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Estimating the Monetary Value of Damages in Negligence Cases Involving Death

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ESTIMATING THE MONETARY VALUE OF DAMAGES IN NEGLIGENCE CASES INVOLVING DEATH

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The courts continually face the problem of establishing reasonable damages in negligence cases involving human injury or death. In many respects the criteria for assessing these damages are unclear, and this has led to decisions based on inadequate data and analysis. The courts are more informed in assessing property damage than personal injury or death, although the conceptual bases for evaluating these damages are quite similar. Statistical data are more readily available and the economic analysis more widely understood in evaluating property damage than personal injury or death.

The purpose here is (1) to present an analytic framework by means of which monetary damages associated with the death of a person can be determined and (2) to demonstrate the application of this framework in estimating the economic loss incurred by surviving family members in two of the more difficult situations, namely, the death of (a) a married college student and (b) a non-gainfully employed housewife. No attempt will be made to evaluate consortium, the benefits children receive from the guidance and companionship of natural parents, or the psychological damage which results from the loss of a member of the immediate family. No attempt is made to evaluate damages from personal injury not resulting in death. However, the general principles developed would also be applicable to this type of loss.

THE ANALYTIC FRAMEWORK

It is necessary to define the terms "production" and "income" before the monetary value of damages can be meaningfully established. Production is defined in economic literature as the creation of utility.[1] In this sense production does not solely involve the creation of actual marketable goods or services, but may include the creation of anything that a person will pay for, or that will prevent an expenditure.[2] This definition of production attributes economic significance to activities by family members that are either salable, or prevent cost outlays.

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1. See Blodgett, Our Expanding Economy 36 (1935).
2. Davenport, The Economics of Enterprise 128 (1929).

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The income concept that provides the most adequate measure of the material well being of the family is termed "real income."[3] Real income is the total goods and services available to a family unit over a period of time and is not limited simply to the number of actual dollars received. The contribution of any member to the family real income may be comprised of money provided, services rendered, goods produced, or any combination of these.

These definitions of production and income serve to provide the basis for establishing the economic loss, or damage suffered by a family as a result of the death of one of its members. The total monetary value of this loss is the sum of all future money income that the deceased would have provided, plus the value of all goods and services he would have produced for family consumption. This loss of future real income due to the death of the family member is an amount of income that the family will simply have to forego unless compensation is provided.

The procedure for establishing the value of this loss in real income is conceptually identical to that long accepted as appropriate for use in estimating the value of land, machinery, and buildings.[4] However, market prices are no longer available as a basis for assessing the value of human beings.[5] Therefore, in order to estimate the monetary loss to the family other data are utilized, such as:

(1) the decedent's present and prospective cash earning ability;

(2) the replacement cost of all services that would have been rendered and all goods that would have been produced by the decedent, for his family, had he lived to his actuarial life expectancy;

(3) the estimated cost of self-maintenance that the decedent would have incurred had he continued to live his actuarial life expectancy;

(4) the decedent's actuarial life expectancy at the time of his death; and

(5) the rate of discount appropriate to reduce the above real income and costs to present values.

Selecting the correct rate of discount is difficult because of the different interest rates on various types of securities and assets in

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3. COCHRAN & BELL, THE ECONOMICS OF CONSUMPTION 23 (1956).

4. See BABCOCK, THE VALUATION OF REAL ESTATE 129-32 (1st ed. 1932).

5. Under a system of slavery, or voluntary lifetime indenture for lump sum compensation, the market prices for human beings with various skills and abilities would be directly established. For a brief discussion of the valuation of human beings under slavery see DUBLIN & LOTHAN, THE MONEY VALUE OF A MAN 6-7 (rev. ed. 1946).

the market-place.[6] If the purpose is to compensate for future real income lost, it can be argued from an equity standpoint that the rate of discount should be no greater than the interest rate obtainable in the safest possible investment. The survivors should be able to place their award in an investment that entails minimum risk of financial loss. Thus the interest and principal required over time to maintain real family income are most likely to be assured to the survivors. Because interest on long-term United States Government bonds most closely approximates a risk-free investment, it is suggested that the rate of discount to be employed should vary directly with and should be equal to the interest rate on long-term government securities.

<center>EXAMPLES</center>

<center>*Married College Student — Male*</center>

This example assumes that the deceased student (1) was married, and is survived by a wife and two children; (2) was twenty-three years of age at the time of death; (3) was white, with a life expectancy of forty-seven years;[7] (4) at the time of his death had completed three years of a five year engineering program, at a level of achievement which would indicate a reasonable probability of successful completion;[8] (5) was in good health up to the time of his death; and (6) had earnings equal to his maintenance cost. This example also assumes that goods and services created for family consumption by the student were and would have continued minimal. Further, it ignores any estate that the individual would have accumulated over his normal life expectancy.

Determination of the loss in real income created by the death of a family member in this category is difficult to compute due to an absence of demonstrated earning capacity. However, this problem leaves the conceptual framework unharmed because the value of an income producing asset at any given instant of time is based on its anticipated future earning capacity rather than on its past earnings. Even had a previous earnings record been established, it could not be used as a base for a linear projection of future earnings because

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6. For an illustrative discussion of the selection of an "appropriate" rate of discount in a different context see KRUTILLA & ECKSTEIN, MULTIPLE PURPOSE RIVER DEVELOPMENT: STUDIES IN APPLIED ECONOMIC ANALYSIS 78-127 (1958).

7. U.S. DEP'T OF COMMERCE, STATISTICAL ABSTRACT OF THE UNITED STATES 55 (82d ed. 1961).

8. Application to a specific situation would require that the major field of engineering be specified, although the annual starting salaries in various engineering fields varied only about $500 in 1961. See NEA RESEARCH REP. 1962-R7, ECONOMIC STATUS OF TEACHERS IN 1961-62, at 26 (1961-62).

of the new factor introduced by the engineering studies of the student.

Based on 1960 salary levels in the engineering profession, the average engineer who works from age twenty-five through age sixty-five can expect to earn $470,250 during that time.[9] In addition, income may be anticipated after age 65 and until death that will at least equal the average income earned by college graduates age sixty-five and over. This would provide him with a total lifetime income of $494,614 (see Appendix, Table I).

To determine the proportionate part of the total cost of family operation that is properly allocable to the maintenance of the subject student, one cannot simply divide the total budget by the number of family members. Such items as family housing costs, family transportation costs, and the portions of the family insurance program necessarily assumed by the surviving spouse will not be materially reduced by the death of the father. Conversely, such items as food, medical and health items, recreation, and clothing are directly related to the number of persons in the family. However, even if one divides these directly related costs by the number of members in the family, the quotient probably is larger than the cost of maintenance properly chargeable to a given family member.[10] The annual average amount needed to maintain the father of a family at the indicated income level, according to limited budget data currently available, is $1,234 per year. Over the student's actuarial life span this would amount to $55,530. His anticipated lifetime earnings reduced by his anticipated lifetime maintenance costs would presumably be the amount of earnings available for family utilization and for payment of personal income taxes. In this example, the total difference amounts to $439,084 over a forty-seven year period. The annual differences discounted at four per cent have a total present value of $166,662.[11] This represents the present value of the loss in income to the family as the result of the death of the father.

The data presented above represents the loss only in terms of earnings at 1960 salary levels. To be realistic these should be adjusted to anticipate increases in salary level, for in the engineering

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9. Even if it is assumed that the individual did not complete his college education program, the average lifetime earnings of persons completing from one to three years of college would amount to $327,402. This is determined by multiplying the annual income of persons twenty-five years of age and older with these educational qualifications by the life expectancy in the particular example. The annual income estimate was obtained from Miller, *The Money Value of an Education*, 5 OCCUPATIONAL OUTLOOK Q. 3 (1961).

10. For a more extended discussion of the problem of measuring maintenance cost see Weisbrod, *The Valuation of Human Capital*, 69 J. POL. ECON. 428-31 (1961).

11. The yield to maturity on United States Treasury Bonds, 3¼'s 11/15/98 was 3.97% as of August 29, 1962. See Closing Trading Quotations, U.S. Treasury Bonds & Notes, Aug. 31, 1962. This yield was rounded to 4% in the examples.

profession salaries have increased appreciably since World War II, and further increases are expected. An official source indicates:[12]

> "The outlook is for continued rapid expansion of the engineering profession, both through the mid-1960's, and over the long run. Engineering has been one of the fastest growing professional occupations in the United States in the past 50 years, and there is every indication that the demand for engineers will continue to grow. Besides the engineers needed to fill new positions, thousands more will have to be trained annually to replace those who transfer to other occupations, retire, or die. . . . Despite the anticipated growth in demand for engineers, little or no increase in the annual number of engineering graduates is expected until the mid-1960's. . . . For engineering graduates with ability and thorough training, there is every reason to believe that employment opportunities will remain very good for many years to come."

When 1960 salary levels are adjusted so as to estimate future increases, using as a basis, changes that occurred in the decade of the 1950's, the total lifetime earnings figure in this example becomes $897,162 (see Appendix, Table II). When retirement income is also adjusted to anticipate increases, using as a basis the average increase in individual income after age sixty-five in the Post-World War II period, the total estimated lifetime earnings become $953,922. Maintenance costs must also be adjusted to reflect both increases in price levels and increases in consumption incidental to the indicated anticipated rise in family income. By using historic rates of increase in prices of consumer goods, and by estimating the increased consumption chargeable to the father as family income increases above these 1960 income levels, the estimated actuarial lifetime maintenance costs chargeable as the father's increment are raised to $146,707. The father's contribution to the family income before taxes then becomes $807,215. This amount as distributed over time has a present value of $300,143.

From this example it is obvious that the individual's anticipated contribution to his family is determined by the extrapolation of known salary levels and maintenance costs. Failure to base decisions in negligence cases on the best available statistics and on sound projections therefrom may cause a serious deterioration of the family's economic position from the position it would have enjoyed had the deceased lived his normal life span.

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12. U.S. DEP'T OF LABOR, BULL. 1300, OCCUPATIONAL OUTLOOK HANDBOOK 103-04 (1961).

Non-Gainfully Employed Housewife

This example hypothesizes the death of the mother. It will be assumed that (1) the mother was a white, non-gainfully employed housewife, thirty-six years of age at the time of death; (2) the one surviving child, age six, will leave home at age eighteen; and (3) the husband, age thirty-seven, has a life expectancy of thirty-four years.

This type of loss must be measured indirectly because the mother's contribution to the real income of the family results from services rendered and goods produced. The loss must be predicated on the cost of replacing the services that would have been rendered to the family by the mother during her actuarial life expectancy. Such replacement is necessary if the family is to maintain its real income position. The estimate made here is designed to replace completely the mother's services in her various capacities as a manager of household affairs, as a governess, and as a domestic servant.

A study by the Bureau of Home Economics, United States Department of Agriculture, classifies activities of a housewife into the following categories: preparing meals; cleaning and care of the house; clearing away meals, including dishwashing; mending and sewing; laundering; care of the family; purchasing and management; other homemaking tasks; work in connection with the farm enterprise or family business; and other activities.[13] According to these data the average housewife devotes 205,000 hours between the ages of twenty and sixty to homemaking tasks alone (exclusive of time devoted to other activities and to work in connection with the family business). Over the forty-year period this averages 5,125 hours per year, 99 hours per week, and 14 hours per day.[14] Working hours are not evenly distributed over the life of the housewife because time demands are heaviest when children are living at home, and slacken after the children grow up and become independent.[15]

Under present and projected labor market conditions, at least *two* full-time persons are required to completely replace the mother's services until the child leaves home, and one full-time person is required thereafter throughout the husband's life. Within limits, the number of children in the family will not affect the numerical re-

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13. What You Do With Your Time, distributed by G. Kendall, Home Industries and Marketing Specialist, and B. J. Carter, Home Improvement Specialist, Florida State University, Tallahassee, Florida (May 1958).

14. This amount of time devoted to homemaking duties is consistent with other studies. See David, *Man's Best Investment — His Wife*, The American Home 35 (Jan. 1959). David states: "Studies at universities and research centers show that the average mother of growing children works from 80 to 100 hours a week, including child supervision."

15. NICKELL & DORSEY, MANAGEMENT IN FAMILY LIVING 101-02 (3d ed. 1960).

placement personnel requirements, but the necessary qualifications of and the rate of compensation for such employees will increase with the number of children.

The basic position requirements need not be filled with persons of equal qualifications, for only one person will be required to manage the household and care for the family, while the other will perform only the more menial tasks. The requisite qualifications of a person selected to assume the role of household manager and to provide for the general care of the family most closely approximate the job description of a governess.

The DICTIONARY OF OCCUPATIONAL TITLES describes the more pertinent of the duties and qualifications of a governess as follows: "Takes charge of children in a private home, supervising their recreation, diet, health, deportment, and education. . . . Takes necessary disciplinary measures to control children's behavior. Must be able to cope with behavior problems, and to devise means for solving them."[16]

In addition to the basic personnel requirements, additional replacement help must be made available to provide permanent employees with time off, vacations, and sick leave. Adequate allowances for such replacement help must be made to minimize the turnover of basic employees.[17] Provision for two days off each week, for two weeks vacation, and for two weeks sick leave should create sufficiently desirable employment conditions to minimize the disruption to the family that would be caused by repeated turnovers of basic employees.

Little information is available from official statistical sources regarding the annual average compensation of a governess. However, on the basis of the qualifications and duties described above, the average compensation for school teachers might be considered as commensurate with these qualifications. In 1960 the annual average salary of school teachers was $5,236.[18] This salary level is consistent with the mean salary for executive housekeepers, another comparable occupation.[19]

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16. 1 U.S. DEP'T OF LABOR, DICTIONARY OF OCCUPATIONAL TITLES 617 (2d ed. 1949).

17. Labor turnover is high in the domestic service occupations. See OCCUPATIONAL OUTLOOK HANDBOOK, *supra* note 12. This bulletin states: "Turnover is high in these occupations [domestic service] for several reasons — the high proportion of women, especially in private household work, the many temporary and part-time jobs, and the relatively low rates of pay. Turnover will no doubt continue high because of these factors, and will result in many thousands of job openings each year." *Id.* at 321.

18. NEA RESEARCH REP. 1961-R4, ECONOMIC STATUS OF TEACHERS 41 (1960-61).

19. See OCCUPATIONAL OUTLOOK HANDBOOK, *supra* note 12. "The annual salaries of executive housekeepers typically ranged from $3,600 to $8,000 in 1958 . . . . Most hotel housekeepers are furnished with rooms in the hotel, meals, laundry, and other services, in addition to their salaries. *Id.* at 636.

The annual cash earnings of full time domestic servants are reported by the United States Department of Commerce. In 1960 the annual average earnings in the United States of this class of employee amounted to $2,336.[20]

If it is assumed that 1960 wage levels will remain constant over the thirty-four period, then the total cost of completely replacing the wife's services will amount to $198,547 (see Appendix, Table III). This amount is determined as follows: $84,192 for governess and governess' replacement salaries for twelve years; $3,279 for employer's social security contribution on the governess and governess-substitute salaries for twelve years; $106,420 for domestic servant and domestic servant-substitute salaries for thirty-four years; and $4,656 for employer's social security contribution on the domestic servant and replacement salaries for thirty-four years. The present value of such total expenditures at four per cent over this time period amounts to $152,450.

Salaries of both school teachers and domestic servants have, however, risen considerably over the past thirty years, and this trend is expected to continue. Between 1929 and 1959 the pay of teachers increased from $1,400 to $5,012 per year, a compound rate of increase of 4.3 per cent.[21] During the same period the annual cash earnings of full-time domestic servants increased from $731 to $2,190, an annual rate of increase of 3.7 per cent. These increases have been greater than increases in the general price level. The annual rate of increase in consumer prices during this time was only 1.8 per cent. Other researchers have found comparable increases. Stigler, for example, indicates increases in earnings of domestic help between 1889 and 1950, that would, in total, amount to 523 per cent.[22] Ferber testified before the Joint Economic Committee of the United States Congress that the price of domestic service increased 7.7 per cent annually between 1936 and 1950, and 3.6 per cent per year between 1950 and 1958.[23]

If the salaries of the governess and domestic servant are projected at rates slightly below the actual rate of increase between 1929 and 1959 (that is, at 4¼ per cent and 3⅝ per cent, respectively) the total cost of replacing the wife's services will be $321,970 (see Appen-

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20. U.S. DEP'T OF COMMERCE, SURVEY OF CURRENT BUSINESS 27 (July 1961).
21. The compound rate of increase is determined:

$$i = \sqrt[30]{\frac{\text{Salary in 1959}}{\text{Salary in 1929}}} - 1$$

22. STIGLER, TRENDS IN EMPLOYMENT IN THE SERVICE INDUSTRIES 94 (1956).
23. *Hearings Before the Joint Economic Committee*, 86th Cong., 1st Sess., pt. 8, at 2660 (1959).

dix, Table IV).[24] The present value of the total expenditures over time, at four per cent, amounts to $228,109.

If allowance for the replacement cost of the wife's services is based on the assumption that 1960 salary levels will remain constant, and if the projected cost increases are actually experienced, the family would then find it necessary to pay out $123,423 more than was awarded to replace the wife's services. This amount of additional expense distributed over time would have a present value at four per cent of $75,659 ($228,109 minus $152,450).

SUMMARY AND CONCLUSIONS

The contributions of an individual to family material well-being may consist of money income provided, goods produced, services rendered, or some combination thereof. Thus it becomes necessary to recognize all efforts of the member that contribute to real family income to assess properly the economic loss suffered by the family as the result of the death of that member.

The economic value of the individual to the family unit can be assessed as the discounted value of the reduction in real income resulting from the death of the family member. When the major contribution of a family member is money earnings, the present value of this individual to the family is measured by discounting the anticipated future earnings. Similarly, when the individual's contribution is in the form of goods produced, or services rendered for family consumption, the present economic value of the family member is the discounted anticipated cost of replacing the goods or services that the deceased individual could have otherwise been expected to produce. Money income constitutes only a part of family real income, and the value of goods produced and services rendered by a single member may well exceed the money income of the family unit.

The rate of discount to be employed in determining the present value of future income is that which will allow the utmost financial safety to the surviving family members. This will provide maximum assurance that the income and principal will be sufficient to provide real family income equal to the level anticipated had the deceased lived to his full life expectancy.

The data employed to estimate money earnings or the cost of re-

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24. It will be noted that no deduction was made for the mother's maintenance cost. In this example it was assumed that the deduction would be offset by increases in costs to provide: (1) quarters for household employees; (2) food and other perquisites to household employees; (3) advertising costs to obtain household employees; and (4) increased liability insurance so as to provide coverage for increased risk to the family as a result of employer's liability.

placement should be taken from reliable sources, and in a society characterized by high population mobility such data should be national in character. In some cases the lack of data pertaining to earnings in specific occupations may force the use of data from closely related occupations. In applications to specific cases in which deviations from average earning capacity are actually found, the basic data relating to earnings should be modified to reflect these deviations.

Projection of anticipated future levels of earnings or costs must take cognizance of changes in the economy generally and the occupations in question specifically. If anticipated changes take place, and if allowance is not made for these changes, the real income position of the surviving family members will seriously deteriorate.

APPENDIX

TABLE I

LIFETIME EARNINGS OF AN ENGINEER GRADUATING AT AGE 23 AT
1960 SALARY LEVELS, MAINTENANCE COST AT 1960 COST LEVELS &
PRESENT VALUE OF EARNINGS LESS MAINTENANCE COST

Year	Age	Annual Earnings[a]	Maintenance Cost[b]	Earnings Less Maintenance Cost	Present Value of Earnings Less Maintenance Cost @ 4 Per Cent
1	23	$ _____[c]	$ _____[c]	$ 0	$ 0
2	24	--------	--------	0	0
3	25	6,300	1,234	5,066	4,504
4	26	6,725	1,234	5,491	4,694
5	27	7,125	1,234	5,891	4,842
10	32	8,900	1,234	7,666	5,179
15	37	10,325	1,234	9,091	5,048
20	42	11,430	1,234	10,196	4,653
25	47	12,205	1,234	10,971	4,115
30	52	12,380	1,234	11,146	3,437
35	57	12,280	1,234	11,046	2,799
40	62	12,175	1,234	10,941	2,370
43	65	12,175	1,234	10,941	2,206
44	66	6,091[d]	1,234	4,857	865
47	69	6,091	1,234	4,857	769
Total*		$494,614	$55,530	$439,084	$166,662

*Totals include amounts for omitted years.

[a]Source: Median earnings of engineers by years since baccalaureate degree obtained from NEA RESEARCH RFP. 1962-R7, ECONOMIC STATUS OF TEACHERS, 1961-62, at 28 (1962). Interpolations were made by the author.

[b]Source: Estimated from budget data presented for salaried junior professional and executive personnel in QUALITY & COST BUDGET FOR TWO INCOME LEVELS 17, at 56-57 (1952).

[c]Earnings as a student assumed to be equal to maintenance costs.

[d]Retirement income estimate is annual average income for college graduates 65 years of age and over as determined by Miller, *Income in Relation to Education*, 50 AM. ECON. REV. 966 (1960).

TABLE II

LIFETIME EARNINGS OF AN ENGINEER AT PROJECTED SALARY LEVELS,
MAINTENANCE COST AT PROJECTED COST LEVELS, & PRESENT
VALUE OF EARNINGS MINUS MAINTENANCE COST

Year	Age	Annual Earnings[a]	Maintenance Cost[b]	Earnings Less Maintenance Cost	Present Value of Earnings Less Maintenance Cost @ 4 Per Cent
1	23	$ ——	$ ——	$ ——	$ ——
2	24	——	——	——	——
3	25	6,942	1,300	5,642	5,016
4	26	7,787	1,323	6,464	5,525
5	27	8,569	1,346	7,218	5,933
10	32	13,274	1,736	11,538	7,795
15	37	17,563	2,410	15,153	8,414
20	42	22,184	3,136	19,048	8,693
25	47	26,485	3,833	22,652	8,497
30	52	27,895	4,167	23,728	7,316
35	57	28,260	4,378	23,882	6,052
40	62	29,140	4,671	24,469	5,097
43	65	31,243	5,059	26,184	4,848
44	66	13,917[c]	3,226	10,691	1,903
46	68	14,281	3,373	10,908	1,796
47	69	14,463	3,447	11,016	1,744
Total*		$953,922	$146,707	$807,215	$300,143

*Totals include amounts for omitted years.

[a]Source: Same as Table I except that basic data are adjusted for annual average increases in earnings by years of experience for the period 1953-1960.

[b]Source: Table I. Maintenance cost is adjusted upward by the rate of increase in consumer prices for the period 1929-1959 plus 13 per cent of excess of salary minus cost of basic maintenance over the basic budget of $9,742.

[c]Source: Table I. Income adjusted by the average annual increase in income of persons in this age and education category for the period 1946-1958.

TABLE III

ANNUAL OUTLAY REQUIRED TO REPLACE THE WIFE'S SERVICES AS A HOUSEHOLD
MANAGER AND GOVERNESS, AND DOMESTIC SERVANT AT 1960 WAGE LEVELS
AND PRESENT VALUE OF THESE OUTLAYS AT 4 PER CENT

	OASI Tax Rate[a]	Basic Governess Salary[b]	Employer's Social Security Contribution[a]	Salary for Governess Substitute[c]	Employer's Social Security Contribution[a]	Total Outlay for Governess Services[d]	Present Value at Four Per Cent[e]
		1	2	3	4	5	6
1	3 %	$ 5,236	$ 157	$ 1,780	$ 53	$ 7,226	$ 6,948
2	3	5,236	157	1,780	53	7,226	6,681
3	3½%	5,236	164	1,780	56	7,236	6,433
4	3½%	5,236	190	1,780	65	7,271	6,215
5	3½%	5,236	190	1,780	65	7,271	5,976
6	3½%	5,236	190	1,780	65	7,271	5,746
7	4½%	5,236	216	1,780	73	7,305	5,551
8	4½%	5,236	216	1,780	73	7,305	5,338
9	4½%	5,236	242	1,780	82	7,340	5,157
10	4½%	5,236	242	1,780	82	7,340	4,959
11	4½%	5,236	242	1,780	82	7,340	4,768
12	4½%	5,236	242	1,780	82	7,340	4,585
		$62,832	$2,448	$21,360	$831	$87,471	$68,357

[a] Social Security contributions computed according to schedule presented in YOUR SOCIAL SECURITY 16 (1961).

[b] Source: NEA RESEARCH REP. 1962-R7, at 41 (1960-61).

[c] Computed on the following basis: 2 days each week for 48 weeks + 2 weeks vacation + 2 weeks sick leave = 124 days that a substitute is needed. This represents 124 days/365 days or 0.34 years. The salary for the governess-substitute = 0.34 times the basic salary.

[d] The sum of columns 1, 2, 3, and 4.

[e] Present value factors obtained from FINANCIAL COMPOUND INTEREST AND ANNUITY TABLES (2d ed. 1960).

TABLE III (CONTINUED)

	Domestic Servant Salary[f]	Employer's Social Security Contribution[a]	Salary for Domestic Servant Substitute[c]	Employer's Social Security Contribution[a]	Total Outlay for Domestic Servant[g]	Present Value at Four Per Cent[e]	Present Value at Four Per Cent of Total Outlay[h]
	7	8	9	10	11	12	13
1	$ 2,336	$ 70	$ 794	$ 24	$ 3,224	$ 3,100	$ 10,048
2	2,336	70	794	24	3,224	2,981	9,662
3	2,336	73	794	25	3,228	2,870	9,303
4	2,336	85	794	29	3,244	2,773	8,988
5	2,336	85	794	29	3,244	2,666	8,642
6	2,336	85	794	29	3,244	2,564	8,310
7	2,336	96	794	33	3,259	2,477	8,028
8	2,336	96	794	33	3,259	2,381	7,719
9	2,336	108	794	37	3,275	2,301	7,458
10	2,336	108	794	37	3,275	2,212	7,171
11	2,336	108	794	37	3,275	2,127	6,895
12	2,336	108	794	37	3,275	2,046	6,631
17	2,336	108	794	37	3,275	1,681	5,449
22	2,336	108	794	37	3,275	1,382	1,382
27	2,336	108	794	37	3,275	1,136	1,136
32	2,336	108	794	37	3,275	934	934
33	2,336	108	794	37	3,275	898	898
34	2,336	108	794	37	3,275	863	863
	$79,424*	$3,468	$26,996	$1,188	$111,076	$60,060	$152,450

*Totals include amounts for omitted years.

[a] Social Security contributions computed according to schedule presented in YOUR SOCIAL SECURITY 16 (1961).

[c] Computed on the following basis: 2 days each week for 48 weeks + 2 weeks vacation + 2 weeks sick leave = 124 days that a substitute is needed. This represents 124 days/365 days or 0.34 years. The salary for the governess-substitute = 0.34 times the basic salary.

[e] Present value factors obtained from FINANCIAL COMPOUND INTEREST AND ANNUITY TABLES (2d ed. 1960).

[f] SOURCE: U.S. DEP'T OF COMMERCE, SURVEY OF CURRENT BUSINESS 27 (July 1960).

[g] The sum of columns 7, 8, 9, and 10.

[h] The sum of columns 6 and 12.

TABLE IV

ANNUAL OUTLAYS REQUIRED TO REPLACE THE WIFE'S SERVICES AS A HOUSE-
HOLD MANAGER AND GOVERNESS, AND DOMESTIC SERVANT AT WAGE LEVELS
INCREASING AT HISTORIC RATES AND PRESENT VALUE OF THESE OUTLAYS
AT 4 PER CENT*

	OASI Tax Rate	Basic Governess Salary at Increasing Rate of 4½%	Employer's Social Security Contribution	Salary for Governess Substitute at Increasing Rate of 4½%	Employer's Social Security Contribution	Total Outlay for Governess Services	Present Value at Four Per Cent
		1	2	3	4	5	6
1	3 %	$ 5,236	$ 144	$ 1,780	$ 53	$ 7,213	$ 6,936
2	3	5,459	144	1,856	56	7,515	6,948
3	3¼%	5,691	150	1,935	60	7,836	6,966
4	3½%	5,932	174	2,017	73	8,196	7,006
5	3½%	6,184	174	2,102	76	8,536	7,016
6	3⅝%	6,447	174	2,192	79	8,892	7,027
7	4⅛%	6,721	198	2,285	94	9,298	7,066
8	4⅛%	7,007	198	2,382	98	9,685	7,077
9	4⅜%	7,305	222	2,483	115	10,125	7,114
10	4⅝%	7,615	222	2,589	120	10,546	7,125
11	4⅝%	7,939	222	2,699	125	10,985	7,136
12	4⅞%	8,276	222	2,814	130	11,442	7,147
		$79,812	$2,244	$27,134	$1,079	$110,269	$84,564

*Sources the same as Table II.

TABLE IV (CONTINUED)

	Domestic Servant Salary at Increasing Rate of 3½%	Employer's Social Security Contribution	Salary for Servant-Substitute at Increasing Rate of 3½%	Employer's Social Security Contribution	Total Outlay for Domestic Servants	Present Value at Four Per Cent	Present Value at Four Per Cent of Total Outlays
	7	8	9	10	11	12	13
1	$ 2,336	$ 70	$ 794	$ 24	$ 3,224	$ 3,100	$ 10,036
2	2,421	73	823	25	3,342	3,090	10,038
3	2,508	78	853	27	3,466	3,081	10,047
4	2,599	94	884	32	3,609	3,085	10,091
5	2,694	98	916	33	3,741	3,075	10,091
6	2,791	101	949	34	3,875	3,062	10,089
7	2,892	119	983	41	4,035	3,066	10,132
8	2,997	124	1,019	42	4,182	3,056	10,133
9	3,106	144	1,056	49	4,355	3,060	10,174
10	3,219	149	1,094	51	4,513	3,049	10,174
11	3,335	154	1,134	52	4,675	3,037	10,173
12	3,456	160	1,175	54	4,845	3,026	10,173
17	4,130	191	1,404	65	5,790	2,972	10,178
22	4,934	222	1,677	78	6,911	2,916	2,916
27	5,896	222	2,004	93	8,215	2,849	2,849
32	7,045	222	2,395	111	9,773	2,786	2,786
33	7,300	222	2,481	115	10,118	2,773	2,773
34	7,565	222	2,571	119	10,477	2,761	2,761
	$151,810*	$5,977	$51,603	$2,311	$211,701	$100,416	$228,109

*Totals include amounts for omitted years.