Orphans in the United States: Number and Living Arrangements

by JACOB FISHER *

CONSIDERING the extent of public provision for the payment of benefits to children of deceased wage earners and of veterans, there is surprisingly little exact knowledge concerning the number of orphans in the United States. Currently about 630,000 children under age 18 are receiving survivor benefits under old-age and survivors insurance; perhaps another 350,000 are in receipt of benefits as the survivors of deceased railroad and government workers and deceased veterans. Orphans among the 1.6 million children on the aid to dependent children rolls may number 300,000 or more. Yet how large a proportion these children are of the total number of orphans is a matter of estimate, while the numbers falling outside the programs mentioned and their economic circumstances remain to a considerable extent in the realm of speculation.

Census Family Data

Some idea of the minimum number of children in the country who have lost one or both parents by death may be obtained from Census family data. The 1940 enumeration indicated the presence in the population of about 1.8 million children under age 18 living with a widowed mother and another 0.7 million living with a widowed father. Estimates based on the monthly population sample survey of the Bureau of the Census suggest that by April 1949 the size of these two groups had declined to approximately 1.2 or 1.3 million living with a widowed mother and about 0.3 million living with a widowed father.[1]

While some of the children thus classified were not necessarily the biological children of the surviving spouse, it is reasonable to suppose that the figures cited tend on the whole to understate the number of orphans in the country. Complete orphans—that is, children who have lost both parents—are missed altogether, as are half-orphans living away from the surviving parent and half-orphans in the home of a remarried parent. In April 1949, perhaps 1.5 million non-married children under age 18 were living with neither parent, including about 1.0 million in the home of relatives and 0.5 million living with non-relatives in either a family or non-family setting.[2] Some of these children had undoubtedly lost one or both parents by death. Data cited later indicate that a substantial proportion of orphaned children are to be found in the homes of parents who have remarried and who would be classified by the Bureau of the Census as members of "husband-wife" rather than "widowed" families.

The number of orphans not living with a widowed parent may be expected to vary with general economic conditions, the extent of provision for survivor benefits, remarriage rates, and the availability of housing. For these reasons it may be hazardous to draw conclusions concerning the trend in the number of orphans in the country from changes in the number of children living with a widowed parent.

The Life-Table Method

The limitations of Census family composition data have induced actuaries and statisticians to develop estimates of the volume of orphanhood on the basis of the mortality of parents, using the life table as a tool for measurement. The life table provides measures of the chance of survival for a given year or number of years according to age, sex, and race; it is derived from the data on total

population and on deaths, classified according to these three characteristics. The application of the life table to the problem of estimating the size of the orphan group is illustrated in the following summary of the technique developed by Alfred J. Lotka in 1928.[3]

The average age of the fathers for all children born in a given year may be determined from birth registration reports. The proportion of fathers surviving at the end of the child's first year can be calculated from the life-table survival factor for men of that average age. The complement of the proportion of fathers surviving is the proportion of fathers dying, with an appropriate adjustment made for fathers dying after the conception but before the birth of the child. The proportion of fathers who will have died by the child's second birthday can be similarly estimated on the basis of survival factors for men 1 year older. In this manner the proportion of children with deceased fathers can be developed for each age of childhood. These proportions, when multiplied by the number of children distributed by single years of age, yield the estimated number of paternal orphans in each age class. The total number of such orphans under a given age is found by summing.

A similar procedure, using average age of mothers at birth and female survival rates, is followed to obtain the number of maternal orphans, with an adjustment for mothers dying in childbirth. The number of complete orphans is estimated from the life-table values for persons of the age, sex, and race of the surviving parent, adjusted to take into account the greater probability of a surviving

* Division of Research and Statistics, Office of the Commissioner.

[1] Estimated from the Bureau of the Census, Current Population Reports: Population Characteristics, Series P-20, particularly Nos. 21, 23, and 26.

[2] Ibid.

[3] Alfred J. Lotka, "Orphanhood in Relation to Demographic Factors: A Study in Population Analysis," Metron, International Review of Statistics, Rome, 15 August 1931, pp. 37–109.

parent dying than the average person in the same age-sex-race class.

Lotka made no adjustments for differences in the mortality of married and nonmarried individuals or of parents and nonparents and for changes in mortality over time.

This method, applied to life-table values for 1919–20 and the age distribution of children in 1920, gave Lotka an estimate of 4.0 million orphans under age 17 in the white population of the United States in 1920, or 12 per 100, of whom 2.0 million had lost a father only, 1.6 million had lost a mother only, and about 350,000 were complete orphans.

In 1933, Mortimer Spiegelman, using Lotka's method and 1930 mortality rates, estimated the number of white orphans under age 17 in 1930 to have been 3.1 million, or 9 per 100, including 1.7 million paternal-only orphans, 1.2 million maternal-only orphans, and 0.2 million complete orphans.[4]

Spiegelman returned to the subject in 1944, preparing an estimate for 1940, based again on the Lotka method and employing 1930–39 mortality rates, which put the number of orphans in the United States under age 18, white and nonwhite, at 3.8 million, or 10 per 100.[5] The total included 2.2 million paternal-only orphans, 1.4 million maternal-only orphans, and 300,000 complete orphans.

Both Lotka and Spiegelman started with the age distribution of the children as enumerated in the Census year, working backwards, by use of the mortality factors mentioned, to estimate the number of children whose fathers had died in the years before the Census. In 1945, T. J. Woofter reversed the procedure, beginning with the number of births in a given calendar year and estimating, by use

[4] "The Diminishing Burden of Orphanhood a Great Social Benefit," *Statistical Bulletin of the Metropolitan Life Insurance Company,* September 1933; "The Broken Family—Widowhood and Orphanhood," *Annals of the American Academy of Political and Social Science,* November 1936, pp. 117–130.

[5] "One Child in Nine in a Broken Family," *Statistical Bulletin of the Metropolitan Life Insurance Company,* March 1944, p. 3–6; "The American Family," *The Record,* American Institute of Actuaries, November 1944, pp. 394–409, June 1945, pp. 121–124.

of age-of-father data and life-table survival factors, how many new paternal orphans were created among such children in each successive calendar year.[6] These annual accretions through age 17 were summed up and adjusted for deaths among the orphans themselves, leaving the number of paternal orphans in the population in the age class 17. Similar computations yielded the estimated number of paternal orphans in each younger year of age. The sum of these estimates comprised the total number of paternal orphans under age 18.

Woofter's estimate of paternal orphans (paternal-only plus complete) under age 18 in 1940, based on births in the period 1922–39 and on 1929–31 mortality rates, was 3.3 million, or about one-third more than Spiegelman's estimate of 2.5 million for the same year. (The rates per 100 were 8.3 and 5.4, respectively.)

The October 1949 Survey

The question that every student of the subject asks at some stage of his investigation is, "Why not seek an answer by direct enumeration?" Great Britain, Ireland, Australia, and New Zealand have obtained statistics on orphanhood by including in the census schedule an inquiry into the number of children under a specified age with two, one, or no living parents, and there would seem to be no reason why a similar approach should not be feasible in this country.

In the course of discussions with the Census Bureau regarding the content of the 1950 Census schedule, the Social Security Administration in 1948 suggested, among other things, the inclusion of a question or series of questions concerning orphanhood. The suggestion was ruled out because of, among other reasons, lack of demand for such information for small areas. The addition to the current population survey schedule of a supplement on the subject was proposed and accepted as an alternative.

In October 1949, respondents in all households in the survey sample containing one or more children under 18 (roughly half the 25,000 households comprising the sample) were ques-

[6] "Paternal Orphans," *Social Security Bulletin,* October 1945, pp. 5–6.

tioned as follows: "Are both parents of all children under 18 still living?" If the answer was "No" with respect to any child, the respondent was asked "Is _____'s father still living?" and "Is _____'s mother still living?" If the answer to either question was "Yes," the enumerator was requested to indicate on the schedule whether the surviving parent was living in the same household. Instructions to the enumerator specified that the parents referred to in the questions were the "blood" or "natural" parents.

The results of the October 1949 survey pointed to the presence in the population under 18 years in that month of 2.4 million orphans, including 1.6 million paternal-only orphans, 0.7 million maternal-only orphans and 0.1 million complete orphans.

In the interpretation of these figures two kinds of qualifications must be borne in mind.

The first is sampling variability, arising out of the fact that the estimates are obtained from a survey based on a sample. According to the Census Bureau, the chances are about 19 out of 20 that the difference between the estimated number of orphans obtained from the survey and the figure that would have been obtained from a complete enumeration, using the same schedule, instructions, and enumerators, is less than 300,000. For paternal-only orphans, similarly, the sampling variability is a little more than 200,-000; for maternal-only orphans, a little more than 100,000; for complete orphans, about 40,000. In other words, the survey suggests that the results of a complete enumeration would probably lie in the range 2.1–2.7 million for all orphans; 1.4–1.8 million for paternal-only orphans; 0.6–0.8 million for maternal-only orphans; and 0.05–0.13 million for complete orphans.

The other qualification arises out of errors of response and nonreporting. These tend on the whole toward an understatement of the number of orphans in the country. Some mothers may have reported as dead fathers who have deserted or from whom they have been divorced or otherwise separated, or, perhaps more importantly, fathers to whom they have never been married.

This bias in the direction of an overstatement in the number of orphans may have been more than compensated for, however, by the tendency of some respondents, consciously or unconsciously, to forget or conceal the fact that some of the children in the household were orphans. In some cases it is quite possible that the respondent did not know the parental status of the children in the household. Memory lapse or concealment would be particularly marked in adoption cases, or in cases in which the surviving parent remarried and had a second set of children and either rejected any distinction between the issue of the first and of the second marriage or confused the de facto parent with the biological parent.

Since widowers have a higher remarriage rate than widows, the influence of this factor may be expected to affect particularly the count of maternal-only orphans. As a matter of fact, the ratio of maternal-only to paternal-only orphans in the survey results is perhaps lower than the relationship to be anticipated from sex differences in adult mortality and may be explained largely on the basis of underreporting of the children of remarried widowers.

Still another limitation of the survey was the difficulty of insuring adequate coverage of children in institutions, arising from the fact that the monthly population sample survey is primarily designed to yield a representative sample of noninstitutional households in the country.

Generation Mortality Method

Discussion of the special survey results among the interested staff members of the Census Bureau and of the Division of Research and Statistics and the Division of the Actuary of the Social Security Administration suggested the desirability of developing an independent estimate for the same period by the life-table method. The Division of the Actuary subsequently prepared an estimate on the basis of the presumed annual changes in the mortality of married persons between 1932 and 1949, calculated from the annual United States life tables by single years of age and by sex and race. These tables are issued by the

Table 1.—*Estimated number of orphans under age 18, by type, October 1949*

Type	Orphans under age 18		Orphans as percent of estimated population under age 18
	Estimated number (in millions)	Percent	
Total............	3.0	100	6.3
Paternal only........	1.9	63	3.9
Maternal only........	1.0	34	2.2
Complete............	.1	3	.2

Source: Number of orphans, based on generation life tables for married persons, by race and age, estimated by the Division of the Actuary, Social Security Administration. Estimated population under age 18, from the Bureau of the Census.

Metropolitan Life Insurance Company and have been adjusted for the mortality of married persons by reference to 1940 data of the National Office of Vital Statistics, with an allowance for additional paternal orphans created by deaths of fathers in service overseas during World War II.

This generation mortality estimate recognizes the fact that orphans under age 18 in the population in October 1949 lost their parents under varying conditions of risk of death, and it is therefore preferable to an estimate that assumes that between 1932 and 1949 (or any other 18-year period) the mortality factors remained constant, as is the case when one uses the 1930–39 life table, the 1939–41 life table, or any other table of fixed values over the entire period.

The generation mortality method produces an estimate for October 1949 of 3.0 million orphans under age 18, of whom 1.9 million were paternal-only orphans, 1.0 million were maternal-only orphans, and somewhat less than 0.1 million were complete orphans. On this basis, orphans constituted 6 percent of the estimated 48 million children under age 18 in that month; paternal-only orphans, 4 percent; maternal-only orphans, 2 percent; and complete orphans, 0.2 percent (table 1).

From an examination of the Lotka and Spiegelman estimates for 1920, 1930, and 1940, in relation to the estimate in table 1 for 1949, it would appear that the number of orphans has decreased absolutely as well as relatively over the past 30 years. The primary factor responsible for the decrease in the burden of orphanhood

has been, of course, the progressive improvement in the mortality of men and women in the child-rearing ages. Other factors have been the decline in the number of very large families, among whom a parent's death left more orphans than among smaller-sized families; the related factor of the decrease in the median age of father and mother at birth of child, which has meant a lower mortality rate for parents of children under age 18; and the better-than-average improvement in the mortality of Negroes, whose families have tended to be larger than those of other population groups.

Personal Characteristics of Orphans

Type of orphanhood.—All estimates of the number of orphans agree in showing more paternal than maternal orphans. The larger number of children who have lost a father is understandable in the light of the higher mortality of men as compared with women, age for age, and the circumstance that married men are on the average several years older than their wives.

According to the generation mortality estimate, about 63 percent of the orphans under age 18 in October 1949 were paternal-only orphans, 34 percent were maternal-only orphans, and 3 percent were complete orphans (table 1). The corresponding ratios in the special survey were 66, 30, and 4 percent.

Lotka's estimate for 1920 suggested that paternal-only orphans comprised 51 percent of all orphans. In Spiegelman's estimate for 1930 the rate was 56 per 100, and in his estimate for 1940 it was 57 per 100.

The upward trend in these estimates in the relative number of orphans who have lost a father only, as well as the concurrent decline in the proportion of maternal-only orphans, is consistent with the greater improvement in recent years in the mortality of women as compared with men.

Census enumerations of orphans in other countries have yielded paternal-only ratios between 53 and 70 percent, reflecting presumably varying sex differences in adult mortality. The low-

Table 2.—_Estimated number of orphans under age 18, by age, October 1949_

Age	Orphans under age 18		Estimated percentage distribution, total population under age 18	Orphans as percent of population in specified ages
	Estimated number (in millions)	Percent		
Total	3.0	100	100	6.3
Under 5	.2	7	35	1.2
5–9	.7	24	28	5.3
10–14	1.1	37	23	9.8
15–17	1.0	32	13	15.5

Source: Distribution of orphans by age estimated by the Division of the Actuary, Social Security Administration. Estimated age distribution of total population under age 18, from the Bureau of the Census.

est proportion was shown by the Irish censuses of 1926 and 1936. Intermediate ratios appeared in the New Zealand enumerations of 1921, 1926, and 1936 (58 percent in all 3 years) and in the Australian census of 1933 (60 percent). The 70-percent ratio in the 1921 census of England and Wales is usually attributed to male service deaths in World War I.

Age.—Because of the cumulative increase in the number of orphans with each year of age, as well as the higher mortality of parents of older children, more orphans may be anticipated in the later than in the earlier years of childhood. Census data from other English-speaking countries show orphanhood ratios per 100 children in the age group 5–9 from two to three times higher than in the group under 5 years of age, while the ratio among children aged 10–14 was anywhere from one-third higher to twice as high as the proportion in the age class 5–9.

The generation mortality estimate for the United States for October 1949 suggests that among children under 5 years of age in that month, orphans comprised 1 percent of the total. The ratio was 5 percent in the age class 5–9, 10 percent in the group aged 10–14, and 16 percent among children from 15 to 17 years of age (table 2). The special survey also showed a rise in the relative number of orphans at each successive age class.

School enrollment.—Orphaned children are not at an educational disadvantage, to judge from the special survey made by the Census Bureau in October 1949. The survey findings indicate that among orphans in the ages 5–17, 87 percent were enrolled in school, or about the same proportion as for all children of that age.[7] The similarity in school-enrollment status shows up also when the data are analyzed by age. In the age class 5–13, about 9 in 10 children in both groups were enrolled; in the age class 14–17 the proportion was 8 in 10 for both orphans and all children.

Labor-force status.—According to the special Census survey, orphaned children in the age group 14–17 are less frequently found in the labor force than all children at the same ages. The Census Bureau's _Monthly Report on the Labor Force_ for October 1949 suggests that about 27 in every 100 persons aged 14–17 were either working or looking for work in that month. The special orphan survey points to a labor-force participation rate among orphans of 15 per 100.

This underrepresentation of workers among older orphaned children is one of the surprises of the survey. As a group, orphans are at an economic disadvantage and might be expected to show a higher-than-average rate of participation in the labor force. In 1940, 14 percent of the families with a male head and children aged 14–17 had one or more children in the labor force, but among families with a female head, including widows, this proportion was 20 percent.[8] Another factor expected to make for a higher labor-force participation rate among orphans is the greater concentration of 16- and 17-year-olds in the orphan group aged 14–17 as compared with all children aged 14–17.

It is possible, of course, that part or all of the difference is spurious because of sampling variability, a possible undercount of older orphans in the special survey because errors in

[7] Bureau of the Census, _Current Population Reports: Population Characteristics_, Series P–20, No. 30, table 5.

[8] Bureau of the Census, _16th Census of the United States: 1940, Population and Housing, Families, General Characteristics_, table 4.

Table 3.—_Percentage distribution of the estimated number of orphans under age 18, by type and by living arrangement, October 1949_ [1]

Household relationship of orphan and relative present	Paternal orphans	Maternal orphans	Complete orphans
Total	100	100	100
In households	97	96	99
Mother present	88		
Mother head of household	54		
Other	35		
Father present		64	
Father head of household		61	
Other		3	
Neither parent present	9	32	99
Relative head of household	7	27	80
Male relative	7	21	44
Female relative	(²)	6	37
Other	2	5	17
In institutions	3	4	2

[1] Estimated.
[2] Less than 0.5 percent.

Source: Special sample survey, Bureau of the Census, October 1949.

response due to memory lapse and other factors may have been more frequent for children in the older ages, and the possibility that among those missed a relatively large number were in the labor force. If the difference is real, perhaps one reason is the presence among the million or so orphans aged 14–17 of several hundred thousand receiving survivor benefits under social insurance and related programs or receiving aid to dependent children, programs under which employment usually entails reduction or loss of benefit or assistance. Under the circumstances it is to the advantage of the family to keep the child out of the labor market.

It may seem paradoxical that despite a seemingly significant difference in the rate of labor-force participation, both orphans and the total population aged 14–17 show approximately the same relative numbers enrolled at school. The explanation would appear to lie in the difference between the two groups with respect to the overlap in school enrollment and labor-force membership. More than half the total number of children aged 14–17 in the labor force were enrolled in school, as compared with about 1 in 8 in the orphan group. In other words, children enrolled at school and not in the labor force were relatively more numerous among orphans than in the general population.

Living Arrangements

Relative lived with.—The institutionalized orphan of song and fiction is far from representative of the orphan in real life. The Census Bureau's special survey indicates that most orphans live in a family setting, sometimes with relatives, more often with the surviving parent in his own home.

In October 1949, only about 3 in every 100 orphans under age 18 lived in an institution. Of the children who had lost a father, about 9 in 10 were living with the mother. There is evidence that most of the remainder were in the homes of other relatives (table 3). As noted earlier, it is possible, of course, that institutions were not adequately covered in the survey and that a complete enumeration would have yielded a ratio higher than 3 percent.

The proportion of children living with a surviving parent was somewhat lower among maternal orphans, but these children accounted for more than half the children who had lost a mother. About 6 in 10 were living with the father, about 3 in 10 with other relatives (table 3). The higher frequency of maternal orphans in the homes of relatives other than the

Table 4.—*Percentage distribution of the estimated number of orphans under age 18 living with surviving parent, by age of parent, October 1949*

Age of parent	Paternal orphans living with mother, by age of mother, October 1949	Children living with male married family heads, with 1 or more children under age 18, by age of wife of head, 1940 [1]	Maternal orphans living with father, by age of father, October 1949	Children living with male married family heads, with 1 or more children under age 18, by age of head, 1940 [1]
Total	100	100	100	100
Under 25	3	8	--------	3
25–34	24	36	12	26
35–44	38	36	24	38
45–54	29	16	44	24
55–64	5	3	17	8
65 and over	--------	1	3	2

[1] 1940 data refer to children "related" to the family head; some of these children were not the biological children of the family head.

Source: Age distribution of surviving parent from special sample survey, Bureau of the Census, October 1949. Age distribution of male married family heads and of their wives from *16th Census of the United States: 1940, Population, Families, Types of Families*, table 9.

surviving parent reflects, presumably, the difficulties faced by widowers in caring for children. Some of the difference may have been due to the greater likelihood of an undercount of orphans living with remarried parents, an arrangement more frequent among maternal than paternal orphans.

Among orphans who had lost both parents, about 8 in 10 were living with relatives, divided about equally between male relatives and female relatives. About 2 in 10 were living with unrelated persons, some of whom may have been foster parents (table 3).

Age of surviving parent.—Because the incidence of orphanhood increases with the age of the child, one would expect the average surviving parent to be somewhat older than the average parent in the population as a whole. From the special survey it may be estimated that the median age of mothers living with paternal orphans in October 1949 was about 41 years as compared with a median of some 37 years among married women with children under age 18 in the 1940 Census. Fathers living with maternal orphans in October 1949 had a median age of about 48 years; the median for married men with children under age 18 in 1940 was about 41 years. The difference in the median age of a parent would perhaps be even greater but for the possible undercount of orphans in the older ages in the special survey and the inclusion in the 1940 data of children not the own children of the family head or his wife, who were relatively more numerous at the older ages of the family head.

One-third of the surviving mothers living with paternal orphans in October 1949 were 45 years of age or over; the corresponding proportion for wives with children under age 18 in 1940 was one-fifth. Fathers 45 years of age and over living with maternal orphans comprised about two-thirds of the total; the 1940 ratio for married men with children under age 18 was one-third (table 4).

Marital status of surviving parent.—Marriage statistics indicate that a substantial number of widows and widowers, particularly widowers, remarry. Three in every 10 paternal

Table 5.—*Percentage distribution of the estimated number of orphans under age 18 living with a surviving parent, by age and marital status of parent, October 1949*

Age of surviving parent	Paternal orphans			Maternal orphans		
	Total	Living with mother who has remarried	Living with mother, other marital status	Total	Living with father who has remarried	Living with father, other marital status
Total	100	30	70	100	45	55
Under 25	100	60	40	100	------	------
25–34	100	47	53	100	77	23
35–44	100	28	72	100	46	54
45–54	100	19	81	100	40	60
55–64	100	3	97	100	38	62
65 and over	------	------	------	100	15	85

Source: Special sample survey, Bureau of the Census. October 1949.

orphans living with a surviving mother in the special survey conducted in October 1949 were members of new families created by the remarriage of the mother. About half the maternal orphans living with a surviving father in that month had stepmothers as a result of the father's remarriage (table 5).

The chances of an orphan to acquire a stepparent are greatest in his early years, since the likelihood of the parent's remarriage declines with age. Six out of 10 mothers under age 25 living with paternal orphans in October 1949 had remarried. Among mothers aged 25–34, this proportion dropped to about one-half, and in the age class 55–64 it was less than 5 per 100. Among fathers living with maternal orphans, remarried men comprised about three-fourths of the total in the age group under age 35, 40 in 100 in the age class 45–64, and 15 per 100 aged 65 and over (table 5). Some of the nonmarried parents in the older ages probably included persons who had been widowed more than once.

Household size.—Families consisting of orphans and surviving parents are often incomplete families, in the sense that many of the mothers affected might have had more children if they had not died or been widowed. They may therefore be expected to have fewer children on the average than normal families. The special survey indicates that orphans in

Table 6.—*Percentage distribution of the estimated number of orphans and other related children under age 18 in households with children, by number of orphans and total number of related children per household, October 1949*

Number of related children or related orphans in household	Orphans in household related to head, October 1949	Children under age 18, in household related to head, April 1949
Total	100	100
1	34	20
2	29	30
3 or more	38	50

Source: Data on orphans from special sample survey, Bureau of the Census, October 1949; on children under age 18, related to household head, April 1949, from unpublished data of the Bureau of the Census.

households containing one orphan accounted for one-third of all orphans. By contrast, children in the general population in April 1949 in one-child households constituted only one-fifth of all children under age 18 in households. Half the children in the general population were in households containing three or more children. The corresponding proportion for orphans was three-eighths (table 6).

About 2 in every 10 children living in households containing orphans were not themselves orphans. Presumably they were for the most part the issue of the surviving parent's remarriage. Their relative number increases with houschold size. In households containing two related children, including at least one orphan, about 16 percent of the children in October 1949 were not orphans. In households of three or more related children, the proportion of nonorphans was 30 percent (table 7).

Summary

Periodic Census data on the number of children under age 18 living with a widowed parent understate the number of orphans in the country since they exclude children who have lost both parents, orphans living away from the surviving parent, and orphans living with remarried parents.

A special survey conducted by the Census Bureau in October 1949 as a

supplement to the monthly population sample survey yielded an estimate of 2.4 million orphans under age 18, including 1.6 million paternal-only orphans, 0.7 million maternal-only orphans, and 0.1 million complete orphans. The estimate is affected by sampling variability and errors of response due to memory lapse and the probable unwillingness of some respondents to identify children as orphans.

An estimate prepared by the Division of the Actuary of the Social Security Administration, based on mortality trends for the period 1932–49, puts the number of orphans under age 18 in October 1949 at 3.0 million, of whom 1.9 million had lost a father by death, 1.0 million had lost a mother, and 0.1 million, both parents.

There is some evidence that the burden of orphanhood has decreased in the past 30 years, primarily because of improved mortality among men and women in the child-rearing ages.

Paternal orphans outnumbered maternal orphans in October 1949 because men have a higher mortality than women of the same age and husbands are generally older than their wives.

The population orphaned increases with the age of the child. According to the estimate of the Division of the Actuary, about 1 in every 100 children under age 5 was an orphan in October 1949. Among children aged 5–9, the rate was 5 per 100; among children aged 10–14, 10 per 100; among children aged 15–17, 16 per 100. For the total group of children under age 18, the proportion orphaned was 6 percent. The corresponding rates in the Census special survey were 1, 4, 8, 12, and 5 per 100.

The Census survey indicates that about the same proportion of orphans aged 5–17 were enrolled in school as among children in that age class in the population as a whole.

Orphaned children aged 14–17 were found in the Census survey to be half as frequently in the labor force as all children of that age, possibly because several hundred thousand were in re-

Table 7.—*Percentage distribution of estimated number of orphans and other children under age 18 related to household head, by number of related children in household, for households with orphans, October 1949*

Number of related [1] children under age 18 in household	All related children in household	Orphan children	Other children
Total	100	79	21
1	100	100	
2	100	84	16
3 or more	100	70	30

[1] "Related" children are children related to the household head, including orphans.

Source: Special sample survey, Bureau of the Census, October 1949.

ceipt of benefits under social insurance or related programs or were receiving aid to dependent children and risked loss or reduction of benefits or assistance if they went to work. The proportion who were both at work and in school was substantially greater among all children aged 14–17 than among orphans in these ages.

Most orphaned children live with a surviving parent. About 9 in 10 paternal orphans were living with the surviving mother in October 1949. About 6 in 10 maternal orphans were living with the surviving father. Approximately three-fourths of the remaining children were in the homes of other relatives.

The average surviving parent of an orphan was several years older than the average parent of the same sex in the general population. The age difference reflected the increase in the incidence of widowhood with age of parent.

Three in every 10 paternal orphans living with a mother in October 1949 and almost half the maternal orphans living with a father in that month were members of new families created by the surviving parent's remarriage. The proportion of remarried parents was lower among older orphans.

Family groups consisting of orphans and a surviving parent tended to have fewer children than normal families.