

THE UNIVERSITY OF MANITOBA

AN INVESTIGATION OF CHRISTIAN ORTHODOXY
AND RIGHT-WING AUTHORITARIANISM IN
A COLLEGIATE POPULATION

by

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the University of Manitoba in partial fulfillment of the requirements
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ABSTRACT

This study investigates stability and change in the religious beliefs and right-wing authoritarianism of high school students. Three related issues were explored: changes in the level and organization of orthodox Christian beliefs; changes in the level and organization of right-wing authoritarianism; and the causal relationships that might exist between these changes.

Right-wing authoritarianism was operationally defined as scores on Altemeyer's (1979) Right-Wing Authoritarianism (R.W.A.) Scale. Orthodox Christian beliefs were assessed by a Christian Orthodoxy (C.O.) Scale developed specifically for this study. The scale construction and cross-validation procedures as well as evidence for the reliability and validity of the scale are described.

The research questions were explored using cross-sectional and longitudinal data obtained from male and female Grade 10, 11, and 12 students attending either rural or urban collegiates. The cross-sectional sample included 747 students (154 rural and 593 urban). One hundred and seventeen of the rural and 325 of the urban students were involved in the longitudinal sample. Analysis indicated that the longitudinal sample was a representative sub-set of the cross-sectional sample.

Statistical analyses to assess change in the level of orthodox Christian beliefs over the high school years indicated, contrary to our prediction, that students' C.O. Scales scores were not decreasing over

grade levels. Post-hoc analysis of C.O. absolute change scores indicated that at the individual level change was occurring in both directions, however, overall these increases and decreases cancelled out and no net change over time or grade levels was observed. Both the C.O. Scale raw score and absolute change score analyses indicated that the students' gender was an important determinant of C.O. Scale variability. Females had significantly higher C.O. Scale scores and their scores were significantly more stable over time than males.

Analyses which probed changes in the organization of orthodox Christian beliefs revealed that the internal consistency of the C.O. Scale was increasing slightly among the Grade 10 and 11 students. The overall picture from the several analyses which investigated this question, however, was that orthodox Christian beliefs are highly organized and essentially stable among this population as hypothesized.

Investigation of changes in the level of right-wing authoritarianism over the high school years indicated that contrary to our prediction the R.W.A. Scale scores of these students were not decreasing over grade levels. Post-hoc analyses of R.W.A. Scale absolute change scores indicated individual students' level of right-wing authoritarianism was changing. These changes were occurring in both directions and cancelled out overall. Analyses of R.W.A. raw scores indicated the students' residential location was an important determinant of R.W.A. Scale score level. Rural students had significantly higher R.W.A. Scale scores than urban students. The R.W.A. Scale change score analysis indicated that the students' gender was an important factor in the amount of absolute change. Females displayed greater stability in their R.W.A. Scale scores than males.

Analyses which explored the organization of right-wing authoritarianism over the high school years revealed that the organization of this ideology was quite low in the population. Further only partial support for the hypothesized increase as a function of students' educational level was found. The internal consistency of the R.W.A. Scale increased over time for the Grade 10 and 11 students, however, no increase was found in the Grade 12 sample.

Exploration of possible causal sequences between changes in C.O. and R.W.A. Scale scores, using the Cross-Lagged Correlation Technique indicated that neither variable had "causal priority" over the other.

The findings that orthodox Christian beliefs and right-wing authoritarianism did not decrease over the high school years are discussed and explanations offered. It is thought that the stability of these variables at this time may be due to ideological ferment being cyclic in nature. It is suggested that the middle to late seventies have been a "quiet time" for ideological ferment.

Several explanations for the sex difference in C.O. Scale scores are elaborated. Data gathered in this study enabled these explanations to be probed. Data presented provides no support for a differential emphasis explanation of sex differences in orthodoxy. Some support is found for a sex-role identification explanation of these difference. However, an explanation which postulates that observed sex differences are due to males being more rebellious against, while females are more conforming to, parental attitudes and values appears to mesh best with the available data.

The location difference in R.W.A. Scale scores was explored through an item analysis of the R.W.A. Scale. This analysis indicated that the

R.W.A. Scale location difference is due to rural students being more conventional and "old fashioned" than urban students.

The high and stable organization of orthodox Christian beliefs is discussed and attributed to the widespread, early, and thorough teaching of these beliefs in our society. The increases in the organization of right-wing authoritarianism, while being partially due to improved verbal skills, are thought to reflect increased psychological organization of these social attitudes as a result of increased education.

The picture presented by the present research is that, at least with regard to the variables considered, the high school years are a "quiet time" for social attitude change.

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CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

The present research project sought to investigate empirically stability and change in the religious beliefs and right-wing authoritarianism of middle and late adolescents. Specifically, three issues were examined: (1) change over time in (Christian) religious beliefs; (2) change over time in right-wing authoritarianism; and (3) the relationship between changes in these two attitudinal constructs.

Religious Belief Change

With regard to the first issue, previous research has shown that religion is an important issue to young people. A post-war study conducted by Allport, Gillespie and Young (1948) found that approximately seven out of 10 Harvard and Radcliffe students felt they needed religion in their lives. These researchers further determined that the most important influence producing this need for religion was the students' parents. A more recent longitudinal study of students at a number of American universities (Webster, Freedman and Heist, 1962) found that at entrance to college, 88% of the male and 91% of the female National Merit Scholarship Winners felt a need to believe in a religion.

Notwithstanding the importance of religion to young people, several studies have shown it also to be a source of anxiety, conflict, and doubt. Meissner (1961) administered a free-response questionnaire to 1,278 boys attending nine Catholic schools to determine the major sources of anxiety in adolescent boys. He found that over the high school years,

religion became an increasingly prominent issue, until it was listed as the primary source of doubt among juniors and seniors. Havens (1963) estimated that at any given time about 12% of college students have a critical concern, or even an acute crisis due to religious conflicts.

Such conflicts and doubts may, of course, cause young people to change their religious beliefs and behavior. Allport et al. (1948) concluded from their investigation that about two-thirds of all children who eventually go to college react against parental teachings. In addition, while approximately 25% of their sample stated that they had no need for any sort of religious orientation, only 40% of those students who did feel such a need found the system in which they were reared satisfactory to their needs.

Several studies have sought to determine the period in the adolescent's life when such changes are most likely to occur. Some have identified the high school years as the "critical period" for adjustments in religious values.

Kublen and Arnold (1944) in a cross-sectional study administered questionnaires to adolescents in the sixth, ninth, and twelfth grades. They found that many specific beliefs acquired during early childhood were no longer held in the late teens and that older subjects displayed a greater tolerance with respect to the religious beliefs and practices of others. Allport et al. (1948) found from the self-reports of Harvard and Radcliffe students that both conversion and reaction to religion tend to occur at about 16 years of age. Moreton (1944) reported that

religious conflict and change in a sample of British adolescents was most common between the ages of 15 and 19.

Other studies, however, have indicated that changes in religious values occur during the college years. Feldman (1969), in an extensive review of more than 40 years of research on this question, concluded that these studies

...generally show mean changes indicating that seniors, compared with freshmen, are somewhat less orthodox, fundamentalistic, or conventional in religious orientation, somewhat more skeptical about the existence and influence of a Supreme Being, somewhat more likely to conceive of God in impersonal terms, and somewhat less favorable toward the church as an institution. Although the trend across studies does exist, the mean changes are not always large, and in about a third of the cases showing decreasing favorability toward religion, differences are not statistically significant (considering only those studies that have given results of statistical tests of significance) (p. 44).

The majority of these studies, however, were conducted during the 30's, 40's, and 50's and it may be that 'kids' are growing up faster now and thus changes occur earlier. Research conducted recently at the University of Manitoba and elsewhere (Hunsberger, 1973, 1978) provided little, if any, support for the proposition that religious beliefs change during the course of higher education.

Hunsberger administered a 44-item questionnaire on religious attitudes and practices to 311 freshmen and 146 "seniors" attending the University of Manitoba and three church-related colleges. The students were from Mennonite, Roman Catholic, or United Church backgrounds.

There was little evidence that first-year students agreed with parents' religious teachings more than third-year students. Overall, measures of religious practice showed third-year subjects to be less active than first-

year subjects; however, the tendency was weak. Furthermore, a religion-by-religion breakdown of this tendency showed virtually no such trend for individual religious groups. Similarly, very little evidence was found to suggest that differences in religious ideology exist between first- and third-year students.

Hunsberger inferred that a period of religious ferment had probably occurred in many of his subjects' lives, and that a frequent outcome of this period was a lessening in orthodoxy. But this usually happened before the students entered university...presumably during late adolescence. That, of course, is one of the issues tested in the present research.

The Ontogeny of Right-Wing Authoritarianism

Consideration of the second issue of this study requires some summarization of the extensive literature which exists on authoritarianism. The search for the "authoritarian personality" began approximately 30 years ago and over this period of time numerous conceptualizations of the construct (and scales to measure them) have been presented. The best known of these are probably Adorno, Frenkel-Brunswick, Levinson, and Sanford's theory of "the authoritarian personality" (1950), Rokeach's theory of "dogmatism" (1960) and Wilson and Patterson's theory of "conservatism" (1968). In addition, both Lee and Warr (1969) and Kohn (1972) have developed approaches to the issue, and recently Altemeyer (1979) has been active as well. We will briefly consider the first three approaches listed above because they are the best known, and because they have been related to religious behavior more often than the other published conceptual-

izations. But in the main, we shall examine the recent approach taken by Altemeyer because it appears to be conceptually clearer, and have greater validity, than any of the preceding efforts.

The Berkeley Theory of the "Authoritarian Personality"

The most famous and influential research program ever undertaken on authoritarianism is, of course, that developed by a multidisciplinary research team at the University of California at Berkeley in the 1940's. The original goal of this research team was to investigate social prejudice, and at one point it occurred to them that an indirect measure of prejudice which they were about to develop could also be used to tap a fascist or antidemocratic personality syndrome. Eventually, a nine-trait model of this syndrome was conceptualized (Adorno et al., 1950, p. 228); the nine traits were operationalized in the 30 unidirectionally worded items which formed the F Scale.

The Berkeley researchers theorized that authoritarianism (i.e., scores on the F Scale) should be positively associated with anti-semitic and ethnocentric attitudes. To a large extent their research program seemed to confirm this, and also pointed to the childhood origins of authoritarianism. However, this evidence for the F Scale's validity was seriously questioned soon after the publication of The Authoritarian Personality. The mean inter-item correlation on the test was approximately .13 indicating there was very little relationship among responses to the various items. Furthermore, various researchers argued (Christie and Jahoda, 1954) that response sets could have contributed appreciably to the apparent relationship between authoritarianism and prejudice, as the tests used to measure these constructs were both unidirectionally worded.

In addition, the "interview studies" which had produced the evidence that authoritarianism had childhood origins were found to be methodologically flawed from beginning to end.

Despite the fact that there was virtually no evidence to support the validity of the F Scale, an avalanche of research soon appeared which used F Scale scores as indices of right-wing authoritarianism. A careful review of this literature, however, (Altemeyer, 1979) indicates that there still is no convincing evidence that the F Scale measures the Berkeley investigators' construct of authoritarianism with any power and precision.¹ The assessment seems unavoidable: Some 30 years after the publication of The Authoritarian Personality, the F Scale has little to offer the behavioral sciences today.

Rokeach's Theory of Dogmatism

Whereas the Berkeley researchers had endeavored to construct a measure of right-wing authoritarianism, Milton Rokeach (1960) set out to develop a construct and a measure of "general authoritarianism" which he called Dogmatism. It was intended that this concept would have equal applicability on both ends (and in the center) of the political spectrum, as it focused on the structure of belief systems rather than their content.

The conceptualization of dogmatism which Rokeach developed is

¹ At best the test seems able to predict (weakly)
1) Aggression against unconventional or low-status victims, and
2) right-wing political sentiments.

somewhat involved, and need not concern us here. Suffice it to say that belief systems were thought to be organized along three dimensions each of which was subdivided into several subcomponents, which in turn had numerous subcomponents. The operational definition of this construct, the Dogmatism Scale consists of 40 unidirectionally worded propositional statements. Its psychometric properties are even poorer than the F Scale's however (the mean inter-item correlation is only about .10).

Moreover, despite Rokeach's intention that the Dogmatism Scale would measure general authoritarianism, Dogmatism Scale scores seem to correlate better with measures of right-wing sentiment (such as the F Scale) than with anything else. Further, scores on the Dogmatism Scale have been found to be higher among right-wing political groups than among others (Barker, 1963; Direnzo, 1967; Granberg and Corrigan, 1972; Kirtley and Harness, 1969; Thompson and Michel, 1972). As a measure of right-wing authoritarianism, however, it is even a poorer measure than the F Scale (Barker, 1963; Granberg and Corrigan, 1972; Schwendiman, Larson and Cope, 1970; Vacchiano, Scheffman and Crowell, 1966; Vaughan, 1969). Thus, despite the wide use of the test in recent times, it seems definitely to lack validity as a measure of either general or right-wing authoritarianism.

Wilson and Patterson's Theory of Conservatism

Wilson and Patterson (1968; Wilson, 1973) have recently offered a new conceptualization of "conservatism" which they suggest incorporates that which has previously been described as fascism, authoritarianism, and dogmatism. "Conservatism" is most closely associated with "resistance

to change", and Wilson and Patterson have argued that it is a factor underlying all social attitudes. More specifically, conservatism has been described as consisting of about seven covarying traits (the number varies from one account to another; Wilson (1973), Wilson, Ausman and Mathews (1973), Wilson and Patterson (1968)) such as "religious fundamentalism", "right-wing political orientation", and "intolerance of minority groups".

The construct has been operationalized in the Conservatism Scale, which consists of 50 slogans or catch phrases (e.g., "Death penalty") to which the respondent either agrees, disagrees, or expresses no opinion. The test is balanced against response sets. The average inter-item correlation on the test is, however, quite low (.13 or less), and no published factor analysis of the test has yet found fewer than 13 factors on the test (Bagley, Wilson and Boshier, 1970; Boshier, 1972; Robertson and Cochrane, 1973; Wilson, 1970). Again, therefore, this scale does not seem to be measuring the construct for which it is named with any power or precision.

A review of the literature on the Conservatism Scale suggests that the scale possesses considerably greater predictive power than either the F or Dogmatism Scales does. A consistent problem with this literature, however, as Altemeyer (1979) has noted, is that the procedures employed in the investigation are hardly ever described in detail, (e.g., Thomas, 1974, 1975; Wilson, 1970; Wilson, Ausman and Mathews, 1973; Wilson and Patterson, 1968) and usually the reader has little grounds for judging whether the study represents a careful test of a hypothesis or not.

Altemeyer's Conceptualization of Right-Wing Authoritarianism

Altemeyer (1979) has proposed yet another conceptualization of authoritarianism which will be reviewed in some detail here. Right-wing authoritarianism is conceived to be the covariation of three behavioral clusters:

- 1) Authoritarian Submission - a high degree of submission to the authority which is perceived to be established and legitimate in the society in which one lives.
- 2) Authoritarian Aggression - a general aggression, directed against various persons, which is perceived to be sanctioned by the society and such authority.
- 3) Conservatism - a general adherence to conventions which are perceived to be sanctioned by this society and such authority.

This conceptualization was not derived from any theoretical base but developed inductively from research which examined the intercorrelations among various authoritarian scale items. Empirically it was determined that, of the many trait dimensions and attitudinal clusters which had been theorized to underlie various conceptualizations of authoritarianism, only items which tapped authoritarian submission, authoritarian aggression, and conventionalism covaried to any appreciable extent. Further investigations revealed that this covariation among the three attitudinal clusters was reliable and a Right-Wing Authoritarianism (R.W.A.) Scale was developed to measure the construct.

The statements which compose the initial, balanced 24-item version of the scale were developed over nine item analysis studies which altogether

involved over 300 statements. The psychometric properties of the test have been established in studies of university students at three Canadian and six American universities and also a sample of adult non-university Winnipeg males. The average inter-item correlation has varied from .18 to .23, and Cronbach (1970) "alpha" coefficients of internal consistency from .84 to .88. Principle axes factor analyses (with Varimax (Kaiser, 1958) then Promax (Hendrickson and White, 1964) rotation) of the test have consistently extracted five factors, accounting for about 35% of the total test variance altogether, which in the oblique Promax rotation have an average intercorrelation of about .40. The first factor has loadings = .40 from nearly all of the protrait items on the test; the remaining factors have their highest loadings from the contraitem items, divided into specific topics: patriotic duty, religiosity, treatment of criminals, and sex roles. Comparison of this test with the F, Dogmatism, Conservatism, "Balanced Authoritarianism" (Lee and Warr, 1969), and "Authoritarianism-Rebellion Scale" (Kohn, 1972) at the universities of Manitoba, Alberta, Western Ontario, and North Dakota in 1973-1974 indicated that the evidence for the construct validity and unidimensionality of the R.W.A. Scale was considerably greater than it was for any of the other measures of "authoritarianism" (Altemeyer, 1979).

The empirical validity of the various scales was also compared and, as one would expect from the above, the Right-Wing Authoritarianism Scale consistently had the highest relationships with most of the criteria involved. These included a measure of the subjects' tolerance for government injustices, aggression against "deviant" persons convicted of crimes,

aggression against confederates in a bogus "electric shock" experiment, political affiliation and party voting preference. The one exception to this pattern involved several indices of religious behavior, where the Right-Wing Authoritarianism Scale was about as predictive as Lee and Warr's "Balanced Authoritarianism Scale" and both were appreciably weaker than the Conservatism Scale.²

A 26-item revision of the Right-Wing Authoritarianism Scale was subsequently developed by Altemeyer (1979) which has somewhat better psychometric properties. In a study conducted at the Universities of Alabama, Indiana, Penn State, Virginia, and Wyoming in the Fall of 1974 this scale had, overall, a mean inter-item correlation of .26, an alpha coefficient of .90, and the same 5 factor structure which here accounted for 39% of the total scale variance. The five oblique factors had an average intercorrelation of .49. Scores on this scale correlated .65, with acceptance of government injustices, .50-.52 with the latency of suspicion about Nixon's role in Watergate, .48 with sentences given deviant criminals, .54 with continued acceptance of the home religion, and significantly differentiated Republican and Democratic supporters.³

Thus, while the Right-Wing Authoritarianism Scale is by no means as unidimensional or as predictive a test as one might wish, it does seem

²The latter is understandable insofar as the Conservatism Scale appears to be more a measure of religious conservatism than anything else (Boshier, 1972; Robertson and Cochrane, 1973; Wilson, 1970).

³It should be recognized that the indices of the Right-Wing Authoritarianism Scales characteristics and performance are somewhat higher in the total sample than they would be in the subsamples because of range restrictions in the latter. In this dissertation, unless otherwise stated, all correlation coefficients are Pearson Product-Moment Correlation Coefficients.

to be acceptable as a valid measure of right-wing authoritarianism, suitable for use in the present study.

The Antecedents of Right-Wing Authoritarianism

There is at present considerable speculation but no solid information on the antecedents of right-wing authoritarianism. Adorno et al. (1950) believed it originated in early childhood as a reaction to treatment received from harsh, cold, distant parents. Frenkel-Brunswick (1954) has speculated that it is caused by status anxiety among the downwardly mobile. Kelman and Barclay (1963) argued instead that F Scale scores are indications of a person's "breadth of perspective", and that this in turn is determined by the extent to which the individual has lived in a "constricted, homogeneous environment" with only a "limited exposure to different values and different points of view". Simon (1965) has suggested that authoritarianism arises from emotional immaturity, manifested in a quest for "subjective certainty". An extension of Selznick and Steinberg's (1969) analysis of anti-Semitism would state that right-wing authoritarianism is endemic to our culture, and that the real issue regarding its "origin" is how some persons manage to become less authoritarian than normal socialization would produce. These explanations overlap somewhat, and it may be presumed that whatever environmental factors (such as the parents, school system, and peer influence) are found to foster right-wing authoritarianism, the various "social learning" theories (e.g., Bandura, 1971, Bandura and Walters, 1963; Mischel, 1973), as well as the more psychoanalytic models (e.g., Adorno et al., 1950; Erickson, 1950, 1963, 1964) would have a general

explanation of their effect.

An important factor to be determined in studying the origin of Right-Wing Authoritarianism is the relationship of the construct with age. When do these social attitudes begin to coalesce? Are they organized by the time students enter high school (as most of the models mentioned above seem to imply)? Does the level of organization increase or decrease over the high school years? How authoritarian are high school students, and does their authoritarianism increase or decrease over the years from Grade 10 to Grade 12? These are questions pursued in the present research.

Evidence for a Relationship Between Right-Wing
Authoritarianism and Religious Orthodoxy

Although the Berkeley researchers (Adorno et al., 1950, pp. 468-486) claimed that authoritarianism was related to religious orthodoxy, the religiosity-authoritarianism nexus has been little studied. Several researchers have investigated the relationship between F Scale scores and orthodoxy, as measured by religious or institutional affiliation. Jones (1958) for example studied two samples of American Naval Aviation Cadets (N = 384 and 395). Subjects in both studies completed the California F Scale and indicated their religious affiliation (none, Jewish, Protestant, Roman Catholic). In both studies an omnibus F test revealed statistically significant differences in F Scale scores among the four groups. Rodes (1960) similarly categorized 1027 Tennessee high school students on the basis of their religious

preference (Jewish, none, Nonfundamental Protestants, Roman Catholic, Baptist, Fundamental Protestants) and whether their scores on a modified F Scale (Srole, 1956) were above or below the sample median. Rodes concluded, on the basis of a Chi-square test, that authoritarianism varies directly with fundamentalism. Eckhardt and Newcombe (1969) found a correlation of .33 between religious denominational membership and scores of a 14-item version of the F Scale, among 46 church-going adults. Denominational membership was coded none = 0, Unitarian = 1, Quaker = 2, Liberal Protestant = 3, Unspecified Protestant = 4, Fundamentalist Protestant = 5, and Roman Catholic = 6.⁴ Similarly, Altemeyer (1979), in his research involving University of Manitoba students, has quite consistently found differences among various religious denominations in their mean F and R.W.A. Scale scores. The consistent trend is for F and R.W.A. Scale scores to be lowest among those with no religious affiliation and Jews, and then increase from United Church members and Anglicans among Protestants to "fundamentalist" groups such as Baptists and Jehovahs Witnesses. Catholics usually score in the median range of protestants.

Despite the apparent success of measuring orthodoxy by religious or institutional affiliation the method has been criticized for being imprecise. Finner (1970) contends that relationships may tend to be obscured because categories are created in which orthodoxy may vary as much within groups as between groups.

⁴The validity of this finding can be seriously questioned since the nominal scaled affiliations do not possess the interval level measurement the reported statistic requires.

A more straightforward approach to the problem has been to develop scales which purport to measure religious orthodoxy directly. This has been done several times in conjunction with the California F Scale. Gregory (1957) administered the F Scale and a 24-item "Religious Beliefs" Scale of his own construction to a sample of 529 students attending two universities in California and to 67 members of various church groups. F-Scale scores correlated .53 with religious orthodoxy. Putney and Middleton (1961) administered questionnaires to 1,126 students enrolled in social science courses at 13 colleges and universities located in six eastern states. Their questionnaire included, among other measures, a five item F Scale (Srole, 1956) and a six-item measure of religious orthodoxy. They found that these two measures were significantly associated (Yules, $Q = .43$).

As impressive as these two correlations might seem to be, other studies have found much weaker relationships. Martin and Nichols (1962) for example, found an r of only .18 between a 41-item religious belief measure and the F Scale, among 163 Purdue undergraduates. Photiadis and Biggar (1962) administered questionnaires to 300 adults attending church services at three Protestant churches (Presbyterian, Baptist, and Episcopalian) in a small South Dakota community. The Srole five-item F Scale correlated .29 with a six-item measure of religious orthodoxy. Keedy (1958), however, failed to find a significant relationship between the Srole (1956) five-item F Scale and a 10-item religious orthodoxy scale which he developed. Keedy's subjects were 138 middle-class Protestant undergraduates attending a small liberal arts denominational college in the "Bible Belt" area of the southern United States.

There is a somewhat larger literature on the relationship between Dogmatism Scale scores and religious orthodoxy, but it is of doubtful relevance to our concern here because of the Dogmatism Scale's ambiguity as a measure of right-wing authoritarianism. Suffice it to say here that when orthodoxy has been measured by religious or institutional affiliation the results have been ambiguous (Bohr, 1968; Kilpatrick, Sutker, and Sutker, 1970; LoSciuto and Hartly, 1963; and Rokeach, 1960). However, other investigators (Hjelle and Lomastro, 1971; Thompson and Michel, 1972; Stanley, 1963, 1964; Swindell and Luciano, 1970; Webster and Stewart, 1973) have reported significant relationships between the Dogmatism Scale and scores on some psychometric measure of religious orthodoxy. The relationships vary from .26 to .58 and have an average value of about .40.

As was mentioned above the Conservatism Scale appears to measure "religious conservatism" more than anything else. Webster and Stewart, (1973) found that Conservatism Scale scores correlated .73 with theological orthodoxy among 77 New Zealand Baptist ministers and deaconesses. Altemeyer (1979) found that this scale correlated .53 with continued acceptance of the home religion among 897 Manitoba university students, .48 among 120 Alberta students, and .49 among 56 Winnipeg nonstudent males. Moreover, scores on the Conservatism Scale also best differentiated Agnostics from Jews from Catholics from Protestants, and also best differentiated among the Protestant denominations. Unfortunately, these findings were largely due to the many items on the Conservatism Scale which have obvious religious connections: (e.g., "Divine Law", "Bible Truth", "Church Authority"); it is not particularly surprising

that these items (and hence the Conservatism Scale) correlate well with the various religious criteria.

Finally, Altemeyer (1979) reports that the R.W.A. Scale also correlated (.33 to .56) with continued acceptance of the home religion in his various samples, and also significantly differentiated among the various religious groups mentioned above. There are, however, only four religion-related items on the R.W.A. Scale and virtually all of the other items on the test correlated significantly with continued religious acceptance in the Manitoba student sample. Given the evidence that the R.W.A. Scale is a more valid measure of right-wing authoritarianism than other instruments, its relationship with the religious variables described above is probably the clearest present evidence that authoritarianism and religious orthodoxy are related. Further evidence of this relationship is obtained from the previously-mentioned factor analyses of the R.W.A. Scale, which found the four religious items loading on a Religion factor. In the various research samples this religion factor correlated in the range .40 to .49 with the other factors on the test.

Problems with Previous Measures of Religious Orthodoxy

In general, "religiosity" scales have had better psychometric properties than most authoritarianism scales, but the record is occasionally spotty. Gregory (1957) reported that the scale he constructed had an odd-even reliability of .89 and an average item-total correlation of .63. The 41-item scale constructed by Martin and Nichols (1962) has a reported Kuder-Richardson reliability of .95, but no information is included on its construct or empirical validity. The 10-item scale

developed by Keedy (1958) had a split-half reliability (corrected for double length) of .83. However, a Guttman Scalogram analysis revealed that the measure was not unidimensional. Neither Putney and Middleton (1961) or Photiadis and Bigger (1962) even report the psychometric properties of the six-item measure they employed. Another measure of Christian orthodoxy, the Theological Orientation Index, was published by Webster and Stewart in 1973 and found to be unidimensional. It was designed for a study of clergymen however, and the sentiments expressed in the items may require more theological sophistication than can be assumed for a lay population.

Several other scales purporting to measure religious orthodoxy have been presented in different contexts and should be mentioned here. Brown and Lowe (1951) constructed a 15-item inventory of religious beliefs, but reported no evidence for either its reliability or validity. Stark and Glock (1968) developed a four-item Christian Orthodoxy Index which has been widely used. However, no reliability estimates have been reported for the scale. Further, although data have been presented in support of the validity of their measure among laymen (Stark & Glock, 1968) and protestant clergy (Stark & Foster, 1970), no statistical indices have been reported.

On the basis of the psychometric indices reported several of the scales mentioned above seem quite good (e.g. those presented by Gregory (1957) and Martin and Nichols (1962)). However, after a careful review of these scales, as well as the others, it was felt that all these previous scales had problems which made them inappropriate for our use.

Some of these problems were unidirectionally worded items and items which were irrelevant or too sophisticated for high school students. As well the validity of some items as measures of Christian beliefs was questioned.

The reader will recall that the purpose of this research project was to investigate stability and change in the (Christian) religious beliefs and right-wing authoritarianism of middle and late adolescents. After reviewing the literature the R.W.A. Scale developed by Altemeyer (1979) was adopted as our measure of right-wing authoritarianism. However, our literature review did not reveal a measure of religious beliefs suitable for our population. Thus, in order to proceed with the investigation of our research questions the first thing that had to be done was develop a good measure of Christian religious beliefs.

CHAPTER II

THE CONCEPTUALIZATION AND MEASUREMENT OF CHRISTIAN ORTHODOXY

By orthodox Christianity is meant the extent to which a person accepts the well-defined, central tenets of the Christian religion. In large measure these tenets are contained in the officially adopted credos of the various denominations (e.g. The Apostles and Nicene Creeds). Whatever other differences the various Christian denominations might have the credos comprise a rockbed of doctrinal beliefs on which there is virtually unanimous agreement by Catholics and Protestants alike. (Indeed, it was this rockbed or bulwark function that the Nicene Creed was originally designed to serve (Hordern, 1955, Ch. 11.))

Scale Development

We began by considering the beliefs expressed in the Apostles' and Nicene Creeds, which seemed to fall into ten categories. The category names are listed below:

- 1) Belief in the existence of God.
- 2) Belief in the Trinity of the Father, Son, and Holy Ghost.
- 3) Belief that God created all things.
- 4) Belief that Jesus of Nazareth was Divine.
- 5) Belief in the virgin birth of Jesus.
- 6) Belief that Jesus' mission was to save mankind.

- 7) Belief that Jesus died but came back to life.
- 8) Belief that Jesus has left the earth but shall return.
- 9) Belief that God will judge men after their deaths.
- 10) Belief that there is a life after death.

A straightforward attempt was then made to write attitude items which could be used to assess the extent to which subjects accepted these beliefs. In addition, three other beliefs were identified which seem to be universally endorsed by orthodox Christian groups even though they are not mentioned in the Creeds.

- 11) Belief in the Divine inspiration of the Bible.
- 12) Belief in miracles.
- 13) Belief in the efficacy of prayer.

Items were written to tap these beliefs as well.

It should be noted here that while we have identified thirteen specific beliefs in the Christian ideology (and indeed they seem to be the central defining beliefs of the ideology), this does not mean that Christian orthodoxy is conceived to be multidimensional. To the contrary, it is the official position of the Christian religions that the beliefs are not independent, but rather are so many elements, each necessary to the definition of Christian orthodoxy. Refutation of any of these points has, in fact, been termed heresy until recent times.

Some of the items which were developed to tap these beliefs originated in earlier scales, but most of them were developed by the writer and his advisor, Dr. R. A. Altemeyer. Experimental items concerning additional aspects of Christianity were also composed. Eventually a pool of approximately 150 items was developed. These were then reviewed to eliminate duplication, represent the different beliefs about equally, and create about a 3:2 mix of con-trait/pro-trait items (Previous experience had indicated it is harder to find suitable con-trait items for a scale). Finally, an item pool of 68 propositional statements was agreed upon.

Item Selection: High School Subjects

The 68 test items were then administered to a sample of high school students in Winnipeg. The particular school used is located in the St. Boniface district and had approximately 330 students nearly equally divided among grades 10, 11, and 12. This particular school was used in the item selection study because discussions with the school administrators indicated it had approximately equal numbers of Protestant and Catholic students. Furthermore, the school draws its students from somewhat heterogeneous neighborhoods (although the school is located in Windsor Park, a middle-class, suburban area, the school also serves a low-rental housing development).

Procedure

The school day at this particular high school was divided into four 80-minute class periods sandwiched around a midday lunch break.

Logistically, it was most convenient for the principal to "freeze" each grade level independently, so the subjects were tested one grade at a time, with Grade 10 and then Grade 11 being surveyed before lunch and the seniors immediately afterwards. Three experienced testers (two male and one female) each administered the questionnaire to approximately 1/3 of the students.

Instructions. Once the students, who had been told that a research team from the University of Manitoba was visiting the school that day, had assembled in the designated classroom, the tester read the following instructions:

My name is _____, and I am a member of a research team at the University of Manitoba, that is doing a survey of social attitudes among high school students here in the Province. The school system has given us permission to administer our survey here today, and that is what we are going to be doing for the next period. The survey deals mainly with religious attitudes, and you will probably find it interesting to give your opinions on this matter. Let me just say however before I pass the booklets out that you do not have to participate in this survey if you do not want to, but that if you do you will give your opinions anonymously. I am now going to pass out the booklets you will be completing during this period, and I'd like you to leave them face down on the table before you until I've had a chance to give you some preliminary instructions about our procedures here today.

(The tester then passed out the survey booklets and continued:)

As I said before no one is required to serve in this survey. The responses of persons who do participate, however, will be kept anonymous. That is, parents, teachers, and school administrators will not be informed of any individual's answers. You should not put your name anywhere on this survey. ----- OK. Would you please turn over your booklets now.

(When the noise had subsided the tester continued:)

This survey is part of an investigation of general public opinion concerning a variety of religious issues. You will probably find that you agree with some of the statements, and disagree with others, to varying extents. Please mark your opinion on the line to the left of each statement, according to the amount of your agreement or disagreement, by using the following scale:

- Write down a -3 in the space provided if you strongly disagree with the statement.
- 2 in the space provided if you moderately disagree with the statement.
- 1 in the space provided if you slightly disagree with the statement.

- Write down a +1 in the space provided if you slightly agree with the statement.
- +2 in the space provided if you moderately agree with the statement.
- +3 in the space provided if you strongly agree with the statement.

If you feel exactly and precisely neutral about an item, write down a "0" in the space provided.

OK. Just one last thing before you begin. You will notice that your booklet has a survey number written on it in red ink in the upper right hand corner. I'm going to pass a sheet of paper around the room on which I'd like you to print this number and some other number, like your telephone number, or your license plate number, which will not mean anything to us but which you will recognize as identifying your survey booklet. The reason we would like this is that sometimes we have trouble understanding what a person meant by his response to a statement. With this sheet we could come back and you could tell us what you meant if your survey booklet was one we had difficulty with. Please do not put your name on the sheet however, as the survey is meant to be taken anonymously. Finally, you do not have to answer any item on the survey if you do not wish to. Simply leave such items unanswered. Are there any questions?

(When all questions had been answered the tester continued:)

When you have finished the questionnaire, please turn it over on your desk; you might spend the rest of the period working on your studies.⁵

⁵ Actually the students were allowed to leave the room in the first testing session once they had finished and this instruction was modified accordingly thereafter.

Please begin.

(When everyone was working, the tester circulated the "attendance sheet".)

The survey booklet distributed to the subjects contained 68 Christian orthodoxy items, the 26-item R.W.A. scale and an eight item "Demographic Survey." (See Appendix A for a copy of the survey booklet.)

The procedures for the Grade 12 Students significantly differed in one respect from the above. It was hoped that most of the students would use their telephone numbers as their "code numbers" on the "attendance sheets", but many in Grades 10 and 11 used some other symbol instead (telephone numbers would facilitate later phases of the main research project). Accordingly, the relevant instructions for the Grade 12 students were changed as follows:

I'm going to pass a sheet of paper around the room on which I'd like you to print this number and your phone number. The reason we would like this is that sometimes we have trouble understanding what a person meant by his response to a statement. With this sheet we could phone you and you could tell us what you meant if your survey booklet was one we had difficulty with.

Survey booklets. The 68 test items for the C.O. Scale were administered to the subjects in two formats, which counterbalanced the order of distribution of the items. The 26 R.W.A. Scale items which began at statement number 69, were not indicated as being a new or different part of the test; the first two items on the test, in fact, have religious connotations, as do two others later on.

Analysis of the Responses

Rejection of certain subjects. Altogether 248 students appeared at the testing sessions, consisting of 93 Grade 10, 85 Grade 11, and 70 Grade 12 students. The decrease in the number of Grade 12 students who made an appearance at the testing session is probably due to "subject pool pollution" over the noon lunch break. The Grade 12 students probably were informed by underclassmen about the questionnaire and some of them may have decided to take a longer lunch break. In fact, the general decrease over the three grade levels may be a result of increasing awareness of the questionnaire and thus an early exercise of their option not to participate on the part of some subjects. A few subjects at each grade level (8, 1, and 2, respectively) openly exercised their option not to participate in the survey. Thus 237 students were given the survey booklets.

It was not altogether unanticipated that some of the high school students might answer the survey sloppily or mischievously and surveys were marked whose respondents (a) finished them very quickly (less than 15 minutes), or (b) were talking to their neighbors during the testing session.⁶ These "red flags" were then used in deciding if a subject's responses should be retained for analysis or dropped.

⁶In general the "experimental climate" among the subjects during the testing session was noticeably poorer than that usually found among university students. It was not uncommon to have one or two small groups of subjects in each room who continued to "compare notes" despite one (or two) requests from the experimenter for cooperation. By comparison, it is very unusual to have any university students even speak to one another while filling out surveys. It did seem that the problem was greatest with Grade 10 subjects, least with Grade 12.

A second consideration in this regard involved the number of items which the subject answered with "no opinion" or did not answer at all (which for scoring purposes had the same effect). A large number of such responses would create a greater degree of apparent internal consistency among the items than was probably truly the case. On the other hand, agnostic subjects who responded with "no opinion" could in fact be giving us their opinion, so it was necessary to note the religious affiliation of subjects who gave many "0"s in their responses. To separate such genuine agnostics from others with no religious affiliation who might have been sloppy or mischievous in completing the survey, a "consistency analysis" was performed on their responses to those questions which involved belief in Jesus' divinity and belief in God. Subjects in this category who gave markedly inconsistent responses to these questions were dropped.

The operationalization of these considerations is detailed in Table 1. Application of the criteria listed in Table 1 caused 42 subjects to be dropped from the sample before the items were analyzed (13, 12, and 17 from Grades 10, 11, and 12, respectively). Students from non-Christian backgrounds would also have been dropped from the analysis, however, in this sample none of the remaining subjects were from non-Christian homes.

The large majority of these "drops" resulted from too many unanswered questions. The net effect of this pre-selection then was probably to lower the level of internal consistency within the item pool from what it would otherwise appear to be.

TABLE 1

Rules for Dropping Subjects

1. If a subject responds "neutral" to or does not answer 25 or more questions (out of the 68 Christian orthodoxy items) discard the data unless the subject is classified as agnostic (i.e., states he had no home religious background or that he does not presently identify himself with any religion and that he does not agree at all with the beliefs taught at home). If subject is classified agnostic, apply consistency analysis.
2. If subject has 15-25 zeros or blanks with an appreciable amount of contradiction on "Jesus" and "God" questions, discard.
("Appreciable" equals three or more contradictions if over 20 zeros/blanks, and four or more contradictions if 15-19 zeros/blanks).
3. If subject was notable during the testing session by a fast exit or "goofing" around and has the minimal level of contradictions (three) on "Jesus" and "God" items, discard.
4. If subject "indicates" on Demographic Survey or elsewhere that he was "screwing around", discard.

Item selection procedures. The responses to the 68 Christian orthodoxy items from the 195 remaining high school students (72, 72, and 51 in the respective grades) were rescaled so that scores ranged between one and seven for each item. The keying of all negatively worded items was reversed so that for all items a low score indicated an unorthodox and high scores indicated an orthodox belief. Then, total scores over the 68 items were computed for each subject and the item-item and item-whole correlations were computed. The level of intercorrelations among the items was in general quite high; item-whole correlations $\geq .70$ were quite common.

As Anastasi (1960) has pointed out it is usually unwise to compose a Likert-type scale from an item analysis merely on the basis of item-whole and item-item correlations. Overrepresentation of certain areas in the total pool will usually place too many of these items on the resulting scale. Also the direction of wording of the items selected must be balanced. However, there were many items with very good psychometric properties in the item pool in this case, and therefore, they were selected so that the 13 fundamental beliefs of Orthodox Christianity, listed earlier, would all be represented equally on the scale, and that an equal number of pro- and con-trait items would result. The 26 items which best met these criteria are listed in Table 2.⁷

⁷It might be noted that none of the experimental items, included in the item pool, which did not specifically refer to one of these 13 beliefs had a relatively high item-whole correlation.

TABLE 2

The 26-Item Mock Christian Orthodoxy Scale

<u>Item No.</u>	<u>Item</u>
1.	Jesus Christ was the divine Son of God.
2.*	The story that God stopped the sun in the sky in answer to Joshua's prayer is not to be taken seriously.
3.	Jesus was born of a virgin.
4.	God exists as: Father, Son, and Holy Spirit.
5.*	It is ridiculous to believe that Jesus Christ could be both human and divine.
6.*	Man is <u>not</u> a special creature made in the image of God; he is simply a recent development in the process of animal evolution.
7.	The record of the Gospels proves beyond a doubt that Jesus was the Son of God.
8.*	Most of the religions in the world have miracle stories in their traditions; but there is no reason to believe any of them are true, including those found in the bible.
9.*	Those who feel that God answers prayers are just deceiving themselves.
10.	God made man of dust in his own image and breathed life into him.
11.*	Jesus Christ may have been a great ethical teacher, as other men have been in history. But he was not the Divine Son of God.

TABLE 2 (CONTINUED)

<u>Item No.</u>	<u>Item</u>
12.	Jesus walked upon the water while his disciples waited for Him in their boat.
13.*	The concept of God is an old superstition that is no longer needed to explain things in the modern era.
14.	There will be a day of judgment when God will take the saved with Him into Heaven and cast the damned into everlasting Hell.
15.	Jesus was crucified, died and was buried but on the third day He arose from the dead.
16.*	The Bible may be an important book of moral teachings, but it was no more inspired by God than were many other such books in the history of Man.
17.	True prayer is always answered by God, in the way that is best for the person.
18.*	Jesus' death on the cross, if it actually occurred, did nothing in and of itself to save Mankind.
19.*	There is really no reason to hold to the idea that Jesus was born of a virgin. Jesus' life showed better than anything else that he was exceptional, so why rely on old myths that don't make sense.
20.	Jesus miraculously changed real water into real wine.

TABLE 2 (CONTINUED)

<u>Item No.</u>	<u>Item</u>
21.	The Resurrection proves beyond a doubt that Jesus was the Christ or Messiah of God.
22.*	Despite what many people believe, there is no such thing as a God who is aware of Man's actions.
23.*	If there ever was such a person as Jesus of Nazareth, he is dead now and will never walk the earth again.
24.	There is a God who is concerned with everyone's actions.
25.*	In all likelihood there is no such thing as a God-given immortal soul in Man which lives on after death.
26.	Christ will return to the earth someday.

*Indicates the item is worded in the antiorthodox direction.

Psychometric Properties of the 26-Item Mock Scale

The 26-item mock scale listed in Table 2 had a very high level of inter-item correlation among the 195 high school students; the mean correlation was in fact .55. Cronback's "alpha" coefficient of internal consistency for the entire scale was accordingly very high, .97. These values all indicate that the composite of test items was essentially unidimensional among these subjects, a fact verified by subsequent factor analysis. A "principle factor" solution was computed using the "BMDP4M" program included in Biomedical Computer Programs (Dixon, 1975). Squared multiple correlations between each item and the rest of the items in the test were used as communality estimates, which were iterated until the difference between two successive communality estimates did not differ by a criterion of .01. Any factor which could account for at least the amount of the total variance of a single variable was retained (that is, any factor with an eigenvalue greater than or equal to one). Only one factor was retained; it accounted for 52.5% of the total test variance and all the test items had loadings on this factor equal to or greater than .60. The squared multiple correlation of this single factor with the 26 items was .97.

These good psychometric properties of the 26-item scale were maintained in several important sub-sample breakdowns of the data. The Cronbach alpha coefficient for students from Protestant (N = 88) and Catholics (N = 82) religious backgrounds was .97 and .96, respectively. The same statistic for the Grade 10, 11, and 12 students was .96, .97, and .97, respectively.

Modification and Cross-Validation of the C.O. Scale
in a University Student Population

As pleasant as the psychometric properties of the C.O. Scale were among the high school students, the test required cross-validation. Furthermore, the 26 items selected for the mock scale were thought to be deficient in one respect. The belief categories "salvation" and "prayer" were not as adequately represented as they might be. So, in late September, 1975, the 26-item mock C.O. Scale along with eight new or revised items was administered to 346 introductory psychology students at the University of Manitoba. This questionnaire was included as part of a larger booklet in a study conducted by a member of the faculty and described to the subjects as "an investigation of general public opinions on a variety of social issues". The subjects, who served in groups of approximately 45-50, encountered the C.O. questionnaire after having completed several questionnaires (such as the R.W.A. Scale) having a similar format. The instructions for the C.O. Scale read, "This survey is part of an investigation of general public opinion concerning a variety of religious issues", and then presented the usual seven point agreement-disagreement response scale. (Appendix B contains the 34-item questionnaire and the accompanying instructions.)

Data Rejection Procedures

Although 346 students completed the C.O. Scale the responses of 51 subjects were discarded because they reported being reared in religious backgrounds which were non-Christian. The questionnaires of the remaining 295 subjects were examined in terms of the rejection criteria described earlier (except that 12 "no responses" replaced the criterion of 25 used

with the 68-item questionnaire, and the "criterion number" was reduced proportionally for all the rules given in Table 1.) Application of the criteria led to the dropping of 73 subjects, leaving a total sample size of 222. Ninety-one percent of these subjects were in their first year at the university.

Psychometric Properties of the Mock C.O. Scale

The mean inter-item correlation among the 26 items was .65 and the Chronback alpha coefficient for the scale, .98, was a little higher than that obtained among the high school students and practically the highest value attainable. A factor analysis of the responses identical to that used before again extracted only one factor, which accounted for 63.5% of the total scale variance. All the test items had loadings on this factor greater than .59 and the squared multiple correlation of this single factor with the 26 items was .98. Further subsample analysis revealed that the scale was about equally as good a measure among students from Protestant (N=120) and Catholic (N=81) religious backgrounds; Cronbach's alpha coefficient was .98 and .96, respectively. Thus, the data from the university students confirm that the 26-item mock C.O. Scale is essentially unidimensional.

A word of interpretation may be in order about the results of the cross-validation study. It is unusual, in a cross-validation study, for the internal consistency of a newly developed test to increase. Usually, one would expect some decrease in these values, as chance occurrences which increased the correlations among some of the items will fail to materialize at a second testing. The increases found here are probably

attributable to the change in populations. First year university students differ, of course, in many ways from "unselected" high school students. It is quite conceivable that the Christian ideology is a little better defined and conceived by university students.

Construction of the Initial Version of the Christian Orthodoxy Scale

The eight new test items included in the questionnaire with the mock scale provided several opportunities for improving the scale's content coverage. An internal consistency analysis of the 34 items' inter-correlations and item-whole correlations, following the same criteria mentioned earlier, produced a 24-item scale which seemed quite suitable for our purposes. This scale, labeled the initial version of the Christian Orthodoxy Scale in Table 3, is composed of 21 of the 26 items from the mock scale, plus three of the eight items tested among the university students. The mean inter-item correlation of these 24 items in this sample was .67, and the alpha coefficient of the test was again .98. Again, only one factor, controlling 66.5% of the total variance of the test's scores, emerged from a factor analysis. All of the items had loadings of .73 or higher on this factor. The squared multiple correlations of this factor with the 24 items was .98.

This 24-item C.O. Scale appears to be an adequate measure of our conceptualization of Christian Orthodoxy. In fact, other measures such as the R.W.A. Scale, which is a fine scale as attitude measurements go, pale by comparison. The success we enjoyed in constructing the C.O. Scale is probably due to the fact that the Christian ideology is one of the most thoroughly and widely taught ideologies in our culture.

TABLE 3

The 24-Item Initial Version of the Christian Orthodoxy Scale

<u>Item No.</u>	<u>Item</u>
1.	God exists as: Father, Son, and Holy Spirit.
2.*	Man is <u>not</u> a special creature made in the image of God, he is simply a recent development in the process of animal evolution.
3.	Jesus Christ was the divine Son of God.
4.	The Bible is the word of God given to guide man to grace and salvation.
5.*	Those who feel that God answers prayers are just deceiving themselves.
6.*	It is ridiculous to believe that Jesus Christ could be both human and divine.
7.	Jesus was born of a virgin.
8.*	The Bible may be an important book of moral teachings, but it was no more inspired by God than were many other such books in the history of Man.
9.*	The concept of God is an old superstition that is no longer needed to explain things in the modern era.
10.	Christ will return to the earth someday.
11.*	Most of the religions in the world have miracle stories in their traditions; but there is no reason to believe any of them are true; including those found in the Bible.
12.	God hears all of our prayers.
13.*	Jesus Christ may have been a great ethical teacher, as other men have been in history. But he was not the divine Son of God.

TABLE 3 (CONTINUED)

<u>Item No.</u>	<u>Item</u>
14.	God made man of dust in His own image and breathed life into him.
15.	Through the life, death, and resurrection of Jesus, God provided a way for the forgiveness of man's sins.
16.*	Despite what many people believe, there is no such thing as a God who is aware of Man's actions.
17.	Jesus was crucified, died, and was buried but on the third day He arose from the dead.
18.*	In all likelihood there is no such thing as a God-given immortal soul in Man which lives on after death.
19.*	If there ever was such a person as Jesus of Nazareth, he is dead now and will never walk the earth again.
20.	Jesus miraculously changed real water into real wine.
21.	There is a God who is concerned with everyone's actions.
22.*	Jesus' death on the cross, if it actually occurred, did nothing in and of itself to save Mankind.
23.*	There is really no reason to hold to the idea that Jesus was born of a virgin. Jesus' life showed better than anything else that he was exceptional, so why rely on old myths that don't make sense.
24.	The Resurrection proves beyond a doubt that Jesus was the Christ or Messiah of God.

*Indicates the item is worded in the antiorthodox direction.

The Relationship Between Christian Orthodoxy and Right-Wing Authoritarianism

Since the subjects in the two C.O. item analysis studies also completed the R.W.A. Scale it was possible to take a preliminary look at the degree of association between Christian Orthodoxy and Right-Wing Authoritarianism among both high school and first year university students. The correlation between these two measures⁸ in the entire high school sample (N=195) was .24. A subsample breakdown by grade level produced correlation coefficients of .30, .31, and .14 for grades 10 (N=72), 11 (N=72), and 12 (N=51), respectively. In the university students sample, the correlation between the 22-item R.W.A. Scale scores and scores on the 26-item mock C.O. Scale was .44 (N=206)⁹. The relationship between scores on the final 24-item C.O. Scale and the 22-item R.W.A. Scale was .43. It is interesting to note that this correlation is similar in magnitude to the correlation of the Religion factor with other Promax factors of the R.W.A. Scale. These correlations, reported in the literature review, ranged from .40 to .49.

⁸Christian Orthodoxy was measured by the 26-item mock scale. However, since the inclusion of the four R.W.A. Scale items with direct religious connotations would artificially inflate any estimate of the degree of association between Christian Orthodoxy and Right-Wing Authoritarianism; a R.W.A. Scale score was computed which did not include these four items.

⁹The decrease in sample size is due to the unavailability of R.W.A. Scale scores for some students.

CHAPTER III

THE PRESENT STUDY

As was stated earlier, the ultimate goal of the present study is to investigate stability and change in the religious beliefs and right-wing authoritarianism of middle and late adolescents. Specifically, three related issues were investigated: (1) changes in the level and organization of orthodox Christian beliefs; (2) changes in the level and organization of right-wing authoritarianism; and (3) the causal relationships that might exist between these changes. These issues were tested using cross-sectional and longitudinal data obtained from Grade 10, 11, and 12 students attending either rural or urban collegiates.

Issues of the Present Study

Issue 1a - Change Over Time in the Level of Christian Orthodoxy

As we have noted (Chapter I), previous research has quite consistently found a decrease in the strength of Christian religious beliefs over the high school and university years. These empirical findings mesh with the general proposition that as children go through adolescence they establish their own identities to a greater extent, separating themselves from their parents' beliefs and establishing their own. A notable exception to previous research and this general proposition is Hunsberger's (1973, 1978) findings. His research (conducted on Manitoba and Ontario university samples) indicated that the decrease in religious beliefs among his subjects had occurred prior to entering university, presumably during

late adolescence. In light of these previous findings, it was predicted that both cross-sectional and longitudinal data would reveal a decrease in mean orthodoxy scores (as ascertained by C.O. Scale scores) over grade levels.

Issue 1b - Change Over Time in the Organization of Christian Orthodoxy

As noted in Chapter II, the tenets of the Christian religion are among the most thoroughly taught beliefs in our society. Since these tenets are learned early (in the home, Sunday schools, etc.), it is expected that these beliefs will be well organized (either pro or con) by middle-late adolescence. Thus, it was predicted that both cross-sectional and longitudinal data would reveal the internal consistency of the C.O. Scale to be high and relatively constant over grade levels.

Issue 2a - Change Over Time in the Level of Right-Wing Authoritarianism

It has generally been expected (and found) that scores on measures of authoritarianism are negatively related to levels of education (Christie & Cook, 1956; Pettigrew, 1958; Altemeyer, 1979). The usual explanation has been that better educated persons are less likely to have the "simplistic" viewpoints of the right-wing authoritarian. Thus, it was predicted that the mean authoritarianism scores (as measured by the R.W.A. Scale) would show decreases across grades in the longitudinal and cross-sectional data.

Issue 2b - Change Over Time in the Organization of Right-Wing Authoritarianism

One expectation was that the organization of authoritarian attitudes would improve as years of education increase. This may be

due simply to an increase in the verbal comprehension skills involved in answering the R.W.A. Scale, or it might occur because increasing education (formal and informal, especially in the "social studies" area) promotes greater organization of one's social attitudes. In contrast to Christian orthodoxy, which many collegiate students learned at an early age, it has been suggested that children in our society are seldom indoctrinated in the attitudes which form the right-wing authoritarian syndrome. Thus, while a 15-year old child may have opinions about capital punishment, the place of dissent in society, homosexuality, etc., these opinions may show less psychological organization than they will later after discussing these issues with teachers, parents, peers, and so on. Therefore, it was predicted that both cross-sectional and longitudinal data would reveal that the organization of R.W.A. Scale responses would increase as the child grows older and, consciously or inadvertently, his "world view" takes better shape.

Issue 3 - Causal Relationships Between Christian Orthodoxy and Right-Wing Authoritarianism

Previous research (cited in Chapter I) as well as the pilot data detailed in Chapter II suggest that a moderately strong relationship exists between Christian orthodoxy and right-wing authoritarianism. One can imagine various ways in which the two constructs might covary. Most obvious perhaps is the hypothesis that religious orthodoxy and right-wing authoritarianism generally exist at a relatively high and stable level during the early years of adolescence. During the middle-to-late years of adolescence,



however, some persons respond to the influence of the educational system, a wider set of contacts in the world, "liberalizing" ideas in movies and songs, conflict over their behavior with their parents, or some other factors and begin to become less orthodox and/or less authoritarian.

- 1) Both may drop simultaneously; this would be a case of a correlation between two variables being caused by the simultaneous influence of a third factor.
- 2) One of the variables may change first, and thereby cause a change in the other. It is certainly conceivable that youth, once less authoritarian, might then begin to question the religious beliefs of the parents; similarly, youth once less orthodox, might begin to doubt authority figures in other areas whose wisdom had previously been taken for granted.
 - a) It may be that some youth become less religious first, others less authoritarian first, and the incidence of one is about the same as the other in our society. If this is the case, then neither change could be said to have overall causal priority.
 - b) On the other hand, it is conceivable that while either change may occur first, one in fact tends to move ahead of the other in our society. It may be that religious orthodoxy usually begins to drop first, with consequent effects upon authoritarianism. Or the trend may be the other way around.

The third goal of this research was to determine which of these causal sequences offers the best explanation of the observed covariation.

No hypothesis was warranted due to the exploratory nature of the issue and this research question was most appropriately viewed in terms of parameter estimation rather than hypothesis testing.

Method

Subjects

Subjects were drawn from Grades 10, 11, and 12 at Midland Collegiate in Carman, Manitoba (rural sample) and Miles Macdonnell Collegiate in Winnipeg, Manitoba (urban sample). At the first testing session usable questionnaires were obtained from 593 out of 634 urban students who completed the survey, and 154 out of 162 rural students; these surveys provided data for cross-sectional analyses. Of the 593 urban students, 325 (55%) were successfully involved in the second wave testing program, while the figure for the rural sample was 117/154 (76%).¹⁰ These matched surveys provided data for longitudinal analyses. The sample is broken down by location, grade, and sex for both types of analyses in Table 4.

Rural sample. Carman, Manitoba, is a small rural community with a population of approximately 2,050 located 60 miles southwest of Winnipeg's centre. The community is the commercial and educational center for a prosperous mixed farming region. Midland Collegiate, located in Carman, is a Grade 7 to 12 regional institution with a total enrollment of approximately 650 students. Roughly 25% of these students are residents of Carman while the other 75% are bused in from farms and four small hamlets within a 25-mile radius of Carman. At the time this research was conducted there were

¹⁰The reasons for data loss at the various stages of this research project are detailed in a later section.

TABLE 4

Sample Sizes, by Location, Grade, and Sex of Subject
for Cross-Sectional and Longitudinal Analyses

Group	Grade		
	10	11	12
<u>RURAL SAMPLE</u>			
Female			
Cross-Sectional	30	29	40
Longitudinal	24	24	29
Male			
Cross-Sectional	16	19	20
Longitudinal	12	11	17
<u>URBAN SAMPLE</u>			
Female			
Cross-Sectional	91	101	109
Longitudinal	53	50	64
Male			
Cross-Sectional	76	115	101
Longitudinal	49	57	52

approximately 325 students rather equally spread among Grades 10, 11 and 12. This particular rural school was employed in the present study because it contained an appropriate mix of students from farm and small rural community backgrounds.¹¹

Urban sample. Miles Macdonell Collegiate is located in the region of Winnipeg known as East Kildonan. During the period in which this research was conducted it had an enrollment of approximately 700 students nearly equally divided among Grades 10, 11, and 12. This particular urban school was employed in the present study because discussions with the school board administrators indicated that the percentage of students from various religious backgrounds was reasonably representative of the larger Winnipeg population and that its students were drawn from heterogeneous socioeconomic backgrounds.

Procedure

Rural sample-first data collection. The first testing session in Carman took place on November 25, 1975 during an 80-minute "activities period". The principal announced, over the intercom system, that all Grade 10, 11, and 12 students not involved in scheduled activities (i.e., hockey practice, drama club, etc.), were to meet in the auditorium. There the principal informed them that a research team from the University of Manitoba was visiting the school that day to administer a survey and he

¹¹ In at least one respect this school did not represent a typical rural Manitoba student population. While the district contained students from most of the major religious denominations it (like many other southern Manitoba communities) contained a relatively large number of Mennonite families.

asked their co-operation. The 128 students thus assembled were then randomly separated into four groups and taken to separate classrooms by four trained testers (two female and two male).

Once the students were reassembled each tester read the following instructions:

"My name is _____, and I am a member of a research team at the University of Manitoba, that is doing a survey of social attitudes among high school students here in the Province. The school system has given us permission to administer our survey here today, and that is what we are going to be doing for the next period. The survey deals mainly with religious attitudes, and you will probably find it interesting to give your opinions on this matter. Let me just say, however, before I pass the booklets out that you do not have to participate in this survey if you do not want to, but that if you do you will give your opinions anonymously. I am now going to pass out the booklets you will be completing during this period, and I'd like you to leave them face down on the table before you until I've had a chance to give you some preliminary instructions about our procedures here today.

(The tester then passed out booklets and continued:)

As I said before, no one is required to serve in this survey. The responses of persons who do participate, however, will be kept anonymous. That is, parents, teachers, and school administrators will not be informed of any individual's answers. You should not put your name anywhere on this survey. -- OK. Would you please turn over your booklets now.

(When the noise had subsided the tester said:)

This survey is part of an investigation of general public opinion concerning a variety of religious issues. You will probably find that you agree with some of the statements, and disagree with others, to varying extents. Please mark your opinion on the line to the left of each statement, according to the amount of your agreement or disagreement, by using the following scale:

- Write down a -3 in the space provided if you strongly disagree with the statement.
- 2 in the space provided if you moderately disagree with the statement.
- 1 in the space provided if you slightly disagree with the statement.

- Write down a +1 in the space provided if you slightly agree with the statement.
- +2 in the space provided if you moderately agree with the statement.
- +3 in the space provided if you strongly agree with the statement.

If you feel exactly and precisely neutral about an item, write down a "0" in the space provided.

When you have completed the first section of the questionnaire you will notice that some of the items you have answered are repeated again. We would like you to answer these items as you think your mother and your father would like you to answer them."

OK. Just one last thing before you begin. You will notice that your booklet has a survey number written on it in red ink in the upper right hand corner. I'm going to pass a sheet of paper around the room on which I'd like you to print this number and your phone number. The reason we would like this is that sometimes we have trouble understanding what a person meant by his response to a statement. With this sheet we could phone you and you could tell us what you meant if your survey booklet was one we had difficulty with. Please do not put your name on the sheet, however, as the survey is meant to be taken anonymously. Finally, you do not have to answer any item on the survey if you do not wish to. Simply leave such items unanswered. Are there any questions?

(When all the questions had been answered the tester said:)

When you have finished the questionnaire, please bring it to me and then you are free to leave. Please begin.

(When everyone was working, the tester circulated the "attendance sheet":)

(If subjects began to talk or compare answers, the tester said:)

May I say that this is meant to be a survey of your own individual opinions. If we were doing a study of group opinions, we'd ask you to talk things over and give us a group answer. But that really isn't the purpose of this study. Instead, I'd like you to answer each item on your own, giving your own personal opinion. If you have any questions about what an item, or a word means, ask me please.

The Subjects then completed the survey booklets which contained the scales in the following order:

- (1) C.O. - self
- (2) R.W.A. - self
- (3) C.O. - Mother's and Father's Wishes

These scales were then followed by a "background sheet" soliciting information on:

(a) Age. (b) Sex. (c) Grade level. (d) Residential background. (e) Home religion. (f) Parental emphasis on religion. (g) Acceptance of beliefs and teachings of the home religion. (h) Present religious affiliation. (i) Frequency of attendance at formal religious services. (j) Frequency of prayer. (k) Frequency of scriptural or devotional reading. (See Appendix C for a copy of the survey booklet).

It should be noted that no mention was made at this first testing session of the longitudinal nature of the study.

An attempt was made five days later to involve other Carman students in the study who had missed the first testing session because of a scheduled activity. The principal requested via the intercom that students who had not completed the survey earlier volunteer to do so during their lunch break. Thirty-four students reported to the school auditorium where they received identical instructions from a male tester and completed the same materials used before.

Rural sample-second data collection (a) Grade 12 students. The second wave testing session for the rural Grade 12 subjects occurred approximately six months later on June 2, 1976. Again, just prior to an "activities period" the principal announced that all Grade 12 students not involved in regularly scheduled activities should report

to the auditorium. There again the principal solicited their co-operation in completing a survey being conducted by a research team from the University of Manitoba. A male tester then read the following instructions:

My name is _____, and I am a member of a research team at the University of Manitoba, that is doing a survey of social attitudes among high school students here in the Province. You may recall that we were here last fall and administered a survey of opinions on religious and other matters to the students at this school. We are here again and are going to ask you to give your opinions on these matters once again. The purpose of our study is to see the extent to which these opinions stay the same, or change, over time. Nearly everyone enrolled in this school completed this survey when we were here before. I shall come around during this period and help you remember if you did or did not. I am now going to pass out the booklets you will be completing during this period, and I'd like you to leave them face down on the table before you until I tell you to turn them over.

(The tester then passed out booklets and continued:)

OK. Would you please turn over your booklets now.

(When the noise had subsided the tester said:)

This survey is part of an investigation of general public opinion concerning a variety of religious and social issues. You will probably find that you agree with some of the statements, and disagree with others, to varying extents. Please mark your opinion on the line to the left of each statement, according to the amount of your agreement or disagreement, by using the following scale:

Write down a -3 in the space provided if you strongly disagree with the statement. Write down a -2 if you moderately disagree with the statement. And write down a -1 if you slightly disagree with the statement. If, on the other hand, you feel you slightly agree with the statement, then write down a +1 in the space provided. And +2 means that you moderately agree with the statement, and +3 means you strongly agree with the statement.

If you feel exactly and precisely neutral about an item, write down a "0" in the space provided. Are there any questions?

(When all questions had been answered, the tester said:)

When you have finished the questionnaire please bring it to me and then you are free to leave. Please begin.

(When everyone was working, the tester circulated the "attendance sheet":)

(If subjects began to talk or compare answers, the tester said:)

May I say that this is meant to be a survey of your own individual opinions. If we were doing a study of group opinions, we'd ask you to talk things over and give us a group response. But that really isn't the purpose of this study. Instead, I'd like you to answer each item on your own, giving your own personal opinion. If you have any questions about what an item, or a word, means, ask me please.

The "Wave II" survey booklets were identical to those used earlier, except three questions were added to the "background sheet" which solicited information on: (a) Peer influence on the acceptance of the family religion. (b) Factors which influenced loss of acceptance of family religious beliefs. (c) Changes which had occurred in the subjects' life over the past year. (See Appendix D for a copy of the "Wave II" survey booklet.)

While the students were completing this material the test administrators (one male, one female) approached each student with a booklet containing the phone numbers (arranged in ascending numerical order) which subjects had written down beside their survey numbers at the first testing session. Students were asked to find their telephone number and then write their previous survey number on the front page of their questionnaire. (Students who had not served in the earlier study continued to answer the survey questions.)

Altogether 55 Grade 12 students completed booklets on June 2, 1976. An additional ten Grade 12 females were tested the next day. (These girls had been away writing provincial civil service examinations on June 2.)

(b) Grade 10 and 11 students. The second wave testing session for the Grade 10 and 11 Carman students took place during the "activities period" on October 12, 1976, (by this time the students were in Grades 11 and 12, respectively). Again students not involved in regularly scheduled activities were requested to go to the auditorium. There the principal told them of the survey and requested their co-operation. A male and a female tester using the same material and procedures previously described collected Wave II data from 113 students.

Finally, a "supplementary" testing session was also held for members of these classes who missed the October 12 survey. During the morning periods of October 19, a list of telephone numbers belonging to the subjects missing from the Wave II data was circulated to the relevant grades. Teachers in each class asked students to note if their telephone number was listed. At the beginning of the afternoon classes the principal asked the students thus identified to leave their regularly scheduled classes and report to the auditorium. Twenty-four students responded to this request and completed the Wave II questionnaires under the instructions and procedures previously described.

Urban sample-first data collection. The first testing session at Miles Macdonell Collegiate took place on December 2, 1975 during a

regularly scheduled 50-minute class period. Through an arrangement made with the school administrators all 26 regularly scheduled Grade 10, 11, and 12 classes were tested simultaneously during this period. Teachers met their classes as usual, took attendance and then announced that the remainder of the period would be given over to a research team from the University of Manitoba who were visiting the school that day to administer a survey. Teachers then left the classrooms and the (14 male and 11 female) testers entered and administered the "Wave I" survey booklet (see Appendix C) under the same instructions used for the rural time-one testing sessions.¹² As was true for the rural sample the urban students were given no indications at this first testing session of the longitudinal nature of the study.

Urban sample-second data collection (a) Grade 12 students. The second-wave testing session for the urban Grade 12 students occurred approximately six months later on May 27, 1976. All nine regularly scheduled Grade 12 classes were tested during a single 50 minute period. Again, the regular teachers met their classes, took attendance, and then informed the students that for the remainder of the period they would be completing a survey being conducted by a research team from the University of Manitoba. As the teachers withdrew from their classrooms the testers (five female and four male) entered and administered the "Wave II" survey (see Appendix D) using the same instructions and procedures previously described for rural time-two data collection.

¹² At Miles Macdonell the students were kept in the class room following completion of the survey and the relevant instruction was modified to reflect this change in procedure.

(b) Grade 10 and 11 students. The second wave testing session for the Grade 10 and 11 Miles Macdonell students took place during a single 50 minute class period on October 15, 1976. (On this testing occasion these students were in Grade 11 and 12, respectively.) As described before teachers met their regularly scheduled classes and informed them of the survey. Then, fifteen testers (8 female and 7 male) using the same materials and procedures previously described for the Grade 12 urban students, collected the "Wave II" data.

Description of Testers and Testing Sessions

The procedure section outlines the sequence of events which took place at each testing session. However, some details of a more qualitative nature about the testing conditions are pertinent to the evaluation of this (or any) survey study.

Testers. The testing sessions for the rural students were all conducted by experienced testers. These testers were familiar with the need for standardization and control in the testing situation, having taken experimental methodology courses as well as having had previous research experience. The testers employed at the urban school were in the main less experienced. These testers were all students selected from undergraduate psychology classes and most of them had never taken an experimental methodology course or had any research experience. To offset this lack of experience these testers were given two training sessions. Several days before each testing occasion the testers were familiarized with their task and the materials they would be presenting to the students. The need for standardization in the presentation of

the instructions and for a controlled testing environment were stressed. Hypothetical disruptive situations were presented and two experienced testers suggested ways to handle them. Testers were also coached on their personal demeanor with a view to minimizing any disruptive influence they might have on the testing session.

The second training session was held during the half hour prior to the testing session. At this time the procedures to be employed were reiterated and the points stressed at the first training session were reviewed. Testers were encouraged to ask questions which had occurred to them since the first training session.

As an additional step to assure well collected data several experienced testers were employed as tester supervisors at each of the urban testing occasions. Each supervisor monitored the testing sessions being conducted by 6 or 7 testers and provided them with assistance if needed.

Testing sessions. The behavior of the students on all the rural testing occasions was exemplary. Students reported to the testing location in an orderly manner, listened attentively to the test instructions, and completed the survey with almost no discussion among themselves. The atmosphere seemed ideal for the collection of survey data. The testing atmosphere at the urban high school was less idyllic. It was not uncommon for a few students in each room to talk to one another during the survey and there were instances of students "acting up" (loud talking, "entertaining" the class) in several of the 50 urban class-testing situations. It also must be reported that the urban Grade 12

Time-2 data were inadvertently collected on the same day student council elections were being held in the school. There was a noticeable "carnival" atmosphere in the school that morning, though it may have had less of an effect on these graduating seniors than on the underclassmen who were electing officers.

All of the above comments notwithstanding, the testing situations at the urban school were certainly acceptable and suffer only by comparison to the rural data collecting sessions. The vast majority of the urban students seemed to work dilligently on their surveys. Most of the "whispering" that occurred took place at the end of the period (when the urban students had to stay in their classrooms), and would have affected students working on the last parts of their booklets. The data pertinent to this research project were collected at the beginning of the period.

Breakdown of Data Loss.

Potential data were unavailable, or were discarded, for several reasons at various stages of this research project. A few students formally declined to participate in the study: three rural and 17 urban students in the first wave, one additional rural and six urban students in the second wave. Secondly, data collected from some subjects were discarded in accordance with certain previously established criteria, as summarized in Tables 5 and 6. Subjects who reported being reared in non-Christian religions, for whom the analysis would be patently inappropriate were not included in the study. Other data were discarded because it was judged that subjects had answered the booklet sloppily or mischievously.

TABLE 5

Breakdown of Subject Loss in the Initial Sample
by Grade, Sex, and Location

	Location	Grade					
		10		11		12	
		M	F	M	F	M	F
Number of subjects who completed questionnaires	Rural	18	30	20	30	21	40
	Urban	80	94	120	104	104	115
Number of subjects rejected because of non-Christian religious background	Rural	0	0	0	0	0	0
	Urban	0	0	0	3	0	2
Number of subjects rejected due to application of "Rules for Dropping Subjects"	Rural	2	0	1	1	1	0
	Urban	4	3	5	0	3	4
Number of subjects whose questionnaires were retained for cross-sectional analysis	Rural	16	30	19	29	20	40
	Urban	76	91	115	101	101	109

TABLE 6
 Breakdown of Subject Loss in the Second Sample
 by Grade, Sex, and Location

	Location	Grade					
		10		11		12	
		M	F	M	F	M	F
Number of subjects who completed Time-2 questionnaires	Rural	26	40	33	37	27	38
	Urban	78	81	99	79	76	93
Number of subjects who claimed they had completed Time-1 questionnaires but were unmatchable	Rural	0	0	1	0	0	0
	Urban	12	15	16	12	10	12
Number of subjects who completed Time-2 survey but had not completed Time-1 survey	Rural	14	15	20	13	10	8
	Urban	14	10	24	17	12	13
Number of subjects whose Time-1 and Time-2 questionnaires were matched but Time-1 data had been rejected	Rural	0	0	1	0	0	0
	Urban	2	3	1	0	2	4
Number of subjects whose Time-1 and Time-2 questionnaires were matched but Time-2 data was rejected.	Rural	0	1	0	0	0	1
	Urban	1	0	1	0	0	0
Number of subjects on whom Time-1 and Time-2 data was available for longitudinal analysis	Rural	12	24	11	24	17	29
	Urban	49	53	57	50	52	64

*As noted in the text, the "Grade 10" and "Grade 11" students were actually in Grades 11 and 12 respectively by the second testing session. The "Grade 12" students were tested for the second time just prior to their graduation.

To this end, testers noted survey respondents who (a) finished them very quickly, or (b) were talking to their neighbors or "acting up" during the testing session. In addition, surveys with a large number (e.g., 9 out of the 24 C.O. items) of unanswered items were noted. Booklets noted in these ways were examined in terms of a "consistency analysis" of responses to questions involving belief in Jesus' divinity and belief in God. Subjects who gave markedly inconsistent responses to these questions were dropped. The specific rules used to make this decision are given in Table 7.¹³

Application of these criteria caused 29 subjects to be dropped from the Time-one sample, and four more at Time-two (see Tables 5 and 6). Finally, additional data loss occurred at Time-two because questionnaires were unmatchable (N=78), subjects had not completed the Time-one survey (N=170), or the subjects' Time-one data had been rejected (N=13) (see Table 6).

Data Preparation

The data obtained as described above were prepared for analysis in the following way. The responses to the Christian orthodoxy and the right-wing authoritarianism items were rescaled

¹³The reader's attention is drawn to several changes which have been made in the "Rules for Dropping Subjects" presented here as compared to those presented in Table 1 of Chapter II. These changes are found in items 1 and 2 and involve the deletion of the number of neutral responses as a criterion for dropping subjects or applying the consistency analysis to subjects' responses. Originally, this criteria was employed because of our concern over inflating the estimate of internal consistency. However, since this was less of a concern once the scale had been established and since a neutral response was one of the legitimate scale responses, the above criterion change was made.

TABLE 7

Rules for Dropping Subjects

1. If a subject does not answer 9 or more questions (out of the 24 Christian orthodoxy items) discard the data.
2. If a subject has 6-9 blanks with an appreciable amount of contradiction on the "Jesus" and "God" questions, discard. ("Appreciable" equals three or more contradictions if over 8 blanks, and four or more contradictions if 6-8 blanks.)
3. If subject was notable during the testing session by a fast exit or "goofing" around and has the minimal level of contradictions (three) on "Jesus" and "God" items, discard.
4. If subject "indicates" on Demographic Survey or elsewhere that he was "screwing around", discard.

so that scores ranged between one and seven for each item. The keying of all negatively-worded C.O. and R.W.A. Scale items was reversed so that for all items a low score indicated an unorthodox or anti-authoritarian belief and high scores indicated an orthodox or authoritarian belief. Then C.O. and R.W.A. Scale scores were computed for each subject by summing over the 24 C.O. items and 24 R.W.A. items,¹⁴ respectively.

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Altemeyer had developed an improved 28-item version of the R.W.A. Scale by the time the main study was conducted and this improved scale was employed. Again, the four R.W.A. Scale items with religious connotations were excluded from the R.W.A. Scale score computed here for the reasons outlined earlier (Chapter II). All R.W.A. analyses and statistics reported in the results section are based on this 24-item R.W.A. Scale.

CHAPTER IV

RESULTS

There were two preliminary issues to be dealt with before proceeding to the tests of the hypotheses. The first concerned the validity of the C.O. Scale, while the second involved the possibility of selection bias in the longitudinal data.

Additional Evidence on the Validity of the C.O. Scale

As the reader is aware, the C.O. Scale was developed for this particular study. It thus had no previous research history, and the only evidence for its validity was presented in Chapter II. The present experiment provided a further test of the measure's usefulness.

The mean inter-item correlation among the scale's 24 items in the initial testing ($N = 747$) was .57, with a Cronbach alpha coefficient of .97.¹⁵ A factor analysis of the test identical to that described in Chapter II again extracted only one factor, which accounted for 58.2% of the total scale variance. All the test items had loadings on this factor greater than .61 and the squared multiple correlation of this single factor with the 24 items was .97. All of these results are quite similar to the earlier findings with the scale.

Thus far there has been no evidence of the C.O. Scale's relationship with more overt indices of religious orientation. Three questions pertaining to the frequency of church attendance, prayer, and scriptural

¹⁵All correlations and Cronbach "alpha's" reported in this Chapter were first computed within each sub-group (sex, location, grade combination) and then pooled using the N weighted mean of Fisher's Z score transformations. Thus the total group \bar{x} was not confounded with differences in means between the sub-groups (Sockloff, 1975).

reading were included in the booklets, along with items seeking information on trust in the Bible and "the Church" (see Appendix C).

Table 8 presents the correlations, at the initial testing, between C.O. Scale scores and these five measures, as well as the relationship with the sum of the "frequency" items.¹⁶ All of these correlations are moderately high in the expected direction and of course significant ($p < .001$). More to the point, C.O. Scale scores can account for a large part of the variance of these indices. Belief in the fundamental principles of Christianity, as measured by the C.O. Scale, appears to be the major covariant of devotional behaviors. This is to be expected of course, but it strengthens the impression that the C.O. Scale is valid.

The Possibility of Selection Bias in the Longitudinal Data

Since both cross-sectional and longitudinal data were used to test the issues involved in this research, it was necessary to consider whether the students who supplied the longitudinal data were a representative sample of the cross-sectional subjects. To this end the C.O. and R.W.A. Scale scores of students whose time-one and time-two data were successfully matched (who thus provided the longitudinal data) were compared with those of students for whom only cross-sectional data were available. The means of these scores by location and sex of subject are presented in Table 9.

It can be seen that the means of the "longitudinal subjects" are slightly higher than those of the "cross-sectionals". In neither case, however, was this a difference that could not reasonably be attributed

¹⁶ These three items had a mean inter-item correlation of .59, and the resulting summed score an alpha reliability of .81.

TABLE 8
 Correlations (Validity Coefficients)
 Between C.O. Scale Scores
 and Measures of Religious Behavior and Trust

Item	Correlation Coefficient	Percentage Common Variance
Frequency of		
Religious Service Attendance	.62 (728)	38%
Prayer	.70 (717)	49%
Scriptural-Devotional Reading	.57 (720)	32%
Overall Religious Behavior Index	.75 (703)	56%
Extent of Trust in the Religious Guidance of		
The Bible	.77 (647)	59%
The Church	.68 (635)	46%

Note: The number in brackets indicates the number of subjects on which the correlation is based.

TABLE 9
 Mean Initial C.O. and R.W.A. Scale Scores for Students
 Included and Not Included in the Longitudinal Sample
 by Location and Sex of Subject

			Included	Not Included
C.O.	Rural	Male	118.5 (40)	111.5 (15)
		Female	139.6 (77)	129.5 (22)
	Urban	Male	102.5 (158)	109.2 (134)
		Female	127.5 (167)	120.7 (134)
	Overall		119.8 (442)	115.8 (305)
	R.W.A.	Rural	Male	109.0 (40)
Female			110.7 (77)	111.9 (22)
Urban		Male	102.0 (158)	103.3 (134)
		Female	99.93 (167)	97.5 (134)
Overall			103.4 (442)	101.4 (305)

Note: The number in brackets indicates the number of subject in that cell.

to chance, $F(1,723) = .89$ and $.05$ for C.O. and R.W.A. Scale scores respectively.¹⁷ It would seem then that the longitudinal data were obtained from a reasonably representative sample of the cross-sectional population.

Issue 1a - Change in Level of Christian Orthodoxy

The reader will recall that Issue 1a was concerned with changes in the level of Christian orthodoxy over time. The predicted decrease in mean orthodoxy scores over grade levels was tested both cross-sectionally and longitudinally.

Longitudinal Analyses

It will be recalled that many of the 1975 Grade 10 and 11 students were tested again 10 months later in 1976, but that the Grade 12

¹⁷ These statistics were obtained from a factorial multivariate ANOVA (MANOVA) in which C.O. and R.W.A. Scale scores of matched and unmatched students were crossed with all levels of location, sex of subject, and grade. This analysis not only revealed the nonsignificant main effect for the "match" factor but also revealed that it did not interact with the above factors.

In order to obtain orthogonal estimates of the effects in this and all subsequent factorial analyses with unequal subclass numbers, Overall and Spiegel's Method 1 least squares procedure was employed (Overall and Spiegel, 1969). This general linear model procedure was employed instead of Overall and Spiegel's Method 2 or 3 because; there was no reason to assume a lack of interaction between the factors in the model, and no a priori ordering of the importance of the effects to be tested, respectively. In the choice of Method 1 as the most appropriate least squares procedure for dealing with the nonorthogonality in our design we followed the suggestion of Carlson and Timm (1974).

The reader should be aware that Overall and Spiegel's general linear model procedure (Method 1) estimates each effect after partialling out all others in the design. When effects are correlated, as they are in a nonorthogonal design, this method leaves any variance in the dependent variable which is accountable but shared by these overlapping effects unclaimed by any effect. Hence Overall and Spiegel's Method 1 is a conservative analysis method in its control of Type I error rate.

students were tested only six months later, at the completion of their senior year. This difference in lag time required separate analysis of the longitudinal data.

For the Grade 10-11 and 11-12 students the influence of time was assessed while stratifying on location (rural, urban), sex of subject (male, female) and grade level at initial testing (10 and 11). The design was thus a 2 x 2 x 2 x 2 factorial with three between and one within factor. For the 1975 Grade 12 subjects the effects of time was assessed while stratifying on location and sex of subject. This design was thus a 2 x 2 x 2 factorial with two between and one within factors.¹⁸

(a) Grade 10 and 11 students. The results of the 2 x 2 x 2 x 2 ANOVA are summarized in Table 10, while the mean scores for each cell of this, and the Grade 12, design are given in Table 11.

Reference to Table 10 reveals that the only between subject effect which was statistically significant was the sex of subject main effect, $F(1,272) = 27.942$, $p = .0001$. Comparison of the means indicated

¹⁸Issues 1a and 2a are concerned with testing similar hypotheses for C.O. and R.W.A. scores respectively. Since C.O. and R.W.A. scores are correlated they were analyzed as a "package", via MANOVA procedures, to control Type I error rate. However, for ease of presentation, results for both the longitudinal and cross-sectional tests of Issue 1a and 2a are presented in univariate terms. The decision rule employed to control Type I error rate was that no univariate F value was judged significant unless the corresponding multivariate F value was significant.

In addition although repeated measures ANOVA terminology is used to describe the longitudinal analyses the analyses conducted employed a MANOVA procedure utilizing both raw and difference scores. The technique addresses the identical questions addressed by a repeated-measures ANOVA but with fewer restrictions (Finn, 1969; Gabriel and Hopkins, 1974; Poor, 1973).

TABLE 10
 Analysis of Variance:
 C.O. Scale Scores, Longitudinal Data,
 Grade 10 & 11 Subjects

Source	D.F.	M.S.	<u>F</u>	<u>p</u>
Between Subjects				
Grade (G)	1	3,939.589	.788	.375
Sex (S)	1	139,634.117	27.942	.0001
Location (L)	1	7,886.294	1.578	.210
G x S	1	1,621.581	.324	.570
G x L	1	1,088.152	.218	.641
S x L	1	1.868	.0004	.985
G x S x L	1	412.758	.083	.774
Within Cells Error (<u>Ss within groups</u>)	272	4,997.292		
Within Subjects				
Time (T)	1	26.765	.077	.782
G x T	1	7755.753	2.165	.142
S x T	1	26.352	.076	.784
L x T	1	833.783	2.388	.123
G x S x T	1	25.738	.074	.786
G x L x T	1	.419	.001	.972
S x L x T	1	1,346.690	3.857	.051
G x S x L x T	1	651.114	1.865	.173
T-x <u>Ss within</u> group	272	349.118		

TABLE 11

Mean C.O. Scale Scores by Grade, Location, Sex of Subject, and
Testing Occasion for the Grade 10 & 11,
and the Grade 12 Longitudinal Analysis

			Test Occasion 1		Test Occasion 2
Grade 10	Rural	Female	134.500	(24)	134.208
		Male	105.333	(12)	106.667
	Urban	Female	133.358	(53)	130.415
		Male	102.674	(49)	98.122
Grade 11	Rural	Female	140.250	(24)	139.417
		Male	109.546	(11)	119.182
	Urban	Female	127.620	(50)	131.700
		Male	108.649	(57)	105.211
Grade 12	Rural	Female	143.172	(29)	143.552
		Male	133.588	(17)	131.824
	Urban	Female	122.438	(64)	120.062
		Male	95.654	(52)	99.654

Note: The number in brackets indicates the number of subjects in that cell.

that female subjects ($\bar{X} = 132.8$) had significantly higher C.O. Scale scores than male subjects ($\bar{X} = 105.0$).

Further, none of the within subjects effects were statistically significant including the hypothesized main effect for Time, $F(1,272) = .077$, indicating that C.O. Scale scores did not significantly decrease from Test Occasion 1 ($\bar{X} = 120.5$) to Test Occasion 2 ($\bar{X} = 119.5$) as predicted.¹⁹

(b) Grade 12 students. The ANOVA summary table for the Grade 12 students longitudinal analysis is given in Table 12. Reference to this table reveals that the sex of subject factor was statistically significant, $F(1,158) = 8.397$, $p = .004$, indicating that female subjects ($\bar{X} = 128.15$) had significantly higher C.O. Scale scores than male subjects ($\bar{X} = 106.3$).

The main effect of location was also statistically significant, $F(1,158) = 23.388$, $p = .0001$, rural subjects having higher C.O. Scale scores ($\bar{X} = 139.4$) than urban subjects ($\bar{X} = 110.65$).

¹⁹In light of the above acknowledgment that Overall and Spiegel's (1969) Method 1 is a conservative analysis procedure the reader may wonder why effects which reached borderline significance in this and subsequent analyses were not interpreted (e.g. the $S \times L \times T$ interaction in the present analysis). The decision to interpret or not interpret these borderline significant effects was based on the decision rule noted above. That is no univariate F value would be interpreted unless the multivariate F value for the effect was significant. In all cases where borderline significant univariate F values may be observed the multivariate F was not significant even at the liberal .10 level. In addition post-hoc analyses of Issue 1a and 2a hypotheses using Overall and Spiegel's more liberal Method 2 failed to find any of these borderline significant effects reaching the chosen Alpha level of .050.

TABLE 12
 Analysis of Variance:
 C.O. Scale Scores, Longitudinal Data,
 Grade 12 Subjects

Source	D.F.	M.S.	F	p
Between Subjects				
Sex (S)	1	36,616.854	8.397	.004
Location (L)	1	101,987.593	23.388	.0001
S x L	1	5,225.970	1.198	.275
Within Cells Error (<u>Ss</u> within groups)	158	4,360.726		
Within Subjects				
Time (T)	1	.448	.002	.969
S x T	1	139.676	.463	.497
L x T	1	70.711	.234	.629
S x L x T	1	566.265	1.878	.172
T x <u>Ss</u> within groups	158	301.487		

None of the remaining between subject or within subject effects were statistically significant. The reader's attention is drawn to the nonsignificant main effect for time, $F(1,158) = .002$, offering no support for the hypothesized decrease over the interval from Test Occasion 1 ($\bar{X} = 118.7$) to Test Occasion 2 ($\bar{X} = 119.0$).

Absolute change in Christian orthodoxy. The absence of significant mean changes in C.O. Scale scores between the two testing occasions, for students in all grades, may create the impression that by and large the students had resolved the issue of their religious beliefs and that at least with regard to their religious stance the high school years are a peaceful and tranquil time for them. Table 13, which displays two measures of the average absolute change in individual students C.O. Scale scores contradicts this notion. These statistics demonstrate that individual student's scores on the C.O. Scale often changed over time.²⁰

A few of the subjects, about five percent, changed their religious attitudes markedly (i.e. by one standard deviation (37.76) or more, see Table 14) but for the most part the changes were smaller and indicate shifts of opinion on certain parts of the Christian belief. Overall the increases and decreases from person to person nearly cancel out. Thus while religious beliefs did fluctuate somewhat during the "year" between testing sessions, there is no evidence of the hypothesized drop in Christian orthodoxy in the samples.

²⁰ ANOVA's conducted on the C.O. absolute change data revealed that the amount of absolute change did not vary systematically as a function of either grade level or location. The only significant finding showed the subject's sex was important in the degree of absolute change with males changing more than females.

TABLE 13

Average Absolute Change in C.O. Scale Scores Over Time by Location,
Sex of Subject, and Grade Level

			Mean		Median
Rural	Female	Grade 10	9.875	(24)	7.500
		Grade 11	10.667	(24)	7.00
		Grade 12	7.000	(29)	3.400
	Male	Grade 10	14.167	(12)	10.500
		Grade 11	16.182	(11)	11.000
		Grade 12	13.412	(17)	8.250
Urban	Female	Grade 10	13.509	(53)	9.000
		Grade 11	11.400	(50)	7.250
		Grade 12	10.406	(64)	8.750
	Male	Grade 10	16.020	(49)	11.000
		Grade 11	13.158	(57)	8.250
		Grade 12	16.615	(52)	12.167

Note: The number in brackets indicates the number of subjects in that cell.

TABLE 14

Percentage of Students
Whose C.O. Scale Score Changed More than One Standard Deviation
by Location and Sex of Subject

	Rural	Urban	Overall
Female	3.90%	3.59%	3.69%
Male	5.00%	8.23%	7.58%
Overall	4.27%	5.85%	

Cross-Sectional Analysis

The longitudinal analyses provide the best test of our hypothesis regarding changes in the level of Christian orthodoxy over time. Cross-sectional analyses are less informative if important characteristics of the sample vary from grade to grade. This in fact proved to be the case as the hypothesized grade effect was confounded with important differences in the uncontrollable influence of the subjects' religious affiliation.

To aid in the reader's interpretation of the cross-sectional analysis results, a categorized breakdown of the religious affiliation of the subjects in each cell is provided in Table 15.²¹

²¹The conservative protestant group consists of students who gave their denominational affiliation as Baptist (N = 13), Mennonite (N = 62), Christian Reformed (N = 6), Christian Missionary Alliance (N = 1), Pentecostal (N = 4), Jehovah's Witness (N = 3), Salvation Army (N = 2), Church of God (N = 1), or Protestant (N = 10). The Catholic category consists of those students identifying their affiliation as Roman Catholic (N = 145) or Ukrainian Catholic (N = 42). The liberal Protestant category included all those that identified themselves as Anglican (N = 60), United Church (N = 157), Lutheran (N = 48), or Presbyterian (N = 8). The no religion category included the 120 students who stated that they had no present religious affiliation. The "other" category included several denominational affiliations which did not fall neatly into any of the above classifications: United Truth (N = 2), Greek Orthodox (N = 5), and Ukrainian Greek Orthodox (N = 4), as well as 54 students who did not respond to the present religious affiliation item .

The implicit assumption in all of this was that C.O. Scale scores vary as a function of the religious affiliation categories. This was found to be the case in an analysis which compared the mean C.O. Scale scores of the four categories (Conservative Protestant, Catholic, Liberal Protestant, No Religion) for which the author had a reasonable expectation as to their standing on the orthodoxy dimension. A One-Way ANOVA applied to these data revealed that overall the means of these four groups differed significantly, $F(3,678) = 158.252$, $p = .0001$. Pairwise post-hoc tests using the Neuman-Keuls procedure (Winer, 1962) revealed that all pairs of means were significantly different at the $p < .01$ level. It should further be noted that if one accepts the denominational classification scheme employed here, then these results also provide support for the construct validity of the C.O. Scale.

TABLE 15

Categorization of Cross-Sectional Subjects'
Present Religious Affiliation
by Location, Grade, and Sex of Subject

Categorization of Subject's Present Religious Affiliation	Rural						Urban						Mean C.O. Scale Score
	Grade 10		Grade 11		Grade 12		Grade 10		Grade 11		Grade 12		
	M	F	M	F	M	F	M	F	M	F	M	F	
Conservative Protestant	4	8	5	9	8	17	8	9	7	10	7	10	151.34
Catholic	2	3	0	2	2	3	25	30	32	30	29	29	133.27
Liberal Protestant	6	17	11	14	8	13	18	40	44	33	28	41	117.59
No Religion	4	1	2	1	1	3	18	8	15	14	31	22	72.16
Other	0	1	1	3	1	4	7	4	17	14	6	7	110.58

Of the many observations that could be made from Table 15 the reader's attention is drawn to two. Firstly, percentage wise there are a lot more conservative protestants in the rural sample. Secondly, within the rural sample these conservative protestants are concentrated disproportionately in Grade 12. It should be noted that this large concentration of highly orthodox conservative protestants in the rural sample and especially the Grade 12 rural sample will inflate the mean C.O. Scale score for that group. The reader's attention is drawn to this fact as it will later be used in interpreting one of our findings.

The relationship of grade level (10, 11 and 12) to time-one C.O. Scale scores was assessed while stratifying on location and sex of subject. A fixed effects model ANOVA was applied to the 3 x 2 x 2 factorial design thus formed. The results of this analysis are summarized in Table 16, while the mean scores for each cell of the design are given in Table 17.

Reference to Table 16 reveals that the hypothesized main effect for grade level was not significant, $F(2,735) = 1.035$, indicating that C.O. Scale scores did not decrease across grades 10 ($\bar{X} = 119.0$), 11 ($\bar{X} = 117.0$), and 12 ($\bar{X} = 118.8$).

The sex of subject factor was statistically significant, $F(1,735) = 34.919$, $p = .0001$, indicating that female subjects ($\bar{X} = 127.7$) had significantly higher C.O. Scale scores than male subjects ($\bar{X} = 107.3$).

The main effect of location was also statistically significant, $F(1, 735) = 10.891$, $p = .001$, rural subjects having higher C.O. Scale scores ($\bar{X} = 129.9$) than urban subjects ($\bar{X} = 115.2$). This difference

TABLE 16

Analysis of Variance:
C.O. Scale Scores, Cross-Sectional Data

Source	D.F.	M.S.	<u>F</u>	<u>p</u>
Grade (G)	2	2,357.059	1.816	.164
Sex (S)	1	45,329.660	34.919	.0001
Location (L)	1	14,138.698	10.891	.001
G x S	2	1,358.843	1.047	.351
G x L	2	5,799.352	4.467	.012
L at G (10)	1	210.939	.162	.687
L at G (11)	1	1,443.764	1.112	.292
L at G (12)	1	23,542.184	18.135	.0001
G at L (rural)	2	7,389.936	5.693	.004
G at L (urban)	2	373.171	.287	.750
S x L	1	65.105	.051	.823
G x S x L	2	844.904	.651	.522
Within Cells Error (<u>S</u> s within groups)	735	1,298.148		

TABLE 17

Mean C.O. Scale Scores
by Location, Grade, and Sex of Subject
for Cross-Sectional Analysis

	Grade 10	Grade 11	Grade 12
Rural			
Female	130.533 (30)	136.586 (29)	142.975 (40)
Male	108.000 (16)	107.316 (19)	132.300 (20)
Urban			
Female	129.319 (91)	124.297 (101)	120.578 (109)
Male	104.474 (76)	107.200 (115)	104.604 (101)

Note: The number in brackets indicates the number of subjects in that cell.

must be interpreted in light of the significant second order interaction between location and grade level, $F(2,735) = 4.467, p = .012$. Exploration of this interaction using a test of simple main effects (Winer, 1962) revealed there were no significant differences between the mean C.O. Scale scores of rural ($\bar{X} = 122.7$) and urban ($\bar{X} = 118.0$) Grade 10 students, $F(1,735) = .162$, nor the rural ($\bar{X} = 125.0$) and urban ($\bar{X} = 115.2$) students in Grade 11, $F(1,735) = 1.112$.²² However, the location factor was significant for the Grade 12 subjects, $F(1,735) = 18.135, p = .0001$, with the rural students ($\bar{X} = 139.4$) having significantly higher C.O. Scale scores than the urban students ($\bar{X} = 112.9$). Thus the overall mean difference between rural and urban students was mainly due to the large and significant difference found in the Grade 12 samples, which may be attributed to the large percentage of Conservative Protestants in the Grade 12 rural sample.

Viewed from the alternate perspective, examination of the effect of the grade factor at each location revealed that grade level had no significant effect on mean C.O. Scale scores among the urban students, $F(2,735) = .287$; but there was a significant effect among the rural sample, $F(2,735) = 5.693, p = .004$. Pairwise contrasts using the Newman-Keuls procedure (Winer, 1962) showed that the mean C.O. Scale

²²The reader will note that in the controversy over Type IV errors and the use of tests of simple main effects (Games, 1973; Levin and Marascuilo 1972, 1973) we have followed the arguments of Games. It is felt that the tests of simple main effects, while blurring the fact that all cells contribute to the interaction, allow for more specificity in identifying the cells primarily contributing to the interaction and in our case facilitates a more sensible and parsimonious interpretation of the data.

score of the Grade 12 students ($\bar{X} = 139.4$) was significantly higher than both the Grade 11 students ($\bar{X} = 125.0$), $p < .05$, and the Grade 10 students ($\bar{X} = 122.7$), $p < .05$. Again, this result is due to the large percentage of conservative protestants in the Grade 12 rural sample.

Returning to Table 16, the reader will observe that none of the remaining higher order effects were statistically significant.²³

In summary, therefore, the cross-sectional data tell the same story as the longitudinal data, once differences in sample composition are taken into account. There is no evidence that the students become less orthodox over the high school years.

Issue 1b - Changes in Organization of Christian Orthodoxy

Issue 1b focuses on change over time in the organization of Christian orthodoxy. It was predicted that the internal consistency of the C.O. Scale would be high and constant over grade levels. This hypothesis was tested both cross-sectionally and longitudinally.

Longitudinal Analysis

The internal consistency (i.e. Cronbach's "alpha" coefficient) of the C.O. Scale for each location, sex of subject, grade, and test occasion as well as the average value for each grade and test occasion is displayed in Table 18. It can be seen that the internal consistency

²³In concordance with these findings cross-sectional and longitudinal analyses of the subject's Religious Behaviour Index scores (described at the beginning of this Chapter) revealed that there was no change over the high school years in these more overt religious behaviors.

TABLE 18

Internal Consistency (Cronbach's "Alpha")
of the C.O. Scale by Location, Sex of Subject,
Grade Level, and Test Occasion

		Rural		Urban		Weighted Z Scale Score
		Female	Male	Female	Male	
Grade 10	Test Occasion 1	.971	.970	.956	.972	.966
	Test Occasion 2	.983	.979	.973	.978	.977
Grade 11	Test Occasion 1	.951	.976	.968	.974	.969
	Test Occasion 2	.946	.969	.976	.982	.975
Grade 12	Test Occasion 1	.976	.945	.956	.972	.965
	Test Occasion 2	.971	.983	.955	.973	.968

of the C.O. Scale was very high for each of the grade levels at both test occasions. The statistical significance of the changes in alpha over time were assessed using a test statistic developed by Feldt (1969).²⁴ The change in alpha for Grade 10-11 was significant, \underline{W} (533, 533) = 1.478, $p < .05$, as was that for the interval 11-12, \underline{W} (629, 629) = 1.24, $p < .05$. The change in alpha for the interval 12-Graduation was not significant however, \underline{W} (748, 748) = 1.094.

Cross-Sectional Analysis

The C.O. Scale internal consistency estimates for each cell of the cross-sectional design as well as the mean value for each grade level are given in Table 19. The C.O. Scale internal consistency of the cross-sectional Grade 10, 11 and 12 subjects were .963, .969, and .969 respectively. There was obviously no significant difference among these coefficients, \underline{M} (2) = 2.972.²⁵

In summary, both the longitudinal and cross-sectional data indicate that opinions regarding the basic tenets of the Christian faith

²⁴Feldt's (1969) article describes the derivation of the test statistic \underline{W} which is employed to test the hypothesis that the reliability coefficients (Cronbach's alpha) associated with two independent samples are equal. When two alpha coefficients are correlated, that is obtained from the same sample, the test statistic \underline{W} is still employed, however, an adjustment in the degrees of freedom is made to take into account the increase in power due to the correlated nature of the reliability coefficients (Feldt, 1979). An article by Feldt elaborating the test procedure for correlated alpha coefficients is scheduled to appear in Psychometrika in March 1980.

²⁵The k-sample significance test for independent alpha coefficients employed was developed by Hakstian and Whalen (1976). The test statistic \underline{M} is approximately distributed as \underline{X}^2 with k-1 degrees of freedom.

TABLE 19

Internal Consistency (Cronbach's "Alpha")
of the C.O. Scale by Location,
Sex of Subject, and Grade Level

		Grade 10	Grade 11	Grade 12
Rural	Female	.965	.949	.977
	Male	.969	.977	.947
Urban	Female	.957	.973	.966
	Male	.967	.967	.971
Weighted Z Score Average		.963	.969	.969

are highly organized by the time students enter high school. Although the longitudinal data indicate there may be a slight increase in consistency during Grade 10 and 11, the overall picture is one of constant nearly maximal organization over the high school years, as hypothesized.

Issue 2a - Changes in Level of Right-Wing Authoritarianism

Issue 2a, it will be recalled, concerned changes in the level of right-wing authoritarianism over time. Again the predicted decrease in mean R.W.A. Scale scores over grade levels was tested both cross-sectionally and longitudinally.

Longitudinal Analyses

The rationale for conducting separate analyses on Grade 10-11 students and Grade 12 students, as well as the form of the two designs is identical to that described for the longitudinal analysis of the C.O. Scale data under Issue 1a.

(a) Grade 10 and 11 students. The ANOVA summary table for the analysis of the Grade 10-11 and 11-12 R.W.A. data is given in Table 20. Table 21 displays the mean scores for each cell of this, and the Grade 12, design.

Table 18 reveals that the location main effect was statistically significant, $F(1,272) = 6.377$, $p = .012$, indicating that rural students ($\bar{X} = 107.95$) had significantly higher R.W.A. Scale scores than urban students ($\bar{X} = 100.6$).

None of the remaining between subject or within subject effects were statistically significant including the hypothesized main effect for time, $F(1,272) = 3.759$, indicating that R.W.A. Scale scores did not

Analysis of Variance:
R.W.A. Scale Scores, Longitudinal Data,
Grade 10 & 11 Subjects

Source	D.F.	M.S.	<u>F</u>	<u>p</u>
Between Subjects				
Grade (G)	1	104.640	.077	.781
Sex (S)	1	12.309	.009	.924
Location (L)	1	8,629.808	6.377	.012
G x S	1	912.049	.674	.412
G x L	1	2,999.028	2.216	.138
S x L	1	3,972.158	2.935	.088
G x S x L	1	210.029	.155	.694
Within Cells Error (<u>Ss</u> within groups)	272	1,353.234		
Within Subjects				
Time (T)	1	749.867	3.759	.054
G x T	1	.003	.000	.997
S x T	1	5.327	.027	.870
L x T	1	3.798	.019	.890
G x S x T	1	.172	.001	.977
G x L x T	1	711.960	3.569	.060
S x L x T	1	138.038	.692	.406
G x S x L x T	1	5.772	.029	.865
T x <u>Ss</u> within groups	272	199.467		

TABLE 21

Mean R.W.A. Scale Scores by Grade, Location, Sex of Subject,
and Testing Occasion for the Grade 10 & 11, and the Grade 12

Longitudinal Analysis

			Test Occasion 1		Test Occasion 2
Grade 10	Rural	Female	107.292	(24)	107.917
		Male	102.667	(12)	101.667
	Urban	Female	103.491	(53)	99.189
		Male	104.531	(49)	101.306
Grade 11	Rural	Female	112.583	(24)	109.750
		Male	110.636	(11)	105.364
	Urban	Female	95.260	(50)	94.52
		Male	102.474	(57)	103.386
Grade 12	Rural	Female	112.034	(29)	117.724
		Male	112.412	(17)	110.471
	Urban	Female	110.641	(64)	101.234
		Male	99.000	(52)	99.519

Note: The number in brackets indicates the number of subjects in that cell.

decrease significantly from Test Occasion 1 ($\bar{X} = 103.3$) to Test Occasion 2 ($\bar{X} = 101.6$) as predicted.

(b) Grade 12 students. The results of the analysis conducted on the Grade 12 R.W.A. data are summarized in Table 22. The only significant effect to be found in Table 22 is the main effect for location, $F(1,158) = 17.779$, $p = .0001$. Similar to the finding in the Grade 10 and 11 analysis, the rural students ($\bar{X} = 113.6$) had significantly higher R.W.A. Scale scores than urban students ($\bar{X} = 100.2$).

Attention is drawn to the hypothesized main effect for time, which contrary to our prediction is nonsignificant, $F(1,158) = 1.386$. Thus, R.W.A. Scale scores did not decrease significantly from Test Occasion 1 ($\bar{X} = 103.4$) to Test Occasion 2 ($\bar{X} = 104.6$).

Absolute change in right-wing authoritarianism. As in the longitudinal analysis of the C.O. Scale, the absence of significant changes in mean R.W.A. Scale scores between the two testing occasions may create the impression that at the individual level little change in right-wing authoritarian attitudes took place during the intervening "year". However, Table 23, which displays two measures of the average absolute change in individual students' R.W.A. Scale scores indicates otherwise.²⁶ For a relatively large percentage of the students, these changes are

²⁶ ANOVA's conducted on the R.W.A. absolute change data revealed that the amount of absolute change did not vary systematically as a function of either grade level or location. The only significant finding showed the subjects' sex was important in the degree of absolute change with males changing more than females.

TABLE 22

Analysis of Variance:
R.W.A. Scale Scores, Longitudinal Data,
Grade 12 Subjects

Source	D.F.	M.S.	<u>F</u>	<u>P</u>
Between Subjects				
Sex (S)	1	816.892	.682	.410
Location (L)	1	21,298.988	17.779	.0001
S x L	1	96.705	.081	.777
Within Cells Error (<u>ss</u> within groups)	158	1,197.968		
Within Subjects				
Time (T)	1	184.406	1.386	.241
S x T	1	463.261	3.481	.064
L x T	1	54.196	.407	.524
S x L x T	1	445.513	3.348	.069
T x <u>ss</u> within groups	158	133.073		

TABLE 23
 Average Absolute Change in R.W.A. Scale Scores
 Over Time by Location, Sex of Subject,
 and Grade Level

		Mean		Median	
Rural	Female	Grade 10	7.958	(24)	7.500
		Grade 11	8.083	(24)	6.167
		Grade 12	8.448	(29)	4.750
	Male	Grade 10	16.500	(12)	15.500
		Grade 11	10.727	(11)	7.000
		Grade 12	11.235	(17)	9.000
Urban	Female	Grade 10	10.981	(53)	9.000
		Grade 11	10.540	(50)	8.500
		Grade 12	9.188	(64)	7.000
	Male	Grade 10	12.571	(49)	11.000
		Grade 11	12.281	(57)	10.000
		Grade 12	7.404	(52)	5.000

Note: The number in brackets indicates the number of subjects in that cell.

quite substantial: about 15% of the subjects showed changes of one standard deviation (19.28) or more (see Table 24). One reason there is about three times as much "R.W.A. ferment" as there is "religious ferment" (see Table 14) however, is that the R.W.A. Scale is appreciably less reliable than the C.O. Scale. But whatever change occurred over time, it by and large cancelled out overall.

Cross-Sectional Analysis

The design and analysis used to assess the effect of grade level on R.W.A. Scale scores was identical to that used for C.O. Scale scores. The results of the ANOVA conducted on the R.W.A. Scale scores is given in Table 25, while the mean scores for each cell of the design are presented in Table 26.

Table 25 reveals that the hypothesized main effect for grade level was not significant, $F(2,735) = .674$, indicating again that R.W.A. Scale scores did not decrease over grades 10 ($\bar{X} = 103.9$), 11 ($\bar{X} = 100.8$), and 12 ($\bar{X} = 103.2$).

The sex of subject factor was not statistically significant, $F(1,735) = .018$, indicating that overall, male and female subjects did not differ in their R.W.A. Scale scores.

As was true in the longitudinal analysis, the main effect for location was statistically significant, $F(1,735) = 21.302$, $p = .0001$. Comparison of the means revealed that rural subjects ($\bar{X} = 109.8$) had significantly higher R.W.A. Scale scores than the urban students ($\bar{X} = 100.7$). Here this main effect was largely due to a significant difference between urban ($\bar{X} = 98.85$) and rural ($\bar{X} = 111.0$) females. however, $F(1,735) = 22.49$, $p = .0001$. Urban and rural males

TABLE 24

Percentage of Students Whose R.W.A. Scale Score
Changed More than One Standard Deviation
by Location and Sex of Subject

	Rural	Urban	Overall
Female	5.19%	13.77%	11.07%
Male	22.50%	17.09%	18.18%
Overall	11.11%	15.38%	

TABLE 25

Analysis of Variance:
R.W.A. Scale Scores, Cross-Sectional Data

Source	D.F.	M.S.	<u>F</u>	<u>p</u>
Grade (G)	2	240.402	.674	.510
Sex (S)	1	6.512	.018	.893
Location (L)	1	7,593.804	21.302	.0001
G x S	2	216.415	.607	.545
G x L	2	563.968	1.582	.206
L x S	1	1,559.558	4.375	.037
S at L (Rural)	1	682.268	1.914	.167
S at L (Urban)	1	883.806	2.479	.115
L at S (female)	1	8,018.073	22.492	.0001
L at S (male)	1	1,135.323	3.185	.075
G x L x S	2	59.497	.167	.846
Within Cells Error (<u>Ss</u> within groups)	735	356.488		

TABLE 26

Mean R.W.A. Scale Scores
by Location, Grade, and Sex of Subject
for Cross-Sectional Analysis

	Grade 10	Grade 11	Grade 12
Rural			
Female	107.767 (30)	112.655 (29)	112.200 (40)
Male	105.875 (16)	105.875 (19)	111.250 (20)
Urban			
Female	101.099 (91)	97.416 (101)	98.303 (109)
Male	105.250 (76)	100.148 (115)	103.307 (101)

Note: The number in brackets indicates the number of subjects in that cell.

differed in the same direction, but not significantly.

Observation of Table 23 reveals that none of the remaining second order interactions, nor the third order interaction, was statistically significant.

The evidence from both the longitudinal and cross-sectional analyses therefore consistently indicates that students' level of authoritarianism did not change over the course of the high school years ... our hypothesis notwithstanding.

Issue 2b - Changes in Organization of Right-Wing Authoritarianism

The focus of Issue 2b is change over time in the organization of right-wing authoritarian attitudes. It was predicted that the organization of R.W.A. Scale responses (as evidenced by R.W.A. Scale internal consistency estimates) would increase over grade levels. Again, this hypothesis was tested both longitudinally and cross-sectionally.

Longitudinal Analysis

The internal consistency of the R.W.A. Scale for each location, sex of subject, grade, and test occasion as well as the average value for each grade and test occasion are shown in Table 27. The Feldt procedure for testing correlated alpha coefficients revealed that there was a significant increase in alpha over the Grade 10-11 and 11-12 period, $\underline{W}(328, 328) = 1.290, p < .05$ and $\underline{W}(330, 330) = 1.280, p < .05$, respectively. The change over the Grade 12-Graduation period was not significant, $\underline{W}(461, 461) = 1.083$, in fact there was a slight decrease in internal consistency over this period.

Cross-Sectional Analysis

The R.W.A. Scale internal consistency estimates for each cell

TABLE 27

Internal Consistency (Cronbach's "Alpha") of the
R.W.A. Scale by Location, Sex of Subject, Grade Level,
and Test Occasion

		Rural		Urban		Weighted Z Score Average
		Female	Male	Female	Male	
Grade 10	Test Occasion 1	.710	.794	.775	.792	.773
	Test Occasion 2	.688	.827	.851	.838	.824
Grade 11	Test Occasion 1	.727	.643	.829	.823	.804
	Test Occasion 2	.716	.865	.867	.863	.847
Grade 12	Test Occasion 1	.804	.843	.773	.805	.796
	Test Occasion 2	.777	.770	.754	.809	.779

of the cross-sectional design as well as the mean value for each grade level are given in Table 28. As can be seen, the internal consistency of the R.W.A. Scale was, .744, .804, and .803 for the Grade 10, 11, and 12 students respectively. The Hakstian and Whalen (1976) k-sample significance test for independent alpha coefficients revealed no significant difference among these estimates, $\underline{M}(2) = 4.878$.

In summary then, while the cross-sectional data did not indicate that R.W.A. internal consistency was increasing significantly over grade levels, the better controlled longitudinal data did show significant increases in alpha over the Grade 10-11 and 11-12 intervals. The longitudinal data thus supports our hypothesis that right-wing authoritarianism would become better organized over the course of the high school years.

Issue 3 - Exploration of Causal Relationships Between Christian Orthodoxy and Right-Wing Authoritarianism

The exploration of causal relationships between changes in Christian orthodoxy and right-wing authoritarianism is the focus of our third issue. It will be recalled that two causal sequences were proposed: (a) Christian orthodoxy would drop first and thus "cause" decreases in authoritarianism, or (b) right-wing authoritarianism would drop first and "cause" a subsequent decrease in orthodoxy.

The analysis used to determine if either of these sequences occurred was the cross-lagged panel correlation technique (Campbell, 1963; Kenny, 1973, 1975). With this technique longitudinal data can be analyzed to indicate which of two variables, each measured at Time 1 and Time 2, is more likely to have causal priority over the other. If C.O.

TABLE 28

Internal Consistency (Cronbach's "Alpha")
of the R.W.A. Scale by Location,
Sex of Subject, and Grade Level

		Grade 10	Grade 11	Grade 12
Rural	Female	.707	.758	.817
	Male	.331	.737	.820
Urban	Female	.801	.822	.825
	Male	.731	.805	.766
Weighted Z Score Average		.744	.804	.803

determines R.W.A., then the cross-lagged correlation $C.O._1 - R.W.A._2$ should exceed $R.W.A._1 - C.O._2$. However, if R.W.A. has causal priority, then the cross-lagged correlation $R.W.A._1 - C.O._2$ should exceed $C.O._1 - R.W.A._2$. It will be recalled that both possibilities seemed equally plausible and no hypothesis was ventured before the study was undertaken.

Grade 10

The array of correlations derived from the Grade 10 "two wave-two variable" (2W2V) panel data is shown in Figure 1. It can be seen that the cross-lagged correlation $C.O._1 - R.W.A._2$ of .521 is larger than its counterpart $R.W.A._1 - C.O._2$ of .419. But this difference was not statistically significant, $Z = 1.684$, $p = .092$, two-tailed.²⁷

Grades 11 & 12

Figure 2 displays the network of correlations between C.O. and R.W.A. derived from the Grade 11 2W2V panel data. In this case, the cross-lagged correlation $R.W.A._1 - C.O._2$ (.441) slightly exceeds that of $C.O._1 - R.W.A._2$ (.408), but not significantly ($Z = .532$). The same pattern of nonsignificant results can be seen in Figure 3 for the Grade 12 subjects ($Z = .543$).

²⁷The use of Fisher's Z transformation would be inappropriate here because the cross-lagged correlations are themselves correlated. A more powerful test proposed by Pearson and Filon (Peters and Van Voorhes, 1940), which is appropriate for the type of correlated data array seen in Figure 1, was employed.

In short, there was no evidence that changes in religious beliefs, or in general right-wing authoritarianism reliably preceded changes in the other, during any of the high school years.²⁸

²⁸ Adjustment in the cross-lagged panel analysis for the differential changes in the reliabilities of the C.O. and R.W.A. Scales (Kenny, 1975) had no effect on the nonsignificance of the findings. Breaking the analysis down by Location and Sex revealed in the rural sample that the cross-lagged correlation C.O.1 - R.W.A.2 exceeded R.W.A.1 - C.O.2 in all sub-samples except the rural Grade 12 females. In the urban breakdown, all sub-groups displayed the pattern demonstrated above with C.O. being the leading variable in Grade 10 and R.W.A. leading in Grades 11 and 12. In no instance did the cross-lagged differential reach significance, however.

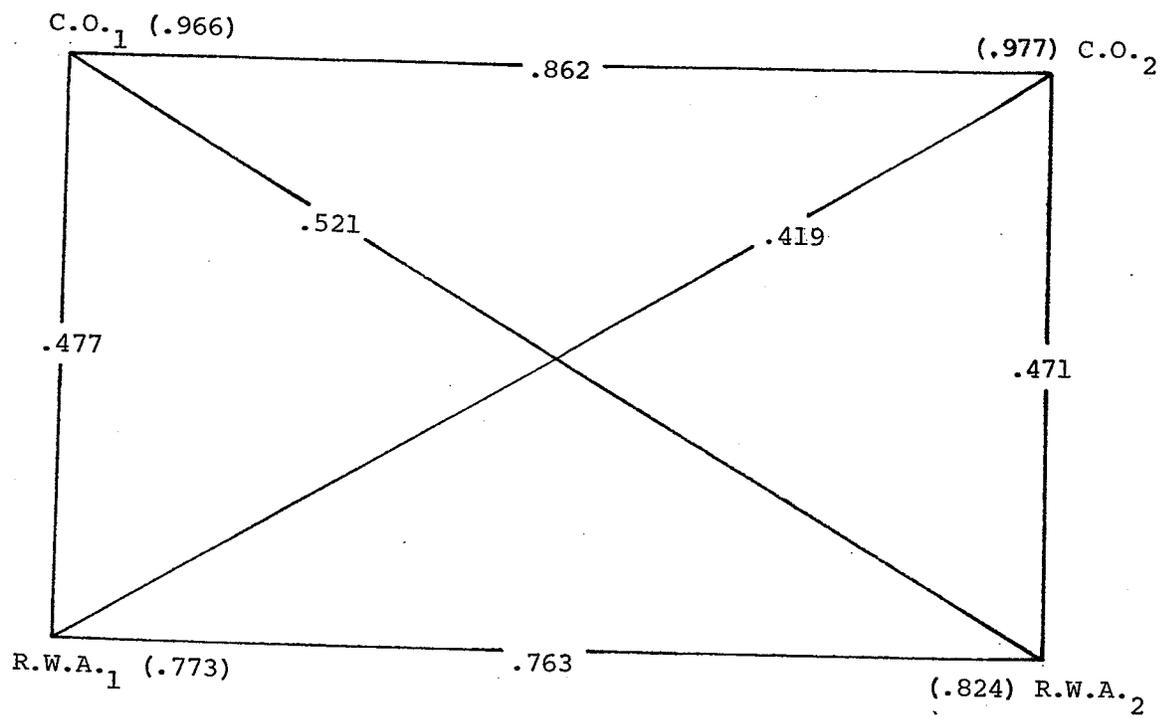


Figure 1. Cross-lagged and other correlations between Christian Orthodoxy (C.O.) and Right-Wing Authoritarianism (R.W.A.) scores of Grade 10 students ($N = 138$).

Note: The values in brackets are the "alpha" reliability estimates for the variables.

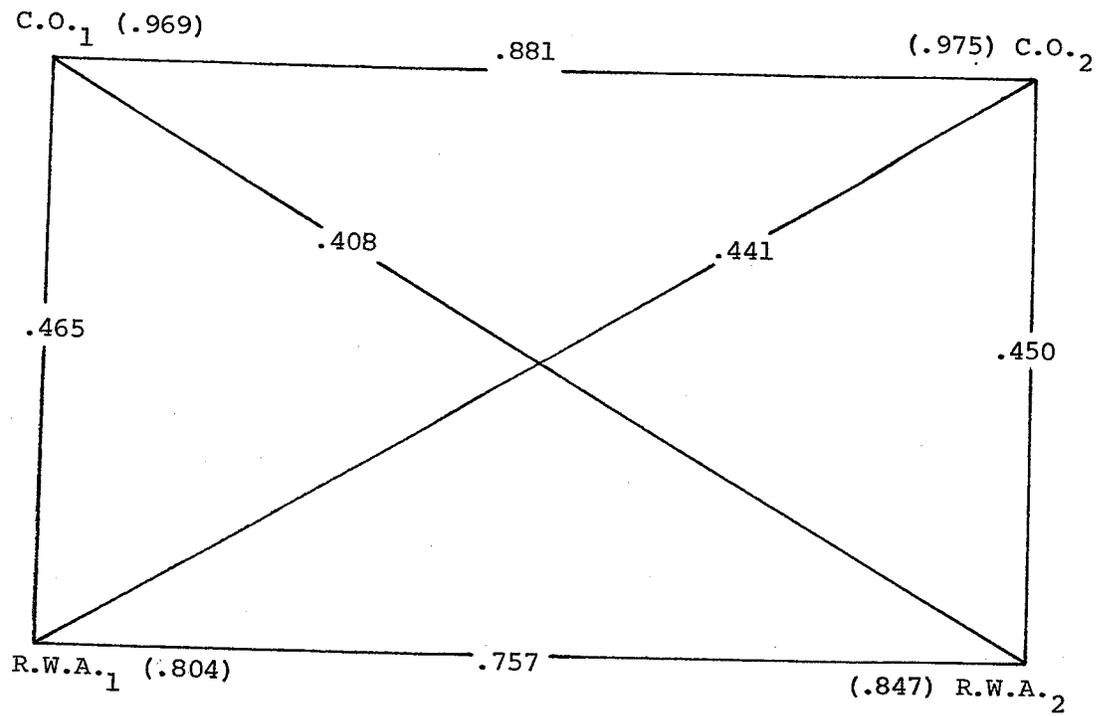


Figure 2. Cross-lagged and other correlations between Christian Orthodoxy (C.O.) and Right-Wing Authoritarianism (R.W.A.) scores of Grade 11 students (N = 142).

Note: The values in brackets are the "alpha" reliability estimates for the variables.

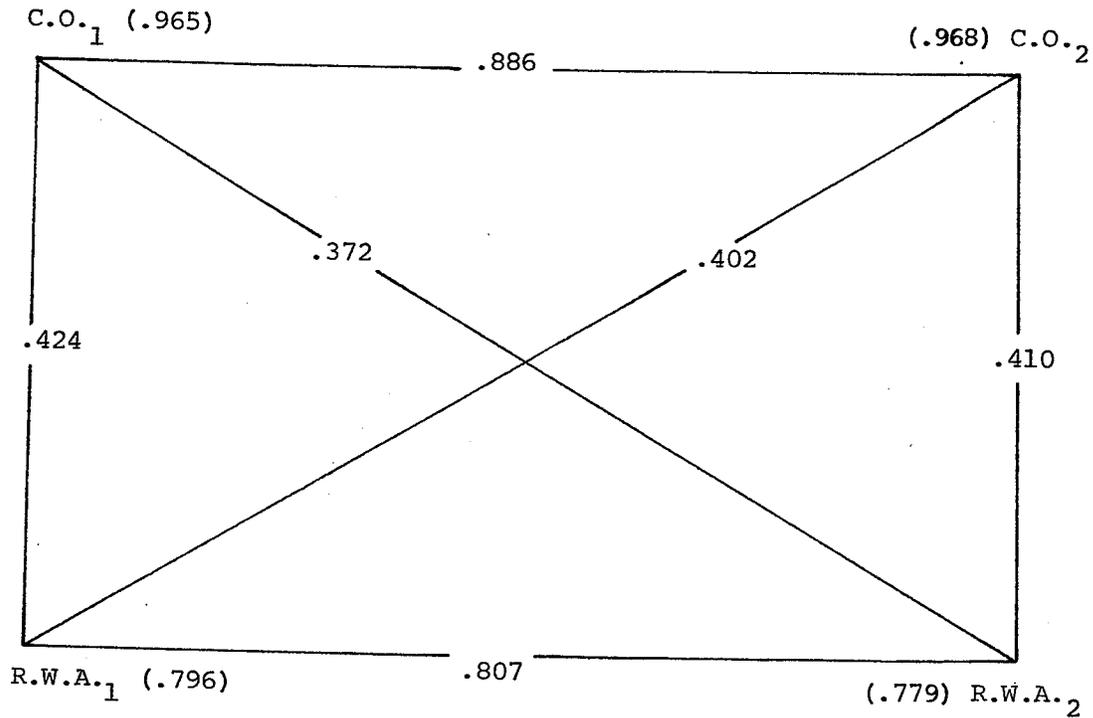


Figure 3. Cross-lagged and other correlations between Christian Orthodoxy (C.O.) and Right-Wing Authoritarianism (R.W.A.) scores of Grade 12 students (N = 162).

Note: The values in brackets are the "alpha" reliability estimates for the variables.

CHAPTER V
DISCUSSION

It will be recalled that C.O. and R.W.A. Scale scores were expected to decrease over the high school years and that the focus of this study was to determine if decreases in one of these variables reliably proceeded and had 'causal priority' over decreases in the other. However, since neither C.O. or R.W.A. Scale scores decreased this issue is somewhat beside the point. This discussion section then will first deal with the observed nondecrease in C.O. and R.W.A. Scale scores. Then it will consider other findings which occurred with some consistency in the samples.

Explanations for the Failure to Find

Decreases in C.O. and R.W.A. Scale Scores

The reader will recall that on the basis of previous research findings it was confidently predicted that C.O. Scale scores would decrease over the high school years. There was a similar, if less confident, prediction that R.W.A. Scale scores would also decrease. But the data are unflinching on both points - no significant decreases occurred. The samples were large, the statistical tests powerful, but the null hypothesis was not rejected.

Non-significant findings, of course, may be due to poor measuring instruments. This, however, was not the case for the C.O. Scale which had outstanding internal consistency at all three grade levels. The R.W.A. Scale's internal consistency was not nearly so good in these samples and it is entirely possible that the failure to find R.W.A. differences was

due to the scale's low reliability at these age/education levels. The ideology does not appear to exist in coherent enough form at these levels to have the questions of its shifts be meaningful.²⁹ Given that unreliability does not constitute an explanation for the C.O. Scale, what do we make of the finding that C.O. Scale scores did not drop overall? At least three interpretations can be offered.

The first is that net drops in Christian orthodoxy do not occur in the lives of people presently living in this part of North America. The high school years do not show it, nor would it be detectable in other periods in the life cycle. If other researchers found a decrease in religiosity in earlier decades in other locales, those findings may not generalize to this "here and now".

A second interpretation is that drops in Christian orthodoxy do occur, but nowadays they are occurring before high school. One of the starting points of this project was Hunsberger's finding (1973, 1976, 1978) that University students did not become less religious over the course of their college years. He suggested whatever drop there might have been had occurred prior to university.³⁰ We in turn are now

²⁹ Altemeyer (1978) has found in studies of 701 parents of University students that the reliability of R.W.A. Scale responses increases rather regularly with level of education, from .76 for those with less than nine years of formal education to .90 for those with 15 or 16 years of school. Response sets cause some of this difference; the less educated are more likely to use extreme categories, especially "+3", when responding to items.

³⁰ Other researchers (Hastings and Hoge, 1976; Pilkington, Poppleton, Gould, and McCourt, 1976) who have failed to find a "liberalization" in religious beliefs over the college years seem to have similar suspicions.

suggesting that if an overall drop occurs, it must occur before high school. There is evidence for a decrease having occurred previously if one believes that both boys and girls are equally indoctrinated in the Christian beliefs prior to adolescence. Our high school males were significantly less orthodox than the females (\bar{X} . 107.3 vs 127.7) a difference fully evident even in Grade 10. If the above assumption is true then at least the boys seem to be showing a net drop. There is evidence (to be presented later) that the girls have not risen, but instead are about as orthodox as they perceive their parents want them to be, while the boys are not. It is possible that no drop has occurred however. The boys may never have been as religious as their parents wanted. This issue will be taken up again when we consider the observed sex difference in C.O. Scale scores.

A third interpretation of the failure to find decreasing C.O. scores (one which applies equally to the R.W.A. Scale data) and one which is popular in the media nowadays - is that ideological ferment runs in cycles in North America, and this is a "quiet time". Had the study been conducted five or ten years earlier, C.O. scores (and R.W.A. scores) would have been found to decrease.³¹ Some evidence for this view comes from a recent

³¹Altemeyer (1978) has found responses to the six protrait and six contrait items on the R.W.A. Scale which he has administered to over 3200 introductory psychology students at the University of Manitoba since 1973 have slowly but steadily become more authoritarian (summed scores have risen from 48.8 to 52.5 by 1978). At the same time the inter-correlation among these items have slowly but steadily dropped (from a mean of .248 in 1973 to .189 in 1978). Both changes fit the common observation that recent university students are more conservative and less ideological than their predecessors of the late 1960's and early 70's, with the drop in ideological organization being by far the more dramatic.

survey conducted on American high school students ("The Tell-Tale Signs of a 'New Conservatism'", 1977). It was reported that the teenagers sampled were politically and morally more conservative than were their predecessors of ten years ago. Perhaps our failure to find the predicted decrease in C.O. and R.W.A. Scale scores was due to the time we live in ... at least lately.

The absence of a net change in C.O. Scale scores coupled with the finding, from the C.O. Scale absolute change analysis, that at the individual level C.O. scores were changing (sometimes substantially) in both directions supports a conclusion drawn by Feldman and Newcomb (1969). These researchers have emphasized that different individuals may change their religious beliefs in different directions and while the net change may indicate trends toward liberalization (or no trend at all) this may serve to make substantial change in the opposite direction.

Other Findings in the Data

Sex Difference in C.O. Scale Scores

In light of previous research the sex difference in C.O. Scale scores found in both the cross-sectional and longitudinal analysis comes as no surprise. Argyle & Beit-Hallahmi (1975) report a large number of investigations which consistently show that women are more religious than men on many different criteria. Earlier, Allport, Gillespie and Young (1948) referred to 'this general well-known law of sex difference'. Only a few investigations (Morton, 1944; Brown & Lowe, 1951; Gilliland, 1953) have failed to replicate this general finding.

While our finding that females are more religious than males hardly breaks new ground, the data gathered in this study enables one

to test several explanations of this common finding.

One obvious explanation is that parents emphasize religion more in the rearing of their daughters than they do for their sons. It will be recalled that our subjects responded to an item in the survey instrument which read, "To what extent would you say your parents emphasized observing the family religion and religious practices as you were growing up?" Females ($\bar{X} = 2.78$) reported receiving greater emphasis than males ($\bar{X} = 2.58$) but the difference was nonsignificant, $F(1,677) = .864$.³² The present data thus provides no support for the differential emphasis explanation of the observed sex differences in orthodoxy.

A second explanation for sex differences in C.O. Scale scores is based on sex-role identification. It may be that mothers and fathers differ in the orthodoxy of their beliefs and the sex difference found in their children is merely a perpetuation of this difference through sex-role modeling.³³ The reader will recall that subjects were asked to respond to the C.O. Scale as they thought each of their parents would like them to. These data indicate that both males and females perceive mothers ($\bar{X} = 129.19$) want them to be more religious than fathers do ($\bar{X} = 121.62$), $F(1,656) = 19.475$, $p = .0001$. Further, there was no

³²The reliability of a single item is often poor and thus skepticism of this finding on its own may be warranted. However, Altemeyer (1978) using a newly constructed 8-item Religious Emphasis Scale (Cronbach "alpha" coefficients range between .85 and .88) has found a similar lack of difference between both students' and parents' report of parental emphasis on family religious practices for sons and daughters.

³³Although the sex-role identification explanation may explain the perpetuation of belief differences from generation to generation it does not explain how the difference originated generations ago.

significant difference between male and female subjects in their estimation of these values. Also Altemeyer (1979) has found that both male and female university students report that their mothers stressed observing the family religion significantly more than did their fathers. If girls grow up being more like what the mother wants and boys more like what the father wants, then the observed sex difference is easily understood through sex-role identification.

It may be, however, that sex-role identification has nothing to do with the observed sex difference. Females may just be more submissive and conforming to (both) parent's wishes than males. Their C.O. Scale mean ($\bar{X} = 127.7$) is between their perceived mother's wishes ($\bar{X} = 131.66$) and their perceived father's wishes ($\bar{X} = 122.59$) - an indication they are responding to both parent's influence. The less conforming males ($\bar{X} = 107.3$), on the other hand, are below both their mother's ($\bar{X} = 126.37$) and father's ($\bar{X} = 120.54$) perceived wishes. It would appear clear that they, as a group, are less accepting of the religious ideas of either parent.

This "rebel male - submissive female" interpretation fits well with the sex difference found in the absolute change data for both the C.O. and R.W.A. Scales. It will be recalled that males showed significantly more absolute change between the two testing occasions on both scales (see Tables 13 & 23). In fact, 42% more change in C.O. Scale scores and over twice as many had changes of one standard deviation

or more.³⁴ Apparently the high school years are a time of greater ferment, fluctuation, and change for males than for females and this may well be because males are more rebellious against, while females are more conforming to, parental attitudes and values.

In summary, the present research revealed no evidence for a decrease in C.O. Scale scores over the high school years. However, there is some indication that for the males, but not the females, a decrease has occurred prior to entering high school. It may be that males became less religious because of sex-role identification or because they are less conforming, than females, to parent's wishes.

Location Difference in Grade 12 Students' C.O. Scale Scores

It will be recalled that both the longitudinal and cross-sectional analysis revealed that the C.O. Scale scores of the rural Grade 12 students were significantly higher than the urban Grade 12 students. Although there are reasons for expecting such a difference, in this case it is thought to be an artifact caused by a high number of Mennonites and other conservative Protestants in the rural Grade 12 sample (e.g. 41.6% of the rural Grade 12 sample were conservative Protestants compared to 8.1% of the urban Grade 12 sample). As can be seen in Table 15, these sects score highest on the C.O. Scale.

³⁴ It is possible that in the case of the C.O. Scale this finding was at least partially due to a ceiling effect operating on the scores of the female subjects. The female C.O. score mean was 131.270 while that for the males was 105.750. The range for the C.O. Scale is 24 to 168 and thus it can be seen that large upward fluctuations would on the average be restricted for females. This possible ceiling effect, however, would not be operative in the R.W.A. Scale data as the means were 103.340 and 103.390 for the females and males respectively and the scales range is 22 to 154.

With the loss of a meaningful Grade 12 location difference one is left with the somewhat surprising conclusion that our sample of rural and urban Christians are equally orthodox.³⁵ By way of contrast, Whyte (1966) found that the strongest adherents to orthodox religious views reside in the least urbanized areas of Canada.

The reader will recall that our rural sample came from Carman, Manitoba a commercial and educational center for a prosperous mixed farming region located approximately 60 miles from Winnipeg. The school contained a mix of students from farm and small rural community backgrounds and was in that sense a representative rural sample. We noted, however, that by reputation this community had a strong religious orientation because of its large Mennonite population. Our urban sample on the other hand contained a representative mix of the religious denominations found in the greater Winnipeg population.

It would appear, in contradiction with Whytes (1966) findings, that urban and rural youth in our sample are equally well indoctrinated in the Christian ideology (the mean C.O. score of approximately 120.0 is "high" given that the scale range is 24-168). Most of the subjects in our sample were raised in a Christian denomination; and, it is not surprising that children raised as Christians learn the same basic

³⁵ Analysis of rural-urban differences using the Religious Behavior Index (Sum score of frequency of church attendance, prayer and scriptural reading items) revealed a similar picture. While overall a rural-urban difference was found post hoc tests revealed that this finding was solely a function of the large rural-urban difference among the Grade 12 students. Again this is thought to be an artifact as explained above.

principles equally well in rural or urban areas. It may be a little surprising that "kids" in the city still accept the teachings as much as the rural sample does by the time they're 15-18. But, it would appear that they do.

Location Difference in R.W.A. Scale Scores

Both the longitudinal and cross-sectional analysis revealed that rural subjects had significantly higher R.W.A. Scale scores, at all grade levels, than the urban subjects. Since few studies using the R.W.A. Scale have investigated rural-urban differences in right wing authoritarianism this finding was explored further through item analysis.

Table 29 presents the item analysis results for the usual 3 x 2 x 2 factorial analysis of the cross-sectional data. Viewing Table 29 it can be seen that rural students scored higher than urban students on 19 of the 24 items, with 13 of these differences being statistically significant. Only one of the other five items, on which urban students scored higher, showed a significant difference.

Turning first to those five items which were reversed to the overall trend it can be seen that they had to do with "what to do with social deviants" (see Appendix C or D). These reversals may be attributable to the Mennonites in the rural sample since they are directly related to strong concerns of the Mennonites such as the sanctity of life and human worth. This impression is somewhat strengthened when one considers the content of the item which showed a significant reversal to the overall trend. Item 50 reads "People who abuse the flag or who refuse to serve in the armed forces should be treated with

TABLE 29
 Item Analysis of the R.W.A. Scale Items:
 Cross-Sectional Data

Questionnaire Item Number	Rural Mean	Urban Mean	F	P
31	5.286	4.454	15.623	.0001
32	5.020	4.649	6.346	.012
33	4.734	4.907	.114	.736
34	5.422	5.084	1.976	.160
35	5.552	5.462	.006	.937
36	5.325	4.678	9.887	.002
37	5.292	5.416	.707	.401
38	5.305	5.142	1.221	.270
39	3.110	2.670	10.337	.001
40	4.208	3.192	19.140	.0001
41	4.214	4.376	2.203	.138
42	5.669	5.280	5.283	.022
43	4.429	4.506	.001	.981
45	4.695	4.433	.723	.395
46	4.857	4.573	1.979	.160
47	5.052	4.467	6.273	.012
48	4.143	3.718	5.952	.015
49	4.078	3.499	6.310	.012
50	3.286	3.680	6.152	.013
51	4.208	2.793	42.505	.0001
52	4.558	4.445	1.549	.214
53	3.662	3.315	3.873	.049
54	4.175	3.386	24.312	.0001
55	3.481	2.555	22.944	.0001

NOTE: Scale items corresponding to the item numbers can be found in Appendix C or D. Items 29, 30, 44 and 56 are omitted as they were not included in the calculation of the R.W.A. sum score because of their religious connotations.

tolerance and understanding". In light of the Mennonite belief and behaviour with regard to pacifism this significant reversal seems understandable.

Notwithstanding these reversals to the overall trend, the general evidence of differences across the content of the scale (13/24 items significant) suggests the total score rural-urban difference is broadly based. Examination of item content reveals that items concerned with conventionality - conventional children, sex roles, modesty, heterosexuality, customs and heritage, neat appearance - all received significantly higher scores in the rural sample. In addition a few aggression items show significant differences (rural > urban), though other aggression items do not. What the item analysis seems to show is that rural students tend to be more conventional and "old fashioned" than city students. This may be just as expected as the equality of religious conviction was unexpected.

Increases in C.O. and R.W.A. Scale Internal Consistency

The longitudinal data revealed significant increases in both C.O. and R.W.A. Scale internal consistency over the Grade 10-11 and 11-12 interval and no significant change over the Grade 12-Graduation period. The changes in C.O. Scale internal consistency while significant resulted in only slight increases in reliable scale variance. This fact combined with the internal consistency stability displayed in the cross-sectional data and the near maximal level of the indices gives a picture of an ideology that is well learned, organized, and stable, as hypothesized.

The R.W.A. Scale internal consistency increases over the Grade 10-11 and 11-12 intervals resulted in large and psychometrically important

increases in reliable scale variance. The increases no doubt in part reflect improved verbal comprehension skills, however, the influence of this factor is thought to be slight since these same students apparently had little problem comprehending the equally difficult C.O. Scale items. The majority of the increase in R.W.A. Scale internal consistency is probably due to increased psychological organization of their social attitudes which comes as a result of formal and informal education.

Given this explanation the failure to find continued increases in the organization of this ideology during the Grade 12-Graduation period is somewhat problematic; especially in light of previous research findings which have found regular increases with years of education well into the university years. Several speculations can be offered. Firstly, the shorter Grade 12-Graduation interval (six months as opposed to 10) may not have been sufficient time to tap organizational increases. It may not only be time however; the summer holiday period, which these students did not go through before retesting, may be an important period for reflecting, integrating, and organizing newly learned concepts and ideas into students' social attitudes.

It would appear then that right-wing authoritarian attitudes are not well organized at Grade 10 and that the evidence from the longitudinal data gives partial support to the hypothesized increase in R.W.A. Scale internal consistency as years of education increase.

Summary and Conclusions

This research sought to empirically investigate stability and change in the religious beliefs and right-wing authoritarian attitudes

of middle and late adolescents. In addition the possibility of a "causal" connection between changes in these variables was explored.

With regard to orthodox Christian beliefs the evidence indicates that while change is occurring in one direction or the other at the individual level (especially for males) there is no overall tendency in either direction. Thus, the high school years are marked by group level stability. Further, the data indicated that females were more orthodox in their beliefs than males and subsidiary analysis indicated that this may be due to greater submissiveness and conformity to the parent's values on the part of females, or to sex-role modelling.

Exploration of the organization of orthodox Christian beliefs indicates that while it still may be increasing at Grade 10 and 11 the ideology is a highly organized one among this population. In light of the explicit and formal training given to these beliefs and the fact that they permeate all of our culture this is not surprising.

As was the case with orthodox Christian beliefs the level of right-wing authoritarian attitudes was marked by stability over the high school years. Again, while individual change again occurred the influence of those who rose or fell cancelled out. The level of authoritarianism, unlike that of Christian orthodoxy, differed at the testing sites however, with rural students being more authoritarian than urban. Item analysis indicated that this difference was primarily due to the greater conventionality of the rural population. Thus while students in both communities were equally "Christian" ideologically; there were significant differences in their attitudes toward sex, sex roles, personal modesty, et cetera. The finding illustrates the importance of conceptually separating religiosity and authoritarianism.

Evidence gleaned in this study indicates that right-wing authoritarian attitudes are not well organized among this population. However, there was a statistically significant indication that this organization was increasing over time for the Grade 10 and 11 students.

Explorations of "causal priority" between these variables yielded no evidence that changes in religious beliefs, or in right-wing authoritarianism reliably preceded changes in the other.

Evidence in support of the null-hypothesis is subject to a variety of interpretations. But if it cannot be attributed to poor measuring instruments or methodological errors it has at least the effect of questioning the generality of previous findings or the reasoning and assumptions on which the hypothesis was based. The evidence presented above is thought to reflect accurately the variable parameters and thus represent the "truth" of the matter for this population at one point in time.

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APPENDICES

ATTITUDE SURVEY

This survey is part of an investigation of general public opinion concerning a variety of religious issues. You will probably find that you agree with some of the statements, and disagree with others, to varying extents. Please mark your opinion on the line to the left of each statement, according to the amount of your agreement or disagreement, by using the following scale:

Write down a -3 in the space provided if you strongly disagree with the statement.
 -2 in the space provided if you moderately disagree with the statement.
 -1 in the space provided if you slightly disagree with the statement.

Write down a +1 in the space provided if you slightly agree with the statement.
 +2 in the space provided if you moderately agree with the statement.
 +3 in the space provided if you strongly agree with the statement.

If you feel exactly and precisely neutral about an item, write down a "0" in the space provided.

1. _____ Jesus' divine mission was to die on the cross to save sinners.
2. _____ Man is not a special creature made in the image of God; he is simply a recent development in the process of animal evolution.
3. _____ God sometimes suspends natural laws to perform miracles.
4. _____ In all likelihood there is no such thing as a God-given immortal soul in Man which lives on after death.
5. _____ The only real result of prayer is the comfort one may get from saying it.
6. _____ There is a Hell full of everlasting suffering to which the wicked will go after they die.
7. _____ One thing which Christians have in common is that, regardless of which church they belong to, they are seldom very Christian outside the church.
8. _____ Those who feel that God answers prayers are just deceiving themselves.
9. _____ The Bible may be an important book of moral teachings, but it was no more inspired by God than were many other such books in the history of Man.
0. _____ The idea of God was created by Man because of his insecurity in the universe and his wonder at the mystery of life.
1. _____ Jesus Christ was the divine Son of God.
2. _____ It is ridiculous to believe that Jesus Christ could be both human and divine.

-3 = strongly disagree
 -2 = moderately disagree
 -1 = slightly disagree

+3 = strongly agree
 +2 = moderately agree
 +1 = strongly agree

0 = neutral

13. _____ Jesus was crucified, died and was buried but on the third day He arose from the dead.
14. _____ Jesus was not simply sent by God; He was and is God.
15. _____ The "miracles" described in the Christian religion can be explained by natural causes (like eclipses) or as exaggerations of events into folk myths.
16. _____ The Resurrection proves beyond a doubt that Jesus was the Christ or Messiah of God.
17. _____ The idea of a final judgment day is used basically to scare people into becoming Christians.
18. _____ There is no such thing as a Holy Spirit which comes upon people and gives them unusual powers.
19. _____ Lots of religions have "resurrection-from-the-dead" stories but there is no reason to believe any of them is true.
20. _____ There is no such thing or person as the Devil.
21. _____ Jesus was born of a virgin.
22. _____ My faith in God is complete for "though He slay me, yet will I trust Him".
23. _____ Prayer is sacred communion with God.
24. _____ Since the Biblical stories often go against reason and common sense they can hardly be the inspired words of God.
25. _____ Someone with "Christian faith" is actually someone who believes a lot of things that don't make any sense.
26. _____ God exists as: Father, Son, and Holy Spirit.
27. _____ God made man of dust in His own image and breathed life into him.
28. _____ Christ will return to earth in physical form someday.
29. _____ The Resurrection story was only a way of expressing the hope that there is a life after death and it is almost certainly not true itself.

-3 = strongly disagree
 -2 = moderately disagree
 -1 = slightly disagree

+3 = strongly agree
 +2 = moderately agree
 +1 = slightly agree

0 = neutral

30. _____ The record of the Gospels proves beyond a doubt that Jesus was the Son of God.
31. _____ Religions should spend less time bringing "salvation" to sinners and more time performing definite acts of kindness and generosity in the community.
32. _____ Placing a lot of faith and trust in God is a pretty risky way to approach life.
33. _____ The Gospel of Christ is the only way Mankind can be saved.
34. _____ There is no convincing evidence that someone named Jesus really lived, died, and arose from the dead about 2,000 years ago.
35. _____ Jesus walked upon the water while His disciples waited for Him in their boat.
36. _____ It is far better to love thy neighbor for the sake of Mankind and human generosity than to love him for God's sake.
37. _____ Despite what many people believe, there is no such thing as a God who is aware of Man's actions.
38. _____ God took a human form in Palistine about 2,000 years ago to suffer and die for Mankind.
39. _____ The idea that there is a God, who created the whole universe, but who came to this planet, and was born of a virgin, performed many miracles, but who allowed himself to be killed to save Mankind, but who arose from the dead, left this earth, yet will come again to judge all men and take some to everlasting happiness with him is, in a word, preposterous.
40. _____ The more scientific discoveries that are made the more the truth of the Gospels is revealed.
41. _____ Life is ultimately misdirected and meaningless for the person who does not believe in God.
42. _____ Most of the religions in the world have miracle stories in their traditions; but there is no reason to believe any of them are true, including those found in the Bible.
43. _____ When the Biblical account of creation conflicts with the teachings of science, the Bible should give way.
44. _____ One's first goal in life as a Christian ought to be integrity, self-sacrifice, and service to Mankind, not "salvation".

-3 = strongly disagree
 -2 = moderately disagree
 -1 = slightly disagree

+3 = strongly agree
 +2 = moderately agree
 +1 = slightly agree

0 = neutral

45. _____ The New Testament story of how Jesus brought Lazarus back to life simply cannot be true.
46. _____ True prayer is always answered by God, in the way that is best for the person.
47. _____ Religions which are not based on the Old and New Testament are misguided and a threat to true Christianity.
48. _____ Jesus Christ may have been a great ethical teacher, as other men have been in history. But he was not the divine Son of God.
49. _____ If Jesus of Nazareth actually existed, he must have been conceived by a human mother and a human father.
50. _____ Prayer is of value because it may make the person praying feel better; but no one actually hears and answers prayers to God.
51. _____ There is really no reason to hold to the idea that Jesus was born of a virgin. Jesus' life showed better than anything else that he was exceptional, so why rely on old myths that don't make sense.
52. _____ Prayer is useless, and can even be harmful because people who are hoping for God's help are not facing their problems very realistically.
53. _____ The concept of God is an old superstition that is no longer needed to explain things in the modern era.
54. _____ The Holy Spirit gives people powers that are beyond their natural ability.
55. _____ There will be a day of judgment when God will take the saved with Him into Heaven and cast the damned into everlasting Hell.
56. _____ None of the Christian religions around today is really doing the work Jesus intended.
57. _____ There is no such thing as eternal life after physical death.
58. _____ There is a personal God who is concerned with everyone's actions.
59. _____ The Bible contains so many factual errors, contradictions and myths that it is foolish to put much faith in its account of how things really happened back then.
60. _____ The idea that God is composed of three different entities (the Father, Son, and Holy Spirit) which are actually all the same thing is clearly contradictory and should not be believed.

-3 = strongly disagree +3 = strongly agree 0 = neutral
 -2 = moderately disagree +2 = moderately agree
 -1 = slightly disagree +1 = slightly agree

61. _____ The story that God stopped the sun in the sky in answer to Joshua's prayer is not to be taken seriously.
62. _____ People should abstain from work on the Sabbath because it is against the Commandments.
63. _____ Jesus' death on the cross, if it actually occurred, did nothing in and of itself to save Mankind.
64. _____ If there ever was such a person as Jesus of Nazareth, he is dead now and will never walk the earth again.
65. _____ The Ten Commandments ought to be the most fundamental laws in our nation; nothing should be allowed to contradict them.
66. _____ The advance of science has shown that many of the things in the Bible are merely primitive myths and untrue.
67. _____ Jesus miraculously changed real water into real wine.
68. _____ There is no survival of any kind after death.
69. _____ It is always better to trust the judgment of the proper authorities in government and religion, than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds.
70. _____ People should pay less attention to the Bible and the other old traditional forms of religious guidance, and instead develop their own personal standards of what is moral and immoral.
71. _____ Women should always remember the promise they make in the marriage ceremony to obey their husbands.
72. _____ Our customs and national heritage are the things that have made us great, and certain people should be made to show greater respect for them.
73. _____ Capital punishment should be completely abolished.
74. _____ When you get right down to it, there's really no reason to play the national anthem before football games, etc. Such superficial displays of patriotism have little to do with what it really means to be a citizen of our country.
75. _____ The facts on crime, sexual immorality, and the recent public disorders all show we have to crack down harder on deviant groups and troublemakers if we are going to save our moral standards and preserve law and order.

-3 = strongly disagree
 -2 = moderately disagree
 -1 = slightly disagree

+3 = strongly agree 0 = neutral
 +2 = moderately agree
 +1 = slightly disagree

76. _____ Homosexuals are just as good and virtuous as anybody else, and there is nothing wrong with being one.
77. _____ Our prisons are a shocking disgrace. Criminals are unfortunate people who deserve much better care, instead of so much punishment.
78. _____ Obedience and respect for authority are the most important virtues children should learn.
79. _____ A "woman's place" should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past.
80. _____ One good way to teach certain people right from wrong is to give them a good stiff punishment when they get out of line.
81. _____ Youngsters should be taught to refuse to fight in a war unless they themselves agree the war is just and necessary.
82. _____ It may be considered old-fashioned by some, but having a decent, respectable appearance is still the mark of a gentleman and, especially, a lady.
83. _____ In these troubled times laws have to be enforced without mercy, especially when dealing with the agitators and revolutionaries who are stirring things up.
84. _____ Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.
85. _____ Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.
86. _____ Rules about being "well mannered" and respectable are chains from the past which we should question very thoroughly before accepting.
87. _____ The courts are right in being easy on drug offenders. Punishment would not do any good in cases like these.
88. _____ If a child starts becoming a little too unconventional, his parents should see to it he returns to the normal ways expected by society.
89. _____ It's one thing to question and doubt someone during an election campaign, but once a man becomes the leader of our country we owe him our greatest support and loyalty.
90. _____ People who abuse the flag or who refuse to serve in the armed forces should be treated with tolerance and understanding.
91. _____ There is absolutely nothing wrong with nudist camps.
92. _____ Being kind to loafers or criminals will only encourage them to take advantage of your weaknesses, so it's best to use a firm, tough hand when dealing with them.

-3 = strongly disagrees
-2 = moderately disagrees
-1 = slightly disagrees

+3 = strongly agrees
+2 = moderately agrees
-1 = slightly agrees

0 = neutral

93. _____ It is best to treat dissenters with leniency and an open mind, since new ideas are the lifeblood of progressive change.
94. _____ The biggest reason divorce rates are increasing so much nowadays is because Man is abandoning Divine Law and God's Holy Church.

DEMOGRAPHIC SURVEY

Section A: General Information

1. Age _____
2. Sex: _____ Male _____ Female
3. What Grade are you presently in?
 _____ 10 _____ 11 _____ 12 _____ Other (Specify: _____)

Section B: Religious Information

The following questions deal with your religious background and your present religious beliefs. When "religion" is referred to in the questions, it means an organized, institutional type of religion which might have anywhere from a few to millions of members, rather than an individual's unique personal philosophy of life.

1. In which of the following religions were you raised?
 _____ Protestant (Which denomination? _____)
 _____ Catholic (_____ Roman, _____ Greek, or _____ Ukrainian?)
 _____ Jewish (_____ Orthodox, or _____ Non-orthodox?)
 _____ A religion not listed above (Specify: _____)
 _____ No religion (If no religion, go to question #4.)
2. To what extent would you say your parents emphasized observing the family religion and religious practices as you were growing up?
- 5 _____ a very strong emphasis was placed on religion
- 4 _____ a strong emphasis was placed on religion
- 3 _____ a moderate emphasis was placed on religion
- 2 _____ a mild emphasis was placed on religion
- 1 _____ a very slight emphasis was placed on religion
- 0 _____ no emphasis was placed on religion

3. To what extent would you say you still hold the religious beliefs taught you when you were growing up?
- 5 _____ I am now in complete agreement with the beliefs taught.
- 4 _____ I am now in nearly complete agreement with the beliefs taught.
- 3 _____ I am now in moderate agreement with the beliefs taught.
- 2 _____ I am now in mild agreement with the beliefs taught.
- 1 _____ I am now in very slight agreement with the beliefs taught.
- 0 _____ I now do not agree at all with the beliefs taught.
4. With which religion do you presently identify yourself or think of yourself as being?
- _____ Protestant (Which denomination? _____)
- _____ Catholic (_____ Roman, _____ Greek or, _____ Ukrainian?)
- _____ Jewish (_____ Orthodox or, _____ Non-orthodox?)
- _____ A religion not listed above (Specify: _____)
- _____ No religion.
5. On the average, how often do you now attend formal religious services (not including weddings, funerals, etc.)?
- _____ More than once a week.
- _____ About once a week.
- _____ About once every other week.
- _____ About once every month.
- _____ A few times a year at most.
- _____ Never.

6. During the past year, how frequently have you prayed? (For your own spiritual welfare, not just while attending weddings, funerals, or the like).

_____ Daily or more frequently.

_____ Several times a week.

_____ About once a week.

_____ Once or twice a month.

_____ A few times at most

_____ Not at all.

7. During the past year, how frequently have you read Scriptural or devotional writings? (For your own spiritual welfare, not just while attending weddings, funerals, or the like).

_____ Daily or more frequently.

_____ Several times a week.

_____ About once a week.

_____ Once or twice a month.

_____ A few times at most.

_____ Not at all.

8. Do you have any further comments that you would like to add?

This survey is part of an investigation of general public opinion concerning a variety of religious issues. You will probably find that you agree with some of the statements, and disagree with others, to varying extents. Please mark your opinion on the IBM card attached to this sheet, according to the amount of your agreement or disagreement, by using the following scale:

blacken the bubble labeled -3 if you strongly disagree with the statement.
 -2 if you moderately disagree with the statement.
 -1 if you slightly disagree with the statement.

blacken the bubble labeled +1 if you slightly agree with the statement.
 +2 if you moderately agree with the statement.
 +3 if you strongly agree with the statement.

If you feel exactly and precisely neutral about an item, blacken the "0" bubble.

1. The Bible is the word of God given to guide man to grace and salvation.
2. The only real result of prayer is the comfort one may get from saying it.
3. The advance of science has shown that many of the things in the Bible are merely primitive myths and untrue.
4. Jesus fed a great host of people by miraculously multiplying the loaves and fishes.
5. Jesus Christ was the divine Son of God.
6. The story that God stopped the sun in the sky in answer to Joshua's prayer is not to be taken seriously.
7. Jesus was born of a virgin.
8. God exists as: Father, Son, and Holy Spirit.
9. It is ridiculous to believe that Jesus Christ could be both human and divine.
10. Man is not a special creature made in the image of God; he is simply a recent development in the process of animal evolution.
11. The record of the Gospels proves beyond a doubt that Jesus was the Son of God.
12. Most of the religions in the world have miracle stories in their traditions; but there is no reason to believe any of them are true, including those found in the Bible.
13. Those who feel that God answers prayers are just deceiving themselves.
14. God made man of dust in His own image and breathed life into him.
15. Jesus Christ may have been a great ethical teacher, as other men have been in history. But he was not the divine Son of God.

16. Jesus walked upon the water while His disciples waited for Him in their boat.
17. The concept of God is an old superstition that is no longer needed to explain things in the modern era.
18. There will be a day of judgment when God will take the saved with Him into Heaven and cast the damned into everlasting Hell.
19. Jesus was crucified, died and was buried but on the third day He arose from the dead.
20. The Bible may be an important book of moral teachings, but it was no more inspired by God than were many other such books in the history of Man.
21. True prayer is always answered by God, in the way that is best for the person.
22. Jesus' death on the cross, if it actually occurred, did nothing in and of itself to save Mankind.
23. There is really no reason to hold to the idea that Jesus was born of a virgin. Jesus' life showed better than anything else that he was exceptional, so why rely on old myths that don't make sense.
24. Jesus miraculously changed real water into real wine.
25. The Resurrection proves beyond a doubt that Jesus was the Christ or Messiah of God.
26. Despite what many people believe, there is no such thing as a God who is aware of Man's actions.
27. If there ever was such a person as Jesus of Nazareth, he is dead now and will never walk the earth again.
28. There is a God who is concerned with everyone's actions.
29. In all likelihood there is no such thing as a God-given immortal soul in Man which lives on after death.
30. Christ will return to the earth someday.
31. The Bible contains so many factual errors, contradictions and myths that it is foolish to put much faith in its account of how things really happened back then.
32. God hears all of our prayers.
33. Through the life, death, and resurrection of Jesus, God provided a way for the forgiveness of man's sins.
34. The Bible was written by men as their hand was guided by the Holy Spirit.

ATTITUDE SURVEY

This survey is part of an investigation of general public opinion concerning a variety of religious and social issues. You will probably find that you agree with some of the statements, and disagree with others, to varying extents. Please mark your opinion on the line to the left of each statement, according to the amount of your agreement or disagreement, by using the following scale:

Write down a -3 in the space provided if you strongly disagree with the statement.
 -2 in the space provided if you moderately disagree with the statement.
 -1 in the space provided if you slightly disagree with the statement.

Write down a +1 in the space provided if you slightly agree with the statement.
 +2 in the space provided if you moderately agree with the statement.
 +3 in the space provided if you strongly agree with the statement.

If you feel exactly and precisely neutral about an item, write down a "0" in the space provided.

1. _____ There is a life beyond death.
2. _____ The idea that God is composed of three entities (the Father, Son, and Holy Spirit) is clearly contradictory and should not be believed.
3. _____ There will be a day of judgment when God will take the saved with Him into Heaven and cast the damned into everlasting Hell.
4. _____ The only real result of prayer is the comfort one may get from saying it.
5. _____ God exists as: Father, Son, and Holy Spirit.
6. _____ Man is not a special creature made in the image of God; he is simply a recent development in the process of animal evolution.
7. _____ Jesus Christ was the divine Son of God.
8. _____ The Bible is the word of God given to guide man to grace and salvation.
9. _____ Those who feel that God answers prayers are just deceiving themselves.
10. _____ It is ridiculous to believe that Jesus Christ could be both human and divine.
11. _____ Jesus was born of a virgin.
12. _____ The Bible may be an important book of moral teachings, but it was no more inspired by God than were many other such books in the history of Man.
13. _____ The concept of God is an old superstition that is no longer needed to explain things in the modern era.
14. _____ Christ will return to the earth someday.

-3 = strongly disagree
 -2 = moderately disagree
 -1 = slightly disagree

+3 = strongly agree 0 = neutral
 +2 = moderately agree
 +1 = slightly agree

15. _____ Most of the religions in the world have miracle stories in their traditions; but there is no reason to believe any of them are true, including those found in the Bible.
16. _____ God hears all of our prayers.
17. _____ Jesus Christ may have been a great ethical teacher, as other men have been in history. But he was not the divine Son of God.
18. _____ God made man of dust in His own image and breathed life into him.
19. _____ Through the life, death, and resurrection of Jesus, God provided a way for the forgiveness of man's sins.
20. _____ Despite what many people believe, there is no such thing as a God who is aware of Man's actions.
21. _____ Jesus was crucified, died, and was buried but on the third day He arose from the dead.
22. _____ In all likelihood there is no such thing as a God-given immortal soul in Man which lives on after death.
23. _____ If there ever was such a person as Jesus of Nazareth, he is dead now and will never walk the earth again.
24. _____ Jesus miraculously changed real water into real wine.
25. _____ There is a God who is concerned with everyone's actions.
26. _____ Jesus' death on the cross, if it actually occurred, did nothing in and of itself to save Mankind.
27. _____ There is really no reason to hold to the idea that Jesus was born of a virgin. Jesus' life showed better than anything else that he was exceptional, so why rely on old myths that don't make sense.
28. _____ The Resurrection proves beyond a doubt that Jesus was the Christ or Messiah of God.
29. _____ It is always better to trust the judgment of the proper authorities in government and religion, than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds.
30. _____ People should pay less attention to the Bible and the other old traditional forms of religious guidance, and instead develop their own personal standards of what is moral and immoral.

-3 = strongly disagree +3 = strongly agree 0 = neutral
 -2 = moderately disagree +2 = moderately agree
 -1 = slightly disagree +1 = slightly agree

31. _____ Women should always remember the promise they make in the marriage ceremony to obey their husbands.
32. _____ Our customs and national heritage are the things that have made us great, and certain people should be made to show greater respect for them.
33. _____ Capital punishment should be completely abolished.
34. _____ When you get right down to it, there's really no reason to play the national anthem before football games, etc. Such superficial displays of patriotism have little to do with what it really means to be a citizen of our country.
35. _____ The facts on crime, sexual immorality, and the recent public disorders all show we have to crack down harder on deviant groups and trouble-makers if we are going to save our moral standards and preserve law and order.
36. _____ Homosexuals are just as good and virtuous as anybody else, and there is nothing wrong with being one.
37. _____ Our prisons are a shocking disgrace. Criminals are unfortunate people who deserve much better care, instead of so much punishment.
38. _____ Obedience and respect for authority are the most important virtues children should learn.
39. _____ A "woman's place" should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past.
40. _____ It would be best for everyone if the proper authorities censored magazines and movies to keep trashy material away from the youth.
41. _____ "Free speech" means that people should even be allowed to make speeches and write books urging the overthrow of the government.
42. _____ It may be considered old-fashioned by some, but having a decent, respectable appearance is still the mark of a gentleman, and especially, a lady.
43. _____ In these troubled times laws have to be enforced without mercy, especially when dealing with the agitators and revolutionaries who are stirring things up.
44. _____ Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.

- 3 = strongly disagree +3 = strongly agree 0 = neutral
 -2 = moderately disagree +2 = moderately agree
 -1 = slightly disagree +1 = slightly agree

45. _____ Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.
46. _____ Rules about being "well-mannered" and respectable are chains from the past which we should question very thoroughly before accepting.
47. _____ The courts are right in being easy on drug offenders. Punishment would not do any good in cases like these.
48. _____ If a child starts becoming a little too unconventional, his parents should see to it he returns to the normal ways expected by society.
49. _____ It's one thing to question and doubt someone during an election campaign, but once a man becomes the leader of our country we owe him our greatest support and loyalty.
50. _____ People who abuse the flag or who refuse to serve in the armed forces should be treated with tolerance and understanding.
51. _____ There is absolutely nothing wrong with nudist camps.
52. _____ People who criticize the police for sometimes using improper procedures are forgetting that the most important thing is to get the criminals and troublemakers into jail where they belong.
53. _____ It is best to treat dissenters with leniency and an open mind, since new ideas are the lifeblood of progressive change.
54. _____ The real keys to the "good life" are obedience, discipline, and sticking to the straight and narrow.
55. _____ The "double standard" in sex deserves to be abolished. If it's all right for a boy to have sex before marriage, then there's nothing wrong with a girl doing it too.
56. _____ The biggest reason divorce rates are increasing so much nowadays is because Man is abandoning Divine Law and God's Holy Church.
57. _____ Youngsters should be taught to refuse to fight in a war unless they themselves agree the war is just and necessary.
58. _____ Being kind to loafers or criminals will only encourage them to take advantage of your weakness, so it's best to use a firm, tough hand when dealing with them.

We would now like you to answer some of the statements about religion again, except this time we would like you to answer them as you think your parents would like you to answer them. That is, how would your father and your mother like you to answer these statements.

Write down a -3 if you think the parent would like you to strongly disagree with the statement.

-2 if you think the parent would like you to moderately disagree with the statement.

-1 if you think the parent would like you to slightly disagree with the statement.

Write down a "0" if the parent has not encouraged you to believe one way or the other on the matter.

Write down a +1 if you think the parent would like you to slightly agree with the statement.

+2 if you think the parent would like you to moderately agree with the statement.

+3 if you think the parent would like you to strongly agree with the statement.

Father	Mother
would	would
have	have
me say	me say

1. _____ God exists as: Father, Son, and Holy Spirit.
2. _____ Man is not a special creature made in the image of God; he is simply a recent development in the process of animal evolution.
3. _____ Jesus Christ was the divine Son of God.
4. _____ The Bible is the word of God given ~~to guide man to grace~~ and salvation.
5. _____ Those who feel that God answers prayers are just deceiving themselves.
6. _____ It is ridiculous to believe that Jesus Christ could be both ~~human and~~ divine.
7. _____ Jesus was born of a virgin.
8. _____ The Bible may be an important book of moral teachings, but it was no more inspired by God than were many other such books in the history of Man.
9. _____ The concept of God is an old superstition that is no longer needed to explain things in the modern era.

- 3 = parent would like you to strongly disagree
 -2 = parent would like you to moderately disagree
 -1 = parent would like you to slightly disagree

"0" = parent has not encouraged you to believe one way or the other.

- +1 = parent would like you to slightly agree
 +2 = parent would like you to moderately agree
 +3 = parent would like you to strongly agree

Father	Mother
would	would
have	have
me say	me say

10. _____ Christ will return to earth some day.
11. _____ Most of the religions in the world have miracle stories in their traditions; but there is no reason to believe any of them are true, including those found in the Bible.
12. _____ God hears all of our prayers.
13. _____ Jesus Christ may have been a great ethical teacher, as other men have been in history. But he was not the divine Son of God.
14. _____ God made man of dust in His own image and breathed life into him.
15. _____ Through the life, death, and resurrection of Jesus, God provided a way for the forgiveness of man's sins.
16. _____ Despite what many people believe, there is no such thing as a God who is aware of Man's actions.
17. _____ Jesus was crucified, died, and was buried but on the third day He arose from the dead.
18. _____ In all likelihood there is no such thing as a God-given immortal soul in Man which lives on after death.
19. _____ If there ever was such a person as Jesus of Nazareth, he is dead now and will never walk the earth again.
20. _____ Jesus miraculously changed real water into real wine.
21. _____ There is a God who is concerned with everyone's actions.
22. _____ Jesus' death on the cross, if it actually occurred, did nothing in and of itself to save Mankind.

- 3 = parent would like you to strongly disagree
 -2 = parent would like you to moderately disagree
 -1 = parent would like you to slightly disagree

"0" = parent has not encouraged you to believe one way or the other

- +1 = parent would like you to slightly agree
 +2 = parent would like you to moderately agree
 +3 = parent would like you to strongly agree

Father	Mother
would	would
have	have
me say	me say

23. _____ There is really no reason to hold to the idea that Jesus was born of a virgin. Jesus' life showed better than anything else that he was exceptional, so why rely on old myths that don't make sense.
24. _____ The Resurrection proves beyond a doubt that Jesus was the Christ or Messiah of God.

_____ A religion not listed above (specify: _____)

_____ No religion (if no religion, go to question #4)

2. To what extent would you say your parents emphasized observing the family religion and religious practices as you were growing up?

5 _____ a very strong emphasis was placed on religion

4 _____ a strong emphasis was placed on religion

3 _____ a moderate emphasis was placed on religion

2 _____ a mild emphasis was placed on religion

1 _____ a very slight emphasis was placed on religion

0 _____ no emphasis was placed on religion

3. To what extent would you say you still hold the religious beliefs taught to you when you were growing up?

5 _____ I am now in complete agreement with the beliefs taught.

4 _____ I am now in nearly complete agreement with the beliefs taught.

3 _____ I am now in moderate agreement with the beliefs taught.

2 _____ I am now in mild agreement with the beliefs taught.

1 _____ I am now in very slight agreement with the beliefs taught

0 _____ I now do not agree at all with the beliefs taught.

4. With which religion do you presently identify yourself or think of yourself as being?

_____ Protestant (please circle the denomination)

Anglican

Baptist

Lutheran

Mennonite

Presbyterian

United

Other (please specify _____)

_____ Catholic (please circle the branch)

Roman

Greek

Ukrainian

_____ Jewish (please circle the tradition)

Orthodox

Conservative

Reform

_____ A religion not listed above (specify _____)

_____ No religion

5. To what degree would you say religion now has an influence on your life?

5 _____ religion has a very strong influence on my life.

4 _____ religion has a strong influence on my life

3 _____ religion has a moderate influence on my life.

2 _____ religion has a mild influence on my life.

1 _____ religion has a very slight influence on my life.

0 _____ religion has no influence on my life.

6. To what extent do you feel you can put complete trust in the religious guidance offered by the sources listed below? (Please mark your opinion on the line to the left of each source, in terms of the following scale:

+3 = complete trust

+2 = substantial trust, but not complete trust

+1 = some trust but not very much

"0" = no trust at all.

_____ The Bible _____ The Church

_____ The Pope, when he speaks on matters of dogma.

7. On the average, how often do you now attend formal religious services (not including weddings, funerals, etc.)?

_____ More than once a week.

_____ About once a week.

_____ About once every other week.

_____ About once every month

_____ A few times a year at most.

_____ Never

8. During the past year, how frequently have you prayed? (For your own spiritual welfare, not just while attending weddings, funerals, or the like).

_____ Daily or more frequently.

_____ Several times a week.

_____ About once a week.

_____ Once or twice a month

_____ A few times at most

_____ Not at all.

9. During the past year, how frequently have you read Scriptural or devotional writings? (For your own spiritual welfare, not just while attending weddings, funerals, or the like).

_____ Daily or more frequently.

_____ Several times a week.

_____ About once a week.

_____ Once or twice a month.

_____ A few times at most.

_____ Not at all.

10. Do you have any further comments that you would like to add?

APPENDIX D

ATTITUDE SURVEY

This survey is part of an investigation of general public opinion concerning a variety of religious and social issues. You will probably find that you agree with some of the statements, and disagree with others, to varying extents. Please mark your opinion on the line to the left of each statement, according to the amount of your agreement or disagreement, by using the following scale:

Write down a -3 in the space provided if you strongly disagree with the statement.
 -2 in the space provided if you moderately disagree with the statement.
 -1 in the space provided if you slightly disagree with the statement.

Write down a +1 in the space provided if you slightly agree with the statement.
 +2 in the space provided if you moderately agree with the statement.
 +3 in the space provided if you strongly agree with the statement.

If you feel exactly and precisely neutral about an item, write down a "0" in the space provided.

1. _____ There is a life beyond death.
2. _____ The idea that God is composed of three entities (the Father, Son, and Holy Spirit) is clearly contradictory and should not be believed.
3. _____ There will be a day of judgment when God will take the saved with Him into Heaven and cast the damned into everlasting Hell.
4. _____ The only real result of prayer is the comfort one may get from saying it.
5. _____ God exists as: Father, Son, and Holy Spirit.
6. _____ Man is not a special creature made in the image of God; he is simply a recent development in the process of animal evolution.
7. _____ Jesus Christ was the divine Son of God.
8. _____ The Bible is the word of God given to guide man to grace and salvation.
9. _____ Those who feel that God answers prayers are just deceiving themselves.
10. _____ It is ridiculous to believe that Jesus Christ could be both human and divine.
11. _____ Jesus was born of a virgin.
12. _____ The Bible may be an important book of moral teachings, but it was no more inspired by God than were many other such books in the history of Man.
13. _____ The concept of God is an old superstition that is no longer needed to explain things in the modern era.
14. _____ Christ will return to the earth someday.

-3 = strongly disagree +3 = strongly agree 0 = neutral
 -2 = moderately disagree +2 = moderately agree
 -1 = slightly disagree +1 = slightly agree

15. _____ Most of the religions in the world have miracle stories in their traditions; but there is no reason to believe any of them are true, including those found in the Bible.
16. _____ God hears all of our prayers.
17. _____ Jesus Christ may have been a great ethical teacher, as other men have been in history. But he was not the divine Son of God.
18. _____ God made man of dust in His own image and breathed life into him.
19. _____ Through the life, death, and resurrection of Jesus, God provided a way for the forgiveness of man's sins.
20. _____ Despite what many people believe, there is no such thing as a God who is aware of Man's actions.
21. _____ Jesus was crucified, died, and was buried but on the third day He arose from the dead.
22. _____ In all likelihood there is no such thing as a God-given immortal soul in Man which lives on after death.
23. _____ If there ever was such a person as Jesus of Nazareth, he is dead now and will never walk the earth again.
24. _____ Jesus miraculously changed real water into real wine.
25. _____ There is a God who is concerned with everyone's actions.
26. _____ Jesus' death on the cross, if it actually occurred, did nothing in and of itself to save Mankind.
27. _____ There is really no reason to hold to the idea that Jesus was born of a virgin. Jesus' life showed better than anything else that he was exceptional, so why rely on old myths that don't make sense.
28. _____ The Resurrection proves beyond a doubt that Jesus was the Christ or Messiah of God.
29. _____ It is always better to trust the judgment of the proper authorities in government and religion, than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds.
30. _____ People should pay less attention to the Bible and the other old traditional forms of religious guidance, and instead develop their own personal standards of what is moral and immoral.

-3 = strongly disagree	+3 = strongly agree	0 = neutral
-2 = moderately disagree	+2 = moderately agree	
-1 = slightly disagree	+1 = slightly agree	

31. _____ Women should always remember the promise they make in the marriage ceremony to obey their husbands.
32. _____ Our customs and national heritage are the things that have made us great, and certain people should be made to show greater respect for them.
33. _____ Capital punishment should be completely abolished.
34. _____ When you get right down to it, there's really no reason to play the national anthem before football games, etc. Such superficial displays of patriotism have little to do with what it really means to be a citizen of our country.
35. _____ The facts on crime, sexual immorality, and the recent public disorders all show we have to crack down harder on deviant groups and trouble-makers if we are going to save our moral standards and preserve law and order.
36. _____ Homosexuals are just as good and virtuous as anybody else, and there is nothing wrong with being one.
37. _____ Our prisons are a shocking disgrace. Criminals are unfortunate people who deserve much better care, instead of so much punishment.
38. _____ Obedience and respect for authority are the most important virtues children should learn.
39. _____ A "woman's place" should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past.
40. _____ It would be best for everyone if the proper authorities censored magazines and movies to keep trashy material away from the youth.
41. _____ "Free speech" means that people should even be allowed to make speeches and write books urging the overthrow of the government.
42. _____ It may be considered old-fashioned by some, but having a decent, respectable appearance is still the mark of a gentleman, and especially, a lady.
43. _____ In these troubled times laws have to be enforced without mercy, especially when dealing with the agitators and revolutionaries who are stirring things up.
44. _____ Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.

-3 = strongly disagree +3 = strongly agree 0 = neutral
 -2 = moderately disagree +2 = moderately agree
 -1 = slightly disagree +1 = slightly agree

45. _____ Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.
46. _____ Rules about being "well-mannered" and respectable are chains from the past which we should question very thoroughly before accepting.
47. _____ The courts are right in being easy on drug offenders. Punishment would not do any good in cases like these.
48. _____ If a child starts becoming a little too unconventional, his parents should see to it he returns to the normal ways expected by society.
49. _____ It's one thing to question and doubt someone during an election campaign, but once a man becomes the leader of our country we owe him our greatest support and loyalty.
50. _____ People who abuse the flag or who refuse to serve in the armed forces should be treated with tolerance and understanding.
51. _____ There is absolutely nothing wrong with nudist camps.
52. _____ People who criticize the police for sometimes using improper procedures are forgetting that the most important thing is to get the criminals and troublemakers into jail where they belong.
53. _____ It is best to treat dissenters with leniency and an open mind, since new ideas are the lifeblood of progressive change.
54. _____ The real keys to the "good life" are obedience, discipline, and sticking to the straight and narrow.
55. _____ The "double standard" in sex deserves to be abolished. If it's all right for a boy to have sex before marriage, then there's nothing wrong with a girl doing it too.
56. _____ The biggest reason divorce rates are increasing so much nowadays is because Man is abandoning Divine Law and God's Holy Church.
57. _____ Youngsters should be taught to refuse to fight in a war unless they themselves agree the war is just and necessary.
58. _____ Being kind to loafers or criminals will only encourage them to take advantage of your weakness, so it's best to use a firm, tough hand when dealing with them.

We would now like you to answer some of the statements about religion again, except this time we would like you to answer them as you think your parents would like you to answer them. That is, how would your father and your mother like you to answer these statements.

Write down a -3 if you think the parent would like you to strongly disagree with the statement.

-2 if you think the parent would like you to moderately disagree with the statement.

-1 if you think the parent would like you to slightly disagree with the statement.

Write down a "0" if the parent has not encouraged you to believe one way or the other on the matter.

Write down a +1 if you think the parent would like you to slightly agree with the statement.

+2 if you think the parent would like you to moderately agree with the statement.

+3 if you think the parent would like you to strongly agree with the statement.

Father	Mother
would	would
have	have
me say	me say

1. _____ God exists as: Father, Son, and Holy Spirit.
2. _____ Man is not a special creature made in the image of God; he is simply a recent development in the process of animal evolution.
3. _____ Jesus Christ was the divine Son of God.
4. _____ The Bible is the word of God given ~~to guide man to grace~~ and salvation.
5. _____ Those who feel that God answers prayers are just deceiving themselves.
6. _____ It is ridiculous to believe that Jesus Christ could be both human and divine.
7. _____ Jesus was born of a virgin.
8. _____ The Bible may be an important book of moral teachings, but it was no more inspired by God than were many other such books in the history of Man.
9. _____ The concept of God is an old superstition that is no longer needed to explain things in the modern era.

- 3 = parent would like you to strongly disagree
 -2 = parent would like you to moderately disagree
 -1 = parent would like you to slightly disagree

"0" = parent has not encouraged you to believe one way or the other.

- +1 = parent would like you to slightly agree
 +2 = parent would like you to moderately agree
 +3 = parent would like you to strongly agree

Father	Mother
would	would
have	have
me say	me say

10. _____ Christ will return to earth some day.
11. _____ Most of the religions in the world have miracle stories in their traditions; but there is no reason to believe any of them are true, including those found in the Bible.
12. _____ God hears all of our prayers.
13. _____ Jesus Christ may have been a great ethical teacher, as other men have been in history. But he was not the divine Son of God.
14. _____ God made man of dust in His own image and breathed life into him.
15. _____ Through the life, death, and resurrection of Jesus, God provided a way for the forgiveness of man's sins.
16. _____ Despite what many people believe, there is no such thing as a God who is aware of Man's actions.
17. _____ Jesus was crucified, died, and was buried but on the third day He arose from the dead.
18. _____ In all likelihood there is no such thing as a God-given immortal soul in Man which lives on after death.
19. _____ If there ever was such a person as Jesus of Nazareth, he is dead now and will never walk the earth again.
20. _____ Jesus miraculously changed real water into real wine.
21. _____ There is a God who is concerned with everyone's actions.
22. _____ Jesus' death on the cross, if it actually occurred, did nothing in and of itself to save Mankind.

- 3 = parent would like you to strongly disagree
 -2 = parent would like you to moderately disagree
 -1 = parent would like you to slightly disagree

"0" = parent has not encouraged you to believe one way or the other

- +1 = parent would like you to slightly agree
 +2 = parent would like you to moderately agree
 +3 = parent would like you to strongly agree

Father	Mother
would	would
have	have
me say	me say

23. _____ There is really no reason to hold to the idea that Jesus was born of a virgin. Jesus' life showed better than anything else that he was exceptional, so why rely on old myths that don't make sense.

24. _____ The Resurrection proves beyond a doubt that Jesus was the Christ or Messiah of God.

DEMOGRAPHIC SURVEY

Section A: General Information

1. Age: _____
2. Sex: Male Female (Circle the appropriate answer)
3. What Grade are you presently in?
 10 11 12 Other (specify: _____)
4. In which of the following kinds of communities would you say you have been raised? (Either entirely, or mostly raised)
- _____ Urban - a large city like Winnipeg, or one of its suburbs.
- _____ semi-rural - a town of about 10,000 or so, such as Portage-la-Prairie.
- _____ rural - in a small town (population around 5,000 or so) or on a farm.

Section B: Religious Information

The following questions deal with your religious background and your present religious beliefs. When "religion" is referred to in the questions, it means an organized, institutional type of religion which might have anywhere from a few to millions of members, rather than an individual's unique personal philosophy of life.

1. In which of the following religions were you raised?
- _____ Protestant (Please circle the denomination)
- Anglican Baptist Lutheran Mennonite
- Presbyterian United
- Other (Please specify): _____
- _____ Catholic (please circle the branch)
- Roman Greek Ukrainian
- _____ Jewish (please circle the tradition)
- Orthodox Conservative Reform
- _____ A religion not listed above (specify: _____)
- _____ No religion (if no religion, go to question #6)

2. To what extent would you say your parents emphasized observing the family religion and religious practices as you were growing up?

5 _____ a very strong emphasis was placed on religion

4 _____ a strong emphasis was placed on religion

3 _____ a moderate emphasis was placed on religion

2 _____ a mild emphasis was placed on religion

1 _____ a very slight emphasis was placed on religion

0 _____ no emphasis was placed on religion

3. To what extent would you say you still hold the religious beliefs taught to you when you were growing up?

5 _____ I am now in complete agreement with the beliefs taught.

4 _____ I am now in nearly complete agreement with the beliefs taught.

3 _____ I am now in moderate agreement with the beliefs taught.

2 _____ I am now in mild agreement with the beliefs taught.

1 _____ I am now in very slight agreement with the beliefs taught

0 _____ I now do not agree at all with the beliefs taught.

4. Sometimes parents think their children's friends take them away from the family's religious beliefs. How much would you say your close friends have influenced your acceptance of the family religion?

3 _____ They have "made" me much less accepting of the family beliefs than before.

2 _____ They have "made" me substantially less accepting of the family beliefs than before.

1 _____ They have "made" me somewhat less accepting of the family beliefs than before.

0 _____ They have had no effect one way or the other on my acceptance of the family beliefs.

1 _____ They have "made" me somewhat more accepting of the family beliefs than before.

2 _____ They have "made" me substantially more accepting of the family beliefs than before.

3 _____ They have "made" me much more accepting of the family beliefs than before.

5. If you are now less accepting of your family's religious beliefs than you once were, would you check (✓) below all of the factors that you think made you less accepting. (If you are not less accepting of your parents' religious beliefs, go to Question 6.)

_____ influence of particular teachers in high school.

_____ influence of particular books I have read.

_____ the death of someone important to me.

_____ learning more about the world.

_____ learning more about life.

_____ philosophical doubts about the beliefs I was taught.

_____ conflict over the rightness or wrongness of certain acts (for example, sex).

_____ amount of suffering and injustice in the world in general.

_____ the findings of science.

6. With which religion do you presently identify yourself or think of yourself as being?

_____ Protestant (please circle the denomination)

Anglican Baptist Lutheran Mennonite

Presbyterian United Other (please specify _____)

_____ Catholic (please circle the branch)

Roman Greek Ukrainian

_____ Jewish (please circle the tradition)

Orthodox Conservative Reform

_____ A religion not listed above (specify _____)

_____ No religion

7. To what degree would you say religion now has an influence on your life?

5 _____ religion has a very strong influence on my life.

4 _____ religion has a strong influence on my life

3 _____ religion has a moderate influence on my life.

2 _____ religion has a mild influence on my life.

1 _____ religion has a very slight influence on my life.

0 _____ religion has no influence on my life.

8. To what extent do you feel you can put complete trust in the religious guidance offered by the sources listed below? (Please mark your opinion on the line to the left of each source, in terms of the following scale:

+3 = complete trust
 +2 = substantial trust, but not complete trust
 +1 = some trust but not very much
 "0" = no trust at all.

_____ The Bible _____ The Church
 _____ The Pope, when he speaks on matters of dogma.

9. Usually when people look back over the past school year they see that some parts of their lives have changed while other aspects continue as before. Below you are asked to reflect on changes that might have occurred in your life during the past year.

Please write down a "0" if you think the statement does not apply to you at all.
 "1" if you think the statement applies to you to a slight extent
 "2" if you think the statement applies to you to a moderate extent
 "3" if you think the statement applies to you to a strong extent

OVER THE PAST YEAR I HAVE:

- _____ become more interested in politics and world affairs.
 _____ thought more about my own personal future in terms of career, education, etc.
 _____ gotten more into serious discussions with others about the purpose of life, what is going on in the world, etc.
 _____ become more interested in the problems facing our society.
 _____ tried to organize my ideas and beliefs so that they fit together better.
 _____ read the newspapers and listened to news broadcasts more.
 _____ worked more on a general "philosophy of life" for me.
 _____ read more articles and books on current affairs.
 _____ examined my old opinions and beliefs more to see if they make sense to me today.
 _____ paid more attention to the arguments going on in our society between different groups, organizations, etc.
 _____ compared my ideas about things with those of other people, to see if mine are as good as I thought they were.
 _____ searched my ideas and opinions to see if there are inconsistencies or contradictions in them.
 _____ tried to make sure that there was a good reason for believing all that I believed.

10. On the average, how often do you now attend formal religious services (not including weddings, funerals, etc.)?

_____ More than once a week.
_____ About once a week.
_____ About once every other week.
_____ About once every month
_____ A few times a year at most.
_____ Never

11. During the past year, how frequently have you prayed? (For your own spiritual welfare, not just while attending weddings, funerals, or the like).

_____ Daily or more frequently.
_____ Several times a week.
_____ About once a week.
_____ Once or twice a month
_____ A few times at most
_____ Not at all.

12. During the past year, how frequently have you read Scriptural or devotional writings? (For your own spiritual welfare, not just while attending weddings, funerals, or the like).

_____ Daily or more frequently.
_____ Several times a week.
_____ About once a week.
_____ Once or twice a month.
_____ A few times at most.
_____ Not at all.

13. Do you have any further comments that you would like to add?