

SOCIAL RESPONSIBILITY IN ADULTHOOD: ONTOGENETIC AND SOCIOCULTURAL CHANGE¹

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Response on a questionnaire scale of social responsibility was reported over a 14-year period for 161 subjects aged 21 to 84 years. Similar analyses were also made based on three independent random samples ($N = 2,151$). Repeated measurement and independent random-sampling data were examined for changes occurring over the two 7-year periods 1956-1963 and 1963-1970. Comparisons were made for subjects retested and for those who left the sample panels (dropout effects). Results suggested that there are no stable ontogenetic patterns in the adult life course of reported social responsibility. Rather, evidence was presented which indicates an overall trend of reduced social responsibility over the period monitored but with specific patterns depending upon sex and generation membership.

Until quite recently, there has been a paucity of data on personality development beyond adolescence, particularly when biographical and speculative treatments have been omitted from scrutiny (Livson, 1973; Looft, 1973; Schaie & Marquette, 1972). One reason for such lack of material over that portion of the life span in which some of the most intriguing developments in personality differentiation might well occur, may be the implicit assumption inherited from the pervasive influence of psychoanalytic as well as nativist sources, that personality is indeed fixed in early childhood and does not change thereafter. Whether or not maturational changes do occur after adolescence, this position seems naive, since it ignores the all too readily apparent impact of sociocultural change upon adult behavior (cf. Neugarten & Datan, 1973; Schaie & Labouvie-Vief, 1974). Whatever one's philosophical position on the issue of personality change in adulthood may be, the fact remains that most available studies which might have yielded some empirical data suffer from the flaw that they are either cross-sectional, involving an assessment of different samples at one point in time, or single-cohort longitudinal, cover-

ing ontogenetic changes within a single epoch. As has been repeatedly asserted (Baltes, 1968; Riley, Johnson, & Foner, 1972; Schaie, 1965, 1972, 1973; Woodruff & Birren, 1972), such designs cannot hope to provide any answers that disentangle ontogenetic from generational change, the very data required to determine which personality traits do indeed remain stable through adulthood or whether these traits are affected by sociocultural impact.

The kind of approach required to solve these questions, namely a mixed model involving short-term longitudinal studies over wide age ranges and the replication of cross-sectional studies at different points in time, has been successfully applied during the past few years in the realm of intellectual variables for children and adults (cf. Baltes & Reinert, 1969; Schaie & Labouvie-Vief, 1974; Schaie & Strother, 1968) and in the area of questionnaire behavior over short periods of time for adolescents (Baltes & Nesselrode, 1972) and for adults for longer periods (Woodruff & Birren, 1972).

Because of the current concern with generational differences³ in attitudes toward soci-

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³ The overwhelming importance of generational differences has been documented by Riley and Foner (1968). It is suggested that particular historical events, attitudes, and knowledge assign unique characteristics to each cohort (generation). Further, each cohort is at a different life-cycle stage at the common point of comparison, and roles, rights, and privileges of members may be quite different for reasons of either life stage or cohort membership.

ety and the availability of a data set covering the entire adult age range over a period of 14 years, during which shifts in attitudes are presumed to have been substantial, the present paper assesses the methodological questions above, including controls for experimental mortality, with respect to the specific questionnaire-derived personality trait of "social responsibility."

The Concept of Social Responsibility

In the realm of questionnaire studies, this concept has been studied carefully as part of efforts to derive Minnesota Multiphasic Personality Inventory-type scales which might be useful to describe salient personality traits in normally functioning individuals within the community. A scale of social responsibility, which included some selected items taken from the Minnesota Multiphasic Personality Inventory, was devised by Gough, McCloskey, and Meehl (1952). Validity of this scale, originally designed for a study of political behavior, can be found in Gough et al. This scale was later included in the California Psychological Inventory (Gough, 1955). The scale was derived by studying questionnaire items typically endorsed by groups of individuals who were nominated by peer groups as either showing a high or low incidence of socially responsible behavior. For this purpose, the socially responsible individual was described as one who accepts willingly the consequences of his own behavior, is dependable and trustworthy, holds a sense of obligation to the group, and has integrity and a feeling of commitment (Gough et al., 1952). Schaie (1959) modified the Gough scale by removing items which seemed particularly relevant to adolescents and young adults and conducted a cross-sectional study over the age range from 21 to 70 years. Validity data for this scale for use with older adults have been reported by Schaie (1959) and Schaie and Strother (1968). Schaie found that social responsibility was greater for his middle-aged subjects than for either the young adults or old subjects. Schaie (1959) also found the social responsibility measure showed its highest correlation with years of education and intelligence in the middle-age period. The reduced 44-item version of the Social Respon-

sibility scale was used as the operational definition of social responsibility for the present study. The display provides sample items taken from the questionnaire.

SAMPLE ITEMS FROM THE SOCIAL RESPONSIBILITY SCALE

1. A person who does not vote is not a good citizen.
2. As long as a person votes every four years he has done his duty as a citizen.
3. If I get too much change in a store I always give it back.
4. Maybe some minority groups do get rough treatment, but it's no business of mine.
5. It is all right to get around the law if you don't actually break it.
6. Every citizen should take the time to find out about National Offices even if it means giving up some personal pleasures.

Social Responsibility within a Life Span Perspective

Neugarten (1968) suggested that in age-stratified society, duties and obligations are partitioned out according to the individual's particular age status. If this were indeed the case, then one would expect reliable differences in traits involving social participation with age and an absence of shifts in such age-related roles over time. Some supporting evidence can be marshaled for this position. For example, Sealy and Cattell (1965) reported in subjects aged 16 to 70 significant differences according to age with increasingly higher scores for the older groups on the questionnaire factors of autia (M), radicalism (Q1), self-sentiment (Q3), and ego strength (C).

Further complications arise when differential developmental patterns for men and women are considered. For example, it has been claimed that males progressing from middle age to old age become more receptive to affiliative and nurturant promptings, while females are more likely to admit to aggressive and egocentric impulses (Neugarten, 1968). Veroff, Atkinson, Feld, and Gurin (1960) found greater systematic decrement in expressed need for affiliation in women than in men when examining 590 men and 770 women from ages 21 to 65.

What bearing do such need changes have upon the maintenance of socially responsible behavior through the life cycle? They may

indeed mediate age-related change, but this is the case only if the data on age differences reflect ontogenetic change rather than generational differences initiated by sociocultural change over time (cf. Ahammer, 1971). Even for very old subjects there are some data showing that individuals who ranked high or low in activity at an earlier age tend to maintain their ranking in a panel (Maddox, 1963, 1968; Neugarten, Crotty, & Tobin, 1964; Pervin, 1970). Furthermore, Kelly (1955) found that indexes of personality consistency of subjects tested in their mid-20s and again 16 to 18 years later showed the greatest consistency for personal values and vocational interests, a somewhat lower consistency for self-ratings and other personality variables, and the least consistency in attitudes.

METHOD

Subjects

All of the subjects for this study were obtained from the membership of a prepaid medical plan with a base population of approximately 18,000. This population was representative of the demographic composition of a large metropolitan area in the Pacific Northwest. Complete descriptions of the sampling procedures have been given elsewhere (Schaie, 1958; Schaie & Labouvie-Vief, 1974; Schaie & Strother, 1968). Briefly, groups of 25 men and 25 women were examined in 1956 for each five-year age interval over the age range from 21 to 70. In both 1963 and 1970 new independent samples were drawn from the same base population. Samples were reorganized into seven-year birth cohorts with average years of birth ranging from 1889 to 1945. Data presented in this paper included results for 2,151 subjects from the three independent cross-sectional samples. Repeated measurement data on the same subjects were also examined for three data points (1956, 1963, 1970) for 161 subjects ranging in age from 21 to 84 years. In addition, repeated measurement data were available on two data point samples of 300 subjects (1956, 1963) and 409 subjects (1963, 1970), representing the same age range.

The Social Responsibility scale was administered as part of a larger battery consisting of the SRA Primary Mental Abilities Test (Thurstone & Thurstone, 1949), the Test of Behavioral Rigidity (Schaie, 1960), and a socioeconomic status questionnaire.

Design of Data Analysis

Scores were first transformed into *T* scores ($M = 50$, $SD = 10$), based on all samples at first test. The subjects were then grouped into seven-year birth cohorts with mean year of birth ranging from 1889 to 1945. The analysis of variance was then used to differentiate age-cohort (cross-sectional)

from age-time (longitudinal) variance arranging the data within a cross-sequential model (Schaie, 1965; Riley et al., 1972). This model was applied to both repeated measurement and independent random-sampling data, in each case also testing for the interaction with sex differences. The Cohort \times Time of Measurement \times Sex analysis was computed for seven cohorts (1889 to 1931) on three occasions (repeated measurement, $n = 161$; independent random sampling, $n = 1,921$).

The cross-sequential model is appropriate either when it can be assumed that there are no age differences (stability of personality assumption) or when one wishes to segregate age variance confounded with generation differences from age variance confounded with epochal differences across generations (i.e., contrast cross-sectional and longitudinal data). It does not provide an adequate test (because of the confounding of age) when age differences are indeed assumed to be present but when they are to be segregated from sociocultural change. The assumption made here was that there were no significant between-generation differences other than those attributable to epochal events occurring for different generations over the same period of historical time. The proper model for such an analysis was to arrange data such that a time-sequential analysis could be performed. This was done for seven age levels by three times of measurement by sex, using the only applicable, independent random-sampling approach ($n = 1,940$). The seven age levels in the time-sequential design had mean ages ranging from 25 to 67 years. The mean ages were obtained by assigning Cohorts 1 to 7 (1889 to 1931) measured in 1956; Cohorts 2 to 8 (1896 to 1938) measured in 1963; and Cohorts 3 to 9 (1903 to 1945) measured in 1970.

A further design complication was introduced in relation to the adequate analysis of the effects of subject dropout which, if uncontrolled, could have had the ultimate effect of seriously biasing results in a study measuring change in social responsibility over time (Baltes, Schaie, & Nardi, 1971; Riegel, Riegel, & Meyer, 1967, 1968; Riegel & Riegel, 1972; Schaie, Labouvie, & Barrett, 1973). What had to be assessed was whether subjects who had been retested several times differed in base scores from those who had since dropped out because of lack of interest, refusal, residence change, illness, or death. Consequently, the analyses of variance described above were repeated for subsamples of subjects who remained or dropped out either after the first or second round of testing.

RESULTS

Repeated Measurement Study

The results of the cross-sequential repeated measurement analyses of variance are graphed in Figure 1 and summarized in Table 1. A significant cohort-differences effect was found for the 1956-1963 period ($p < .05$) with older cohorts scoring in the more socially re-

TABLE 1
CROSS-SEQUENTIAL SUMMARY OF REPEATED MEASURE-
MENT ANALYSIS OF VARIANCE

Source	df	MS	F
1956-1963			
Cohort (A)	6	307.60	2.15*
Sex (B)	1	4.94	.03
A × B	6	98.52	.69
Error (between subjects)	286	143.24	
Time (C)	1	26.04	.77
A × C	6	77.34	2.30*
B × C	1	113.51	3.37**
A × B × C	6	22.88	.68
Error (within subjects)	286	33.67	
1963-1970			
Cohort (A)	7	52.53	.39
Sex (B)	1	955.37	7.04**
A × B	7	157.88	1.16
Error (between subjects)	393	135.70	
Time (C)	1	4.40	.16
A × C	7	12.05	.44
B × C	1	16.52	.61
A × B × C	7	29.12	1.07
Error (within subjects)	393	27.09	
1956-1963-1970			
Cohort (A)	6	361.62	1.91
Sex (B)	1	11.71	.06
A × B	6	91.03	.48
Error (between subjects)	147	189.14	
Time (C)	2	25.36	.82
A × C	12	25.26	.81
B × C	2	18.49	.60
A × B × C	12	22.00	.71
Error (within subjects)	294	31.04	

* $p < .05$.

** $p < .01$.

sponsible direction. Also found was a Cohort × Time (sociocultural change) interaction, suggesting ontogenetic (age) change in certain cohorts ($p < .01$). Specifically, it was found that both the two oldest (Cohort 1 and Cohort 2, ages 60 and 67, respectively) and the two youngest cohorts (Cohort 6 and Cohort 7, ages 25 and 32, respectively) moved in the direction of greater social responsibility over the seven-year period, while the three middle-aged cohorts (ages 39, 46, and 53) decreased in social responsibility level. A significant Sex × Time interaction ($p < .01$) was also found with males reporting increased social responsibility and females

decreased social responsibility over the seven-year period. None of these findings could be replicated for the second seven-year period (1963-1970). For the second longitudinal sample, however, a significant sex difference ($p < .01$) was found with females scoring higher overall than males.

The analysis of variance for those subjects on whom three-point data are available (1956, 1963, 1970) also did not show any significant effects, although there seemed to be a trend toward cohort differences (see Figure 1). These results would superficially suggest that there is either stability in reported social responsibility during adulthood and over different cohorts, or that whatever differences between cohorts existed during one sociocultural epoch have now ceased to prevail, perhaps as a result of increasing uniformity of attitudes toward society.

The latter hypothesis seems simplistic and should not be considered before we have checked further for methodological artifacts which might account for our results. One of the particular difficulties with repeated questionnaire studies is the possibility that attitudes may, indeed, be crystallized by the inquiry itself and thus maintained upon further inquiry in the same subjects. It seems reasonable, therefore, to investigate whether similar results can be found when an independent random-sampling approach is used in which we investigate the impact of sociocultural change by considering only the first response of subjects who are members of the same cohort, tested at different points in time.

Independent Measurement Study

The cross-sequential analysis of variance compares random samples from each of the cohorts studied at all three times of measurement. In this data set, which avoids the effects of prior testing on subsequent test response, highly significant sex differences in favor of the female subjects ($p < .01$) and time of measurement differences involving lower overall social responsibility scores in 1963 ($p < .01$) were obtained. The analysis of variance results graphed in Figure 2 and shown in Table 2 also indicated a significant Cohort × Sex interaction ($p < .01$). Mean scores indicated that older male cohorts were

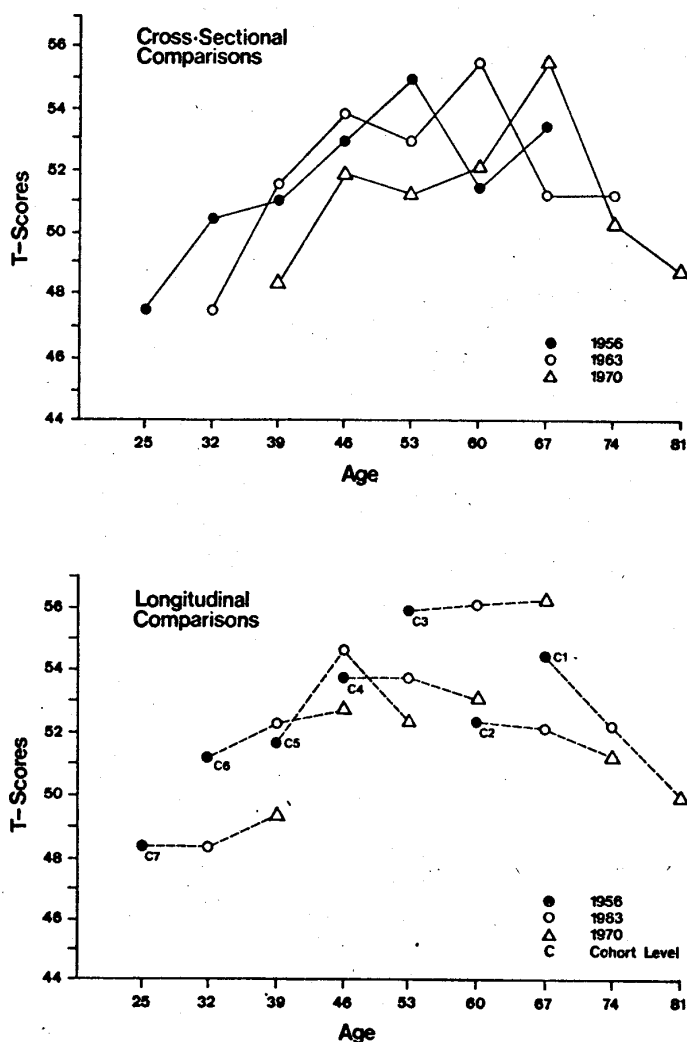


FIGURE 1. Cross-sequential repeated measurements of social responsibility.

more socially responsible than the younger male cohorts with the reverse findings for female cohorts.

The presence of significant time-of-measurement differences in the analysis above must be interpreted either as systematic socio-cultural shift across time or else as ontogenetic changes occurring in all cohorts with about equal effect. In the absence of significant cohort differences, it is proper to use an alternate strategy of analysis, the time-sequential method (cf. Schaie, 1965). In this

approach we assume the absence of cohort effects and consequently can segregate effects of ontogenetic change (age) from those of sociocultural impact during a given time period. In the present analysis we have compared subjects at seven ages and three points in time, with the results of the time-sequential analysis of variance shown in Table 3.

In the time-sequential analysis, of course, sex differences in favor of women were again highly significant ($p < .01$). However, significant differences were now found both for

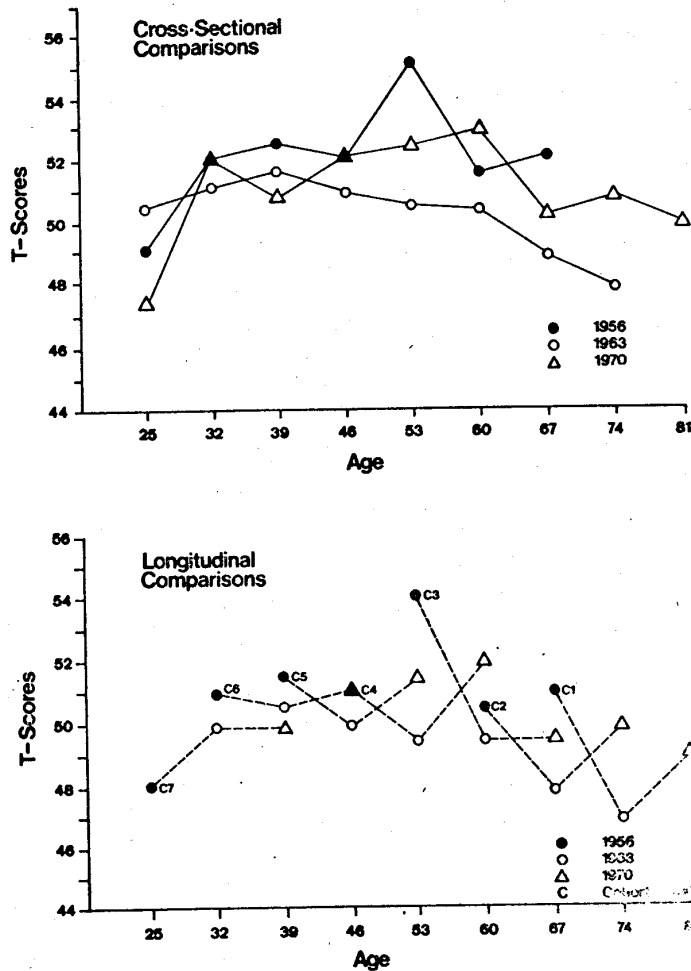


FIGURE 2. Cross-sectional independent measurements of social responsibility.

the ontogenetic changes ($p < .01$) and socio-cultural change ($p < .05$) (see Figure 2). An overall drop in the endorsement of socially responsible attitudes occurred from the 1956 to 1963 assessment, remaining stable for the second seven-year period. The age differences attributed to ontogenetic change indicated a peak in social responsibility reached for the groups with mean ages from 32 to 46 years with a steady linear drop thereafter. This latter analysis did not show any significant interactions.

Experimental Mortality Analysis (Dropout Effects)

As indicated above, it was possible to segregate subjects tested in 1956 and 1963 into subsamples who participated in a subsequent assessment seven years later or who could not be retrieved for the follow-up study. Following the approach used in the analysis of the total data, both cross-sectional and time-sequential analysis of variance were used, with results shown in Tables 4 and 5. In the cross-sectional analysis, the

TABLE 2
CROSS-SEQUENTIAL INDEPENDENT MEASUREMENT
ANALYSIS OF VARIANCE

Source	df	MS	F
Time (A)	2	497.56	5.04*
Cohort (B)	6	185.33	1.88
Sex (C)	1	1,778.57	18.03*
A × B	12	141.67	1.44
A × C	2	7.27	.07
B × C	6	273.36	2.77*
A × B × C	12	61.27	.62
Error	1,879	98.65	

* $p < .01$.

earlier results were confirmed, with sex differences in favor of females remaining highly significant ($p < .01$), and the time-of-measurement effect ($p < .05$) and Sex × Cohort interaction ($p < .01$) remaining significant. However, there was also clear evidence that the continuing participants reported significantly greater socially responsible attitudes ($p < .01$) than did the nonparticipants.

Again the time-sequential analysis was used to segregate effects of ontogenetic change (age) from sociocultural impact (time). In this analysis, however, controlling for dropout effects led to quite different conclusions. Main effects for participation and sex remained highly significant ($p < .01$), with higher mean social responsibility ratings for subjects remaining in the sample and for females. But the variance associated with ontogenetic change (age) became trivial, and the main effect for time of measurement (sociocultural change) was much reduced and did not reach the 5% level of confidence ($p < .08$). However, this analysis did yield a significant Sex × Time × Age interaction ($p < .02$). Figure 3 graphs this interaction,

TABLE 3
TIME-SEQUENTIAL INDEPENDENT MEASUREMENT
ANALYSIS OF VARIANCE

Source	df	MS	F
Time (A)	2	323.85	3.31*
Age (B)	6	241.91	2.88**
Sex (C)	1	1,725.65	17.62**
A × B	12	138.51	1.41
A × C	2	64.72	.66
B × C	6	4.89	.05
A × B × C	12	150.18	1.53
Error	1,897	97.93	

* $p < .05$.
** $p < .01$.

TABLE 4
CROSS-SEQUENTIAL ANALYSIS OF VARIANCE
CONTROLLED FOR DROPOUT EFFECTS

Source	df	MS	F
Participation (A)	1	4,223.39	41.80**
Sex (B)	1	1,079.49	10.68**
A × B	1	17.74	.18
Time* (C)	1	396.07	3.92*
A × C	1	4.94	.05
B × C	1	5.53	.05
A × B × C	1	44.14	.44
Cohort (D)	6	133.25	1.32
A × D	6	128.39	1.27
B × D	6	287.72	2.85**
A × B × D	6	117.23	1.16
C × D	6	99.63	.99
A × C × D	6	42.71	.42
B × C × D	6	53.98	.53
A × B × C × D	6	138.96	1.38
Error	1,301	101.03	

* Sociocultural change.
* $p < .05$.
** $p < .01$.

and Table 6 reports the associated mean *T* scores. It may be seen that for men there appears to be a trend for social responsibility to increase with age in 1963 but to remain stable or even slightly decrease with age in 1970. For the females, in contrast, there seems to be relatively little age variability at either measurement point, but what trends do appear are in a direction contrary to those found for the males. Such findings do not seem compatible with stable developmental patterns. Instead, we are clearly presented

TABLE 5
TIME-SEQUENTIAL ANALYSIS OF VARIANCE CONTROLLED
FOR DROPOUT EFFECTS

Source	df	MS	F
Participation (A)	1	3,567.00	35.39**
Sex (B)	1	1,283.21	12.73**
A × B	1	39.25	.39
Time* (C)	1	311.07	3.09
A × C	1	2.71	.03
B × C	1	18.00	.18
A × B × C	1	31.66	.31
Age ^b (D)	6	75.15	.75
A × D	6	154.00	1.53
B × D	6	6.82	.07
A × B × D	6	162.68	1.61
C × D	6	134.32	1.33
A × C × D	6	15.32	.15
B × C × D	6	244.23	2.42*
A × B × C × D	6	99.18	.98
Error	1,321	100.80	

* Sociocultural change.
^b Ontogenetic change.
* $p < .05$.
** $p < .01$.

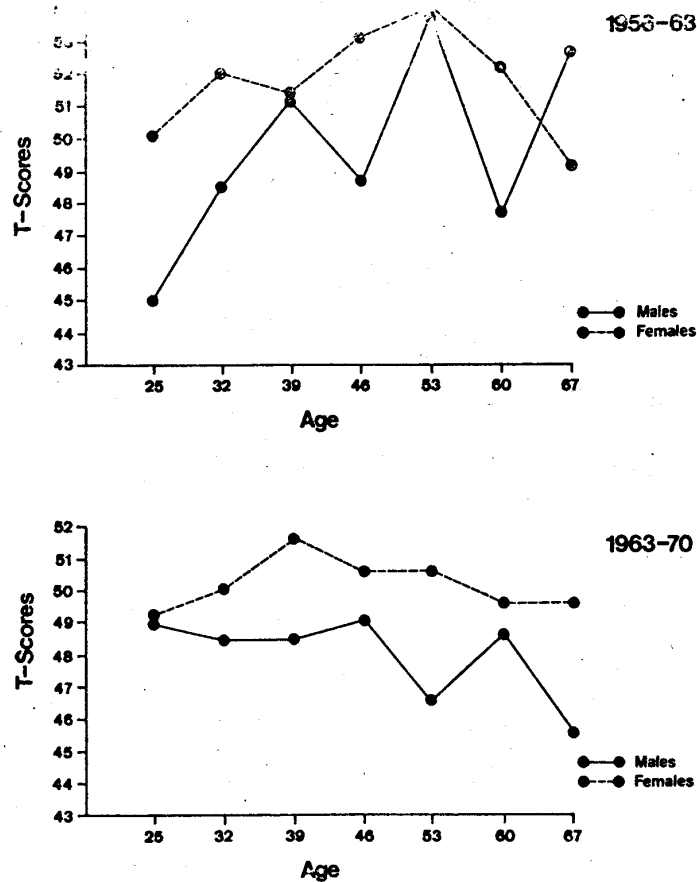


FIGURE 3. Change in social responsibility by sex.

with sociocultural shifts which differentially affect men and women depending upon their generational membership.

DISCUSSION

Data from our 14-year longitudinal study clearly show that the course of changes in response to a social responsibility scale seems to depend upon cohort membership as well as the specific time period which has been monitored. Similar analyses conducted with two samples over 7-year spans would actually have led to the report of stability over the adult life span over the specific periods monitored. When studies are conducted which control for the possibility of attitude change due to possible treatment effects introduced

by our inquiry, it is found that there are overall sociocultural impacts upon reported social responsibility for all age levels. However, these impacts appear to be strongly affected by generation membership depending upon the sex of the respondent. Finally, when the effects of dropout are controlled for, it turns out that the life course of social responsibility is not a stable developmental phenomenon, but rather is affected most strongly by the impact of particular historical epochs as they differentially affect men and women belonging to different generations.

For the two historical periods (1956-1963 and 1963-1970) and the age range (mean age 25 to 67) monitored in the most rigorously controlled investigation, our experimental

mortality study, the conclusion must be reached that there is a temporal overall drop in reported social responsibility, but that within this overall phenomenon there is a trend for younger men to display greater, and for older men to display lesser, concern with socially responsible attitudes, a phenomenon which does not seem to be shown by women.

In looking more closely at the change in social responsibility of older men becoming less, and younger men more, socially responsible (see Figure 3), one might speculate on the historical events precipitating such changes. Perhaps there is a greater opportunity for more political and social involvement recently on the part of the younger male. In the case of older men, perhaps they are relied upon by society to a lesser extent and, due to changes in retirement laws, for instance, disengage at an earlier age.

Cottrell (1960) agreed with this position suggesting that there is a general decline in the power position of the aged. He cited Rose (1960) who indicated that there is a significant decline in participation of those 54 and over in social responsiveness, in voluntary organizations (note in Cohort 3, age 53, the sharp decline in social responsiveness of the males, particularly from the first seven-year period to the second).

In comparing the males and females in the 1956-1963 period, it can be seen that females showed greater (in two age groups, equal) social responsibility than the males except for the oldest age group. In the 1963-1970 period, though both sexes showed a decline in social responsibility, it was the females who endorsed socially responsible behavior more often than the males in every age group. Note the change for the oldest group (Cohort 1, age 67): The males showed a sharp decrease, while the females showed an increase. One reason for the difference between the aged male and female may be the historical decline (Slavick & Wolfbein, 1960) of males over 65 participating in the labor force in contrast to an increase in the participation of females over 65. Sheldon (1958) projected that when women of the age group 20-45 (in 1958) reach the older age groups (65 or over), their rates of participation in the labor force are quite likely to be even higher than that of the males.

TABLE 6
CHANGES IN SOCIAL RESPONSIBILITY MEAN T SCORES
CONTROLLED FOR DROPOUT EFFECTS

Initial age	Cohort	Males	Females
1956-1963			
67	1	52.95	49.42
60	2	48.35	52.56
53	3	54.12	53.86
46	4	49.06	53.52
39	5	51.61	51.66
32	6	49.06	52.54
25	7	45.69	50.69
1963-1970			
67	2	45.79	50.70
60	3	49.07	49.78
53	4	47.12	51.03
46	5	49.35	50.97
39	6	48.71	52.08
32	7	49.16	50.38
25	8	49.47	49.73

Perhaps all we have shown in the above analyses is the fact that the existing literature on personality change over the adult age span should not be relied upon to give us generalizable information. At least for the questionnaire-derived variable of social responsibility (which might, however, be considered a prototype for many other such variables in the personality literature), it must be concluded that there is no single stable developmentally determined life course.

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