Age and Social Change: An Analysis of the Association between Age-Cohorts and Attitude Change, 1972-1977

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Building on the work of Davis and Taylor on "Short Term Trends in American Society...1972-1977," (Davis and Taylor, 1977) this paper examines the relationship of age to attitude change over the last six years. As Davis and Taylor found, of sixty-six attitude items [Attitude items include all questions about public policy matters and general perceptions about society. They do not include questions about the respondent's own life or experience such as satisfaction ques- tions, fertility plans, or personal health evaluations.] that have appeared on the General Social Surveys at least four times, thirty- seven showed no trends (i.e., had constant marginals), nine showed linear trends, seven showed trends with a significant linear component but with a significant amount of unexplained variance, and thirteen showed non-linear trends. [The technique used to fit the successive model of no change, linear change, and non-linear change is described in Taylor, 1976 and Davis and Taylor, 1977.] In brief, 56 percent of the attitudes charted overtime showed no change, 24 percent showed trends with some linear direction, and 20 percent showed more complex time trends. It would be interesting to know whether this distribution of change and stability indicated that a large or small amount of attitude change was occurring during this period, but there are no comparable figures from other times and places to compare these to. Without a comparative perspective it is difficult to know whether this mixture of change versus stability marks this period as one of general change or one of general stability. It is clear however, that change has occurred to a different degree within certain topical areas. Of eleven items on spending priorities nine or 82 percent showed significant variation over the last six years. Almost as changeable has been the confidence in institutions items, 75 percent, of which have varied. After these two groups, the proportion of items changing in other areas drops off sharply being 40 percent on crime items, 38 percent on a miscellaneous group, 33 percent on abortion items, 22 percent on race relations items, 20 percent on sex related items, and 11 percent on Stouffer civil liberty items. Because of this clustering of change, spending priorities items make up nine of the twenty- nine changing items or 31 percent, confidence items make up another 31 percent, and the remaining groups make up only 38 percent with no single topic having as much as 7 percent of the total number of changing items.

Looking at the direction of the changes, we see two basic trends 1) a general trend towards conservative ideological positions. [Ideological direction was determined by testing all attitudes against two measures of the liberal-conservative continuum, a scale from the Stouffer civil liberty items which has been shown to correlate well with various aspects of general liberalism/conservatism (Stinchcombe, 1975) and a direct, subjective measure of liberalism/conservativism. "We hear a lot of talk these days about liberals and conservatives. I am going to show you a seven-point scale on which the political views that people might hold are arranged from extremely liberal--point 1--to exremely conservative--point 7. Where would you place yourself on this scale?"] and 2) the decline and rise of confidence in the leaders of national institutions. Along the first trend there were eleven items that moved in a conservative direction (NATARMS, NATENVIR, NATCITY, NATDRUG, NATRACE, NATFARE, NATHEAL, NATSPAC, COURTS, CAPPUN, and COMMUN). In addition there were five items that moved in a liberal direction at the beginning of the period, but then reached a liberal peak and have remained stable since (COLCOM, FEPRES, ABDEFECT, RACPRES, and ABNOMORE). Only two items (CHLDIDEL and RACMAR) have moved in a liberal direction throughout the period. Finally, there

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TABLE 1

MARGINAL TRENDS, 1972-1977

MNEMONIC	DESCRIPTOR	CATEGORY							
A. LINEAR TRENDS									
NATARMS	Military Spending	Too much	-	38	31	31	27	23	-.035	.93
NATENVIR	Spending on Environment	Too little	-	61	59	53	55	48	-.031	.88
COURTS	Harshness	Not Harsh Enough	66	73	78	79	81	83	+.030	.90
CAPPUN	Death Pendlty	For it	53	60	63	60	66	67	+.025	.80
NATCITY	Spending on Cities	Too little	-	48	50	47	43	40	-.023	.83
NATDRUG	Spending on drug control	Too little	-	66	60	55	59	55	-.023	.66
COMMUN	Communism as a form of government	Worst	-	43	49	-	51	53	+.022	.82
NATRACE	Spending on B1acks	Too little	-	33	31	27	27	25	-.018	.90
CHLDIDEL	Ideal number of children	3 or more	53	48	-	44	-	46	-.016	.71
B. LINEAR COMPONENT										
NATFARE	Spending on welEare	Too much	-	52	42	43	60	60	+.034	.36
NATSPAC	Spending on Space	Too much	-	58	61	58	60	50	-.018	.40
RACMAR	Approve miscegenation laws	No	61	62	66	60	66	71	+.016	.55
COLCOM	Fire Communist college professor?	No	32	39	42	-	41	39	+.012	.34
FEPRES	Vote for Woman for President?	Yes	70	-	78	78	-	77	+.013	.56
ABDEFECT	Abortion OR if baby defective	Yes	75	82	83	80	82	83	+.010	.43
NATHEAL	Spending on health	Too little	-	61	64	63	60	56	-.013	.47
C. NON-LINEAR TRENDS										
CONFED	Confidence, Executive Branch Leaders	Great deal	-	29	14	13	13	28		
CONCLERG	Confidence, Church leaders	Great deal	-	35	44	24	31	40		
CONEDUC	Confidence, Educational leaders	Great deal	-	37	49	31	38	41		
HELPFUL	People helpful v. out for selves	Helpful	46	47	-	56	43	-		
CONBUS	Confidence, business leaders	Great deal	-	29	31	19	22	27	-.013	
CONLEGIS	Confidence, congressional leaders	Great deal	-	24	17	13	14	19	-.012	.21
NATAID	Spending on Foreign Aid	Too much	-	70	76	73	76	66		
CONMEDIC	Confidence, Medical leaders	Great deal	-	54	60	50	54	51	-.012	.22
RACPRES	Vote for b1ack for President?	Yes	69	-	78	77	-	75	+.010	.29
CONSCI	Confidence, Science leaders	Great deal	-	37	45	38	43	41		
CONARMY	Confidence, military leaders	Great deal	-	32	40	35	39	36		
CONLABOR	Confidence, Labor leaders	Great deal	-	16	18	10	12	15		
ABNOMORE	Abortion OR if woman doesn't want more children	Yes	38	46	45	44	45	45	+.009	.28

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were two items (HELPFUL and NATAID) that had weak relationships to the conservative-liberal continuum and showed no net trend. In brief, it appears that the general trend towards liberalism that has been prevailing since at least World War II (see for example, Smith, 1976; Taylor, 1977; Smith, 1977; and Davis, 1976) has at least halted and may well have reversed itself during the last half-decade. The second general trend appears in the confidence items. In seven of the nine confidence items, confidence fell to a low in 1975 and then moved upwards over the next year or two. On the other two measures (CONSCI and CONARMY) confidence hit a low in 1973 and have shown irregular but slightly upward movement since. This through in 1975 may reflect the impact of the recent recession which bottomed out in the Spring of 1975.

Given these two basic attitude trends, we now ask how they relate to age-cohorts. Five age-cohorts were used to measure age. The youngest or entering cohort first entered the adult population in 1973 when they reached eighteen, the next cohort were nineteen to thirty in 1973, the third cohort were thirty-one to forty-five, the fourth were forty-six to sixty, and the oldest were sixty-one and over. For the age cuts for each year see Table 2. Pooling over all six General Social Surveys, we find that all variables were related to some degree to the age-cohorts. Even excluding significant but weak relationships (gamma less than + .10), we find twenty of the twenty-nine items having moderate to strong relationships with age-cohort.

TABLE 2

AGE GROUPS BY COHORT BY YEAR

Age	YEAR					
	1972	1973	1974	1975	1976	1977
COHORT 0	--	18	18-19	18-20	18-21	18-22
COHORT 1	18-29	19-30	20-31	21-32	22-33	23-34
COHORT 2	30-44	31-45	32-46	33-47	34-48	35-49
COHORT 3	45-59	46-60	47-61	48-62	49-63	50-69
COHORT 4	60+	61+	62+	63+	64+	65+

TABLE 3

AGE COHORTS BY ATTTTIJDE ITEMS, 1972-1977 GSS's POOLED

MNEMONICS	PROBABILITY	
CONMED	> . 0001	-.135
CONBUS	> . 0001	+.134
CONARMY	> . 0001	+.123
CONCLERG	> . 0001	+.117
CONFED	.001-.0001	+.070
CONSCI	.025-.010	-.056
CONLABOR	>.0001	-.040
CONEDUC	.005-.001	+.033
CONLEGIS	.005-.001	+.031
NATENVIR	> . 0001	-.320
NATCITY	> . 0001	-.178
NATARMS	> . 0001	+.162
NATSPAC	> . 0001	-.133

NATAID	> . 0001	-.131
NATRACE	> . 0001	-.130
NATHEAL	> . 0001	-.089
NATFARE	.005-.001	-.051
NATDRUG	.025-.010	+.038
RACMAR	> . 0001	-.466
COLCOM	> . 0001	-.405
FEPRES	> . 0001	-.360
RACPRES	> . 0001	-.336
COURTS	> . 0001	-.218
COMMUN	> . 0001	-.209
CHLDIDEL	> . 0001	-.194
ABNOMORE	> . 0001	-.140
ABDEFECT	.005-.001	-.135
HELPFUL	.005-.001	+.083

Before proceeding further with the analysis of these relationships, we take up a side issue. The relationships in Table 3 were calculated after the exclusion of "Don't know" responses from analysis. Since it has been argued that opinionation is itself related to age, it was decided to test this hypothesis before continuing on with the DK's excluded from subsequent analysis. In line with general social disengagement theory, which argues that as people move from middle to old age they reduce their number of interpersonal relations and contacts with society in general, Kenneth Gergen and Kurt Back argued that older respondents were more likely to give "no opinion," "Don't know," or other non-participating replies to attitude questions (Gergen and Back, 1966). Norval Glenn found however, that "when education was precisely controlled for, older respondents were somewhat less prone to "no opinion" responses than younger ones, and a cohort analysis revealed an increase in opinionation with aging" (Glenn, 1968). To test this matter further, we collapsed attitude responses into opinionated and unopinionated (DK) responses and crosstabulated these with our age-cohorts with controls for education (less than high school, high school, and greater than high school), sex, and race--the control variables that Glenn suggested should be used. As Table 4 discloses, these controls reduced the association between age and opinionation (in all but one case), but did not generally elimi- nated that association. To put this matter into somewhat more concrete terms the mean proportion giving an opinion on the national spending items was calculated for white, males by age and education (see Table 5). With little exception it is clear that opinionation is indepedently related to both age (negatively) and education (positively). While these differences are not of great magnitude, they are quite consistent across items and within sub-population.

TABLE 4

OPIONATION BY AGE-COHORT CONTROLLING FOR EDUCATION,

RACE, AND SEX (1972-1977 GSS's Pooled)

Mnemonics	Zero-Order Relationships (Gammas)	Partial Relationships (Gammas)
CONBUS	.435	.335
CONCLERG	.280	.206

CONEDUC	.539	.488
CONFED	.314	.155
CONLABOR	.315	.264
CONMEDIC	.363	.352
CONSCI	.353	.256
CONLEGIS	.252	.105
CONARMY	.391	.285
NATSPAC	.284	.234
NATFARE	.220	.182
NATENVIR	.407	.367
NATHEAL	.206	.196
NATCITY	.290	.226
NATDRUG	.358	.323
NATRACE	.170	.104
NATARMS	.241	.124
NATAID	.116	.044
CHLDIDEL	.318	.339
CAPPUN	.138	.113
COURTS	- .144	- .130
COMMUN	.360	.219
RACMAR	.323	.258
COLCOM	.086	.043
FEPRES	.162	.124
ABDEFECT	.261	.217
HELPFUL	.018	.180
RACPRES	.180	.143
ABNOMORE	.289	.268

NOTE: Positive gammas indicate that older age-cohorts gave more "DK" responses.

TABLE 5

MEAN PROPORTION EXPRESSING OPINION ON SPENDING ITEMS BY AGE AND EDUCATION

(White males GSS'S 1973-1977 pooled)

Age-Cohorts	Education: Less than High schoolg	High School	Greater than High school
Youngest 0,1	.944	.978	.978
2	.943	.965	.975
3	.941	.961	.969
4	.927	.955	.935

The fact that such a relationship does appear does not necessarily relate it to social disengagement or withdrawal from participation in general social issues. [The high voting rates of older citizens also challenges this explanation. See, Crittendon, 1963; Crittendon, 1962; Glenn and Grimes, 1968; and Olson, 1972.] Perhaps with aging comes a more complex worldview and therefore a greater difficulty to give responses to simplistic questions. Or perhaps it reflects an interviewer-respondent interaction. It has been demonstrated that respondents will alter responses in order to minimize offending interviewers. Since it has been shown in Table 3 that attitudes vary by age group, and since interviewers are generally middle-aged, the possible conditions for such an interaction exist.

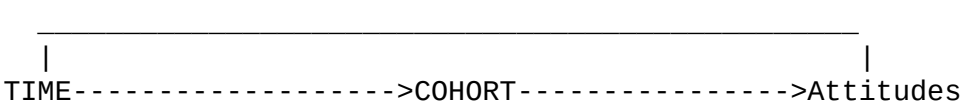
Turning back to the main discussion we observe from Table 3 that age is not only related to these attitudes but the association has a consistant direction to it. On most items the older age-cohorts lean towards the conservative side of issues. On four of the six institutions on which age is positively associated with confidence (CONBUS,CONARMY, CONCLERG, and CONFED), confidence is also associated with conservativism. On the remaining two institutions (CONEDUC and CONLEGIS) there is little relationship between conservativism-liberalism and confidence. On the three institutions on which the older groups have less confidence (CONSCI, CONMEDIC, and CONLABOR) confidence is associated with liberalism in one case (CONSCI) and unrelated in the other two. The picture becomes clearer when the spending questions are examined. On the only issue on which conservatism is related to more spending (NATARMS), the older groups favor more spending. On the rest the older groups reflect the general conservative position of favoring less spending. (Except on drug spending which is weakly related to both age and the liberal-conservative continuum.) On the remaining items, a liberal response has been coded to produce positive associations. As can be seen, only one positive relationship emerges and it is both the weakest and associated with a variable, believing people helpful, that is only weakly related to the liberal-conservative continuum. While some of these relationships would weaken and even disappear with controls for social standing, education, or other prior variable, the general relationship between age and conservative positions is likely to remain intact. In brief, the data both supports the common folk wisdom and preponderance of scholarship that older people hold more conservative beliefs (see Foner, 1972; Riley and Foner, 1968; Glamser, 1974).

The reason for this association is, however, not probably a function of age in its maturational sense, but rather a function of cohort. On many of the issues examined here (e.g., RACMAR,RACPRES, COLCOM, ABDEFECT,ABNOMORE), it is known that the population was much less liberal in past decades. It is likely, but not tested here, that the conservative attitude of the older age-cohorts relects the

conservative perspective of their generation rather than having become conservative from aging. It is further argued that cohort differences will go in the same direction as the long term cross-sectional changes. In other words, the older age-cohorts will differ from the younger age-cohorts in the same direction that the past differs from the present. The associ- ation of conservativism with older age-cohorts thus results from the post World War II drift towards liberalism. If over the next several decades the long term trends was towards conservativism then we would expect to find the older age-cohorts being more liberal and the younger age-cohorts being the conservatives.

While this generational explanation of age-cohort differences is probably the main factor it does not always prevail. In each age- cohort different life stages predominate. The entering cohort for example having the highest proportion never married and the exiting cohort the highest proportions widowed and retired. Since each life stage is likely to have special interests, such as good schools of the cohorts in the child bearing years, the attitudes of each age-cohort reflects not only generational effects and current period effects, but also life stage effects. [It is of course, almost as difficult to separate life course effects from age and cohort effects as the two are to distinguish from one another.] For example, the relationship between being in the older age- cohorts and happiness is suppressed by the fact that more older people are widowed and widowed people are much less happy than married persons. Age per se often exerts a similar influence, it has been shown that older age-cohorts are more in favor of government health care than their younger cohorts (Schreiber and Marsden, 1972). While the data presented here does not find a similar relationship on spending for health care (the old age-cohorts being less in favor of more spending), there is some small conformation in that the association between low spending and age on health is less than on an average of all spending items.

So far we have shown that age is related to most of the attitudes examined here and that the older age-cohorts tend to hold conservative positions. We next examine whether age is related to social change. To examine this we use a model that measures the impact of time, age- cohorts, and their interactions on the attitude items. This can be illustrated



in the above flow graph. Changes in the distribution of the attitude items can come from one of three sources, 1) from an interaction between time and cohort on the attitudes (i.e., from a differential rate of change on attitude items across time for the cohorts), 2) from changing distribution of cohorts across time (cohort succession), or 3) from time net of cohort (period effects). Looking first at the interaction between age and time, the analysis revealed that in twenty-five of the twenty- nine trends examined there was a constant difference between cohort across time. Only on three confidence items (CONCLERG,CONEDUC, and CONFED) and the courts punishment question did age-cohorts change at differential rates. Even in these few cases the changes were generally small and showed little pattern. On confidence in the executive branch no cohort differences showed up among those responding "a great deal" only among those with "hardly any" confidence did differential change occur. On confidence in organized religion (see Figure 1) [Figure 1, Trends on conclerg by COHORTS (% Great Deal), Figure 2, Trends on CONEDUC by COHORT (% Great deal), and Figure 3, Trends on COURTS by COHORT, (% not tough enough) are not available electronically, however, it can be ordered by contacting our GSS staff members.] the difference between age-cohorts varies a lot but the general association between old age and more confidence persists. On confidence in education (see Figure 2) a clearer pattern emerges. Here there has been a convergence of opinion with the association between being older and more confidence disappearing. A somewhat similar pattern appears on the judicial punish- ment question (see Figure 3). On this item the three older cohorts have had virtually the same distribution of opinions and the two younger cohorts have been converging on them. In general, however, it is clear that at least over a short span differences between age-cohort are very stable.

Continuing on we find the expected relationship between time and cohort. The entering cohort significantly changes its proportion over time, rising from 0 percent in 1972 to 8.4 percent of respondents in 1977 and the exiting cohort declines from 22.5 percent in 1972 to 14 percent in 1977. This cohort turnover actually has only a moderate impact on net attitude change, however, since a) the differences are fairly small, b) no change occurs for age-cohorts 2 and 3, and c) the impact of cohort succession must work through the relationship between age-cohorts and attitudes. Thus if a cohort increases .10 and the associ- ation between that cohort and the attitude is ,10 then the net impact on the attitude is only .01 (.10*.10 = .01).

Over a longer span however, cohort succession will have a very large impact as the entering cohort continues to grow because of more people turning 18 and the older cohorts all decline because of deaths. If the associations between age and attitudes observed in Table 3 repre- sents cohort or generational effects and if these differences persists over the long run as they have over the last six years then, the result will be a strong push towards liberalism on most of the issues measured here. That of course does not insure that the population will actually move in a liberal direction, since period effects might either 1) continue to push all cohorts in a conservative direction while maintaining the cohort differences (as over the last six years) 2) lead to the decline or disappearance of these differences (unlike the last

six years), or 3) continue the present cohort differences, but eliminate or reverse such differences among future generations (e.g., among the next cohort, as defined here that will begin entering the adult population in 1985).

With the elimination of period-cohort interactions and cohort turnover as the main explanations for change that leaves time or period effects as the main causal force. As Table 6 shows, the time effects were larger than the cohort effects in all but one of the sixteen instances tested (the exception is letting a Communist teach). In instances in which the marginals trends have been in a conservative direction the age-cohort effect has been to reduce the magnitude of the shift. Taking capital punishment as an example we find that the time effect net of cohort was for support for the death penalty to increase by .151 and the cohort effect net of time was to decrease support by -.008 for a modeled change of .143 (for similar cases see NATARMS,NATENVIR,NATCITY, NATRACE,NATFARE,COURTS, and COMMUN). For those variable that either moved in a liberal direction or reached a liberal peak, cohort effects have increased the magnitude of the shift. For example, the time effect net of cohort on the ideal number of children was -.063 while the cohort effect net of time was -.016 for a total modeled change of -.079. (For the other cases see RACMAR,COLCOM,FEPRES, and ABDEFECT.) For the items not having linear trends (mostly the confidence items), the contribution of time effects is naturally predominate since cohort effects can not explain such large short-term ups-and-downs in the level of confidence.

TABLE 6

TIME AND COHORT EFFECTS, 197Z-1977

		A		B	Net Change	
Mnemonic	Age-Cohort	Age-Cohort Change	Age-Cohort/ Attitude Coefficient	Time Coefficient	Model (A+B)	(Raw)
NATARMS= Too much						
	0	+.082	* 0 = 0	-.163	-.155	(-.155)
	4	-.049	* -.154=.008			
NATENVIR= Too littl						
	0	+.082	*[.057]= .005			
	4	-.048	*-.303 = .015	-.159	-.139	(-.135)
COURTS= Not harsh enough						
	0	+.084	* 0 = 0			
	4	-.043	* .107 =-.008	.141	+.133	(-.137)
CAPPUN= Yes						
	0	+.088	* 0 = 0			
	4	-.069	*-.113 =-.008	.151	+.143	(.142)
NATCITY= Too little						
	0	+.085	*[.068]= .006			
	4	-.045	*-.168 = .008	-.093	-.079	(-.079)
NATDRUG= Too little						
	0	+.084	*[-.013]=-.001			
	4	-.045	*[.039]= -.002	-.102	-.105	(-.108)
COMMUN= Worst						
	0	+.081	*-.014 = -.001			

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          4            -.046   * .243 = -.011       .111       +.099  (+.094)
NATRACE=
Too little
          0            +.077   *[.036]= .002
          4            -.048   * -.108= .005      -.083       -.076  (-.076)
CHLDIDEL=
3 or more
          0            +.083   *   0  =  0
          4            -.071   * .219 = -.016     -.063       -.079  (-.079)
NATFARE=
Too much
          0            +.081   *[-.101]=-.008
          4            -.047   *   0  =  0         .096       +.088  ( .089)
NATSPAC=
Too much
          0            +.080   *[.056]= .004
          4            -.048   * .143 =-.006      -.087       -.089  (-.088)
RACMAR=
No
          0            +.084   *   0  =  0
          4            -.071   * -.413= .029       .081       +.110  ( .109)
COLCOM=
No
          0            +.083   *   0  =  0
          4            -.074   * -.363=+.027       .021
          3           [-.060]  * -.273=+.011                  +.059  ( .059)
FEFRES=
YES
          0            +.085   *   0  =  0
          4            -.074   *-.243 = .018       .045       +.063  ( .057)
ABDEFECT=
Yes
          0            +.084   *[.015]= .001
          4            -.071   * -.071= .005
          3           [-.040]  * -.032= .001       .061       +.068  ( .071)
NATHEAL=
Too little
          0            +.082   *[-.085]=-.007
          4            -.052   * -.096= .005      -.042       -.044  (-.045)


For the method used here see Davis. 1975.

Coefficients in brackets are not significant when corrected
for multistage sampling, but are of borderline significance.

The raw change (i.e., the change as measured by the raw data
often differs from the mddeled data because the modeled data
ignores insignificant paths (i.e., sets them to zero) although
small coefficients actually exist for these paths.
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To review the bidding, we have related age to various attitudes that have been undergoing significant changes over the last six years and found that age was generally related to these items and that the older age-cohorts were commonly more conservative than their younger counterparts. We argue that these differences probably represent genera- tional rather than maturational differences, but do not currently test that hypothesis. We also found a inverse relationship between older age-cohorts and opinionation, but questioned the relevance of this

to the social disengagement theory of aging. Turning to the study of social change itself, we showed that over the six years under examination here cohort differences were highly stable. Each cohort responded to general period stimuli in approximately similar fashion. This contradicts the notion of opinion rigidilty among the aged and supports the notion that across time cohort change their attitdes toward issues, while maintaining the differences between themselves (on the rigidity of the old, see Riley and Foner, I, 276, III,133; on changes with time see Campbell, 1971 and Riley and Foner, III, 134-135). Cohort turnover was shown to play a role in the changes going on, but had a secondary role to general time effects. Over a longer period the impact of cohort succession will be greater, while conversely over a short period (year-to-year) little change can be accounted for by this factor. In sum, it appears that the rate of social change is not a function of age, but that it is to some extent a function of cohort.

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