

EMPLOYMENT AND UNEMPLOYMENT

BY

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I. INTRODUCTION

The Casualty Actuarial Society was organized to deal with casualty and social insurances. Among social insurances it has been chiefly concerned with workmen's compensation. Casualty actuaries are therefore familiar with employment interruptions due to injuries or sickness arising out of or in the course of employment.

During the last ten years employment or its absence have become matters of crucial interest, the emphasis till recently having been on the extent of unemployment, the emphasis now on the shortage of certain types of trained or skilled workmen.

Four special types of governmental agencies have developed a knowledge of employment opportunities, of the extent of compensable unemployment, of the available sources of specially skilled labor, have acquired considerable familiarity with periods of employment, the place of the family in work relationships, and the changed situation in respect to the employment of women. They have developed both information and an understanding that much more information is desirable.

These agencies are:

- (1) The Employment Security organizations, both State and Federal, concerned with job placements and with unemployment compensation;
- (2) The Federal Old-Age and Survivors Insurance agency, in behalf of which contributions are made from covered employed workmen and which certifies the checks enabling benefits to be disbursed when special situations arise because of employment termination;
- (3) Federally subsidized State administered agencies of public assistance, so definitely needed because of certain types of unemployment;
- (4) The agencies developed because of defense, including the Selective Service organization, the Office of Production Management, the enlarged Employment Service Agency, etc.

* The opinions as expressed in this article are those of the author and do not represent the views of the Social Security Board.

This paper is concerned with a discussion of terms, observations as to the need of more specific definitions, and certain graphic delineation of employment relationships. The insufficiency of current data is noted and the current field of cost determination is briefly sketched.

Members of this Society should be increasingly interested in all phases of Social Security. This paper attempts a preliminary orientation as to employment and unemployment, two factors basic to all the social services.

II. WORK

Modern social insurance is oriented to employment. Social insurance might be geared to citizenship or residence, yet a large majority of the income received by citizens or residents comes from wages, salaries, commissions, and other forms of compensation paid by an employer to his employees because of their productive efforts.

The continued development of modern technology has transferred many activities from the home to the factory or to some commercial service center. The home once *was* largely responsible for making clothing, preparing food, building furniture. *Now*, the major part of the making of clothes is done in factories, food products are prepared in canneries, bakeries, meat packing establishments, etc. Mechanical contrivances have entered the home to short-cut the time required for many of the residual home operations.

The recognition of this change is so universal that it has seemed natural to talk about "the industrial revolution" as though it had already reached its ultimate conclusion and as though all activities were now part of our integrated assembly lines. It is argued by some that the machine has reduced work opportunities. Others maintain that new machines increase the aggregate productive efforts of mankind and thus raise the living standards. There may be a temporary period when the new machine results in laying off a certain part of the man power formerly required for the now obviously wasteful methods of production, but the ultimate result of shortened productive processes has usually been

and may again be a higher standard of living and more diversified employment.

Since the very basis of our social and economic existence is in constant flux, the meaning of all our terms and the factors affecting living conditions are undergoing change. Employment and unemployment are not sharply defined conditions but somewhat conventionalized terms. Unemployment may even be primarily a subjective state.

From the early decades of the nineteenth century to the early decades of the twentieth century there seems to have been a steady lengthening of the period of childhood, a steady rise in living standards, a steady increase in the number of women working in the factory, office, or store, a steady reduction in the number of hours worked per day or week by the average employee who considers himself "employed full time", and a steady increase in the use of such supplements to wages as employer contributions to life insurance, accident and sickness insurance, retirement incomes, and vacations with pay. The dollar value of these supplemental forms of compensation has commonly been separated from the basic pay roll. Explanations of the nature of these supplements to wages have varied widely. As to employer contributions to benefits offered the employee by virtue of his employment it seems sound to call them part of the wage bill.

Wages are so much higher in the United States of America than anywhere else that it seems probable that even excluding these supplementary items American priority in wage levels is still present. Working arrangements have on the whole seemed more permanent than in other countries even though new work relationships to keep up the technical advance are a natural consequence of improved processes. Certain social insurances in some of the European countries seem to have developed rather directly from those provisions in the Treaty of Versailles, especially designed to improve the position of labor and to give it a larger share in the national production. The contribution of the employee within these programs helps to justify the employer subsidy. Some social insurance seems a framework for more consistent financial provision by the citizens themselves toward certain desirable goals. Through it they provide financially against the hazards of unemployment, old-age, disability, or death. Old-

age insurance can deal with work loss at an age so advanced that physical capacity to work has become lowered and future work opportunity seems doubtful. Insurance in behalf of orphaned children and their widowed mothers provides certain compensation for the death of the working father without the necessity of proving that death arose out of or in the course of employment. Temporary and long-range disability insurances attempt to replace some of the wages lost because of sickness and accident. They may also involve benefits in kind in the provision of medical care. Unemployment insurance may grant benefits for certain periods when the employees are well enough to work but jobs are unavailable. Work has come to seem the essential basis, not only of a primitive but of a civilized existence. The pay for work enables employees to buy the products of industry. The absence of work shuts off the income with which to make these purchases.

III. THE SOCIAL ANALYSTS

Such organizations as the Bureau of Labor Statistics within the Department of Labor, the statistical units within the Department of Agriculture, the National Bureau of Economic Research, the National Industrial Conference Board, the Industrial Relations Counselors, the Social Science Research Council, the Federal Security Agency, and various other foundations and organizations have attempted to determine conventions and terminology in such a way that discussion of work and wages and living standards could be carried on with adequate meaning to all engaged in the discussion. The terminology is not yet exact. In discussing a national situation as to work there are serious limitations, a catalog of which would be rather lengthy.

The columnist is a new expert. Whether or not he taps the proper sources of information, the trenchant explanation of a statistical-minded writer adds to the chance for subsequent sound analysis. His quotations are certain to be challenged, and the ensuing discussion adds to knowledge. The columnists have approached the extent of unemployment with brevity. They have suggested that many family and work relationships have had effect upon the figures. It is now more popularly understood that when the main breadwinner loses his job other members of the

family may be forced into the labor market to make up for the loss. Such members do not necessarily promptly return to their housekeeping or their further education when the family head gets his job back.

The Bureau of the Census in previous decennial censuses has made certain inquiries as to the extent of "gainful employment". They have also carried forward special unemployment censuses. In 1940 the old concept of gainful employment which not only involved having work but also looking for work had been replaced by a much more definite series of questions. The schedules applicable to all individuals 14 years of age and over made specific inquiries as to the week from March 24 to March 30. They asked whether the person were during this period at work "for pay or profit in private or non-emergency government work", whether he was engaged in public emergency work, such as WPA or CCC, whether he was seeking work, or whether he had a job or business, or whether he was engaged in home housework, in school, was unable to work, or idle for other reasons. He was also asked as to the number of hours worked during the week and if unemployed for how long a time in weeks he had been unemployed. There were special inquiries as to occupation, industry, and class of worker, as to the amount of money wages or salaries received during the year 1939, including commissions, and whether he had received an income of \$50 or more from sources other than money wages or salary. For a sample of 5% of those listed on the basic population schedule there were supplementary questions with reference to Social Security benefit account number holding and the making of actual deductions for Federal old-age insurance or Railroad Retirement benefits in the year 1939 and as to whether such deductions were made from all, half or more, or less than half of wages or salaries. A certain amount of the information as derived has been released by the Bureau of the Census, though the results of this extensive inquiry have not yet been published in detail.

IV. THE FOUR NEW GOVERNMENTAL AGENCIES

While among the organizations discussed above reference is made to the Federal Security Agency, the four governmental agencies

listed in the introduction require special consideration here. Altogether they deal so definitely with employment or the lack of it, that they affect our thinking; they are so closely related to the extent of employment and unemployment, that they require more detailed discussion.

(1) *Employment Security*

These agencies fulfil two purposes—job placement and the payment of compensation to the jobless. The unemployment compensation programs are apparently in effect on somewhat less than half the apparent job content of the Nation. The programs provide that among those covered there shall be established appropriate reports showing essential personal data on the basis of which to pay unemployment compensation when, in accordance with strict formula men “able to work” seem unable to find employment. The machinery is administered by the States, though with some supervision from the Federal Bureau of Employment Security. It was brought into operation by a Federal tax on covered employment, against which tax 90% credit was given should a suitable State unemployment compensation law be effected. Wage reports as to employment are handled on a quarterly reporting basis, sometimes actually showing weeks of employment. Unemployment is evidenced by a weekly report concerning the absence of employment, the ability of the applicant to work, and his willingness to work, and the proper evidence that attempt has been made to find work through the Employment Service. Many of the State programs have assumed a weekly period of unemployment as the unit of measurement. There is a live file estimated to contain in 1939 records on some 31,000,000 separate individuals who had had wage credits reported within that year. This is subdivided, of course, into the 51 State agencies, which also maintain claims files showing weeks when these same individuals have failed to secure employment or have secured only partial employment.

In the administration of such an unemployment compensation program decisions must be made as to:

- (a) Types of employment covered by the scheme;
- (b) The amount of earnings or the number of weeks of work to be credited within a year called the base period, as minimum qualification for benefits;
- (c) The number of waiting period weeks without employment or unemployment compensation;

- (d) The minimum and maximum weekly benefit amounts payable;
- (e) The maximum number of compensable weeks or the maximum amount of benefits paid within a benefit year;
- (f) The extent of evidence given by the employee that no suitable work is available;
- (g) Disqualifications for benefits.

In each State these practical considerations have developed definite provisions. Unemployment compensation programs are in operation in every State, two Territories, and the District of Columbia. The strategy of tax offset has been effective.

(2) *Old-Age and Survivors Insurance*

The contributory program of old-age and survivors insurance is geared up to employment to the extent that as a prerequisite to protection the receipt of earned income in covered employment must be shown to be an amount of at least \$50 in each of a given number of calendar quarters. No provision ties these wage rates to specific periods of time within the quarter, so that \$50 could represent a single day's work or steady work for a month. The coverage is very similar to that for unemployment compensation. The major difference is the exclusion in many States from the unemployment compensation program of the employees of employers who have less than a given number of employees. Among the States this varies from one to eight. There are other minor differences since unemployment compensation is handled by State laws. Detailed comparison between the State records on employment security coverage and the Federal records for old-age and survivors insurance is yet to be accomplished as to the employment of any State. Such comparison would be desirable. As time allows it will presumably be made. The underlying concept of work as a requirement of coverage persists both in employment security and old-age and survivors insurance. Benefits are specifically related to wage payments in both cases. Benefits are also related to work termination in both cases.

(3) *Public Assistance*

Anglo-Saxon nations have for several centuries accepted the responsibility of the whole community to provide at least the minimum standard of subsistence for all its members. Relief has customarily been based upon specific evi-

dence of need. It has sometimes applied rigorous work tests. The proportion of residents receiving unvarnished public relief in the United States has until recently been rather limited, though considerable amounts of "genteel relief" have been accorded by churches, lodges and private citizens. As in the case of unemployment compensation and old-age and survivors insurance, the absence of paid work has been the primary reason why relief has been needed. It has been administered by a growing staff of social workers. It sometimes seems that relief administration has recently become one of our major industries.

The segregation of the categorical assistances has considerably increased the importance of this entire area. The Social Security Act of 1935 specified three categorical assistances:

- (a) That to the needy aged;
- (b) That to the dependent children;
- (c) That to the needy blind.

The categorical assistances seemed to carry less of the sense of disgrace than did outright relief. The recognized number of recipients has greatly increased.

Needy individuals whose unemployment is not due to extreme age, immaturity, or disability have been offered the opportunity of engaging in public works. The provision of such work has sometimes been considered as relief, sometimes as employment.

(4) *Defense*

The end of the year 1940 completed a decade marked by a major depression. It was also marked by the comprehensive adoption of the assistances, various relief measures, and work projects. In 1941 our perspective as to work has changed. Instead of a surplus of labor there is at least in certain skilled occupations an apparent deficiency. Defense has developed the Selective Service for the training of a considerable proportion of our young men. It has greatly increased the responsibility of all industries needed in the defense of the country. "Business as usual," or the upholding of current living standards as a matter of morale may be helpful in maintaining existing work arrangements until the defense assignments are thoroughly under way and shortages of man power become more acute. Then, as production needs advance, priorities will possibly shift considerable groups of workers from existing peace-time activities to defense industries. Established enterprises may be reorganized as a defense measure because we require waste

elimination and increased efficiency. Inexperienced workers with apparent capacities will be promptly trained for limited duties. It is now very easy to contrast the incomplete productive results in France in the period before the war, when their work week was so short, with the current superior results in England, where along with increased morale and alertness the work week is considerably longer. It has sometimes seemed to be assumed in various countries that the fewer hours a man worked, not only the more effective would he be per hour but the more would be his aggregate output. In our own country there now seems so many jobs to be done that the philosophy of made work seems suitably postponed. The idea that real work may occupy the entire community is reasserting itself.

V. PERIODS OF EMPLOYMENT

The factory and its machinery have had a great influence upon the organization of the working day. The simplification of work processes, the formation of the assembly line, the complete use of plant facilities have organized the day into rather definite periods of scheduled hours of work. The very year falls into a scheme where there are mainly work days but periodic holidays and frequently vacation periods. The work day has varied from more than twelve hours down to as short a period as six. A work period of half the 24-hour day is now most unusual save in time of war. The drive for the shortening of the work day is part of the recognition that leisure is a tangible asset, that mechanization should lead to a wise combination of more goods and services and less working time. Industrial engineering has persistently increased the effectiveness of a man-hour of work. The gains are divided between higher living standards and more free time.

As against a 72-hour work week the increased leisure of a 44-hour work week has seemed a notable achievement. The early days of the depression were marked by a different type of work-week-shortening, when part-time schedules as short as 24 hours a week were adopted for entire factories. The philosophy of work sharing implied that the men should be working more hours and would prefer to work more hours but there was insufficient work to go around. Weeks as short as 30 hours have been seriously suggested on the principle of sharing the limited volume of existing work so as to eliminate all unemployment.

A division of the Department of Labor is now named "Wage and Hour". Much of the effort has been directed toward reducing the number of scheduled hours to be worked per week for large groups of workers. Forty hours per week has been established as the maximum permitted by statute for such workers, though a temporary emergency arrangement scheduled 44 hours. Implicit in such a standard work week, however, is the opportunity to extend that work week with higher wage rates paid for extra hours and more compensation for the whole working period.

Drug stores and service organizations like repair shops, telephone companies, transportation systems, develop distinctive working time distribution so as to maintain 24-hour service seven days a week. In general, however, the customary work week is one of 5½ days, with no work from Saturday noon until Monday morning, or five days with no work either Saturday or Sunday. Retail establishments have regular part-time arrangements and extra employees on Saturdays and during bargain sales or holiday seasons. Many have been giving half days off during the middle of the week. The coal mines show employment schedules that vary strikingly from week to week and from month to month. Agriculture is noted for specific seasonality, as is the hotel business of Florida and the White Mountains. While factory production sets conditions which dominate our thinking on employment, many areas of employment differ considerably in their work timing from the factory schedule. Terms which are specific and clean-cut when applied to factory operations become somewhat blurred when applied to the work conditions of agriculture, domestic service, emergency service, or self-employment.

Since social insurance is now being gradually introduced into the American industrial scene and has been geared up to *employment* and the *absence of employment*, this additional factor increases the need for certain conventions and certain standard terms.

VI. THE EXTENT OF EMPLOYMENT

Under war conditions in Germany it has been said that 60% of the population is gainfully employed. In the United States we have been accustomed to think that somewhat less than 40% have

been engaged in paid work relationships. In these defense times, however, and from the increased knowledge of the division of jobs among extra individuals, it seems probable that some employment may be had by as much as 45% of the population within a year.

The particular structure of the social insurances has developed extensive records which already show the very large number of individuals who have some covered employment without achieving steady work. Both the old-age and survivors insurance program under Title II and the unemployment compensation programs developed under Titles III and IX of the Social Security Act can be the means of greatly clarifying our knowledge of the extent of employment. We have spoken rather easily of "the labor market" as though the men and women were putting up their man power as a commodity to be sold in that market. It is recognized that certain individuals remain completely aloof from this so-called market. They go to school; they engage in housework; they suffer from some form of disability; they are members of a limited leisure class; or they are simply unemployed.

In our 1940 population of 132,000,000 members it is possible that there are 60,000,000 workers, of whom over a period of a year 30,000,000 may have worked practically full time; 25,000,000, part-time; 5,000,000 have remained almost wholly unemployed during the entire year even though looking for work. The Census Bureau release of April 4, 1941, based upon the 5% sample and dealing with the work conditions of March 24 to 30, 1940, shows 53,000,000 in the labor force, with 45,000,000 employed, 2,000,000 on public emergency work, 5,000,000 seeking work.

Considering the variable work weeks, seasonal employment, and intermittent employment, we begin to sense the wide range represented by:

- (a) Those who are available for work but have no work whatever;
- (b) Those who are barely connected with work opportunities but do have some paid jobs;
- (c) Those who work intermittently, whether according to some general program or spasmodically;
- (d) Those who work most of the time; and
- (e) Those who are steadily employed.

In respect to all of these categories except those who have no work at all there is time lost because of sickness, accident, factory shut down, or vacations. For the full-time workers such interludes are not regarded as work interruptions, particularly when salaries are continued.

Many of the early State unemployment compensation bills carried references to "full-time employment"—the assumption being that for a particular industry in a particular locality there would be a general understanding as to the number of hours of work needed for a "full work week". In other unemployment compensation legislation the awkwardness of dealing with an assumed number of hours of work was avoided by basing work status on the total amount of earnings in a specified period. *Weeks* when there was total unemployment are defined as "weeks of full-time unemployment representing no income or representing income less than an amount specified in the statute". *Weeks* of partial unemployment are defined as "weeks in which earnings from regular employment were reduced by a definite amount or percentage from recorded earnings of prior periods of time". *Weeks* of part-total unemployment are defined as "weeks in which there was no regular employment but only odd jobs or subsidiary employment". In old-age and survivors insurance the absence of a job beyond age 65 is admitted when during a month aggregate earnings in covered employment amount to less than \$15.

VII. THE FAMILY AND DIVISION OF LABOR

In a population of 132,000,000 persons a working force variously estimated from 45,000,000 to 60,000,000 individuals leaves the major portion of the population outside of the body of "employed". Not only have the factory system and the use of women in positions carrying wages and salaries gained considerable foothold, but the family has also persisted as a special arrangement of work cooperation and pooled resources. The "family" most commonly includes a man, his wife and their minor children. Families may contain members of only one generation. They may include members of three or even four generations. The Consumer Purchases Study analyzed families according to make-up by number of earning and non-earning individuals. It indicated the

number of adults and children under the age of sixteen. We like to think that the family has usually been self-sufficient and has attempted to meet from the earnings of its members the required expenditures of those members. For many years in France there was a special pooling and redistribution of a portion of the wages in accordance with the size of family. This was done specifically to insure added income for the workman with several children. This method of pooling part of the wages seems at first blush an awkward deviation from paying wages directly related to individual production. It was hoped, however, by this method to avoid specific relief in behalf of large families and to encourage somewhat larger families and revise the trend of the falling birth rate.

If only 40% of the population are gainfully employed the production and the income of this sector should be sufficient to provide subsistence for themselves and for the other 60%. This statement is somewhat over-simplified since within the family there is still a large amount of personal unpaid family production, both in the processing of foods and in other household services. Dr. Dublin, of the Metropolitan, in developing his consideration of the economic value of a man seemed at one time to value the housewife's contribution to the family economy as worth approximately one-half the wage earned by the employed husband. The recently developed phrase "unpaid family labor" recognizes the status of those members of the family who outside of the home give their work without special compensation as unpaid family labor. This same work within the home is recognized as homemaking or housekeeping. In most wage analyses it is assumed that each family will have one or the other of these two types of unpaid family work but that its money value need not enter into the arithmetic of family budgeting. It is probably a most important element, and it makes more difficult the many efforts to determine over-all per capita incomes State by State. Moreover, the efficiency of the wife working at home may determine whether the family as a whole maintains a solvent condition. It is conceivable that the emphasis upon having recorded earned wages in order to secure protection from the social insurances may tend to create more wage relationships in lieu of so much of these unpaid family labors of recent years.

VIII. THE CHANGED POSITION OF WOMEN IN EMPLOYMENT

Electrical equipment in the household, and the available services of the laundry, the bakery, etc. outside the home have so much shortened the essential working day of the housewife that it is quite possible for her to engage in part-time paid employment with no obvious loss in household efficiency, or on the other hand, to build up special time-consuming interests in order to utilize the time saved by modern equipment. It may be possible for the efficient woman to maintain "full-time paid employment"—especially if the "full-time" happens to be on the low side in hours per week—as well as to carry forward the reduced family work. A few years ago a large factory shifted from an eight-hour to a six-hour day and ran four six-hour shifts. For the new six-hour day they paid what had represented seven hours of pay and suggested the feasibility that both husband and wife should take one shift each. This would largely increase the family income, though it might necessitate distributing somewhat the housework between the husband and the wife. This experience has been running for several years now. It is hardly typical of factory employment in general. It is indicative, however, of the possible changes in the make-up of the working community, where many of the women do work on shifts of this sort after marriage. It is also illustrative of the untapped working capacity of women not now being fully utilized.

IX. GRAPHIC DISPLAYS OF DATA

A. *Work Capacity*

The various experts have suggested that the gainful workers can be simply classified. One such classification would be an array ranging from the virtually unemployable at one end to the best workers at the other end. The near-unemployables may become recognized as completely unemployables. They will then have no further work opportunities and will disappear from the array. Most of them continue to have some chances at work and so long as they do they are part of the labor force. The near-perfect worker may still lose some time through vacation, or ex-

cusable illness, or for a week or two of lay-off for inventory. There are relatively few who work throughout the entire year. There are many with but insignificant portions of employment. Besides the unemployed who have been eliminated from the category of employment by a recognition of their unemployability, there are others considerably affected by disability, mental incompetence, absence of work habits, and a work wariness rather dismaying to the employer. If we examined the 3,000,000 least able to work and offered them permanent employment, we might secure from them a million complete work years. While the group of the unemployed has been discussed as numbering ten millions, recent figures show five millions. It seems probable that there may be less than three million really competent workmen now left unemployed.

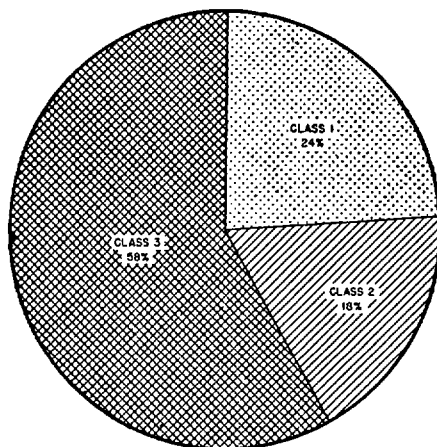
B. *Graphs*

Following out certain rather arbitrary decisions, a graphic presentation of the subject of employment is included herewith. In general, specific figures are omitted. The approach developed arises from some familiarity with the four government agencies discussed in Section IV. The major reason for the current analysis may be the current defense emergency and the need that there shall be a maximum use of available man power. It seems increasingly desirable to know more about the reserves of labor and to apply actuarial analysis.

C. *The Breakdown of the Population Into Three Major Categories—Chart I*

Chart I subdivides the entire population of the United States into three portions. The first portion includes those who *within a given year* have had some taxable income from employment covered under the unemployment insurance programs. The second includes those individuals who, while having no employment covered by that program, have had during that same year employment covered by old-age and survivors insurance (in the main with small employers) or employment wholly excluded from both unemployment compensation and old-age and survivors insurance.

CHART I
ESTIMATED PERCENTAGE DISTRIBUTION OF 1940 U. S. CENSUS
POPULATION ACCORDING TO CLASS*



* Class 1—Persons with some paid work covered for UC during a calendar year.

Class 2—Persons with some paid work, but none covered for UC during a calendar year.

Class 3—Persons with no paid work during a calendar year.

A large proportion of the membership of the second subdivision is made up of the self-employed and the workers in public employment, agriculture, domestic service, and the non-profit enterprises. The third portion represents those in employments not covered by a wage relationship but considered as engaging in unpaid family employment and those lacking employment altogether because of immaturity, senility, sickness, or the possession of a leisure class income. These three component elements of Chart I are further analyzed in Charts II, III, and IV.

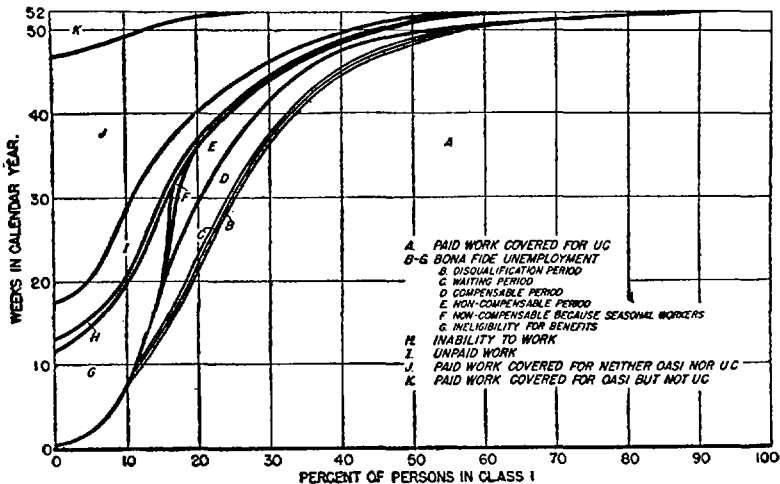
D. *The Unemployment Insurance Coverage—Chart II*

Chart II shows for the unemployment insurance coverage workers arranged in an ascending scale from left to right, from those who have a very little work covered for unemployment insurance within the year to those who have full-time work covered for unemployment insurance within the year. The lower right hand

portion of the chart represents the exact duration of the covered employment of the persons in the class, while all areas above represent average durations of employment for the same people. The rectangle, in short, represents a year of potential work for each person, and the various areas show how those years are divided. The upper left hand portion of the chart (J and K) represents employment in non-covered (in respect to unemployment insurance) industries of those individuals having some employment in covered industries. The intermediate area which is further subdivided represents the portion of the time not accounted for by covered or non-covered employment. There is, of course, considerable doubt as to the extent of the work or the idleness in the upper left hand portion of the chart. There is great

CHART II

ESTIMATED DISTRIBUTION OF MAN-YEARS REPRESENTED BY CLASS I,
ACCORDING TO WORK STATUS, AND OF MAN-YEARS OF BONA FIDE
UNEMPLOYMENT ACCORDING TO BENEFIT STATUS



variation as between calendar years in the extent of bona fide unemployment. The chart is designed to indicate a national condition, while the State is the unemployment insurance unit. There is indicated unemployment in the uncompensated waiting period (C) following the cessation of covered employment, unemploy-

ment after the expiration of the maximum benefit period to which the ex-employee is eligible (E), unemployment disqualified from benefits because of voluntary termination of employment, discharge for cause, seasonal work limitations, work terminations because of disability, labor troubles, etc. (B, F, and H), and finally unemployment disqualified for benefits because the employment record in the base year had been insufficient to give eligibility (G).

This display has been arranged as a percentage distribution of the "covered workers". They numbered in the year 1939 for the country as a whole possibly 31,000,000 separate persons. (This seems to be the sum total of those with some wage records in all the State agencies carrying this program, though records have not been uniformly maintained in all jurisdictions.) There is an operating lag in determining exact data. There may have been approximately 23,000,000 man years of work in covered employment represented by these 31,000,000 individuals, so that 8,000,000 man years of uncovered work or unemployment remains to be accounted for. The smooth curve which separates the period of covered employment from the rest of the time is drawn somewhat free-hand but is the result of a limited inspection of the employment data. It appears from this chart that a large proportion of the employees had too much employment to be eligible to benefits. It is also evident that a tangible proportion of the employees had too little employment to qualify for benefits. The area of protection, one might say, is indicated by the charts to cover half of the employees. Among this half much of the time not spent in employment is non-compensable for one of the reasons there shown.

This chart may be called "schematic". It suggests rather a method of approach than an indication of results. In the array the number in each percentile may be approximately 300,000 persons. The curve which borders the area of covered employment shows at each point not average covered employment but the estimated absolute number of weeks of covered employment for each man in that group. In the upper part of the picture this is not the case. Those individuals included in the tenth percentile each have seven weeks of their working year in covered employment. They *average* about twelve weeks of non-compensated unemployed time (ineligible to benefits), about one week of sick time,

about nine weeks of unpaid home work, about three weeks of work in employments covered by the old-age and survivors program but not by unemployment compensation, and about twenty weeks of other non-covered employment. For the men who have 45 weeks of covered employment the other seven weeks seem to be divided into *averages* of one week of waiting period, a fraction of a week of unemployment disqualified for benefits, two weeks of uncovered employment, one and a half weeks of unpaid home work, and most of the rest in compensable unemployment. The reasons why such unemployment then is not compensated are carefully listed in the chart. These proportions are plausible—they are more prophecy than history.

There is a large area of the population embraced within the nominal coverage of unemployment compensation. A much larger proportion of the people is affected by the Employment Service. The boundary lines create anomalies. It is difficult to justify the disqualification of all the unemployment in (G) which is not compensated because an inadequate number of weeks of covered employment have been registered. It is the practical result of any insurance plan which is not universal that it draws arbitrary boundary lines between the beneficiaries and the non-beneficiaries.

It is not the purpose of this study, however, to consider particularly the social values of the program nor the awkwardness of denying protection, but rather to indicate the necessity for further quantitative valuation of a new social service and the actuarial work required to determine the true size of the areas sketched in the charts. Chart II theoretically represents only one year of protection and in doing so it *assumes a telescoping of the base period and the benefit year* in a way which somewhat belies the nature of the qualifying base period of the subsequent benefit year. It is probably closer to the conditions of 1939 than to those of 1932 or 1933. In these earlier years work was much more effectively shared between those who otherwise would have had either full-time employment or none at all. It is probably closer to 1939 conditions than to those of 1942, when it is to be expected that a great many more people will work in covered employment and when a much smaller proportion of those people need show such long periods out of work.

In spite of the limitations of Chart II it suggests a certain num-

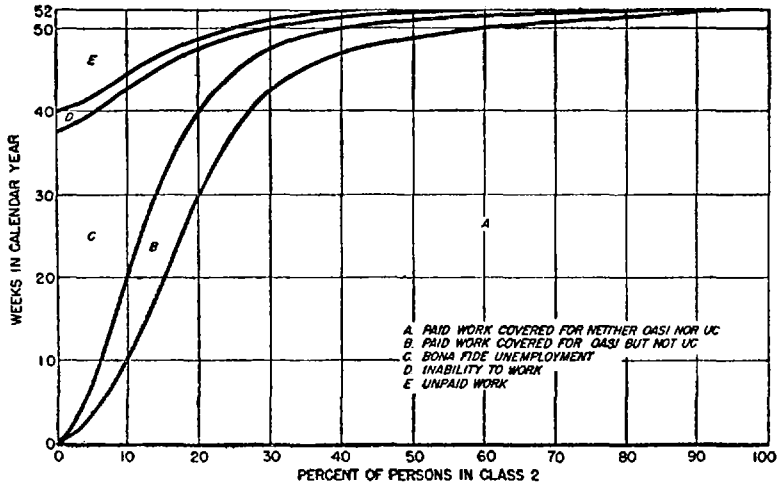
ber of safeguards in the very structure of the plans for granting benefits under unemployment compensation. By these safeguarding limitations the compensable area is held within reasonable bounds in comparison with the area of covered employment. While the chart can be said to show three separate types—the fully employed individuals, the slightly employed individuals, and the individuals with enough employment to secure benefits—we do not in reviewing individual workmen know promptly to which category a given man belongs. There are 51 separate jurisdictions and 51 formulas. The chart is but a single year's composite picture, theoretically in retrospect. There will be a greater in-and-out movement between the different portions of the chart as time goes on. While unemployment compensation at the present time builds a new base period in each successive period of time with no benefits carried over from the past years, the defense emergency may well change this and complicate benefit payments by relating benefits to the employment records of several years.

E. *Those Employed But Not in Employment Covered by Unemployment Insurance—Chart III*

Chart III, dealing only with those individuals lacking work covered by unemployment insurance, is limited to those who have some work during the year but in occupations covered by old-age and survivors insurance though not unemployment compensation or in occupations excluded from both insurances. Because of the absence of Social Security records for many of these employments, Chart III is even more artificial than Chart II. The two charts include all individuals with any paid work whatever during a single hypothetical calendar year. There are excluded, then, from these two charts that group of individuals called "the unemployed" who have had no employment whatever throughout the year. Even so, we are assuming that with persons represented on the two charts and the unemployed we have classified as gainful workers with some work during the year some 56,000,000 separate individuals. The wage records developed by both insurances show tremendous numbers of workmen who have had some degree of work within the year. The practical listing of persons with only a fraction of a day's paid work within the year may in time show that instead of 56,000,000 separate persons there are considerably more than 60,000,000 such persons in a year as good as 1939.

CHART III

ESTIMATED DISTRIBUTION OF MAN-YEARS REPRESENTED BY CLASS 2,
ACCORDING TO WORK STATUS



The additional 4,000,000 above the 52,000,000 listed in the 1940 census have probably rarely been included in any total statement of the labor force. They have occupied the shadowland between complete absence of paid work and any satisfactory work relationship. In old-age and survivors insurance there are millions of persons who have had less than \$100 of earnings credited within a calendar year and millions who have had wages credited in one calendar year but none whatever in the next. These two categories are largely made up of school or college students and housewives who are attracted to certain part-time jobs in one year and not in the next.

The two charts taken together evidence the sort of information which ought to be accumulating in the administration of the two insurances. With the extension of these insurances to those occupations now excluded, the recorded data will be greatly extended. Such information for a single year has most limited significance. Were these charts a factual representation instead of merely a framework indicative thereof, it would even then be desirable to point out the low credibility properly accorded such limited ex-

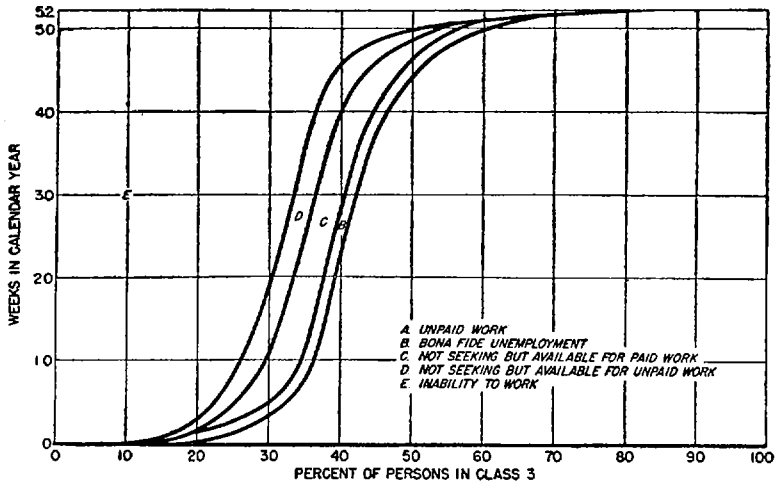
perience. The charts suggest certain types of study yet to be developed and necessary in any actuarial appraisal of employment.

F. *Those Without Paid Work—Chart IV*

Chart IV classifies those who currently lack all wage relationship during the current calendar year into five categories according to the duration of their unpaid work. We have also indicated the average duration of bona fide unemployment, where work is being sought, periods when work is not being actively sought but the persons are able to work, and periods of inability to work. It is assumed that this inability is of various types, including disability, confinement in institutions, and mere unemployment.

CHART IV

ESTIMATED DISTRIBUTION OF MAN-YEARS REPRESENTED BY CLASS 3,
ACCORDING TO WORK STATUS



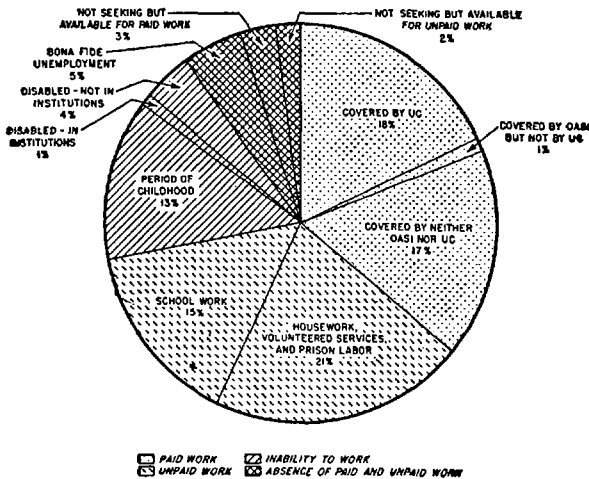
G. *Percentage Distribution of 1940 Census Population by Man Years—Chart V*

Chart V, as did Chart I, deals with the entire population. This chart, however, distributes the man years according to activity or potential activity, although possibly in a somewhat arbitrary fashion. With the growing importance of the defense program

some portion of the man years represented by the group of unpaid workers should be recaptured. What is graphically termed "work rustiness" should be polished up. Children will develop into workers in time. As has been earlier suggested in this paper, the housewives offer a large potential paid work capacity. Among the "leisure class" there are numbers who, believing themselves needed as workmen, will terminate their leisure attitude and go to work. There is already evidence that many with special skills long unused are finding employment and others are using their special skills for a longer work week. Much added work capacity lies in such reduction of unused time.

CHART V

ESTIMATED PERCENTAGE DISTRIBUTION OF MAN-YEARS REPRESENTED BY 1940 U. S. CENSUS POPULATION, ACCORDING TO WORK STATUS



H. *The Number of Persons with Various Periods of Unemployment Within a Year—Chart VI*

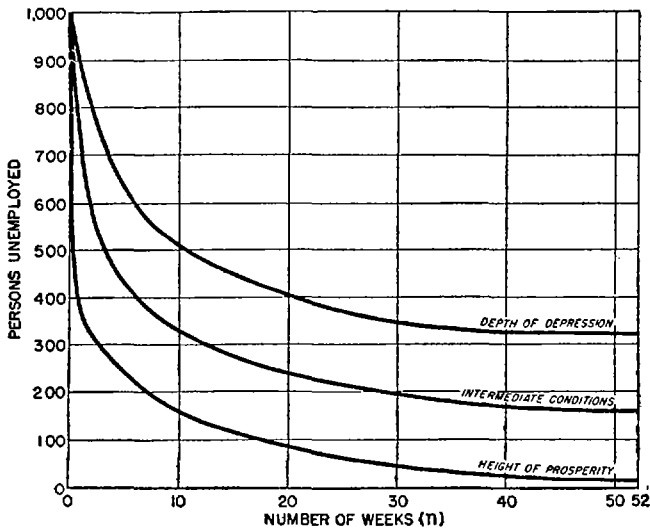
Chart VI indicates the curves of the unemployed arranged somewhat like the l_x function of life tables. The radix is 1000. The curves are sketched in very freely but show from certain plausible approaches what happens to 1,000 individuals becoming unemployed as time passes. The downward slope of the curve indi-

cates returns to employment or the elimination from unemployment by disability or death. The curves indicate the cumulative effect of several spells of unemployment taken together over a year's time, and it could be prepared only at the end of a full year of observation. Such curves should become available from the tabulated experience of the various State agencies—after time has allowed mature review. The three curves represent what might be the situations under widely varying economic conditions.

CHART VI

ILLUSTRATIVE CURVES: NUMBER OF PERSONS WITH AT LEAST " n " WEEKS OF EMPLOYMENT WITHIN A YEAR

Radix = 1,000 persons with some unemployment



I. *Limitations of the Data*

These displays have been made after considerable discussion and a certain amount of familiarity with the subject. Much work yet remains to be done to make such exhibits adequate portrayals of actual conditions. In the early years of social insurance programs the belief that actual administration is more important than actuarial analysis may itself postpone somewhat the establish-

ment of comprehensive frameworks for cost study. Most of what may be called the actuarial valuation remains to be done in all fields of social insurance. It is over six years since the Committee on Economic Security initiated study in this country of certain phases of such protection and over five years since administration of the Social Security Act got under way. In the early years each problem is new, each decision sets a precedent. Most decisions, moreover, must be made before the administrators are really ready to make them. Actuarial review will be coordinate with future administration. The programs are very largely State administered and involve coordination at local, State and Federal levels.

X. THE IMMATURITY OF CURRENT EXPERIENCE

The charts seem to represent cross-sections of observation. A social insurance plan is outlined to-day in order to secure organization and administration for several decades into the future. This is thoroughly understood in life insurance, where there is so great a contrast between a one-year term policy and an ordinary life policy. In any insurance program there is a considerable difference between the long-range importance and the temporary expediencies of a given year. While to-day in most unemployment compensation programs the base period determines the benefits for the benefit year and annually a new base period and a new benefit year come into view, continuity may seem more and more important when the current self-sufficiency of a single year becomes open to question. Social policy may well require more recognition of continuity even as in pension fund discussion growing attention is given to "vested rights".

This continuity has been considered somewhat in connection with old-age and survivors insurance, though there are numerous anomalies from the standpoint of long-range social policy which must be considered as experience gradually develops. The benefits in unemployment compensation will continually vary. Eventually, the non-typical results of such years as 1938, 1939, and 1940 will fit neatly into a long-range perspective which is now rather difficult to forecast.

In connection with the defense program it is already being sug-

gested that unemployment compensation benefit rights of men entering military service should be "frozen" so that when they return to private employment they can pick up these rights where they left them rather than find them completely eliminated by the very structure of the plan. This recommendation will probably be extended to considering the defense activities of a civilian character as well, both for Federal office work and for special agricultural duties.

In the early development of the unemployment compensation plans this factor of continuity was recognized in some State programs by granting a longer duration of benefits for those who had worked for several years without drawing benefits. One definite advantage would follow from varying benefits in accordance with work history over many years. There would then develop a considerable volume of case histories most helpful to long-range cost analysis.

Without emphasizing the range of individual protection which would result from the carrying over of benefits from one year to the next, it is essential to view the whole unemployment compensation program as involving experience throughout a *long* business cycle at least. The accumulation of reserves during relatively good times or times of low compensable unemployment so that in times of high compensable unemployment there shall be adequate funds for the payment of benefits requires careful study as to the variations in employment stability, and in the seriousness of unemployment. For the full delineation of employment and unemployment history a three-dimensional graph was constructed by Mr. Harry Winslow for the Committee on Economic Security in conjunction with the studies made by that Committee in 1935. The changing structure of unemployment was represented by a surface, the surface itself developed from a frequency distribution curve of the unemployed by duration of unemployment.

Over a decade or more of time it is possible to indicate variations in the extent of school attendance, variations in work continuity among the apprentice group, variations in work persistency among the elderly individuals, and even the differentiation between the hard core of unemployment, the hard core of employment, and the intermediate group of individuals who shift from employment to unemployment and back again.

XI. THE UNUSED MAN POWER AND THE CURRENT DEFENSE EMERGENCY

For the defense program and for the continuation of production of goods and of services which belong to the ways of peace there are differences of opinion as to the inherent productive capacities of the relatively well constructed American production machine. There are those who believe that because of the large reserve labor force virtually no reduction in living standards will be required when we allocate a growing proportion of our labor time to the duties directly appertaining to defense. These individuals believe that in the steady reduction of hours worked during the past two or three decades we have nevertheless maintained on the part of most of the members of the community certain work habits which can now be developed so as to utilize a major portion of the day or the week for work. They contend that the population as a whole would prefer to reduce its leisure time considerably in order to continue earning enough for the purchase of customary goods and services. They contend that the added responsibilities developed by defense can be largely cared for by the increased working time.

There are many others who feel that the appraisal of work reserve has been counting upon the existence of more usable idle time than has actually been the case in the recent past. They believe that too large a share of the apparent labor reserve represents virtually unemployable individuals or individuals with marked work handicaps so that the use of the residual competent but unemployed workers and even the spare time of those who are not working to full capacity will together be insufficient to meet the added requirements of the defense emergency. They believe that if we are to meet defense needs promptly and efficiently priorities must be established and that beyond drawing upon the time of the married women, of the elderly individuals, and of other time not sufficiently utilized that it would still be necessary to transfer a considerable amount of man power from occupations not directly connected with defense.

As we learn the facts we can enter them upon our charts in constructive fashion so as to replace the theoretic areas by areas representing actual history.

XII. THE CURRENT FIELD OF COST DETERMINATION

We have now reviewed briefly a considerable diversity of presumptive data concerned with the employment and unemployment existing throughout the Nation. The unemployment compensation agencies in the administration of their programs must accumulate data showing as well as possible certain quantitative information. It would be well for them to develop data as to the number of individuals covered, comparable to this record in old-age and survivors insurance. It is essential that they show the amount of time worked for each employee, at least as to weekly work units. It is essential that they show the income which determines tax receipts, the extent of unemployment with sufficient data to determine the facts of benefit receipt. The program of old-age and survivors insurance punctiliously shows for most of these same individuals specific amounts of earnings in employment covered by old-age and survivors insurance, a field somewhat wider than that of unemployment compensation. An attempt to develop from the two sets of records information as to time limits of employment and unemployment, of the amount of wages received during employment, the amount of compensation granted during unemployment will require considerable accumulation of data so as to show both national trends and State variations from those trends. Most interesting suggestions have recently been made by the Social Security Board as to relating the financing of State programs more closely to the whole national program of unemployment benefits. In the administration of both plans special studies covering the aged, the working staffs at the high ages and at normal ages, and the children who will be full-time workers later on may develop. Habits as to school attendance, habits as to work within the home or as to unpaid family labor without the home, the breakdown of the year into working and vacation time, work programs for use by those at the higher ages, all of these studies and more are required for an understanding of the costs and the methods of functioning of both old-age and survivors insurance and of unemployment insurance.

Important also in these studies will be fuller reports of the activities of those above age 65 who are drawing old-age assistance from State agencies since the grants are largely subsidized by the

Federal Government. The balanced financial situation of the future will depend upon a combination of two interrelated functions:

- (1) The body of employed individuals on wage or salary or in constructive family employments;
- (2) The body of unemployed individuals who serve as a virtual dead weight against that part of the community competently at work and who make up the group of claimants.

The total benefits of the second class must represent amounts not out of line with the national economy.

Having developed charts as to the utilized and non-utilized work capacity of the community since we need this data now for defense, we should later be in a preferred position to carry forward the same type of analysis in relation to the occupations of peace. Sober discussions are appearing both in Great Britain and in the United States concerning the transition from the emergency to peace-time activities.

If we are to remedy the shortage of modern housing, if we are to substitute good roads for the many bad ones, if we are to complete the needed flood control facilities, if we are to bar from all the good roads those cars so obsolete as to be a menace to safety, if we are to modernize those branches of our industry where modernization is already overdue, we will need to maintain a thorough-going controlled record system as to the occupations which can be handled by transfer from the then less important defense industries. We will, in short, need a thoroughly modern, efficient employment service which is being seriously trained to-day and which can use that training for to-morrow's transition.