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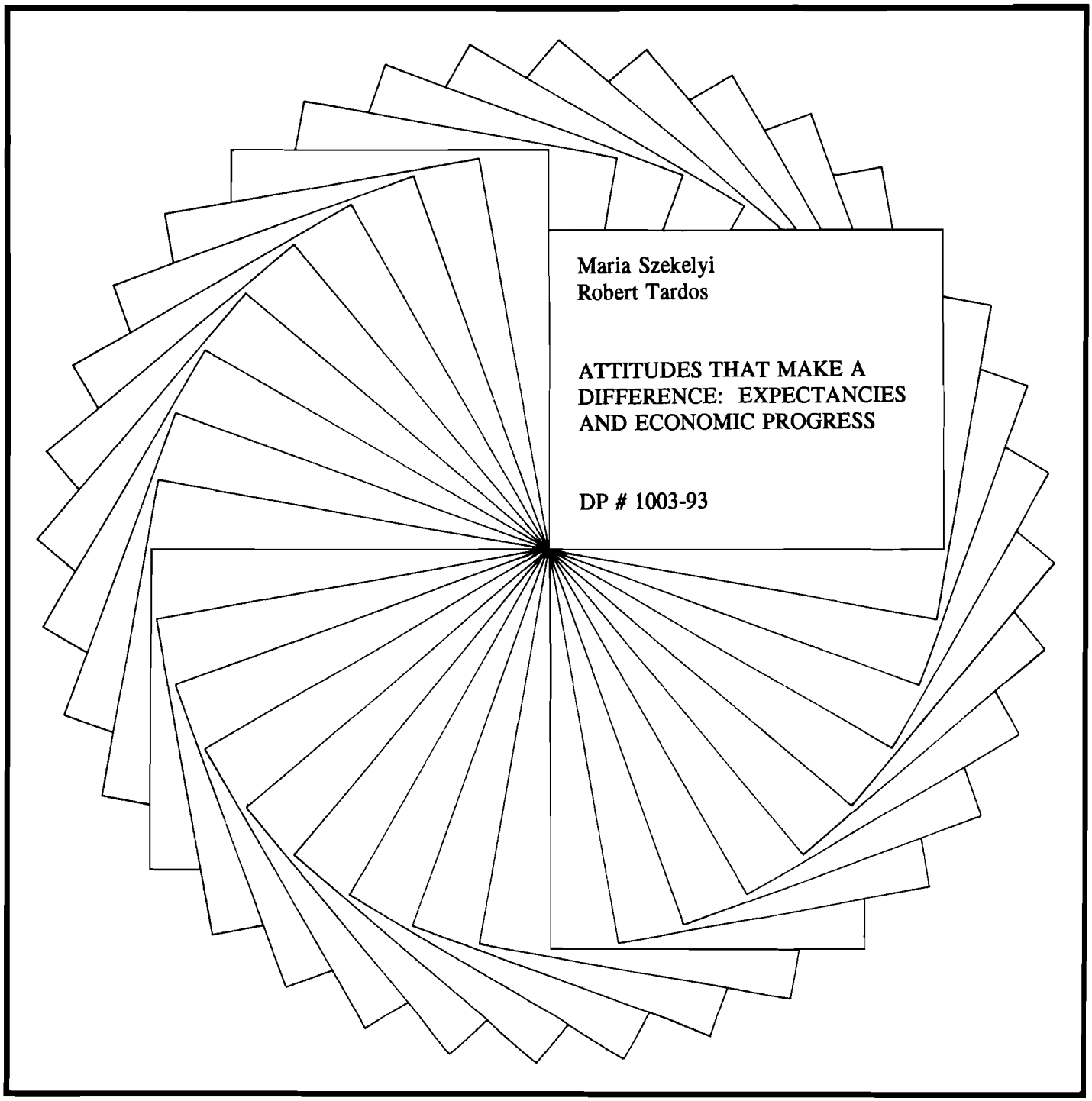

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ATTITUDES THAT MAKE A DIFFERENCE: EXPECTANCIES AND ECONOMIC PROGRESS

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Attitudes that Make a Difference: Expectancies and Economic Progress

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Abstract

The authors estimate the influence that a person's expectancies and attitudes (about the future, toward planning for future events, regarding saving or spending money, etc.) have on economic outcomes. They find that people who expect to be economically successful generally will be so. The findings of previous research on this topic have been controversial and anything but unanimous. The present authors' results, which are based on longitudinal data from the Panel Study of Income Dynamics, suggest that attitudes and expectancies help determine one's economic position.

Attitudes that Make a Difference:
Expectancies and Economic Progress

1. STARTING POINTS

Students of sources of economic progress may meet a curious duality in the literature concerning the role of motivations, attitudes, and cultural characteristics. The seminal studies on this topic, conducted in the early 1960s, were by researchers who examined two or more countries simultaneously and who used cross-sectional data, which were the only data available at the time. These researchers regarded it as a cornerstone that the symbolic environment affected economic progress. That is, they argued that the dominant values and attitudes of a society decisively influence the character of its economic institutions and the economic behavior of its members. We refer not only to the authors of the classic studies on this issue--authors such as McClelland (1961), who focused on the role of motivations, or Katona et al. (1971), who emphasized the impact of aspirations--but also to authors of recent investigations that also analyzed two or more countries together. Inglehart (1990), for example, holds (among others) that materialistic vs. postmaterialistic values have an impact on economic outcomes; Kohn and Slomczynski (1990), after examining the situation in the United States and Eastern Europe, concluded that self-direction helps determine one's economic position.

Since the 1960s and early 1970s, scholars investigating the sources of economic progress have had longitudinal data to work with and thus have avoided what are believed to be the methodological constraints imposed by cross-sectional data. The use of longitudinal data has, however, been confined so far to one country or to homogeneous cultural settings. Many of these "one-country" researchers (as detailed below) have come to different conclusions about the significance of attitudes in the formation of economic outcomes. Instead of arguing that attitudes influence economic progress,

several contend the opposite: that attitudes are conditioned by economic positions and changes in those positions. Their results were greatly backed by the methodological consideration that longitudinal data, in general, are more sound than those derived from cross-sectional data, and that longitudinal data, it is generally agreed, permit one to better determine causality.

The finding from the early cross-sectional studies--that motivations and attitudes influence economic progress--was somewhat undermined by evidence from some longitudinal analyses; taken as a whole, however, the results of the longitudinal studies of the origins of economic progress have not been consistent. Some studies based on data from the Panel Study of Income Dynamics (PSID) have concluded that attitudes are caused by economic position;[1] others have suggested the opposite.[2] Analyses that used data from longitudinal sources other than the PSID also have yielded incompatible conclusions that have been greatly debated. One study based on the National Longitudinal Surveys,[3] which found that attitudes influenced economic outcomes (and not vice versa), prompted researchers using the PSID data bases to reexamine the data and methodology as well as to reanalyze data on comparable subsamples (see Duncan and Morgan, 1981; and Andrisani, 1981). Their reanalysis, however, did not produce conclusive results.

The ambiguity engendered by conflicting findings was unfortunately exacerbated by an intermingling of social policy implications. With regard to poverty issues, numerous references (see Hill et al., 1985; Corcoran et al., 1985) have been made to the fact that some political observers come close to "blaming the victim" by their use of the idea that attitudes influence economic outcomes. It is likely that related considerations may have some impact (though we cannot assess the degree of their relevancy), in some circumstances, on emphases of data interpretations and conclusions.

We, in turn, have gained most of our practical and research experiences in a different cultural setting (Hungary in particular, and Eastern Europe in general). We are therefore concerned with

somewhat differing points of interest. Central and Eastern European societies undertaking the difficult task of changing from bureaucratic to market-type economic structures have to cope with the additional burden of widespread skepticism and lack of confidence felt by large groups of the population[4]--mentalities and attitudes deeply rooted in unfortunate experiences of the historical past. We believe, and we could also call this a leading assumption or perhaps bias on our part, that mentalities or attitudes of this type do not change from one day to the next. We would add that in favorable cases (of which American history, for example, may provide ample evidence), optimism and faith in solving emerging problems may facilitate economic development. Widespread lack of confidence and distrust on the other hand may hinder economic progress.[5] In approaching these issues in the American context, we were lured by the unique possibility yielded by the more than twenty-year-long longitudinal PSID data base. It has been of special significance for us that the PSID is based on a large, nationwide sample and contains both attitudinal indicators for several years and data on economic outcomes for nearly a quarter of a century. In spite of contradictory results of prior research, we were encouraged by the following comment made by the authors of the summary of the first volume of PSID studies: "It is after all difficult to believe that there are not some situations where individual effort matters" (Five Thousand American Families, Vol. 1, 1974:339).

After studying the vast set of indicators of the Ann Arbor data base, our impression is that a shift in conceptual focus and modifications in measuring instruments may produce a greater number of positive results in the disputed issues. (1) In part because of some practical considerations such as the availability of a sufficient number of indicators and the "behavior" of attitudinal data themselves, we selected "expectancy attitudes" as the principal variable of our analysis. We have accepted the conceptual distinction made in most PSID studies as postulated by Gurin and Gurin (1970) and guided by Atkinson's theory of motivation (Atkinson, 1964). These authors make a conceptual distinction between "motive" (disposition to objects) and "expectancy" (estimate of the chances of reaching one's

goal). For both substantive (as indicated from our primary points of interest) and methodological reasons (the availability of a more elaborate and temporally extended set of indicators), we focused on the concept "expectancy," which we attempted to represent through the diverse array of available attitude items. In contrast to the conception of expectancies as somewhat ephemeral phenomena immediately subject to situational changes (as described by Hill et al., 1985:4.), we assumed that expectancy is resistant to short-term changes (in line with the more balanced view of the original Gurin and Gurin treatise). (2) Using hindsight on data of twenty-odd years, in composing the measuring instruments, we took advantage of the long series of indicators (both the independent and dependent variables). (3) In terms of outcome variables, we decided to use a more balanced set of level and change-type indicators (instead of an emphasis on change-scores, which many PSID studies use). We will discuss all of these points in more detail below.

After establishing some clear practical limits to the scope of our research, we attempted to approach a set of interrelated questions which arose partially because of our original interest and partially because of the disputed issues in the literature: (A) Since most studies based on PSID data refute the existence of a strong relationship between attitudes and economic outcomes (especially when attitudes perform as independent variables and economic outcomes perform as dependent variables), our first question is: Can we prove that expectancies significantly affect subsequent earnings when the effects of other basic variables are controlled? If any effect exists, can it be found both in the level and change of earnings? Will the effect exist, even if we control for the initial level of earnings? What is the temporal range if the effect exists? What is the order of magnitude of the effect either in comparison to other variables or in absolute terms?

(B) Since many PSID analyses were carried out on various subsamples (with a special emphasis on lower-income subpopulations), the second question concerns the studied relationships

among various sociodemographic strata: What differences can be found between the relationship of attitudes and economic status (and mobility) in different subgroups of the population?

(C) Since it can be hypothesized that cultural influences and the cultural character of the (wider or narrower) milieu play an autonomous role among factors of economic progress, a consequent question is whether any contextual effects of expectancies exist, either on the macro-level (such as the level of regions or communities) or on the micro-level (such as the level of family relations)?

(D) Since a number of analyses indicate that a variety of opportunity structures (such as differing labor market conditions) may play a decisive role in the formation of economic outcomes, and since it can be assumed that opportunity structures have a bearing on the functioning of possible expectancy effects, it is logical to study the existence of any cyclical fluctuations in the expectancy-incomes relationships in correspondence with economic cycles. A possible hypothesis is that strengthened economic constraints during recessionary periods constrain the playground of individual motivations. But it could be argued just as well that individual differences manifest themselves most vigorously in the very periods of economic hardships. Though in a twenty-year period only few economic cyclical changes will occur, the longitudinal design of the PSID challenges us to determine which hypothesis is true.

(E) Since the possible relationships between expectancies and economic outcomes (the development of incomes) may occur through various methods (such as the extension of work input, the pace of career advancement, forms of adult education, residential transfers for better jobs, and the extension of the households' labor force participation), it is important to study which channels, if any, effectively transmit attitudinal influences on economic progress.

2. METHODOLOGICAL CONSIDERATIONS

2.1. The Sample

We decided to limit the sample of analysis, because of data constraints. Items of attitudes were assigned (from 1968 to 1975) to heads of households only, supplemented with a one-year survey of wives in 1976. We focused our analysis on heads of households (those functioning as heads of households at least from 1968 to 1976). First, to track the long-term influences of motivations, (for the basis of our secondary analysis) we chose the 21-year (1968-1988) family-individual response file of PSID data on individuals who had not dropped out of the sample before 1988.[6]

Second, we selected respondents categorized as "heads of household" (by the criteria of "relationship to head") both in 1968 and 1976 (from the perspective of our topical issues their subsequent family status was of less concern). Thereafter, following the path of previous PSID analyses, we omitted the members of the sample prior to or beyond the prime earning age (eliminating from the sample those who were 19 years or younger and those who were 61 years or older in 1968, at the start of the study.[7] In addition to this initial selection we also made a secondary screening of the older members of the sample: on a year-by-year basis, we omitted the data on those over the 61-year age-limit.)

Because we used an index of general expectancies as our central independent (-intervening) variable, we utilized the data on only those with a more or less complete set of attitudes. Since a percentage of family questionnaires (approximately 10 percent annually) were completed by wives rather than male heads of households, we also omitted cases in which the main respondent was substituted at least twice by someone else in the waves of the survey (1968 to 1972 and 1975).[8] In the remaining cases, though applying a relatively strict limit (at most, two unusable attitude-items during the six years), only a small number of respondents were eliminated from the analyses. (With

the scarce cases of remaining missing values, attitudes data were completed through the use of mean values.)

As a consequence of the above screenings, at the outset of our analysis, we had obtained a sample of 1713 persons. We will briefly discuss the representativeness of this set. We believe that representativeness, in a strict sense, is not of first-order relevance with regard to our main topics. Nevertheless, great deviance from the composition of the basic population is undesirable, especially with regard to our principal variables. The implications of two possible biases are important in this respect.

1. The concentration of the sample to respondents of relatively stable family and economic status (by including heads of households and non-dropouts from the sample for a longer period) may increase the chance of "upgrading selection," with a greater occurrence of individuals who are generally better off and with higher expectancies (as was raised by similar concerns related to personal efficacy in Lachman, 1985).

2. Beginning with the original sample, an overrepresentation of lower-income families (who are overrepresented in the PSID for analytical purposes) may involve an overrepresentation of persons with less favorable life chances and lower general expectations.[9]

Although both circumstances may entail important consequences, our analysis of the composition of the sample indicates that the two biases of opposite character serve to neutralize each other. The education, residence, and gender compositions of our 1713 head-of-household population do not differ significantly from the initial PSID sample. (See more detailed data in Appendix 1. To mention some slight differences: inhabitants of metropolitan areas are somewhat overrepresented in our sample, while the percentage of those who have completed 6 to 8 grades of schooling is slightly lower and those who have completed 9 to 12 grades is slightly higher, apparently related to differences in the age composition.) With regard to the occupational composition, the number of

professionals, managers, self-employed, craftsmen, operatives, and farmers in the sample is practically the same, while we have relatively fewer clerical workers and more laborers in our sample. In the comparable age groups our sample has a slightly higher concentration of middle-aged individuals (35 to 54 years at the beginning of the study). The most striking differences, with regard to the racial and regional composition, are related to the overrepresentation of lower-income households. It is important to note, however, that for a narrower subsample of our analysis (embracing those with a persistent job status for a longer period), even the racial composition has approximated that of the general population. The regional overrepresentation of the South is somewhat lessened, as well. (In this narrower subsample the above-average concentration of laborers and unskilled workers disappears, the number of professionals and managers slightly exceeds that in the general population, while the underrepresentation of clerical workers remains).

The danger of a bias toward favorable expectancies does not occur, and if there is a slight deviation from the population at large, it is in the opposite direction. Calculating the arithmetic means of the twenty-five items and composing the expectancy-index used throughout our analyses, the difference is only one-tenth on a five-point scale.[10]

2.2. Measurement

The construction of a coherent measure of general expectancies was one of the crucial stages of our analyses. We referred to our view that prior studies have not taken full advantage of the possibilities offered by the comprehensiveness of indicators and the relatively large number of replications. Though the operationalization of applied motivational constructs underwent significant changes throughout the decades of studies,[11] the resulting indices remained too specific. Apart from some exceptions,[12] motivational indices in most studies were based on one-year measurements (possibly not unrelated to the fact that most of those studies explicitly emphasized the implications of

motivational changes from one year to another). We have postulated general expectancies as more durable phenomena and regarded the yearly data as observed indicators for a temporally stable latent variable. The strong across-year correlations of the various attitude items (as shown in detail by Lachman, 1985) have provided an empirical foundation for this approach.

We based our attitudinal measurement on items available each year from 1968 to 1972 (as explained below, in some analyses we also included items from the 1975 replication). The available items embraced indicators of efficacy, planning, future orientation, and trust in others. Assuming some conceptual overlap among these dimensions, we began with an exploratory factor analysis of seven items year by year from 1968 throughout 1972.[13] (See their exact wording in Appendix 2.) The resulting factor structures practically coincided with each year. (See more details in Appendix 2.) The factor structures outlined two dimensions in their compositions from those presented by previous studies. The first dimension, which we call the dimension of "general expectancies," embraces items that were taken into account earlier as indicators of sense of efficacy, planning, and trust in others. As common elements with similar constructs, this set includes items on being sure of whether one's life works out the way one wants it to and on one's experiences of the success or failure of carrying out his/her plans. The dimension in question also contains the item on finishing things or giving up (which was included by some analyses alongside with the above two items, and excluded by others--on the basis of its somewhat poorer fit--from the index of efficacy). The item on the habit of planning ahead, in turn (constituting in most previous studies a part of an index of future orientation) though with somewhat higher loading on the second than on the first factor, fits the "expectancy" dimension in a satisfactory fashion (as is shown more clearly by a next step when including items of this dimension only). Finally, the item on trust in others, conceptually separated by previous studies, fit surprisingly well with the first factor(s).

Items on thinking about happenings in the future and the habit of spending vs. saving were separated from those of the expectancy dimension (complemented by the item on the habit of planning ahead), composing a factor called "future orientation."

In a next step we carried out a principal component analysis using the five-year set of items of the first dimension. Table 1 presents data of the first unrotated component, proving a definite inter-item and temporal coherence. (The average loadings for each item range between 0.57 to 0.45 while the average loadings belonging in each year range between 0.48 to 0.55, slightly more in the later than in the earlier years.)

The above unrotated first component provided a basis for calculating factor scores. We used these factor scores in our further analyses of the index of general expectancy. Although, as in previous studies, a simple summation of values of individual items may also have been feasible, we chose to use factor scores. Factor scores have slightly higher correlations with our principal dependent variables based on incomes data. As the .99 correlation between factor- and simple summation-scores indicates, however, the differences between the products of the two kinds of calculation are only marginal.*

In spite of the empirical match, the substantial coherence of the above five items is questionable. By taking a closer look, however, one can discover the common elements connecting

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*Due to this strong relationship, we used summation scores for reliability estimates. The coefficient alpha of reliability for the index embracing the 25 (5X5) items is .89. This indicates rather high internal consistency either in absolute terms or when compared to coefficients of similar indices based on fewer items and fewer (or only one) years. (Lachman [1985] presents an average internal consistency reliability of .57 [with a range of .51 to .60] for the personal efficacy measure. This measure consisted of three efficacy items and was computed on a yearly basis.) As more detailed computations indicate, reliability was enhanced first of all by extending the observation period. The inclusion of two items usually omitted from the construct also entailed an (.05-.06 point) increase in reliability. (If computed, the alpha coefficients in our sample for the "traditional" three items are .50 for 1968 and .52 for 1969; when the further two items are added, the alpha coefficients grow to .56 and .59, respectively. The five-year values, on the other hand, amount to .85 in the former and .89 in the latter case.)

TABLE 1

Principal Component Analysis (First Unrotated Component) of the Items of the Dimension "General Expectancy"

FACTOR MATRIX	FACTOR 1	EIGENVALUE	PCT OF VAR
SURE68	.49776	6.92058	27.7
PLAN68	.46552		
CARRY68	.47475		
FINISH68	.44890		
TRUST68	.52270		
SURE69	.56543		
PLAN69	.47447		
CARRY69	.55413		
FINISH69	.41680		
TRUST69	.54695		
SURE70	.59173		
PLAN70	.49316		
CARRY70	.56952		
FINISH70	.45647		
TRUST70	.56173		
SURE71	.59265		
PLAN71	.50774		
CARRY71	.58666		
FINISH71	.44284		
TRUST71	.56641		
SURE72	.59671		
PLAN72	.50082		
CARRY72	.59555		
FINISH72	.47293		
TRUST72	.57815		

each item. Efficacy indicators such as being sure of one's life-path, the positive experiences of the realization of one's plans, and not giving up once things started all express confidence in one's future and the capability to cope with problems. The habit of planning one's life ahead also implies some positive expectancy of getting things done. And finally, the item on trust in others also expresses some hope of not being hindered in one's plans or misused by hostile forces. In brief, all items in this dimension reflect a degree of hope or optimism.

Data on differences among sociodemographic groups also contribute to the validity of our index. The observed relationships coincide with those generally identified for efficacy indices in PSID studies.[14] In the first place, higher-educated people have a higher level of general expectancies. Individuals with less education have a lower level of general expectancies. Race also makes for significant differences, with blacks having less favorable expectancies than non-blacks. Among heads of households, gender differences are worth mentioning (however, it should also be emphasized that differences between male heads of households and their wives are much less conspicuous than between male and female heads of households. It is likely that gender differences are badly enhanced by the disadvantageous circumstances of single female heads of households.) Regional characteristics are more noteworthy than those related to the indicator of residence (the size of the largest city in area). The South had the less favorable expectancies, while among the other three large regions the Midwest revealed the most optimistic attitudes. Occupational differences were related to education, with professionals and managers on the pole of favorable and unskilled workers on the pole of unfavorable expectancies. A more detailed analysis of variance (ANOVA adjusting for the effects of the strongest determining variables such as education and race), however, has outlined a somewhat differing pattern, with farmers and managers ranking highest, then self-employed businessmen, while professionals rank only in the following place. This pattern suggests a role of

ownership and market-related activities in conditioning expectancy attitudes. (See more detailed data on the above characteristics in Appendix 3.)*

As concerns the principal dependent variables of our analysis and in accordance with other studies, we put special emphasis on the development of personal (wage and other labor) income of heads of households as a basic indicator of economic outcomes. Though some analyses took other indicators such as family income or income-to-needs ratio into consideration, we distinguished earnings (annual or longer-term) as being most directly connected with individual economic efforts. To eliminate possible biases we made some corrections in income data. First, on a year-to-year basis, we omitted incomes which were derived from work input of less than 500 hours a year. Various studies established various limits in this respect, ranging from 500 to 1500 hours. Since data led us to the conclusion that the main threshold lies between 0 and 500 and not so much between 500 and 1500 hours, then, for reasons of sample size, we chose the lower 500-hours limit. Second, in connection with the implications of retirement or the period preceding retirement (keeping in mind the changing character of labor force participation), we omitted wage earners over the age of 61, for the remaining years. We established this age limit partly on an empirical basis, but also considering sample size aspects. Lastly, as in many previous PSID studies, we applied the (natural) logarithmic

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*Though the measurement of attitude items surveyed from 1968 to 1972 was repeated for heads of households in 1975, in most analyses we omitted this wave of data for three reasons: (1) The 1975 wave contained only four of the five items of our index (the item on trust in others was absent in 1975); (2) The inclusion of the other four items from the last year of questioning would have had practically no effect on increasing the internal consistency of the index; (3) As the most important consideration, the inclusion of the 1975 data would have significantly cut the time period of the study of expectancy effects on subsequent income formation.

For some analyses, however, we included the 1975 attitudes. As will be presented in more detail in the section on contextual effects, to measure the influences of the family milieu we also used the data on the attitudes of the wives of household heads surveyed in the 1976 wave. Since the period of study of subsequent income effects was necessarily curtailed, and the period of attitudes measurement for household heads would have been even more separated from the 1976 date of survey for wives, for this case we constructed a modified version of the index of general expectancies. This index also contains the four attitude items for household heads from the neighboring 1975 year.

transformation of income data in order to eliminate biases resulting from the badly skewed distribution of income data. In preliminary analyses we also made a further correction by cutting off incomes with extreme values; however, through the use of the logarithmic transformation this further correction turned out to be less important.[15]

We applied a constant set of variables controlling for the effect of attitudes on income. This set consists of sociodemographic variables usually applied in PSID studies, mostly influencing economic outcomes: education, residence (size of largest city in area), region,[16] age, sex, and race. At a considerable part of our analyses we also included the initial income level (the income of 1967 first registered by the PSID).*

For the education indicator we used the eight-category data on the type of education ("number of years of schooling" was introduced in the coding scheme only in a later phase of the study); since the numerical codes of the categories reflect the years spent at various schools, we also included type of education in regression equations. (Though methodologically more correct, we avoided the use of separate dummy variables instead of a unified education variable so we could compare the size of education effects with attitude effects in the formation of incomes.)[17] Age of household heads figured as a second basic item in the set of our control variables, which was also conceived of as a proxy for work experience, usually measured by the difference between age and years of education. For race and region we applied dummy variables contrasting black heads of households with non-blacks, and Southerners with non-Southerners, following the line of former PSID studies. Finally, as an indicator of place of residence we used the available six-degree measure of largest city in the area

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*We do not claim to have used all the variables that could be used to determine income, such as occupational or class-related (ownership and hierarchical) positions, that are in the foreground of this strongly debated issue. (For recent discussions of the variables applied by these approaches see Halaby and Weakliem [1993] and Wright [1993].) We have intentionally used the basic variables of the theoretical framework applied in most of the PSID studies--the human capital approach--with special emphasis on the role of education; we wanted to measure expectancy effects by controlling effects which proved to be significant in previous studies utilizing the same longitudinal data base.

(which we included in this original form in regression equations for similar reasons as the type of education).

3. DATA ANALYSIS AND FINDINGS

3.1 Overall Effects of Expectancy Attitudes on the Development of Earnings

In assessing the overall effects of expectancy attitudes on the formation of earnings, one of the first strategic decisions is related to the choice between level and change indicators. This distinction is important in defining dependent variables of economic outcomes.[18] Though econometric models often applied in PSID analyses tend to favor change indicators, in the framework of the underlying human capital approach it is equally legitimate to work with data on level of incomes. For example, when measuring the pecuniary gain of education as a given asset (usually non-changing after the attainment of a certain school degree), it is quite natural to apply a level indicator to define the dependent variable. If we conceive of general expectancies as possessing a longer-run inherent stability, these attitudes can also be treated as assets positively (or negatively) influencing subsequent levels of economic outcomes. Acknowledging at the same time the relevance of some types of change variables, we decided to use both (level and change) types of indicators in our analyses.

Similarly, another problem concerns the inclusion of the initial level of earnings to the set of control variables. If we treat general expectancies as ephemeral phenomena simply reflecting fluctuating developments of existential circumstances (such as changes in earnings constraining one's life-chances), we have to include the initial income level in our model as a factor principally responsible for differing levels of general expectancy. However, if we treat these attitudes as enduring constructs (and, as mentioned above, data on the temporal stability of our expectancy index have not contradicted this assumption), temporal interdependencies cease to be given in a clear-cut fashion (we may equally assume that some initial levels of incomes were significantly influenced by

the preceding state of expectancies). Setting out from such assumptions, the inclusion of initial level of income will not be cogent any more. On the basis of these considerations, and to make our evidence more solid, we decided to apply both options (that is, both the inclusion and the omission of the initial level of income in various models of analysis).

Finally, we had to decide which time-spans to choose when defining (the levels or changes of) earnings as our basic dependent variable. Since our basic expectancy index contains data from 1968 to 1972, the subsequent period embraces the years from 1973 to 1987. We had to consider whether to base our analyses on annual income data (year by year) or to use some more aggregate data embracing a longer period. The latter approach may eliminate some idiosyncratic fluctuations of the income data and lend a higher level of generalizability to the findings. Data on the formation of incomes on a year-to-year basis, however, may outline short- and long-term effects in more detail and may reveal some cyclical effects, as well. With regard to the time-span of the income indicators, we decided again to use various type of indicators (including both annual and longer-term incomes) in defining our basic dependent variables. First, we will discuss data on the year-to-year level of incomes from 1973 to 1987. Our regression analyses[19] included respondents (under age 62) who worked more than 500 hours in the respective years (the decreasing tendency in the number of cases is explained by the shift in age of the members of the sample).

Table 2 presents the results of the first round of analyses with regard to the attitudes of general expectancy not involving the initial level of income among the control variables (which contain education, age, sex, race, region, and the size of the largest city in the area). As additional information, we attach the data on the explained variances of the overall models and the zero-order correlations of the index of general expectancy to the annual incomes for each year.

Though the strong zero-order correlations (.45 to .34) are also worth noticing, it is even more important that after controlling for six basic sociodemographic variables, the values of the

TABLE 2

Regression Results on the Effects of General Expectancy on the Annual Earnings of Household Heads from 1973 to 1987, not Controlling for the Initial Level of Income (control variables are education, age, sex, race, residence, and region)

	Number of Obs.	Beta Coeff.	T-Value	Sign.T	R^2(adj.)	0-ord. Corr.
ln(income73)	1411	.15	6.2	.0000	.46	.45
ln(income74)	1368	.17	6.8	.0000	.43	.45
ln(income75)	1325	.17	6.6	.0000	.43	.45
ln(income76)	1296	.15	5.8	.0000	.39	.41
ln(income77)	1282	.16	6.2	.0000	.40	.44
ln(income78)	1238	.14	5.2	.0000	.39	.42
ln(income79)	1187	.14	5.1	.0000	.35	.41
ln(income80)	1150	.17	5.8	.0000	.37	.44
ln(income81)	1111	.14	4.8	.0000	.35	.41
ln(income82)	1060	.15	4.8	.0000	.28	.38
ln(income83)	1013	.14	4.3	.0000	.30	.37
ln(income84)	979	.15	4.7	.0000	.32	.40
ln(income85)	933	.10	2.8	.0054	.28	.34
ln(income86)	912	.12	3.5	.0005	.27	.35
ln(income87)	864	.12	3.4	.0006	.31	.37

standardized regression coefficients (.17 to .10) remain relatively large, and the effects of expectancy attitudes on annual incomes prove highly significant throughout the observed period. The endurance of these relationships is noticeable: in spite of a slight decrease in the middle of the eighties (observable in both the zero-correlations and the beta-coefficients), the effects remain strong even ten to fifteen years after the survey of the expectancy attitudes. This finding also supports the notion that general expectancies are relatively stable attributes. If the attitudes had undergone significant changes in consequence of changes in external conditions throughout the observed period, we could also expect a steeper shrinkage of the impact of expectancies on subsequent incomes. Short of data on subsequent attitudes we have to make do with the assumptions in this respect.

As to the relative role in determining incomes (in comparison with the other independent variables of the model), general expectancies take place somewhere in the middle of the variable set. They follow sex and education during the entire period (the beta-values of which range between .35 and .20), lead race, region and age, and fall more or less on par with the indicator of residence (running ahead of it in the seventies and behind it in the eighties).[20]

As seen in Table 3, the inclusion of the initial level of incomes in the model brings about considerable changes in the overall pattern of explanations, especially in the first period of observation when correlations between annual and initial incomes maintain a high level (above .60 until the end of the seventies). The contributions of the expectancy attitudes diminish mainly in this first period; however, their effects on incomes remain significant (on at least the .01 level) in all but one of the fifteen years.

With the restructuring of effects, the relative role of expectancies somewhat attenuates, being pushed behind age (with the higher incomes of younger age-groups, adjusting for the initial lag), residence, and sex. This is even more true for the initial income level and education, the two

TABLE 3

Regression Results on the Effects of General Expectancy on the Annual Earnings of Household Heads from 1973 to 1987, Controlling for the Initial Level of Income (other control variables are education, age, sex, race, residence, and region)

	Number of Obs.	Beta Coeff.	T-Value	Sign.T	R^2(adj.)	0-ord. Corr.
ln(income73)	1344	.07	3.1	.0020	.58	.45
ln(income74)	1301	.09	4.2	.0000	.57	.45
ln(income75)	1259	.09	3.7	.0002	.54	.45
ln(income76)	1228	.09	3.5	.0005	.47	.41
ln(income77)	1214	.08	3.5	.0005	.51	.44
ln(income78)	1167	.09	3.5	.0005	.48	.42
ln(income79)	1120	.08	3.0	.0030	.42	.41
ln(income80)	1084	.11	3.9	.0001	.44	.44
ln(income81)	1045	.10	3.2	.0013	.39	.41
ln(income82)	990	.08	2.5	.0014	.34	.38
ln(income83)	950	.09	2.8	.0060	.34	.37
ln(income84)	911	.11	3.5	.0001	.37	.40
ln(income85)	867	.04	1.1	.2540	.31	.34
ln(income86)	844	.10	2.8	.0060	.29	.35
ln(income87)	797	.09	2.7	.0080	.33	.37

variables clearly outstanding in this respect. General expectancies, on the other hand, are throughout the whole period more effective in this case than race and region.[21]

The relative consistency of the year-to-year effects of our principal variables (which is true for both the expectancy attitudes and the control variables) justifies the use of a longer-term indicator of earnings. The fifteen-year span ranging from 1973 to 1987 embraces an aggregate of incomes approaching the amount of life-earnings. Since, however, only a smaller part of our sample possessed some income throughout the entire period (according to our criteria explained above), we have been more liberal in defining the circle of the eligible respondents with this analysis. Dividing the embraced period into two parts, the first five years after the survey of attitudes (1973-1977) and the remaining ten years (1978-1987), we applied the criterion of existing labor incomes for at least three years in the first period and at least six years in the second period. Thus, we included respondents with at least nine years of earnings relatively evenly distributed over the 1973-1987 period. To correct for the differential number of years with income data, as the final measure we used the yearly averages of incomes. (If we had not adjusted for inflation, the aggregate income would have been higher [the inflation effect itself could engender the bias] for those who had the larger share of their labor income in the later period, when wages were higher than previously.)

The next analyses (see Tables 4.A and 4.B) were also conducted in both ways of treating the initial income level. Both analyses included the six control variables identified above.

The data on the long-range income effects of expectancy attitudes (correcting for the cross-year fluctuations of earnings) agree to a large extent with the findings presented above. In both respects (either when the initial income is included in the model or when it is not), the standardized regression coefficients and T-values reflecting the role of attitudes on incomes reach higher values than in any of the distinct years in the period covered. Through a strengthening of effects related to

TABLE 4.A

Effect of General Expectancy on the 15-Year (1973-1987) Aggregate Earnings of Household Heads: Regression Data, not Controlling for the Initial Level of Income (control variables are education, age, sex, race, residence, and region)

	Beta Coeff.	T-Value	Sign.T
Expectancy attitudes	.20	6.9	.0000
Sex (male=1, female=2)	-.32	-12.4	.0000
Education	.27	10.0	.0000
Size of largest city in area*	.20	8.0	.0000
Race (black=1, non-black=2)	.11	3.8	.0001
Region (South=1, non-South=2)	.06	2.5	.0142
Age	.00	0.2	.8513
		R^2=.45; (N=1017)	

TABLE 4.B

Effect of General Expectancy on the 15-Year (1973-1987) Aggregate Earnings of Household Heads: Regression Data, Controlling for the Initial Level of Income (other control variables are education, age, sex, race, residence, and region)

	Beta Coeff.	T-Value	Sign.T	0-order Corr.
Expectancy attitudes	.12	4.6	.0000	.46
(ln)Initial income ('67)	.43	14.2	.0000	.62
Education	.21	7.9	.0000	.48
Sex (male=1, female=2)	-.16	-6.0	.0000	-.40
Size of largest city in area*	.16	6.6	.0000	.18
Age	-.15	-6.2	.0000	-.05
Race (black=1, non-black=2)	.07	2.6	.0094	.41
Region (South=1, non-South=2)	.01	0.3	.7307	.26
		R^2=.54; (N=957)		

*6=over 500,000; 1=under 10,000

the aggregate data on incomes also applied to the control variables, the amount of the increase exceeds the variables of most significance such as education and sex (and the initial income level).*

The complications with regard to change-scores as dependent variables in PSID studies have been raised by Augustyniak et al. (1985:241), with a reference to Bohrnstedt (1969) emphasizing the inherent biases caused by "regression to the mean." We attempted to attenuate this bias by applying differential instead of proportional scores in measuring income changes. In the first set of our analyses we used the annual differences in earnings as our dependent variables.[22]

With one or two exceptions, the effects on the annual changes have generally not proved to be significant on an acceptable level. As mentioned earlier, however, year-to-year data should be treated with some caution, especially with regard to changes. Annual fluctuations in earnings can to a large extent be caused by accidental events such as health problems or changes in family conditions outside the scope of inquiry. The inexactness of personal estimates of incomes may also distort data on changes rather than those on levels. The prevalence of idiosyncratic factors is clearly indicated by the fact that even the controlling variables explain only a minimum of the variances in the annual income changes.

Since it is presumable that in most cases the "normal" path of incomes is a gradual increase of the nominal level, we also made analyses including only those with a positive change in the nominal levels of income from one year to another. These calculations resulted not only in enhancement of the overall explanation of changes (with the biggest influence of sex, education, and age) but also identified slightly stronger effects for the expectancy attitudes (see the results of both sets of analyses

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*Before turning to data with an explicit emphasis on the role of attitudes in income changes (as opposed to the effects on the level of incomes), it is important to mention that one version of the above models--that in which the initial level of incomes is included--is itself a kind of indicator of change effects, since it implies a contrast in the initial and subsequent levels of incomes.

in Appendix 4).[23] Since, however, a large portion (thirty to forty percent) of respondents possessing some incomes are omitted by these analyses, we cannot overestimate their significance.

The relevance of annual income changes is also questionable for a substantive circumstance. In a number of cases, especially those with typically high life-earnings such as businessmen or entrepreneurs, a considerable increase in incomes in the long run is accompanied by frequent fluctuations, even sharp drops at times.

With regard to all of the above considerations, long-range indicators of change in incomes seem to be much more reliable than annual ones (we consider the increase in reliability to be even greater than in the case of levels of incomes). For these analyses we made use of the entire range of registered earnings and contrasted the aggregate amount of incomes between 1978 and 1987 with that of the preceding decade (in the form of subtraction). This is quite a rigorous test of change effects: as shown above in Table 2, the effects on the level of earnings somewhat faded by the second half of the eighties, a finding that predicts decreasing rather than increasing change effects covering such a long period.

As to the missing data, we applied the relatively liberal criterion of expecting at least six years of labor incomes (for both five-year periods of the first decade we expected at least three years of non-missing data). To adjust for the possible difference between the two contrasted time periods (regarding the number of years with non-missing income data), we used the yearly averages for both periods. When transforming the change scores into logarithmic form, only a negligible percentage of cases had to be eliminated due to a negative change (with these analyses we made a distinct correction for inflation effects for both ten-year periods of income development).[24]

As shown in Table 5, the effect of the expectancy attitudes on long-term changes in income is much more significant than on one-year changes. It is also true that its value is lower than it was for expectancy effects on the 15-year level of incomes. (The latter can be said of most control variables.

TABLE 5

Effect of General Expectancy on the Ten-Year Change in Earnings of Household Heads, Comparing 1978-1987 with 1968-1977 (regression data, with control variables:[a] education, age, sex, race, residence, region)

	Beta Coeff.	T-Value	Sign.T	0-order Corr.
Expectancy attitudes	.11	3.3	.0010	.28
Education	.19	5.7	.0000	.33
Size of largest city in area*	.18	5.8	.0000	.13
Sex (male=1, female=2)	-.18	-5.8	.0000	-.25
Age	-.14	-4.8	.0000	-.17
Race (black=1, non-black=2)	.10	2.9	.0044	.27
Region (South=1, non-South=2)	-.01	-0.4	.6807	.12
		R^2=.21; (N=957)		

*6=over 500,000; 1=under 10,000

[a]Based on the considerations explained in endnote 23, we do not present data for the long-term change model including the initial (1967) level of income. We note, however, that even if this variable is involved, the expectancy effect would remain significant (with .09 beta-coefficient, 2.6 T-value, $p < .01$).

Age is an important exception with the larger gain of younger age groups in the subsequent years of their careers.)

Above we presented a number of data on the existing effects of general expectancies on the development of earnings as a principal indicator of economic outcomes. The next step is to demonstrate the magnitude of these effects. For this purpose we made a shift from treating general expectancy as a continuous variable to treating it as a categorical variable by grouping cases according to specific intervals. As a simple solution, we chose the use of tertiles in defining these intervals. To provide for the temporal homogeneity of the sample, in these analyses we included only those individuals with a complete record of incomes throughout the covered period. The data presented in Figure 1 give a picture of the formation of the nominal levels of incomes of the various attitudes groups. For the sake of clarity we restricted this analysis to those with high and low expectancies (while omitting the intermediate group). Figure 1.A presents the data on the average earnings of the two groups from 1973 to 1987 in a nominal form (not controlling for the effects of other variables). Figure 1.B, on the other hand, is based on data corrected for the effects of the control variables applied in our previous analyses.

Though the unadjusted data of Figure 1.A should be treated carefully, they are not without interest.[25] As the gap between the curves indicates, differences between the incomes of high- and low-expectancy groups increased from the first to the second half of the period not only in absolute terms but to a smaller degree in relative terms, as well. This is also true with regard to the development of real incomes. While the 160 percent price level increase during the observed period was barely offset by the growth in wages for the low-expectancy group, the average real income grew by about 10 percent on the opposite pole. (It is important to recognize that the increasing gap in the eighties was to a degree caused by the appearance of some cases of annual incomes with a pitch well inside the six-digit zone pertaining largely to those with high expectancies.) The inclusion of the

FIGURE 1.A

Development of the Observed Average Earnings (in thousands of dollars) from 1973 to 1987 in Groups with High and Low General Expectancies, not Controlling for Other Variables

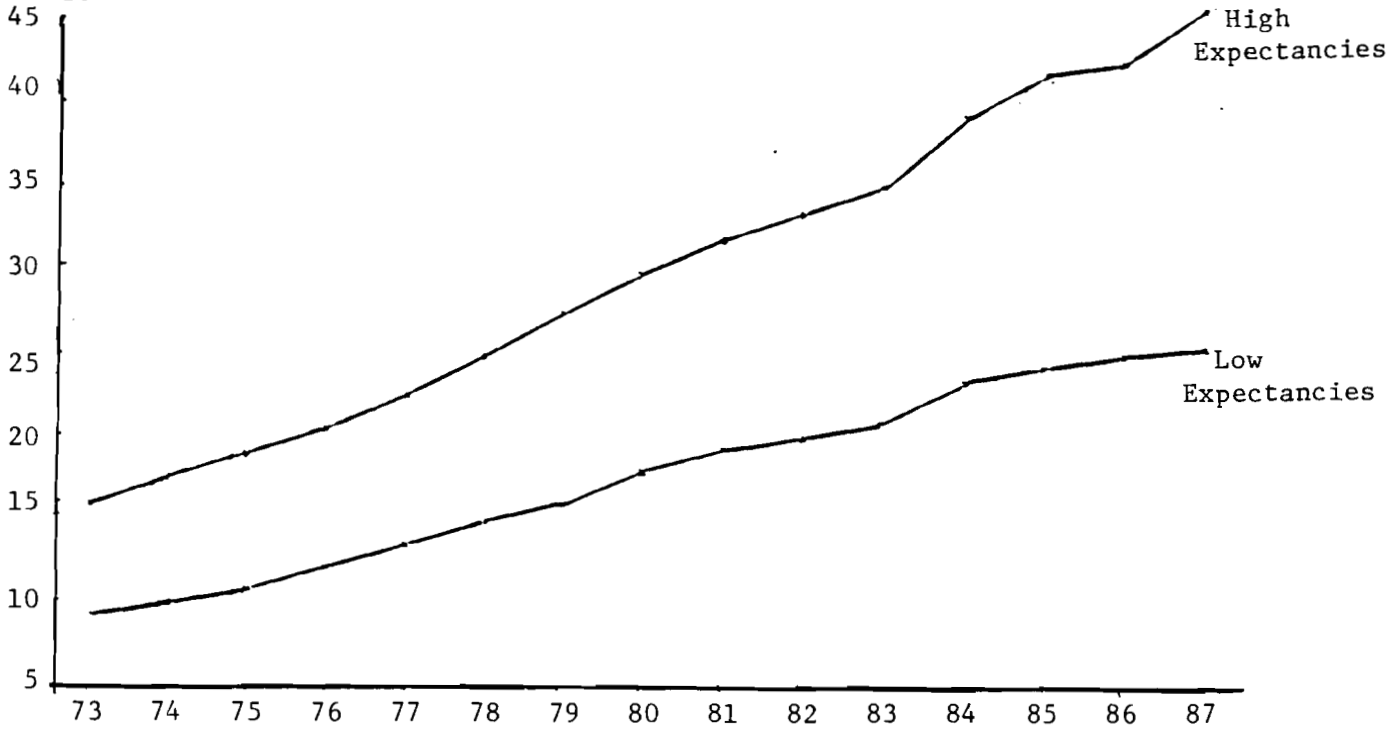
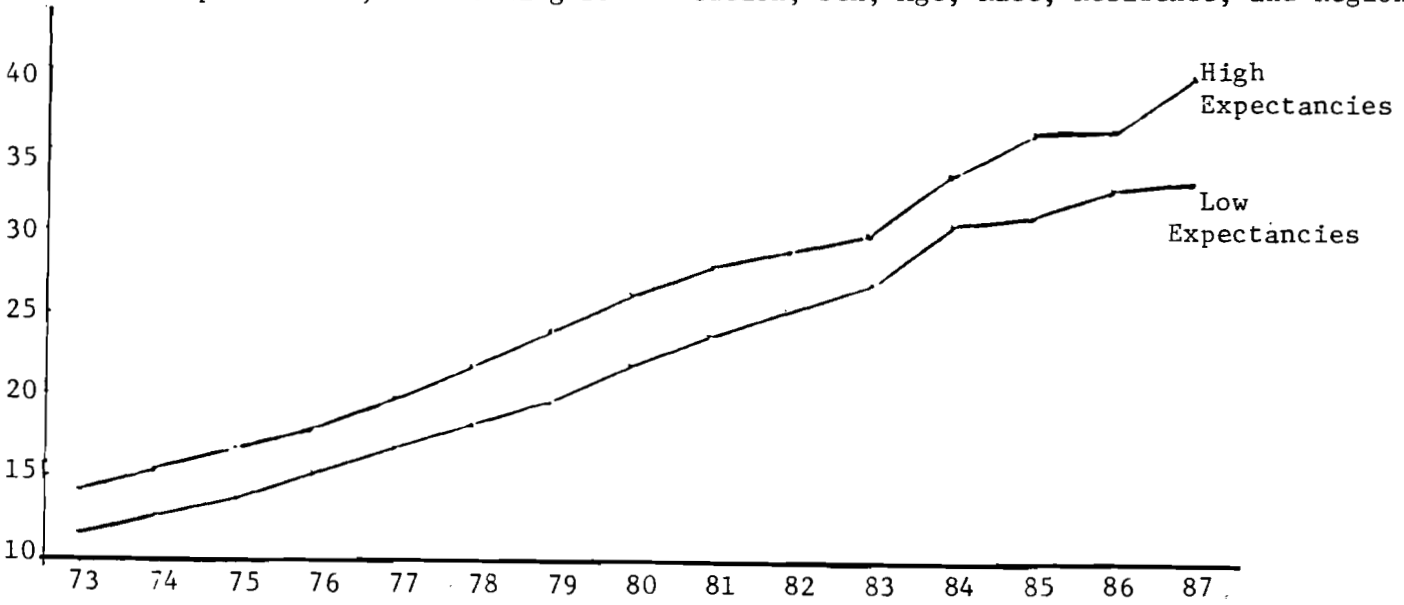


FIGURE 1.B

Development of the Average Earnings from 1973 to 1987 in Groups with High and Low General Expectancies, Controlling for Education, Sex, Age, Race, Residence, and Region



Note: N=229 for the group with high general expectancies and 234 for the group with low general expectancies.

control variables as shown in Figure 1.B significantly diminishes the differences between the two groups but the gap remains, and even increases somewhat throughout the period. (Since differences in the households' incomes assigned to necessary expenditures are generally smaller than those of the "discretionary" part of incomes, an increase of the differences in absolute terms may entail an even larger gap in assets available for unnecessary expenditures.)

3.2 Expectancy Effects in Various Subgroups of the Population

Previous PSID studies have put special emphasis on comparing various subgroups of the population with regard to the functioning of effects that condition economic outcomes. Such analyses are important contributions, complementing those carried out on the sample of the general population. Contradictory results in various subgroups could also bring into question findings related to the population at large. The following analyses can be regarded as further tests of the overall effects but they also aim to reveal specific characteristics for various groups of the population.

Table 6 is based on two types of comprehensive data related to the sociodemographic variables identified in our former analyses. The first set consists of regression data indicating the effects of general expectancies on fifteen-year (1973-1987) earnings (as a level type of dependent variable), with initial level of incomes as a control variable. The second set is based on aggregate data on the long-term change in incomes, comparing the first and the second half of the twenty-year period.

As depicted in Table 6, the expectancy effects on long-term economic outcomes prove to be more or less universal throughout the various subgroups of the population. For example, only five out of the sixty regression coefficients have a sign opposite from the one expected (and four among them concerning female heads of households, a point we will discuss below). Though the fact that most signs are in the expected direction does not tell us about the significance of effects, it is, however, an indication of consistency. Several PSID studies had contradictory findings even

TABLE 6

Expectancy Effects on the Long-Term Development of Earnings in Various Sociodemographic Groups: Regression Data,[a] with the following Control Variables: Education, Sex, Age, Race, Residence, and Region, Plus the Initial Level of Income[b] for the 15-Year Aggregate Incomes

	Dependent Variable									
	The Level of Fifteen-Year Aggregate Earnings of Heads of Households					The Ten-Year Change of Heads of Households' Earnings				
	Beta	T	Sign.T	N	0-order Corr.	Beta	T	Sign.T	N	0-order Corr.
Male	.14	4.9	.0000	836	.40	.15	4.2	.0000	823	.26
Female	.03	0.3	.7396	121	.32	-.09	0.9	.3489	134	.08
White	.11	3.7	.0002	703	.33	.13	3.4	.0007	697	.21
Black	.14	2.6	.0098	224	.33	.02	0.4	.7136	229	.10
White male	.13	4.1	.0001	655	.29	.15	3.9	.0001	644	.21
Black male	.19	2.8	.0063	152	.32	.09	1.1	.2757	148	.13
White fem.	-.09	0.7	.4732	48	.24	-.18	1.3	.1993	53	.04
Black fem.	.06	0.5	.5881	72	.25	-.09	0.7	.4686	81	-.02
-35 (in 72)	.10	2.1	.0340	370	.38	.08	1.5	.1247	392	.26
35-45	.11	3.0	.0032	443	.51	.16	3.0	.0027	429	.34
45-	.10	1.5	.1379	144	.48	.02	0.2	.8664	136	.23
Large city	.12	2.8	.0052	337	.47	.10	1.8	.0730	347	.30
Middle	.11	2.5	.0117	406	.51	.08	1.4	.1627	401	.30
Small[c]	.16	2.6	.0097	214	.38	.21	2.8	.0064	209	.26
South	.16	3.8	.0002	357	.54	.18	3.3	.0009	354	.38
West	.12	1.6	.1033	154	.41	.19	2.4	.0192	152	.26
Midwest	.07	1.5	.1815	269	.28	.00	0.0	.9634	270	.15
East	.15	2.3	.0210	177	.41	.11	1.3	.1955	181	.25
Professional	.09	1.6	.1227	177	.27	.11	1.4	.1535	188	.16
Manager	.15	1.8	.0701	106	.28	.22	2.1	.0350	99	.26
Clerical	.07	0.7	.4676	116	.38	-.06	0.7	.5144	120	.18
Craftsman	.18	2.6	.0112	189	.31	.13	1.6	.1128	182	.14
Operative	.13	1.9	.0578	160	.31	.16	1.9	.0560	161	.23
Laborer[d]	.20	2.5	.0139	105	.40	.07	0.7	.4920	105	.19

(table continues)

TABLE 6, continued

	Dependent Variable									
	The Level of Fifteen-Year Aggregate Earnings of Heads of Households					The Ten-Year Change of Heads of Households' Earnings				
	Beta	T	Sign.T	N	0-order Corr.	Beta	T	Sign.T	N	0-order Corr.
Prof.+Cler.	.06	1.2	.2274	293	.37	.04	0.7	.4925	308	.21
Manag+S.emp.	.17	2.5	.0154	141	.31	.18	2.1	.0340	131	.21
Crafts+Oper.	.16	3.2	.0013	349	.35	.15	2.6	.0096	343	.21
Labor+Farm.	.21	2.6	.0104	129	.42	.06	0.6	.5659	127	.15
Lower[e]	.12	3.0	.0026	474	.37	.05	1.1	.2614	457	.22
Higher inc.	.10	2.6	.0098	483	.28	.13	2.6	.0085	461	.18

[a]When making comparisons across subsets of data it is advised (e.g., by Asher, 1976:50) that the unstandardized coefficient is more appropriate than the standardized one. The former is immune, it is argued, to the effects of the differential variances in the same variable in various subgroups. We have continued, however, the practice of presenting the standardized coefficients to relate these findings to the ones contained in our earlier tables (and to identify the magnitude of the effects). The T-values in Table 6 take into account the differential variances and allow for comparisons across subsets.

[b]The set of control variables was modified from case to case, depending on the classification criteria (e.g., the variable sex was left out when defining the regression models for male and female household heads).

[c]The following categories were used to classify the size of the largest city in the area: 1: over 500,000; 2: 25,000-500,000; 3: under 25,000 inhabitants.

[d]We do not present separate data for occupational groups represented by less than 50 cases in the sample (such as the self-employed and farmers). These groups, however, were included in the more comprehensive categories presented below.

[e]We defined these two groups according to the median of the initial (1967) income level.

regarding the direction of the impact of attitudes on economic outcomes. As to the significance of effects, in spite of the generally low number of cases, half of the results in Table 6 prove to be significant at least at the .05 level, and less than a quarter of the T-values do not reach the more liberal 1.0 threshold.

Turning to the differential characteristics across the various sociodemographic groups, the observable gap between gender groups is worth mentioning. While in both (level and change) respects expectancy effects for men are at least as solid as for the general population, those for female heads of households are not only insignificant but in some cases have signs in the unexpected direction. The relevance of these data should not be overstated, however, for as we will point out in our following analyses, wives of male households (a subgroup more prevalent in the general population than female heads of households) show more resemblance to male heads than to female heads of households with regard to the relationships between general expectancies and economic outcomes. The data for the female heads of households (a group with several disadvantages according to pertinent studies), on the other hand, reflect to the suppression of expectancy effects amidst constrained opportunity structures, a case that will appear with other subgroups as well.

Race is the next variable of interest, a pivotal issue for previous studies (with a reference to the distinguished treatment of race and sex as grouping variables by prior PSID analyses we also present data for the four subgroups based on their juxtaposition). In this respect, however, differences are not as unequivocal as those between male and female household heads. Though change effects for blacks are not significant, the expectancy effects on the subsequent level of earnings are quite sizable for them (what's more, data for black male household heads show a degree of consistency even when taking account of the change effects). As the more detailed data suggest, the principal dividing line lies between gender rather than racial groups of households (thus, both white and black female heads of households fail to turn out with the generally expected expectancy

effects). As to the lack of unequivocal change effects with black males, it is important to refer to the marginal labor market position of a considerable part of this subgroup; cyclical fluctuations may have a bearing on change type of indicators of economic outcomes, even when setting out from a longer time-span. The temporal basis of the gain scores may be of similar importance; these indicators contrast the late sixties and the seventies with the following decade of economic setbacks when a high level of unemployment embraced more years than earlier.[26]

Differences in age (or age-cohorts) influence expectancy effects to a lesser degree (at least when the oldest age-groups are excluded from the analyses), though the most solid effects can be observed in the middle cohort. (It is more useful to speak of cohorts than of age-groups in this case, for the analyses extend to nearly a generation-long period.) The poorer relationships for the oldest members of the sample (even though before the passage to retirement) are no surprise, taking into account some characteristics of the transition period. The lower values for the youngest cohort are, however, not that natural, especially when considering that in the second half of the period under study this cohort reached their middle ages. Here we certainly had to study a cohort- (or period-) effect rather than a life-cycle effect. One possible explanation may relate, again, to the temporal factor suggesting that the members of the youngest cohort came to the peak years of their careers (with the chance of a higher jump of incomes) in a more unfavorable period than the preceding cohort. Another line of interpretation that would involve observations on the declining role of materialistic values and the spread of postmaterialistic values in the younger generations (such as emphasized in Inglehart, for example) would reach too far, not to mention the fact that the extent of the differences in the data between the two cohorts could not be regarded as vast.

Data across inhabitants of various types of settlements (more precisely, living in the area of cities of different sizes) are rather similar. Though the effects of attitudes on economic outcomes are the most solid in smaller communities, they do not differ strikingly from those in larger cities.

The observed characteristics are more noticeable with regard to another indicator of location, region. Expectancy effects are strongest for the South and poorest for the Midwest. Though the interpretation of these results would need more detailed analyses and specific knowledge in this field, it is worth mentioning the peculiar congruence of the former data with the explications (such as Olson, 1982) on the more rapid economic growth in the Southern than other states in the postwar decades. This line of reasoning would not only imply a reference to the broader room for expectancy effects in the more rapidly developing regions, but also a reciprocal relationship between economic and motivational factors on the macro-level.)*

First-order data on the various occupational groups are in some cases problematic due to the small numbers of cases (a few of the groups could not even be mentioned distinctly). Therefore, a less detailed classification is appropriate, distinguishing four comprehensive categories: (1) owners and managers typically employed in the business sphere (groups 2 and 3 of the original PSID classification); (2) salary earners employed primarily outside of the business sphere (professionals, technicians, clerical workers; groups 1 and 4); (3) skilled and semi-skilled manual wage-earners (craftsmen, operatives; groups 5 and 6); and (4) primarily unskilled manual workers (laborers, farmers; groups 7 and 8). The data indicate a dividing line between the non-manual and the manual groups. Expectancy effects prove to work most solidly among business people, on the one hand, and skilled (and semi-skilled) workers, on the other. Non-manuals outside the business sphere present, in turn, only weak effects; perhaps being less preoccupied with pecuniary gains than owners and

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*Considering the lack of observed effects on the Midwestern part, it is curious that the strength of effects with regard to the various regions grows in opposite proportion with the order of the average value of expectancy scores (let us remember that the Midwest stood out and the South lagged behind in that respect), contrary to the general rule. We could risk the assumption that expectancy attitudes in the Midwest are too homogenous (on a generally high level) to allow for the appearance of differential effects on economic outcomes. Though there is only partial evidence of this, we note that the standard deviation of general expectancies is somewhat lower in the Midwest than in the other three regions.

managers, their motivations are directed toward other objectives. Finally, effects for unskilled workers are strong with level-type indicators but not significant with change-type indicators, a finding that reminds us of the above findings related to blacks; the interpretation of this bifurcation could also run on similar lines.

The discrepancy between the level- and change-type indicators among lower strata is only corroborated by the data on income groups (as defined by the location from the median of the initial incomes). As in the similar cases above, the weakness of expectancy effects among the lower-income group with regard to change scores may be related to the higher sensitivity to temporal fluctuations due to less favorable labor market positions and greater vulnerability to economic hardships in the second half of the observed period. It is important to mention, however, that expectancy effects with regard to the level of subsequent incomes are as influential on the lower- as on the higher-income group.

3.3 The Role of Contexts

Since we hypothesized that on a larger plane the cultural climate of the social environment (whether a more embracing or a smaller community) plays a decisive role in conditioning more or less favorable, optimistic or pessimistic general expectancies, and because we also believe that some influences of the milieu can be empirically approached, we looked for data in the PSID allowing for such an attempt. We found two types of variables applicable in this respect: one for the influences of the macro-context and one for those of the micro-context (e.g., the family).

In the macro-context, the county of residence was the most direct among the available indicators of one's community membership. Following the mainstream line of contextual analysis (as detailed by Boyd and Iversen, 1979), we computed an aggregate variable (the arithmetic means) of the expectancy indices for each county (with more than twenty respondents) as a quantitative representation of the attitudinal "spirit" of the respondents' localities. To briefly summarize the

results of these analyses, the group variable proved to exert much weaker effects than did the individual variable treated above. Apart from the generally contradictory record of the findings from the contextual analyses, perhaps our indicator was not a really suitable one. The county level may have been too high of an aggregation (and may have embraced too many types of settlements) to express the atmosphere of a given area.

We have obtained more positive results with regard to family contexts as approached by data on the attitudes of the male household heads' wives. Following the series of attitude surveys of household heads, a special block for wives in 1976 contained attitude questions as well as four of the items composing our index of general expectancy (the item on trust in others was not included). The set of four items constituted a coherent factor-structure (see Appendix 2 on the data of the related principal component analysis), allowing for the construction of an expectancy index such as the one for their husbands (apart from its covering only one year and the lower degree of its reliability). Since the expectancy attitudes for husbands and wives proved to be congruous in important respects (they strongly correlated: $r=.40$) and since wives' attitudes tended to produce similar outcomes to those for the heads of households, a finding we shall deal with in more detail below, it seemed reasonable to apply an index of their combination to approach the "expectancy climate" in this micro-context. Before doing this, however, we had to deal with a technical problem. The items of our index for the heads of households were surveyed from 1968 to 1972 while those for the wives were surveyed in 1976. We attempted to bridge (though not eliminate) the temporal gap by including the data from the last replication of the basic block on attitudes in 1975 into the heads' index (see Appendix 2). This alteration allowed us to somewhat approach the periods covered by the household heads' and the wives' surveys.

Following a general practice for measuring the joint effect of two variables, we applied the interaction term: household head's expectancy index * wife's expectancy index (making a prior

correction for both indices by shifting the entire set of scores above zero). We shall refer to this in the following section as the "interaction-index."

The analyses with this index embraced the 1978-1987 period, five years shorter than observed in the previous cases. Another restriction regards the sample: its downsizing to married male household heads followed naturally from the composition of the subjects of the interaction-index. To allow for a direct comparison of the previous results with those produced by the use of the interaction-index, we also made regression analyses for the household heads' expectancy attitudes of the same (married male) subsample.[27] Table 7 presents parallel results of expectancy effects, using the interaction-index in the first set and the original index in the second.

As data in Table 7 clearly indicate, in the majority of cases expectancy effects are more significant when applying the interaction-index than when applying the one based solely on the household heads' attitudes (t-values are higher for the latter ones in only four of the twenty-two year-to-year cases, and without exception, the cases of longer periods are lower). This is especially true for the models that include the initial level of income (not unrelated to the fact that the zero-order correlations with the income levels are lower for the interaction-index than for the original one).

Considering that it is not very common for "group-level" variables (as the index combining husbands' and wives' attitudes could in a sense be conceived) to surpass the individual variables in their effects, it is important to examine the possibility of artifactual results. First, the question arises as to whether the individual components of the interaction index (that is, either the modified index for the household heads including the 1975 attitudes, or the expectancy index for wives) or the composite of the interaction index is indeed responsible for the increase of effects. Therefore we made comparisons of the interaction-index with the components as well. As to the modified index for household heads, its correlation with the original index reaches .99, and though in some cases its regression values are slightly higher, with some exceptions they do not surpass those of the

TABLE 7
Comparison of Regression Results by the Use of the Interaction-Index and the (Original) Individual Index of Expectancy Attitudes, on the Subsample of Married Male Household Heads (control variables: education, sex, age, race, residence, and region)

	Interaction-Index of Expectancy Attitudes (as independent variable)					Individual Index of Expectancy Attitudes (as independent variable)				
Outcome Variables	Beta	T	Sign.T	N	0-order Corr.	Beta	T	Sign.T	N	0-order Corr.
Not controlling the initial inc.:										
ln(income77)	.16	5.3	.0000	942	.32	.15	4.8	.0000	942	.33
ln(income78)	.19	6.0	.0000	909	.33	.16	4.9	.0000	909	.34
ln(income79)	.18	5.7	.0000	875	.32	.19	5.5	.0000	875	.34
ln(income80)	.17	5.4	.0000	858	.33	.16	4.8	.0000	858	.35
ln(income81)	.14	4.3	.0000	833	.30	.17	4.9	.0000	833	.35
ln(income82)	.16	4.6	.0000	789	.27	.14	3.9	.0001	789	.28
ln(income83)	.16	4.5	.0000	759	.29	.17	4.5	.0000	759	.31
ln(income84)	.13	3.7	.0002	729	.28	.16	4.2	.0000	729	.33
ln(income85)	.13	3.5	.0005	694	.26	.11	2.8	.0057	694	.27
ln(income86)	.11	3.0	.0030	683	.24	.11	2.7	.0066	683	.26
ln(income87)	.14	3.7	.0003	637	.28	.12	2.9	.0037	637	.29
Controlling the initial inc.:										
ln(income77)	.12	4.3	.0000	921	.45	.08	3.0	.0033	921	.45
ln(income78)	.16	5.7	.0000	889	.41	.10	3.3	.0008	889	.39
ln(income79)	.15	5.0	.0000	855	.36	.13	4.1	.0000	855	.36
ln(income80)	.15	5.0	.0000	838	.40	.11	3.6	.0004	838	.39
ln(income81)	.12	3.7	.0002	813	.35	.13	3.8	.0002	813	.35
ln(income82)	.13	3.8	.0002	768	.29	.09	2.4	.0153	768	.29
ln(income83)	.13	3.8	.0001	741	.28	.12	3.3	.0009	741	.28
ln(income84)	.10	3.0	.0026	709	.32	.11	3.1	.0020	709	.32
ln(income85)	.11	2.9	.0042	674	.27	.06	1.6	.1117	674	.26
ln(income86)	.09	2.5	.0145	663	.26	.07	1.9	.0647	663	.26
ln(income87)	.12	3.1	.0020	617	.30	.08	2.0	.0468	617	.30
15-year aggregate, not controlling the initial income	.19	6.2	.0000	769	.37	.19	5.8	.0000	769	.40
Controlling the initial income	.16	5.5	.0000	749	.37	.15	4.4	.0000	749	.40
10-year change of earnings	.15	4.2	.0000	740	.26	.14	3.6	.0003	740	.26

interaction-index either. It would have been a much bigger surprise if wives' attitudes had been at the first place responsible for the development of their husbands' subsequent incomes, but the data unequivocally contradicted this assumption.*

To complement the methodological counterarguments with a substantive one, the interaction-index might be regarded as an improved instrument of measuring individual attributes rather than "emerging effects" of a higher-level entity such as "family climate." This argument refers to preexisting "biases of selection" (such as the preference of similar rather than divergent attitudes and the emphasis on related criteria in mating) or, in another vein, the differential ability of household heads to influence their spouses' attitudes. These points may be plausible, but additional measurements of the wives' attitudes (to the one in 1976) would be required to examine the implied issues (such as the persistence or change in husbands' and wives' attitudes) on an empirical basis.

3.4 Opportunity Structures and Cyclical Fluctuations

One of the initial assumptions at the start of our secondary analysis was that coping behavior with economic hardships must be related to motivations and attitudes. We expected such relationships can be revealed through the study of data of a relatively long period. When studying this issue more closely, however, we encountered several difficulties, partly of a substantive nature and partly of a more practical character. First, it was not easy to hypothesize how the expectancy-economic outcomes relationship would be influenced by cyclical fluctuations. It could be assumed that economic hardships mobilize more energy on the part of those possessing more favorable general expectancies,[28] and thus differences in outcomes by differential attitudes would grow in recessionary

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*Keeping in mind that the interaction-index is based on the product of two rather highly correlated components, it could also be posited that the interaction-index is a proxy for an individual-level variable, expressing the non-linear effects of the expectancy attitudes. Thus we carried out some analyses substituting the original index with its square-value: however, the interaction-index continued to show stronger effects in this comparison as well.

periods. It was also plausible, however, that the differential availability of favorable opportunities would put a brake on the realization of expectancy effects during slump periods. The empirical separation of these two influences of opposite characters is not a simple task.

A much more practical problem is implied, on the other hand, by the very delimitation of the cyclical periods. Though among economists some consensus exists on the beginning and end of various recessions, this does not necessarily coincide with the periods of hardships as perceived by the public. The latter tend to extend longer than the recessions in technical terms.[29]

Let us note that some of our above results can also be interpreted in light of this question if not in the strict terms of recession. In sections 3.1 and 3.2 expectancy effects attenuated from the seventies to the eighties (a finding that might also be attributed to the gradual exhaustion of the expectancy momenta) and that this attenuation was most significant for the lower-income groups of the population (resulting in a poorer expectancy effect with regard to change- and level-type of outcome variables). These findings suggest the dominant role of opportunity constraints in the differential functioning of attitudes, suppressing rather than reinforcing their effects under unfavorable circumstances.

We took a closer look at these mechanisms when partitioning the observed time-span (from 1973 to 1987) into four 4-year (in the first case, 3-year) periods. These periods (1973-75, 1976-79, 1980-83, and 1984-1987) more or less correspond to the periods in which economic fluctuations occurred, as depicted by pertinent manuals; when merging the years of two shortly consecutive economic downturns (of the turn of the eighties and 1981-1982) into one period, we widened the intervals of the "officially" registered recessionary periods. We also took account of the aftermaths of approximately one year before a perceivable improvement occurred. As for the concrete indicators, we calculated (for each subperiod) the change of earnings as compared to the average of the preceding period (for arithmetic reasons, taking into consideration only positive changes; cases

with incomplete data for a given period were also eliminated).[30] Table 8 presents regression data using the individual index of general expectancies.

Though the differences in expectancy effects between the four periods are not really salient, their level of significance changes from one period to another. Albeit not giving basis for far-reaching conclusions as to the rival hypotheses, the data support the role of increasing constraints of opportunity structures during periods of economic downturns, rather than the enhanced efficiency of general expectancies in these very periods. The lowest regression value pertains to the period of the deepest and longest (with two shorter recessions in between) slump during the embraced fifteen years, at the beginning of the eighties. The highest value occurred during the period of highest economic growth throughout the fifteen years (1976-1979), and it is also in accordance with our expectations that the value of the after-1983 recovery period exceeds that of the preceding one. The results presented above on the enhanced role of economic constraints among low-income groups in the eighties, however, indicate the need of more detailed analyses to better clarify this issue.

3.5 Expectancy Effects at Work: The Ways of Increasing Incomes

In our previous analyses we scrutinized the existence of expectancy effects (in general and under specific conditions) but did not attempt to determine how such effects are actually realized. This is a question no less complicated than those above and it could be the subject of a whole study; given the practical (such as term) limitations of our secondary analysis, we could only make some first steps in this direction.

To continue with a reference to some data constraints, as well, we could not find sufficient clues to study some ways of income gain related to career mobility such as adult education or geographic mobility. As to the former, we found few respondents with some degree attained during the years under study to seriously investigate these relationships. The case was similar with regard to moving from a city to another for vocational reasons during the observed period. (We assume that a

TABLE 8

Effects of General Expectancies on Earnings in Periods of Economic Downturns and Upswings: Regression Results, Controlling for Education, Age, Sex, Race, Residence, and Region

The change in earnings from the preceding periods for	Number of Obs.	Beta Coeff.	T-Value	Sign.T	R^2(adj.)	0-order Corr.
1973-1975	1038	.09	2.6	.0103	.14	.23
1976-1979	965	.10	2.9	.0044	.17	.27
1980-1983	806	.07	1.9	.0585	.18	.26
1984-1987	657	.11	2.5	.0145	.19	.29

long-distance residential move could lead in a number of cases to dropping out from the sample.) If the data were available to study this line of analysis, it might be of special relevance, taking into consideration the comparatively high rate of geographic mobility in the United States.

Data, on the other hand, have been ample on work hours, which indicate the extent of labor force activity, and on pay rates, which indicate the qualitative attributes of jobs. Prior findings on the trends of the last two decades are not without contradiction in these respects, either. Schor (1991) gives, for example, an account of a considerable increase of labor force activity in the seventies and eighties, including the growth of work hours by the main earners of households. PSID data, however, have not corroborated Schor's findings; moreover, some analyses even point to another direction concerning work/leisure relationships. As detailed in Duncan (1984:101-102), the negative relationships between the development of rates of pay and work hours yield more evidence for the functioning of an "income effect" (an increasing preference for leisure with increasing income) than a "substitution effect" (a preference for more work input with improving wage rates).

We attempted to approach this issue, too, by applying the expectancy concept, though our remark to the degree of complication particularly holds true for this case. We made some analyses for both work hours and rates of pay (as calculated by the ratio of annual labor incomes and annual work hours). Their results help to disentangle the role of better-paying jobs and more work input in bringing about income gains on the part of those with higher expectancies. On first sight (as presented in more detailed in Appendix 4), there appears to be no contradiction between these two ways. Applying multiple regression for annual work hours and for hourly wages with the inclusion of expectancy attitudes as independent variables and the regular set of our analyses as control variables, we found for each year from 1973 to 1987 positive effects of expectancy attitudes with regard to both work hours and rates of pay (significant at a conventional level in all cases except one for the latter). The absolute magnitudes of the two kinds of effects are close to each other, but, in a

relative sense, general expectancies prove to be more influential on the extent of work activity. They rank higher in the set of included variables (as compared to the effects on pay rates), surpassed only by sex (with male households working longer hours) for the seventies, and by sex and age (with younger ones at the higher pole) for the eighties. As to hourly pay rates, expectancy effects follow education, type of residence, and, for some years, race and region as well. The data suggest, on the whole, that higher general expectancies prompt increased efforts in both directions of income growth.

Direct correlations between work hours and wage rates, in turn, put these relationships into a somewhat different light. While we found only vague negative correlations for the general population (for no year significant at a .05 level), partitioning the sample by the tertiles of expectancy scores (as presented above in section 3.1) leads to different results.[31] As can be seen in Table 9, work hours/wage rates correlations are consequently negative (with quite a robust significance except two years) for those with high expectancies while they show no regularity whatsoever for the low-expectancy group (what's more, the only significant correlation is not negative but positive).[32]

The results may seem embarrassing if we interpret the negative correlations for the high-expectancy group as a sign of moderate pecuniary aspiration (a low preference of work input with increasing income). Taking the previous findings (on the general impact of expectancy attitudes to extend work hours) also into account, however, we interpret the above results in another way. Thus it is first of all those with high expectancies but worse-paying jobs who attempt to compensate for their income lags with a (further) increase of work input. Those with high expectancies and well-paying jobs may be less prompted to enhance their work input. As to those with low expectancies, the lack of any relationships (as depicted in Table 9) may be related to the less direct fashion in which low-expectancy individuals react to wage differentials (recall the concrete components of the expectancy construct suggesting that these persons may to a lesser degree feel capable of controlling the balance of personal efforts and outcomes).

TABLE 9

Correlation Coefficients between Annual Work Hours and Hourly Rates of Pay from 1973 to 1987 for Groups of High and Low General Expectancies

	High Expectancies	Low Expectancies
1973	-.26**	-.06
1974	-.18**	-.04
1975	-.19**	.03
1976	-.20**	.01
1977	-.23**	.03
1978	-.25**	.01
1979	-.23**	.03
1980	-.23**	.00
1981	-.25**	.12*
1982	-.18**	.02
1983	-.15**	.02
1984	-.16**	-.01
1985	-.11	-.03
1986	-.14*	-.03
1987	-.10	-.04

The data of the surveys provide some additional information to establish whether the increased work input is exerted at the main jobs (overtime included) or at some extra jobs. According to our analyses, the high-expectancy group tends to extend its labor force activity in the framework of the main jobs rather than at some outside forms.[33] Taken as a whole, all these data show that those with high expectations could realize their goals either by obtaining well-paying jobs or, not given this chance, by taking jobs with ample opportunity to work more hours. This line of conclusion is also supported by the fact that in a separate question inquiring about the need for more work than available, those with high expectancies were less inclined to complain about such a shortage.[34]

Finally, we briefly turn our analyses to the extension of the households' labor force participation by the wives' earning activity. It is understood that in the seventies and eighties many American families coped with inflation and the decrease in real wages by having a second earner enter the labor market. PSID data also give an account of this trend. Did expectancy attitudes have something to do with these developments?

In section 3.3 we dealt with expectancy attitudes of household heads' wives (surveyed in 1976) and the way family milieu had an impact on husbands' incomes. We have, however, data on wives' earning activity and their incomes, as well. While our analyses could prove no significant expectancy effects for the number of years of wives' labor force participation during the observed period (as defined by years with work hours over 500), and we could find only poor correlations (though of the expected sign) with regard to yearly incomes, regression analyses for the long-term (1978-1987) incomes of wives[35] (eliminating various transitory and idiosyncratic effects) have already proved to be significantly influenced by wives' expectancy attitudes.[36] Resembling our previous results, the "interaction-index" (the combined index of household heads' and wives' attitudes expressing the motivational climate of the family context) has proved to be somewhat more influential than individual effects in this respect, as well.[37] On the whole, our data yield evidence that the

extension of the wives' labor force participation was an additional strategy of importance for high-expectancy families in the seventies and in the eighties.

4. CONCLUDING REMARKS

It is not easy to convincingly prove the impact of such an elusive phenomenon as "general expectancies" on such tangible matters as earnings, the economic progress of families. We believe, however, that the results of our analyses have been consistent enough to corroborate the existence of these effects from various aspects. We may also add that the order of magnitude of these effects was in some cases comparable to several standard variables of social research. Our more specific analyses (either as to various subgroups of the population, the family milieu, or the cyclical influences of the wider economic environment) have shed light, at the same time, on the role of opportunity structures and contextual factors in decisively constraining the room of such effects. Given the fragility of these mechanisms, and taking into account some indications of temporal changes (such as the findings on some cohort-effects or the slight diminution of relationships for the eighties), we cannot take for granted that the revealed tendencies have not changed to date (even though the observed period of our secondary analysis extends to quite recent years, at least with regard to some outcome data such as earnings).

Lack of more recent data on attitudes, in turn, does not only affect the possibility of checking the temporal validity of the revealed relationships but also prevents us from taking full advantage of the wide dynamic potentials of longitudinal analysis. Needless to say, it would greatly enrich our findings if we could study attitudinal changes alongside with changes in economic outcomes for a longer period (one or two decades). But data on subjective phenomena may be a missing link for other related topics, as well. To refer to a recent statement, Haveman and Sawhill (1992), in

concluding a report on trends in poverty research, recommended that a "multipronged approach" be used that would include "tastes, motivations and hopes" in a set of interdependent parameters.

Optimism and confidence have proved to be an important asset of economic progress in American history, the value of which can be fully assessed in an international comparison. Considering that even this asset is not a constant (inexhaustible) one, it may be worthy of long-term attention.

APPENDIX 1

A Comparison of Samples

	The Original PSID Sample (of Heads of Households)	The Sample of Our Study
TYPE OF EDUCATION (for 1972)		
("How many grades of school did you finish?")		
0. 0-5 grades and has difficulty reading	3.1%	3.2%
1. 0-5 grades, no difficulty reading	4.7	3.7
2. 6-8 grades	20.3	16.0
3. 9-11 grades	17.7	20.2
4. 12 grades (compl. high school)	17.0	19.5
5. 12 grades plus non-academic training	9.8	9.7
6. College, no degree	14.0	13.8
7. College, bachelor degree	8.2	9.1
8. College, advanced or professional degree	4.7	4.8
AGE (for 1968)		
25-34	24.0	15.7
35-44	28.8	27.5
45-54	25.4	31.3
55-64	21.6	5.7
GENDER (for 1972)		
Male	75.4	74.7
Female	24.6	25.3
RACE (for 1972)		
White	86.0	65.4
Black	11.3	31.8
Spanish American	2.2	1.9
Other	0.5	0.9

(table continues)

APPENDIX 1, continued

	The Original PSID Sample (of Head of Households)	The Sample of Our Study
LOCAL PLACE (for 1972) Largest city in area is		
1. 500,000 or more	34.2	38.2
2. 100,000 - 499,999	22.0	22.1
3. 50,000 - 99,999	11.7	11.7
4. 25,000 - 49,999	7.2	5.8
5. 10,000 - 24,999	9.5	8.0
6. Less than 10,000	15.1	14.2
REGION (for 1972)		
1. Northeast	23.4	18.8
2. North Central	29.5	27.3
3. South	29.4	39.1
4. West	17.5	15.6
OCCUPATION (for 1972)		
1. Professional, technical, and kindred workers	17.8	16.8
2. Managers, officials, and proprietors	10.6	10.0
3. Self-employed businessmen	6.0	4.9
4. Clerical and sales workers	16.0	13.5
5. Craftsmen, foremen, and kindred workers	18.9	18.2
6. Operatives and kindred workers	16.2	16.4
7. Laborers and service workers, farm laborers	11.9	17.0
8. Farmers and farm managers	2.8	3.0

The source of PSID data "Study Design, Procedures, Available Data, 1968-1972 Interviewing Years," Volume I. ISR 1972.

APPENDIX 2

The Items Taken into Consideration in Constructing the Indices of General Expectancy, and the Results of Preliminary Factor Analyses

a) The Item Texts:

SURE68, SURE69...:
Have you usually felt pretty sure your life would work out the way you want it to, or have there been times when you haven't been very sure about it?

1. Usually been pretty sure
2. Pretty sure, qualified
3. Pro-con, sure sometimes, not sure other
4. More times when haven't been sure, qualified
5. More times when not very sure about it

PLAN68, PLAN69...:
Are you the kind of person that plans his life ahead all the time, or do you live more from day to day?

1. Plan ahead
2. Plan ahead, qualified
3. Sometimes plan ahead, sometimes not, pro-con
4. Live more from day to day, qualified
5. Live more from day to day

CARRY68, CARRY69...:
When you make plans ahead of time, do you usually get to carry out things the way you expected, or do things usually come up to make you change your plans?

1. Usually get to carry out things the way expected
2. Usually get to carry out things, qualified
3. Pro-con, sometimes carry out, sometimes things come up
4. Things come up to make me change plans, qualified
5. Things usually come up to make me change plans

FINISH68, FINISH69...:
Would you say you nearly always finish things once you start them, or do you sometimes have to give up before they are finished?

1. Nearly always finish things
2. Nearly always finish, qualified
3. Pro-con, sometimes finish, sometimes give up
4. Sometimes have to give up, qualified
5. Sometimes have to give up before they are finished

TRUST68, TRUST69...:
Do you trust most other people, some, or very few?

1. Most
2. Most, qualified
3. Pro-con, depends, should trust some
4. Few, not many, qualified
5. Very few, I trust no one

SAVE68, SAVE69...:
Would you rather spend your money and enjoy life today or save more for the future?

1. Would rather spend money and enjoy life today
2. Rather spend and enjoy, qualified, would if had it
3. Pro-con, want to do both
4. Save more for the future, qualified
5. Save more for the future

FUTURE68, FUTURE69...,
Do you think a lot about things that might happen in the future, or do you usually just take things as they come?

1. Think a lot about things that might happen
2. Think a good deal, qualified
3. Pro-con, sometimes do, sometimes do not
4. Usually just take things as they come, qualified, but...
5. Usually just take things as they come

b) Year to Year (1968-1972) Results of the Seven Items Originally Included in the Factor Analyses

Rotated Factor Matrix:

	Factor 1	Factor 2	Eigenvalue	Pct. of Var.
SURE68	.70252	-.00983	1.88436	26.9
PLAN68	.35529	.67979	1.27715	18.2
CARRY68	.65075	.18688		
FINISH68	.59560	.05386		
SAVE68	.13297	-.63637		
TRUST68	.34333	-.10136		
FUTURE68	.01082	.70527		

Rotated Factor Matrix:

	Factor 1	Factor 2	Eigenvalue	Pct. of Var.
SURE69	.71067	.04184	1.96212	28.0
PLAN69	.37359	.66684	1.29446	18.5
CARRY69	.69461	.17338		
FINISH69	.55888	.04718		
SAVE69	.11950	-.65848		
TRUST69	.60461	-.13517		
FUTURE69	.01190	.71174		

Rotated Factor Matrix:

	Factor 1	Factor 2	Eigenvalue	Pct. of Var.
SURE70	.73107	.08174	2.04467	29.2
PLAN70	.35263	.70530	1.35780	19.4
CARRY70	.70934	.14401		
FINISH70	.60288	-.00657		
SAVE70	.12082	-.68439		
TRUST70	.58362	-.06336		
FUTURE70	.00802	.72418		

Rotated Factor Matrix:

	Factor 1	Factor 2	Eigenvalue	Pct. of Var.
SURE71	.69120	.08395	2.06652	29.5
PLAN71	.35901	.69896	1.33492	19.1
CARRY71	.73903	.09359		
FINISH71	.61356	.08342		
SAVE71		.09927	-.62423	
TRUST71	.60744	-.12260		
FUTURE71	.01103	.75975		

Rotated Factor Matrix:

	Factor 1	Factor 2	Eigenvalue	Pct. of Var.
SURE72	.70916	.05322	2.22033	27.8
PLAN72	.36376	.68622	1.33567	16.7
CARRY72	.68938	.16235		
FINISH72	.60538	.07758		
SAVE72	.04815	-.61726		
TRUST72	.60446	-.02240		
FUTURE72	-.05684	.76799		

c) Principal Component Analysis (First Unrotated Component of the Items) of the Dimension "General Expectancy" with inclusion of the 1975 items

Factor Matrix:

	Factor 1	Eigenvalue	Pct. of Var.
SURE68	.49353	7.84201	27.0
PLAN68	.46602		
CARRY68	.47405		
FINISH68	.44322		
TRUST68	.50294		
SURE69	.56906		
PLAN69	.48043		
CARRY69	.54795		
FINISH69	.41010		
TRUST69	.52683		
SURE70	.59260		
PLAN70	.49240		
CARRY70	.56515		
FINISH70	.45576		
TRUST70	.54102		
SURE71	.59653		
PLAN71	.50760		
CARRY71	.58649		
FINISH71	.44269		
TRUST71	.54485		
SURE72	.59536		
PLAN72	.50837		
CARRY72	.59721		
FINISH72	.47026		
TRUST72	.55891		
SURE75	.57103		
PLAN75	.48276		
CARRY75	.55809		
FINISH75	.41119		

d) Principal Component Analysis of the Dimension of "General Expectancy" for the Wives of Heads of Households (wave 1976)

Factor Matrix:

	Factor 1	Eigenvalue	Pct. of Var.
WSURE76	.67803	1.54090	38.5
WPLAN76	.53036		
WCARRY76	.75432		
WFINISH76	.48052		

APPENDIX 3
The (Unadjusted and Adjusted) Scores Of Various Sociodemographic Groups on the Index of "General Expectancy" (deviation from the grand mean using ANOVA procedure)

	GENERAL EXPECTANCY Factor Scores Deviation		
	Unadjusted	Adjusted[a]	N
EDUCATION			
0-5 grades, difficulty in reading	-.81	-.60	36
0-5 grades, no difficulty reading	-.72	-.50	49
6-8 grades	-.43	-.27	233
9-11 grades	-.32	-.21	280
12 grades (compl. high school)	.07	.03	302
12th grade plus non-acad. training	.16	.07	158
College, no degree	.33	.27	221
College, bachelor's degree	.56	.37	143
College, advanced or prof. degree	.75	.49	76
RACE			
Whites	.30	.17	1037
Blacks	-.72	-.41	416
Others	-.36	-.26	30
SEX			
Male	.14	.06	1219
Female	-.60	-.25	279
REGION			
East	.12	-.09	265
Midwest	.18	.05	407
South	-.22	-.02	593
West	.10	.06	233
RESIDENCE (The largest city in the area)			
500,000 or more	-.07	-.08	525
100,000 - 499,999	-.04	-.03	349
50,000 - 99,999	.18	.14	182
25,000 - 49,999	.13	.07	95
10,000 - 24,999	.16	.10	126
Less than 10,000	-.06	-.04	221

(table continues)

APPENDIX 3, continued

	GENERAL EXPECTANCY Factor Scores		
	Deviation		
	Unadjusted	Adjusted[a]	N
OCCUPATION			
Professional, technical and kindred workers	.49	.20	222
Managers, officials and proprietors	.63	.31	144
Self-employed businessmen	.25	.16	182
Clerical and sales workers	.05	.05	178
Craftsmen, foremen, and kindred workers	.10	.05	260
Laborers and service workers, farm laborers	-.41	-.29	228
Laborers and service workers	-.76	-.34	229
Farmers and farm managers	.40	.46	45
THE INITIAL (1967) LEVEL OF INCOME			
Low income (lower than median)	-.36	-.16	736
High income (higher than median)	.36	.16	724

[a]The control variables included education, the initial level of income, age, and sex (depending on the variable under analyses).

APPENDIX 4

Regression Results on the Effects of General Expectancies on the Change in Annual Earnings from the Previous Years

	Beta	T	N	0-order Corr.		Beta	T	Sign.T	N	0-order Corr.
d74	.04	1.3	1353	.09	ln(d73)	.07	1.8	.07	871	.18
d75	.01	0.3	1297	.03	ln(d75)	.09	2.2	.03	840	.18
d76	.04	1.2	1262	.07	ln(d76)	.05	1.4	.16	862	.14
d77	.01	0.3	1247	.05	ln(d77)	.07	1.7	.09	852	.17
d78	.04	1.0	1212	.07	ln(d78)	.07	1.8	.07	800	.18
d79	.05	1.5	1158	.08	ln(d79)	.08	1.4	.17	788	.18
d80	.00	0.0	1125	.07	ln(d80)	.08	1.8	.07	765	.20
d81	.03	0.7	1093	.07	ln(d81)	.00	0.2	.86	721	.15
d82	-.01	0.2	1037	.02	ln(d82)	.04	0.8	.40	611	.15
d83	.00	0.1	986	.03	ln(d83)	.07	1.5	.14	619	.16
d84	.01	0.2	945	.05	ln(d84)	.02	0.4	.72	600	.13
d85	.03	0.7	906	.03	ln(d85)	.04	0.9	.39	549	.13
d86	-.03	0.6	876	.02	ln(d86)	.12	2.3	.02	514	.22
d87	.03	0.7	845	.04	ln(d87)	.10	1.9	.06	487	.19

Regression Results on the Effects of General Expectancies on the Annual Work Hours of the Heads of Households

	Beta	T-value	Sign.T	N	0-order Corr.
Hours73	.11	3.7	.0002	1413	.26
Hours74	.14	4.5	.0000	1370	.26
Hours75	.15	4.8	.0000	1327	.24
Hours76	.09	2.8	.0050	1297	.21
Hours77	.15	4.7	.0000	1283	.23
Hours78	.10	3.2	.0014	1246	.19
Hours79	.14	4.5	.0000	1195	.19
Hours80	.15	4.4	.0000	1150	.22
Hours81	.13	3.8	.0001	1111	.24
Hours82	.16	4.4	.0000	1060	.23
Hours83	.09	2.4	.0221	1013	.16
Hours84	.09	2.3	.0231	979	.17
Hours85	.08	2.0	.0422	941	.17
Hours86	.05	1.4	.1624	921	.13
Hours87	.08	2.0	.0483	874	.13

(continues)

APPENDIX 4, continued

Regression Results on the Effects of General Expectancies on the Yearly Rates of Pay (Hourly Earnings of the Heads of Households)

	Beta	T-Value	Sign.T	N	0-order Corr.
ln(wage73)	.11	4.5	.0000	1411	.39
ln(wage74)	.12	4.5	.0000	1368	.38
ln(wage75)	.12	4.3	.0000	1325	.38
ln(wage76)	.13	4.8	.0000	1296	.36
ln(wage77)	.12	4.1	.0000	1282	.37
ln(wage78)	.12	4.3	.0000	1238	.37
ln(wage79)	.15	5.1	.0000	1195	.33
ln(wage80)	.17	5.8	.0000	1159	.37
ln(wage81)	.09	2.9	.0032	1111	.33
ln(wage82)	.09	2.7	.0074	1060	.29
ln(wage83)	.11	2.9	.0061	1013	.33
ln(wage84)	.13	3.7	.0002	979	.35
ln(wage85)	.08	2.3	.0238	933	.30
ln(wage86)	.12	3.3	.0013	912	.32
ln(wage87)	.14	3.8	.0001	872	.33

Notes

[1]See Morgan (1974); "Seven Year Check" (1976); Duncan and Morgan (1981a); Duncan and Liker (1983); and Corcoran et al. (1985).

[2]See for example some partial results in Duncan and Hill (1975) (such as those concerning the five-year changes in incomes for white men).

[3]For a description of the study and some of the findings, see Andrisani (1977).

[4]Let us only refer to the results of worldwide Gallup surveys of public mood, with postcommunist countries repeatedly ranking high in the degree of pessimism.

[5]We do not believe that Central and Eastern European countries stand alone in this respect. Hirschman (1973) called attention to similar problems of economic development in Latin America.

[6]For a detailed description of cumulative PSID data files see Hill (1992).

[7]Similar age delimitations can be found in the analyses in Duncan's volume (1984).

[8]Data for those with one year of substitution were regarded as missing for the given year. We applied the same completion procedure for missing attitudinal items in other cases.

[9]The weighting procedure, widely applied in PSID analyses, could not be used in our case, since our selection criteria (with the elimination of the youngest and oldest age-groups and those with non-stable family status) deviate significantly from certain characteristics of the general population.

[10]The arithmetic means were computed on the basis of the following item values: favorable expectancies: 5 (1 or 2 codes in the original data file); ambivalent expectancies: 3; unfavorable expectancies: 1 (1 or 2 codes originally). The resulting means are 3.55 for the 1713 respondents of the sample of our analysis and 3.64 for the original data base.

[11]Compare, for example, the methodological appendices of the first volumes of PSID studies with the index construction of a recent phase as presented in Hill et al. (1985).

[12]As an example of such exceptions, see the analysis in Appendix A of Volume IV of Five Thousand American Families applying five-year average scores at the measurement of various attitudes. (See "Seven Year Check" [1976].)

[13]For both these and the subsequent factor analyses, we used item scores as presented above in endnote 10.

[14]For a review of these results see Lachman (1985).

[15]The construction of longer-term income indices and the indices of income changes have implied several methodological considerations but we shall treat these in more detail in the relevant sections.

[16]With education, residence, and region, we chose the data for 1972, the year ending the basic series of surveying the attitude data and halfway between the first and last years of attitude measurement among household heads (1968 and 1975). We also made some attempts by applying earlier or later data on these variables, but these modifications had only marginal effects on the basic results.

[17]As our test analyses indicated, this option had no significant consequence on the size of attitude effects in our regression models.

[18]For a review of the complicated substantive and methodological problems connected with the choice between level and change indicators, see Augustyniak (1981) and Augustyniak et al. (1985).

[19]We apply ordinary least squares multiple regression (method=enter) in the following analyses.

[20]The discussion in this paragraph is based on the results of the analyses on which Table 2 is based (data for the control variables are not contained in the table).

[21]The discussion in this paragraph is based on the results of the analyses on which Table 3 is based (data for the control variables are not contained in the table).

[22]In the case of annual changes we used the original values of incomes instead of the logarithmic forms due to the large number of negative changes from one year to another. (Since the distribution

of changes in income differs from that in the level of incomes, the use of the original values may present less of a problem in the former than in the latter cases.)

[23]In contrast with the analyses on the levels of earnings, we did not include the initial level of income in these analyses. A principal reason for this was to avoid the double inclusion of prior incomes (our change indicators by definition imply some preceding level as a component). Another practical reason for the exclusion was the fact that the correlations of the initial incomes with the annual changes are considerably lower than with the subsequent levels of incomes, and their inclusion would result in much less modification in the pattern of explanations.

[24]If not distinguishing between the two periods, more than half of the respondents would have had a negative change score.

[25]We may notice here again that the direction of the causal relationships is not self-evident even for our models applying control variables.

[26]Though in a somewhat different context, these data are in accordance with those on the decline of college-entry rates among black Americans in the second half of the seventies and the first half of the eighties (see Hauser and Anderson, 1991, a study also referring to the economic sources of this decline among black families).

[27]For these analyses (contrary to those solely for wives' attitudes and incomes) we made no corrections with regard to the subsequent maintenance of the marriage, assuming that the wives' orientation (similar to other types of background variables) exerts a relatively lasting influence on their partners' behavior, partly independent from the temporal extent of the relationship.

[28]For example, several findings of the study of Elder (1974) on the impact of the Great Depression on young people's life courses may be interpreted in this light.

[29]This tendency has been exemplified by the last recession, the end of which was recorded as 1991. However, in public debates, reference to an existing recession has occurred well into 1993.

[30]Since this analysis embraced longer subperiods (contrary to the indicators of one-year changes), we applied the logarithmic transformations of income data. Adjustment of incomes for inflation was made from period to period.

[31]Differently from the above analysis, however, we computed the correlations for all respondents with labor income in a given year.

[32]The correlations for the intermediate group are consequently negative, but they reach in no case the threshold of significance.

[33]We studied these relationships for the years 1970, 1976, and 1982.

[34]The question was put like this: "Would you have liked to work more if you could have found more work?" We studied the relationships of this question with expectancy attitudes for the years as above (1970, 1976, and 1982).

[35]Similarly to that of household heads we have defined wives' long-term incomes as the annual average of the period (adjusted by inflation). As a difference from husbands, we expected only three years out of ten with existing labor income (and work hours over 500).

[36]As control variables we included wives' education, age, number of children, residence, region, and the initial level of income (as defined by the first year of work hours over 500 from 1968 to 1975). The resulting beta-coefficient was .10 with a t-value 2.3 ($p < .02$, $N=490$).

[37]With the control variables as above, the beta-coefficient was .11, with a t-value 2.5 ($p < .01$, $N=480$).

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