

FUTURE ECONOMIC VALUE IN WRONGFUL DEATH LITIGATION†

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I. THE CONCEPT OF VALUE (PRICE) IN THE LAW OF DAMAGES AND IN ECONOMICS

How should the courts determine the reasonably probable future earnings in wrongful death cases? There is no doubt such earnings should be included in the damages awarded,¹ that proof is required,² and that the damages on future earnings “. . . should be precisely commensurate with the . . . loss, and should serve to balance it out exactly.”³ The test is “. . . what he [the decedent] might *under all the circumstances* reasonably be expected to earn had he remained alive . . .”⁴ [Emphasis added.]

The courts have tried over a considerable period of time to include the more important “circumstances” which determine future earnings, including changes in value of money,⁵ the scale of wages,⁶ likely job advancement⁷ which occur or are clearly ascertainable up to the date of trial. Generally, plaintiffs’ attorneys have not until recently introduced evidence on probable earnings after the date of trial, or expiration of existing contracts.⁸

Price theory in economics has a similar problem of how to include future “circumstances.” Neo-classical price theory is a study in statics, that is, it uses future circumstances only as they influence the present conditions of supply and demand.⁹ The theory of prices in general, or price levels, is more empirical and dynamic,¹⁰ and is much more useful in studying the “future circumstances” which determine future earnings.

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¹ *Bartholomew v. Universe Tankships, Inc.*, 279 F. 2d 911, 916 (2d Cir. 1960), *cert. denied* 359 U.S. 1000 (1960); *Dickson v. Queen City Coach Co.*, 233 N.C. 167, 63 S.E. 2d 297 (1951); *Sutfin v. Burton*, 91 Ohio App. 177, 104 N.E. 2d 53 (1951); H. OLECK, *DAMAGES TO PERSONS AND PROPERTY* 966.1 (1961).

² *Revak v. Anderson*, 348 Pa. 65, 33 A.2d 917 (1943); *ENCYCLOPEDIA OF NEGLIGENCE* 198, (1962). 1 *SUTHERLAND, DAMAGES* 121, (4th Ed. 1916); *Hodkinson v. Parker*, 16 N.W. 2d 924 (S.D. 1944); *Affolder v. New York, C & St. L. R.*, 79 F. Supp. 365 (E. D. Mo. 1948).

³ H. OLECK, *CASES ON DAMAGES* 37 (1962).

⁴ *O'Connor v. United States*, 269 F. 2d 578, 582, (2d Cir. 1959); *Louisville & N.R.R. v. Scott's Adm'r.*, 188 Ky 99, 220 S.W. 1066 (1920).

⁵ Cases cited, note 4 *supra*, *Tullos v. Corley*, 337 F. 2d 884, 887 (6th Cir. 1964); *Frasier v. Public Service Interstate Transportation Co.*, 244 F. 2d 668 (2d Cir. 1957).

⁶ *Frasier v. Public Service Interstate Transportation Co.*, 244 F. 2d 668 (2d Cir. 1957).

⁷ *M/v El Salvadore — Tug Russell* No. 18, 1966 A.M.C. 1777, 1797 (1966).

⁸ *Rogow v. United States*, 173 F. Supp. 547 (S.D. New York 1959).

⁹ P. SAMUELSON, *ECONOMICS* 65 (6th ed. 1965).

¹⁰ P. TRESMOTT, *MONBY, BANKING AND ECONOMICS WELFARE* 8-13 (1965).

Government agencies which regulate specific prices, such as the Federal Power Commission, and the Interstate Commerce Commission, try to determine a competitive price, in the absence of competitive conditions, by using a rule of thumb formula, such as "fair return on fair market value."¹¹ Since prices (rates) can be changed as time goes on, their determination of future "circumstances" is not as crucial as judicial determination of future circumstances in wrongful death cases. Once finally determined, a damage award may not be reopened again and again as circumstances change. Heraclitus observed: "You cannot step twice into the same river, for other waters are constantly flowing on."¹²

II. USE OF EXPERT WITNESSES ON COMPENSATORY VALUE OF FUTURE EARNINGS

Legal justice depends upon the sound discretion of judge or jury. This discretion should rest on the understanding which is available from appropriately chosen expert witnesses.¹³ The expert witness technique has been called ". . . the institutionalization of the function of transferring scientific knowledge to social use,"¹⁴ and of course to the attainment of private justice.

The appropriate expert to testify on reasonably probable future earnings is an economist, especially an economist whose major area of specialization is labor economics. His expertise typically comes from graduate studies and experience. In recent years a new professional society, The American Society of Econometric Appraisers, has come into being. Each member has the PhD degree (or its equivalent), holds a senior professional rank at an accredited college or university (or the equivalent), and has completed 15 or more approved appraisals of future earnings. Members of the Society have prepared appraisals in several hundred cases of wrongful death or injury, and have been accepted as expert witnesses in scores of cases.

III. RECENT EXPERT TESTIMONY ON FUTURE EARNINGS¹⁵

Until recent years, attorneys for the plaintiff and defendant made little or no attempt to introduce evidence or expert testimony on probable future earnings. This was true even though legal opinions seemed to be

¹¹ Regulatory agencies use different terms, but the concepts are similar. The Interstate Commerce Commission, for example, uses the terms "just and reasonable", 325 ICC 766 (1967).

¹² P. WHEELWRIGHT, HERACLITUS, Fragment 21 at 29, Atheneum (1964).

¹³ H. OLECK, DAMAGES TO PERSONS AND PROPERTY § 966.2 (1961); Camden & A.R. Co. v. Williams, 61 N.J. 646, 40 A. 634 (1898).

¹⁴ Mesthene, *How Technology Will Shape The Future*, SCIENCE 11 (1968).

¹⁵ The author testified as an expert witness in all of the cases referred to in this section.

asking for it,¹⁶ even pointing out that “. . . wages received before and after are not controlling.”¹⁷ Since October of 1963, the author of this article has prepared more than 110 appraisals of future earnings and testified in more than 30 cases.

A typical appraisal of future earnings uses statistical evidence of life expectancy, worklife expectancy and actual earnings (including *some* fringe benefits). Future earnings are based on reasonably probable changes in the earning of the decedent as these are determined by trends in the economy as a whole, in specific industries and/or firms, and by trends in the relationship of the individual to the labor market.

Historical trends in earnings are an important consideration in judging future earnings trends, because the basic causes of the past also affect the future. Among the important causes (or concomitant phenomena) of earnings trends are productivity and prices, especially the consumer price index.

Increases in productivity, or effectiveness or efficiency, in the use of resources is an important factor which permits rises in earnings. Productivity is most frequently measured as percentage of increase in output per man hour of input. Prices are also related as cause to changes in earnings. The price changes which are relevant are changes in the consumer price index (often referred to as cost-of-living), because these changes, along with productivity are an important cause of long-term change in earnings. A few cases in which the author testified as an expert witness will illustrate how these data are used.

CASE NUMBER 1

This case involved the alleged wrongful death of an executive/engineer. The deceased had been very successful with the firm. His employer was able to supply rather extensive data on his future prospects, including probable next assignment within the company and probable date of promotion. Data was prepared on the industry and on the employer firm. The expert witness combined these materials with data on the economy as a whole. The final appraisal was the result of this extensive, in depth study which yielded a reasonably probable life earnings of the deceased. The award, although appealed as excessive, was sustained.

CASE NUMBER 2

The plaintiff, a butcher by trade, was rendered permanently and totally disabled, including blinded, by an alleged wrongful act. The expert witness testified on future earnings and on future costs of personal care.

¹⁶ *Sutfin v. Burton*, 91 Ohio App. 177, 104 N.E. 2d 53 (1951); *O'Connor v. United States*, 269 F.2d 578 (2d Cir. 1959); *Tullos v. Corley*, 337 F.2d 884 (6th Cir. 1964).

¹⁷ *Yates v. Dann*, 124 F.Supp. 125, 138, (D. Del. 1954).

Future earnings were based on reasonably probable earnings as a butcher, even though the sole employer of butchers in the community had ceased business prior to the date of trial. The judge took notice of employment opportunities for a man of his skill approximately thirty miles from his home.

The expert testimony included upward correction of wages for reasonably probable trends in the economy and discount to present value. The opinion of the court refers to April, 1966 pay rates and to the demand for men having the plaintiff's skills. No explicit reference was made in the opinion either to the appraisal, or to an upward correction for general economic trends.

CASES NUMBERS 3 AND 4

These two cases involved the value of *future* contributions of a wife and mother who is not a part of the labor force. The technique used was as follows:

1. Reconstruct a usual or typical day or week of activities for the housewife and mother.
2. Place a price or value on each activity by comparing it with the same service sold on the market.
3. Separate those services rendered primarily to the spouse and those rendered primarily to minor children.
4. Deduct those for which there is no market, or where the market is so thin as to be unreliable.
5. Compute the loss for the period from date of accident (or date of trial) to date the youngest child attains majority.
6. Compute the loss for the period from date youngest child attains majority to end of the period terminated by the lower of the life expectancies of the spouses.

After the typical or usual day or week has been ascertained and priced, each price of services should be corrected to reflect reasonably probable trend of prices of that item over the appropriate time period. Appraisal of the economic value of lost services due to death or injury of a housewife and mother is the same as for an employed male after the typical or usual day or week has been determined and priced.

In some cases, the units of contribution of a housewife and mother may be large. In case number 4 the units used were (1) beginning female public elementary school teacher. (The injured party *was* a schoolteacher) and (2) experienced female private household worker living in.

In other cases, the units of contribution of a housewife and mother may be somewhat smaller. In case number 3 the testimony used a governess (until the infant child became six years of age), housekeeper, once-a-week laundress and cleaning woman. Other appraisals have used many more units. The facts in each case determine what is best and what is possible.

CASE NUMBER 5

This case involved the reasonably probable worklife earnings of a person without a meaningful work experience. This eighteen year old male had graduated from high school, had worked only in part-time and/or temporary jobs. At the time of death he had summer employment on the highways.

The first step of the appraisal involved the evaluation of the abilities and intentions of the youth. He had above normal intelligence and stood well academically and had definite plans to attend a data processing school. There was evidence he had applied, been accepted and paid a small deposit. The worklife earnings appraisal was based in part on his reasonably probable "new occupation."

Where would he have worked after graduation? The appraisal prepared several charts showing probable worklife earnings in his new occupation for (1) the three northern counties of Kentucky (the decedents state of residence), (2) the Cincinnati labor market, and (3) other data based on his general characteristics of age, sex, race and education for the U.S.A. as a whole. The three estimated worklife earnings were all within 10% of the arithmetic mean (average).

In several similar cases, the intent of the decedent was less clear. The appraiser used the general categories of age, sex, race and education, plus a work category that might aid the jury in its deliberations. This might be a common employment in the local community or some other occupation which would be significant in a given case. In these later cases, the appraiser did not arrive at a single figure, but rather several different figures under different clearly stated assumptions.

IV. A PROBLEM FOR THE DEFENDANT

Economic experts are equally available to attorneys for the plaintiff and the defendant but in most cases they are employed by plaintiff's attorneys. Plaintiff's attorneys must not only prove a wrongful act, they must also prove amount of damages. Defendant's attorneys under adversary proceedings usually allege their client is not liable, so they have no need to determine the money value of the loss of future earnings.

An important consideration in any appraisal of future earnings is the reasonably probable trend of earnings in the general economy. This consideration tends to raise the amount of the appraisal and possibly the size of the verdict. Economists agree that there is and will continue to be a general rise in earnings. The attorneys for the defendant are therefore not able to employ an economic expert to refute the judgment of rising earnings. In a recent case, attorneys for the defendants are known to have contacted a substantial number of economists, but could not obtain one who would testify in a way satisfactory to the defendant's position. The

fact is that knowledge from economics has now established the idea that the size of wrongful death damages should reflect future earnings trends because they are based on a reasonable probability, not on speculation and conjecture. It seems likely that future cases will involve two expert economists, each of whom will give his opinion on *rates* of future increases in wages, just as present cases sometimes hear diverse opinions on the appropriate discount rate for reducing future earnings to present value.

V. THE UPWARD TREND OF EARNINGS

Economic knowledge, historical and statistical as well as analytical, shows that there is a long-term upward trend of hourly earnings, the causes of which continue in full force.

The long-term upward movement in earnings is clearly shown in average hourly earnings for production workers in manufacturing, a wide measure of earnings behavior in the economy. The average annual rate of change from 1910-1960 is 4.2%.¹⁸ Since the Employment Act of 1946 the average annual rate of increase has been about 5%,¹⁹ and since 1960 substantially above 5%.²⁰

Historical trends of earnings are significant, but they should be studied with knowledge of the causes of the movement observed. In this case, the earnings trend is significantly related to changes in productivity and prices. Productivity means effectiveness or efficiency in the use of input items to produce output. The most common measure of productivity changes over a unit of time is percentage change in output per man-hour. If an input of X produces 100 units of output in 1968, and the same input produces 104 units of output in 1969, this change is referred to as "a 4% increase in productivity."

In the United States economy, productivity (based on real gross private domestic product per man-hour in the total economy) has moved upward each decade since 1900.²¹ The increase from 1899 to 1914 was 1.4% per annum; for 1914-1929 it was 2.5% per annum and for 1946-1967 it was 3.3% per annum.²²

Productivity increases are based on favorable changes which occur in any aspect of economic production. A long-term negative or zero rate of productivity could exist only under conditions in which science, technology and the level of human skill failed to advance. The future is,

¹⁸ See U.S. DEPARTMENT OF LABOR, HANDBOOK OF LABOR STATISTICS 1909-1946 (1950 ed.) and U.S. DEPARTMENT OF LABOR, MONTHLY LABOR REVIEW for the period 1947-1960.

¹⁹ *Id.*

²⁰ *Id.*

²¹ U.S. DEPARTMENT OF COMMERCE, HISTORICAL STATISTICS OF THE U.S. SERIES W-1, 593-94; STATISTICAL ABSTRACT OF THE UNITED STATES (current edition).

²² Authorities cited, note 21 *supra*.

with a high degree of probability, one in which there will be continuing long-term increases in productivity.

Expectation of long-term increases in earnings are also based on the expectation of a gradual rise in the consumer price index, or cost-of-living. The consumer price index has moved from 60 (1947-49 is 100) in 1936, to 80 in 1946, to 115 in 1956 to 140 in 1966.²³

Increases in the price for final products permit sellers to pay higher earnings to receivers of wages and salaries. Economists agree that the present form of market and industrial organization, plus governmental policies necessary to attain economic growth, make long-term increases in the consumer price index reasonably probable for the foreseeable future.

The reasonably probable future rise of earnings, productivity, and prices provide a firm foundation for analysis of reasonably probable future loss in individual cases of wrongful death. Expert opinion may vary somewhat on the exact rate of future increases, depending on each expert's opinion of the strength of the forces which have kept earnings rising at about 5% per annum since 1946. Of course, each case must be considered separately for those unique or special influences which may cause reasonably probable earnings of an individual to be different from the general trend.

VI. FUTURE EARNINGS: A VIEW FROM THE EXECUTIVE AND LEGISLATIVE BRANCHES OF GOVERNMENT

In addition to the analytical, statistical and historical evidence on future earnings, we now have a commitment by the legislative and executive branches of the federal government to an economic policy which will give additional confirmation to the upward trend of earnings. This policy was contained in the Employment Act of 1946.²⁴ Section 2 of the act directs the Federal government to use all its plans, functions, and resources . . . to promote maximum employment, production, and purchasing power. Section 3 calls upon the President to specify the levels of activity pre-

²³ Federal Reserve, Historical Chart Book, 96, 97 (1968). The courts have recognized the probability of continued price rises. Judge Friendly said ". . . there are few who do not regard some degree of continuing inflation as here to stay." *McWeeney v. New York, N.H. and H.R.R.*, 282 F.2d 34, 38 (2d Cir. 1960). The following cases take into account future prospects of inflation or deflation in fixing damages for personal injuries. *Richey v. Service Dry Cleaners* 28 So. 2d 284, (La. App. 1946); *Henwood v. Moore*, 203 S.W. 2d 973 (Tex. Civ. App. 1947) There are two decisions squarely opposed to such considerations by either court or jury *in the absence of evidence*. *Hodkinson v. Parker*, 70 S.D. 272, 16 N.W. 2d 924 (1944); *Armentrout v. Virginian R. Co.* 72 F. Supp. 997 (D.C. W. Va. 1947) (personal injury) *rev'd* on another ground 166 F. 2d 400 (4th Cir. 1947).

Changing cost of living and purchasing power are considered by the jury in assessing damages for wrongful death in the following cases. *Giles v. Chicago Great Western R. Co.* (D.C. Minn. 1947) 72 F. Supp. 493, *app. dismissed* 163 F. 2d 631 (8th Cir. 1947); *Mooney v. Terminal R. Association*, 353 Mo. 1080, 186 S.W. 2d 450 (1945), *cert. denied*, 326 U.S. 723 (1947).

²⁴ The Employment Act of 1946, as amended 60 Stat. 23, Pub. L. No. 79-304. *See also*, W. HELLER, *NEW DIMENSIONS IN POLITICAL ECONOMY* 175 (1967). Mr. Heller was chairman of the Council of Economic Advisers under Presidents John Kennedy and Lyndon Johnson.

ailing in the U.S. economy, the levels expected and the levels needed to carry out the policy of the act. Section 4 creates the three-member Council of Economic Advisers in the Executive Office of the President and specifies its duties and functions. Section 5 establishes the Joint Economic Committee of the Congress. So important a change away from economic laissez-faire was forced in part by memories and fears of the depression in the early 1930s.²⁵

The period 1946-60 saw a doubling of the gross national product. In 1960 a new philosophy and new techniques were added to greatly strengthen the effectiveness of the Employment Act. From early 1961 to 1969 there was a continuous rise in the real gross national product uninterrupted by a recession.²⁶ It is probable that per capita long-term earnings will continue to rise as they have since 1909.

The Employment Act of 1946 was in part a result of fear of the American people of the possible return of the mass unemployment of the 1930s,²⁷ and in part a reaction against excessive price increases of the early post-war years.²⁸ In order to combat this fear, the public and Congress accepted the idea that a role of the central government is to exert influence on the volume of output and employment, and consequently, on other important economic variables, such as earnings, productivity and prices. This was a departure from the philosophy of laissez-faire, but it was still a lessening of the governmental economic participation that had been experienced during World War II.

The Employment Act included the governmental goal of using "all its plans, functions and resources . . . to promote maximum employment, production and purchasing power . . .",²⁹ and directed other agencies of government, including the Executive Office of the President, to participate and co-operate in this quest for a prosperous and stable economy. This statement of intent does not commit government to a monetary explanation of business behavior; it does not say whether monetary and/or fiscal policy is likely to suffice. It enacts a goal, with the means of attaining it to be based on existing and emerging views of causation and interrelationships in government economic policy. This elastic clause permits useful evolution in means of attaining the prescribed goals, a characteristic that became very important after 1960.

In 1947 no one believed that recessions had been eliminated, only that the severity of the cycles had been ameliorated. President Truman said

²⁵ S. BAILEY, CONGRESS MAKES A LAW: THE STORY BEHIND THE EMPLOYMENT ACT OF 1946 (1950).

²⁶ A recession may be defined as a period of decline in the real gross national product for at least two consecutive quarters.

²⁷ About 24% of the work force was unemployed in 1933. When World War II began in Europe our unemployment was about 8%.

²⁸ The Consumer Price Index rose by more than 25% in two years (mid 1946 to mid 1948)

²⁹ 60 Stat. 23 (1946).

"I reject, and I know the American people will reject, the notion that we must have another depression. I am not referring to minor detours and bumps in the road ahead — these we know we shall have."³⁰ From that date to 1960 the economy experienced four recessions, all mild, and none a serious threat to economic stability and growth. There was also a threat of substantial inflation due to the Korean War and the psychological reactions to the war.

The Korean War generated vast new demands for goods and services, which could not be met without price and wage increases which threatened economic stability. The transition to peace was also a threat to stability. The Council of Economic Advisers (January 1953) suggested certain guidelines.

[T]he specific wage and price considerations of a longer-run character which the Council wants to suggest may be set down as follows: In the case of wages: First, in the event of a weakening in demand, wage cutting should be avoided. While such an adjustment may temporarily ease the situation of an individual firm, it can set off a dangerous chain reaction. Second, during the period ahead, wage adjustments should continue to do their long-run job of helping to distribute the increased incomes resulting from improved productivity. As was said in the Economic Review of January 1950, with a growing potential for national output, the only way to translate this potential into actuality is to distribute more goods. If the price level is to be kept reasonably stable when the economy is in balance, then the increasing purchasing power necessary for expanding markets must come mainly in the form of consumer incomes rising in accord with improved productivity. And since wages constitute the bulk of personal income, the preferable general formula — once wages, prices, and profits are in a workable relationship — is for money wages to increase with productivity trends in the whole economy."³¹

The need for government to assume an increasing role in maintaining economic stability was not a partisan view. President Eisenhower said: "Government must use its vast power to help maintain employment and purchasing power as well as to maintain reasonably stable prices."³² His administration used the by-then usual means of monetary and fiscal policy to achieve the policy goals, and the economy prospered. Emphasis was placed on the long-term growth rate, because ". . . the proper objective of national economic policy . . . is to strive to limit fluctuations in the rate of over-all economic growth to a relatively narrow range around a rising trend."³³ The last year of the Eisenhower administration occasioned a review of the record under the Employment Act of 1946. The Economic

³⁰ ECONOMIC REPORT OF THE PRESIDENT vii (January 1947).

³¹ ANNUAL ECONOMIC REVIEW, COUNCIL OF ECONOMIC ADVISERS 113, 114 (January 1953).

³² ECONOMIC REPORT OF THE PRESIDENT iv (1954). President Nixon has indicated his support for this policy in his inaugural address.

³³ ECONOMIC REPORT OF THE PRESIDENT 3 (1958).

Report of the President and the Annual Economic Review of the Council of Economic Advisers praised the progress which had occurred since 1946, especially in growth and stability of the economy.

VII. A NEW STEP FORWARD 1961-68

The period 1961-68 gave strong empirical and theoretical support to the proposition, earlier indicated by the record since 1909, and further supported since 1946, that ours is an economy that will continue to be characterized by a long term upward movement of per capita earnings.

Emphases in economic policy changed in the 1960's under Presidents Kennedy and Johnson. Monetary, fiscal, price and growth policies of the Eisenhower years were conceived as means of correcting divergencies from a sustainable rate of growth. Under Walter Heller, Chairman of the Council of Economic Advisers, Presidents Kennedy and Johnson made national economic policy a continuing and integral part of the growth process. Mr. Heller wrote in August 1966 that ". . . [g]one is the countercyclical syndrome of the 1950's. Policy now centers on gap closing and growth, on realizing and enlarging the economy's non-inflationary potential."³⁴ The techniques of influence upon the economy were not greatly changed, but the attitudes toward the influence of government had changed. The "new policy" evolved from the earlier policies, and was the fulfillment of earlier policies. As President Kennedy said, "[w]hat is at stake in our economic decisions today is, not some grand warfare of rival ideologies which will sweep the country with passion, but the practical management of a modern economy."³⁵

The Council of Economic Advisers suggested wage-price guideposts in 1962³⁶ as a means of attaining economic stability. The idea was to inform labor, management and the public of the nature of the interrelationship of wages, productivity and prices. It was hoped that this knowledge might moderate inflationary movements of prices and wages. The guideposts said that wage rate increases which average no more than the economy-wide increase in productivity per man hour (3.2% as of 1966) are not inflationary. When productivity is higher a higher wage rate increase is justified. This does not mean that wage earners get the full amount of gain made available by increases in productivity. If increased efficiency raises productivity by 3.2%, this permits a rise of 3.2% in each share, including labor's share. The 3.2% increase in productivity is 3.2% above the former output, whereas a 3.2% wage rise is 3.2% above the former wage.³⁷

³⁴ W. HELLER, *NEW DIMENSIONS OF POLITICAL ECONOMY* (preface) (1966).

³⁵ *ECONOMIC REPORT OF THE PRESIDENT* 37 (1962).

³⁶ *ANNUAL ECONOMIC REVIEW, COUNCIL OF ECONOMIC ADVISERS* 185-190 (1962).

³⁷ For a discussion of some of the ethical and moral issues of the guidelines see NORMAN

Success of the early guideline policy cannot be measured quantitatively, but it probably had some moderating effect. It surely was successful in directing attention to the fact that productivity increases are the means of attaining higher wages and profits without higher prices. If prices continue to go higher (as they have) wages may rise even more (as they have.)

President Kennedy made productivity increases a basic aim of his economic policy.

Rising productivity is the foundation of the country's leadership of the free world, enabling it to earn in world competition the means to discharge its commitments overseas. Rapid advance of productivity is the key to stability of the price level as money income rise, to fundamental improvement in the balance of international payments, and to growth in the Nation's capacity to meet the challenge of the 1960's at home and abroad. That is why policy to accelerate economic growth stresses investments in science and technology, plant and equipment, education and training — the basic sources of future gains in productivity.³⁸

Although the "guidelines policy" probably restrained wage and price increases somewhat, the level of prices and of earnings continues to rise. The guidelines, begun in 1962 were specifically reaffirmed and modified in 1966.³⁹ In spite of this the actual record shows that productivity rose a little more than 3%⁴⁰ and the consumer price index about 3.2%⁴¹ in 1966.

The most dramatic and clear-cut demonstration of the new approach of the 1960's was the large income tax cut of 1964. This tax reduction was not based on a need to prevent recession, but rather a desire to raise the gross national product from its existing level to a point closer to the national capacity to produce. The size of the cut was tailored to the gap between existing and potential levels of production. It is difficult to conceive of better proof of the effectiveness of economic policy.

The new approach of the 1960's was highly successful; the national economy experienced the longest recession free period in its history. From 1960 to 1967 earnings per hour rose more than 25% (about 10½% in real terms).⁴² At the same time the consumer price index rose about 12%.⁴³ The *real* gross national product rose at an annual rate of 5.2%.⁴⁴

LEONARD, SHOULD STRIKES BE MADE ILLEGAL? 1-30, Methodist General Board of Christian Social Concerns, (undated).

³⁸ ECONOMIC REPORT OF THE PRESIDENT 190 (1962).

³⁹ ANNUAL ECONOMIC REVIEW, COUNCIL OF ECONOMIC ADVISERS 92 (1966).

⁴⁰ ANNUAL REPORT OF THE COUNCIL OF ECONOMIC ADVISERS 40 (1967).

⁴¹ *Id.* at 262.

⁴² BUREAU OF LABOR STATISTICS, U.S. DEPARTMENT OF LABOR, *Employment of Earnings Statistics*, Bull. No. 1312-5 (1909-67).

⁴³ BUREAU OF LABOR STATISTICS, U.S. DEPARTMENT OF LABOR, *Monthly Labor Review*.

⁴⁴ ANNUAL REPORT OF THE COUNCIL OF ECONOMIC ADVISERS 58 (1968).

Perhaps the Council in its report in 1966 was not overly optimistic when it said

[w]e are at an historic point of accomplishment and promise. Twenty years of experience have demonstrated our ability to avoid ruinous inflations and severe depressions. It is now within our capabilities to set more ambitious goals. We strive to avoid recurrent recessions, to keep unemployment far below rates of the past decade, to maintain essential price stability at full employment, and, indeed, to make full prosperity the normal state of the American economy. It is a tribute to our success under the Employment Act that we now have not only the economic understanding but also the will and determination to use economic policy as an effective tool for progress.⁴⁵

VIII. THE LESSON FOR JUDICIAL LAW

Judicial awards in cases of wrongful death should reflect a reasonably probable rise of earnings over time. The statistical and historical data since 1909, The Employment Act of 1946, and the "new approach" of the 1960's lead compellingly to this conclusion. The reasonably probable rate of increase should be based on expert testimony prepared for each case on the basis of the facts in that specific case.

IX. FUTURE INCOME AND THE PHILOSOPHY OF LAW

Men govern themselves with words. Private justice and social policy rest upon the logically and empirically correct meaning of terms such as "damages" and "pecuniary loss." The legal test of value in tort law is generally market value, an objective and amoral standard. In tort law courts have generally rejected the view that they should make normative judgments⁴⁶ on the correctness of the evaluation of the free market as suggested by J. R. Commons.⁴⁷ The needed adjustment for probable future earnings uses market value as the base⁴⁸ of the computation. It stresses the need for a correction of the amount of earnings on the date of accident or trial to adjust for probable future market value of the labor services being evaluated.

If man governs himself with words, perhaps words should be made "unambiguous expression"⁴⁹ as exact as mathematics. This proposition, argued by Bertrand Russell and Alfred North Whitehead in *Principia Mathematica*⁵⁰ is a motivating force behind much of the contemporary study of linguistics. But "damages" is a term which cannot take on the

⁴⁵ ANNUAL REPORT OF THE COUNCIL OF ECONOMIC ADVISERS 186 (1966).

⁴⁶ *Dillon v. Twin State Car and Electric Co.*, 163 A. 111 (N.H. 1932).

⁴⁷ J. COMMONS, LEGAL FOUNDATIONS OF CAPITALISM 9 (1959).

⁴⁸ Current earnings of the decedent are usually used. These earnings *are* the market value.

⁴⁹ L. WITTGENSTEIN, LOGICO-PHILOSOPHICIES (1922).

⁵⁰ B. RUSSELL & A. WHITEHEAD, PRINCIPIA MATHEMATICA (1950).

attributes of mathematics without a divorce from the common life of man, with its changing environment, and its changing view of the future made possible by economic technology. ". . . [T]he life of the law has not been logic; it has been experience."⁵¹

The experience of man shows him that justice results in part from accurate knowledge of the consequences of an act or judgment. A monetary award based on *stare decisis* alone may conform to a static logic, but a gradual decline in the purchasing power of a dollar is in fact a gradual departure from substantive justice. Substantive justice requires a reasonably accurate judgment of future economic trends, including trends of earnings, productivity and prices. "In this perpetual flux, the problem which confronts the judge is in reality a twofold one: he must first extract from the precedents the underlying principle, . . . he must then determine the path or direction along which the principle is to move and develop. . . ."⁵² Expert economic knowledge is the means by which the path to appropriate damages may be determined.⁵³

The need for expert economists in wrongful death cases is of course merely an illustration of the problem of the relation of science (or technology) and law.⁵⁴ Jurisprudence, like analytical philosophy, seeks to understand concepts through linguistics. Words (e.g., damages) stand for or describe a specified set of conditions or relationships. They do not stand for a specific thing or amount but rather make justice dependent on circumstances introduced in evidence.⁵⁵ Emphasis is placed on the process of valuing, rather than value per se. The expert witness should explain clearly what he did and why he did it. This is as important as the value to which he testifies. In a technological world the process of systematizing and institutionalizing the expectation of change is necessary for private justice and for response to social need.

⁵¹ OLIVER WENDELL HOLMES, JR., *THE COMMON LAW* 1 (1938).

⁵² B. CARDOZO, *THE NATURE OF THE JUDICIAL PROCESS* 28, (reprinted 1965).

⁵³ In the United Kingdom economists are on the staff of the Restrictive Practices Court [Anti-trust]; A. MILLER, *Science and Law*, *SATURDAY REVIEW* 41 (Aug. 3, 1968).

⁵⁴ This paragraph relies in some measure on H. HART & A. HONORE, *CAUSATION IN THE LAW* and on H. L. HART, *ENCYCLOPEDIA OF PHILOSOPHY* 417-18 (1967).

⁵⁵ *Hurst v. Chicago & Q. R. Co.*, 80 Mo. 566, 219 S.W. 566 (1920) (dictum). The court explained it could not follow the money market as a broker would, but said when ". . . material and apparently permanent . . . changes in economic conditions occur, the courts must take cognizance of them; ". . . not too hastily lest that which seems to be permanent should prove to be transient, nor yet too tardily, lest justice fail."