What the GSS Tells Us About Social Change, 1972-1985

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INTRODUCTION

GENERALIZING ABOUT CHANGE IN GENERAL

After 15 years, 12 major surveys, and some 1500 reports and publications it is not amiss to ask "what does this all add up to?" The question is not unfair but it is daunting. Unlike its cousins, the National Election Study and the Panel Study of Income Dynamics, the GSS has no theme. As its name implies, it is deliberately eclectic and it aims to cover the broadest possible range of topics of interest to researchers in that very broad discipline, Sociology. Asking what the GSS adds up to is very much like asking "tell me all about the United States since 1972."

Difficult as the question is, it is also tempting, since the broad scope of the GSS allows us to ask broad questions. For the first time in the history of Sociology it is possible to think about "social change in general" in an empirical rather than arm chair fashion.

In this report I will attack the problem three ways. First, I will simply look at the statistics on rates of change in GSS items asking such simple questions as "How many GSS items showed statistically reliable change?" Second, I will shift from abstract numbers to specific items, a sort of informal content analysis asking "what changed and what didn't?" Finally, I will assess three models (frameworks or theories or paradigms or what you will) frequently used to interpret social change: economic fluctuation, massification and differentiation, and cohort succession.

Prices must be paid for such a broad and grand perspective. First, I must deal with variables statistically rather than one at a time.

Consequently, there will be many, sometimes dozens, of important exceptions to the generalizations. Second, while I have not ignored issues to statistical inference, I had neither the resources nor inclination to make the hundred of precise calculations required to treat each variable in each analysis "by the book". Instead, I applied a number of reasonable approximations and rules of thumb (e.g. assuming for each variable the "design effect" is 1.5). Third, I simply did not have the space to properly cite the dozens of Sociological theorists and research reports from whom I plucked the ideas and findings discussed here. They should be obvious to the specialist and are not crucial for the others. Finally, and perhaps the most difficult problem - "mnemonics". In talking about 243 different GSS items, one can not stop to explain each. Therefore, one is tempted to use the conventional mnemonics (brief tags) in the codebook. Many are obvious (MAWORK is about whether the respondent's mother worked for pay) but others (e.g. CONBUS for confidence in major companies or DOTPRES for <u>Dictionary of Occupational Titles</u> Prestige Score) a good deal less so. I have tried to explain the main mnemonics in the text and in the Appendix each is presented with a descriptive phrase. Needless to say, a GSS codebook is a handy supplement to this essay.

THE 243 ITEMS

While the statistics used here are quite conventional, the data are not. Rather than analyzing GSS respondents (by now numbering almost 20,000 souls) my "cases" will be GSS questions or variables. Thus, the percentages reported will be (mostly) the percentage of items show this and that, the correlations will (mostly) show tendencies for this sort of item to move up or down with that sort of items.

My data base then consists of 243 GSS items (actually mnemonics). I started with 294 mnemonics which, according to the GSS codebook, appeared at least once in the period 1972-5 and also in 1982-85 (most, of course appeared many more times). I then eliminated:

17 filters, which only gave minor detail (e.g. CHLDNUM, which asks those people expecting a child how many they expect).

1 item with extreme marginals (HITMARCH)

4 non-substantive mnemonics (ID, OVERSAMP, SAMPCODE, SAMPLE)

6 items which asked about spouses questions identical to those already asked of respondents (e.g. spouse's hours of work)

12 items giving detail (DOT...) on spouse's and father's occupation.

10 individual items in the GSS vocabulary test.

3 racial items (RACFEW, RACHAF, RACMOST) were combined into a single new item (RACSKOOL), as will be explained later.

The remaining 243 items constitute, for all practical purposes all, non-redundant repeated questions in the GSS.

The statistical pattern: Change is pervasive, steady, and slow

MOST ITEMS CHANGE...........

How much did the U.S. change between the troubled Nixon years 1972-1975 and the upbeat Reagan years 1982-1985? A simple, but not hopelessly simplistic, answer is given by asking how many of the 243 items showed significant (statistically reliable) changes. But even this simple question is not perfectly simple since there are at least two plausible definitions of change:

Change I, Fluctuation: Here we ask whether the year-to-year changes in the (dichotomized) variable exceed the amounts one would expect from sampling fluctuation.

Change II, Trend: Here we ask whether the 1982-85 marginals (sometimes but not always dichotomized) are reliability different from the 1972-1975 marginals.

Change I and Change II are related but they are not exactly the same. Obviously a variable could fluctuate wildly without showing any trend (e.g. temperature over a 12 month period). Less obviously, an item which does not show significant fluctuation across individual years might show a shift when the years are grouped so small changes cumulate.

Table 1 shows the results.

Table 1

Overall Pattern

		Significant Shift 82-85 v. 72-75		
a) Number		No	Yes	
Significant Year to Year Fluctuation	YES	31	140	171
	NO	52	19	71
		83	159	242
				1*
				243 = N
b) Percents		13%	58%	71%
		21%	8%	29
		34	66	100%

*ETHNIC excluded from row variable because there is no plausible way to dichotomize it.

Of 242 items in the table (one, ETHNIC, country of family origin, could not be plausibly dichotomized for Trend I runs), 140 show both forms of change, 52 show neither, and 50 show one but not the other. Percentages make things clearer:

79% of the items showed one or the other change.

71% showed significant fluctuation.

66% show significant trend.

21% showed neither.

Table 1 makes the bare bone case for a GSS. 'The vast majority of the items Sociologists chose to monitor did, indeed, show more than chance change during the GSS years. The stuff of Sociology is clearly not fixed or immutable. The issue here is single variable distributions; whether correlations change, and if so, how much, is another matter. We explore the tip of this iceberg in the final section of this memorandum.

Actually, the 21 per cent which did not change (strictly speaking, those whose change was too small to be detected by our samplings) are interesting and important. Given that almost 80 percent of the items showed some change, it is of striking that favorable attitudes to CANADA fluctuated from a "low" of 95.3% in 1977 to a "high" of 97.0% in 1985 or 10 annual self-rating of HEALTH ranged only from 33.3% Excellent (1985) to 29.9% Excellent (1984). Considering the large N's (8,722 for CANADA and 15,068 for Health) such "stickynesses" should be of theoretical interest to researchers in these areas.

The non-changers also make a methodological point. If we found that all or almost all items showed significant change, we might become suspicious that NORC sampling or field methods were contributing noise over and beyond that predicted from sampling theory. When so many items (52), each based on repeated sampling of some 1500 cases, show stability, this in itself raises our faith that the others are showing true change, not methodologically induced jitters.

BUT FEW CHANGE A LOT...........

With a sample of 12,000 cases, a percentage change of 1 point can be statistically significant. Consequently, statistical significance tells us very little (although its absence, as noted above, can be quite telling). Furthermore, the chi square goodness of fit test, our work horse statistic

here, is highly sensitive to N (sample size and the numbers of categories ("degrees of freedom"). Therefore, for the Change I data, I divided each chi square by its degrees of freedom, years minus 1. (* note: since the items were dichotomized and since each yearly sample is much the same size, this rule of thumb correction compensates for both N and degrees of freedom).

Table 2 shows the distribution of Chi Square/d.f.

	Table 2 Distribution of χ^2/DF	
χ^2/DF	ALL ITEMS	SIGNIFICANT FLUCTUATIONS
172	1	1
104	1	1
75-79	1	1
70-74		
65-69		
60-64		
55-59		
50-54	1	1
45-49		
40-44		
35-39	3	3
30-34	2	2
25-29	9	9
20-24	9	9
15-19	11	11
10-14	27	27
5-9	62	60
0-4	115	46
NA	1	1
N	242	171
MEAN	9.3	12.3
MEDIAN	4.9	7.6
S.D.	15.3	17.3

While the absolute values mean little, the shape of the distribution is informative. For the complete set of 242 and the subset of 171 items showing statistically significant fluctuations the distributions are highly skewed. They tail upwards and the means are considerably higher than the medians, pulled up by the handful of extremely high values. Thus, most of the

variables are concentrated towards the small fluctuation end of the scale

while a few show quite high values. Table 3 lists the mnemonics for the 36

items with the largest scores, those where chi square/d.f. is 16.0 or more.

Table 3

Mnemonic, χ^2/DF, and r square for 36 items with
largest year to year fluctuations

Mnemonic	χ^2/DF	r^2	Mnemonic	χ^2/DF	r^2	Mnemonic	χ^2/DF	r^2
Income	171.8	.98	Egypt	26.8	.66	Commun	21.5	.83
Natarms	104.9	.04	Courts	26.4	.59	Conlegis	20.3	.48
Rincome	76.1	.98	Confinan	25.9	.45	Conpress	20.3	.67
Russia	51.0	.92	News	25.9	.91	Brazil	19.5	.55
Fework	39.3	.80	Anomia5	25.6	.01	Natfare	18.9	.02
Cappun	37.0	.84	Hompop	25.5	.89	Racopen	18.6	.91
Confed	36.4	.06	China	24.2	.69	Fepol	18.4	.85
Aged	32.6	.93	Racseg	23.9	.90	Ticket	18.0	.78
Racpush	30.9	.90	Marital	23.8	.92	Ethnum	18.0	.82
Coneduc	28.5	.42	Conclerg	22.2	.11	Mawork	17.4	.79
Hit	28.1	.79	Fehome	22.0	.83	Fepres	16.6	.64
Uswar	27.2	.01	Helpful	21.7	.10	Madeg	16.2	.94

The table itself is not terribly informative and I reserve discussion

of specifics for the next section. However, here, for the record are the 36

items that show the greatest fluctuation during the GSS years. By this crude

measure, the greatest fluctuator is INCOME (total family income). On this,

more later. For the moment the table merely serves to mark off the items that

stand out from the pack of small fluctuations. Focusing on these most

volatile items....

....AND EVEN THE MOST VOLATILE ITEMS SHIFT STEADILY,

NOT PRECIPITOUSLY....

Next to each fluctuation score in Table 3 we see a value of r square,

the square of the product moment correlation between YEAR and the value of the

dichotomized marginal percentage. The square of r, of course, is the standard

index of how well the relationship can be described by a straight line. Table

4 shows the distribution of r squares in Table 3.

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TABLE 4

Distributions of r^2 values in Table 3 (decimals omitted)

											$\dfrac{N}{}$
90-99	90	90	91	91	92	92	93	94	98	98	10
80-89	80	82	83	83	84	85	89				7
79-79	78	79	79								3
60-69	64	66	67	69							4
50-59	55	59									2
40-49	42	45	48								3
30-39											
20-29	20										1
10-19	11										1
0-9	1	1	2	4	6						5

36

MEDIAN = 79
MEAN   = 64

Table 4 displays another skewed distribution. Most of the r squares are quite high: the median is .79, 28% are .90 or more. Remembering that these are r squares, not r's, the conclusion is clear. The bulk of the "big fluctuators" show a linear pattern. Although the word "fluctuation" implies flopping back and forth, the typical pattern - among the very strongest changers - is one of slow, steady "progress", not precipitous or erratic shifts. Figure 1 shows year by year results for three items with typical r squares (FEWORK = should married women work?, MAWORK = mother's employment since marriage, HIT = ever punched or beaten by another person).

(Figure 1 here)

Figure 1 shows a steady increase in the percentage approving married women's employment, the percentage whose own mother worked after marriage, and

the percent who claim to have been punched or beaten at one time or another.
These three are typical of the 36 strong changers - half of them would show
"straighter" trends, half less straight. Even very high r squares, you will,
note allow exceptions. Each of the three shows one or two dips, some of which
would be statistically significant if one compared adjacent years. As a rule-
of-thumb a 5 percentage point difference between two GSS percentages will be
statistically reliable. Such changes are marked by dashed lines in the
graphs.

Seven striking exceptions to the generalization appear at the bottom
of Table 4. While each shows strong fluctuation (values of chi square/d.f. of
16 or more), their r squares are .20 or less and there is a gap between them
and the others. Of the 243 variables in the analysis these seven stand out
because they (1) show strong fluctuation and (2) show little or no trend.
These items are:

ANOMIA5 = the lot of the average man is getting worse

USWAR = expect U.S. in war within ten years

HELPFUL = are people handful or do they look after themselves

CONCLERG = confidence in organized religion

NATARMS = attitude to spending on welfare

CONFED = confidence in executive branch of federal government

Figure 2 plots the twists and turns of these items.

(Figure 2 here)

The ups and downs for USWAR, NATARMS, and CONFED track well known
political events and trends, the results for ANOMIA5 will be analyzed in
detail later in this essay. As for HELPFUL, CONCLERG, AND NATFARE, your guess
is certainly as good as mine. While the zigs and zags in Figure 2 are

fascinating, the point is that they are not typical at all, the more sedate

inclines of Figure 1 being much more typical of social trends as reflected in

the GSS.

The linearity of GSS change is not limited to the 36 most volatile

items. Table 5 gives r squares for the 171 items with statistically

significant fluctuation, sorted by size of fluctuation (chi square/d.f.)

TABLE 5

Mean and median r square (171 items with significant fluctuations)

| | | | r^2 | |
		N	Mean	Median
χ^2	0 - 4.99	54	40	38
	5 - 9.99	53	38	38
	10 -14.99	26	53	64
	15 +	36	64	79
		169	47	50
NA	2*			
	171			

* < 6 years

The r squares are smaller for the items with smaller fluctuations, but

even those with scores below 5.00 have an average (mean or median) of about

.40. Overall, we get a mean of .47 and a median of .50. Thus, for the GSS

items that show any movement at all, slow steady (linear) increase is the

norm.

....WITH QUITE MODEST SLOPES

Table 6 displays the slopes for the 27 items (among the 36 most volatile) with r squares of .40 or larger.

Table 6

Slopes of 27 Items with Chi Sq/D.f. $\geq$ 15 and r^2 $\geq$ .40

(Stem and Leaf Display)

3.6 - INCOME
3.4 - RINCOME

2.5 - RUSSIA

2.0 - CHINA
1.8 - EGYPT
1.6 1.7
1.4 1.4
1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.3 1.3 1.3
1.0 1.0 1.0 1.1
0.8 0.9
0.7 0.7

Median = 1.43

Mean = 1.21

The biggest number is 3.6: the percentage reporting a family income of $20,000 a year or more increased at the rate of somewhat less than 4 points per year. As suggested by the volatility "score" this is the largest trend in the GSS. However, the mean is 1.21, the median is 1.43, and 20 of the 27 slopes are between 0.7 and 1.4. In other words, the typical slope is about one point per year. Remembering that we are talking about the most striking changers, the items toward the top of Figure 1, the slope data reinforce the theme that change is pervasive but hardly breathtaking.

From a formal statistical point of view, the subheadings review the story crisply:

MOST ITEMS CHANGE.....
BUT FEW CHANGE A LOT...
AND EVEN THE MOST VOLATILE ITEMS SHIFT STEADILY, NOT
    PRECIPITOUSLY...
WITH QUITE MODEST SLOPES...

From a Sociological point of view, these results have at least two
implications for research.

First, they suggest that the short run future is not unpredictable by
any means. There is no money back guarantee on extrapolations of any type
ever, but the gentle linearity of the first GSS decade tempts one to predict
the near future will see more of the same. The exceptions in Figure 2 warn us
against complacency but they are exceptions. Whether there is any "demand"
for such forecasting is another matter.

Second, these results give hints, albeit negative, about the forces
driving social change in modern America. In thinking about sources of change,
dramatic national level events - Watergate, presidential elections, energy
crises, Grenada, the Olympics, etc., etc. - leap to mind, if only because the
media are casual and lavish in announcing national turning points. But the
pervasive linearity in the numbers doesn't "feel" as if they are responding to
isolated dramatic events. It isn't a mathematical impossibility; an isolated
event could set off steady reverberations over a decade. My hunch, however,
is that the forces behind these changes will turn out to be longer run
demographic, economic, or cultural shifts. Exactly what they may be remains
to be seen, and their discovery may not be easy, as we shall see later in this
memo.

Shifting from Sociological research per se, these numbers have
something to tell us about perspectives on social change. It is probable that
social science contributes more by shaping our general perspective on society
than by its specific discoveries. I think it is fair to say that most of us-
professional social scientist, "pop" social scientist, and John Q. Citizen,
view current social change as erratic and explosive. The pop Sociologist
Alvin Toffler (Toffler, Alvin, "The Third Wave", Bantam Books, 1981, p.1) puts
it vividly:

> "A powerful tide is surging across much of the world
> today, creating a new, often bizarre, environment in
> which to work, play, marry, raise children, or retire.
> In this bewildering context, businessmen swim against
> highly erratic economic currents; politicians see their
> ratings bob wildly up and down; universities, hospitals,
> and other institutions battle desperately against
> inflation. Value systems splinter and crash, while the
> life boats of family, church, and state are hurled madly
> about".

This is not exactly the image one gets from the GSS. Now the image is hardly on of antedeluvian permanence - the main point to be made so far is that most everything we measure is changing. But the image of erratic change is not consistent with our results. The change we have seen is generally the opposite of bobbing wildly up and down.

Perhaps the image we need for the 70s and 80s is not the hurled life boat, but the revolving restaurant. Those who have dined in one of those roof top restaurants that slowly revolve minute by minute, change is barely perceptable, but if you look up between courses the scene becomes radically different. So it is with the GSS. Year by year one sees little dramatic change, but when one compares the hors d'oeurve data of the early 1970's with the entree view of the mid 1980's, we see a society distinctly and pervasively changed.

What Changed and What Didn't

In contrast to the 1960s, the 1970s and 1980s are believed to be decades of conservativism, careerism, "high tech", and marital instability. To check such broad formulations, I divided the 273 items into 17 topics, based partly on Sociological themes and partly on common sense. Tables 7 and 8 show the statistical summaries for change in these topics.

Table 7

Change Indices by Topic

Topic		N	Median chi/df	Percent... Fluct.	Percent... Trend	Mean r sq
1	Family, attitudes	7	18.4	100	100	.73
2	Politics; international	14	10.7	86	50	.40
3	Morale	30	10.0	87	70	.21
4	Racial attitudes among whites	12	8.6	100	100	.55
5	Geography	7	8.2	86	86	.34
6	Education	4	8.2	75	75	.69
7	Family, structure	14	6.6	79	86	.80
8	Income, social class	9	5.1	90	80	.59
9	Sex and fertility	18	5.0	78	78	.37
10	Politics, domestic	4	5.0	100	100	.36
11	Participation	24	4.1	33	33	.52
12	Family background	19	3.9	58	89	.60
13	Tolerance	13	3.8	69	46	.51
14	Religion	5	3.8	83	50	.45
15	Occupation	15	3.8	73	67	.47
16	Crime, violence	26	3.6	58	38	.40
17	Values	19	3.0	49	47	.31

Fluct = Percent of items showing significant fluctuation over all years
Trend = Percent of items showing significant trend 1982-5 v. 1972-5
Mean r sq = mean r square among items showing significant fluctuation

Table 8
Distribution of Median Chi/Df in Table 8

```
20
19
18     18.4
17
16
15
14
13
12
11
10     10.0   10.7
 9
 8      8.2    8.2    8.6
 7
 6      6.6
 5      5.0    5.0    5.1
 4      4.1    4.3
 3      3.0    3.6    3.8    3.8    3.9
 2
 1
 0
```

There certainly is variation by topic. Median fluctuations scores
(Chi square/d.f.) range from 3.0 to 18.4 and the percentage showing a
significant trend ranges from 33 to 100. Table 8 suggests that six topics
stand out as especially volatile: Family attitudes, International politics,
Morale, Racial attitudes among whites, Geography, and Education.

By the measures and definitions here, the most striking changes over
the GSS years are in attitudes to family roles and structures. The shift to
eqalitarian sex roles is the core here: FEWORK (should married women
work?), FEHOME (women should take care of home not the country), FEPOL (women
are not suited for politics) and FEPRES (vote for woman president) all show
very strong "pro feminist" trends. But the family attitude trends are not all
"individualistic". There has been a sharp, essentially linear increase in the
percentage agreeing it is a "good idea" for older people to share a home with
their grown children (AGED) and a distinct increase in the percentage agreeing
divorce should be "more difficult to obtain" (DIVORCE).

International politics is the second most volatile cluster, as one
might expect since it is loaded with topical "issues". Figure 2 showed the
striking U-shape for NATARMS (spending on military, armaments, and defense).
The other big changes come mostly in attitudes to specific nations. Although
we noted the remarkable stability of attitudes to CANADA (ditto for ENGLAND),
the stocks of EGYPT and CHINA picked up, ISRAEL sagged a bit and attitudes to
BRAZIL (mysteriously) became less extreme at both ends. The most impressive
change (fluctuation = 51.0) was for RUSSIA. In 1974, 52 percent were on the
negative side of the scale, by 1985 the figure was 77. Similarly, attitudes
to Communism as a form of government (COMMUN) showed a striking negative trend
(fluctuation = 21.5, r square = .83).

Morale is a fat package comprising 30 items, of which 13 are a famous
battery regarding "confidence in institutions". The confidence items have

sparked several books and mongraphs and a National Academy of Sciences

panel. I can hardly do them justice in a paragraph, but the main theme is

fairly simple. As several investigators have noted, personal morale hasn't

changed much at all, but the net trend for confidence in "them" is definitely

down. On the personal side, such fundamentals as job satisfaction (SATJOB),

HEALTH (condition of health), and judgments of life as exciting, routine or

dull (LIFE) shifted little; Self ratings of happiness (HAPPY) moved toward the

middle, away from elation or depression; the decline in financial satisfaction

(SATFIN) discussed below, while statistically reliable, is just four points.

But when we look at the confidence in institutions items, we see big shifts

for most. Figure 3 summarizes.

(Figure 3 here)

Figure 3 graphs 1972-5 results (Percent "great deal of confidence"

minus percent "hardly any confidence") against 1982-5 results. Scores about

the diagonal line represent increased confidence, scores below it mean

declines. Hardly any institutions "improve". At best, we can say the

Scientific Community, Supreme Court, Major Companies and Executive Branch are

holding their own. For the executive branch, of course, this means current

confidence is at Watergate levels. Below the line we see the big declines:

Press, TV, Organized Labor, Education, and Banks. We are not prepared to say

why particular institutions differ here, but stick to the broader

conclusion: confidence in a broad spectrum of institutions declined while

personal morale did not.

Cluster 4 comprises 12 race items (all but one tabulated for whites

only since the items were not asked of blacks during the early GSS years).

Although commentators, academic and nonacademic, have characterized the 70s and 80s as periods of inertia or even reaction in racial attitudes, all 12 of the GSS items show significant trends, all but two trends are clearly "liberal", and the two exceptions are ambiguous, not racist. RACMAR (flavor laws against racial intermarriage) is typical. In 1973 38 percent supported anti-miscegenation laws, but 1985 the figure was down to 28 percent.

I interpret the trends for Cluster 4 more optimistically than many, and fairness requires some qualifications here.

First, the GSS cluster does not include any "affirmative action" questions and consequently no evidence one way or the other on their trends. Other surveys show affirmative action is not very popular among whites, but this says nothing about its trends. Support for busing students to achieve integration (BUSING) is low among whites, but it increased significantly from 14 percent in 1972-5 to 19 percent in 1982-5.

Second, let us examine the two exceptions to the liberal bandwagon. One, NATRACE (spending on improving the conditions of blacks) is simple. The percentage saying "Too little" did not change reliably, but the percentage saying "Too much" decreased and the percentage saying "About right" increased. Ultra liberals may be disappointed at the stability of "too little" but they must take some cheer at the decline in "too much". The other, a battery dealing with tipping points in school integration is much more complicated.

Support for the abstract concept of integrated schools (RACSCHOL) was already high in 1972 (86 percent favorable), but it still increased significantly to 93% in 1985. Now, however, let us consider the mnemonics RACFEW, RACHAF, and RACMOST. They are part of a battery that asks, "Would you yourself have any objection to sending your children to a school where a few/half/more than half of the children are Negroes/Blacks?" I combined them

into a single index (RACSKOOL) dependent on whether the respondent's "tipping point" was (1) a few or half (2) more than half or (3) denies tipping point. Before looking at RACSKOOL let us examine a more typical item, support for an open housing referendum (RACOPEN). Figure 4 shows the shifts (1982-5 v. 1972-5) for four groups: A) Northern whites, 13-20 years of school B) Northern whites 0-12 years, (C) Southern whites, 13-20 years, and (D) Southern whites 0-12 years.

(Figure 4 here)

While the four groups differ noticeably in support for Open Housing, each shows a liberal shift. The changes in groups B, C, and D are statistically reliable. While the shift among the A's is not significant if it were based on 1351 cases rather than its 1332 it would be significant, i.e. it is borderline and very close to the border. Now, however, let's look at the same groups in terms of RACSKOOL, as shown in Figure 5.

(Figure 5 here)

Group D (white Southerners with less than college) show significant shifts. They decline in "Half or Less" and gain in "More than Half". That is, they become relatively more liberal. But the other three groups show little or no change (Table 9 tells us the absence of significance here is not due to breaking the data into small subgroups. The differences are so small it would require huge samples, especially in the North, to achieve significance.)

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Table 9

Goodness of Fit (Chi Square) Data for Figure 5

Subgroup	N	Half or Less	N^* for... More than Half	None
A = North 13-20	1900	43,5604	10,117	14,590
B = North 0-12	3335	13,222	7,982	112,263
C = South 13-20	750	4,996	27,123	2,810
D = South 0-12	1541	232+	290+	17,519

N^* = sample size necessary to make this difference statistically significant at the .05 level

+ = N^* smaller than N and hence the difference is significant

In particular, the ultra-liberals as (white, Northern, some college) give virtually the same answers in the 80s as they did during the 70s. A little less than half claim no tipping point, a third would balk when their child is in a minority and a fifth would object to an even paler mixture. In sum it appears that even "advanced" white opinion draws the line at the point where their children become a minority, this line has been constant since the early 70s, and the other three groups are stabilizing at similar, though a bit less permissive level.

Those who hope to see progress toward a color blind society may be discouraged by this result - though school integration in most communities could move a long long way before many white children were in minorities and half of Northerners claim to be color blind on this issue.

To sum up: On almost all counts white opinions on racial matters have moved sharply (by GSS standards) and in a "liberal" direction. The one exception is school tipping points. Even in the most liberal sectors, whites balk at schooling where their children are in a racial minority, and little has changed in the 70s and 80s.

Moving on more rapidly:

Geographically (Cluster 5) the trend was away from the largest central cities and small towns (SRCBELT, SIZE, XNORCSIZ) while city problems (NATCITY) and the environment (NATENVIR) received lower priorities in terms of national spending. '

Americans were significantly better educated (DEGREE) in the 80s but there was no change in national level vocabulary scores (WORDSUM). This apparent paradox suggests that in younger cohorts increased years of schooling are not producing proportional increases in verbal skills, i.e. degrees, like money, are subject to inflation (Smith, 1986).

Family structure (cluster 7) shows a definite trend toward streamlined households. Households are smaller (HOMPOP), adult Americans are less likely to be currently married (MARITAL), households are less likely, to have any children (TEENS, PRETEEN, BABIES) and more likely to have just one adult (ADULTS). More of us are in the labor force and this is, of course, especially true of married women. Overall, labor force participation (WRKSTAT) has a fluctuation score of 10.5. In a tabulation limited to married women it jumps to 14.6. In the 1972 GSS 38 percent of the married women were in the labor force, in 1985 the figure was 65 percent.

Two "missing" trends merit discussion. There is virtually no change in the age distribution (AGE) of GSS respondents from 1972 to 1985, although we are all aware of the "greying of America". The "paradox" occurs because (1) the GSS is an adult sample. A big factor in the "greying of America" is simply the very small size of recent cohorts of children. (2) during the GSS years the "baby boom" cohorts swelled the ranks of younger adults. The "Statistical Abstract" validates these claims. It shows that considering only those 20 and older, between 1970 and 1983 (a) the percentage 65 and older increased only from 16 to 17 (b) the percentage 50 and older decreased from 39 to 37 and (c) the percentage 40 and older decreased from 58 to 52.

The second "missing trend" is divorce. Overall the percentage of GSS respondents ever divorced only increased from 14 to 18 comparing 1972-5 with 1982-5, with a fluctuation index of 2.4. But the proportion never married also increased during the period. If we limit the data to the ever married the percentages change to 22 and 32. The fluctuation figure changes to 13.3, which would make it the third largest fluctuation in the cluster.

The Income and Social Class cluster is dominated, of course, by changes in INCOME (total family income), the number one fluctuator among the 243. In 1972, 14 percent of respondents reported annual family incomes of $20,000 or more per year. By 1985 the percentage was 54. RINCOME (respondent's income), naturally, tells the same story. Economists would be quick to point out these measures treat nominal income, not real income. Respondents seem to agree since the items treating finances in nonmonetary terms all trend down, not up. FINALTER (change in financial situation) shows an increase in "worse", FINRELA (opinion of family income) shows an increase in "below average" (versus "average" or "above average"), the percentage reporting unemployment in the previous decade (UNEMP) moved from 27 in 1972-5 to 34 in 1982-5, and we saw earlier that financial satisfaction (SATFIN) declined. These sour trends did not, however, appear to have a fundamental impact on American social structure. Self-placement in the Lower, Working, Middle, or Upper Class (CLASS) was one of the most stable items in the lot, with a fluctuation score of just 1.1. In sum, nominal incomes increased enormously, subjective assessment of finances shifted in a negative direction, but the proportion placing themselves in the middle or upper classes stayed within a point or two of its pooled mean (48 percent) each year.

Cluster 9 included 18 items on sex and fertility. Their median fluctuation score, 5.0 is distinctly lower than the 18.4 for attitudes to family structure. The difference between sex and gender applies here. The

GSS years saw striking changes in attitudes toward sexuality. There are evidences of the so called sexual revolution in increasing acceptance of premartial sex (PREMARSX) and birth control for teenagers (TEENPILL). But the nation's "morals" are hardly coming apart at the seams, a Table 10 illustrates.

Table 10 TRENDS IN THREE SEX ITEMS Percent "Not Wrong at all"			
	1972-5	1982-5	d
Premarital (PREMARSX)	30%	41%	+11
Homosexual (HOMOSEX)	12%	14%	+2
Extramarital (XMARSEX)	3	3	0

The data do show a striking acceptance of premarital sex (an 11 point jump) but for homosexuality the change, while statistically reliable, is only from 12 to 14 percent, and there is no increase at all in the monolithic rejection of extra-marital sex. Similarly, the items PORNMORL (materials lead to breakdown in morals), PORNRAPE (materials lead to rape) and PORNINF (materials provide information about sex) suggest lesser acceptance of pornography, as agreement with the first two increased and agreement with the last decreased.

The six items on abortion are of interest because they show significant fluctuation and low r squares. Each asks "whether or not you think it should be possible for pregnant women to obtain a legal abortion if ..". The six conditions divide into three which receive strong support (ABDEFECT=if there is a strong chance of serious defect in the baby, ABHLTH=if the woman's own health is seriously endangered by the pregnancy, and ABRAPE=if she became

pregnant as a result of rape) and three that split the adult population about half (ABNOMORE=if she is married and does not want any more children, ABPOOR=if the family has a very low income and cannot afford any more children, and ABSINGLE=if she is not married and does not want to marry the man). Figure 6 plots the average pro abortion response for the two clusters over the GSS years.

(FIGURE 6 HERE)

Both increased from 1972 to 1973 after the Supreme Court decision legalizing abortion (Roe v. Wade) and both show a slight drop beginning in 1982. Since the matter is controversial one should not overemphasize the down shift. Perhaps it is better to warn the anti-abortionists that throughout the period more than 80 percent of adults favored legal abortion under several circumstances, while warning the pro-abortionists that half or more opposed "completely elective" abortion throughout the period.

The cluster "domestic politics" contains only four items because (a) where possible, political items were put in a substantive cluster, e.g. educational spending with education, and (b) the GSS had wished to avoid overlap with the American National Election Study. The items there do, nevertheless, make a point - as often as not the GSS does support population impressions on trends (but with plenty of exceptions, e.g., AGE, race relations, DIVORCE) but the magnitudes are often unimpressive. Thus, the GSS does indeed show a trend toward the Republicans (PARTYID) and to self-ratings as "conservative" rather than "liberal". But each amounts to just 5 percentages points form 1972-5 to 1982-5.

Of the 24 items in the Participation cluster 21 involve group memberships (sports groups, veterans groups, youth groups, etc.) or forms of sociability (neighbors, family, friends, etc.) None show substantial or

interesting trends. Daily newspaper reading (NEWS) does show a sharp

decline. Viewing x-rated films (XMOVIE) is u-shaped. The percentage who have

seen an x-rated film in the last year (about 20 percent overall) dropped from

1973 to 1978 and then rose in 1980, 1983, and 1984, presumably because of the

rise of VCRs.

Family background (e.g. parents' education, father's occupation, size

of place at age 16, etc.) is fixed for a given individual, but over time

cohort replacement slowly but steadily changes the kinds of families from

which we come. For example, in 1972, 36 percent of adult Americans reported

their mothers to be high school graduates, in 1985 the figure was 51. Perhaps

some mothers benefited from adult education but most of the change comes from

the boom in education attainment during the first half of this century. The

changing variables in Cluster 12 reflect the modernization processes of the

early 20th century with increases in parental education, maternal employment,

professional and managerial fathers, small sib size, etc. Few of the changes

are large but Americans in the 1980s hailed from appreciably more

"cosmopolitan" families than Americans in the 1970s. The single largest

fluctuation, 18.0 for ETHNUM, is rather subtle. The item concerns national

origins and has four possibilities, (1) names one country, (2) names two or

more countries, chooses one, (3) names two or more countries, can't choose,

and (4) can't name any country. The trend is to #2, which suggest (a) ethnic

intermarriage is increasing but (b) ethnicity is still salient. That is, our

national backgrounds are becoming more diverse but we tend to pick some ethnic

identity from the array and cling to it.

Nine famous "Stouffer" items form the core of Cluster 13, Tolerance.

They ask whether the respondent would allow a (1) communist (2) atheist or (3)

homosexual to (a) give a speech, (b) teach in a college or (c) have their book

remain in a public library. As in the case of the "confidence in institutions" battery, the Stouffer items have generated a large research literature - to which I can not do justice in a brief paragraph. The main point is this: during the GSS years the nine items show increased tolerance, but the gains are small and uneven. Table 11 shows the changes.

TABLE 11

SHIFT IN PERCENT GIVING "TOLERANT"

ANSWER, 1982-5 VERSUS 1972-5

	ISSUE		
"NONCONFORMIST"	LIBRARY BOOK	SPEECH	COLLEGE TEACHING
HOMOSEXUAL	+ 2.6*	+ 4.9*	+ 8.2*
COMMUNIST	+ 1.5	+ 0.9	+ 6.9*
ATHEIST	+ 1.1	+ 1.5	+ 4.7*

* = Statistically significant, p 6.05, assuming design effect of 1.5.

The increases are higher for homosexuals and for the issue of college teaching. The former may reflect greater acceptance of Homosexuals (see HOMOSEX above) and the absence of same for Communists (see COMMUN above) and atheists. Why tolerance should increase more for the area of college teaching is unclear.

Legalization of marijuana (GRASS) and pornography (PORNLAW) both show small but complex changes. Pro-marijuana trends are u-shaped. Legalization showed a rather large increase from 1973 (19 percent) to 1978 (30 percent)

followed by declines in 1980, 1983, and 1984 (24 percent). For Pornlaw the trend is against complete legalization for adults only (48 to 54) but there is no statistically significant change in the proportion preferring a total ban (42 v. 41).

Although religious trends are prominently featured in the media, the five GSS religious items show very little change. The closest our data come to documenting religious ferment is a 6 percent increase in "other" and "non-denominational" among Protestants, these being essentially "fundamentalist" preferences. As others have noted, American Catholicism experienced some sharp changes during the period. Table 12 summarizes them.

TABLE 12

RELIGIOUS TRENDS BY RELIGIOUS PREFERENCE

PREFERENCE	1972-5	1982-5d	d	N	N*
	a) % attending religious services "nearly every week" "every week", or "more than weekly"				
PROTESTANT	37	38	+1	7706	45,525
	(3885)	(3821)			
CATHOLIC	51	45	-6	3119	1,279
	(1536)	(1583)			
JEWISH	7	12	+5	301	631
	(163)	(138)			
	b) % whose religious faith is "strong"				
PROTESTANT	43	46	+3	5643	8,438
	(1901)	(3742)			
CATHOLIC	42	43	+1	2291	36,154
	(733)	(1558)			
JEWISH	40	41	+1	202	290,880
	(67)	(135)			

N* = sample size required to make the difference statistically significant (p<.05, design effects = 1.5)

Catholic church attendance dropped a significant six points during the GSS years, while Protestant attendance did not change. More Jews now report weekly attendance at services, but the difference is not statistically reliable. (It would, however, be significant in a sample of 631 Jews, rather than 301. Therefore, it might be worth further study.) Panel (b) in Table 12 shows no change in strength of religiosity in any of the three major religions. In sum, Catholic church attendance declined but there is no evidence of (a) attendance change among Protestants or (b) shifts in religiosity in any of the three categories.

Of 16 measures treating respondent's occupation ten showed significant shifts but none were impressive in magnitude. Again GSS detects the same trends that galvanize popular commentators and writers, but the magnitudes hardly justify Toffleresque prose. Thus, jobs in the secondary sector (industry) did indeed decline, but the 1972-75 to 1982-85 shift was 4 points, a bit less than half a point per year and a lot less than the "big shifts" in Table 6. Similarly, GSS did detect a significant shift in the proportion of jobs involving working with data - from 32% to 35%! More on this in the next section.

While the GSS designers bet heavily on "crime and violence" giving us 26 items in cluster 16, the trends are mostly unimpressive. Three stand out. The GSS years saw a striking increase in repressive attitudes to crime (CAPPUN=favor or oppose death penalty for murderers, COURTS=courts dealing with criminals), but no change in personal experience with crime (ROBBRY= robbed during last year, BURGLR=home broken into during last year). The variable HIT (ever punch or beaten by another person) showed a definite increase. In 1972-5 30 percent said "yes", in 1982-85 it was 43 percent, earning this item a place in Table 3. Does this indicate a rising level of

violence? Perhaps but a cohort analysis of HITAGE, a subquestion, showed that most cohorts had a significant increase over the decade in the percentage reporting beatings as a child. Thus, the suspicion arises that the national recollection is being jogged by the vast publicity currently given to problems of child and wife abuse.

The last cluster is "values" and that is the main point about values. Batteries on preferred characteristics of children (e.g., obedience, self-control, curiosity, etc.) or jobs (security, high income, interesting jobs, etc.) shift little. As indexed by these items American values are less like life boats tossed in a storm than vessels tied to the dock in a calm.

The Change Processes

Why did America change during the GSS years? Sociologists are not without ideas here, but theories of social change tend to be highly speculative, not data based - if only because data such as the GSS have not been available until very recently.

I am not about to reveal the forces driving social changes in the last half of the twentieth century. I have no idea what they are. But the broad sweep of the GSS content and the time scale of 12 readings 1972-85 allows a preliminary scan in which we can try three classic social science ideas against the facts:

Hypothesis I: Sociological phenomena track short term
                 economic fluctuations.

Hypothesis II: American Society is undergoing
                 "Massification".

Hypothesis III: Society changes through cohort replacment.

ECONOMIC FLUCTUATION

Sociologists do not believe "every thing boils down to Economics", but Economics and economic variables play an increasing role in Sociological thought. Among the ideas which are currently salient is the proposition that the economic crunch of the 70s and 80s, the GSS years, is reshaping American social structure and attitudes.

The GSS years 1972-1985 are a wonderful natural laboratory for testing the hypothesis that Sociological phenomena move with economic fluctuations. After two decades of relatively steady flop around wildly in the 70s and 80s. The results have not been entirely happy for the citizenry but for the data analyst these gyrations make it possible to separate economic trends from long term "secular" trends.

Table 13 shows the relevant "objective" and "subjective" economic trends.

Table 13
Economic Indicators

Year	FINALTER	SATFIN	GNP 1[+]	GNP 2[++]	GNP 3[+++]
72	25.1	9.7	69-70 = NA	70-71 = 3.4	71-72 = 5.7
73	26.0	6.9	70-71 = 3.4	71-72 = 5.7	72-73 = 5.8
74	17.9	8.0	71-72 = 5.7	72-73 = 5.8	73-74 = -0.6
75	6.9	4.4	72-73 = 5.8	73-74 = -0.6	74-75 = -1.2
76	13.2	7.4	73-74 = -0.6	74-75 = -1.2	75-76 = 5.4
77	16.6	12.0	74-75 = -1.2	75-76 = 5.4	76-77 = 5.5
78	22.8	10.0	75-76 = 5.4	76-77 = 5.5	77-78 = 5.0
79	(No GSS)				
80	8.9	1.6	77-78 = 5.0	78-79 = 2.8	79-80 = -0.3
81	(No GSS)				
82	1.9	-1.8	79-80 = -0.3	80-81 = 2.5	81-82 = -2.1
83	8.1	-1.5	80-81 = 2.5	81-82 = -2.1	82-83 = 3.7
84	17.3	2.3	81-82 = -2.1	82-83 = 3.7	83-84 = 6.8
85	16.9	3.4	82-83 = 3.7	83-84 = 6.8	84-85 = NA
86	19.0	3.4	83-84 = 6.8	84-85 = NA	85-86 = NA

*	=	% Better - % Worse
**	=	% Pretty Well Satisfied - % Not Satisfied at all
+	=	% Change in GNP (constant 1972 dollars)
++	=	% Change in GNP, shifted one year
+++	=	% Change in GNP, shifted two years

FINALTER is a GSS item asking, "During the last few years, has your financial situation been getting better, worse, or has it stayed the same?"

SATFIN is a GSS item asking, "Would you say that you are pretty well satisfied with your present financial situation, more or less satisfied, or not satisfied at all?"

GNP1, GNP2, and GNP3 are government data from "The Statistical Abstract" on annual changes in real GNP.

How well do subjective economic reports agree with objective economic data? Table 14 answers the question with bivariate product moment correlations among the variables in Table 13.

Table 14
Correlations between Economic Indicators

	Year	GNP 1	GNP 2	GNP 3	FINALTER	SATFIN
Year		-.091	-.053	-.079	-.346	-.668
GNP 1	-.091		+.139	-.469	+.193	+.040
GNP 2	-.053	+.139		+.174	+.616	+.441
GNP 3	-.079	-.469	+.174		+.705	+.466
FINALTER	-.346	+.193	+.616	+.705		+.697
SATFIN	-.668	+.040	+.441	+.466	+.697	

N = 13 years

The center "box" in Table 14 shows positive correlations. Thus, subjective economic trends (FINALTER) tend to agree with GNP calculations. Furthermore, the data suggest that respondents are not taking the "last few years" phrase literally, as the correlation with GNP3 is higher than with GNP2 which is higher than GNP1. That is, GSS reactions in year X than with X-2 to X-1 or X-3 to X-2. Figure 7 plots FINALTER against GNP3 for the GSS years.

(Figures 7 here)

Figure 7 shows (a) nice agreement between the two measures and (b) w-shapes with bottoms in the early 70s and 80s and peaks in 1972, 76-78, and 1984. Which leads to a neat, if not exactly astounding socio-economic "model", as shown in Figure 8.

(Figures 8 here)

The mini-model says objective economic fluctuations (GNP3) influence subjective perceptions of economic progress (FINALTER, r=+.705) and subjective progress, not GNP, drives financial satisfaction (SATFIN, beta* = +.825). In other words, year to year changes in American financial satisfaction reflect beliefs in personal financial progress, which are driven by changes in the GNP. These are not ideas one would consider astounding or novel insights into the human condition, but they make an important methodological point: the GSS measure FINALTER has things to say about the real world. It is not an artifact of sampling fluctuation, question wording, oedipal conflicts, or interviewer style.

Fine, but does it predict change in Sociological variables? Since YEAR and FINALTER are not strongly related (r = -.346 in Table 14) we can enter them both into multiple regression equations and see their independent correlations with the 36 most volatile items from Table 3. Six of the items are not much related to either YEAR or yearly FINALTER scores. Their multiple correlations are .20 or less (HELPFUL, CONCLERG, NATARMS, BRAZIL, NATFARE, and CONFED). The remaining 30 have R squares of .40 or more. Table 15 displays their results.

Table 15

Partial Regression Coefficients for 30 Items with $R^2 \geq .40$

YEAR		FINALTER
1.00,1.00,1.00,1.00,1.00,.99,.99,.97,.96,.95	.95+	98,1.00
.94,.93,.92,.91,.91,.90	.90-.94	
.89,.87,.87,.86,.86	.85-.89	
.84	.80-.84	
	.75-.79	
.73	.70-.74	
.67	.65-.69	
	.60-.64	
.59,.55	.50-.59	
.54,.50,.50	.50-.54	
	.45-.49	
42	.40-.44	.40,.44,.47
	.31-.39	.36,.31
	.30-.34	
	.25-.29	
	.20-.24	.21
	.15-.19	.15,.15,.16,.17,.18
	.10-.14	.10,.10,.11,.12,.13,.13
	.05-.09	.05,.05,.07,.08,.08
	.00-.04	.01,.01,.03,.04,.04

A glance reveals the pattern: the coefficients for YEAR (on the left) are concentrated toward the top, the coefficients for FINALTER (on the right) are concentrated toward the bottom. In other words, for items whose trends are predicted by either financial progress or the sheer unwinding of years (secular trend), financial progress is seldom important. Two items do appear to be driven by financial fluctuations, ANOMIA5 and USWAR. The former asks whether the "lot of the average man" is getting worse. It was designed to measure Sociological anomia, but it appears as if respondents are taking it at face value (and why shouldn't they?). When times are bad they say the lot of the average man is getting worse. USWAR says that - during the GSS years - expectations of war increased when the economy turned down. Five other items show small net relations with economic trends. Good times seem to enhance confidence in congress and banks, bad times seem to promote anti-communism,

punitive attitudes toward criminals on trial, and disinclination to vote for a woman for president. Save for ANOMIA5 I wouldn't take any of these associations at face value, but they do serve to make a theoretical point:

Economic fluctuations do not have a pervasive influence on the more volatile GSS items.

Conversely, the linear trends in GSS items are not a spurious function of the economic slides of the 70s and 80s.

MASSIFICATION AND DIFFERENTIATION

Both Sociologists and nonacademic observers often allege that social change, over the long haul, tends to eliminate differences between subgroups. They believe that, compared with the highly seasoned past, America is turning into a bland pudding with fewer and fewer regional, class, racial, and ethnic differences. Other analysts maintain that "differentiation" is holding its own or even increasing. Oddly enough, the little hard data that exists tends to support the "differentiationists", not the "massificationists", though the latter idea is probably more popular.

GSS is well suited to exploring these ideas, as it allows us to look at rates and direction of change for many variables in many subgroups. The mathematical possibilities for defining subgroups are staggering, and I do not claim to have explored many of them. However, I have examined change rates in two artifical groups that seem highly strategic.

Sociological research and informal observation support the propositions that:

        a)   The better educated
        b)   The young
        c)   East and West Coasters
        d)   Big City dwellers

. . .tend to be more "progressive", "opinion leaders", "avant garde", while:

    a) **The less educated**
    b) **Older people**
    c) **Southerners**
    d) **People in small towns**

. . .tend to be more "conservative", "reactionary", "resistant to change". As

a shotgun test of this notion, I combined these four variables into a single

index, using a simple point system:

    a) For education: 0-11 = -1, 12 = 0, 13 = 20 = +1
    b) For age: 55-89 = -1, 30-54 = 0, 18-29 = +1
    c) For region: South = -1, Central = 0, Northeast and West = +1
    d) For size of place: outside a SMSA = -1, other = 0, city of
       250,000+ or its suburb = +1

Total avant/rear "guarde" (as I'll call our two groups) scores range from -4

to +4. Table 16 shows the index taps each of its constituents and Figure 9

shows that in the early GSS years the index correlated nicely with classic

"liberal-conservative" items (COLHOMO, COMMUN, RACMAR).

Table 16

Composition of Change Strata

	"rear guard" (-4 to 0)	"avant garde" (+1 to +4)
AGE		
55-89	47%	11%
18-29	14%	42%
EDUCATION		
0-11	52%	8%
13-20	14%	58%
REGION		
South	49%	11%
Northeast or West	20%	64%
SIZE OF PLACE		
Not SMSA	50%	8%
250,000+	19%	60%
N	(10292)	(7811)

(Figure 9 here)

Now, let's see whether the rate and direction of social change was the same or different among the avant garde and the rear guard. To do so, I dichotomized "guarde" as -4 to 0 (57 percent of all cases 72-85)=rear guard versus +1 to +4 (43 percent)=avant garde. Then I cross tabbed "guarde" against the 69 items showing the biggest trends 1982-5 v. 1972-5 (I selected items with values of 1500 or less on number of cases required for statistical significance in the four-fold table item by 72-75 v. 82-85.).

Table 12 cross-tabs the size of the "guarde" difference in 1972-75 against the size of the overall trend from 1972-75 to 1982-85.

Table 17
Guarde Differences and Trend

Trend 82-85   v.   72-75

d_{72-75}	$\leq$ -.10	-.00 to .09	+.00 to +.09	$\geq$ 10.0	Total	%	% $\geq$ .10
.20-.35	1	2	6	9	18	83	56
.15-.19	1	2	6	3	12	75	33
.10-.14	1	1	5	3	10	80	40
.05-.09	1	2	5	5	13	77	46
.00-.04	4	5	4	3	16	44	44
Total	8	12	26	23	69	71	45

Let's start with the right hand column. For the total group of 69 items, about half (45%) showed a ten point shift (another version of the rule of thumb that a changeable GSS items moves at about 1 percentage point per year). The column percents, 56, 33, 40, 46, 44, tell us whether items showing bigger initial d's showed stronger trends. I don't see a persuasive pattern. Furthermore, the product moment correlation between the 72-75 percentage difference and the absolute trend is just -.10.

That's "size". Nothing very interesting there. Now let's look at

"sign". Here there is a pattern: the initially stronger differences are

associated with positive signs. When the initial d's are .05 or larger, 79

percent of the signs are positive, for the trivial d's less than .05, 44

percent are positive.

Why care? Because if one is willing to take an operational point of

view, Table 16 says the trends in the GSS years were in a liberal direction,

not the conservative one assumed by most observers.

The argument goes like this:

(a) Assuming the better educated, younger, non-Southern, more urban

Americans are more "liberal", answers showing a "guarde" difference in 1972-

1975 can be scored as liberal or conservative depending on whether they are

more common among the avant garde or the rear guard.

(b) Items whose trend is toward the answers characteristic of the

avant garde show "liberal trends".

(c) Trends with a positive sign in Table 16 are, thus, liberal.

(d) Hence, of the 69 (of 243) items showing the biggest trends:

    42 (61%) are liberal.
    16 (23%) are neutral (not associated with "guarde" in 1972-5).
    11 (16%) are conservative.

In other words, more often than not the trends in the 70s and early

80s were toward the categories originally characteristic of young, well

educated, urban, coastal Americans. Table 18 displays the sharpest "liberal"

and "conservative" trends (those with trend values of 10 points or more and

initial "guarde" differences of 10 points or more).

Table 18
Largest "Liberal" and "Conservative" Trends

Liberal				Conservative			
Item	Category	D1	D	Item	Category	D1	D
INCOME	$20,000+	+12	+34	RUSSIA	Anti	-15	+25
NATSPAC	Too little	+13	+19				
RACPUSH*	Not "agree strongly"	+22	+17				
HELPPOOR	Neither extreme	+11	+16				
				HOMPOP	1+2	-13	+15
				COMMUN	Worst	-22	+13
RACOPEN*	Can't discriminate	+19	+13				
RACSEG*	Disagree	+25	+13				
HIT	Yes	+15	+12				
FEPOL	Yes	+20	+12				
SPDEG	High school +	+31	+11				
MADEG	High school +	+31	+10				
PREMARSX	Not wrong	+23	+10				
FEHOME	Disagree	+26	+10				
FEWORK	Approve	+21	+10				
PADEG	High school +	+31	+10				
MAWORK	Yes	+21	+10				

*Whites Only
Items included if:
Trend $\geq$.10
D1 $\geq$.10

On the liberal side we see trends toward (a) higher nominal incomes, (b) favorable attitude to space exploration (c) racial liberalism (RACPUSH, RACOPEN, RACSEG) (c) sexual equality (FEPOL, PREMARSX, FEHOME, FEWORK) and (d) more "modern" family backgrounds (MADEG, PADEG, MAWORK). The latter is hardly surprising since one's own education is part of the guarde index, but it is not tautological. Americans are not only increasingly better educated, they are the offspring of better educated parents and the spouses of better educated partners. What to make of this is beyond the scope of this essay and one should bear in mind the exceptional stability of vocabulary scores, noted above.

You might wonder why HIT (claiming to have been beaten or punched) is a "liberal trend". "Yes" answers are more common among the young, better educated, and big city dwellers -- which makes it a liberal trait by definition.

GSS: 72

As noted at above, this may be a reporting artifact but I have no detailed

analysis to back my hunch.

Increasingly negative attitudes to RUSSIA and COMMUN are the major

conservative trends in attitudes, and smaller households (HOMPOP) are tagged as a

conservative trend because they are strongly characteristic of older Americans.

Now, massification and differentiation. We will assess them by looking at

"interactions" in cross tabulations of "guarde" by item by decade (82-5 versus 72-

5). Figure 10 should clarify things.

(Figure 10 here)

The two vertical "poles" at the left side of Figure 10 display the results

for FEPRES (vote for woman for president). Between the early 70s and the early

80s, endorsement (a) went from 85 percent to 92 percent among the avant garde

groups and (b) went from 73 to 80 among the rear guard. Each group showed a 7

point increase. Consequently, (1) the "guarde" differences are 12 points at both

times (2) the slopes in Figure 10 are parallel and (3) there is neither

massification nor differentiation -- the two groups are exactly as different in

82-85 as they were in 72-75...on this item.

Now, consider FEWORK in the next two columns. For the avant garde the

increase is 6 points, for the rear guard it is 14 points. The difference (6-14 =

-8) is the "interaction effect". Observe that the 72-75 group difference was 22

points and 14-22 is also -8. This is no coincidence: the interaction effect is

such tables gives us a single number which describes either (a) the difference

between the two slopes or (b) the change in the cross-sectional difference. Thus,

there was definite "massification" for FEPRES as the "guarde" difference declined

8 points. But not all interactions mean massification. AGED, the third set of

columns in Figure 10, shows an interaction effect of +7 and an increase from 3 to 10 in the "guarde" difference. AGED shows differentiation.

We will use interaction effects (often called dd's for "difference in a difference") in 69 such tables to look at massification and differentiation. Table 19 displays the absolute values of the dd's.

Table 19

Distribution of DD (Absolute Difference)

8	7.8	8.0	8.0	8.1	8.4												
7	7.1	7.3															
6	5.5	5.6	5.8	6.0	6.2	6.5											
5	4.7	5.4															
4	3.5	3.6	3.7	3.8	3.8	3.8	3.8	3.8	4.0	4.0	4.1	4.1	4.2	4.2	4.3	4.5	4.5
3	2.8	2.9	2.9	3.0	3.0	3.1											
2	1.5	1.6	1.7	1.8	1.9	2.0	2.4	2.5									
1	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.1	1.2	1.2	1.3	1.3	1.4	
0	0.1	0.2	0.3	0.3	0.3	0.5											

$$N = 69$$
$$\text{Mean} = 3.2$$
$$\text{Median} = 3.0$$

The dd's are not very large. The average (mean or median) is about 3 and the maximum is 8.4. You can see I choose relatively large examples for Figure 10. The point is Sociologically important: the pervasive social changes of the GSS years have moved through the avant-rear "guarde" strata at about the same rates. Nevertheless, massification-differentiation is of theoretical interest and in the cumulative GSS a dd of roughly 4 points is likely to be statistically significant. So we will pursue the matter farther than Table 19 might seem to warrant.

Let's scrutinize the 32 items with dd's greater than 3.5, i.e. those which are likely to be statistically reliable if we worked out the exact calculation. They are selected from the 69 items showing strong trends. Let us consider whether the trend is "liberal" or "conservative" because:

a)   If the overall trend is liberal...

> a1) and dd is positive -- we see polarization. The avant garde strata are pulling away from the rear guard.

> a2) and dd is negative -- we see massification. The rear guard is changing faster and closing the gap.

b)   If the overall trend is conservative...

> b1) and dd is positive -- we see massification. The avant garde are "doing an about face" that will tend to close the gap.

> b2) and dd is negative -- we see differentiation. The avant garde are "laggards" in the conservative trend so the gap will tend to widen.

Table 20 sorts the 32 non-trivial interactions according to this scheme.

Table 20

Interactions, Massification and Differentiation

Sign of dd

TREND	− Avant garde changes less	+ Avant garde changes more	
LIBERAL	Massification N = 16	Differentiation N = 6	22
NEITHER	N = 1	N = 2	3
CONSERVATIVE	Differentiation N = 0	Massification N = 7	7
	17	15	32

Table 20 strongly supports the massification hypothesis (for the items that changed most during this particular period). Sixteen items showed "liberal" massification in which the rear guard moved faster in a liberal direction, 7 showed conservative massification in which the avant garde moved faster but in a conservative direction. Only six items, all "conservative", showed differentiation. All in all then, 72 percent of the interactions suggest "massification", 22 percent differentiation.

Inspection of the specific items shows (a) the liberal massifiers are mostly familiar racial and sex items, (b) the conservative massifiers are

PORNMORL, COMMUN, DIVLAW, RUSSIA, NATCITY, COURTS, and CAPPUN, (c) except for

NATSPAC, the differentiating items are "objective" (PADEG, MADEG, FAMDIF16,

INCOME, RINCOME), not attitudes.

In sum, this rather intricate analysis repays us with three

generalizations:

First, change from the early 70s to the early 80s was much more "liberal"

than "conservative" -- if liberal means shifting to the positions characteristic

of the young, better educated, non-Southern, and urban.

Second, for all but a handful of items, the rate of change was quite

similar in the avant garde and rear guard social categories.

Third, where change was not homogenous in these broad strata, the

tendency was toward massification, differentials in change that reduced social

differences. The avant garde and rear guard differed less on most of these

items in the early 80s than in the early 70s.

THE SUCCESSION OF COHORTS

The third model (framework, paradigm, orientation, what you will) for

analysing social change is "cohort succession". A cohort is defined a persons

who enter some social process at the same time, e.g. the birth cohort of 1900

or the marriage cohort of 1950. In any enduring group, over time:

a) Newcomers enter the system (e.g. births)
b) Older cohorts depart (e.g. deaths)
c) And if cohorts differ on some variable X, the level of X
will
    tend to shift toward the level characteristic of the newer
    generations
d) Provided each cohort maintains a stable level of X.

An obvious example: every year the proportion of GSS respondents who

(might) say they listened to President Roosevelt's fire side chats declines -

not from failing memory but because the adult population increasing consists of

people who were not alive when FDR was in office while those who remember him

are subject to increasing mortality.

Since birth and death are relentless and there are a number of strong "generational" differences in modern America, cohort replacement has been an attractive model. In particular, many sociologists have hypothesized that America becomes steadily more "liberal" as old fashioned, reactionary cohorts are silently but steadily replaced by modern, progressive ones. This hypothesis is not just wooly minded liberal optimism but a logical set of propositions that can be tested. Remembering that theories that can be falsified are rare and precious in social science, we shall try these ideas out in the GSS data.

A major plus for the cohort model is the blunt force of births and deaths. Even the short, 13 year span of the GSS has seen impressive cohort shifts. Tables 21, 22, and 23 demonstrate.

Table 21
Age in...

Label	Year of Birth	1973	1983
'58	1954-63		20-29
'48	1944-53	20-29	30-39
'38	1934-43	30-39	40-49
'28	1924-33	40-49	50-59
'18	1914-23	50-59	60-69
'08	1904-13	50-69	70-79
'98	1894-1903	70-79	80-89

Table 22
Years

Cohort	1972-75	1982-85
'98	9.6	3.4
'08	12.9	8.1
'18	16.3	13.0
'28	16.9	13.6
'38	18.5	14.4
'48	23.5	22.0
'58	2.4	25.5
Total	100%	100%
	(6071)	(6080)

Cohort	Table 23	
	Years ('58 Cohort admitted)	
Cohort	1972-75	1982-85
'98	8.0	4.5
'08	13.5	10.8
'18	17.0	17.4
'28	17.7	18.2
'38	19.3	19.4
'48	24.5	29.6
Total	100%	100%
	(5810)	(4528)

Table 21 shows how GSS birth dates can be arranged in seven cohorts that give conventional age brackets in 1973 and 1983, the midpoints of the 72-75 and 82-85 periods we are comparing.

Table 22 shows the cohort distribution in the two periods. Note, in particular, the addition of the '58 cohort. They were virtually absent in 72-75 (a few are present because the age grouping and decades don't match perfectly), but constitute 26% of respondents in 82-85. To repeat, a quarter of the respondents in the 82-85 GSS were too young to have been sampled in 72-75. If one tabulates the proportion from the '58 cohort across years, one gets a "fluctuation index" of 49.7. which would make COHORT the fifth most volatile variables in the GSS.

Table 23 shows a second cohort process. Even after eliminating the '58 cohort, the two periods differ in cohort distribution, thanks to the grim reaper.

Analysing cohort processes is a notoriously subtle and complicated matter, but for present purposes - a scan of the broad sweep of the data - a simple method will be quite sufficient:

First, we cross-tab variable X against Decade (82-5 versus 72-5) to get "Total change".

Second, we eliminate the '58 cohort from the data.

Third, we calculate the partial (pooled) association between Decade and X, WITHIN cohorts '98, '08, '18, '28, '38, and '48. The change captured here, if any, is NOT due to cohort replacement, neither entry of the newcomers or departure of the old timers. In cohort analysis lingo it may be due to Aging or Period (Years) but it is not due to cohort replacement. We'll call it AGE/YEARS.

Fourth, we subtract the result in step 3 from the result in step 1 to get the effect of cohorts.

Two examples:

PADEG (fathers educational attainment). If we cross-tab PADEG by DECADE we get a percentage difference of 9.8, i.e. a ten point increase in high school graduate fathers. When, however, we repeat the tab within cohorts '98 through '48, the pooled result is 0. Within a given cohort (naturally) there was no change in paternal schooling. Since 9.8 - 0 = 9.8, the cohort replacement effect is 9.8 and "all" of the change in this variable is due to cohort processes.

For UNION, on the other hand, we get a total change of 6.5 (an increase in "neither belongs"), a within cohort change of 6.5., and a cohort change of -0.4. Thus, cohort processes had no effect on the decline in union members. It all came from the tendency of persons within cohorts to report fewer memberships in 82-85 than in 72-75.

If you wish, you can break the Cohort total into the part coming from Newcomers (births) and the part coming from the Departures (deaths). To get the former, compare the total d with the d after removing the newcomers; to get the latter compare this no-newcomer d with the partial (within cohort) difference. Thus, for PADEG, Newcomers produce +7.7, Departures +2.1. Most of the increase in paternal education comes from the arrival of new adults from better educated families. The two parts need not agree. Thus, for marital status, altar shy newcomers raise the percentage unmarried by 2.2 points, while

departers lower it -1.4 points (as widows die off). For the 70 variables analysed here, only four (INCOME, MARITAL, UNEMP, and UNION) showed opposite sign cohort effects, so I will drop this matter here.

Tables 24 and 25 summarize the cohort effects for the 70 GSS variables showing the largest 82-85 v. 72-75 shifts (up from 69 because of DEGREE, excluded previously because it is a component in the "guarde" index).

Table 24

Size of Cohort Replacement

											18 Strongest	
+9	9.2	9.8	9.9								9.9	FAMDIF16
+8	8.8										9.8	PADEG
+7	7.5										9.2	MADEG
+6	6.0	6.2	6.3	6.3	6.4	6.4					8.8	PORNLAW
+5	5.0	5.2	5.3	5.5	5.6	5.7					-8.0	RINCOME
+4	4.0	4.1	4.2								-7.5	MAWORK
+3	3.1	3.2	3.3	3.4	3.6	3.7	3.7	3.8	3.8	3.8	3.9	6.4	PAIND16
+2	2.4	2.4	2.5								6.4	COLHOMO
+1	1.1	1.3	1.3	1.6	1.7	1.7	1.7	1.7			6.3	NEWS
+0	0.0	0.1	0.2	0.2	0.4	0.4	0.8	0.8			6.3	DEGREE
-0	0.1	0.4	0.4	0.6	0.7	0.7	0.8	0.9	0.9		6.2	RACOPEN
-1	1.3	1.4	1.6	1.7	1.8						6.0	SPDEG
-2	2.3										5.7	RICHWORK
-3	3.3	3.5									5.6	FEHOME
-4	4.4	4.7									5.5	RACMAR
-5											5.3	COLCOM
-6											5.2	HIT
-7											5.0	PREMARSX
-8	8.0											

N = 70

Table 25

Size of Various Changes

	Median	Mean
COHORT REPLACEMENT		
Raw	1.7	2.1
Absolute	3.2	3.3
AGE/YEAR		
Raw	6.7	8.3
Absolute	6.7	8.5
TOTAL Change	10.4	8.9

The average GSS trend includes a cohort replacement component of about 3 points. For comparison, the average total trend is about 10 points and the average Age/Year effect is around 7 or 8. Cohort replacement doesn't dominate or account for change by any means but it is pervasive and much more important than short term economic fluctuations.

We see in Table 18 the biggest cohort effects are, as one would expect, on family backgrounds (FAMDIF16, PADEG, MADEG, MAWORK, AND PAIND16). FAMDIF16 is rather interesting. It treats the "reason why" for respondents who were not living with their own parents at age 16. The trend is toward divorce rather than death as the source of a parental split. We also see clear cohort components in the familiar "liberal" attitude trends (PORNLAW, COLHOMO, RACOPEN, FEHOME, RACMAR, COLCOM, and PREMARSX).

Clearly, as Sociological theorists have predicted, demography has pushed American society in a "liberal" direction during the GSS years.

But cohort replacement is not the only force at work by any means. The within-cohort Age/Year effects must be considered before we draw any conclusions. Table 25 shows, on the average, they are about twice as big. More telling, the two processes tend to work against each other. The simplest documentation is the product moment correlation between the Cohort d and the Age/Year d. over the 70 variables it is - .68. This, merely says when one is big, the other tends to be small. The cross-fire becomes more telling, however, when we look at signs. Table 26 cross tabulates the sign of the Cohort d and the sign of the Age/Year d.

Table 26

Signs of Cohort and Age/Year d's

		Cohort			
		−	o	+	
Age/Year	+	20	1	45	66
	o			2	2
	−			2	2
		20	1	49	70

Table 26 looks a little odd (there can't be any -- or 0 -- cases because the two d's add up to the total shift which was categorized to be positive) but it has a simple story: of the 67 cases where both are nonzero, in 22 (33 percent) the signs are opposite. The Age/Year effects are not only stronger, they frequently work in the opposite direction.

Scientifically, we don't really care which force is stronger, but in a way it would be nice if cohort processes dominated. Why? Since we know a lot about birth rates and death rates and we can look at cross-sectional data to see cohort differences, cohort effects can be very useful in forecasting. If cohort replacement "theory" worked perfectly, one could (a) look at contemporary cross-sectional differences associated with Cohort or Education or Family Background (which are mostly cohort driven) and (b) forecast increases over time in the characteristics typical of the young, better educated, and well born. Figure 10, a path model (with raw coefficients) shows how this both works and fails. The cases are the 70 trend items.

(Figure 11 here)

The first variable is DIFF1, the percentage difference on the item between the avant garde and the rear guard in 1972-75. Strictly speaking, it includes extraneous variables, Region and Size of place, which are not cohort driven; but as Table 16 showed, the "guarde" index is saturated with cohort (age) and education. Arrow A says a one point difference in "guarde" produces a .182 increase in cohort change (about one fifth of a point change per point of initial difference.) This is a definite confirmation of the cohort model. cohort replacement does indeed move society in a liberal direction (as defined here).

Arrow B suggests a slight "liberal" trend in Age/Year changes, but the coefficient, +.097, is half the size of coefficient A and not statistically reliable.

Arrow C is the fly in the ointment. As hinted above, a one point increase in cohort change is associated with a -1.681 decrease in the Age/Year coefficient. Statistically this decrease could come from either an aging or a period effect. We suspect that historical period conservative socio-economic "weather" was over riding longer run liberal "climatic trends", but this metaphor is suggested but not proven by the present analysis.

Arrows D, E, and F simply say the total change is the sum of Cohort and Age/Year effects, which must be true of arithmetical necessity.

The sums at the bottom of Figure 10 summarize the fate of the cohort-liberalization hypothesis. The +.181 vindicates it, while the -.305 swamps it, so the total (i.e. our ability to predict change from initial guarde differences) is trivially small.

In summary:

The hypothesis of cohort-liberalization receives definite support here. Births and deaths do move many GSS variables in a "liberal" direction.

GSS: 72

But Age/Year changes, shifts within cohorts, are stronger and, probably due to period effects tend to be opposite in direction.

Thus, the process, while verified statistically, is not powerful enough to make it a useful simple scheme for forecasting or interpreting the broad sweep of changes from the early 70s to the early 80s.

SUMMARY

In this section we have reviewed three models or frameworks for looking at broad scale, short run social change.

The Economic model says Sociological variables move with short term economic fluctuations. The GSS years certainly had sufficient economic fluctuations to test this proposition. Save for Economic matters per se, it did badly.

The Massification model says modern societies become increasing homogeneous as subgroup differences evaporate. In most cases the rate of change is quite similar across subgroups, but when subgroup differences varied they tended to massify. The majority of the GSS changes were in a "liberal" direction (with "liberalism" operationally defined as responses characteristic of the young, the better educated, nonSouthern and Coastal residents, and those in bigger cities). "Rear guard" and "avant garde" sectors always showed identical directions and in most cases similar rates of change, but where the rates differed, in 72 percent of the cases the result was a convergence rather than divergence.

The Cohort-Liberalization model says that birth and death will tend to make modern societies more liberal - if that means more like its younger people. Somewhat complicated statistical analyses led to a clear result: cohort-liberalization is indeed pervausive in GSS trends from the early 70s to the early 80s, but practically speaking, it is swamped by an opposite process that might be "aging" or entry into a "conservative period".

THREE TYPICAL ITEMS WITH r SQUARES OF .79 AND .80

FEWORK = APPROVE
$r^2 = .80$

MAWORK = YES
$r^2 = .79$

HIT = YES
$r^2 = .79$

.95 confidence intervals $= \{90 = $
$+\!+\!+\!+\!+ = P_1 - P_0 \geq .05$

YEAR 72 74 76 78 80 82 84 86
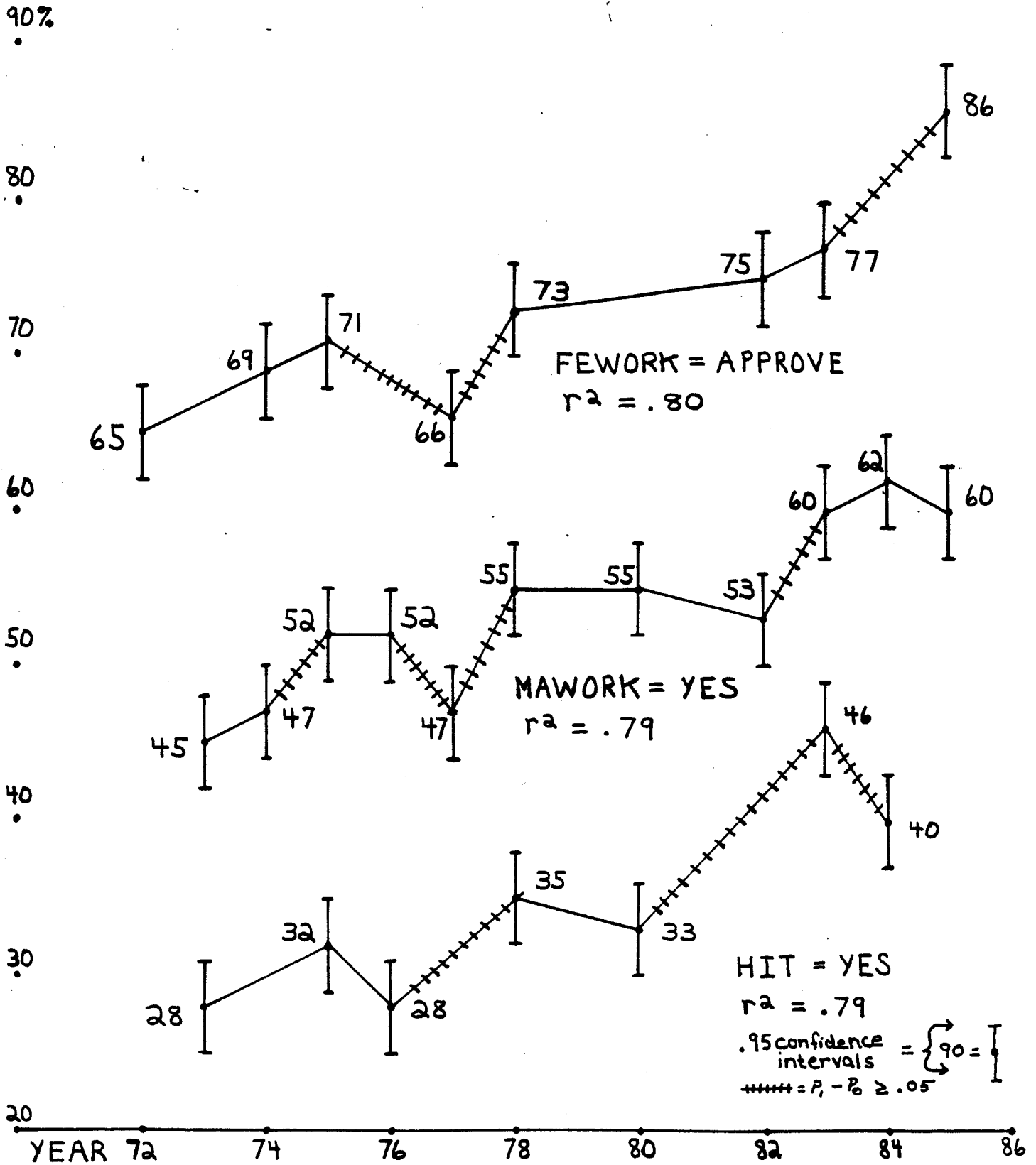
* assumes N = 1500, (P)(1-P) = .25, design effect = 1.5

Figure 1
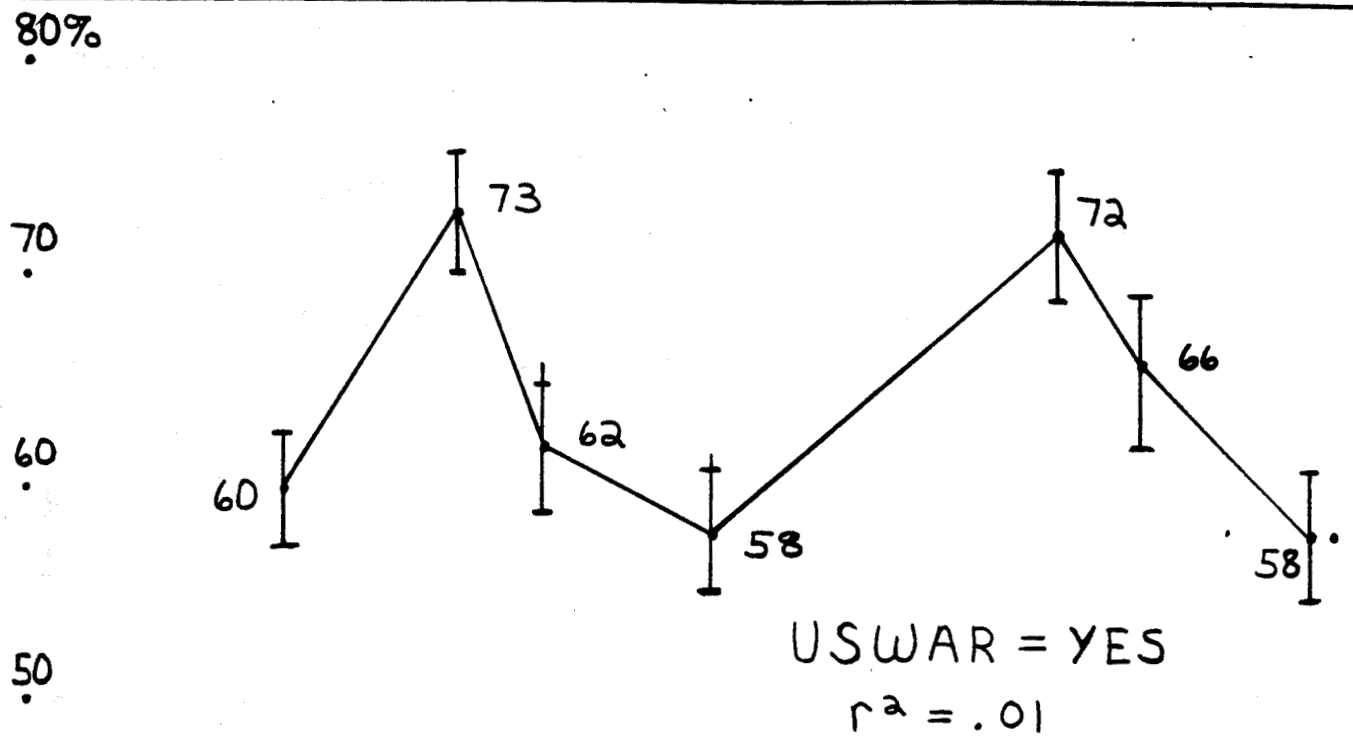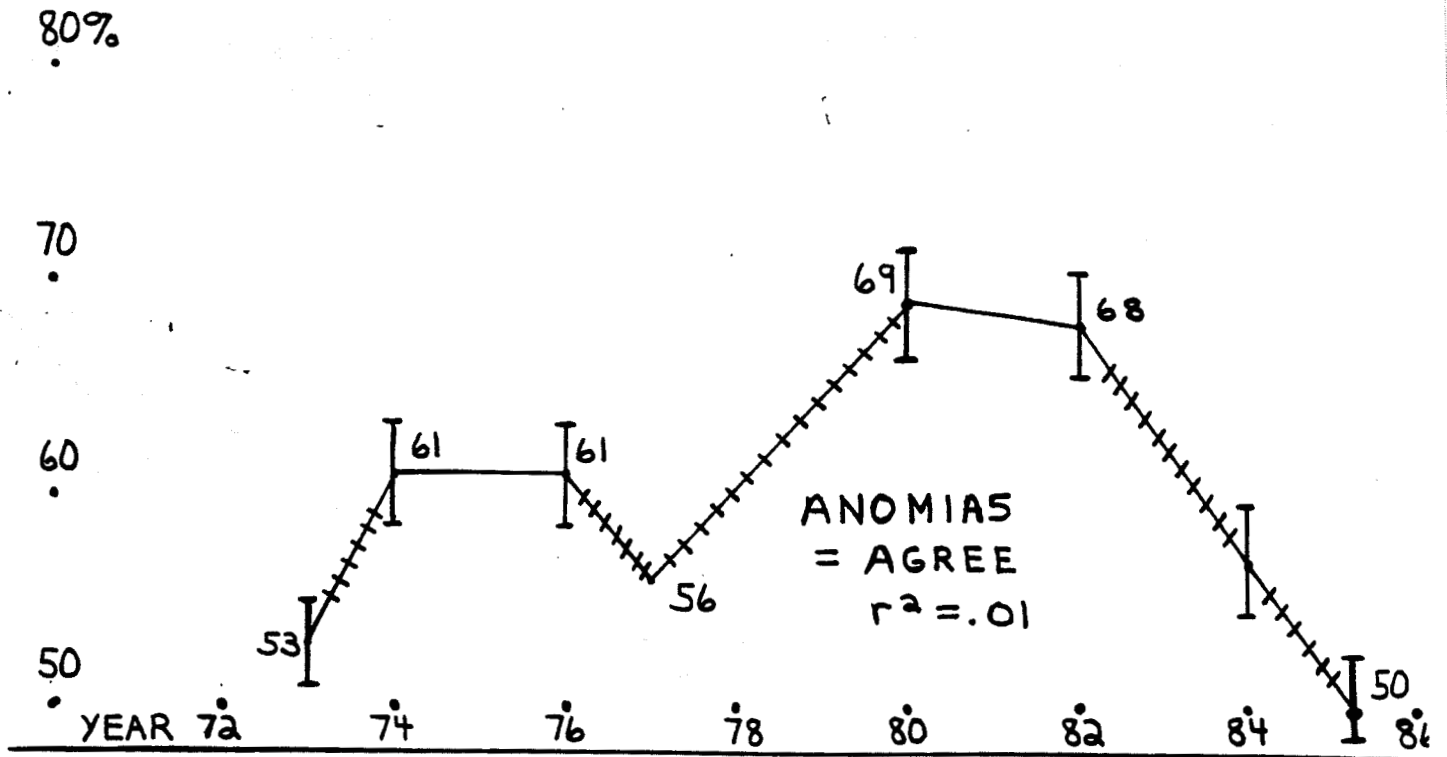
SEVEN ITEMS WITH HIGH FLUCTUATIONS
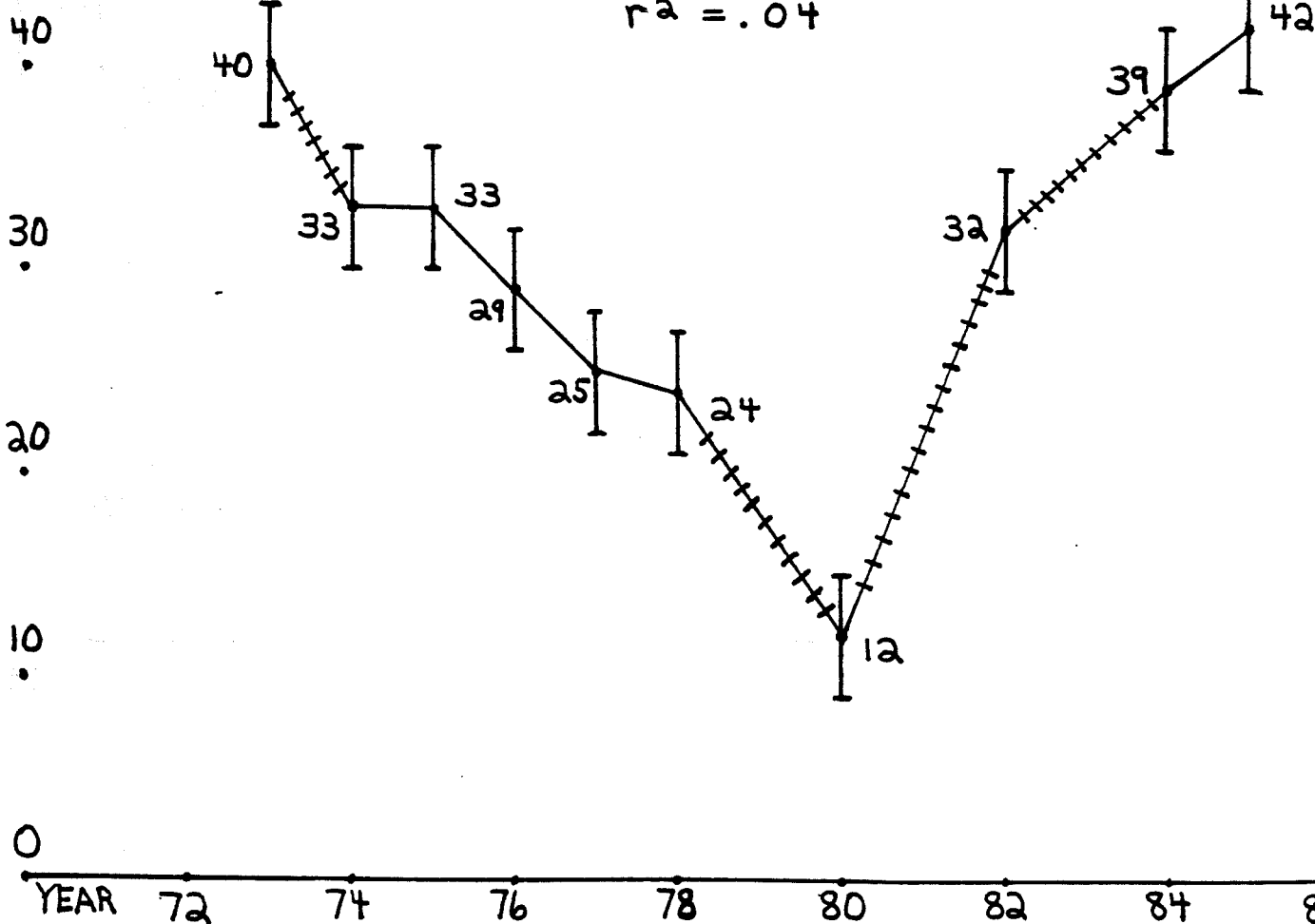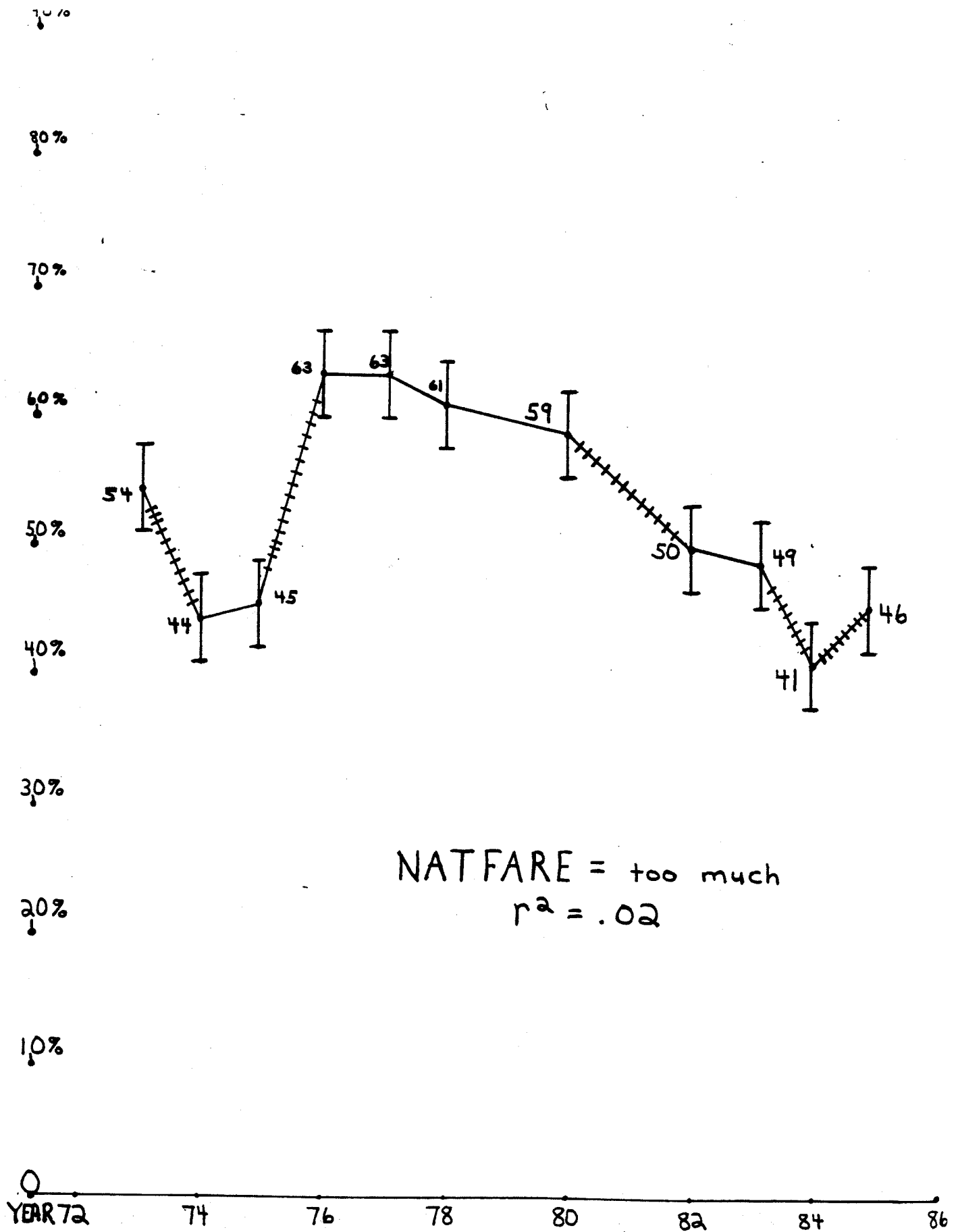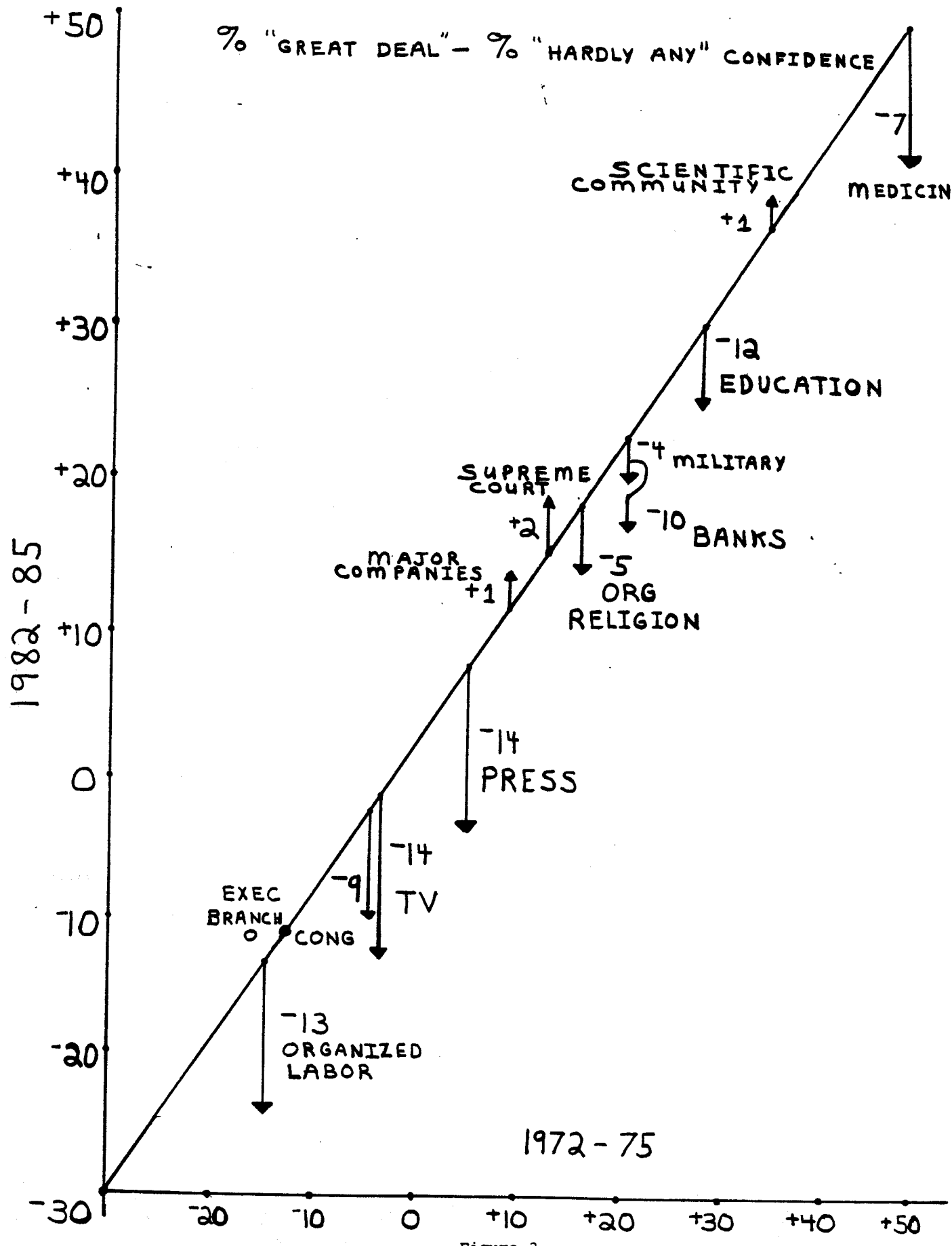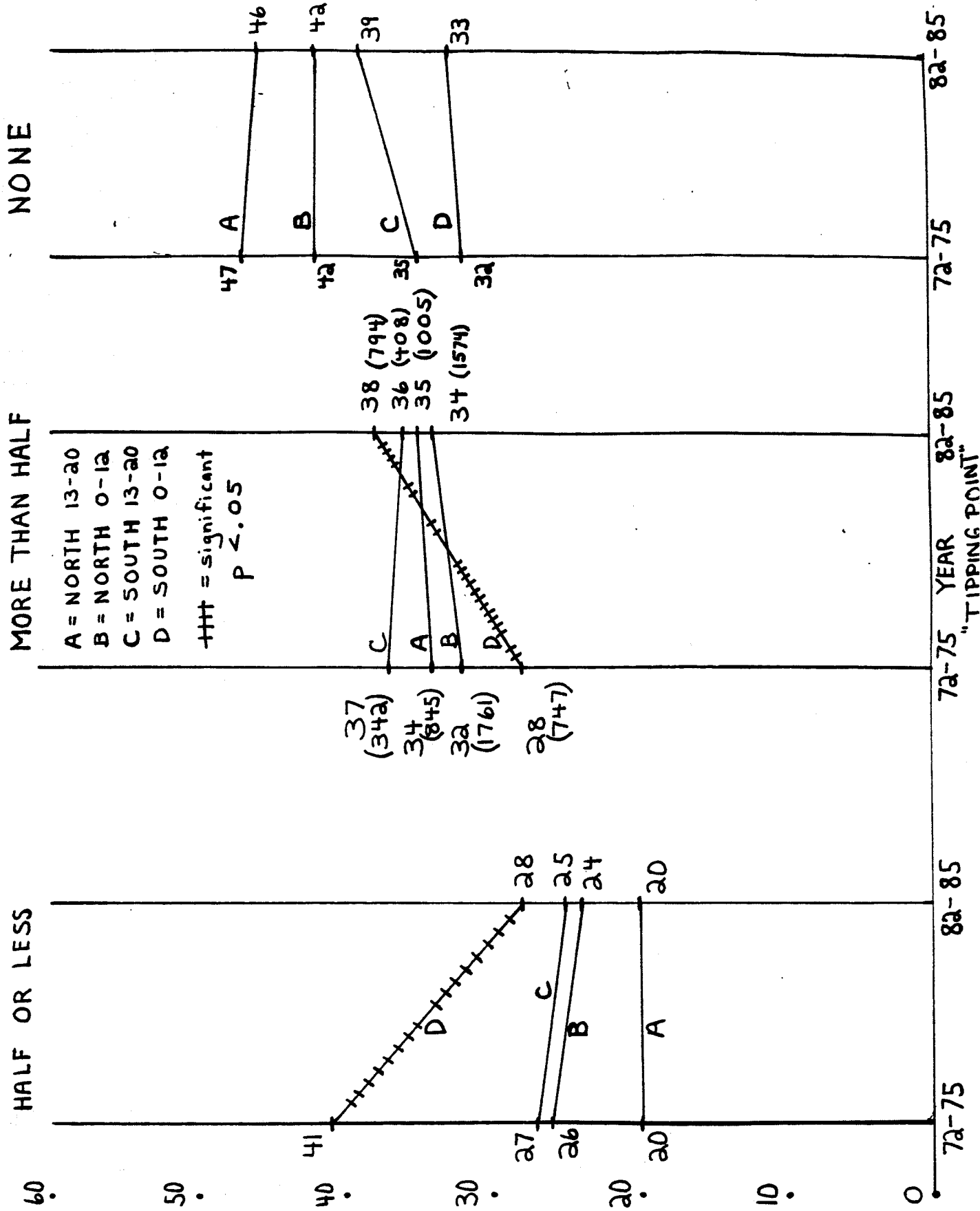AND SMALL r SQUARES

Figure 2.1
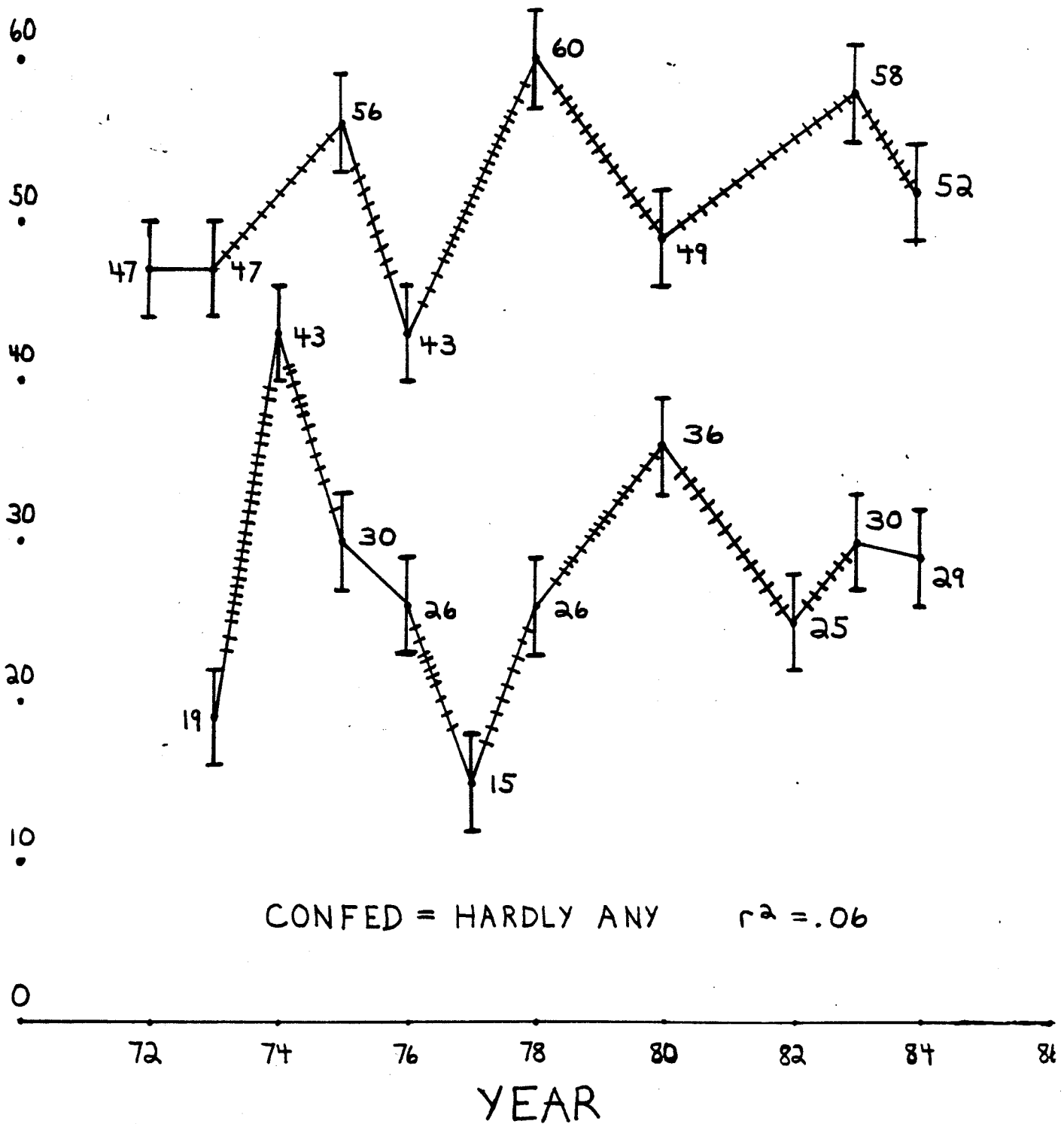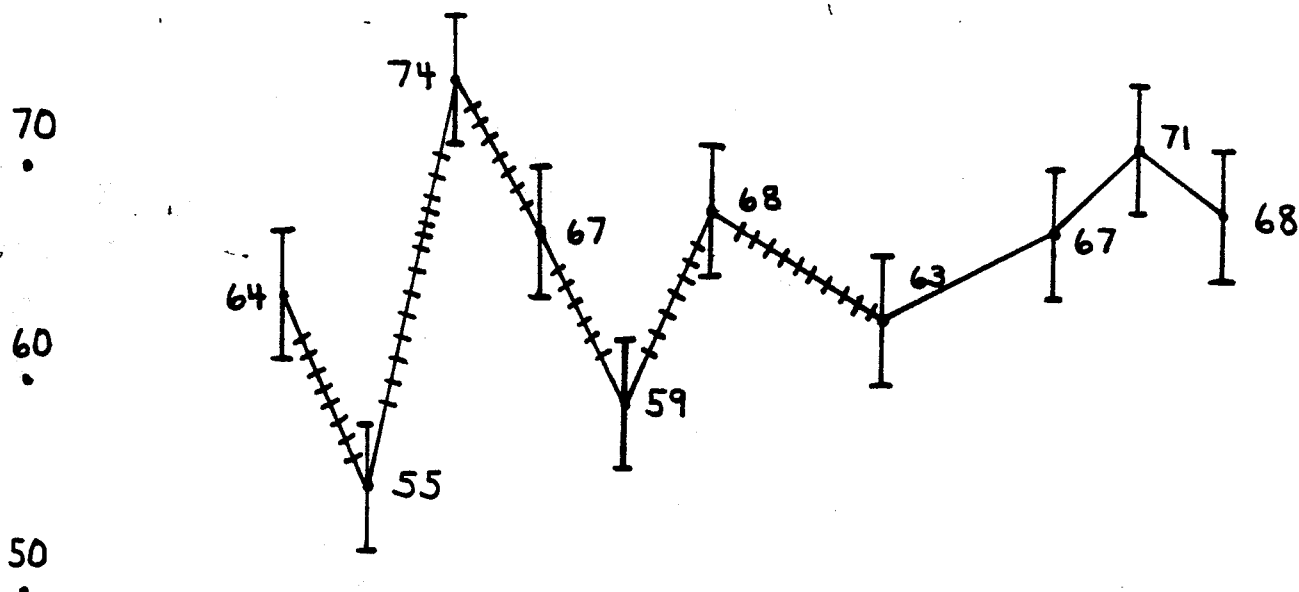
Figure 2.2

Figure 2.3

Figure 2.4

Figure 3

Figure 4

Figure 5

90%

87   88   88
82 · 86   86   87   84 83
80   85   85   83

AV(ABDEFECT, ABHLTH, ABRAPE)

70

60

50   50 51   50 50   50
44   49   49   44
40   43   41   42

AV(ABNOMORE, ABPOOR, ABSINGLE)

30

20

++++ change ≥ 5 points

10

0

YEAR   72   74   76   78   80   82   84   86
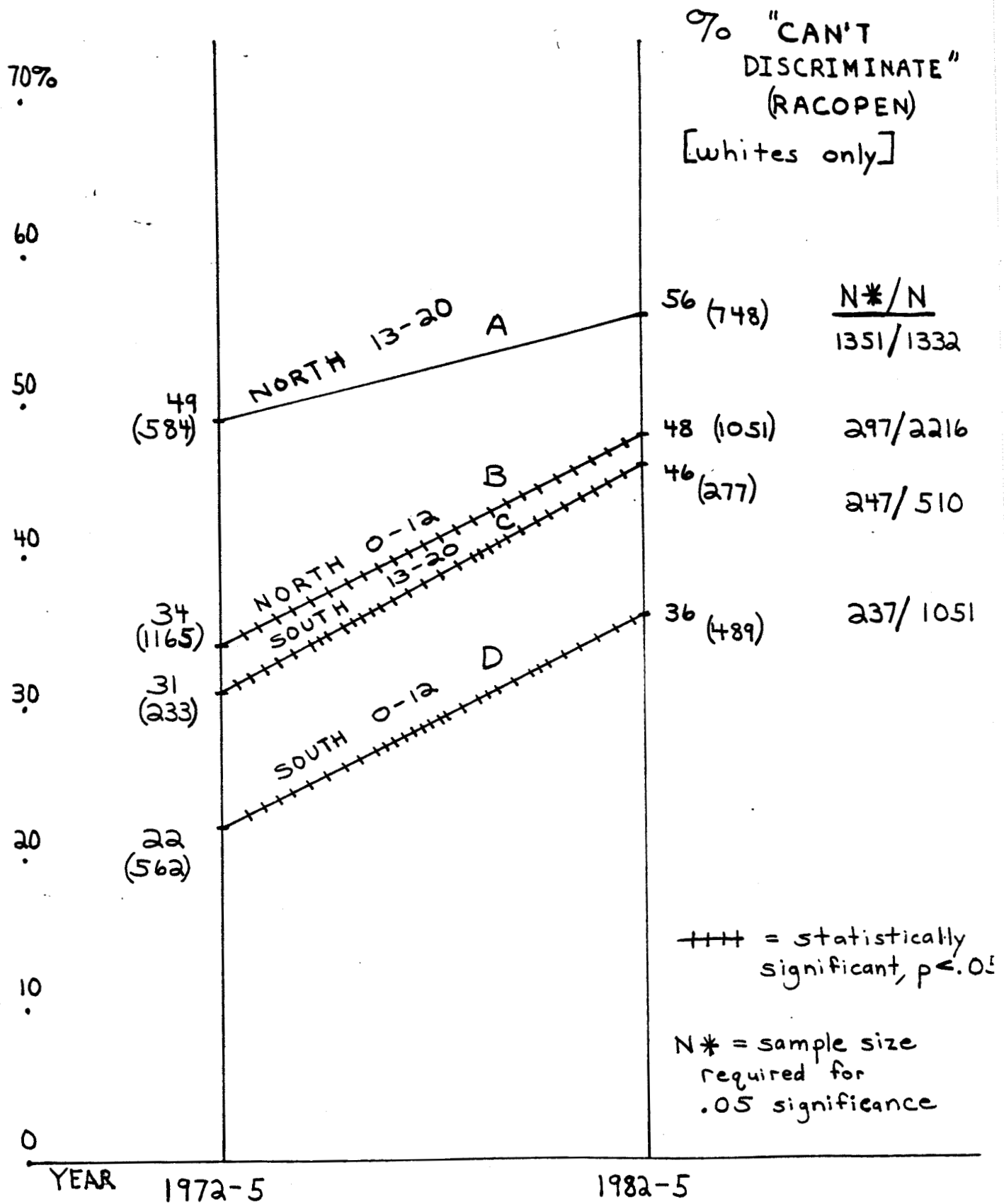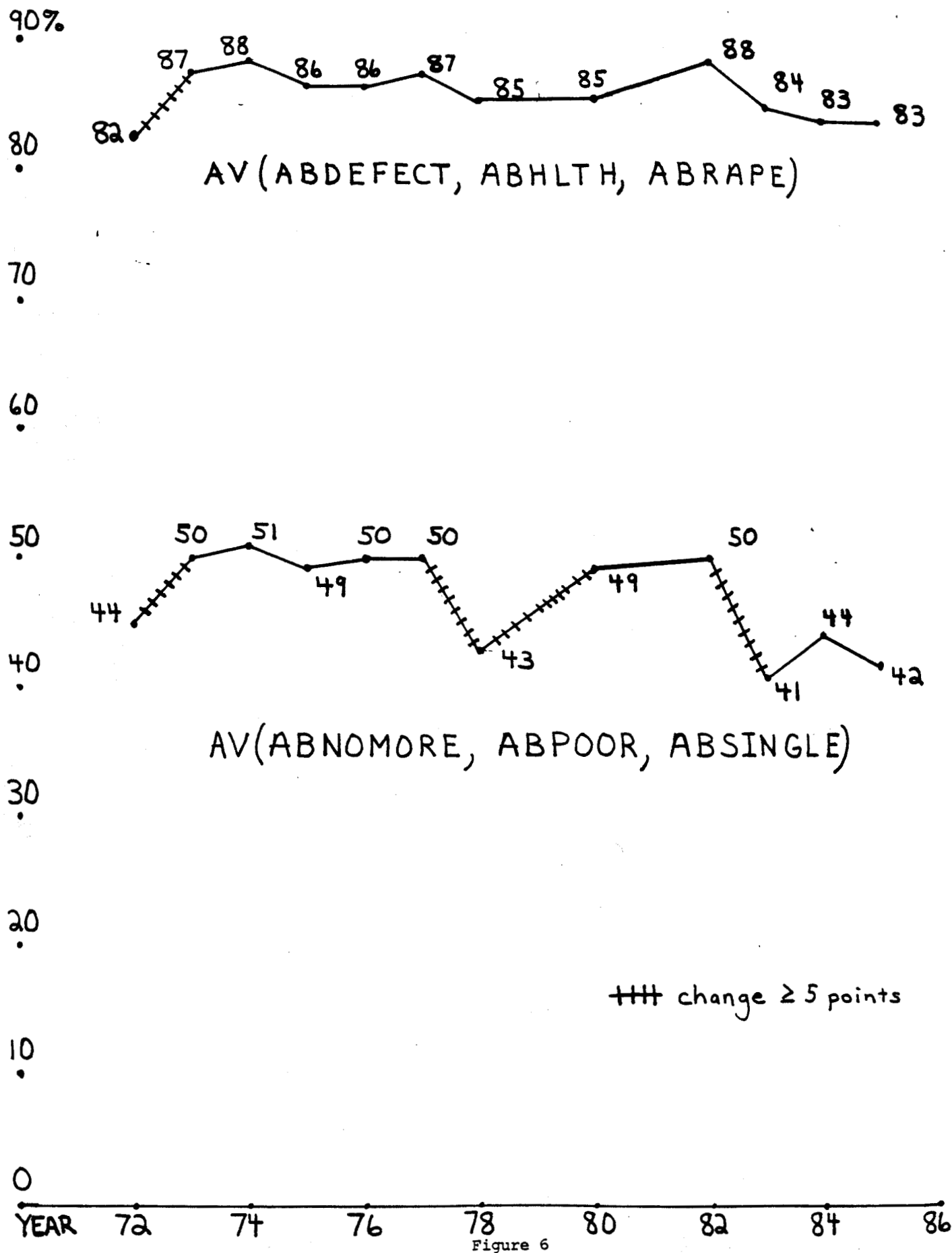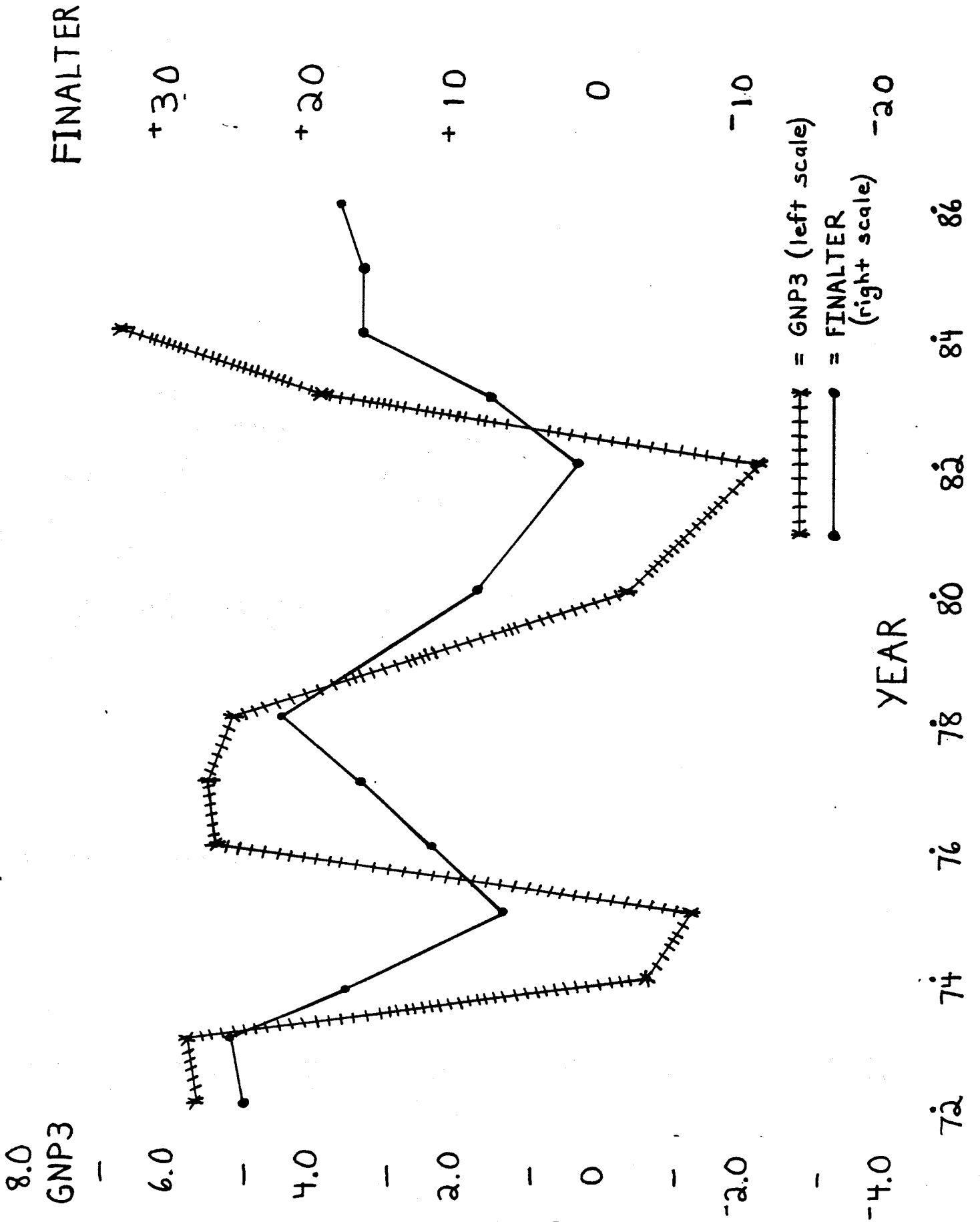
Figure 6

Figure 7

PATH MODEL FOR ECONOMIC TRENDS
1972 – 1985

.709

FINALTER

+.705

GNP3   -.115   SATFIN

+.825

.663
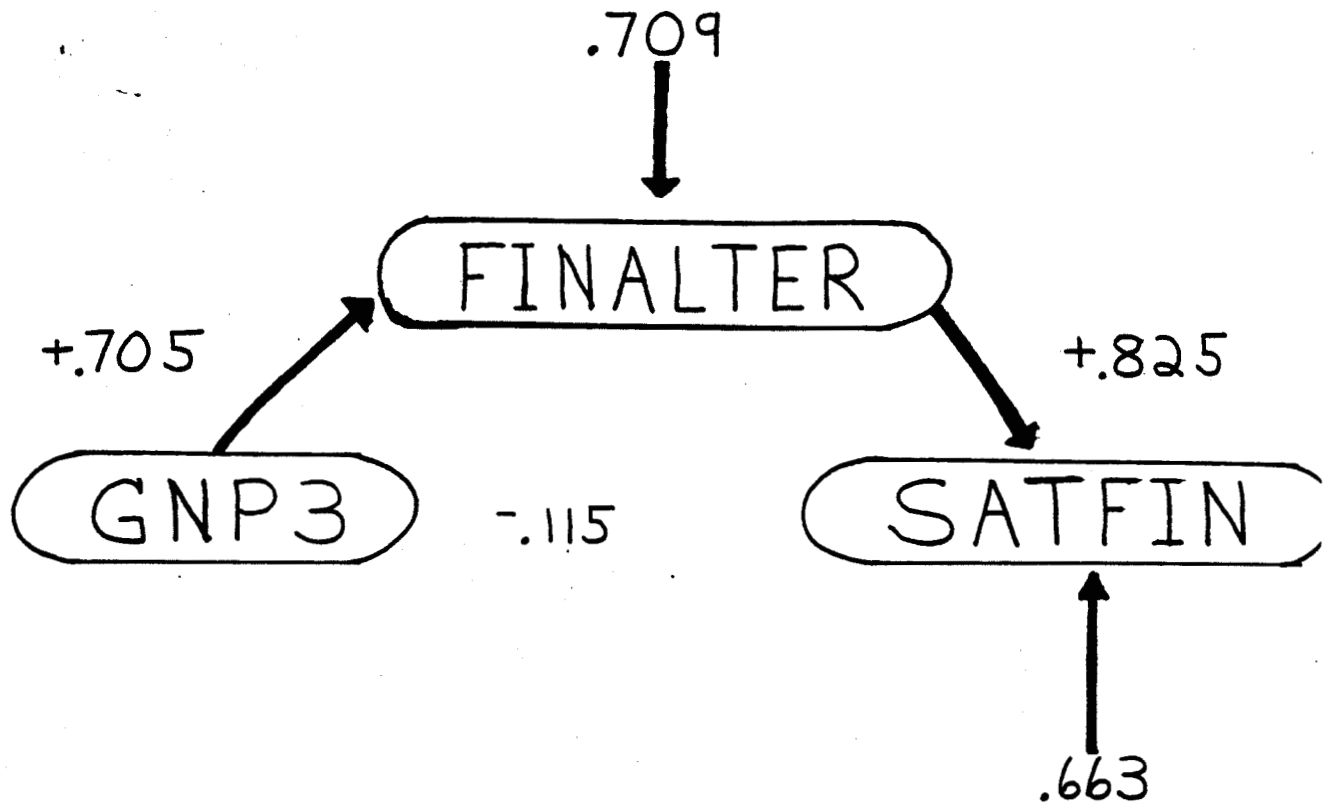
Figure 8

"GUARDE" INDEX AND THREE ATTITUDE ITEMS, 1972-75

● = COLHOMO (ALLOW) N = 2828 N✳ = 126
▣ = COMMUN (NOT "WORST") N = 2867 N✳ = 333
✳ = RACMAR (NO)　　 N = 5120 N✳ = 117
　[whites only]

O % of cases 4 + 8 + 11 + 16 + 19 + 17 + 15 + 8 + 2 = 100%

-4　-3　-2　-1　0　+1　+2　+3　+4　"GUARDE" INDEX

Figure 9

Figure 10

PATH MODEL FOR GSS COHORT PROCESSES
(raw coefficients)


```
COHORT D        D .997*

   A .182*                      -
                C -1.681*    -.002 --E--> TOTAL CHANGE
DIFF 1

   B .097                        F .998*
           AGE/YR
```

DIFF 1 TOTAL

```
            -.002                          DIRECT
            +.181    .182  .997     ⎫
            +.092    .097  .998     ⎬ INDIRECT
            -.305    .182 -1.681 -.998 ⎭
            -.034
```

N = 70 VARIABLES
* = exceeds 2 standard errors

Figure 11

Statistical Results for Specific Items

notes:

the columns, from left to right are

GSS mnemonic

descriptor

Significant fluctuation: + = significant at .05, assuming design
effect of 1.5

Chi Square/d.f.

r square: for dichotomized item and year, if fluctuation is
significant

Significant trend: + = significant shift in marginals 1982-5 v.
1972-5, p less than .05, assuming design effect = 1.5

Categories increasing: categories showing signficant increase
from 1972-5 to 1982-5 for items with significant trend.

FAMILY ATTITUDES   N=7

		Significant Fluctuation	χ^2/d.f.	r square	Significant Trend	CATEGORIES INCREASING
FEWORK	Should women work	+	39.3	80	+	Approve
AGED	Should aged live with their children	+	32.6	93	+	Good Idea
FEHOME	Women take care of home not country	+	22.0	83	+	Disagree
FEPOL	Women not suited for politics	+	18.4	85	+	Disagree
FEPRES	Vote for women president	+	16.6	64	+	Yes
DIVLAW	Divorce laws	+	12.3	53	+	More Difficult
HAPMAR	Happiness of marriage	+	4.6	53	+	Pretty Happy

POLITICS, INTL   N=14

		SIG1	χ^2/d.f	r^2	SIG2	CATEGORIES INCREASING
NATARMS	Military, Armaments, and Defense	+	104.9	4	+	Too little
RUSSIA	Liking for Russia	+	51.0	92	+	Anti
USWAR	Expect U.S. in War within 10 years	+	27.2	1	0	----
EGYPT	Liking for Egypt	+	26.8	66	+	Pro
CHINA	Liking for China	+	24.2	69	+	Pro
COMMUN	Feelings about Communism	+	21.5	83	+	"Worst kind"
BRAZIL	Liking for Brazil	+	19.5	55	+	Middling
ISRAEL	Liking for Israel	+	10.7	40	+	Anti
JAPAN	Liking for Japan	+	7.3	2	0	
USUN	Remain in U.N. or pull out	+	5.9	14	0	
USINTL	Take active part in World Affairs	+	4.3	20	0	
NATAID	Foreign aid	+	3.6	28	0	
ENGLAND	Liking for England	0	2.9		0	
CANADA	Liking for Canada	0	0.7		0	

		SIG1	x^2	r^2	SIG2	CATEGORIES INCREASING
CONFED	Confid. In Exec Branch of Fed Govt	+	36.4	6	+	_ ?
CONEDUC	Confidence in Education	+	28.5	42	+	Down
CONFINAN	Confid. in Banks & Financial institutions	+	25.9	45	+	Down
ANOMIA5	Lot of the average man getting worse	+	25.5	1	0	----
CONCLERG	Confidence in Organized Religion	+	22.2	11	+	Down
HELPFUL	People helpful or looking out for selves	+	21.7	20	+	Helpful
CONLEGIS	Confidence in Congress	+	20.3	48	+	Down
CONPRESS	Confidence in Press	+	20.3	67	+	Down
CONLABOR	Confidence in Organized Labor	+	14.4	40	+	Down
CONBUS	Confidence in Major Companies	+	12.5	0	+	Up
ANOMIA6	Not fair to bring child into world	+	12.5	2	0	----
CONARMY	Confidence in Military	+	12.2	18	+	Down
CONMEDIC	Confidence in Medicine	+	11.2	27	+	Down
CONTV	Confidence in Television	+	11.0	70	+	Down
ANOMIA7	Officials not interested in average man	+	10.6	30	+	Agree
CONJUDGE	Confid. in United States Supreme Court	+	9.4	16	+	Up
SATCITY	Satisfaction in place R lives in	+	8.8	0	+	Down
TRUST	Can people be trusted	+	8.5	3	0	----
SATFRND	Satisfaction in Friendships	+	7.5	0	0	----
SATHOBBY	Satisfaction Non-working activities	+	6.0	1	+	?
CONSCI	Confidence in Scientific Community	+	5.8	6	0	----
SATFIN	Satisfaction with financial situation	+	4.8	50	+	Down
HAPPY	General Happiness	+	4.4	16	+	Extreme down
GETAHEAD	Opinion of how people get ahead	+	3.3	11	+	Luck or Help
FAIR	People fair or try to take avantage	+	3.1	14	+	?
SATHEALT	Satisfaction with health	+	3.0	2	0	----
SATFAM	Satisfaction with family life	0	1.7		0	----
LIFE	Is life exciting or dull	0	1.2		0	----
HEALTH	Condition of health	0	0.9		+	?
SATJOB	Satisfaction with job	0	0.0		0	----

		Significant Fluctuation	χ^2/ d.f.	r^2	Significant Trend	Increasing Category
RACPUSH	Blacks shouldn't push	+	30.9	90	+	Disagree
RACSEG	Whites have right to Segregate Neigh.	+	23.9	90	+	Disagree
RACOPEN	Vote on Open Housing Law	+	18.6	91	+	Can't discriminat
RACSCHOL	Whites & blacks go to same school	+	10.0	83	+	Same schools
RACDIN	Object to opp. race home for dinner	+	8.9	80	+	No objective
RACMAR	Favor laws against racial intermarriage	+	8.7	57	+	Oppose
BUSING	Attitude toward racial busing	+	8.4	57	+	Pro
RACLIVE	Any opp. race in neighborhood	+	7.3	40	+	Yes
NATRACE*	Improving the conditions of blacks	+	6.6	3	+	"About right"
RACHOME	Opp. race home for dinner recently	+	5.6	90	+	Yes
RACPRES	Would vote for black president	+	5.5	40	+	Yes
RACSKOOL	School integration scale	+	3.7	37	+	"Moderate"

*Both races

		GEOGRAPHY	N=7			
SRCBELT	SRC Beltcode	+	13.4	69	+	Rural and Largest cities down
NATENVIR	Improving & Protecting environment	+	11.4	3	+	Lower priority
SIZE	Size of place in 1000's	+	9.1	27	+	10,000-99,000 up
NATCITY	Solving problems of big cities	+	8.2	37	+	Lower priority
XNORCSIZ	Expanded N.O.R.C. size code	+	6.4	60	+	Surbubs up
MOBILE16	Geographic mobility since age 16	+	2.8	6	0	
REGION	Region of interview	0	2.1		+	Various Short Shifts

EDUCATION   N=4

		SIG1	χ^2/d.f.	r^2	SIG2	CATEGORIES INCREASING
DEGREE	R'S highest degree	+	14.6	92	+	High school +
NATEDUC	Improving nation's education system	+	12.3	82	+	About right, too much
COMPREND	R's understaning of questions	+	4.0	32	+	Good
WORDSUM	Number words correct in vocabulary test	0	0.2		0	

FAMILY STRUCTURE   N=14

HOMPOP	Number of persons in household	+	25.5	89	+	1 & 2
MARITAL	Marital status	+	23.8	92	+	Single,widowed,divorced
TEENS	Household members 13 thru 17 yrs old	+	11.8	87	+	0
ADULTS	Household members 18 yrs and older	+	11.1	77	+	1
WRKSTAT	Labor force status	+	10.5	85	+	Full time, part time
PRETEEN	Household members 6 thru 12 yrs old	+	9.1	86	=	0
BABIES	Household members less than 6 yrs old	+	7.6	68	+	0
EARNRS	How many in family earned money	+	5.7	69	+	0
UNRELAT	Number in houshold not related	+	3.6	71	+	1 or more
CHILDS	Number of children	+	3.2	72	+	0
EVWORK	Ever work as long as one year	+	2.9	79	+	Yes
DIVORCE	Ever been divorced or separated	0	2.4		+	Yes
AGE	Age of respondent	0	1.5		0	
AGEWED	Age when first married	0	1.0		0	

INCOME, SOCIAL CLASS   N=9

		SIG1	χ^2/d.f.	r^2	SIG2	CATEGORIES INCREASING
INCOME	Total family income	+	171.9	98	+	$20,000+
RINCOME	Respondent's income	+	76.1	98	+	$15,000+
NATFARE	Welfare	+	18.9	2	0	----
FINALTER	Change in financial situation	+	8.2	24	+	Worse
PHONE	Telephone in home	+	5.1	50	+	In home
UNEMP	Ever unemployed in last ten years	+	5.1	78	+	Yes
FINRELA	Opinion of family income	+	4.8	50	+	Below average
GOVAID	Ever receive government aid	+	3.0	74	+	Yes
CLASS	Subjective class identification	0	1.1		0	----

SEX, FERTILITY   N=18

		SIG1	x^2/d.f.	r^2	SIG2	INCREASE CATEGORIES
TEENPILL	Birth control information to teens	+	14.5	NA*	+	Should be available
CHLDIDEL	Ideal number of children	+	13.8	65	+	"Two"
PREMARSX	Sex before marriage	+	9.8	93	+	"Not worry at all"
ABSINGLE	Not married	+	9.5	19	+	No
PORNMORL	Materials lead to breakdown in morals	+	8.9	82	+	Yes
ABPOOR	Low income-can't afford more children	+	8.9	41	+	No
SEXEDUC	Sex education in public schools	+	8.4	73	+	Favor
ABDEFECT	Strong chance of serious defect	+	7.7	13	+	No
ABNOMORE	Married--wants no more children	+	7.0	6	+	No
ABRAPE	Pregnant as result of rape	+	5.2	0	0	---
ABHLTH	Woman's health seriously endangered	+	4.5	0	0	---
XMARSEX	Sex with person other than spouse	+	3.6	10	+	Wrong
PORNRAPE	Materials lead to rape	+	3.2	58	+	Yes
PORNINF	Materials provide info about sex	+	3.2	23	+	No
HOMOSEX	Homosexual sex relations	0	2.9		+	"Not wrong at all"
PORNOUT	Material provide outlet	0	2.8		0	----
CHLDMORE	Expect more children	0	6.7		+	No
PILL	Birth control information	0	0.4		0	----

*less than 6 years

POLITICS, DOMESTIC

NATSPAC	Space exploration program	+	13.7	44	+	More favorable
NATHEAL	Improving and protecting health	+	5.9	38	+	Less favorable
PARTYID	Political party affiliation	+	4.0	58	+	Republican
POLVIEWS	Think of self as liberal or conservative	+	4.0	86	+	Conservative

PARTICIPATION   N=24

		SIG1	x^2/d.f.	r^2	SIG2	CATEGORIES INCREASING -
NEWS	How often does R read newspaper	+	25.9	91	+	Not Daily
XMOVIE	Seen X-rated movie in last year	+	13.2	0	0	
MEMCHURII	Membership in church group	+	9.9	45	+	No
MEMNUM	Number of memberships	+	7.0	35	0	
MEMSCHL	Membership in school group	+	6.5	38	+.	No
SOCOMMUN	Spend evening with neighbor	+	4.2	89	+	Less frequent
SOCBAR	Spend evening at bar	+	4.0	57	+	Less "Never"
MEMFRAT	Membership in fraternal group	+	3.2	60	+	No
MEMPROF	Membership in professional society	0	2.6		+	Yes
TVHOURS	Hours per day watching TV	0	2.5		0	
MEMUNION	Membership in labor union	0	2.4		0	
MEMSPORT	Membership in sports club	0	2.4		+	Yes
MEMSERV	Membership in service group	0	1.7		0	
MEMVET	Membership in veteran group	0	1.7		0	
MEMPOLIT	Membership in political club	0	1.7		0	
MEMYOUTH	Membership in youth group	0	1.4		0	
SOCREL	Spend evening with relatives	0	1.4		0	
MEMNAT	Membership in nationality group	0	1.4		0	
SOCFREND	Spend evening with friends	0	1.3		0	
MEMGREEK	Membership in school fraternity	0	1.2		0	
MEMOTHER	Membership in any other	0	0.9		0	
MEMHOBBY	Membership in hobby club	0	0.4		0	
MEMLIT	Membership in literary or art group	0	0.4		0	
MEMFARM	Membership in farm organization	0	0.4		0	

FAMILY BACKGROUND   N=19

		SIG1	χ^2/d.f	r^2	SIG2	CATEGORIES INCREASING
ETHNUM	Type of response about ethnicity -- R.	+	18.0	82	+	Chooses 1 of 2
MAWORK	Mother's employment after marriage.	+	17.4	79	+	YES
MADEG	Mother's highest degree.	+	16.2	94	+	High school graduate
PADEG	Father's highest degree.	+	13.7	91	+	High school graduate
PAIND16	Father's industry.	+	9.0	83	+	2 day activity incurred
RES16	Type of place lived in when 16 yrs old.	+	7.8	77	+	middle sizes increased
PAOCC16	Father's occupation	+	7.7	71	+	High white collar incurred
ETHNIC	Country of family origin.	+	6.0	NA*	+	"America" down
RACE	Race of respondent.	+	5.0	28	+	
INCOM16	R's family incoe when 26 years old.	+	4.3	55	+	"Above average" incurred
SEX	Respondent's sex.	+	3.9	56	+	More women
PAPRES16	Father's occupational prestige.	+	3.8	0	+	43-82 increased
SIBS	Number of brothers and sisters.	+	2.9	10	+	Fewer
RELIG16	Religion of which raised.	0	2.4		0	
DENOM16	Denomination in which r was raised.	0	2.4		+	Other Protestant
FAMDIF16	Reason not living with parents.	0	2.3		+	Parents divorced
PAWRKSLF	Father Self-emp. or worked for somebody.	0	2.1		+	"Someone else"
FAMILY16	Living with parents when 16 years old.	0	1.6		0	
REG16	Region of residence, age 16.	0	1.2		+	Various small shifts

*No logical way to dichotomiz the variable

TOLERANCE   N=13

		SIG1	χ^2/d.f.	r^2	SIG2	CATEGORIES INCREASING
GRASS	Should marijuana be made legal	+	14.6	01	0	
COLCOM	Should Communist teacher be fired	+	10.7	63	+	Not fire
COLHOMO	Allow homosexual to teach	+	10.4	89	+	Allow
PORNLAW	Feelings about pronography laws	+	5.3	86	0	Illegal for minors
COLATH	Allow anit-religionist to teach	+	4.9	72	+	Allow
SPKHOMO	Allow homosexual to speak	+	4.8	87	+	Allow
SPKATH	Allow anit-religionist to speak	+	3.8	7	+	Allow
SPKCOM	Allow Communist to speak	+	3.8	7	0	
WIRTAP	Wiretapping	+	3.3	51	+	Approve
LIBCOM	Allow Communist's book in library	0	2.5		0	
SPKATH	Allow atheist to speech	0	2.5		0	
LIBHOMO	Allow homosexual's book in library	0	2.2		0	
LIBATH	Allow anit-religious book in library	0	1.3		0	

RELIGION   N=5

PRAYER	Bible prayer in public schools	+	11.5	90	+	Approve
RELITEN	Religious intensity	+	4.3	39	0	
POSTLIFE	Belief in life after death	+	4.2	13	0	
ATTEND	How often R attends relgious services	+	3.8	15	+	Extremes increase
DENOM	Specific denomination	+	3.7	77	+	Other and non-denom
RELIG	R's religious preference	0	1.2		0	

OCCUPATIONAL   N=16

		SIG1	χ^2/d.f.	r^2	SIG2	CATEGORIES INCREASING
UNION	Does R or spouse belong in union	+	7.2	86	+	Neither belongs
DOTGED	D.O.T. Code – general educ develop.	+	5.5	35	+	Higher
PRESTIGE	R's occupational presitige score	+	5.0	12	+	48-82
DOTPRES	Temme prestige scale	+	5.0	22	+	49-88
DOTDATA	D.O.T. Code – relation to data	+	4.6	34		More
OCC	R's occupation	+	4.4	60	+	High white collar
WKSUBS	Does supervisor have supervisor	+	4.3	18	0	----
INDUSTRY	R's industry code	+	3.5	72	+	Service
DOTSVP	D.O.T. Code – specific vocat, prep	+	3.6	34	0	----
WKSUP	Does R or spouse supervise anyone	+	3.1	51	+	Supervising
WRKSLF	R self-emp or works for somebody	+	2.8	55	+	Self employed
DOTTHNG	D.O.T. Code – relation to things	0	2.2		0	
DOTPEOP	D.O.T. Code – relaion to people	0	2.2		+	Related to
HRS1	Number of hours worked last week	0	2.0		0	
WKSUB	Does R or spouse hav supervisor	0	2.0		0	
WKSUPS	Does subordinate supervise anyone	0	0.7		0	

		SIG1	χ^2/d.f.	R^2	SIG2	CATEGORIES INCREASING
CAPPUN	Favor or oppose death penalty for murder	+	37.0	84	+	Favor
HIT	Ever punched or beaten by another person	+	28.1	79	+	Yes
COURTS	Courts dealing with criminals	+	26.4	59	+	Not harsh enough
TICKET	Ever received a traffic ticket	+	18.0	78	+	Yes
POLABUSE	Citizen said vulgar or obscene things	+	13.0	75	+	No
HITROBBR	Stranger had broken into man's house	+	8.8	8	0	----
HITCHILD	Stranger had hit man's child	+	8.4	45	+	Yes
POLATTAK	Citizen attacking policeman with fists	+	7.2	9	+	No
NATDRUG	Dealing with drug addiction	+	6.8	1	0	----
HITOK	Ever approve of man punching adult male	+	6.7	19	0	----
POLHITOK	Ever approve of police striking citizen	+	6.4	1	0	----
POLESCAP	Citizens attempting to escape custody	+	5.4	42	+	No
ARREST	Ever picked up or charged by police	+	3.8	62	+	Yes
GUN	Ever threatened with gun or shot at	+	3.6	65	+	Yes
NATCRIME	Halting rising drug rate	+	3.5	6	0	----
HITBEATR	Stranger was beating up a woman	+	3.4	5	0	----
FEAR	Afraid to walk at night in neighborhood	0	2.8		0	
GUNLAW	Favor or oppose gun permits	0	2.4		0	
ROBBRY	Forcefully robbed during the last year	0	2.4		0	
OWNGUN	Have gun in home	0	2.1		0	
HITDRUNK	Drunk bumped into man & wife	0	1.8		0	
PISTOL	Pistol or revolver in home	0	1.4		0	
SHOTGUN	Shotgun in home	0	1.2		0	
BURGLR	Home broken into during the last year	0	0.9		0	
RIFLE	Rifle in home	0	0.9		0	
POLMURDR	Citizen questioned as murder suspect	0	0.4		0	

		SIG1	x^2/d.f.	r^2	SIG2	CATEGORY INCREASE
INTEREST	Interested how and why things happen	+	7.7	35	+	Lower priority
RICHWORK	If rich, continue or stop working	+	7.2	38	+	Continue
JOBHOUR	Short working hours	+	6.6	87	+	Lower priority
AMICABLE	Gets along well with other children	+	6.0	57	+	Lower priority
JOBSEC	No danger of being fired	+	5.8	0	+	---
JOBINC	High income	+	5.4	33	+	Higher priority
OBEYS	Obeys parents well	+	4.4	22	0	---
JOBMEANS	Work important and feel accomplishment	+	3.9	2	0	---
JOBPROMO	Chances for advancement	+	3.6	1	0	---
CONTROL	Self-control	0	3.0		0	---
JUDGMENT	Good sense and sound judgement	0	2.8		0	---
MANNERS	Good manners	0	2.7		0	---
SUCCESS	Tries hard to succeed	0	2.6		0	---
ROLE	Acts like boy-acts like girl	0	2.5		+	Lower priority
HONEST	Honest	0	2.4		0	
CLEAN	Neat and clean	0	2.1		0	
RESPONSI	Responsible	0	1.6		+	
CONSIDER	Considerate of others	0	0.8		+	Higher priority
STUDIOUS	Good student	0	0.7		0	Lower priority

MISC

VETYEARS	Years in armed forces	+	3.8	.74	+	None
COOP	R's attitude toward interview	0	2.6		+	Lower