Subjective Retirement

by Janet Murray*

An individual's identification of his retirement situation does not necessarily coincide with the retirement concept as defined by objective measures. Self-evaluation of retirement status by respondents to the Retirement History Study has been analyzed to discover to what extent their subjective assessment of retirement matched the situation predicted by objective measures. For those completely retired or not retired, the self-evaluation was closely related to the number of hours worked. A "partly retired" response was not as well-predicted, to some extent because of definitional problems. Pension receipt and, to a lesser degree, aging had some significance as predictors, but other demographic and attitudinal factors were not significant. Analysis of the partly retired suggests the relative importance of gradual retirement during the period 1969–75.

Retirement is a concept that is much used and understood in the general sense. Yet definitions vary when it comes to specific measurement of the number who are or are not retired. Retirement has been defined in terms of such identifiable situations for an individual as receipt of a pension, being in or out of the labor force, and full-time employment. Such definitions, based on objective measures, may or may not coincide with the individual's identification of his own retirement situation. This article continues the analysis of the data provided by the Retirement History Study (RHS)[1] to discover the extent to which the subjective retirement situation matches the objective situations used to define retirement in various social or economic studies.

Procedural definitions of retirement differ greatly. Robert Atchley, for example, is very specific:[2] "An individual is retired if he or she is employed at a paying job less than full-time, year-round (whatever that may mean in a particular job), and if his or her income comes at least in part from a retirement pension earned through prior years of employment." In Gerda G. Fillenbaum's study of the working retired, a man was considered retired if he was on one of the retirement lists of a number of companies or organizations from which sample members were drawn.[3]

The RHS obtained information from respondents that permitted classification by any one or a combination of several criteria for retirement: In or out of the labor force, receipt or nonreceipt of income from a pension—public or private—or from earnings, and number of hours worked, if any. In addition, the respondent was asked directly: "At this time, do you consider yourself partly retired, completely retired, or not retired at all?" The answer to this question are related to other measurements and to demographic factors and provide the basic data for this article.

One of the problems in defining retirement is how to take into account the phenomenon of partial retirement. In most analyses, the focus is on the dichotomous groups—the "retired" and "not retired." Depending on the objective classifying measure (such as "with earnings" or "in the labor force" or "receiving a pension," those who subjectively consider themselves partly retired are by implication thrown into one or the other of these two groups. Since the RHS provides more data on the part-time groups than are generally available, special attention has been given to partial retirement and to its frequency as an intermediate stage between not-retired and completely retired.

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[1] See Lola M. Irelan and D. Bruce Bell, "Understanding Subjectively Defined Retirement: A Pilot Analysis," in the **Gerontologist,** Winter 1972, pages 354–356; Kathleen Bond; "Retirement History Study's First Four Years: Work, Health, and Living Arrangements," **Social Security Bulletin,** December 1976; and Joseph Quinn, **Labor Force and Retirement Status of the Self-Employed: A Preliminary View from the 1969 Retirement History Study** (unpublished report prepared for the Social Security Administration), January 1978.

[2] Robert C. Atchley, **The Social Forces in Later Life, An Introduction to Social Gerontology** (second edition), Wadsworth Publishing Company, Inc., Belmont, Calif., page 139.

[3] Gerda G. Fillenbaum, "The Working Retired," **Journal of Gerontology,** October 1971, pages 82–89.

Subjective Retirement, 1969–75

To aid in comparing subjective and various objective measures of retirement, table 1 gives an overview of subjective retirement responses in each of the 4 years of the RHS—1969, 1971, 1973, and 1975.

In the 6 years during which the original RHS 58–63 cohort aged to 64–69, an expected increase (from 15 percent to 64 percent) occurred in the proportion considering themselves completely retired. The proportion partly retired (9 percent in 1969) doubled to 18 percent in 1975. In general, a larger proportion of women than of men considered themselves completely retired, and more of the nonmarried men than of the married men. The overall pattern of changes in subjective retirement in the three groups, however, was not very different, and the findings are therefore usually given for the total group.

Subjective Retirement and Objective Measures

Analysis of the relationship between the subjective responses and the various objective measures has been made through two approaches. First, cross-tabulations of subjective retirement with the two conventional measures, "working" and "receiving a pension"[4] are presented in various combinations. Second, additional variables hypothesized as possibly affecting subjective responses (such as age, race, health, attitude toward retirement) were introduced into a multivariate nominal scale analysis (MNA).[5]

Work and pension receipt as related to subjective retirement. It is usually expected that a completely retired person is not working at all and is receiving a pension. Conversely, a person working full time and not receiving a pension would be expected to fall into the classification "not retired." If the subjective responses conformed to such conventional expectations, they have been classified in table 2 as "perception consistent with behavior." Also included in this group are those who worked part time with or without a pension and who considered themselves partly retired. Similarly, a subjective response would seem to be completely unreasonable if it were "not retired" for those who did not work at all and received a pension, or "completely retired" for those who worked full time and received no pension.

Table 1.—Subjective response to retirement status: Number and percentage distribution of respondents, by type of response, marital status, and sex, specified years 1969–75

Year, marital status, and sex	Total number reporting	Percentage distribution, by type of response			
		Total	Completely retired	Partly retired	Not retired
Total:					
1969	[1] 8,301	100	15	9	76
1971	8,490	100	30	13	57
1973	8,235	100	50	16	34
1975	7,968	100	64	18	18
Married men:					
1969	[1] 5,673	100	12	8	80
1971	5,477	100	25	12	62
1973	5,163	100	46	17	37
1975	4,819	100	60	20	20
Nonmarried men:					
1969	[1] 696	100	19	9	72
1971	722	100	34	15	51
1973	782	100	52	15	32
1975	861	100	69	16	15
Nonmarried women:					
1969	[1] 1,932	100	23	11	67
1971	2,291	100	41	14	45
1973	2,290	100	58	14	28
1975	2,288	100	70	14	16

[1] Excludes those who had never worked and who were not questioned on retirement status.

What would be the expected subjective response of someone working full time and receiving a pension? The pension suggests a retirement situation, and the hours worked suggest attachment to the labor force. In 1969, 26 percent of the respondents were receiving pensions and 10 percent also reported some work; by 1975, 77 percent were receiving pensions and 18 percent were also working.

It might be reasoned that equal weight would be given to both situations and the person would classify himself as partly retired. On the other hand, some might give more weight to pension receipt and thus consider themselves to be completely retired while others give more weight to the number of hours worked and consider themselves not retired. In fact, for each of the work-pension combinations, room for some variation in the subjective response exists, aside from those cited above as conforming to conventional expectations or exactly contrary to such expectations. These have been grouped as "perceptions indeterminate."

As table 2 shows, a little more than two-thirds of the responses conformed to the conventional or consistent category, and only a negligible number (1 percent or less) were completely inconsistent. With "don't know's" taken into account, less than one-third of the respondents were indeterminate.

Little change was noted in the relative size of these categories during the period covered, although within each of the categories the definite shift was made in each year from not retired to completely retired, and to some extent to partly retired. For those who are neither working nor receiv-

[4] The work variable is defined by the number of hours worked per week: 35 hours or more, full time; 1–34 hours, part time; less than 1 hour, not working. Estimates of annual hours worked using information on number of weeks worked per year have not been made (see Joseph Quinn, **op. cit.**). The proportion of full-time workers are thus somewhat overstated; part-time workers are understated, particularly for women. The pension variable includes social security benefits; Federal, State, and local pensions; and private pensions.

[5] Frank M. Anderson and Robert C. Messenger, **Multivariate Nominal Scale Analysis—A report on a new analysis technique and a computer program,** Survey Research Center, Institute for Social Research, University of Michigan, 1973. See Technical Note, page 25.

Table 2.—Subjective response to retirement status and objective measures: Percentage distribution of respondents, by type of perception of retirement status, specified years 1969–75

Retirement status	Percentage distribution			
	1969	1971	1973	1975
Total	100.0	100.0	100.0	100.0
Perceptions consistent with behavior	68.7	66.9	67.6	70.9
Not retired (subjective); working full time, not receiving pension (objective)	55.6	44.2	24.2	10.7
Completely retired (subjective); not working, receiving pension (objective)	10.2	17.8	36.5	51.8
Partly retired (subjective):				
Working part time (objective):				
Receiving pension	1.6	2.7	5.0	7.2
Not receiving pension	1.3	2.3	1.9	1.2
Perceptions inconsistent with behavior	1.1	.7	.9	.7
Not retired (subjective); not working, receiving pension (objective)	1.0	.6	.7	.6
Completely retired (subjective); working full time, not receiving pension (objective)	.1	.1	.1	.1
Perception indeterminate	25.7	30.8	30.1	28.3
Not retired (subjective); working full time, receiving pension; working part time, receiving pension or not receiving pension; or not working, not receiving pension (objective)	16.3	10.6	7.9	7.1
Completely retired (subjective); working full time, receiving pension; working part time, receiving pension or not receiving pension; or not working, not receiving pension (objective)	4.0	12.7	14.0	11.9
Partly retired (subjective); working full time, receiving pension or not receiving pension not working, receiving pension or not receiving pension (objective)	5.4	7.5	8.2	9.3
Don't know/not ascertained	4.5	1.6	1.4	.1

ing a pension, no clear-cut reason exists for knowing in advance which of the two situations will have the greater weight in determining how a respondent will define his retirement status—whether, because he is not working, he will consider himself retired or, because he is not receiving a pension, he will not consider himself retired. The change in the pattern of responses between 1969 and 1975 suggests that increasing age contributes to the meaning of retirement for this divided group.

Thirty-one percent of those in the "no work, no pension" group considered themselves completely retired when respondents ranged in age from 58 to 63; 55 percent considered themselves not retired. In 1975, 85 percent of the total "no work, no pension" group considered themselves retired when respondents were aged 64–69; only 6 percent reported they were not retired. A somewhat similar, though not as striking, shift occurred in the "part time, no pension" category. In 1969, 67 percent considered themselves not retired and 30 percent considered themselves partly retired. By 1975, the proportions had changed to 37 percent not retired and 60 percent partly retired.

Age therefore—as well as other demographic or attitudinal factors suggested as possible variables to help explain subjective retirement—has been introduced into the analysis discussed below.

Results of the multivariate nominal scale anlaysis. A technique for measuring the relative importance of a number of factors in predicting subjective retirement is provided by the MNA (tables 3 and 4). For men, 48 percent were reported as completely retired in 1973. This was the modal category. Thus, one could predict that every man was completely retired and be correct 48 percent of the time. Ideally, knowledge of other variables will improve this prediction. Indeed, knowing other variables in this model improves predictions to 87 percent as given by the multivariate theta. Of the variables in the model, work status and pension receipt were clearly the most important.

The importance of the number of hours worked per week and pension receipt as predictors of subjective retirement is confirmed by these results. Aging is also a factor in explaining subjective retirement, but the demographic and psychological factors of race, education, health evaluation, and attitude toward retirement do not improve the prediction. In table 3, predictors are listed (for men and women separately) in the order of generalized eta[2] which measures the association between each predictor and subjective retirement. Also given is the generalized R^2, a measure of the "variance" accounted for by all the predictors in the model, and the multivariate theta, which indicates the proportion that could be predicted by knowing all the specified predictors.

The bivariate theta is a measure of the proportion of cases that could be predicted correctly by knowing that predictor alone. Thus, for many predictors, the bivariate theta was almost the same as the overall proportion considering themselves completely retired (the modal category). Theta for race was 0.4778 (for men), which checks with the 47.78

Table 3.—Relative importance of predictors of subjective response to retirement status from multivariate nominal scale analysis,[1] by sex, 1973

Multivariate	Men		Women	
R^2		0.6518		0.5509
Theta		.8716		.8399
Predictor	**Eta [2]**	**Theta**	**Eta [2]**	**Theta**
Work status	0.6317	0.8689	0.5370	0.8383
Pension receipt	.2194	.6631	.1025	.5998
Age	.0735	.5670	.0407	.5866
Health evaluation	.0447	.5014	.0367	.5866
Education	.0123	.4936	.0159	.5866
Attitude toward retirement	.0036	.4787	.0169	.5898
Race	.0002	.4778	.0003	.5866

[1] For an explanation of multivariate nominal scale analysis, see the Technical Note, page 25.

[2] Actual proportion completely retired (modal group): 0.4778 for men and 0.5866 for women.

Table 4.—Actual subjective response and prediction of retirement status from multivariate nominal scale analysis:[1] Number and percentage distribution of respondents, by sex, 1973

[Boldface figures indicate accurate prediction]

Actual response	Total number	Percentage distribution, by predicted response			
		Total	Completely retired	Partly retired	Not retired
	Men				
Completely retired	3,058	100	**97.48**	1.67	.85
Partly retired	1,044	100	28.35	**45.98**	25.67
Not retired	2,298	100	2.83	5.05	**92.12**
	Women				
Completely retired	1,473	100	**95.23**	1.43	.34
Partly retired	349	100	42.41	**47.56**	10.03
Not retired	689	100	12.77	15.24	**71.99**

[1] See table 3, footnote 1.

percent completely retired. Knowing whether a respondent was black or white would not improve one's estimate of his subjective retirement status any more than accepting the average in the total group. Knowing only whether he had a pension or not would, however, increase the chance of correctly classifying his subjective retiremnt from 47.78 to 66.31, or about 18 percentage points. Knowing only his work status—full time, part time, or not working—would improve the likelihood of correct prediction by 39 percentage points.

For women, the modal category was 59 percent completely retired. Work status was the important predictor, with other variables contributing very little.

Another way of summarizing the results of the MNA technique is in a classification matrix (table 4). The predicted classification category—completely retired, partly retired, and not retired—is cross-tabulated with the actual response of the individual. The boldface percentages on the diagonal show those correctly predicted. Thus, of the men who said they were completely retired, 97 percent were correctly predicted. Nearly as many of the not retired (92 percent) were successfully classified. Only about 46 percent of those who considered themselves partly retired were so predicted; of the remainder, about one-half were classified as completely retired and one-half not retired. The greater ambivalence of the partly retired category is evident. The results for the women are similar except that fewer of the not retired were correctly classified, and, of the approximately one-half of the partly retired incorrectly predicted, most were placed in the completely retired group.

Partial Retirement

Two special questions regarding the subjectively evaluated status of the partly retired arose during the analysis of the RHS data. One of the questions was definitional—how satisfactory is the conventional definition of part-time work as being less than 35 hours a week? The second, more substantive, is the question of the importance of partial retirement as an intermediate stage between not retired and completely retired.

Defining part-time work. One explanation for the problem of correctly predicting the partly retired might lie in the measurement variable itself: the definition of a full-time workweek as 35 hours or more and of part time as 1–34 hours. This conventional classification is arbitrary and not necessarily universally accepted.[6]

The RHS data were utilized to investigate this point. Subjective retirement was tabulated for the respondents grouped by their reported working hours, with intervals of 5 hours per week, up to 50 hours or more (1973 data). The results are shown in table 5. These data support the reasonableness of 35 hours as a full-time workweek, although a case could also be made for either 30 hours or 40 hours. A steep change occurs in subjective retirement within the 30–40 hour range. Immediately below that range, at 25–29 hours, 73 percent considered themselves partly retired, 23 percent not retired. At 30–34 hours the comparable percentages were 52 percent and 46 percent. At 35–39 hours only 17 percent were partly retired and 80 percent were not retired. Incidentally, 70 percent of the partly retired reported less than 30 hours of work per week, and about 75 percent reported less than 35 hours.

The data thus seem to support the hypothesis that at least part of the difficulty in using hours worked as a predictor of the "partly retired" category is in the indeterminate nature of the definition of part-time work. At the extremes—with 0 hours of work per week (or less than 5 or 10) or with 40 hours

[6] In a recent survey of retirement in Great Britain, the division between full-time and part-time workers was 30 hours.

Table 5.—Hours worked per week, by subjective response to retirement status: Number and percentage distribution of respondents, by type of response, 1973

Hours worked per week	Total number	Percentage distribution, by type of response			
		Total	Completely retired	Partly retired	Not retired
Less than 1	409	100	88	9	3
1–4	40	100	32	55	13
5–9	69	100	15	74	10
10–14	111	100	9	72	19
15–16	168	100	6	79	15
20–24	219	100	5	69	25
25–29	70	100	4	73	23
30–34	155	100	2	52	46
35–39	281	100	2	17	80
40–44	1,440	100	1	8	91
45–49	274	100	1	9	91
50 or more	642	100	1	11	88
Don't know/not ascertained	96	100	9	42	49

Table 6.—Retirement paths, by subjective response to retirement status: Percentage distribution of respondents, by sex, 1969–75

Retirement paths	Total	Men	
Total number	7,620	5,655	1,964
Total percent	100.0	100.0	100.0
No change in retirement status, 1969–75	29.4	28.5	32.0
Not retired	16.1	17.1	13.3
Partly retired	1.2	1.3	.8
Completely retired	12.1	10.1	17.9
Change in retirement status	58.7	60.9	52.3
Not retired, 1969; completely retired, 1975:			
Shifted directly to completely retired	35.5	36.7	32.2
Partly retired (intermediate stage) before completely retired	6.9	7.2	5.9
Not retired, 1969; partly retired, 1975	11.9	13.0	8.7
Partly retired, 1969; completely retired, 1975	4.4	4.0	5.5
Varied irregularly away from retirement	11.8	10.6	15.6
Not retired	6.4	6.4	6.5
Partly retired	3.0	2.6	4.3
Completely retired	2.5	1.6	4.8

or more—respondents do or do not consider themselves retired. In between there is much less unanimity.

Partial retirement as intermediate stage. The 1969–75 RHS data have been examined to provide insight on the extent to which "partly retired" served as an intermediate stage between "not retired" and "completely retired" during the period.

Although "partly retired" would not necessarily be the precise definition for those experiencing gradual retirement, that group might serve as an indication of the importance of gradual retirement. Gradual retirement, involving a transitional period of part-time work before full retirement, is sometimes recommended as a means of easing the stress of retirement.[7]

Accordingly, retirement paths have been traced. Respondents who reported on their subjective retirement in 1969, 1971, 1973, and 1975 have been classified by (1) whether they reported the same retirement status throughout the period, (2) whether they shifted downward from working to partial retirement and then to full retirement or moved directly to full retirement, or (3) whether some shifting took place in the reverse direction—from not working or part-time work to part-time or full work. Within these three major groups, the respondents are shown in table 6 classified by their subjective retirement in 1969. The group not retired in 1969 but completely retired in 1975 has also been subdivided according to whether, in either or both of the 1971 and 1973 interviews, a "partly retired" report was made that might indicate a type of gradual retirement. The retirement paths of those who at one time or another shifted away from retirement—12 percent of the total—have not been traced in detail.

Less than a third had no change in their retirement status and more than half of these were the "not retired." The largest single group listed was the conventional one—those shifting directly from the "not retired" in 1969, when they were in the 58–63 age range to the "completely retired" aged 64–69 6 years later (about 35 percent of the total). The 7 percent who gave definite evidence of partial retirement as an intermediate stage does not seem large.[8] A better indicator of the potential size of this group may be obtained by adding to it, for a total of 24 percent, (1) those partly retired throughout the period (1 percent); (2) those not retired in 1969 but partly retired in 1975 (12 percent); and (3) those partly retired in 1969 and completely retired in 1975 (4 percent). The 24 percent represents, of course, the maximum amount reflected by these data.

Summary

This analysis of the way respondents in the RHS evaluated their own retirement status suggests that "complete" retirement was clearly associated with engaging in no paid work (as measured by hours per week), just as a full workweek of 35 or 40 or more hours would elicit the response "not retired." The broad band of hours of work per week from about 20 to 35 is less clear-cut in its association with "partial retirement." Although retirement is also associated with the receipt of a pension, this factor was not as good a predictor of subjective retirement as hours of work. Aging, to a lesser extent, served as a predictor—particularly among those not working or receiving a pension. Other demographic and attitudinal factors (race, education, health, attitude toward retirement) were not found to have any significant bearing on the subjective retirement responses.

Those partly retired have not been found to be clearly defined, but the group provides a useful insight into the practice of gradual retirement. When the respondent reports himself as partly retired between reports of "not retired" and "completely retired," he gives evidence of the experience of gradual retirement. Although only 7 percent reported all three retirement stages—"not retired," "partly retired," and "completely retired"—in the period covered, an additional 17 percent could potentially be classified as having moved toward retirement gradually, if further information on retirement status were available. This group includes those not retired in 1969 and partly retired in 1975, those not retired in 1969 and completely retired in 1975, and those who considered themselves partly retired throughout the period.

[7] For a discussion of gradual retirement and analysis of the 1969–73 RHS data for men, see Karen Schwab, **Gradual Retirement and Adjustment to Retirement,** paper prepared for the 30th annual meeting of the Gerontological Society, San Francisco, November 1977. See Ake Elmer, "Old-Age Pensions and Retirement Rules in Sweden," in **Mandatory Retirement: Blessing or Curse?** (Symposium, International Federation on Aging, Jerusalem, Israel, 1975) that also describes various approaches.

[8] Karen Schwab, **op. cit.,** reported that 9 percent of the men retired gradually between 1969 and 1973—a proportion consistent with the 7 percent given here, after taking into account technical differences in definition and approach.

Technical Note*

The Sample

The sampling frame for the RHS is the same as that used by the Bureau of the Census for its Current Population Survey (CPS).[9]

Members of the sample were persons living in households that had last participated in the CPS before February 1969. They were men in all marital-status categories and women who, at the time of sample selection, had no husband in the household. In any month the CPS panel consists of eight groups of households selected up to 18 months previously. The oldest of these rotation groups is dropped and replaced by a new one each month.

Nineteen of these discontinued CPS rotation groups were used for the RHS. Information was gathered from sample members and their spouses by Bureau of the Census interviewers, usually in late spring of the survey year. In 1969, 11,153 interviews were completed; 10,169 were completed in 1971, 9,423 in 1973, and 8,693 in 1975.

Sampling Variability

A measure of the sampling variability of an estimate is given by the standard error of the estimate. Generally speaking, the chances are about 68 out of 100 that an estimate will differ from the value given by a complete census by less than one standard error. The chances are about 95 out of 100 that the differences will be less than twice the standard error.

Table 1 gives approximate standard errors for the estimated percentage of individuals with a certain characteristic. Linear interpolation may be used to obtain values not specifically given. To derive standard errors that are applicable to a wide variety of items, a number of assumptions and approximations were required. As a result, these standard errors provide an indication of the order of magnitude rather than the precise standard error for any specific item.

To make a rough determination of the statistical significance of the difference between two independent percentages, the following procedure may be used. Find estimates of the standard errors of the percentages in question, using table I. Square these standard errors to get variances and add the variances. Take the square root of this sum to get the standard error of the difference. If the absolute difference between the two percentages in question is greater than twice the standard error of the difference, they are said to be significantly different from one another at the 5-percent level.

Table I.—Approximate standard errors of estimated percentages

Size of base	Estimated percentage									
	2 or 98	5 or 95	8 or 92	10 or 90	15 or 85	20 or 80	25 or 75	30 or 70	40 or 60	50
25	3.1	4.8	6.0	6.6	7.8	8.8	9.5	10.0	10.8	11.0
50	2.2	3.4	4.2	4.7	5.6	6.2	6.7	7.1	7.6	7.8
100	1.5	2.4	3.0	3.3	3.9	4.4	4.8	5.0	5.4	5.5
200	1.1	1.7	2.1	2.3	2.8	3.1	3.4	3.6	3.8	3.9
300	.9	1.4	1.7	1.9	2.3	2.5	2.8	2.9	3.1	3.2
500	.7	1.1	1.3	1.5	1.8	2.0	2.1	2.2	2.4	2.4
800	.5	.8	1.0	1.2	1.4	1.6	1.7	1.8	1.9	1.9
1,500	.4	.6	.8	.8	1.0	1.1	1.2	1.3	1.4	1.4
3,000	.3	.4	.5	.6	.7	.8	.9	.9	1.0	1.0
5,000	.2	.3	.4	.5	.6	.6	.7	.7	.8	.8
8,000	.2	.3	.3	.4	.4	.5	.5	.6	.6	.6
10,000	.2	.2	.3	.3	.4	.4	.5	.5	.5	.6

Multivariate Nominal Scale Analysis

Multivariate nominal scale analysis[10] is a type of dummy variable multiple regression characterized by a dependent variable that is measured by a set of mutually exclusive categories—that is, a nominal scale. The independent variables may be measured at any level of measurement including nominal measurement. The nominally scaled dependent variable is converted to several 0–1 dummy variables, and parallel regressions are run using each of the dummy variables in turn as a dependent variable.

The strength of relationship between the independent variables taken together as a set and the dependent variable is shown in two ways by MNA:

(1) Generalized R^2—roughly interpretable as the amount of "variance" in the dependent variable explained by all the predictor variables combined, and

(2) multivariate theta—a measure of the proportion of cases that could be correctly classified after taking into account each respondent's score on each of the independent variables.

For each independent variable, the generalized eta^2 and

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[9] For a general description of the CPS, see Bureau of the Census, **The Current Population Survey—Design and Methodology** (Technical Paper No. 40), 1978. See also Marvin M. Thompson and Gary Shapiro, "The Current Population Survey: An Overview," **Annals of Economic and Social Measurement,** April 1973.

[10] For more detail, see Frank M. Andrews, Robert C. Messenger, **op. cit.**

Table M-14.—OASDHI cash benefits: Estimated number of beneficiaries with monthly benefits in current-payment status, by age group and by type of benefit, 1940–79

[In thousands. Adjusted to exclude duplication arising from dual entitlement; see the **1973 Annual Statistical Supplement**, p. 11]

At end of selected month	Total, all ages	Under age 62	Aged 62 and over								
			Total, aged 62 and over	Aged 62-64				Aged 65 and over			
				Total	Retired workers	Disabled workers	Dependents and survivors[1]	Total	Retired workers	Dependents and survivors[1]	Persons with special age-72 benefits[2]
December:											
1940	222	75	147	[3]	.....	.....	[3]	147	112	35	.....
1945	1,287	510	777	[3]	.....	.....	[3]	776	518	258	.....
1950	3,462	877	2,586	1	.....	.....	1	2,585	1,771	814	.....
1955	7,912	1,622	6,291	3	.....	.....	3	6,287	4,474	1,812	.....
1956	9,070	1,701	7,369	338	113	.....	225	7,031	4,999	2,032	.....
1957	11,081	2,009	9,072	729	266	46	417	8,343	5,931	2,411	.....
1958[4]	12,390	2,231	10,159	837	299	77	461	9,322	6,621	2,701	.....
1959	13,667	2,560	11,107	968	334	105	529	10,139	7,191	2,948	.....
1960	14,811	2,883	11,928	1,041	357	127	557	10,887	7,704	3,183	.....
1961	16,471	3,406	13,065	1,375	648	141	586	11,690	8,277	3,413	.....
1962	18,032	3,858	14,174	1,659	873	156	630	12,515	8,865	3,650	.....
1963	19,016	4,109	14,907	1,748	946	163	639	13,159	9,318	3,841	.....
1964	19,783	4,274	15,509	1,848	998	183	667	13,661	9,671	3,990	.....
1965	20,867	4,735	16,132	1,854	992	197	665	14,278	10,108	4,169	.....
1966	22,767	5,199	17,568	1,954	1,028	230	696	15,614	10,631	4,349	634
1967	23,705	5,491	18,214	2,013	1,040	258	714	16,202	10,979	4,494	729
1968	24,560	5,829	18,733	2,096	1,084	283	729	16,635	11,337	4,622	676
1969	25,314	6,088	19,226	2,195	1,141	304	751	17,031	11,682	4,746	603
1970	26,229	6,380	19,849	2,332	1,225	322	785	17,517	12,122	4,861	534
1971	27,292	6,744	20,548	2,479	1,333	352	794	18,069	12,594	5,003	472
1972	28,476	7,160	21,316	2,665	1,440	390	835	18,651	13,115	5,126	410
1973	29,868	7,577	22,291	2,835	1,560	420	856	19,456	13,805	5,294	358
1974	30,853	7,859	22,994	2,973	1,631	462	880	20,021	14,328	5,415	278
1975	32,085	8,309	23,777	3,134	1,723	512	899	20,643	14,865	5,554	224
1976	33,024	8,512	24,511	3,264	1,781	563	920	21,247	15,384	5,675	188
1977	34,083	8,711	25,372	3,410	1,868	598	945	21,961	15,965	5,837	159
1978	34,587	8,587	26,000	3,412	1,861	609	942	22,588	16,497	5,958	134
1978											
July	34,106	8,506	25,600	3,446	1,901	606	939	22,154	16,126	5,885	143
August	34,265	8,555	25,711	3,450	1,902	607	941	22,260	16,215	5,903	141
September	34,382	8,583	25,799	3,452	1,902	608	943	22,346	16,289	5,918	139
October	34,456	8,580	25,876	3,428	1,877	608	943	22,448	16,378	5,933	138
November	34,493	8,552	25,941	3,418	1,868	608	942	22,523	16,440	5,947	136
December	34,587	8,587	26,000	3,412	1,861	609	942	22,588	16,497	5,958	134
1979											
January	34,681	8,585	26,096	3,449	1,896	608	945	22,647	16,545	5,969	132
February	34,725	8,594	26,131	3,449	1,897	608	944	22,683	16,578	5,975	130
March	34,803	8,621	26,182	3,463	1,911	608	944	22,720	16,614	5,978	127
April	34,779	8,620	26,159	3,460	1,914	608	938	22,699	16,594	5,979	126
May	34,815	8,619	26,196	3,453	1,912	607	935	22,743	16,630	5,988	124
June	34,737	8,485	26,252	3,462	1,920	606	936	22,789	16,670	5,998	122
July	34,673	8,345	26,328	3,469	1,924	606	940	22,858	16,729	6,010	120

[1]Includes dependents of disabled workers.

[2]Authorized by 1966 legislation for persons aged 72 and over not insured under the regular or transitional provision of the Social Security Act.

[3]Less than 500.

[4]November data; December data not available.

Subjective Retirement

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bivariate theta provide two alternate ways of measuring the strength of the simple bivariate relationship between the predictor and the dependent variable:

(1) Generalized eta[2]—a measure of strength of association between a predictor and the dependent variable, and

(2) bivariate theta—a measure of the proportion of cases that could be predicted correctly by showing that predictor alone.

In addition, coefficients show the effect of membership in each category of the independent variables on the likelihood of memberships in each category of the dependent variable (not shown in summary tables).