Church has two predominant inadequacies:

- (1) It has become an empty husk - especially the Protestant Church - devoid of almost all living ideas.
- (2) It has no means of meeting modern man's demand for understanding, rather than for blind belief. (New religion needed)

The organized church, as far as I am concerned, fulfills, for most people, an inner need for security, in that you can place the blame for untoward incidents on a greater being. If you are strong enough to supply this strength by yourself, religion (i.e., the church) loses most of its power. (No religion needed)

The Church is good for anyone that requires a release of emotion. I mean by this, that anyone that has to express their faith in a supreme creator of man had best express it in an organized program, such as the Church. In addition the Church has a strong influence on societies, and forces people to abide by the "Golden Rule" because of fear of the consequences. (Protestant)

It is a desirable institution for those people who are less educated, or not intellectually capable of accepting "nature" or the explanation science has to offer for the design of life and of the universe. The Church is a useful institution for many people (or rather for civilization) in that it keeps them in "civilized" or accepted patterns of behavior and gives them a hope in life. For me, science and rational thinking, I believe, are enough to keep me on an even keel. (No religion needed)

The "Church", meaning the one which I have attended in childhood and still attend occasionally, I believe is very good for those people who feel a strong need to belong to some Church group and be forced to obey certain religious tenets. However, I believe many of these tenets which a member must believe in and obey, not only of the Church I belong to, but others as well, are ridiculous in today's age of modern and scientific findings and ways of thinking. (Other)

Many people can not lead a moral and ethical life without the Church's assistance. The Church is good insofar as it gives those people a crutch. Many church members tend to become bigoted, although this is probably deplored by the church itself. The Church organizations, of course, depend for their continued existence on the acceptance by the

laymen of the idea of Divinity; this is unfortunate, and detracts from the force of their many excellent teachings. (No religion needed)

For many, the Church is a source of great inspiration and solace. I will never quarrel this right with those for whom it is true. It is not true for me. (Ethical Christianity)

In general a combination of most of the above is to some degree applicable. More specifically, the Church should be available to those who find it a necessary part of life. I do think however that the Church does do some harm, in that it does not give the individual a chance to find out for himself whether or not the Church is a necessary part of his life, since it indoctrinates the young and easily formed mind into a code, with punishment as a reward for not following the pattern set down by the Church. Also I can easily see how any one Church can claim that it represents the "true God", but I cannot see how any Church can claim to be the only one that pays homage to God in the proper manner. In this respect I also claim that the Church is to some degree harmful. (No religion needed)

I think that the Church can do very little harm. The intentions of individual church goers cannot be associated with Church but are functions of the individual. (No religion needed)

I put science before religion and trust that with increasing intelligence man will follow the "Golden Rule" of his own accord and not because he "has the fear of God" in him. (No religion needed)

The Church represents its own interpretation of the universal problem of intangibles. Its answer is, in the main, similar to those of many other religious groups. (Doubtful)

Each church must be treated by itself. Some fall in each category listed. Beware of the glittering generality, young man! (No religion needed)

Institutionalized religion, i.e. the Church has lost most of the influence it once had, with probable exception of the Catholic Church. Although it is not so much a dynamic force in today's society, it has done little to catch up with liberal trends, as an organization. There is much room for modernized theological thinking instead of dogma. (Liberal Protestant)

Human (individual) rights form a very real part of our life, insofar as the Church complies with these rights it is, was, and will be un-harmful. (No religion needed)

The Church as such is a small part of Judaism. (Doubtful)

Like any other institution, a stronghold of wholesomeness & unwholesomeness. (Judaism)

The Church represents a way of life for those not strong enough to stand alone. It is theatrical and exists only through mass emotional effect. (No religion needed)

What Church? If Protestant, then I would check #4; if Catholic, I would check #5. If you mean both, then check #5. Please understand that Catholics can and are friends of mine. It is the overall influence of Catholicism that I think is harmful not only to non-Catholics but to Catholics themselves. (No religion needed)

A combination of "4" and "5" above. (No religion needed)

Combination of 5 & 4. (New religion needed)

(Following are comments written in by students who nevertheless chose the alternative statement indicated.)

checked #2:

The Church is the earthly (or physical) establishment of the Divine Being. (Protestant)

checked #3:

The Church as exemplified by the Quaker meeting is perhaps useful & a necessity. However I believe a considerable looser group than this to be best. (New religion needed)

FRESHMEN:

The church is probably the only way in which human beings will ever be able to get along with each other. But God as I sometimes think of it is the same as the ones primitive people worship, i.e. something to explain a few problems we don't know the answers for, life, death, etc. The Church is definitely good. (Protestant)

The Church, or synagogue, as a place where a person can come into contact with something divine, if he feels the need of divine company, is definitely good. (Doubtful)

This question states the Church. First Church must be defined before the question can be answered. Taking for granted that Church here means and includes all the Churches of the world, Judaism, Buddhism, Mohammedanism, Christianity, etc. no. 2 will sufficiently answer the question. But in regard to the Church as the body of believers no. 1 revised as such will answer it. (revised to include all life; society will support it , if they are members) (Protestant)

I note that you capitalize "The Church". I do not know what you mean by this. My belief is that my church - in my opinion "The Church" is the true and permanent organization of God's Kingdom. Membership and participation either in this life or in the next life - the eternity - in the Kingdom is essential to the development of man to the position of Godhood which he can aspire to - and realize. (Other - Mormon)

The Church, with regard to the words of God, is infallible. Otherwise its members, from thief to Pope, are subject to human imperfectness. Every member of the Church should be educated in it and non-members should be given every opportunity to understand its teachings if they wish. Every member of the Church should be expected to support it as a duty. (Roman Catholic)

The Church is a foundation of civilization. People should attend realizing it is a privilege, available to all, & not be required to attend. (Protestant)

A synagogue is more than a place of worship, it is the center of the community, the nucleus of the communities social and religious life. The synagogue is as helpful and enjoyable as the individual wants it to be. With participation, comes enjoyment and development of the individual. Each synagogue reflects the opinions and ideals of the congregation. It is a give and take relationship. This is for a Reform Synagogue. (Judaism.)

There are certain happenings within one's own life which cannot be explained by any tangible relationship. Yet it is or was there, unexplained. Though I am not a superstitious person myself, it is such happenings, which incite a belief in God and the Church. Also family norms & traditions have laid the foundation of such beliefs. (Judaism)

The Catholic Church (in its 3 branches - i.e. Roman, Anglican, and Eastern Orthodox) is the one true and infallible foundation established by Christ. (I disagree however, with part 2 of statement 1 above in that, altho it would be good for all people to believe in and be educated in the faith, nevertheless forcing one who does not wish to would certainly not do him any good and most probable would turn him against the church. No one should be forced into it. They must do it of their own free will in order to do them any good. (Anglo-Catholicism or Eastern Orthodoxy)

Somewhere between 1 & 2. The Church, altho now comprised of men, has preserved thru the ages and has passed down to us men for our salvation the Word of God and the tradition of the ancient Church - the still-living Church. It has preserved the Word of God and preached Christ's gospel to us so that we might have God's Holy Spirit with us. I feel that every member of society should be educated in it, for it is as I have said the custodian and preacher of the Word of God. There must be no compulsion, however, for if a man is forced to love

God his love is not true, and his spirit is not freely given to the Lord. (Eastern Orthodox)

The Church is far from being infallible, but it serves to unite its people to one common belief no matter what it is. These beliefs may go from one extreme to another such as atheism which, I think, is no more than a (common belief) religion of those who wish to get away from religion. (Other)

I feel that the ethical standards promoted by the church are reasonable and wholesome as a whole, but it does foster some bigotry, and in past history has been known to be a considerable hinderance to science. I feel that the church is valuable to those who seek security, or a more complete fulfillment of life, but it does not appeal to me. (No religion needed)

I am not sure whether there is a God or not (good arguments both). I do believe that in early life (childhood) an education in the doctrines of any Church is good because it teaches the "Golden Rule" and other (X Commandments) attitudes which help us fit better into society. (No religion needed)

The Church does much good for those who have sincere faith in what it stands for. It should not try to force others to join it. It is not necessary for those who have faith in their inner selves, and will do no good for one who does not believe in God. (New religion needed)

I respect the Church, but will not myself support it. (Ethical Christian)

The Church is good for those who need formal ceremony and are incapable of seeing certain fallacy in traditional religion. The church opposes those who can see religion without formal ceremony because the church is a bureaucratic organization, and I don't like to see bureaucracy and religion together. (New religion needed)

The church gives a lot of people something they can believe in and rely on, and in many cases gives them a sense of security that "they will be taken care of no matter what." This may of course be a false sense of security. It is quite possible that the church does harm in many cases. (New religion needed)

I have always thought of the church as, one might say, a house of goodness. I see nothing harmful or wrong in a church but neither do I see that every member of society should be educated in it. (Doubtful)

The Church is meaningless in modern life. By and large it exercises no real power over people. (No religion needed)

I feel that the church is incidental to religion. Religion is a personal belief and independent of such tangible things as buildings, etc. (Judaism)

The church is an organization that can be used by each individual as he or she personally sees it. Whether it does good or bad depends on how its members make use of it. (Roman Catholic)

I do not think the Church does any "harm" to an individual. At present I think that the Church has a much smaller influence on an individual than in years gone by. This seems to show that the present Church system is not what the people want. I think a more modern Church with different aims would satisfy many people. (New religion needed)

The Church, while definitely a force for good (Christianity) is losing its influence and becoming a meaningless institution for many members who profess to be pious upholders of the "faith". (Other)

I feel that the church, as an institution, is not essential to religion. Church, as an institution, tends to be a cover-up for some people. Quite a few of my most religious and "Christian" (describing a virtue) friends do not attend church. Also, some most "un-Christian" people attend church regularly, but it does them no good. I think that too much emphasis has been put on "going to church", as such, and not enough emphasis on the so-called Christian virtues, kindness, compassion, and selflessness. (Liberal Protestant)

The Jewish religion is not a church in the usual meaning of the word. It is far more a matter of individual reasoning and interpretation. (Judaism)

I believe in the fundamental principles of the church, but I do not think that much of the ritual is necessary. The teachings of the church are basically sound, but I do not think the Bible should be accepted verbatim. (Doubtful)

Though it aims well, it is too steeped in tradition. Does not apply sufficiently to daily life. (New religion needed)

The Church is too symbolic. It should revise its symbols so as to apply to modern life. (New religion needed)

In my opinion, the Church as a whole, and in saying "whole" I mean all the various religions, have several important concepts which they either ignore or class as immaterial. One is the concept of science vs. religion. Another fault is the unnecessary dominance of the Catholic parish by the clergy of that sect. The church fills many gaps and leaves many wondering just where we get off. (Protestant)

The Church is a man-made institution. No man has the right, wisdom, or intelligence to define God or to distinguish coincidence from "miracle". I belong to no Church because I believe they're all wrong. (Doubtful)

The church in general, is organized & frequently commercialized religion. People should worship by themselves, to themselves.
(Doubtful)

APPENDIX H

DIFFERENT OPINIONS EXPRESSED ON THE DEITY QUESTION 15

(The following is a complete list of the comments written in under alternative #7, "A different attitude, as follows:" No revising or paraphrasing has been done whatsoever. An attempt has been made to list them in order of decreasing personality of the Deity and increasingly mechanistic points of view. Such a ranking obviously can not be precise. Parentheses give the student's choice of belief. Comments of freshmen and seniors are listed separately.)

SENIORS:

There is an infinitely intelligent, good, and all forgiving person who stretches his hand to you if you give him yours. (Roman Catholic)

"God is incorporeal, divine, supreme, infinite Mind, Spirit, Soul, Principle, Life, Truth, Love." - Mary Baker Eddy (Other - Christian Scientist)

God is the creator. (Doubtful)

A combination of 1 & 2 (Protestant)

A strong desire to believe 1 but with some doubts. (Protestant)

This is a toughie. Obviously there is some greater force that created and regulates the universe, but the nature of this Supreme Being I'm not capable of describing. (Doubtful)

There is a Creator, the originator of existence, so infinitely lofty that to speculate about His attributes or to try, childishly, to endow him with our own characteristics is, at the present stage of human development, the sheerest presumption. (New religion needed)

On a rational basis I find it difficult to believe that God intercedes upon the fate of those who pray, on an emotional basis I find it necessary to seek God. (Liberal Protestant)

Close to #1 - A "logical" description of the Deity hasn't been found yet. When & if science ever reaches this point, that will be my belief, based on reasoning. (Protestant)

I hope there is a God, or at least something better than man who, in body and intelligence, is very limited. In man's very weakness, I see a hope of something, God, if you will; it would be impossible to describe his characteristics. (Ethical Christian)

There may or there may not be a God - but I do not necessarily believe that our ignorance will always be necessary - we may find out some day. I wish there were a God as defined by alternative #1, but first he must be shown to me. Until then, my own order for the universe is enough. (No religion needed)

I have not settled my feelings on this matter yet. I see that naturally it is impossible to know. I feel that nature & its manifestations is impersonal & uncontrollable. As for their being a driving force: I don't know. (Doubtful)

For me there is no God but for those who need one there is one. (No religion needed)

God is necessary to many of mankind. As the Russian & French intellectuals of the last century, I refuse to venture whether God made man, or man made God. (I tend towards the latter.) (new religion needed)

No god has been established as existing, the necessity for a god as an explanation to natural phenomena has steadily decreased. However, science is not able to explain the action of each part of the universe. (No religion needed)

God is a personal thing to each man. Man's soul and individual spirit has a higher being which each person is to some degree lifted and inspired by. Since the spirit is personal, there does not seem to be relationship of God as a creator of the Universe. When we pray, we communicate to that greater thing within ourselves & not to an outside, almighty Being. (Other)

A "God" concept does not play any part in my personal philosophy. (No religion needed)

FRESHMEN:

There is an infinite and all-powerful intelligence that orders the universe and sets the laws of nature. The intelligence is not personal but can be swayed through prayer or concentration. (Judaism)

"Something" started all this and was always here. It organized natural laws and the universe progressed naturally from there. (New religion needed)

Prayer in the form of organized worship is unimportant to God. It is your attitudes and actions toward your fellow man that is the measure of your prayers. (charity, etc. takes the place of prayers)
(Ethical Christian)

There is an omnipotent Creator of the universe and of natural laws. Prayer & worship does not offer protection & favor. Reasoning & questioning a personal god may clear all questions but does not necessarily prove he is right. (New religion needed)

I believe in God as the creator of life - all his other characteristics are of necessity undefined. If he has "human" characteristics as suggested above, I feel that they must be too great to require prayer for action. (Other)

I do believe in natural laws, but as yet there is no explanation (scientific) for these laws so there must be "something" behind nature and the origin of humanity. Prayer serves more than one purpose. It does the individual good to pray even though it might not reach a "superior omnipotent being". (New religion needed)

God is a natural power responsible for those actions of nature which we can't explain. This concept is too vast to set God as a person or a natural law alone. (New religion needed)

I strongly suspect that there is a (possibly many) being higher than man, but I see no need to define it in view of our complete ignorance, nor do I believe that it has any interest or knowledge of the individual. (No religion needed)

I believe in a God who dwells within my soul; within my soul I know what is right. When I pray my mind is devoid of other worldly thoughts and I can see what is right from what is wrong without worldly influences. (New religion needed)

I simply don't know. This is not a re-statement of (4), but states more aptly that worldly experience has made it impossible for me to reach a conclusion, and, perhaps, I am not emotionally mature enough to decide. (Doubtful)

Same as 3 but with possibility of communication as in 2. (Liberal Protestant)

I agree with the 6 paragraph with the exception of the 1st sentence & the word I underlined ("useless" referring to prayer in the last line) I don't quite understand what you mean by the 1st sentence. I think prayer is a superstition but not always useless, for it does afford comfort sometimes. (No religion needed)

APPENDIX I

DIFFERENT OPINIONS EXPRESSED ON IMMORTALITY QUESTION 17

(The following is a complete list of the comments written in under alternative #7, "A different attitude, as follows: " No revising or paraphrasing has been done whatsoever. An attempt has been made to list them in order of decreasing acceptance of a personal immortality. Such a ranking can not always be precise. Parentheses give the student's choice of belief. Comments of freshmen and seniors are listed separately.)

SENIORS:

Life of man made in God's image and likeness is eternal. Human existence is a myth of mortal mind. (Other - Christian Science)

A combination of 1 and 3 - the soul is part of a universal "spiritual" principle but retains its separate identity - similar to a country and its citizens. (Ethical Christian)

My beliefs are confused and often vary on this point. #1 comes closest to my belief. (New religion needed)

The soul continues to exist - in what manner, where, etc. is beyond the knowledge and reasoning I possess. (Protestant)

I should like to believe in immortality of the soul, however I am not certain. Probably I shall not become concerned until later on in life. (Liberal Protestant)

I'd like to believe immortality, but I don't dare. (Doubtful)

If I believed in God, I would believe in immortality. As it is, I place more stock in immortality. (This is not to say that it doesn't exist, just that it is beyond my intellect.) (No religion needed)

If pressed, I might select "4" above, but I should say that I just don't know. Arguments for and against immortality both seem to have holes in them. (No religion needed)

I don't think I have a definite opinion I'd argue for although I have certain ideas. These ideas aren't certain. (Doubtful)

I do not know if there is a "life after death", but if there is, I feel that it has nothing to do with this life on earth. This (#4), of course, is always true, I believe. (Other)

As of now, #4 sounds the most logical to me but I must reserve my judgment until I die - if I am capable of making any judgment then. (No religion needed)

#4 is very close, however there is some question on how long this type mark lasts - immortal? (New religion needed)

I believe that a person has influence on his children and this may be carried on to his grandchildren but the influence dies with succeeding generations. The person is not really immortal in any sense. (No religion needed)

I don't believe anything definite concerning "religion". (No religion needed)

I do not believe immortality is necessary to living. I believe in birth and death. (New religion needed)

To paraphrase #5 I have no reason to believe in immortality in any of these senses. (No religion needed)

FRESHMEN:

Soul continues, but have not definitely thought whether the soul is reincarnated or not. (Protestant)

I have accepted without real conviction or any real consideration the Church's teachings i.e. point 1. (Anglo-Catholic or Eastern Orthodox)

I accept personal immortality because I want to believe in it. It would be the most pleasant thing & I want it to happen. (Doubtful)

No man knows or has any idea of what comes after death. It is wholly outside man's experience (as such) and is therefore impossible to visualize or form any valid beliefs about. (Other)

It is one of those Big Questions that may never be answered or realized. If a person is reached through say Protestant beliefs, faith in immortality of soul is mandatory, practically, if a person is to continue to live positively. (Other)

Once again I have no idea or answer (but I am not disinterested or even uncaring about the problem as (6) might suggest). (Doubtful)

I am not able to definitely decide on this matter. (Ethical Christian)

APPENDIX J

DIFFERENT FACTORS GIVEN AS CONTRIBUTING TO A REACTION
AGAINST THE BELIEFS TAUGHT QUESTION 21

(other than alternatives supplied)

(The following is a complete list of the additional factors written in. No revising or paraphrasing has been done whatsoever. Parentheses indicate the student's choice of belief. Comments of freshmen and seniors are listed separately.)

SENIORS:

17th cent. ideas of heaven, hell, & high water. (No religion needed)

Emotional rebellion as a result of extreme insecurity. (Liberal Protestant)

Disbelief in dogma & tradition.
Revolt against forced religion. (No religion needed)

Bigotry. (No religion needed)

Ritual. (Judaism)

Resistance to thought control (although recognizing its necessity in an organized religion.) (New religion needed)

Dissatisfaction with "unreasonable" teachings of the Church of my earlier years. (Liberal Protestant)

I know that they are wrong with no outside help needed (except for general personal experience) (New religion needed)

I didn't talk anything over with anyone. It just came over me that my whole body of experiences and knowledge made any present religion seem based on the flimsiest grounds. Extant religious beliefs seemed false, superfluous, or unsubstantiated. (No religion needed)

Most important - as I have said, I find I may describe nature to myself better by other means. (No religion needed)

Considerable thought - skepticism - mostly concerning the existence of a deity. (No religion needed)

Common sense, and a feeling of dignity in the individual, i.e. a man is a man and not a child. (No religion needed)

I started to think for myself, believe it or not! (No religion needed)

Unanswerable questions (which at the time bothered me but now they have been answered to my satisfaction) (Roman Catholic)

Just a period of doubt and disbelief which developed with a sense of having the power to think things thru in the light of reason. (Roman Catholic)

Personal feelings and opinions. (Protestant)

Indifference. (Anglo-Catholic or Eastern Orthodox)

It was a natural (begging question?) learning process. (New religion needed)

Not sure, but just arose out of a desire to think some for myself. (No religion needed)

Religion appeared too irrational at the time. (Protestant)

Personal meditation. (New religion needed)

Religion attempts to explain unknown areas of experience (especially after death), but fails for me since it presents no proof of its teaching which I find valid. (No religion needed)

I think that personal pride, intellectual pride, was the main factor. Part of the rebellious attitude of adolescence, over ridden through prayer & study. (Roman Catholic)

An increasing unwillingness to accept as fact things, such as spiritual reincarnation, that cannot be observed. (Doubtful)

Reason (New religion needed)

Extensive and concerted deliberation. (Ethical Christian)

Almost entirely an intellectual reaction - I know I cannot be entirely objective - but I try to be in evaluating such principles as salvation (Ethical Christian)

The basic failure of religion in withstanding logical & rational examination. (Doubtful)

Obvious lack of necessity for certain obsolete laws such as keeping kosher; not writing, riding, smoking, etc. on a holiday, etc. (No religion needed)

I find it very difficult to believe some parts of the Bible. (Protestant)

- Absurdity & incompatibility of these beliefs to me. (New religion needed)
- A feeling that religious teachings were improbable. (Anglo-Catholic or Eastern Orthodox)
- Completely unfounded teachings. (No religion needed)
- A realization, after what I consider a deep search, that as far as I am concerned there is no God. (No religion needed)
- Lack of understanding of certain doctrine. (Roman Catholic)
- Time lag of church dogma & times we live in. (Roman Catholic)
- Questioning of validity of statements. (New religion needed)
- Dislike of idea of dependence on an all-powerful Being resulting from resentment against personal helplessness as a child. (No religion needed)
- Contradictions in the Bible itself & to science. (No religion needed)
- Simple daily experience and observation. (Other)
- I like to sleep in, Sunday mornings. (No religion needed)
- I had a feeling that almost all firm believers in organized religion had never considered their own opinions rationally. (Doubtful)
- Influence of other "disapprovers" in the early years. (No religion needed)
- During high school (public) there was so little mentioned to support or contradict my religion that I almost lost it. (Roman Catholic)
- At MIT there were many things said or done that conflicted with my religion so that I began to resent these things and find what I consider the correct answers to these things. (Roman Catholic)
- General contact with people of varying religions. (Doubtful)
- 5 yrs. military service has influenced my thinking & prompted me to adopt my own beliefs & philosophy. (new religion needed)

FRESHMEN:

Feeling that as a small child I was subjected to a merciless flood, of propaganda (not religious in nature) from a Hebrew School, which, when I understood its nature caused a complete revulsion against religion. (No religion needed)

Disapproval of the beliefs. (Protestant)

I was forced to attend Sunday School during this period and did not appreciate being forced. (Other)

War, death, suffering, common-sense. (No religion needed)

A general review of the situation, followed by doubt as to some of the teachings of the church. (New religion needed)

Since I was not religiously "conditioned" in my childhood I was able to think less emotionally and therefore more logically about religion. (New religion needed)

Uninterest in Sunday School type teachings (Liberal Protestant)

Attempted to explain to myself religion by logic. (Protestant)

Desire for knowledge. (No religion needed)

Personal revolt against unsatisfactorily explained dogma or points of doctrine. (Roman Catholic)

Questions on doctrine. (Protestant)

Personal doubts (Roman Catholic)

Disagreement (slight) with some of the doctrines of the various churches I have attended. (Protestant)

Certain religious beliefs which at the time seemed unfair because they deprived me of some worldly pleasure. (Roman Catholic)

Personal confusion in that I could not fully grasp the principles involved. (Other)

Probably the difference between my home environment and that at church and Sunday School. (No religion needed)

Personal reaction in adolescence against parents' attitudes. (Other)

The lustful attitude toward sex into which I slid during 7 - 12 grades in the course of trying to be "one of the gang". It was a slipping, not a reaction. (Eastern Orthodox)

I went for 4 yrs. to a Roman Catholic High School and since about my 2nd or 3rd yr., I have been very seriously considering joining the R. C. Church. Consequently, my views expressed in this paper are correct at the present time but I may possibly reject them for a stricter belief in Catholicism (Roman). (Anglo-Catholic or Eastern Orthodox)

Not being forced to actively accept religion by my parents until I wanted it myself. (Protestant)

Lack of any worthwhile accomplishment as a result of religion. (No religion needed)

APPENDIX K

COMMENTS ON CONFLICT OF RELIGION AND SCIENCE QUESTION 22

(The following is a complete list of the comments written in on the matter of religion and science. These are arranged according to the degree of conflict which the student felt existed. Within each category an attempt has been made to list them in finer shades of conflict, in order of greater conflict and less agreement. Such a ranking can not always be precise. No revising or paraphrasing has been done whatsoever. Parentheses indicate the student's choice of belief. Comments of freshmen and seniors are listed separately.)

SENIORS:Those replying that science and religion support one another:

In my mind science is a manifestation of God's work. And the orderliness of the universe is a tribute to His powers. (Roman Catholic)

Science is gradually proving my religion. (Protestant)

Pure science seeks the truths of nature. Since Christ, the founder of Christianity, is the Truth, religions based on His teachings and given to us by His Church manifest the truth. (Roman Catholic)

Earth creation, its history, its predicted destruction, astrology studies proving 1½ days lost in earth's history (as mentioned in Bible); the flood. (Protestant)

Every scientific discovery and trend seem in my mind to point to the existence of a Supreme Being and the human soul. (Roman Catholic)

To my mind, the sometimes amazing discoveries of science serve to strengthen my belief that there exists a stronger force than any science has discovered, and a stronger mind than any scientist has or does possess, a combination of which, I call God. (Doubtful)

Science is merely one way of understanding a religious belief. (Ethical Christian)

I haven't come across any scientific fact yet that has in any way proved to me that god may not exist. (Roman Catholic)

Scientific findings contain only part of the whole story; only God

Himself knows the whole story, therefore we understand only imperfectly with our inferior wisdom. (Protestant)

Science tends to explain (or attempts to) certain "miracles" which appeared in the Bible. I do not think the Bible can be taken as a thesaurus on life but must be used as a guide only. Some parts of the Bible seem to be refuted by science but I think such things as the Earth being made in six days can be explained by a different concept of the time "day". (Protestant)

To my mind differences result mainly from the way in which history has been recorded, also I do think all religious contentions demand literal interpretation. (Protestant)

My beliefs are such that I find little to dispute with in evolution, relativity, temporality of Man. Science merely gives evidence of a vast ordered system. (Liberal Protestant)

Any differences or conflict is due to a too rigid interpretation of the various religious works. (Protestant)

Books could and have been written on this subject but I have heard of no proven theory which contradicts the basic dogmas of Christianity. (Roman Catholic)

Religion starts where science leaves off. (Judaism)

Both are directed at truth; they can hardly conflict because they encompass separate laws, the physical and the spiritual. The supreme order and design of natural law, however, is indicative, to me, of a Creator. (Roman Catholic)

Science is independent 'till one asks "why" and "where from?"; then it can all be seen to fit in. (Protestant)

1. Religion applies where science leaves off.
2. In matters of morals, faith, etc. renders no opinion, and hence there can be no conflict. (Protestant)

Those replying that the conflict is negligible:

Science and religion may appear to be in direct opposition, but actually ones religious interpretation may be in error so that with an equally good interpretation science and religion do support each other. (Protestant)

Unitarianism is not a "limited" religion - any personal beliefs are yours as long as they respect idea of right of one's own belief and

and other social, political, etc. rights. This concept of liberalism & beauty of nature (scientific approach just a way of viewing the mysteries & beauties) equates religion to science. (Liberal Protestant)

Both science and religion give evidence of God. The particulars are unimportant. (Doubtful)

Science does not support religion in many respects. However it does not disprove the fundamental core ϕ i.e. the existence of God. (Liberal Protestant)

Man cannot perceive the infinite but he can perceive the works of the infinite. - the works exist, science merely uncovers them. Science cannot support (prove) a "true" religion but it does not conflict with the idea of God. (Ethical Christian)

I believe that much of the conflict comes from an attempt to place a rigorously literal interpretation on many parts of the Bible which, it seems to me, are figures of speech, similes, etc. Furthermore, I think that such a strict interpretation is not quite justified in view of the differences in phrasing and even in ideas which apparently crept in, in the process of several translations. (Liberal Protestantism)

It is my belief that the Bible and religion in general is allegorical - a fact which is not realized by most pious worshippers, who you must agree are in general the relatively uneducated masses. If religion is treated in this way, then there really is not very much of a conflict. (No religion needed)

The teachings shaken by scientific findings are not basic, to my mind. (Protestant)

Much of the conflict arises from different time reckoning methods. (Protestant)

Usually there is a biased view being taken, and therefore the true picture is distorted. (Ethical Christian)

It is in most cases possible to interpret the bible in such a manner so not to conflict with physical findings without changing any of its religious teachings & beliefs. (Other)

The conflict is there present in one who believes in the literal translation of the bible. I do not. (Doubtful)

The principal (basic) contentions of religion, as I see them, are the existence of a supreme Deity and immortality. If one must include other principal contentions, the conflict increases to a considerable degree from the negligible. (Ethical Christian)

I don't care how many days it took to create the world. (Anglo-Catholic or Eastern Orthodox)

Evolution may not be far from the Divine plan. Separating the two may be a mistake. Matter & its origin is yet unknown and seems to be explained only through religious beliefs. (New religion needed)

The conflicts are in regard to Biblical Myths such as the origin of the world, creation of man, etc. which I feel are negligible. (Liberal Protestant)

Science derives from logic, consistency, and ingenuity; religion, examined with these tools, leaves scientists confused. We may be looking at religion through the wrong type of glasses - looking at a "3D" with the wrong glasses - it appears screwy. (Ethical Christian)

I don't really believe there is much conflict between science and religion except on the creation. (Doubtful)

There is some conflict in my mind but I feel that this is due to my ignorance. (Protestant)

Science does not have all the answers. Science or "scientific methods" do not explain human behavior. (Doubtful)

To my knowledge there is nothing in science which conflicts with basic religious contentions. Those so-called facts which many people call to our attention are merely theories and until that time which they are backed by fact I consider them as fallacies. (Roman Catholic)

To the best of my knowledge science and the Bible have not contradicted each other unless you want to be literal about the seven "days" of creation. (No religion needed)

My religion does not conflict with science since it is based mainly on what I believe to be right and wrong! (Protestant)

Fail to see any serious conflict. (Liberal Protestant)

Since I don't believe or don't have much faith in the Old Testament, the beliefs are not very contradictory in the New Testament. But I am not much of an authority on the bible, so this opinion should not be regarded too highly. (Other)

Truth is stranger than fiction. (No religion needed)

I can't see how science & religion can be compared at all. They deal with two unrelated fields. (New religion needed)

They belong in their place (separate) (Protestant)

I really recognize no conflict between the two. To me they are totally separated fields and therefore cannot conflict with each other (except in the minds of men). (Ethical Christian)

I believe science and religion are just two principals which neither claim nor disclaim one another. (Judaism)

Science, as such, is not concerned with the same questions as religion. However, to my mind, any philosophy which arises out of science will necessarily conflict with the basic tenet of religion (i.e. the existence of God) (Ethical Christian)

In my type of religion there is no conflict because science and religion apply to completely different worlds. (Protestant)

I do not see any immediate connection between facts (i.e. science) and faith, which by its very nature is not demonstrable readily. (Protestant)

To me, they are completely different realms - one dealing with "natural law", to be prosaic, and the other with inner feelings. (New religion needed)

The two deal with different things. Science with observable fact Religion with meta-physical, social, psychological human factors. (Doubtful)

I wish you had not used the term "negligible" but had used only the terms in parentheses. The two fields, science and religion, have completely different approaches for study; the two approaches are in no way related, for conclusions are reached by completely different means. Therefore such a "conflict" is very unreal. (Protestant)

What conflict. Disagreements, perhaps. Science deals with material things & laws; religion, immaterial ones. Both may be valid. (Liberal Protestant)

Religious contentions have little basis. (No religion needed)

Conflicts between physical science & religion are religious errors. (i.e. gravitational laws) on other conflicts I have no opinion, i.e. powers of Christ. (Other)

Those replying that the conflict is considerable:

Those who are literal interpreters of Bible can never reconcile science with religion. However Roman Catholicism and other non-literal interpreters can reconcile the two and will do so. (Note the R. C. stand on evolution.) (No religion needed)

Any churchman in possession of his right mind will not attempt to call the careful and supported work of a scientist incorrect on a dogmatic basis. Unfortunately there are R. Caths. whose minds have left them. (No religion needed)

The narrowmindedness of both factors is all that hinders complete reconciliation. (Protestant)

There is so much that has not been explained by science that may eventually lead science to set up a postulate of the existence of a supernatural. (No religion needed)

Religion keeps the poor man happy. However, there has to be some source for the order of science, and God is as good as any at present. (No religion needed)

There are teachings of the Church which appear as definite physical miracles. I believe that these were miraculous because at the time, people did not understand science, and that these miracles and teachings can have a scientific description. (Other)

Science can go back in time only so far. Somewhere, sometime, there had to be an impetus. I believe that this impetus was in the form of a divine act. (Liberal Protestant)

There have been many conflicts between religion and science. These have all been resolved, usually by the church shifting position, since most of the findings of science which are stated as fact can be backed up by proof. (Other)

Religion in its broadest sense may be considered as a philosophy or perhaps as way of life. The basic tenets of each group when taken at their outward appearance may conflict but upon examination, they probably don't cover the same field. (Doubtful)

Science is only using & developing the forces & material that some supreme being has created. Where science fails, at the origin, religion is the only answer. People who doubt religion because of science have never thought deeply on the subject. (New religion n needed)

Am not familiar with all the metaphysical implications, but think religion is largely a matter of faith and if you believe in God you don't have to go into lengthy philosophical arguments to reconcile science and relig. but can accept both easily. (Protestant)

The Adam and Eve story (for example) (bible in general) is very interesting and beautiful fiction, but (Protestant)

There are some regions of religion which the scientific method can probably never bear upon. The scientific basis of religion, however, is very weak. (Doubtful)

Churches and their beliefs are flexible enough to sway with an age of science - i.e. I think that attendance is more important to the average church than holding to established beliefs. (Doubtful)

There is not, to my mind, enough information one way or the other to prove any statements made. (No religion needed)

I believe that nearly all phenomena are capable of explanation (although our knowledge at present may not be sufficient to give such an explanation) without considering religious doctrines (creation, etc.) On the other hand, this does not disprove to me the existence of God. (Doubtful)

Where is the scientific evidence for "after life"? But certainly there is scientific evidence for creation. (No religion needed)

This must be qualified. As for the creation, the less said the better, but as far God's laws vs. physical principles, I do not believe the two very far apart. (Protestant)

I believe the conflict to be reconcilable, provided the religion concerned is not based on a static, dogmatic basis, but is instead capable of accepting new ideas and discoveries, while at the same time retaining that which is of value in tradition. (Ethical Christian)

When churches realize their dogmas are "founded on sand" and abandon them, they will have come a great way but they can't by their very make-up, retract any previous statements. (Doubtful)

Science seems to disprove the theory as to when & how man was formed & came into being. Also science tends to deny the fact that there is a Deity, by seeming to explain Biblical miracles. (Judaism)

Being a scientist I must believe that the origin of the earth and its natural laws are controlled not by a power (s), but by something different. A religion built up along these lines appeals to me. (Judaism)

If science uncovers truth, there can be no conflict between science and that part of religious belief which is true. (Judaism)

Those replying that the conflict is very considerable:

This depends on the religion being studied. Some religions "explain" God and speak little of science. For these religions, the conflict is negligible. (No religion needed)

Religion has a different purpose than science. On the whole, basic religious contentions were crystallized in an unscientific manner very long ago. Little attempt has been made to revise religious contentions in the light of new knowledge & ideas. Religion & science can be practiced honestly & consistently by the same person.
(Judaism)

Seems to me religion periodically reinterprets its teaching so as to agree with the findings of science. (Doubtful)

Religion insists on divine origin of the universe, with all the accompanying mysticism. Science keeps making findings along this line which agree with natural laws and which do not show the necessity of a divinity. (New religion needed)

One could interpret the bible so that it does not conflict with science i.e. in a certain no. of days God created earth, who knows the length of a day then, etc. However this in my mind does not suffice but perhaps some day some one while interpret the bible in regards to science to my satisfaction. (New religion needed)

Science holds to natural laws without recognizing a Deity while religion teaches us that there is a Creator to these natural laws.
(Judaism)

If viewed with our present intellect. (No religion needed)

Science explains observed phenomena the result of whose laws are at least partially verified. Religion takes observed phenomena and ascribes laws which can never be verified. (No religion needed)

I believe science will eventually disprove religious beliefs. Whether or not it can disprove religion completely is doubtful due to the limitations of man and science. I believe if it were possible, religion would be at a loss. (No religion needed)

Religion, shorn of its ethical precepts, is superstition, Superstition and science must always contend. If religion can drop its mysticism, it and science may be reconciled; otherwise not. (No religion needed)

Science still differs from most Church teachings with respect to the Creation. Perhaps some day, they (church) will change, but it is not probable. (Doubtful)

Publications of astronomical investigations have provided a good example of the dealing and conniving which the "unchanging faith" underwent. The church has a determined position on all, science determined by agreement of all. (New religion needed)

Science disagrees with the symbolic mythology of the Bible (Genesis, Noah, etc.) & fails to find any evidence of soul, immortality, etc. (Doubtful)

Those replying the conflict is irreconcilable:

I cannot see any relation between the body of superstitions called religion and that called science. They are experiences of totally different nature. (No religion needed)

Interpreting science to include anthropology, archaeology, and similar investigations. (Ethical Christian)

Adam & Eve vs. evolution. Scientific laws & activities vs. biblical miracles. (No religion needed)

The belief that there exists a power susceptible to worship and prayer without an absolute proof of any type is definitely contrary to the methods of science. Also the miracles of Christ's life as related by the bible are contrary to scientific belief. (No religion needed)

When science proves a fact beyond a doubt, which, however, contradicts a religious belief, then the religious belief must be altered just as superstitions have been altered, e.g. witch burning, evolution, birth control. (No religion needed)

Those not replying to the question on the conflict:

The principles of science show that some Force or Supreme Being must have planned things to run as well as they do. Religion, when all the traditions and the "outside husk" is taken away, yields a core which agrees with this statement. (Other)

The two are separate fields of activity. You are asking me to relate tomato soup with Japanese lanterns. (No religion needed)

None of the above. The only conflicts with which I am familiar are on "petty" aspects. They do not conflict for me, in that the physical qualities of science have not interacted with the spiritual essence of religion. (New religion needed)

What cannot be explained by science and an explanation seems necessary, I believe in applying faith on the principal contentions of religion. (Protestant)

Please be more explicit as to which conflict. (Roman Catholic)

To my mind science and religion do not need to be reconciled; therefore this question is meaningless. (Doubtful)

Present-day science is so restricted in its sphere of interest - that is, it restricts itself entirely to a materialistic approach - that it does not appear to me to infringe on the realm of religion. One day in the distant future, no doubt, religion & science will be combined into a single study of Truth. (New religion needed)

Religion, ingeneral, is an irrational answer to man's sorrows and frustrations. As Science overcomes man's helplessness, religion will become irrelevant. (No religion needed)

There is NO conflict as religions always adapt the findings of science and then claim them as their own. Science never adopts anything from religion. The method of inquiry used by the two is irreconcilable just as "right & wrong", "left & right" etc. are irreconcilable. (No religion needed)

In the end science and religion will agree on all points except the existence of a God. The conflict there is irreconcilable. (No religion needed)

It is not impossible that a religion might be produced which would be compatible with present & future science, but I do feel that most of the present religions have been discredited by science, because they allow themselves to be caught in conflict and then to be proved wrong (or at least proved almost certainly wrong) (No religion needed)

FRESHMEN:

Those who replied that religion and science support one another:

Proof has been given for the Bible and scientists agree that there is an all powerful being. (Protestant)

The findings of science, showing the orderliness of the universe require a Supreme Being for explanation. (Roman Catholic)

Many parallels can be drawn between Biblical records and scientific inferences. The more science progresses, the more we know there must be a Creator who shaped the universe. (Protestant)

Science seems always to be one step behind the Creator. Some phenomenon may be explained, leaving another God given mystery to explain. Something must have given the universe order. (Liberal Protestant)

The more I learn about science and the way natural laws fit everything together, the more I realize that there must be a Supreme Being of infinite power and wisdom who created and controls everything we know. (New religion needed)

That which is true was created by God - hence conflict between the two is a physical & theological impossibility. (Roman Catholic)

My concept of religion is a vague science, etc. in a way, itself. (Other)

It seems that as science goes on to new discoveries in history and natural history they can be found to correlate information in the bible the only difference being in the relative periods of time. (Other)

The dietary laws of my religion are supported by science as science shows that these banned foods were poisonous under conditions of ancient days. (Other - Jewish background)

They must be identical or they cannot be truth - and I consider them both true. (Protestant)

To me the findings of science can be correlated to support the teachings of the Bible, and can be used to explain the wonders of our world. (Protestant)

Great scientists have said that the sciences have supported religion, substantiation of a belief in God and in his goodness. (Roman Catholic)

That science originates from God is evident. True scientists are the ones to realize this most fully. It is the misinformed who consider them in conflict. (Anglo-Catholic or Eastern Orthodox)

Science and religion clearly support one another because all are sciences investigate natural phenomena which have been created by god. (Roman Catholic)

To me, the creation found in Genesis is being followed pretty close by the findings of science. Other things in the Bible are also supported by science. However, I feel that not all things can be explained by science. (Protestant)

God wrote 2 books - one in nature, one thru the prophets (the Bible) Science deals with the reading of the first, religion with the second. They cannot and do not disagree. Apparent disagreements occur, at times, when theories are accepted too readily as fact which apparently contradict religion. Actually, between true science (facts) and religion, there is no conflict. (Anglo-Catholic or Eastern Orthodox)

Even if there is a supreme "personal" creator behind the universe the theory of evolution (the main point of contention) does not conflict with such a possibility. For if "God" created the universe he would undoubtedly be still creating and changing it, thru the process we call evolution. (Other)

The point in question is that of the first chapter of Genesis and the Darwin theory. My explanation is that the days mentioned were not of 24 hours but several thousand or million years. (Other)

Religion explains what science can only hope to explain. Science is a search for truth; religion is truth. (Protestant)

The best explanation I have seen is in Human Destiny by Lecomte Du Nouy. (Protestant)

They are both directed towards an ultimate goal, although along different paths. (Protestant)

I feel that in some cases, science is more creditable than so-called religion. Only in the matter of the creation of the universe do I follow religion's ideas fully. (Liberal Protestant)

Religion supports that which science cannot support. Ex. beginning of universe. (Doubtful)

Science pertains to the physical. Religion pertains to the spiritual. There is no conflict. (Roman Catholic)

Religion and science are two diversified fields that sometimes falsely contradict each other but are really in unity. (Roman Catholic)

Science can only go so far, then religion must take over. (Protestant)

This is where I am confused about God and science. (Protestant)

There is, however, a conflict due to the varied opinions of evolution (Protestant)

No 2 is, of course, partially true. (Roman Catholic)

Those replying that the conflict is negligible:

The religious beliefs personify those of science. (New religion needed)

Everything scientific can be explained by religion. (Roman Catholic)

The story of the creation, while technically false, is true, except that the "days" were much longer. Otherwise, it does not seem possible to me that science can explain any of its phenomena without religion and science accounts for religion. (Liberal Protestant)

The further science goes, the more nearly it matches the statements of religion. (Protestant)

For every proof of science that God did not create something which he was credited for, science must prove the creation of the parts. E.g. God didn't make man and earth - Earth is composed of atoms, and man evolved from lower life. But where did atoms and lower life come from? If one says all this matter came from energy, where did that come from, etc. A rationalization, true, but one difficult to explain away. (Doubtful)

Major difference seems to me to be Biblical records as to time. To me this seems an unimportant point, since early historical records have long had errors with regard to time. (Other)

Science hasn't reached the point of contradiction of the basic contention of religion. On the other hand the many secondary contentions contradicted by science are not that important to the religion. (Doubtful)

Scientific findings always support the idea of an orderly nature or universe, which usually is also a basic contention of religion. Although science seems to contradict certain portions of the Bible, the Bible is not always translated literally. (Anglo-Catholic or Eastern Orthodox)

There is no real conflict at all. The earth may have come from the sun, but where had the sun come from, and in effect the whole solar system & universe. (New religion needed)

There are certain things which science is unable to explain, i.e. where did everything come from. (Judaism)

The Bible as a book is probably not too accurate in places and wrong interpretations can arise. (Protestant)

Science in reality is trying to find the power of universe of "God" (New religion needed)

The translation of the bible literally states that the world was created in 7 days. Can it not be true that a day was say a million years of our length of time. Such liberal interpretations I think necessary. Also, many religious practices of the Jewish Peoples have proven scientifically sound (i.e. circumcision; certain foods which proved unhealthy) (Judaism)

I do not feel there is any conflict between the fundamental principles of religion and science. (Judaism)

There may at the outset exist a seemingly irreconcilable conflict between the dogmas of many of the world's influential religious bodies. This is due to lack of realization that science has not answered all questions of a philosophic nature and the bigotry and rank apostacy of the majority of the prelates of the Christian religious world, since the time of Constantine. "Religion" as viewed by the majority of American churches is largely responsible for the acute - but idle - conflict between their religions and truth in general. (Other)

If we apply a non-strict interpretation upon some of the ambiguous words & phrases that are used in the Bible, religious & scientific findings can be made to coincide to a fair degree at least. (Roman Catholic)

I have no fixed religious belief but I think no matter what belief is held there need be no conflict with science. (No religion needed)

My flexible interpretation of the Bible can be made to coincide with scientific teachings. (Doubtful)

There are certain phenomena that science will probably never be able to explain, such as life. (Judaism)

Religion and science do conflict, but in my mind they are separate entities each covering their own spheres. Religion covering the field of peace of mind which science has not yet attempted to explain, whereas science deals with about every other subject conceivable to mankind. (New religion needed)

Science is the practical side of life. Religion is based on ideas and illusions and sometimes does not fit in with fact, but can be explained through psychology. (Ethical Christianity)

Keeps many people happy (in a distinctive way) - It is perfectly reasonable and logical that people should seek emotional security if they are taught to need it, and that they should seek immortality; survival instinct, appearing thru evolution. (Ethical Christian)

Much in religion is of a superstitious quality. This is, by its very nature, contrary to science. Still the very essence of religion is not this, but the belief in a God and His moral structure - in this I don't believe there is a clash. (Liberal Protestant)

Those replying that the conflict is considerable:

God acts through natural laws, and His miracles are performed through these laws also. Very often it may be difficult, however, to explain religion on this basis. (Judaism)

It is dependent upon the role of religion in life. That is, if one considers religion as a static force through time, the answer would be yes, there could be little reconciliation. If one sees religion only in terms of the church, the answer once again is yes. However, if you understand that religion is a part, a more aesthetic part of our society and more important a product of our society, it is evident that the role of religion is adaptive and thus by its very nature the religion will change with time. Thus the problem is not irreconcilable. (Doubtful)

Well, I take a liberal interpretation of the Bible, and regard the 1st Testament like legend - or Aesop's Fables - or is that being sacrilegious? (Liberal Protestant)

Since the world began so long ago, it is possible that some historians along the way have made mistakes. (Roman Catholic)

I've heard arguments stating that they support each other, and also that they are irreconcilable. However, I am not an expert on the bible or the theories of evolution. Therefore I can't ascertain if they are reconcilable or not. (Doubtful)

Those religious thinkers are pretty cagey at reinterpreting disproven religious documents. (Other)

The understanding of religion, or clear interpretation, is not complete. Many seemingly different aspects of each could probably be reconciled with proper interpretation. (Protestant)

Up until recent times there has been much conflict between the teachings of science & religion but recent "looser" interpretations of religious writings have brought the two closer. However we can never quite forget the Catholic Church & the Spanish inquisition where the greatest clash between science & religion were brought to the forefront. (No religion needed)

Both of the sides have very different points on many things, but these are of a nature which cannot be justified by either side. There can be faults in both and I am willing to accept these. (Judaism)

The conflict is just an expression of the much larger conflict in everyone. I think it is serious because it affects children in that adolescent "you-can't-fool-me" period, when they scorn frailties and emotions, which is how they have been taught religious people are. (Protestant)

When using the term "religion" I reject the supernatural connotations and consider only the ethical aspects of the word. Science greatly conflicts with the supernatural factors in religions but has small argument with the ethical nature of religion. (New religion needed)

Those replying that the conflict is very considerable:

The conflict does exist. However, I still choose to believe. (Judaism)

Two theories. Personally I lean toward the scientific one. I wish I knew. (Doubtful)

We do not know enough of either religion (i.e. God) or science to make a definite statement. It is possible that the conflict is in reality not really a conflict but that the facts in the case are merely misinterpreted. (No religion needed)

Science will sometimes show or prove that something in the Bible is false or not wholly true. (New religion needed)

The conflicts in the beginning of the Old Testament. Several miracles in both Old & New Testament. However, may be natural phenomena, exaggerated. (Doubtful)

Unless religion changes some of its principal contentions (which is very improbable), I don't believe the conflict is reconcilable. (Doubtful)

Those replying that the conflict is irreconcilable:

Since science is based on fact & religion on superstition (my belief anyway) there can be no support of one by the other. (No religion needed)

Science deals with the logical development of certain phases of problems that will aid mankind. Religion is based upon belief but not logic. (Judaism)

Although many natural historical events in the Bible are supported by science, the stories built around them are highly improbable. Darwin's theory of evolution, and Adam and Eve, will never support each other. (No religion needed)

Answers have been given for many previously unsolved Natural phenomena while no evidence of a divine being has been given for a long time. (New religion needed)

Each is stubborn in his stand & the issues are too hazy, too far beyond us to be clearly seen & evaluated. (Doubtful)

The method of science places reason above faith, etc. (No religion needed)

Science is essentially pragmatic. It accepts no theory which cannot be tested. The basis of the theory of religion is mysticism, which cannot, by definition, be subjected to any rational test. (No religion needed)

Those not replying to the question on the conflict:

Scientific examination has not progressed far enough & probably never will in determining the existence or non-existence of a God. Many, who approach this scientifically are actually deeply religious, but are also very broad-minded. (Other)

I feel religion and science should not conflict greatly. However, I do feel that religion should control the use of science in life. (Judaism)

Actually I am not aware of all that makes up this conflict. However, it doesn't interest me in the least. (Anglo-Catholic or Eastern Orthodox)

There are some matters which can not be answered satisfactorily by science; these I assign a religious nature or "something" which must be the cause of these various occurrences & material objects. (Judaism)

Although the conflict exists I believe it is very unimportant. Religion should not be considered in the same vein as science. Each serves a different purpose. (Ethical Christian)

Religion (Catholicism at least) does not want to explain any problem in science. The conflict is therefore inexistent for me. Catholicism does not disagree on any point with science. (Roman Catholic)

Science is based on concrete evidence; religion is not. Therefore, religion should retain basic beliefs, but be willing to advance and conform to the new peripheral facts. (Ethical Christian)

I believe science is more accurate and correct than religion. (No religion needed)

In some cases the conflict is definitely irreconcilable. In some cases they support each other. I think scientists are being very careful to present their findings and beliefs in a manner that won't antagonize religious leaders. (New religion needed)

The conflict of the spirit of many men in science with the Spirit of God is only reconcilable by conversion to God, but the actual physical findings of science are not greatly in conflict with religion. It is the spirit of the sceptical scientist which causes the irreconcilability. (Eastern Orthodox)

APPENDIX L

COMMENTS GIVEN BY FOURTH - YEAR STUDENTS
ON THE EFFECTS OF EXPERIENCES WHILE AT M. I. T. QUESTION 23

(The following is an edited list of the comments written in by seniors on the effects of their four years at M. I. T. on their religion. Some students wrote interesting but lengthy descriptions, some parts of which have been deleted. No paraphrasing has been done; the intention has been to retain all major points expressed using the student's wording throughout. These are arranged according to the replies made in question 23 as to the over-all effect on religiousness and interest. Parentheses indicate the student's choice of belief)

SENIORS ONLY:Those reporting an increase in both interest and religiousness:

Formerly I thought that simple faith was sufficient basis for security and that it was entirely an inward state of the soul. MY M.I.T. experiences with Christian friends led me to study my beliefs critically, and I have come definitely and finally to realize that faith is not only inward but outward. Faith which has no outworking is not faith at all, but hope. True faith in Christ has been the most important result of my years (4) at M.I.T. (Protestant)

In my looking about at other students without a definite religion and in defending my own against criticism in various religious "bull sessions" I believe my faith has been strengthened and my desire to know more about my own religion has been more completely awakened. (Protestant)

The knowledge gained in my scientific courses has in some cases been the basis of conflict with my religious beliefs. On the other hand some of the work covered in humanities courses has helped me to understand religion more fully. My religious beliefs have been reinforced by many of my social experiences at Tech. (Protestant)

A more mature viewpoint? An understanding of why's and wherefore's heretofore beyond scope of experience and incomprehensible. With more understanding came greater appreciation. (Roman Catholic)

Studies and experience at M.I.T. has served to only substantiate my personal beliefs that have gradually evolved. Biological evolution

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1. In general, freshmen made fewer comments and indicated much less change during their short time at M. I. T.

necessitates the realization that man is a step, and not the end, of the long stairway of development. We shall seem to some future society as the Pithecanthropus Erectus seems to us. Historical perspective necessitates the realization that Christianity is one of many prominent religions. It also necessitates the realization that Christianity is just one more religion in a long, and not ended, series of religions. I conceive of religion as a basic psychological need (cf. Freud: Future of an Illusion). (Ethical Christian)

I feel that my faith has been strengthened at MIT because in hearing of new proofs of the "denial of the basis for religion" I have, to my mind, refuted these arguments and thereby strengthened my feeling of the existence of an approachable supreme being. MIT is not irreligious so much as it is non religious. Speaking of the Humanities Department in particular, their approach to the subject is conspicuous for the absence of any views at all. This, I gather, is the new trend in education, that is to make the student think it all out for himself. This has its good pts. but also bad ones. It is my belief that unless the student is sufficiently grounded in his basic thinking such an attitude will eventually make him atheistic at worst or agnostic at best. In my case I was lucky, for having had an excellent background in my faith during high school for just such a so-called "worldly encounter". So that as a result, while not knowing all the answers (who does) at least I knew where to find them. (Roman Catholic)

In general I would say MIT has made me realize the brevity and insignificance of this life or any of the material successes it offers. (Roman Catholic)

I have grown older at M.I.T. and, of course, more educated on religion. I have been subjected to different opinions on religion and have thought about it in my own mind quite a bit, and, of course, formed some opinions. (Roman Catholic)

My experiences at MIT have convinced me of the factual inconsistencies (general) as recorded in the Bible and taught by several religious groups. (Man's proof of certain natural laws proves the existence of these inconsistencies) I have come to believe that simple acceptance of the principle of any particular religious group is just a lazy solution (taken by most people due to mental inertia and/or emotional appeals) to the puzzle of the Universe and Man's place therein. Thinking people should, and have the right to, revise and adjust, or even originate their own religious theories. (Ethical Christian)

MIT has tried to teach us to be logical, rational beings. I have tried to apply this idea to religion and found that there is no organized religious groups which believe as I do. (New religion needed)

I approach religion from a scientific standpoint. (Judaism)

By associating with people of different religions, I have gained some understanding of the different beliefs & philosophies. Being an admittedly weak believer in religion I can see how one can easily explain things in different lights, especially when there is nothing to prove or disprove this theory. Also I have appreciated more fully the limitations and incompatibilities of the various religions and I now believe that this is a prime weakness of the systems as a whole. I doubt very much if in my life at college any of the religious concepts have been more firmly installed, but rather weakened because of the numerous conflicts, both in the final beliefs & in their development which to me shows insufficient evidence. (No religion needed)

M.I.T. was just one more contact with life in its very real form. I learned to accept with more assurance the fact that all people aren't honest or in any event as religious as the church would like them to be. M.I.T. in no way influenced my own personal outlook on life. In fact it provided another opportunity to discuss, with people of other beliefs, the events that are continually happening about us every day in the light of religious attitudes. On the whole, M.I.T. and the life that goes with it, had the effect of confirming my beliefs in my religion. (Roman Catholic)

I have had discussions with non-believers and have answered their questions and doubts the way they should have been answered. These discussions are very educational to me since I can feel what disturbs other people about my religion or any other religion; it also clears up points that were a little foggy in my mind. (Roman Catholic)

Life at Tech has taken me away from the formal religion as my parents & home town church characterized. On the other hand certain periods of intense thought on the subject, stimulated by events at Tech, have made me develop my own views on the subject. Rather than the over-all teachings of any one form of religion. I think the present forms of religion need to be modernized if they are to meet the current needs of the people. Furtherly I think that the practices of a certain form of Christianity are splitting the major groups apart by using the police state tactics of Communism that they are so violently opposed to. (New religion needed)

My views have not been changed, but my love for God has increased due mostly to his love for me and his assistance at times when He was most needed by me. (Protestant)

At MIT, more from conversations and thought than from the academic courses, my mind shifted back toward the right to a middle-ground, more or less, in which I believe the place of religion should be to encourage men to live more happily & usefully together in this earth. (Other)

Those reporting an increase in their interest but no effect on their religiousness:

Since MIT has what I think is a great preponderance of non-believers (compared to the average man in the street), my non-belief has been strengthened - i.e. I have found natural science easier and easier to understand as a description of nature and a religious belief more and more difficult to understand. As I have already noted in a statement above this question, I have however made aware of the function of religion (or what I think is its function, and that is to describe nature - which is all that natural science does) - This is something that I was completely unaware of before my attendance at MIT. (No religion needed)

My experience at MIT has enabled me to take a broader & more mature look at religion. This is probably a combination of age and speaking with various people about their views on the subject. I have come to realize that people can have a deeply sincere emotional response to religion. (that is not merely a superficial reaction to ritual.) I still personally feel a ritualized religion is not a real manifestation of what religion is or should be. I have by no means found that I have learned the answer to all the problems of life and believe that an encompassing of some of these is really a process that continues throughout life. (Doubtful)

Experiences at MIT have had little or no effect except for an increased interest in ironing out apparent contradictions between science and religion. This is not to say that I have become more religious; my convictions were and are fairly well established, but occasionally I am pleased to find that I can reconcile to myself some point which I felt was reconcilable but which I could not previously prove. Instead of saying "I believe. . ." with a vague undefinable justification for the belief, in many cases, a logic acceptable to me has crystallized to the point where I say, "I believe . . . because . . ." (Liberal Protestant)

My religious views have been unaltered by any experiences encountered at M.I.T. (Judaism)

I was for the first time able to find, study, and discuss formal philosophies which while concerned with the structure of the universe did not require or use the concept of a Divine Being. Previous to MIT my ideas were of necessity, primitive and not formalized. My years at MIT have made me more certain that my method of attack of religious problems is correct but less sure of my answers. (Ethical Christian)

Maturity has brought a greater interest in religions and their beliefs although not through any desire or interest in myself becoming religious but rather as a point of academic interest. (No religion needed)

The general maturing of personality and intellect has given me a more mature insight into all aspects of life. (New religion needed)

Experiences at M.I.T. have led me to a more critical attitude toward any field of learning and belief. So with religion. I do not feel that my attitudes toward religion are "jelled" yet because I have had too little time critically to examine what religion has to offer the rational person. M.I.T. experiences have been principally discussions of religion to weed out the "hocus-pocus" leaving the essence. Only a few people I find are honest enough with themselves to be able to do this. (No religion needed)

Those reporting an increase in their interest but a decrease in their religiousness:

My basic religious, or, if you choose, irreligious, thinking has not changed as much in principle as in detail. The main difference is probably due to a more logical outlook on things brought on by increasing maturity and straighter thinking. The latter is definitely due to the type of education received here. (No religion needed)

Experiences at M.I.T. affecting my religious views had almost nothing to do with M.I.T. studies or associations. What I meant by the answer is that while at M.I.T. I have investigated more thoroughly the tenets of religions (but by no means adequately) and become more irreligious. (No religion needed)

When I say that I am more interested in the problems religion seeks to answer, I mean such questions as inter-personal relations, the responsibility of the individual, etc. My interest in the more spiritual side has remained at a fairly constant low ebb. (No religion needed)

While I have come to disregard more and more the form of appearing religious such as regular church attendance, participation in church functions, praying, etc.; I have nevertheless softened some of the strong anti-religious feelings which I had in high school at the time of my first "rebellion", and have developed an appreciation of the meaningfulness of some of the "Big Questions" of religion. My interest in religion, however, seems to spring from a purely intellectual curiosity, rather than from any strong emotional feelings. I fear that I am inclined to regard religion as primarily for persons of emotional temperaments, however erroneous this may be, and have not as yet felt that I belong in this category. (Ethical Christian)

Individuals at MIT find little barrier to friendship and little conflict in their relationships with one another due to religious differences. One's religion is something he is born with and is "conditioned" to accept as "faith". Few people change their religion. Many do not take it too seriously. I have come to recognize that there are basic teachings and ideals common to all religions, and all probably have some measure of truth. But I believe no religion is or

has THE ANSWER. At MIT one is asked to think, to reason, to base conclusions on substantiated evidence (as I assume you will do in this thesis) whereas religion asks one to believe. (Judaism)

I ponder more over religious or life goals than previously, but this might be due to the growing up effect of my mind. However, fellow students with whom I may converse certainly help in creating new or solving old problems. (No religion needed)

By becoming more aware of the universe about me, and seeing less of a need for religion. (No religion needed)

During my stay at MIT I have come to accept that it is at least possible that there is an explanation for all nature. Religion, therefore, would no longer serve this purpose, and many of its principles no longer have any meaning. On the other hand I have become more convinced of the usefulness of religion as a set of moral and ethical standards if such things have not become old-fashioned today. (Doubtful)

I am aware of a growing hatred though of the lack of real humane feelings in the cold cold atmosphere of MIT, and in many cases the individuals who annoy me most are those that are unconsciously dissatisfied with the lack of spiritualism in science, and hence have turned to religion. In so doing they have closed the channels to better understanding of themselves and their time. They have, so to speak, retreated to a nunnery, and life has narrowed for them. They are, I am afraid, the first to condemn social progress and artistic creation. (No religion needed)

A desire to get through the bull shit of religion to give it its proper due in the actual (and necessary) role it plays in our society. (Doubtful)

Not much other than bull sessions which have served to strengthen my agnostic tendencies. (Doubtful)

MIT has given me a "what the hell" attitude towards life. (Doubtful)

Standard dogmatic arguments failed consistently until I felt a need for re-examination in the light of new rationales I had encountered. More discussions and reading followed. Under the scrutiny of rational thought, the foundations of my religious beliefs fell. The necessity of the existence of a Supreme Being is no longer obvious to me. (New religion needed)

The principal effect of my experience at M.I.T. on my religious consciousness has been nil. The inhabitants of this institution by necessity are not overly burdened with philosophical thought. (New religion needed)

The effect of my experiences at M.I.T. has been to set ideas and opinions which I had before coming to Tech. (No religion needed)

Experiences here made me think more of science & less of religion, perhaps by learning to think in a logical & rational manner. (Doubtful)

The amount of confusion that has been cleared up has been consolidated into the belief that "in the beginning" God started the ball rolling and once this motion was perceived the rest is scientific history. My experience here at M.I.T. is responsible for the belief in the scientific history. (Liberal Protestant)

My experience has probably served to make me feel a need for religion & god just as much or more while on the other hand it has also made me less able to believe in But I also feel confident that I shall be able to work out a clear workable philosophy of life which will include religion and belief in God in some form. (Protestant)

Considerably less prone to accept ideas of others. Attempt more now to question before accepting. (Liberal Protestant)

The rational approach with which M.I.T. students are imbued has been an influencing factor on my religious understanding. In a sense, it displaces somewhat the role of faith in religious dogmas and their understanding. For example, few students after spending four years at Tech will accept a statement purely on faith. In a way, I think this is bad, since it indicates man's attempt to show his omniscience, and thus rule out the necessity of an Omniscient Being. (Roman Catholic)

I have come in contact (left home early age) with a certain breed of disgusting individuals - those who have forcibly invoked their religious beliefs upon my person! If they would have hit me, I could have hit back. I'm referring to the V D smoker incident. This has made me rather bitter for the action was tremendous, intent ridiculous, and thought a priori nil. (New religion needed)

Those reporting an increase in religiousness but no effect on interest:

Experiences at M.I.T. have had no real effect upon my religious views. As far as I have observed people at M.I.T. have no religious discriminations. (Protestant)

My experiences at M.I.T. & during the course of the past 4 years have (1) made me doubtful as to the creditability of religious dogma i.e. Catholicism & Byzantine religions, etc. (2) convinced me of the necessity of man to seek a Supreme Deity.

Those reporting no effect on either interest or religion:

A broader & unbiased outlook toward any questions on religion that may arise. (Other)

Experiences at MIT have had no major effects upon my beliefs. (No religion needed)

Brought me into contact with men of varied religions. Made me more tolerant of strangers but did not change my religious beliefs one whit! (No religion needed)

Those reporting no effect on interest but a decrease in religiousness:

The four years which I have spent at M.I.T. seem like a period during which the veil of ignorance has been partially lifted from my eyes. My study of physics has extracted from the turmoil of innumerable physical phenomena a beautiful and symmetric pattern of logical, rational principles which govern the physical world around us. I need no religion to explain a physical world which I can explain much better by rational means. True, there are many questions concerning physical phenomena which science cannot answer yet. But just because a rational explanation to a particular physical phenomenon cannot be given does not imply that that rational explanation does not exist !! Summarizing, I can safely say that M.I.T. has made me less religious by making me less ignorant. (No religion needed)

Those reporting a decrease in interest but no effect on religiousness:

Two points: a) I have not had much time to dwell on it. b) I have learned that there are many points of view, inside & outside of religion, and this broadness, I hope, is my present basis - i.e. rational social principles & no hogwash. (New religion needed)

Those reporting a decrease in both interest and religiousness:

At M.I.T., mainly through the Humanities program, and association with people in general, I began to lose faith in my religion as being the only true religion. I had many doubts about specific doctrine before this, but nothing so drastic as doubting its basic premise. As a result, I became somewhat emotionally upset all too frequently, wanting to believe something which I could not believe. It took about two years of talking to fellow students, etc., to knock out a foundation which was being built for some 17 years. (Doubtful)

On the whole, MIT made me lean away from religious activity since I had little time to practice any religion. (Other)

M.I.T. on the whole is a menace to religion. Because of its purely factual and "prove it" air, I don't see how it could promote anything but atheism. From what I have seen at M.I.T. it seems to transfer a person into nothing but a servomechanism whose sole purpose in life is to prove $F = ma!$ (Judaism)

Completely taken me away from religion - from one who was going to enter the ministry to a non-church goer. (Doubtful)

Have made me disagree with many church teachings. Seems as though Church is too interested in worldly matters. Keeps the poor or oppressed people happy. Gives them something to look ahead to (heaven). Religion is alright, but theologians try to interpret too many things. They have as little chance of hitting the right meanings as I have. They think with a pre-prejudiced outlook. (No religion needed)

QUESTION NO.	COURSE	AGE	MARRIED	RESIDENCE	HOME POPULATION	FAMILY
9	Engineering Science Business Miscellaneous NO ANSWER	17 18 19 over 19 NO ANSWER	Married Single NO ANSWER	Dormitory Fraternity Apartment With Parents Other NO ANSWER	< 5,000 5-20,000 20-100,000 > 100,000 NO ANSWER	< 2,000 2-5,000 5-10,000
22	Roman Catholic	12	22	9	6	7
8	Anglican - E. Orthodox	3	8	7	9	4
29	Protestant	18	128	13	6	12
6	Liberal Protestant	2	5	4	2	1
6	Ethical Christian	3	6	2	3	1
14	Judaism	10	14	1	1	2
9	Others*	6	9	7	2	3
11	New Religion	8	2	1	1	3
18	Doubtful	12	18	3	3	3
13	No Religion Needed	4	13	4	1	1
136	TOTALS	83	4	81	13	1

* Included under "Others" are those saying that several different systems are adequate.

QUESTION NO.	AGE OF AWAKENING	AWAKENING WHILE:	TYPE OF AWAKENING	ISOLATED OR EMBARRASSED	THE CHURCH
9	less than 10 10-12 12-15 15-18 18-20 over 20 NO ANSWER	before high sch. In High school After high s. At MIT NO ANSWER	Definite Crisis Emotional Stimulus Gradual NO ANSWER	YES NO Doubtful NO ANSWER	#1 #2 #3 #4 #5 #6 #7 - Different NO ANSWER
22	2	5	3	1	12
8	2	12	16	2	8
29	1	6	5	3	6
6	8	17	20	6	17
6	3	4	4	3	2
6	1	3	3	2	1
14	1	1	4	2	3
9	1	5	6	2	8
11	2	4	6	2	1
18	2	4	6	5	5
13	4	5	7	10	3
136	7	24	2	20	16

7 HOME TOWN POPULATION	8 FAMILY INCOME	10 CHURCH MEMB.	11 FACTORS TOWARD RELIGION	12 SUBJECTIVE AWAKENING	
< 5,000 5-20,000 20-100,000 >100,000 No ANSWER	<2,000 2-5,000 5-10,000 10-20,000 20-50,000 >50,000 No ANSWER	Same } YES Different } NO	Parents Conformity Personal Influences Fear or Insecurity Sorrow & Bereavement Gratitude Sex Mystical Experience Studies in School & College Outside Read. Church Teachings Aesthetic No ANSWER	NO YES No ANSWER	R. Catholic A. or E. Orth. Protestant Liberal Prot. Eth. Christian Judaism Others *
6 9 7 2 6 9 6 8 9 2 2 2 3 1 2 1 2 5 6 1 2 1 4 1 1 4 3 3 3 3 1 11 3 3 4 7 1	7 6 7 1 1 1 4 3 7 1 1 12 12 9 2 1 1 1 3 3 1 2 4 1 2 5 5 1 3 5 5 2 3 4 2 3 5 3 3 9 6 4 1 3 6 4	22 8 6 23 3 3 6 3 3 14 5 3 5 1 3 6 5 5 9 9 4 4 4 4	15 6 7 2 2 9 1 2 7 2 2 13 5 2 4 1 3 1 2 10 3 3 4 1 23 10 15 7 2 10 8 10 19 3 4 4 4 2 1 3 1 1 1 1 4 4 4 2 1 1 2 4 4 1 1 3 1 12 11 6 3 2 4 1 2 4 6 4 1 1 7 4 4 5 2 2 4 3 2 1 1 1 1 4 6 5 2 2 4 2 2 5 2 1 1 1 13 12 5 5 4 4 2 1 1 1 1 1 1 6 5 1 4 4 2 2 2 1 1 1 1 1	3 19 8 8 3 25 1 1 5 3 3 7 7 1 8 3 8 2 7 9 2 9 4	TOTALS
13 28 36 57 2	1 35 53 37 4 1 5	77 34 25	92 63 53 29 14 36 1 11 31 28 59 21 8	37 96 3	TOTALS

equates.

APPENDIX - M

14 THE CHURCH	16 CHRIST	15 THE DIETY	18 CHURCH ATTENDANCE	
#1 #2 #3 #4 #5 #6 #7 - Different No ANSWER	#1 #2 #3 #4 No ANSWER	#1 #2 #3 #4 #5 #6 #7 - Different No ANSWER	once/week once/2 wks. once/month once or twice never No ANSWER	R. Catholic A. or E. Orth. Protestant Liberal Prot. Eth. Christian Judaism Others * New Religion Doubtful No Religion
12 8 6 6 4 17 2 1 5 5 3 3 1 1 8 1 1 1 4 5 1 1 1 3 3 1 1 1 6 4 3 2 1 2 6 2 3 2 1 2 3	20 6 2 22 2 3 3 4 4 7 7 2 2 4 4 3 2 6 3 2 2 10 5 1 6 6	21 6 2 16 12 1 2 2 1 1 3 3 1 1 3 8 2 2 2 4 3 3 1 5 3 6 2 2 4 2 3 3	20 3 2 1 2 1 1 6 8 7 5 3 2 1 1 2 2 1 1 3 8 1 1 1 3 1 4 3 1 1 5 4 1 2 3 11 2 7 2 2 2 2 7	TOTALS
16 61 11 6 3 6 33	59 40 1 35 1	52 41 5 14 6 4 11 3	39 15 20 37 24 1	TOTALS

TABULATION OF ALL DATA TAKEN IN THE SURVEY

I Freshmen Sheet 1

QUESTION NO.	PRESENT CHOICE OF BELIEF	IMMORTALITY							PRAYER					FEELING OF REVERENCE, ETC.					CHILDREN								
		#1	#2	#3	#4	#5	#6	#7-Different	No ANSWER	daily	fairly frequently	occasionally	rarely	never	No ANSWER	daily	fairly frequently	occasionally	rarely	never	No ANSWER	None at all	Moderate	Slight	Very Marked	Moderate	
22	Roman Catholic	21							12	5	4	1	1	7	6	5	1	3				7	11	2			
8	Anglican - E. Orthodox	6							5	1	1	1	1	3	3	3	2				1	1	1			2	3
29	Protestant	23							8	9	7	4	1	8	9	10	2				1	1					1
6	Liberal Protestant	2							1	2	2	2	2	2	3	1	2				1	1					
6	Ethical Christian																										
14	Judaism	4							2	4	2	4	2	2	1	4	5	1	2			1	1				
9	Others *	3							1	2	3	3	2	3	1	1	1	2			1	1					
11	New Religion	1							1	2	3	4	3		2	2	2	5			1	1					
18	Doubtful	2							2	2	5	6	3		1	6	7	4			1	1					
13	No Religion Needed	1							2	2	5	6	3		1	2	10				1	1					
136	TOTALS	63	2	7	33	2	21	7	33	26	25	27	23	2	24	30	35	18	22	7	5	8	16	4	2	4	

* Included under "Others" are those saying that several different systems are adequate.

QUESTION NO.	PRESENT CHOICE OF BELIEF	AGE OF REACTION						REACTION BEGAN				PRESENT VIEW			FACTORS IN REACTION					RELIGION						
		less than 10	10-12	12-15	15-18	18-20	over 20	No ANSWER	Before high s.	In high school	After high s.	At MIT	No ANSWER	Agree	Partially Agree	Disagree	No ANSWER	Disapprove of persons	Personal influences	Disapprove of conformity	Disappoint.	Studies outside Reading	No ANSWER	Support	Negligible	Considerable
22	Roman Catholic							1	5	1	1	5	1	1	1	1	1	1	1	1	1	2	1	15	2	1
8	Anglican - E. Orthodox	1						1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	3	3		
29	Protestant							2	9	3	9	1	7	5	5	2	2	2	2	2	2	1	17	7	5	
6	Liberal Protestant							1	2	1	2	1	2	1	1	1	1	1	1	1	1	2	3	2	1	
6	Ethical Christian	1						2	1	1	2	1	3	1	3	1	1	4	1	2	1	1	3	3		
14	Judaism							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	7	3	
9	Others *							3	4	1	4	1	5	5	2	5	3	3	3	3	3	2	5	3	1	
11	New Religion							2	1	1	1	1	5	1	1	1	1	1	1	1	1	2	3	4	1	
18	Doubtful	2						2	4	1	4	1	9	1	1	1	3	4	9	1	6	5	2	5	3	
13	No Religion Needed	3						1	3	1	3	1	3	4	1	1	3	3	3	4	3	3	1	3	1	
136	TOTALS	7	11	21	18	1	1	25	31	3	19	33	5	2	17	19	33	13	13	13	18	71	49	39	16	

QUESTION NO.	DEGREE OF RELIGIOUS INFLUENCE IN CHILDHOOD	SUBJECTIVE AWAKENING	CHURCH ATTENDANCE	PRAYER	FEELING OF REVERENCE, ETC.
19	Very Marked	Definite Crisis	once/week	daily	daily
26	Moderate	Emotional Stimulus	once/2 wks.	fairly frequently	fairly frequently
63	Slight	Gradual	once/month	occasionally	occasionally
41	None at all		never	rarely	rarely
5	No ANSWER		No ANSWER	never	never
1	No ANSWER		No ANSWER	No ANSWER	No ANSWER
TOTALS					
136					

QUESTION NO.	DEGREE OF RELIGIOUS INFLUENCE IN CHILDHOOD	REACTION AGAINST BELIEFS TAUGHT	PRESENT VIEW OF BELIEFS TAUGHT	RELIGION & SCIENCE	EFFECT OF TIME AT MIT	RELIGIOUSNESS	EFFECT OF TIME AT MIT
19	Very Marked	Agree	Support	More	At MIT	Definite Crisis	At MIT
26	Moderate	Partially Agree	Negligible	Less	Not at MIT	Emotional Stimulus	Not at MIT
63	Slight	Disagree	Considerable	No Effect	No ANSWER	Gradual	No ANSWER
41	None at all	No ANSWER	Very Cons.	No ANSWER			
5	No ANSWER		Irreconcilable	No ANSWER			
1	No ANSWER		No ANSWER	No ANSWER			
TOTALS							
136							

QUESTION NO.	COURSE OF STUDY	RELIGION & SCIENCE	EFFECT OF TIME AT MIT	INTEREST	SUBJECTIVE AWAKENING	REACTION AGAINST
1	Support	More	More	At MIT	At MIT	At MIT
2	Negligible	Less	Less	Not at MIT	Not at MIT	Not at MIT
3	Considerable	No Effect	No Effect	No ANSWER	No ANSWER	No ANSWER
4	Very Cons.	No ANSWER	No ANSWER			
5	Irreconcilable	No ANSWER	No ANSWER			
6	No ANSWER					
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136						

18

BEING OF REVER-
ENCE, ETC.

daily	
fairly frequently	
occasionally	
rarely	
never	
No ANSWER	

12	7	3	3	1	
11	14	22	9	3	4
8	10	7	15	1	
1	1	2	1	1	
24	30	35	18	22	7

19

INTEREST
AT MIT

More	
Less	
No Effect	
No ANSWER	

16	6	4	
22	2	28	11
9	3	22	7
4	1	1	1
51	5	57	23

20

REACTION AGAINST BELIEFS
Present View

At MIT	
Not at MIT	
Doubtful	
No ANSWER	
Agree	
Partially Agree	
Disagree	

20

Emotional Stimulus

Gradual				
1	62	13	8	
1	28	3	1	
1	10	1		
5	5			
2	1	110	17	9

19

TYPE OF RELIGIOUS INFLUENCE IN CHILDHOOD

23

EFFECT OF TIME AT MIT INTEREST

QUESTION NO.	TYPE OF RELIGIOUS INFLUENCE IN CHILDHOOD	EFFECT OF TIME AT MIT INTEREST							
28	Roman Catholic	4	6	17	1	9	12	7	
7	Anglican-E. Orthodox	1	1	5		2	4	1	
54	Protestant	15	7	30	2	22	2	20	10
6	Liberal Protestant	2	1	2	1	3	2	1	
2	Ethical Christian			2		1	1		
38	Judaism	6	8	24		11	3	21	3
1	Others	1				1	1		
4	None at all	1		3	1	3	1		
2	No ANSWER			1		2			

8

FAMILY INCOME

19

DEGREE OF RELIGIOUS INFLUENCE IN CHILDHOOD

QUESTION NO.	FAMILY INCOME	DEGREE OF RELIGIOUS INFLUENCE IN CHILDHOOD					
1	less than 2,000	Very Marked	1				
35	2-5,000	Moderate	6	16	9	3	1
53	5-10,000	Slight	10	24	19		
37	10-20,000	None at all	8	17	10	1	1
4	20-50,000	No ANSWER	2	2			
4	over 50,000		1	1	1	2	
5	No ANSWER		1	1	1		
136	TOTALS		25	61	42	4	4

APPENDIX
I. Freshmen
Sheet 3

SAMPLE BY
COURSES:

- (Not given) 5
 - I 6
 - II 16
 - III 4
 - IV 3
 - V 8
 - VI 24
 - VII 7
 - VIII 14
 - IX 2
 - X 26
 - XI 1
 - XII 1
 - XIII 1
 - XIV 2
 - XV 9
 - XVI 5
 - XVII 1
 - XVIII 3
 - XIX 1
 - XX 1
- Total - . 136

QUESTION NO	COURSE	AGE	MARRIED	RESIDENCE	TOWN POPULATION
TOTALS	Engineering Science Business Miscellaneous NO ANSWER	20 21 22 over 22 NO ANSWER	Married Single NO ANSWER	Dormitory Fraternity Apartment With Parents Other NO ANSWER	> 5,000 5 - 20,000 20-100,000 100,000 NO ANSWER
16	Roman Catholic	11	2	3	2
3	Anglican - E. Orthodox	3	2	13	4
34	Protestant	19	6	3	1
10	Liberal Protestant	4	3	30	14
11	Ethical Christian	6	2	6	3
11	Judaism	6	4	9	4
15	Others*	2	2	10	2
15	New Religion	2	1	1	2
19	Doubtful	10	7	12	7
35	No Religion Needed	12	4	16	6
		4	3	3	6
		7	5	7	6
		18	7	27	5
169	TOTALS	100	22	31	63
		27	71	137	50
		18	30	1	23
		21	45	1	28
		3	1	1	4

*Included under "Others" are those saying that several different systems are adequate.

QUESTION NO	PRESENT CHOICE OF BELIEF	AGE OF AWAKENING	AWAKENING WHILE:	TYPE OF RELIGIOUS AWAKENING	ISOLATED OR EMBARRASSED	THE CHURCH
16	Roman Catholic	1	4	2	3	5
3	Anglican - E. Orthodox	4	4	11	1	4
34	Protestant	1	2	3	2	3
10	Liberal Protestant	1	9	18	6	4
11	Ethical Christian	1	5	6	23	23
11	Judaism	1	4	1	7	1
15	Others*	3	5	2	5	5
15	New Religion	1	4	10	2	3
19	Doubtful	2	5	9	5	4
35	No Religion Needed	1	4	6	10	1
		1	1	4	13	1
		2	1	4	1	8
		4	1	1	11	3
		22	1	1	15	5
		24	1	1	20	2
		30	1	1	26	16
		9	1	1	20	2
169	TOTALS	2	18	7	25	10
		4	27	10	126	65
		22	26	73	16	19
		24	20	2	2	7
		30	1	2	2	12
		9	1	1	2	8

QUESTION NO.	PRESENT CHOICE OF BELIEF	IMMORTALITY							PRAYER					FEELING OF REVERENCE, ETC.					CHILDHOOD						
		#1	#2	#3	#4	#5	#6	#7-Different	No ANSWER	daily	fairly frequently	occasionally	rarely	never	No ANSWER	daily	fairly frequently	occasionally	rarely	never	No ANSWER	None at all	Roman Catholic	Moderately	Slightly
169	TOTALS	51	2	14	49	8	27	16	2	26	26	30	41	46	22	28	35	38	44	2	7	12	14	6	1
16	Roman Catholic	14	2	2	1	1	1	1	5	8	2	1	3	5	8	1	2	3	1	2	2	1	1	1	1
3	Anglican - E. Orthodox	2	2	4	2	1	7	1	2	1	9	12	4	1	1	2	9	6	1	1	1	1	1	1	1
34	Protestant	19	19	3	3	3	1	1	8	9	12	4	1	8	9	9	6	1	1	1	1	1	1	1	1
10	Liberal Protestant	1	1	1	7	2	1	1	1	1	2	6	2	1	1	2	6	2	3	3	3	3	3	3	3
11	Ethical Christian	3	3	1	3	1	2	1	1	1	1	2	4	3	1	1	2	4	4	3	3	3	3	3	3
11	Judaism	8	8	1	2	2	1	1	3	3	3	3	2	3	3	3	3	2	3	1	2	3	3	3	3
15	Others #	2	2	1	4	3	3	1	2	4	4	5	4	3	2	6	5	2	1	2	3	1	1	1	1
15	New Religion	1	1	1	11	2	4	3	2	2	2	2	5	2	3	3	6	5	2	7	4	4	4	4	4
19	Doubtful	1	1	1	17	4	5	6	1	1	3	7	8	1	1	3	9	7	4	28	4	4	2	1	1
35	No Religion Needed	1	1	1	4	5	6	1	2	2	1	3	8	24	1	1	1	4	28	4	4	2	1	1	1
169	TOTALS	51	2	14	49	8	27	16	2	26	26	30	41	46	22	28	35	38	44	2	7	12	14	6	1

* Included under "Others" are those saying that several different systems are adequate.

QUESTION NO.	PRESENT CHOICE OF BELIEF	AGE OF REACTION						REACTION BEGAN				PRESENT VIEW OF BELIEFS TAUGHT				FACTORS IN REACTION					RELIGIOUS SUPPORT				
		less than 10	10-12	12-15	15-18	18-20	over 20	No ANSWER	Before high school	In high school	After high school	At MIT	No ANSWER	Agree	Partially Agree	Disagree	No ANSWER	Disapprove of persons	Personal influences	Disapprove of conformity		Disappoint.	Studies Outside Reading	No ANSWER	
169	TOTALS	7	9	25	29	24	8	1	25	40	18	20	18	65	19	1	21	25	53	24	36	45	55	41	4
16	Roman Catholic	2	1	2	1	2	2	2	1	1	3	3	6	1	1	1	3	1	2	1	1	1	8	11	3
3	Anglican - E. Orthodox	2	1	2	1	2	2	1	2	1	3	3	6	1	1	1	3	1	2	1	1	1	8	11	3
34	Protestant	1	1	1	8	3	1	1	1	9	3	1	4	10	4	10	3	7	8	4	4	6	17	14	11
10	Liberal Protestant	1	1	1	3	2	1	1	2	1	2	1	2	4	4	4	2	1	2	4	2	2	3	3	6
11	Ethical Christian	1	1	1	3	4	1	1	1	3	2	2	2	6	2	2	1	1	3	1	4	6	2	1	5
11	Judaism	2	2	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	3	1	3	3	5	2	1
15	Others #	2	2	3	1	1	1	1	2	4	1	1	1	6	1	1	2	3	3	2	2	3	6	5	6
15	New Religion	3	3	1	4	3	1	1	1	3	2	6	2	1	1	1	2	3	6	2	4	4	3	2	4
19	Doubtful	3	3	5	4	4	3	1	1	6	3	2	3	9	3	3	4	4	10	3	4	8	5	1	6
35	No Religion Needed	5	5	9	6	3	1	1	13	10	3	3	15	13	1	1	5	7	12	8	11	12	6	1	6
169	TOTALS	7	9	25	29	24	8	1	25	40	18	20	18	65	19	1	21	25	53	24	36	45	55	41	4

QUESTION NO.	DEGREE OF RELIGIOUS INFLUENCE IN CHILDHOOD	SUBJECTIVE AWAKENING	CHURCH ATTENDANCE	PRAYER	FEELING OF REVERENCE, ETC.
12		Definite Crisis Emotional Stimulus Gradual	once/week once/2 wks. once/month once or twice never NO ANSWER	daily fairly frequently occasionally rarely never NO ANSWER	daily fairly frequently occasionally rarely never NO ANSWER
19	Very Marked Moderate Slight None at all NO ANSWER	NO YES NO ANSWER	once/week once/2 wks. once/month once or twice never NO ANSWER	daily fairly frequently occasionally rarely never NO ANSWER	daily fairly frequently occasionally rarely never NO ANSWER
32	Very Marked	NO	once/week	daily	daily
82	Moderate	YES	once/2 wks.	fairly frequently	fairly frequently
45	Slight	Doubtful	once/month	occasionally	occasionally
7	None at all	No Answer	once or twice	rarely	rarely
3	NO ANSWER	No Answer	never	never	never
169	TOTALS	74 90 2	31 14 23 43 55	24 26 30 41 45	21 28 35 38 42 2

QUESTION NO.	DEGREE OF RELIGIOUS INFLUENCE IN CHILDHOOD	REACTION AGAINST BELIEFS TAUGHT	PRESENT VIEW OF BELIEFS TAUGHT	RELIGION & SCIENCE	EFFECT OF RELIGIOUSNESS	EFFECT OF TIME AT MIT
19	Very Marked Moderate Slight None at all NO ANSWER	NO YES Doubtful NO ANSWER	Agree Partially Agree Disagree NO ANSWER	Support Negligible Considerable Very Cons. Irreconcilable NO ANSWER	More Less No Effect NO ANSWER	At MIT Not at MIT NO ANSWER
32	Very Marked	NO	Agree	Support	More	At MIT
82	Moderate	YES	Partially Agree	Negligible	Less	Not at MIT
45	Slight	Doubtful	Disagree	Considerable	No Effect	NO ANSWER
7	None at all	No Answer	No Answer	Very Cons.	No Answer	No Answer
3	NO ANSWER	No Answer	No Answer	Irreconcilable	No Answer	No Answer
169	TOTALS	40 101 18 7	17 65 19	40 48 34 21 12 11	40 57 63 6	87 12 41 26

QUESTION NO.	COURSE OF STUDY	RELIGION & SCIENCE	EFFECT OF TIME AT MIT	INTEREST	SUBJECTIVE AWAKENING	REACTION AGAINST BELIEFS TAUGHT
1		Support Negligible Considerable Very Cons. Irreconcilable NO ANSWER	More Less No Effect NO ANSWER	More Less No Effect NO ANSWER	Definite Crisis Emotional Stimulus Gradual	At MIT Not at MIT Doubtful NO ANSWER
100	Engineering	Support	More	More	Definite Crisis	At MIT
27	Science	Negligible	Less	Less	Emotional Stimulus	Not at MIT
18	Business	Considerable	No Effect	No Effect	Gradual	Doubtful
21	Miscellaneous	Very Cons.	No Answer	No Answer	No Answer	No Answer
3	NO ANSWER	Irreconcilable	No Answer	No Answer	No Answer	No Answer
169	TOTALS	41 48 33 22 11 11	42 56 62 6	87 12 41 26	20 145 4	20 123 16 10

18

FEELING OF REVER-
ENCE, ETC.

daily	11	7	3	8	2	1
fairly frequently	10	18	24	19	11	
frequently	3	7	10	24	1	
occasionally		1	1	5		
rarely						
never						
No ANSWER						

21 28 35 38 42 2

INTEREST

TIME AT MIT

More	19	2	6	6	5
Less	47	6	16	13	
No Effect	19	4	16	6	
No ANSWER	2		3	2	

87 12 41 26

20

REACTION AGAINST BELIEFS
AT MIT

Emotional Stimulus	At MIT	Agree	3	12	1
Gradual	Not at MIT	Partially Agree	1	1	
	Doubtful	Disagree	1	2	
	No ANSWER		1		

3 10 2 1 1 1 1 1

16 73 10 1 1 3 10 1 4 15 4 2 2

20 123 16 10 4 15 1

23

QUESTION NO.	19	23
TYPE OF RELIGIOUS INFLUENCE IN CHILDHOOD	Roman Catholic Anglican - E. Orthodox Protestant Liberal Protestant Ethical Christian Judaism Others None at all No ANSWER	More Less No Effect No ANSWER
EFFECT OF TIME AT MIT	More Less No Effect No ANSWER	More Less No Effect No ANSWER
TOTALS	32 9 79 9 7 28 5 7 3	17 3 5 7 4 1 2 2 42 8 19 10 5 1 3 1 2 1 6 2 19 1 6 2 1 1 2 2 2 2 3 2

8

QUESTION NO.	8	19
FAMILY INCOME	less than 2,000 2-5,000 5-10,000 10-20,000 20-50,000 over 50,000 No ANSWER	DEGREE OF RELIGIOUS INFLUENCE IN CHILDHOOD Very Marked Moderate Slight None at all No ANSWER
TOTALS	3 65 58 24 14 3 2	1 2 10 32 20 2 1 12 29 14 3 1 7 9 7 3 1 2 8 3 1 1 1 1 1 1 1 1 1 1 1 1

Total - 169

- XX
- XIX
- XVIII
- XVII
- XVI
- XV
- XIV
- XIII
- XII
- XI
- X
- IX
- VIII
- VII
- VI
- V
- IV
- III
- II
- I

SAMPLE BY COURSES:

(Not given)

3 12 19 7 9 7 29 3 13 7 17 4 1 1 18 9 4 4 4 1 2