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The Findings

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The Findings

Abstract

The evidence on enduring effects of education is provided by 151 discrete questions from American national surveys conducted between 1949 and 1975, which implicated various values in diverse situations. Since the influence of education on each item is examined separately for each of four age cohorts, our detailed findings involve 600 sets of comparisons of values across a series of educational levels. As in the first study, which involved more than a thousand sets of comparisons of knowledge by educational levels, the presentation of such massive evidence creates a dilemma. Compression and condensation are essential to protect the reader from drowning in the ocean of data, but it is also essential to present enough detail to demonstrate the stability of the findings with replicated items and surveys and to show the variations in the patterning of effects on different values, in different situational contexts, for groups educated in different periods, and with aging.

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We have chosen the same modes of presentation and the same tests and indexes of effect we employed in the first study. No one solution to the problems of presentation is ideal, perfectly satisfying both the need for detail and the need for compression and quick understanding. Any single index or statistical test gives some special vantage point for gauging effect but also has some special limitation. To prevent arbitrariness, several tests and indexes have been used and are incorporated into the tables. The lengthy tables, however formidable they appear, are a compromise arrived at after much thought. They provide for the interested reader a substantial portion, *but not all*, of the specific results from the analysis of each of the discrete items. Whatever the disadvantages of this mode of presentation, whatever the limitations of the various indexes employed, the advantage is that effects on knowledge and effects on values have been evaluated by the same procedures, subjected to the same tests, and measured against the same standards. Thus one can readily compare the relative effectiveness of education in the two realms. Summary measures have also been computed and are incorporated into the tables, whenever appropriate, for batteries of items that are homogeneous in content, helping the reader to inspect and comprehend the many pages of details.

In these surveys educational attainment was generally classified in terms of seven fairly refined categories. In one survey, the code provided for only five categories; in several others the classification was so refined that eight or nine categories are distinguishable; in four the exact number of years of education is specified. In our analysis, those who completed high school or college are *always* distinguished from those who did not complete the stage, and apart from the rare exceptions noted in the tables, those who completed eight years of elementary school are distinguished from those with fewer years of schooling. Those with *no* schooling at all are eliminated from almost all our analyses

except the occasional surveys—too few to cause worry—where the original coding did not permit such refinement. At we stressed in our earlier book, this completely disadvantaged group has been so small a component of the white population of the United States during the periods studied that mixing them with those who had some schooling (where this had to be done) adds very little error to the descriptions of those with some elementary school.¹ At higher levels of education, although the refinement of the coding in some of the surveys would have permitted differentiation, we included those who had some vocational or trade school in addition to regular high school with the group of “graduates,” and we treated those who had professional or graduate training in addition to college as “college graduates.” Thus these two groups may in fact reflect the effects of the additional training some of their members received. But, apart from the occasional exceptions noted, the elementary-school “graduates” have had the full benefit of no less than eight years of education, and the least-educated group in the analyses has had at least some schooling.

The measurement of values, or of knowledge in the first study, rarely required such refinement. On most questions the respondent had a choice between two simple answers, one indicating support of the “good” value implicated in the situation, the other its rejection or the endorsement of the “bad” value. However, a third answer, “don’t know,” was permitted and coded. In our earlier study this feature created no perplexity. Although the lack of knowledge could take two different forms—*ignorance*, as revealed by answering “don’t know” to a question of fact, or *misinformation* by venturing a definite, but incorrect answer, in both cases, the respondent clearly could be scored as not knowledgeable. In the current study, the “don’t know” or undecided answer does create some perplexity. Though the respondent has not categorically endorsed the “good” value, neither has he rejected it completely or categorically endorsed the alternative “bad” value. He appears to be wavering, indecisive, conflicted—a reasonable and normal position for individuals confronting complex decisions involving a variety of considerations, where fully supporting one value may require sacrificing something else that is also desirable. Respondents who took such qualified, ambivalent positions are always included in our analyses and in effect assigned an intermediate score.² They are not counted as exhibiting the “good” value, but in the matrix from which the various indexes of effects of education are computed they are not lumped with those who have rejected the good value and thrown their full support behind the “bad” value.

Some may jump to the conclusion that our assessment is in error because these cases are misclassified. Had they been scored at one extreme or the other, depending on whether they were more or less educated we might have drawn an even more positive or more negative conclusion about the effects of education. Some might even argue that the wisest position when facing such conflicts of values is compromise or moderation—to reserve judgment and not

be categorical. Others might argue that halfhearted support for good is no support at all. Our scoring convention seems to us the reasonable interpretation and a conservative practice. We neither add too much to the credit of education nor subtract too much. Fortunately, any misclassifications can create very little error, since only a very small proportion—generally less than 5%—of the samples answered “don’t know” to most of our questions. And since such undecided respondents are not found consistently among either the more or the less educated, as revealed by careful inspection of the matrix on each item, whatever errors have been made are balanced out.³ On any particular item where the problem appears to be of a magnitude and character to deserve attention, it will be noted.

In the tables of basic findings (Appendix C), the first three columns show the prevalence of support for the value implicated in each discrete question among the college graduates, high-school graduates, and elementary-school graduates within the specified age-group and birth cohort. This mode of presentation furnishes the reader much, but not all, of the richness and descriptive detail of the findings. If we had presented such findings for the six or seven levels of education distinguished in the surveys, we would truly have confronted him with an enormous task. If one must choose, it seems more important to show the benefits derived by those who have had the full course at each level. The elementary-school group provides a baseline for assessing the gains from secondary and higher education. By using only graduates, we address the question of the *maximum* enduring effects yielded by those educational experiences.

The figures in parentheses are the bases or numbers of cases used to compute each of the percentages. The reader, of course, will note that the base for estimating prevalence on a discrete item in particular groups is small; this is especially true of the highly educated in the oldest cohort and the least educated in the youngest cohort. However, the replications presented throughout the tables reinforce most conclusions, though occasionally they may leave us in doubt.

The two other modes for testing the effects and presenting the findings are shown in the last two columns of the tables in Appendix C. They compensate for the previous omission of some levels of education but also compress the findings radically. Using the maximum refinement permitted in the particular survey, we tested the relationship between education, over its full range of six levels, and the level of support of the value, as scored over the full range of alternative answers. This relationship is summarized by the two statistics shown. A chi-square (χ^2) test indicates the significance of the difference. The symbols used are “ns” (not significant) when the chi-square value does not reach the .05 level, one asterisk when it reaches .05 but not .01, two asterisks when it reaches .01 but not .001, and three asterisks when it reaches or exceeds the .001 level. In making 600 tests, any investigation is bound to find

a few instances where the differences are so big that they would occur by chance only once in a hundred times, but we have a *great many* tests where such large differences would occur by chance only once in a hundred times or even once in a thousand times. The reader can quickly establish the level of consistency by scanning the column of symbols in the various tables. The symbol "ns" obscures the fact that the chi-square test of the effect of education on a particular item sometimes comes very close to reaching significance. We do not try to make too much out of such discrete findings, and so we evaluate and present each one as "not significant." But since many discrete findings are independent tests of the same hypothesis, based on the very question repeated in another survey or on a series of indicators of the same value from separate surveys, a legitimate overall test made by combining several nearly significant chi-squares, or occasional nonsignificant tests with many significant ones, would have yielded highly significant results. This column in the tables therefore presents a highly conservative picture of the effects of education.⁴ In the text, we will periodically report instances where the combination of chi-squares would lead to a revised and more positive conclusion about the effects of education.

The chi-square test by itself gives no indication of the magnitude or direction of the differences across all the educational levels. This information is provided in the last column of the tables, where we enter the *gamma* (γ), a coefficient of association developed especially for ordinal variables computed for each item over the full range and all the refined levels of education. We shall review this in more detail later, but the reader can see from the first three columns that although the relationships often are not linear, the prevalence of "good" values usually increases as people move up the educational ladder. The gammas convey this; a negative sign indicating the reverse pattern and a coefficient close to zero indicate that the effect of education on that particular variable is negligible.⁵

All the findings, with one exception, are based on questions that implicate values in various concrete situations rather than on direct questions about the desirability of some abstractly stated, highly general pattern of conduct or goal. The one exception is a battery that asked the respondent to *rank* a set of generally stated items in order of their desirability. Such a complex instrument, as previously noted, is not vulnerable to the biases that may afflict a direct simple question where by his choice of answer the respondent can present himself in a good or bad light. These findings are replicated in two surveys from the 1970s, but since they are limited to the one period and based on only one such instrument, they do not have the power of our many other findings. We shall present and dispose of them first, before turning to the much richer and far more generalizable data from the great many questions of the other type.

Hierarchy of Values

Respondents were shown a list of thirteen desirable qualities and asked "which three [were] the most desirable for a child to have." We used only seven of the qualities as criterion measures, selecting these "blindly"—with no knowledge of their relationship to education. These seven were chosen because they represent three contrasted clusters of values. The proper location of two of these clusters in the hierarchy of desirability seems unambiguous, and the third cluster is of special interest.⁶

Table C.1 (Appendix C) presents the replicated results for each of the four age-groups or birth cohorts, using the standard format and the several tests of the enduring effects of education employed throughout our study. The voluminous data may seem confusing at first, but the clarity and consistency in the replicated findings becomes evident as soon as we note the several dimensions implicit in the items. Items 1 and 2, "being considerate" and "being responsible," in contrast with items 6 and 7, "being neat and clean" and "having good manners," recall the old distinction between *morals* and *manners*. There is nothing bad or wrong about any of these qualities; but to elevate the latter pair to high rank in such a hierarchy is surely to place too great a value on the superficial. To elevate the former pair is to show a proper concern for the moral foundations of conduct.

Inspecting the first three columns in the table, we see that high-school graduates are somewhat more likely and college graduates far more likely than elementary-school graduates to regard these moral values as ranking high in importance. By contrast, items 6 and 7, especially "good manners," are far more likely to be given elevated rank by the least educated and are least likely to be elevated by the college graduates, though there are occasional inversions in the pattern. The pattern is stable in the two surveys, is characteristic of all age-groups, and persists up to age seventy-two. Inspection of the last column of the table shows that the sign of the gamma is positive in all sixteen tests in the sphere of morals and, by contrast, is *negative* in all sixteen tests in the sphere of manners. The magnitude of the coefficients, though not high, is not insubstantial. With too few exceptions to worry about, the chi-squares in the former sphere are significant. In the latter sphere, especially on item 7 and taking account of the combined results, the findings are significant for the three younger groups and up to age sixty. For those over sixty, the tests are not significant. It must be stressed that throughout this and the earlier study the much smaller size of the sample of the very old and the very small size of some of the cells among them may account for the more frequent nonsignificant chi-squares. However, the gammas provide another source of evidence on the pattern among the very old, and if they are positive and of magnitude similar to those for other age groups, they protect us from jumping too quickly to negative conclusions about effects among the very old.

Thus far education seems to have enduring effects in establishing a good hierarchy of values—in placing morals and manners in their proper places. Yet the evidence when we turn to item 5 in the table, “honesty,” may seem contradictory. Certainly, honesty is a virtue, and it should be valued highly by all who are concerned with morals. The first three columns clearly show that one does not need much education to learn to put honesty in its proper high place. In five of the comparisons the high-school graduates are the most likely to rank it highly, and in the other three the elementary-school graduates are the most likely.

The finding is not surprising, and from one point of view is not contradictory. Honesty is such an obvious and old-fashioned virtue that anyone can learn to value it without benefit of formal education. In fact, across the nation in both surveys, honesty was placed among the three most desirable qualities more frequently than any of the other *twelve* qualities and, on the further probe, it was far and away most frequently described as the “most desirable of all” the qualities. Inspection of the table will show that among college graduates, too, honesty is more likely to be ranked among the top three than are being considerate or responsible. The lesser educated are more likely to give honesty high rank simply because for them it is *preeminent*, whereas among the highly educated it is *sometimes* pushed out of high place in the hierarchy by other values regarded as equally or more important. In no sense does it mean that the highly educated regard it as *unimportant*. In fact, only one solitary college graduate in the 1973 survey ranked it as one of the three least important qualities, and in the 1975 survey only two college graduates responded in that fashion. If one examines the pattern over all the refined levels of education, one can see in the last column that the signs vary and the relationship of education to the ranking of honesty is not statistically significant in half the tests. In the significant instances, the gammas are low, suggesting little or no relationship.

The cluster of values represented by items 3 and 4 were included to test whether *intellectual* values become elevated among those who have the benefit of more education. Our view was not that qualities of mind should take precedence over qualities of character in the hierarchy of values; although their proper placement is moot, our own curiosity led us to test this hypothesis. According high rank to the intellect is more prevalent among the educated, and with one exception the sign of the gamma is positive. But a few of the coefficients are close to zero, and the chi-squares are predominantly nonsignificant.⁷ This set of findings is surely ironic and interesting, but judges might well differ as to its importance.⁸

We shall not extend this analysis of the hierarchy of values by presenting findings involving controls on other social factors. At best the findings are limited, referring only to one time period and based only on one very special instrument of measurement. They certainly suggest that education has endur-

ing good effects,⁹ but we shall reserve judgment until we examine the very large body of evidence based on many different questions covering a wide range of values and a long span of time. By now the reader is familiar with the standard format and character of the tables, and we turn to that evidence.

Values relating to Civil Liberties

Within the broad sphere of values relating to civil liberties, the many questions cover a variety of situations within which the issue of the liberties of different types of individuals is explored. We turn first to a large set of items that provide the most demanding tests of the support of these values.

Civil Liberties for Nonconformists and Freedom of Information

Table C.2.1 presents evidence from the early 1950s, based on seventeen questions about socialists, atheists, and communists. In items 1–6, however, the individuals were not labeled but were described as “somebody who is against all churches and religions” and as “a person who favors government ownership of all the railroads and all big industries” (see Appendix A for complete wording), so as to reduce ambiguity about the exact type of nonconformity and to eliminate the biases that might arise from an inflammatory symbol. The term “communist” was used throughout items 7–15 and in item 17, with various modifiers like “admitted” and “member” added to give specificity and to introduce shades of meaning, thus testing whether all respondents or certain educational subgroups take special note of the finer distinctions and apply the value differentially.

Subsets of questions (e.g., 1–3, 4–6) refer to the very same nonconformist but vary the situation within which his liberty is at issue, thus providing another test of whether the value is applied differentially. All the situations, however, place the nonconformist in the role of *communicator*—writer, teacher, speechmaker—and thus implicate *two* values. A restraint on the actor’s liberty in turn reduces his audience’s freedom to obtain the information he would have communicated.¹⁰ The observed variation in the liberty allowed the same nonconformist when different audiences are exposed to his messages clearly warrants the inference that the respondents have indeed weighed the value of freedom of information and, perhaps in the spirit of protecting a particular audience, are willing to infringe its freedom.¹¹ By contrast, some of the items in the surveys of the later period, for example whether an atheist should be allowed to *vote*, do not implicate anyone else’s freedoms and are pure measures of support for the value of liberty for the nonconformist.

The findings in the first three columns, when summarized for items 1–9, show that support of the two values implicated is least characteristic of the elementary-school group, somewhat more prevalent among the high-school graduates, and much more prevalent among the college graduates. Within the youngest cohort, on the average, the prevalence of support has increased by more than 40 percentage points. The effect of education diminishes regularly

and dramatically with age, but even among the very old there is a substantial average increase of more than 20 percentage points in the prevalence of the value among the college graduates compared with the least-educated group among their age-mates.¹² Since the contrasted age-groups represent different birth cohorts, educated and developing in different historical periods, we must reserve final judgment on whether *aging* does in fact erode some of the earlier effects of education until we examine the cohort analyses and comparative findings for later periods. It is conceivable that the pattern observed in this particular generation of aged individuals reflects peculiarities in their rearing and education. One might have obtained the same findings if their values had been measured earlier, long before they became aged.¹³ The tentative and *conservative* conclusion is that some of the good effects of education in inculcating these values do wither with age, but clearly a substantial part endures.

Inspection of the percentages for each of the discrete items 1-9 shows a striking consistency in the patterns. Up to age fifty, prevalence of support for the values rises regularly and dramatically with education in all nine tests. In the two older age groups, the differences are smaller and there are occasional inversions in the pattern, but the differences persist on most of the items right up to very old age and are still substantial in magnitude. The statistics in the last two columns show that the pattern is consistent over the full range of education. The chi-squares for ages up to fifty are uniformly and highly significant (with one exception out of 18 tests); the gammas are always positive and are generally of fairly high magnitude, with the exception of two special situations to be noted below. In the two older age groups, the results are usually significant and the gammas positive, but there are some nonsignificant results, one gamma of negative sign, and quite a number close to zero. The gammas usually decline in magnitude with age.

The consistency of the patterns with increasing age and education does not mean that individuals perceive the different kinds of nonconformists in the different situations in exactly the same light. Indeed, everyone—young or old, lowly or highly educated—differentiates sharply between circumstances in which they would apply or deny the values. In their eyes, the atheist is less entitled to his liberties than the socialist, and the admitted communist deserves them least of all. Especially when any of the nonconformists might take on the role of teacher, his liberties shall be denied.¹⁴ Indeed, all the inversions, nonsignificant results, and negative gammas occur in these particular circumstances. It is ironic that even the highly educated, whose experience might have led them to prize academic freedom and the opportunity for college students to learn everything, very rarely apply their values to these particular circumstances. Had we eliminated these special items, the effects of education in the very old would have been much larger and longer enduring. Including these items works to make the overall conclusion conservative. Clearly, neither the lesser nor the better educated apply their values indiscriminately, and the very old seem to make the sharpest distinctions of all.¹⁵

The remaining items in table C.2.1 enlarge the body of evidence, reveal the same basic findings, and show some additional subtleties and occasional blemishes on the pattern of good effects of education. The nonconformist in items 10–12, described in abbreviated form in the table as a “suspected communist,” is, in the detailed wording of the question from the Stouffer survey of 1954, someone who has sworn “under oath that he has never been a communist” but his “loyalty has been questioned before a congressional committee.” Surely he is different from the “admitted communist” described in items 7–9 and implicated in the same three situations. By reasonable standards and taken at face value, he is innocent of nonconformity. The summary findings for items 10–12 juxtaposed to the summary findings for items 7–9 show that all individuals—young and old, more and less educated—make a sharp distinction and extend him far more liberties. And the taint of suspicion, when unfounded, does *not* deter the oldest college graduates from applying the value. There is no decline in effect with age. But the analysis of these discrete items over the *full range* of education does show among the very old that the findings are nonsignificant—that the gammas decline in magnitude. And when an accused communist is cast in the role of *teacher*, the mere accusation washes out the effect of education among the very old, yielding a gamma of zero.

Items 13–15 are drawn from Gallup polls rather than from NORC surveys, but the basic findings are the same. Item 14, asked in 1953, underscores the present purity of the individual by its redundancy: “former members of the Communist Party who have resigned from the party.” Nevertheless, as the chi-squares and gammas reveal, the more educated among the *middle-aged* as well as the very old are no more likely than the less educated to apply the value when the former nonconformist is cast in the role of *teacher*.

Items 16 and 17 in the table show the replicated findings for two questions, repeated in surveys separated by several years during which the climate of opinion was changing. Strictly speaking, the second survey does not represent the early 1950s, since it was conducted in 1957, but the longer interval between measurements creates a more incisive test of the stability of the findings.¹⁶ The better educated are consistently more likely to apply libertarian values. These effects endure, the major exception once again being among the very old, where the 1954 tests show not only an inversion, but also a negative gamma and a nonsignificant chi-square.

The early 1950s, of course, were the period of McCarthyism, and some of the surveys were conducted at the very time, 1953–54, when the senator was at the height of his activities and power. Naturally, everyone was responding in some degree to that current experience as well as reflecting his past educational experiences. But since the situation was constant, the findings can reveal still the *differential* response of various educational and age groupings to that very special stimulus. The findings must be seen in that context, and as we examine similar data for later periods, we shall see whether the effects

observed are greater or smaller, and whether they are generalizable. Surely that was the most trying of times for libertarians, and table C.1 therefore presents the most demanding tests and the most compelling evidence of the good and enduring effects of education in strengthening the values of civil liberties.

Table C.2.2 presents parallel findings from the 1960s, based on seven items contained within two surveys. The first two items again implicate the value of freedom of information for the audience as well as the value of civil liberties for a nonconformist. They are very similar in content and wording to items 2 and 3 in table C.2.1 and, as before, refer to an atheist without invoking that emotional term or label, simply stating that he "admitted in public that he did not believe in God." That the audience implicated in new question 2, "high-school" students, is younger and presumably needs more protection than the college students implicated in the earlier question makes more compelling the new finding of the greater support for liberty among the educated. As the atmosphere changed, support for the values increased dramatically in all segments of the population—young and old, more and less educated. Since the contemporary climate was a constant, impinging on everyone, the new comparisons can reveal the effects of the amount and kind of education this set of birth cohorts received when they entered the schools and colleges a decade later than the earlier set of cohorts and can determine whether the effects endured up to specified stages of aging.

As in the earlier period, on items 1 and 2 education substantially increases the prevalence of support for the values, but the differences once again diminish among the old, especially when the atheist is cast as a *teacher*, where the findings are nonsignificant. Two new items, 3 and 4, show good and long-enduring effects of education in increasing support of the value of civil liberties for an atheist, the differences being large and significant even among the very old. The summary findings for the battery of four items referring to an atheist show that the prevalence of the value increases by more than 50 percentage points, on the average, among the young and by about 30 percentage points among the very old.

A new battery, items 5–7, reveals some of the subtle ways education affects the application of the value of civil liberties. All the groups, no matter what their age or education, regarded members of the Communist party or the Ku Klux Klan or prisoners as less deserving of the right to vote than an atheist. The effects of education are dampened. Nevertheless, *averaging* the findings shows that the more educated are considerably more likely to apply the value of liberty to such special cases and extremist groups. The differences between the levels are smaller but are still substantial among the very old. When the discrete items are examined, however, the more educated manifest a distinctive pattern in the way they apply their usual libertarian values. They are more supportive of extending the right to vote to members of the Communist party and the Ku Klux Klan, although as usual the differences diminish

sharply among the very old. But for prisoners the more educated reverse their usual stance and are more in favor of *curtailing* the right. Whether this represents a sensible distinction or an inappropriate and discriminatory one, blemishing or spoiling the larger pattern of good and enduring effects of education, the reader must decide. Since we will present additional data bearing on such distinctive patterns, one should postpone final judgment.

Table C.2.3 presents parallel findings for the 1970s.¹⁷ Items 1–9 are the very same questions asked by NORC in 1954 and again in 1972 and 1974. The same instruments employed by the same agency in surveys separated by twenty years insure a thorough and rigorous test of whether the effects of education on the values of civil liberty and freedom of information, as applied to the wide range of situations, are uniform across and generalizable to different generations and cycles of education. Following cohorts as they age by means of these comparable surveys and measurements separated by twenty years will provide direct and powerful evidence that can either strengthen or weaken our tentative conclusions about aging. And the general stability of the replicated findings from 1972 and 1974, with the exception of certain discrete findings among the *very old*, establishes that the net effect of sampling and measurement error and of transient conditions at the times of the two inquiries is very small and gives us safe grounds for concluding that any major changes observed in the recent period are not artifacts.

The reliability of the findings for the 1950s is equally critical to such conclusions. The stable findings from the two simultaneous, equivalent surveys conducted by the Gallup Poll and by NORC that composed the larger Stouffer inquiry are presented in table C.2.4. With the exception of certain discrete findings among the oldest cohort, they establish that the net effect not only of sampling and measurement error but also of whatever distinctive practices the particular agencies employed is very small. We turn with confidence first to the basic findings for the 1970s, then to their comparison with the 1950 findings.

In every one of the nine situations, the effects of education, twice tested, are found to be large and enduring in all the groups up to age sixty. Almost always, the prevalence of support increases regularly and dramatically as one moves through the three major levels of education; the chi-squares in all but one of the fifty-four tests involved are significant, and the combined test on that item would have been significant; the gammas are always positive and substantial in magnitude and rarely diminish with aging. This does not mean that the educated apply their values indiscriminately. As was true in the earlier periods, all the groups—the less educated as well as the more educated, the younger and the older—differentiate between situations where the values are more and less applicable, once again making the sharpest separation in situations where the nonconformist is cast in the role of *teacher*. Indeed, the two instances out of fifty-four where either the effects of education are non-significant or the gamma approximates zero involve these special situations.

Among those over age sixty, the prevalence of support for the values usually increases regularly and substantially as one moves across the three major levels of education, but there are a good many instances where findings from the replications are contradictory as well as several nonsignificant tests. The gammas usually are substantial and of about the same magnitude as in the younger cohorts, but there are several instances where the gammas have diminished sharply—notably in situations where the nonconformist is a teacher.

From the many tests it seems reasonable to conclude that the effects of education on these values are large and lasting and to some extent endure into very old age. If we look at the summary findings for items 1–9 presented in the table, which averages out the irregularities on occasional items and replications, prevalence of support rises by 35–45 percentage points as one moves from the least to the most educated members in all four cohorts. It is also clear from the summary data, looking down each column, that prevalence of the value declines when one compares older individuals with younger ones of the *same* educational level. Aging *as such* thus seems to have a depressing effect on the value, but this process in no way destroys the effects of education. Since the decline occurs among the older at all three levels of education, the *difference* between the levels is preserved and persists even among the very old.¹⁸

As we noted in discussing similar findings for the 1950s, one must be cautious in concluding from one such analysis that aging has a depressing effect. Once again let us stress that the older group in table C.2.3 is not the same cohort as the younger group, measured at a later stage of life. They are a different generation, and their lesser support of the values may reflect particular educational and other experiences during their development rather than their aging. But since that decline also characterized the older groups in the 1950s, especially their more educated members, as well as the older groups in the 1970s—generations separated by twenty years—it seems unreasonable to try to explain away the decline with aging as due to the peculiar experience of a particular generation. By juxtaposing the summary findings for items 1–9 in table C.2.1 and table C.2.3 we can observe the uniformity of the process: in the 1950s, the marked decline with aging occurred essentially among the better educated. (The least educated among the young started out so close to the floor that very little further decline in the values could set in with aging.) We should withhold final judgment until we make more precise analyses based on exactly comparable age-groupings, take account of floor and ceiling effects, and trace specific cohorts as they age. Tentatively the conservative conclusion is that some of the effects of education on these values decline with aging, but a substantial portion endures far into old age.¹⁹

Tables C.2.5–6 present a series of refined comparisons, all strictly comparable in their definition of the age and educational categories and in the survey agency involved, that will permit more precise examination of the uni-

formity of the effects of the education gained in different historical periods and of their persistence or decline with aging. In table C.2.5, each tier shows a pair of generations that have reached the same age but that were educated in different historical periods. For example, in the first tier, all respondents have reached ages thirty to thirty-nine, but the two generations were born twenty years apart. To be sure, to catch different birth cohorts or generations when they have reached the same age, the measurements must be made at different times, and the different circumstances at the times of measurement may have influenced the responses. But fortunately this has not obscured the findings and can be taken into account.

The top half of the table shows the prevalence of support over the battery of nine items on civil liberties and freedom of information. In each of the four pairs of comparisons, the individuals, although of constant age, represent generations who developed and were schooled in different historical periods. Yet the effect of education, whatever its kind, is to increase the prevalence of support by almost the exact amount in three of the four pairs of comparisons. Whichever two generations are examined, the effects become smaller when we examine individuals who have reached older ages; but they surely are substantial even in the oldest age groups examined.²⁰

These conclusions, however, are based on the increased prevalence of the value, expressed in *absolute* terms. The later generation in each of the contrasted pairs was measured in 1974, when support of the value had become much more widespread than in 1954, even among the least educated. Some might argue that the equal percentages do not mean equal effects, when the baselines from which the gains are measured are so different for the two generations. In one respect it is *more* difficult for the most educated in the *later* generation to show a gain, since the least educated score closer to the ceiling. For example, if the value were prevalent among 80% of the elementary-school group, the maximum possible gain from further education would be only 20%, and an observed increase of ten percentage points would be half, or 50%, of the possible gain. By contrast, if only 20% of the least educated exhibited the value, gains of as much as 80% could be registered. In this instance an observed increase of the same absolute size, ten percentage points, would only be one-eighth, or 12.5%, of the possible maximum gain.

By this logic and this index, gains of any given magnitude—even very small ones—deserve and are given greater weight when the baseline is high; that is, when the good value is common among the least educated. But to see the matter this way is to pay attention only to the technical or mathematical implications of the *high* baseline and to ignore its meaning. When the good value is common, anyone who exhibits it is, in a way, simply floating with the tide, being carried along by the prevailing winds of doctrine. Therefore, when the baseline is high, though it may be difficult to register a large gain among the educated, it is certainly not difficult for them to maintain or express the

value.²¹ Why give gains under such conditions any added weight by transforming the percentages?

By contrast, when the value is uncommon, someone who exhibits it is, in a sense, swimming against strong countercurrents—surely a difficult task. To allow that the gain expressed in absolute percentage points under these conditions when the baseline is low can be a large and impressive number seems only fair. In times when it is difficult to maintain and express a cherished value, any gains produced by education deserve special weight. Why discount them by transforming the absolute percentages? We are inclined for these reasons to regard the absolute gain as the more meaningful index of the effects of education. For those who prefer an index of effects adjusted in terms of the different baselines and distances to the ceiling of the contrasted generations, the last column of table C.2.5 provides such an index. Although that index suggests that effects are not equal, it does show that they are substantial no matter which generation is examined, even in the very oldest pair of age groups, although once again there is a decline at that stage.

The bottom half of table C.2.5 compares pairs of contrasted generations, equated in age but separated by a ten-year interval. The measure of effects is the one item about an atheist common to the 1964 and 1974 NORC surveys, the points when the generations were measured. Whichever index is examined, the effects of the education these generations experienced is about equal up to a fairly advanced age, but among the very old—whichever generation they represent—the effects, though substantial, have declined.

Table C.2.6 rearranges the data from the 1954 and 1974 surveys to show the changes in effect as contrasted educational levels age over the twenty-year interval. Two cohorts or generations are tracked through time, the later generation being traced up to age fifty-nine and the earlier up to age sixty-nine. In both instances, of course, the aging has occurred during a particular historical period, and the second measurement was made in the context of the events of 1974. But the historical context is a constant for everyone and does not obscure the comparison between educational levels and the examination of the *differential* changes as the more and less educated have aged and experienced the events of those twenty years. The summary at the bottom of the table, which compresses the findings and averages out the irregularities over the nine discrete items, shows for the more recent generation, those aged thirty to thirty-nine in 1954, that the differences have remained intact up to age fifty-nine. The prevalence of the value increased among the least educated members of this cohort but also increased among the more educated, and the distance between them has not diminished at all. Within the earlier cohort, those already aged forty to forty-nine in 1954, the educational levels have become a bit more alike by age sixty to sixty-nine, but the distance between them is still substantial.

The detailed findings for each discrete item show not only changes in the prevalence of the value with aging of the three major educational subgroups within each cohort, but also changes with aging in the significance of the effects and in the gamma over the *full range* and all refined levels of education. Whatever minor changes have occurred in the prevalence of the value or in the significance of the differences or magnitude of the gammas as these cohorts and the subgroups within them have aged, considering the combined evidence, the effects of education on most of the items have persisted. The only totally negative finding occurs, once again, when a nonconformist—a “socialist”—is cast in the role of teacher. By the time the earlier cohort has reached age sixty to sixty-nine, there is no longer any difference in the prevalence of support, the chi-square is nonsignificant, and the gamma is effectively zero.

These many tests of different types surely provide dramatic and consistent evidence that education has large and lasting effects in increasing support of civil liberties for nonconformists and freedom of information. The skeptic might accept the findings but question our conclusion that education has enduring effects on *values*. He might argue that the answers to such a battery of questions are simply indicative of *self- or group interest*. For example, if the educated are more secular or nonreligious than the less educated and if, for the sake of the argument, we assume that they themselves are more radical than the less educated, then they are merely expressing selfish support for their own liberties and for those who think like them rather than any high-minded, unselfish ideal that liberty is to be valued for its own sake. He might assert that the small changes with aging do not signify any decline in the *value*. The young presumably are more radical than the old, and the differences in support of the liberties involved once again simply reflect the respective interests and ideologies of the young and the old.

Table C.2.7 should allay any such skepticism. In a series of tests, each one duplicated in surveys from different time periods, 1954, 1964, and 1974, the effects of education are examined for groups contrasted in education but equated in their personal sympathies or beliefs. For example, in the first row of the table, one notes that in 1974, among frequent churchgoers, the willingness to allow a speech *against* religion is 39% more prevalent among the most educated than among the least educated; the differences being highly significant and the gamma fairly high. Even in 1954, in the days of McCarthyism, among those who believed communism was a “very great danger,” the prevalence of support for a speech against private ownership increased by 41% as one moved from the least to the most educated.

The consistent evidence from this long series of compelling tests is that education greatly increases support of the value even when it demands that individuals oppose their own sympathies. There are only two instances in the thirty-six comparisons where the combined evidence from the three statistical tests is thoroughly negative; both are in 1954, and again the socialist or communist is cast as a teacher.

Civil Liberties and Due Process of Law for Extremists and Deviants

Findings from a brief battery of questions asked in the 1960s, reviewed earlier, had indicated that the educated were more supportive of the right to vote for members of the Communist party and the Ku Klux Klan. However, everyone was less inclined to apply libertarian values to these extremist groups than to the other types of nonconformists, and the effects of education were dampened and diminished among the very old. In the special case of *prisoners*, the findings took the reverse pattern, the more educated being even *less* supportive of their right to vote than the less educated. Findings from five other questions asked in the 1970s, items 10–14 in table C.2.3, not previously reviewed, strengthen the evidence and cast doubt on the earlier, rather anomalous variation in the usual pattern of effects of education on such values.

Three of the items deal with the liberties of “radical groups”: whether the authorities shall be permitted to search their meeting places without a warrant, spy on their members even though they have not broken the law, or deny them bail and imprison them if they are suspected of inciting a riot. On the average, as the summary shows, and on each of the three items the more educated are much more likely to support the liberties of radicals and protect their rights to due process, but, as before, the differences diminish among the very old and are not significant.

The comparative findings for two questions on whether the police should be permitted to search the home of a *criminal* suspect without warrant and to imprison him without bail (items 13 and 14) test whether the more educated discriminate against criminals and reverse their normal pattern of support of the values involved. Among the old, education has little or no effect, but up to age fifty, and perhaps beyond that stage, the effects of education are certainly positive. The earlier anomalous finding from the one item on prisoners’ right to vote asked in the 1960s thus seems a limited aberration and, at worst, depending on one’s judgment, a minor flaw in the pattern of good and fairly long-lasting effects.²²

Liberty for Public Expression

One final battery of four questions tests the effects of education on values relating to civil liberties in a quite different context. These deal with the rights of members of the *general public*, rather than nonconformists, to express themselves in various ways in an attempt to influence governmental decisions. Three of the items fall within the realm of traditional, conventional acts, ranging from criticizing a decision supported by the majority through circulating petitions, to “holding peaceful demonstrations”; the fourth item is in sharp contrast and asks whether “people should be allowed to block the entrance to a government building for a period of time.”

As table C.2.8 reveals, on the average and for each item 1–3, when such liberties take a conventional form, support increases substantially and sig-

nificantly among the more educated, though the effects are smaller and occasionally not significant among the very old. But when the value is applied in the service of the unconventional, extreme act of blocking a building entrance, the pattern is sharply different, as is shown in item 4 in the table. In 1971 hardly anyone—young or old, more or less educated, supported such liberties. The differences between educational groups are not significant, but the gammas computed over the full range of education show that education in fact has an *inverse* effect. This reversal of the general pattern surely shows that education does not lead to an indiscriminate endorsement of all kinds of liberties. Some may weigh the finding differently, arguing that by this acid test the educated have faltered and fallen short of full support of the value of civil liberties. Unfortunately, these data were available only for the one survey in the 1970s, and there is no evidence on the uniformity and generalizability of this particular pattern in other periods and for other generations.

Controls on Other Factors

These many positive findings, showing large differences between educational groups that endure even into old age, should not be accepted as evidence of the effects of education on these values until we control other major factors and find that the differences persist. On every one of these items, as we noted in chapter 1, we have controlled the series of antecedent variables found to be the major social determinants of educational attainment, which might thus have accounted for the values, then reexamined the differences between educational groups. The findings on values relating to civil liberties are presented in table D.1 in Appendix D. In this and in the later tables that relate to other values, the top section summarizes the results of all the discrete tests where the contrasted educational groups were equated on each of six antecedent factors—sex, ethnicity, and social, residential, regional, and religious origins.²³

And as we also noted in chapter 1, two other major determinants of educational attainment—race and birth cohort—were automatically controlled by the basic procedures routinely employed in all the initial analyses of the effects of education. In the initial analyses of the surveys from the 1970s, the factor of ethnicity was also automatically controlled because about 97% of the white respondents were native-born. Since the contrasted educational groups were almost completely homogeneous in this respect to start with, there was no need for any special control over the variable in the tests from this period. Thus, in the twenty-one tests of the effect of education on civil liberties values in the surveys from the 1970s, previously shown in table C.2.3, the positive findings on every test for individuals up to age sixty cannot be accounted for by nativity, since that variable was already under control. On top of that, add the dramatic finding summarized in table D.1, that in all fifteen tests specially conducted among individuals who were uniformly of native birth, the differences in values among educational groups remained sig-

nificant and the gamma was substantial. This grand total of thirty-six tests not only protects us from spurious conclusions about the effects of education but also insures that we are examining the effects of *American* education.²⁴ In reviewing the later tables in Appendix D, the reader should apply the same kind of reckoning to the totals entered under the variable of native birth.

The findings from the other long series of controlled tests, summarized in the top section of table D.1, also safeguard our tentative general conclusion about the positive effects of education on values relating to civil liberties. The differences persist in test after test, despite the many controls.²⁵ For example, among males the differences between educational groups remain significant on 51 out of the 53 items tapping these values. Among females, the differences persist on 49 of the items. The gammas on the average are substantial in magnitude for both males and females.

In focusing on the main question of whether the educational effects persist, the reader should not neglect the important question of whether the effects are *differentially* greater in certain social groups, which is also answered in these tables. Such a finding would specify the effects of education more precisely, perhaps circumscribe it, although it would in no way deny its good effects. There are many grounds for entertaining such hypotheses. As a result of their early socialization some groups might be more resistant to the value changes education might initiate, and in later life they might end up in milieus that are more or less conducive to maintaining the values education taught them. Or if higher educational institutions had been more selective in recruiting members from a particular group—for example, women—or if women were exposed to particular types of schools or colleges or subjected to different modes of instruction even when in the same institutions, the effects might well be differential. And since the careers of men and women have often taken different courses and the roles prescribed for them have been different—especially in the generations brought under scrutiny in our surveys—in later life the earlier effects of education might well be dampened for one sex and enhanced for the other.

However plausible this seems, there is relatively little evidence that education has differential effects between men and women. In both groups the effects are almost always significant, and the gammas on the average are of about the same magnitude. One may still argue that the *means* obscure subtle differences. The respective distributions of gammas, showing the effect for each discrete item, could be different and yet yield averages of the same magnitude. The findings from inspecting each of the gammas are also summarized in the table. In about two-thirds of the tests, the coefficients differ by less than .10. In the remaining instances, the higher gammas almost always characterize the men, suggesting a differentially greater effect of education, but the differential even then is not of great magnitude or very common.

The other findings presented in the top section of table D.1 provide little evidence of differential effects except for groups contrasted in religious origins.

The effects are more frequently significant among Protestants than among Catholics; the gamma on the average is higher in magnitude, and over many discrete tests more frequently of higher magnitude. More detailed inspection of the specific items establishes, however, that only in the surveys in the early 1950s did these differential effects occur. Since they characterized individuals of all ages, they cannot reflect the distinctive experiences or education of a particular generation of Catholics or Protestants. It seems that the atmosphere of that historical period somehow had a pervasive effect on Catholics and often diluted or washed out the usual effects of education in strengthening support of civil liberties, for reasons our inquiry cannot illuminate. Whatever the cause, over the much longer span of time examined, the effects of education among both Catholics and Protestants are generally positive and about equal in magnitude.

Having been alerted to the implications of the findings summarized in the top section of this table, the reader will be able to detect from the later tables in Appendix D whether differential effects are peculiar to certain value spheres and whether they occur consistently in certain of the various social groups described. We shall not dwell on the question but shall turn instead to the bottom section of this and later tables, which summarizes the findings when adults contrasted in their past educational attainments are equated on two features of their *current* situation.

These controls serve a different function from the controls on characteristics that are *antecedent* to education. When we control current social class or current residence in analyzing the effects of education, we are not protecting the findings from spuriousness. Current position, since it does not antedate education, therefore could not account for the original findings, except insofar as it reflects earlier regional or social origins. These controls test whether the effects of education endure only under certain conditions of later life. Educational credentials facilitate entry into privileged occupations or into marriages with the more privileged. When we compare adults who are all in relatively low class positions, we are testing whether the values of mature, educated adults can endure despite a fall to disadvantaged status. When we compare mature adults who are all in higher class positions, we are testing whether the less educated can learn particular values merely as a result of their ascent, then maintain them despite their previous educational disadvantage. As table D.1 reveals, there is clear evidence that the effects of education often are dissipated or weakened to some extent among individuals who have ended up in the blue-collar classes. Among those of higher status, the effects are substantial and generally significant.²⁶ Advantaged position thus helps maintain the earlier effects in this value sphere, but it cannot compensate for educational disadvantage, since the differences among those of contrasted education persist and are enhanced under such conditions.

Many of the values examined in this study—for example, racial equality—are not in conformity with the social norms that have prevailed in the South.

The controls on current residence therefore generally test whether the values inculcated by education can survive only when the milieu in later life is friendly to the value or whether they will be retained under conditions that are hostile; thus they are compelling indications of just how powerful a force education can be. These tests show that the effects of education on values relating to civil liberties are significant in almost all instances no matter what the region of residence, and there is no evidence for any differential effects relating to residence in the South or the North.

Freedom of Information

The earlier battery of questions dealing with the freedom of a nonconformist to act as a communicator—speechmaker, writer, teacher—also implicated the value of freedom of information. Each question, of course, specified a particular kind of audience, for example, college students rather than the general public, who would be free to receive a specified kind of controversial information, such as atheistic or socialistic. Although the effects of education were found to be pervasive, spread across the diversity of situations described, the findings also showed that the level and pattern of support for freedom of information depended on the audience and the information to be communicated.

Another question dealing with a different kind of information permits further exploration of the domain within which education affects the value of freedom of information and has the added advantage that it presents the issue in explicit and sharp terms and yields replicated evidence from several time periods. The question asks whether “birth control *information* should be available to *anyone* who wants it.”²⁷ The findings presented in table C.3.1, when juxtaposed to the earlier findings of tables C.2.1–8, show that such information is regarded as far less dangerous than atheistic or radical ideas, and its dissemination is far less controversial. Even in earlier periods, very large majorities of the young and the old, the more and the less educated, favored making the information available. Those who greet these findings with skepticism or surprise should note that the question does not measure whether respondents themselves favor birth control, or want to encourage others to practice it, or want birth-control devices to be distributed, or want compulsory lectures on the topic to be given in high schools, but simply asks whether *information* should be available “to anyone who wants it.” Since a preface informed the respondent that “in some places in the United States it is not legal to supply birth control information,” the question measures specifically the support for people’s being freed from the restraints of law to obtain information if they seek it.

The combined evidence in table C.3.1 on the effects of education on this specific application of the value of freedom of information is equivocal. To be sure, in every one of the twenty tests, the gamma has a positive sign, and the value is more prevalent among the college-educated than among the elementary school group in eighteen of the twenty comparisons. But the replications

often yield inconsistent findings, and the effects of education shown by the increasing prevalence or by the gammas or chi-squares are meager and not significant in a considerable number of the tests. For the moment, the conservative conclusion would be that education has little effect on this particular application of the value of freedom of information. Even if education did not have all-pervasive effects throughout the domain within which the value applies, that would not completely discredit education, and the gross findings presented thus far may be misleading. Almost everyone is in favor of freedom for this particular kind of information, and the high-school graduates had almost reached the ceiling of the instrument long ago. It may be an insensitive test, and it is far from a demanding one. The earlier findings in more controversial areas seem to us to provide more compelling evidence of the effects of education on the value.

Table C.3.2 shows clearly that the initial gross findings were misleading and demonstrates why. It reexamines the effects of education in all the time periods and replicated surveys, separately for Protestants and Catholics. Elsewhere in our analyses, religious affiliation and other variables are introduced as controls to check on the possibility that initially *positive* findings are spurious. Here the variable of religion is introduced to check on the possibility that initially *negligible* or modest findings are misleading. If the positive effects were dampened among Catholics, when the two religious groups were combined in the initial analysis, any large effects among Protestants would be offset and the aggregate findings would be modest or could even be negligible. This turns out to be true in all five surveys. Among Protestants the effects are uniformly significant and substantial. Among Catholics they are uniformly nonsignificant and small in magnitude, and in the earlier period the effects are inverse, with education working upon Catholics to produce a slight *decrease* in the value. Certainly this more refined analysis circumscribes these effects of education, limiting them mainly to those whose conception of the circumstances in which freedom of information should be applied was not shaped by Catholic doctrine. For such individuals, the effects are far larger than one would have realized from the initial findings. Some might conclude that education is not a powerful force in this special instance if it cannot modify a doctrinally fortified position. Others might argue that it is to education's credit that it did not undermine particular beliefs Catholics regarded as right.²⁸

Controls on Other Social Factors

The findings summarized in table D.2 establish that the effects of education on this application of the value of the freedom of information persist when various social factors other than religion are controlled. The refined analysis by religion, just reviewed, establishes that the differences persist when the contrasted educational groups are matched in religion and are Protestant.

Freedom from Legal Constraints in Choosing to Intermarry

Table C.4.1 presents replicated findings in each of three time periods relating to the value of freedom of choice in personal and social relations, as applied to the special situation of whites and blacks who choose to intermarry. The question in the seven surveys used specifically asks whether individuals should be free to choose a partner of different race or should be prevented by law from exercising their preferences. Note that the question does not measure the respondent's (all of them white in our studies) own preferences in a partner or ask whether he would encourage others to choose or avoid such a partner or disapprove or approve of intermarriage. Just as the question in our last section dealt with individuals' freedom not to be hampered by the law in obtaining birth-control information—if *they want it*—here too the question deals only with individuals' freedom not to be hampered by law if they want to intermarry.²⁹

When the Gallup Poll asked the question, a preface remarked, "some states have laws making it a crime for a white person and a Negro to marry," and the respondent who then indicated his opposition was in effect stating that he wished an already established law to be stricken from the statute book. The NORC version of the question did not carry any such prefatory information and simply asked whether "there should be laws against marriage between Negroes and whites." The stability of the results despite this important variation in the wording only makes the findings more compelling.

The effects of education throughout these tests are consistently large and significant and endure into old age, no matter what the time period or generation involved. Of the twenty-four tests presented in table C.4.1, all but one show a marked increase in prevalence of support of the value of freedom from constraints of law in such choices, with a significant chi-square and a sizable gamma.

That education has enduring effects on this application of the general value is shown even more clearly in table C.4.2, where two independent sets of tests, based on the surveys of the two agencies, show changes in the value as a series of cohorts are aged by a number of years into the 1970s, some aging up to their middle sixties. Despite the aging, substantial significant differences persist in every test, and the gammas generally remain as high in magnitude or *increase* with aging.

Controls on Other Factors

Table D.3 summarizes the findings on the effects of education on this value when a series of other factors were controlled. The effects persist in the face of all these controls. The differences between educational levels, matched on other factors, are consistently significant, and the gammas continue to be high. The conclusions are surely not spurious. That differences in support for

individuals to opt for interracial marriage without legal constraints persist among individuals reared and now residing in the South—the site of such laws—suggests how powerful the effects of education are. Once again, as with values relating to civil liberties, there is considerable evidence that the effects of education are differentially greater and more frequently significant among adults in advantaged class positions. Such a situation helps maintain the effects of education but clearly does not counterbalance earlier educational disadvantage.

The Value of Privacy and Protection from Wiretapping

The findings from the various questions already reviewed indicate that education increases support of the values of liberty and freedom for many kinds of people in many—though not all—spheres and their protection from arbitrary laws. Table C.5 presents evidence on support for the value of privacy and for protection from legally instituted wiretapping, drawn from replicated surveys spanning a twenty-five-year period, thus measuring the effects of education for generations educated in contrasted times and subsequently surveyed in strikingly different historical contexts.³⁰ We know from other evidence that a majority of Americans during the 1950s regarded wiretapping as a legitimate institution to protect national security and that substantial support continued until about 1970. In the 1970s, after Watergate, a great many people became sensitive to the abuses of wiretapping and the dangers it presented to the value of privacy, and the climate of national opinion changed. As table C.5 reveals, in every group—young or old, more or less educated—there was a dramatic increase in opposition to wiretapping.³¹ Did education sensitize individuals to the dangers of wiretapping before the flagrant abuses made the dangers obvious to all?

Ironically, the evidence of table C.5 consistently shows, *at best*, that education has had no effect on the value of privacy and protection from wiretapping, neither increasing nor decreasing its support. In every time period, the differences between the educational levels within each generation and at every age are almost always nonsignificant, the differences in prevalence of support for the value are negligible, and the gammas are very low in magnitude.

A depressing conclusion is suggested by the consistently *negative* signs of the gammas, for education seemingly *decreases* support for the value throughout this long span of time. This strange pattern was present even in the 1970s, when it might be construed as a perverse response to the invasion of privacy and the abuses of wiretapping.

Equality of Opportunity for Minorities

A series of questions repeated in surveys conducted both by NORC and by the Gallup Poll over a long span of time measured support of the value of equality as applied to the rights of several minorities to equal opportunity in the social, economic and political spheres. The reader can examine just how reliable and

comprehensive the evidence is, and how far it can be generalized to different spheres, minorities and time periods.

Table C.6 shows the white support for equality of *economic* and *social* opportunity for blacks in surveys in the early and late 1960s. By the beginning of that decade, support of the value was already widespread, and the less-educated groups were relatively close to the ceiling on equality of economic opportunity and fairly close to the ceiling on social equality. By the end of the decade they had moved much closer to the ceiling on social equality. Although this limits the size of the effects that can be demonstrated, one nevertheless observes considerable increase in the prevalence of the value among the more educated and sees the difference between educational levels is as great among the older cohorts, whichever generation they represent, and endures into very old age.³² The gammas are always positive and substantial in magnitude, and they do not decline with age. In light of the combined evidence, the occasional nonsignificant chi-squares, mainly in the very oldest group where the sample size is very small, should be given little weight.

Readers will note that the two questions fall within the broad domain covered by many studies of prejudice. But since they deal with the specific dimension of whether or not a minority should be subject to discriminatory treatment and worse, they implicate the value of equality. By contrast, other traditional areas of study in race relations, such as beliefs and stereotypes about minorities or feelings and preferences about intimacy, contact, or social distance in relation to minorities, cover important dimensions of prejudice but do *not* measure the value of equality or other values of concern to us. They are thus excluded from our studies.³³ Stember's findings indicate that respondents are not simply expressing their diffuse feelings and prejudices in answering our two questions; prejudiced individuals and those who find personal contact with minorities awkward or dislike it may nevertheless support equal rights. In surveys in the 1940s, support of the egalitarian view that employers should hire "the most capable people whether they are Jewish or not" increased markedly with education, 77% of the college group then favoring that policy. But the individual's own preferences about a worker who was Jewish were *unrelated* to education, and 44% of the college group stated that it would make a difference to them if a new employee were Jewish.³⁴

Table C.7.1 presents findings for the late 1950s from a battery of questions on equality of political opportunity for various minorities. The question describes a candidate for the presidency who is a member of a minority group and always specifies that he is "well qualified" and nominated by the respondent's "own party." Rejection therefore reflects only the minority membership and represents a denial of equal opportunity. Support, however, represents more than just an endorsement of the *principle* of equality of opportunity. That could have been elicited by a simple question on whether a minority candidate should be allowed to run, parallel in form to questions in the economic and social realm that asked only whether minorities should have equal

access to public facilities and jobs. This question goes beyond that. The respondents have to commit themselves to vote for the minority candidate, thus overriding any personal prejudices in order to act in terms of the value. Any positive findings should be regarded as compelling evidence of the effects of education.

Support cannot simply be the expression of self- or group interest in these analyses. Since blacks were excluded from all the samples, only whites are answering the questions about a black candidate. Jews are such a tiny component of all the samples that their inclusion cannot affect the findings on the Jewish candidate. By contrast, only Protestants are included in the analysis of findings on the Catholic candidate, and only men in the analysis of findings on a woman candidate, since Catholics and women are sizable groups in the population and thus in the original samples.³⁵

Prevalence of support for the value, as applied to blacks, Jews, and Catholics, increases substantially across the three major educational levels and remains undiminished even in the oldest age groups. Over the full range of education, the effects revealed by the gammas are always positive and, though modest, not insubstantial. The chi-squares, with occasional exceptions, are significant.³⁶

It would be stretching the usual meaning of the term "minority" to apply it to the question about the nonconformist but well-qualified presidential candidate who was an "atheist." This 1959 finding, however, deserves inclusion because it enlarges upon the earlier evidence from the 1950s that the value of civil liberties was often denied to an atheist. In every age group and at every educational level, individuals were far less likely to support the candidacy of the atheist than that of conventional minority candidates. On the basis of the comparative findings, one might say that as recently as 1959 the atheist—as president—was truly anathema. And although the prevalence of support for him increased substantially across the three major educational levels, his candidacy seems too much for even most of the better educated of that period. The gammas are very low, and three out of four of the chi-square tests are not significant.³⁷

The last item in table C.7.1 shows that the value of equality applied to the situation of a woman presidential candidate was already fairly prevalent throughout the male population in the late 1950s. In contrast with the atheist, a woman president was surely not anathema; but, in sharp contrast to all the other findings, the effects of education in this case were negligible. The gammas were as close to zero as they could get; the chi-squares in both cohorts were not significant, and although the prevalence increased between the least and most educated, the difference was relatively small. Surely, here is a flaw in the pattern of diffuse and general support by the educated of the value of political equality for minorities. We shall postpone discussion of the finding until we see how general it is in other periods. But before we pass over it, we should be reminded of what we have observed many times already. Any in-

strument measuring a value that is couched in a general fashion, or any that is formulated in terms of some single specification or application of that value, cannot do justice to the intricate patterning of such values over a variety of situations or provide comprehensive evidence on the effects of education.

Table C.7.2 presents evidence on the same four applications of the value of equality in the political sphere (excluding the case of the atheist), based on replicated findings in the early 1960s. With respect to the three minorities—blacks, Jews, and Catholics—for cohorts up to age sixty, the findings across the replications are very stable, positive, and highly consistent with the findings for the late 1950s. Among those over age sixty the replicated tests are consistent, the gammas showing diminished effects on two of the items and the chi-square tests suggesting no significant effects at all. Again we observe the strange flaw in the pattern of positive effects of education when the value is applied to the situation of a woman candidate, but we shall wait and see what happens in a later period before commenting.

Table C.7.3 presents replicated findings from two surveys in the late 1960s. When juxtaposed to table C.7.1, the later one provides evidence on generations separated by a full decade. For the three minorities—blacks, Jews, and Catholics—the findings, with minor exceptions, are stable across the two replications, are positive, and agree with the findings for earlier periods. Up to age sixty the effects of education are large, and over age sixty, although there is again some suggestion of a diminished effect, the effects are still substantial.³⁸ The consistent findings in the several periods, no matter which generation is involved or what kind of education and other formative experience it had, strongly suggest that education has positive and generalizable effects and that the slight diminution in the very oldest represents the inroads of aging. But surely the overall effects are large and long-enduring for the value as applied to blacks, Jews, and Catholics. Yet when the issue is support for a woman presidential candidate, the strange flaw in the pattern reappears in the late 1960s, taking the anomalous form in two of the tests of a *negative* sign and an inverse effect of education on this application of the value of equality. (The two negative gammas, however, are effectively zero in magnitude, as is a third gamma out of the four tests made.) Let us begin to unravel the mysterious flaw in the general pattern.³⁹

The findings in these three time periods are based on five comparable surveys conducted by the Gallup Poll, the questions being identical in all the surveys. All five surveys were conducted outside an immediate campaign period, making the circumstances comparable. The *sequence* of the items we examined was basically the same,⁴⁰ the question about a woman candidate always being last, after the respondent had expressed himself on the three minority group candidates (whose respective locations in the sequence occasionally varied). But this only makes the incongruity in the pattern more surprising.⁴¹ One would expect the respondents, and in turn the educational groupings, to feel some pressure to make their position on a woman candi-

date consistent with the stand they had already taken on the other three minorities—assuming they defined women as also a “minority.” If they did not see women as exemplifying the general principle of equality for minorities but considered them a special and different case, then of course they would not feel they had contradicted themselves. Perhaps the finding implies that some unknown distinction was being made in the past that freed or diverted the better educated from applying their generally better values—not that the distinction deserves to be honored.

There is another possible explanation for the incongruity, subtle but simpler. For the three minorities, the question always referred to a “generally well-qualified man,” who was then described as a member of the specified minority. But for reasons that defy understanding, the end clause in the question about a woman candidate was either “if she seemed qualified for the job” or “if she qualified for the job” or “if she were qualified for the job.” The change in words and syntax may well have introduced real *doubt* or at least permitted the respondent to entertain doubt about competence. Indeed, it may be especially the highly educated, trained in the subtleties of syntax and sensitive to the conditional or subjunctive mode, in whose minds doubt has been raised. Thus freed from the imperative of acting on egalitarian principles, since a distinction in competence was implied, the appropriate conclusion is that the educated either quite properly withdraw their support or are given a rationale for acting upon whatever prejudices they might hold in this particular matter. This is as far as we can go in our attempts to understand the flaw in the pattern. As we shall see, the findings for the 1970s may add to the mystery, but, whatever its explanation, it is but one exception to a general pattern of large and enduring effects of education in expanding the realm in which the value of equality is applied.

Although they extend the temporal span of our conclusions, we hesitate to present findings from two NORC surveys in the 1970s, each of which included the pair of questions about a woman and a black presidential candidate. For one thing, the change in agency may obscure the influence of time and of the educational and other experiences of the particular newer generations studied. But, more important, the instrument has changed in ways that are subtle but, we now realize, important. The question on a woman candidate is now *first* rather than last in the sequence, the question on the black candidate coming forty or more questions later in the interview. Whereas the Gallup questions are imbedded in an irrelevant context of earlier questions, the prelude to the question on a woman candidate in both NORC surveys was two other questions on whether “women should take care of running their homes and leave running the country up to men,” then a question on whether married women whose husbands are capable of supporting them should be engaged in gainful employment. This certainly heightens the salience of the traditional homemaker role of women and thus perhaps biases the findings on

the woman candidate and makes them less comparable to the Gallup findings.⁴²

Most important is the fact that both of the NORC questions described the candidate, then added the end clause "if she (he) were qualified for the job." NORC thereby remedied the defect in the Gallup battery, where the questions on women versus other minority candidates had differed in syntax. But it paid the price of casting a shadow of doubt over both candidates and making the wording of the NORC question on the black candidate no longer comparable to the Gallup question.

For all these reasons, we are uneasy about how to interpret the newest findings and how to evaluate any changes from the earlier findings. In the spirit of the value of freedom of information, the results are presented in table C.7.4. The replicated findings on the black candidate are highly unstable, sometimes showing large and significant effects, sometimes showing negligible and nonsignificant effects—clearly very different from the long run of consistent and large effects in all the earlier surveys. By the 1970s, even the lesser educated have moved closer to the ceiling, making it more difficult to register effects. The replicated findings on the woman candidate are somewhat unstable but tend, as in earlier periods, not to be significant.⁴³ We shall discount the new findings on a black candidate and conclude conservatively that education has positive, enduring, and pervasive effects on the value of equality of political opportunity, though there is one persistent flaw in the general pattern.

In table C.7.5, using only the comparable Gallup surveys and the two questions on the black and Jewish candidates—the only items for which the entire samples can be used—a series of cohort analyses are presented to provide further evidence on whether the positive effects of education endure with aging. In section A of the table, cohorts are aged by seven years; in section B by nine years, the oldest cohort in both instances advancing far into its sixties. On both items, there had been a trend across the nation in the 1960s toward greater support of candidates from these two minority groups; but, as in earlier cohort analyses, our interest is whether the various educational levels, all equally exposed to these common historical events, show any *differential* change as they age.

In section A the evidence shows unequivocally that there is no decline in the effects of education as cohorts advance into old age. In section B, there is no evidence of any decline of effect up to the point where individuals have reached their late fifties. In the cohort that has advanced up to age fifty-eight to sixty-nine, there is some suggestion of a decline of effect, but the evidence from our three statistical tests is mixed.

Weighing these many positive findings on how education affects the value of political equality applied to the support of well-qualified minority candidates, some readers may question the meaningfulness or validity of the find-

ings. After all, about one-quarter of the population sampled in these surveys did not cast a vote for *anyone* in the elections of the period. Thus it might seem trivial, perhaps meaningless, to analyze whether they would vote for a hypothetical candidate from a minority group. Table C.7.6 thus repeats the earlier analyses but includes only those who reported that they had voted in the previous presidential election. As we noted in chapter 1, such self-reports have high validity. The issue is certainly meaningful for this group, and the triplicate evidence presented shows consistently that the effects of education are both good and large.⁴⁴

Controls on Other Factors

The effects of education on the value of equality of opportunity applied to the situation of the three minorities—blacks, Jews, and Catholics—are not diminished by a series of controls. These tests, repeated on all the surveys before the 1970s, are highly consistent and are summarized in table D.4.⁴⁵ That the educational differences persist among southerners, especially on the item on a black presidential candidate, is compelling evidence that the effects are strong enough to survive in a hostile milieu.

Humane Values

Tables C.8.1–3, C.9, and C.10 present evidence on the effects of education in strengthening humane values. We looked for questions repeated in the surveys of several periods that would be indicators of humanitarianism—of support for practices designed to reduce pain, cruel punishment, deprivation, injury, violence, and suffering. We hoped that education's good works would go beyond inculcating support for the liberties of others, for their freedom from arbitrary constraints, for their equality of opportunity. That might still leave those others in a sorry state. If education also moved individuals toward the goals of reducing the suffering of others, that would be truly an impressive set of good works.

It was very difficult to find such a battery of questions, repeated over time, that measured a broad range of applications of humane values and that reasonable judges would agree were unambiguous measures of humanitarianism. The ambiguity stems not only from the limitations of the survey researchers who designed the questions but from deeper sources. Ironically, in real life desirable measures designed for humane purposes may also have undesirable consequences. Support for the measures we shall analyze—complex in their implications—may be judged by some to represent negative rather than positive effects of education, depending on which facet the judges examine. And the effects of education may turn out to be mixed and confusing, depending on the multiple facts—the pros and cons—that the more educated might perceive and balance in deciding their position.

Allowing Abortion

Tables C.8.1–3 present findings from a battery of questions dealing with the conditions under which abortion should be legally allowed, asked in the early and late 1960s and in the 1970s. The battery described a graded series of circumstances—never less than three but sometimes more—varying in the character and severity of the discomfort or suffering that would be alleviated by the abortion. Clearly, to support the legal right to an abortion for those individuals, *if they wish it*, is to favor reducing whatever burden has been described and to exhibit a humane value. But, just as clearly, in the eyes of some judges, the price paid for allowing that humane act is to condone killing. The latter act—at least in other circumstances—is far from humane. While we cannot resolve all ambiguity in interpreting the array of findings, it should be stressed that the questions *never* ask whether the respondent himself favors the abortion or would encourage others to have it, but only whether it should be legally allowed, if the other parties wish to avail themselves of it to reduce their burdens. And some of the questions describe burdens so severe that very little ambiguity can becloud those particular findings.

Items 1 and 2 in table C.8.1, used and replicated in surveys from the early 1960s and the 1970s, describe extreme situations where the “health of the mother is in danger” or the “child may be deformed.” Abortions under these conditions clearly reduce great suffering and pain and possible death. Given such compelling reasons, to favor legalizing abortion seems close to an unambiguous expression of humane values. Indeed, as far back as the early 1960s, Americans saw little ambiguity in these situations. A very large majority supported the legalization of abortion in situation 1, except those over age sixty, among whom a smaller majority supported the measure. In situation 2 a somewhat smaller, but still substantial, majority supported the measure in the early 1960s. By the 1970s, close to 90% of all adults favored the measure in situation 1 and more than 80% favored it in situation 2, while only 3% remained undecided or conflicted.⁴⁶

The most *recent* findings reveal that education has little or no effect in strengthening the humane values implicated in these two situations. Most of the tests are not significant. The gammas often are close to zero, though positive. Support is not substantially or consistently more prevalent among the more educated. Some might say everyone is so close to the ceiling by the 1970s, and the humane and merciful view of these situations now is so pervasive, that these two items are no longer sensitive indicators. But one cannot explain away the negative findings so easily. The findings on these items in the *earliest* period were also mixed, the effects of education being nonsignificant or negligible in magnitude in many of the tests. For the late 1960s the evidence is stronger, the gammas always positive and larger in magnitude and the prevalence of the values considerably greater among the more educated.

Taken all together, the effects of education on these two specific applications of the value surely are not impressive, albeit not totally negligible. Item 6, included in the battery in the 1970s, provides additional evidence. It describes a third extreme situation where the woman became pregnant as a result of rape. To alleviate the severe, involuntary burden such a mother must suffer also seems a relatively unambiguous criterion of humane values and was considered so by the public. In the aggregate, 80% endorsed the legalization of abortion in such circumstances and only 4% remained undecided. Although some of the chi-squares are not significant, the prevalence of the value as applied to this particular situation increases markedly with education on the replicated tests in all the cohorts, and the gammas are uniformly positive and substantial. Over these three extreme situations, the evidence in the 1970s is still mixed, but the general conclusion is not so tilted in a negative direction.

Item 3, asked in all the periods and replicated in the early 1960s and 1970s, describes the contrasted situation "where the family does not have enough money to support another child." An abortion would reduce deprivation and privation, and supporting its legalization can be construed as an expression of humane values. The circumstances, to be sure, are not as extreme as those described in items 1-2, and outside judges might be split, some regarding the item as an ambiguous criterion. Back in the 1960s, opposition generally prevailed. Although support had increased by the 1970s, those favoring the measure had become just a bare majority in the adult population.⁴⁷

In the early 1960s, the replicated findings certainly provide no evidence that education strengthens the humane values implicated in situation 3 for any of the cohorts. Although most of the gammas are very close to zero, the negative signs may suggest the anomalous conclusion that the educated of that period were *less* sensitive to the plight of the poor family and to alleviating its burden through the avenue of legal abortion. Before advancing any hypothesis, let us look at the later findings. In the late 1960s, by contrast, the evidence is clear that in the two younger age-groups education has significant and substantial positive effects. Among individuals over age fifty, however, the effects are not significant and the gammas are considerably lower, although positive in sign. This pattern is not peculiar to those particular cohorts or generations and reappears in the replicated findings for the early 1970s. Once again, education has significant and substantial positive effects in the two younger age-groups (born about five years later than those measured in the late 1960s). Once again, among those over age fifty the effects are not significant and the gammas considerably lower, although positive in sign. Education has good and marked effects in heightening this application of humane values, but aging erodes some, if not all, of the effects.

Table C.8.2 summarizes the discrete findings for items 1-3, showing the average prevalence of support in each period, for each age-group or generation and the educational levels within it. The averages iron out the irregularity

ties and present a clear, if gross, picture. Education has positive and enduring effects in this sphere of humane values, no matter which generations are examined. But one must not forget that this overall picture obscures the earlier confusing details: the modest or negligible effects on some discrete tests, the instability of the findings on replication, the occasional paradoxical patterns, the declines with aging on certain specific applications of the values, and the fact that all groups—young and old, more and less educated—sharply differentiate the circumstances in which they would apply humane values.

Some of the confusing detailed findings may be clarified, as before, by refined analyses. Table C.8.3 reexamines the effects of education on items 1–3 in all the time periods and replicated surveys, separately for Protestants and Catholics. Once again the separate analyses may reveal why the initial findings on the effects of education were often modest or negligible. If education in some periods had *intensified* the normal doctrinal position of Catholics, making them *less* supportive of the legal right to abortion in some or all of these circumstances, the combined findings would surely show modest effects and perhaps occasionally show the paradoxical form of an *inverse* effect of education. The refined analysis clearly and consistently shows sharply differential effects, positive and substantial among Protestants, modest or negligible or *inverse* among Catholics. The inverse effects (the negative signs) with one exception occur in the earlier historical periods, as one might expect. This analysis again circumscribes the effects of education in this sphere, limiting them mainly to those whose conception of humane values or the circumstances in which they should be applied was not guided by Catholic doctrines. For such individuals, the effects are far larger than one would have realized from the initial findings.⁴⁸

Beginning in the late 1960s, item 4 was added to the battery. It anchors the other end of the scale and describes a situation with none of the dangers or deprivations included in items 1–3, one in which “the parents simply have all the children they want although there are no major health or financial problems involved in having another child.”⁴⁹ However, support for a legal abortion under these circumstances does serve the humane goals of reducing the discomfort, dissatisfaction, and unhappiness an unwanted child brings and maximizing the freedom of choice of the family. Item 5, asked only in the 1970s, states that the “woman is not married and does not want to marry the man.” On top of the burdens contained in situation 4 are the special burdens faced by an unwed mother and an “illegitimate” child.

No group—whether more or less educated, young or old—applies its values indiscriminately to these two special situations, support being far lower on these items than on items 1–3 and 6. But education does increase support. In the late 1960s, the effects on item 4 are substantial in the two younger age groups but decline in those over age fifty, the gammas being considerably lower and the differences nonsignificant. By the 1970s the national trend was toward increased support, but the differences between educational levels per-

sist. Once again, the prevalence of the value increases with education. However, as before, the effects decline among those over age fifty. The findings are consistent in the replicated tests and in the two time periods. A similar pattern of effects is observed on item 5.⁵⁰

So lengthy a battery of items in this sphere, so many tests within and across periods, so many comparisons among age-groups and generations, yield an extensive body of evidence. Understandably, the findings reveal occasional inconsistencies and may create some confusion. The weight of all the evidence, however, leads to the conclusion that education heightens humane values as applied to this special sphere; but often, though not always, the effects diminish after age fifty in the several generations examined. Some of the contrasted generations, to be sure, represent groups born only a few years apart, but other generations compared are separated by as much as a dozen years. There is the possibility that the pattern among the old and very old may be peculiar to a *set* of adjacent generations whose educational and other experiences were relatively similar, but there is enough evidence to entertain the hypothesis that the humane position in these matters, initially strengthened by education, is later undermined by aging.⁵¹

Controls on Other Factors

Table D.5 presents findings on the battery of questions on abortion when various social factors other than religion are controlled. The refined analysis by religion, already presented, establishes that the differences persist when the contrasted educational groups are matched in religion and all are Protestant.

Opposition to Capital Punishment

As we searched for indicators of humane values applied in other spheres, a question on approval or opposition to the death penalty for murder, asked repeatedly in surveys from the 1950s onward, seemed to us a relatively good criterion. The death penalty, in the phrase used by many learned judges, is *cruel and unusual* punishment, and to oppose it therefore seems a clear expression of humane values. Yet some regard such opposition as condoning or encouraging murder. Whatever ambiguity surrounds these findings, however, should be reduced when the findings from a second question are cited.

Over a long period there had been a nationwide trend toward increasing opposition to capital punishment; but in the late 1960s the demand for law and order and severe punishment for criminals produced a sharp reversal of the trend.⁵² As noted in the earlier analyses, since all individuals and groups were exposed to the same atmosphere, any differential response of the contrasted educational groups can be observed.

Table C.9 shows with almost perfect uniformity that education has no effect whatsoever on this application of humane values. On item 1, in all the time periods, all the age-groups or generations involved, and all the replicated tests, the differences between educational groups are negligible and not sig-

nificant, and the gammas are close to zero in magnitude. (A considerable number have a negative sign, but most of these are effectively zero.)

Some may say that the highly educated are being sensible, not inhumane, in favoring capital punishment as much as the lesser educated. Some might even argue that capital punishment deters violent crimes and therefore in the long run the position of the educated is humane. Subquestion 2, asked in variant ways in the early and late 1950s and the early 1960s, weakens this argument. Those who favored the death penalty for a convicted murderer were then asked whether a "teenager" or a "person under 21" should receive the death penalty for murder, special emphasis being given in one version to the possibility that he "should be spared because of his youth."⁵³ Here the humane view would be not to apply such cruel and irrevocable punishment to someone whose youthful actions might have been irresponsible and who might be corrigible. Yet here again, in three sets of tests based on item 2, the effects of education are found to be negligible. These findings reveal another persistent flaw in the pattern of effects of education on humane values.

Gun Control

A question on gun control asked over a long span of time and replicated in the 1970s provides a last measure of humane values. The question refers only to whether there should be a "law which would require a person to obtain a police permit before he or she could buy a gun." Thus it does not infringe the rights of responsible citizens to have guns for hunting or self-protection, but simply records or registers their ownership. By the screening process it insures in some degree that guns will not fall into the wrong hands and thereby serves the humane purposes of reducing violent injuries and deaths. Seemingly, the only ground on which a humane person would oppose it would be the belief that the procedure was totally ineffectual.

In answering the question, of course, all individuals may be responding to the temporary events of the period that would make the issue more or less dramatic as well as expressing their deeper values. But such stimuli are a constant and should not distort any differences between educational levels, and our findings from four surveys spanning fifteen years transcend particular events. In fact, over this long period, with minor exceptions most individuals—young or old, more or less educated—endorsed gun registration.

Table C.10 shows with almost complete uniformity that education has no effect on the humane values implicated in this situation for any of the age-groups or generations studied in the different time periods.⁵⁴ Another flaw in the pattern of effects in this sphere is revealed.

We have now completed our profile of the values of contrasted educational groups and examined whether the good features shaped by education deteriorate with age. We will summarize these findings and consider their implications in our conclusion.