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THE CONCEPT OF UNEMPLOYMENT[1]

SUMMARY

Present status of the concept of unemployment, 1. — Willingness to work: gross and net unemployment, 7; statistical indications for 1940, 11. — Employability: marginal employables, 13; legal unemployables, 14; cumulative unemployment, 15; institutional unemployables, 18. — Suppressed unemployment: part-time unemployment of wage workers, 19; part-time unemployment of non-wage earners, 20; unproductive employment, 20; statistical estimates, 21. — Summary of statistical approximations, 25. — Recommendations for improving current estimates, 27. — Conclusion, 28.

Present Status of the Concept of Unemployment

Lack of understanding was the basis for Nassau Senior's conviction that irregular employment is a privilege which workers are willing to pay for through lower incomes.[2] We are beyond this insipidity (as Marx described Senior's comments), but we are not beyond others no less grievous. The most serious misconception, perhaps, is widely held in economic theory, statistical practice, political policy, and public thinking. This misconception is that unemployment is, at any given time, an absolute quantity of unused labor time.[3]

1. This article was written with the support of a Guggenheim Fellowship, a research grant from Wesleyan University, and a membership in the Institute for Advanced Study, Princeton, New Jersey. My thanks are due to Susanna Long, my wife, and Marjorie S. Belcher, my research assistant, for their careful aid.

2. Nassau W. Senior, An Outline of the Science of Political Economy (Library of Economics edition, 1938), p. 208: "We believe, after all, that nothing is so much disliked as steady, regular labour; and that the opportunities of idleness afforded by an occupation of irregular employment are so much more than an equivalent for its anxiety as to reduce the annual wages of such occupations to below the common average."

3. Another misconception is that unemployment can be cured without necessarily being understood or measured. Still a third is that we need know

Many economists, it is true, concede the multiplicity of any economic idea; but even when such a concession is made the current attitude implies that, for practical purposes, unemployment can be roughly approximated by a single definition and a single statistical magnitude. Of course, no statistical magnitude, when finally approximated, is more vigorously challenged than is an estimate of unemployment. Yet the challenge is usually made on charges of statistical inaccuracy. *It is not often fully realized that conceptual limits of unemployment are not definite boundaries, but rather wide battlefields over which economic and social philosophies are still fighting.*

The suggestion that there is more than one definition and estimate of unemployment deeply disturbs some statisticians, for it seems to imply endless complications in an already difficult job of measurement. Actually, not all complications would be increased by recognition of the multiplicity of the concept. And the measure would be more honest and useful. Moreover, statisticians are justified in using an absolute concept of unemployment only if they can demonstrate its practical reliability. To my knowledge the use has been based on no such quantitative demonstration. This paper will suggest, I think, that the practical variability in measures of unemployment due to the concept used is large and unstable, and that single-definition estimates of unemployment, even when made with care as to statistical method, are apt to be unsafe for many, if not all, uses. Before proceeding to the main discussion, it may be useful to review the literature of the concept, which falls into three main groups.

The first group is composed of the literature before 1908. The body of it is not large, the theoretical part of it may be represented by the writings of F. A. Fetter and H. Stanley Jevons,[4] and it can hardly be said to have defined unemployment at all. The treatments were confined to implications that the unemployed tend to be unemployable, either absolutely or relative to the wages they

only fluctuations in unemployment, not absolute amounts. Yet we cannot be sure of fluctuations in unemployment without knowing absolute amounts and, in any case, we should be interested in both size and composition of the absolute amounts, rather than in mere fluctuations in size alone.

4. Frank A. Fetter, The Principles of Economics (1904), p. 183; H. Stanley Jevons, "The Causes of Unemployment, I," Contemporary Review, Vol. XCV (1908), p. 550. See also Don D. Lescohier, The Labor Market (1919), p. 69.

demand. This failure of the theory to approach the concept seriously had its counterpart in the practice adopted by the United States Censuses of 1890 and 1900 — leaving the definition up to the unemployed.[5] The Censuses concerned themselves only with defining a gainful worker. This practice persisted in many local surveys[6] as late as the first part of the Great Depression.

The second group of literature on the concept has sprung up in the last three decades. Its characteristic is an attempt to mark scientifically the absolute limits of unemployment; but aside from method, the definitions often have little in common except words. The definitions of this group attempt to confine unemployment to persons *willing and able to work but not working;* but we shall see that they differ widely in their application of these terms to strikers, self-employed persons, family workers, persons temporarily ill or on lay-off, persons working less than full time, inexperienced workers, and so on. Moreover, they differ widely in respect to the treatment of "willingness" or "ability" to work as functions of economic conditions. One set of theoretical definitions seems to take willingness to work for granted, but relates ability to reasonable, or usual, or prosperous conditions.[7] The other set of theoretical definitions seems to take ability to work for granted, but makes willingness a function of either worker-stipulated (real?) wage rates;[8] prevailing real wage rates;[9] reasonable wage rates;[1] wage

5. Twelfth Census of the United States: 1900, Special Reports, Occupations at the Twelfth Census, pp. ccxxv-ccxxvii, ccl-cclii.

6. Portland, Oregon (1914); Columbus, Ohio (1921–1925); Bloomington, Indiana (1930); Minneapolis, Duluth and St. Paul, Minnesota (voluntary registration, 1932); Washington State (cities of 11,000 or more, 1934).

7. Percy Alden, The Unemployed, A National Question (1905), p. 32; J. A. Hobson, Work and Wealth (1914), p. 229; Frank T. Carlton, Labor Problems (1933), p. 313; Solomon Blum, Labor Economics (1925), pp. 185–86. It is possible that the writers would also relate willingness to work to the same conditions, but they do not say so.

8. Philip H. Wicksteed, The Common Sense of Political Economy, Vol. 2 (1938), p. 637: "at a living wage or at the wage which he demands;" F. W. Pethick Lawrence, Unemployment (1922), p. 7.

9. R. A. Nixon and P. A. Samuelson, "Estimates of Unemployment in the United States," Review of Economic Statistics, Vol. XXII (1940), p. 102; and Russell A. Nixon, The Problem of Employability: A Consideration of Certain Fundamental Aspects of the Labor Market (1940), (unpublished doctoral dissertation, manuscript in the Harvard University Library), p. 13. Although the definition of these writers is formally incomplete, their formulation of the concept seems to be much the best of the scientific group.

J. M. Keynes, The General Theory of Employment, Interest and Money (1936), p. 15, 289: "Men are involuntarily unemployed if, in the event of a

rates low enough for employability;[2] or wage rates not stated at all.[3] The theoretical definitions for this group are therefore vague and conflicting. And when they recognize unemployment as a disequilibrium between supply and demand for labor expressed as functions rather than constants, they make their bows to only a token number of variables. Their chief defect, however, is the fundamental one, as we shall see, of being single-boundary definitions.

The statisticians of the scientific group define the unemployed as those who describe themselves as willing and able to work. The definitions vary according to the devices employed to prove or modify the worker's self-classification. One group would apply no test or modification at all;[4] another would restrict (or expand) the unemployed to those who usually work[5] or would be working,

small rise in the price of wage-goods relatively to the money-wage, both the aggregate supply of labour willing to work for the current money-wage and the aggregate demand for it at that wage would be greater than the existing volume of employment." This rather obscure statement seems to mean that persons who would work and would be employable at lower real wages, but cannot get work because existing real wages are so high as to make them unemployable at the level of effective demand, are involuntarily unemployed. Stated in another way, if the marginal utility of the real wage exceeds the marginal disutility of the labor, then workers are involuntarily unemployed. The classical economist would call them voluntarily unemployed (and therefore not unemployed at all), but Keynes feels that this taxonomy rests on a mistaken notion that labor can accept general reductions in real wages without disturbing the level of effective demand (259–60). Voluntary idleness, or refusal to work for less than worker-stipulated real wages, and frictional idleness, Keynes holds compatible with full employment.

Keynes cannot be charged with overlooking the relativity of employability, but he can be charged with confining the relativity to wage rates, which is surely only one of the variables.

1. B. S. Rowntree and B. Lasker, Unemployment: A Social Study (1911), pp. xiii-xiv.

2. J. A. Schumpeter, Business Cycles, Vol. 1 (1939), pp. 42–43.

3. P. H. Douglas and A. Director, The Problem of Unemployment (1931), pp. 5–6; Warren B. Catlin, The Labor Problem in the United States and Great Britain (revised, 1935), pp. 94–95; Adolphe Landry, "Réflexions sur les théories du salaire et le chômage," Revue d'Economie Politique, Vol. XLIX (1935), p. 1679.

4. Census of Partial Employment, Unemployment and Occupations: 1937. Final Report, Vol. I (1938), pp. ix-x. Local surveys: Champaign-Urbana, Illinois (1929); Buffalo, New York (1929–1932); Lincoln, Nebraska (1932, 1933, 1937, 1939).

W. S. Woytinsky, "Controversial Aspects of Unemployment Estimates in the United States," Review of Economic Statistics, Vol. XXIII (1941), p. 69.

5. Fifteenth Census of the United States: 1930, Unemployment, Vol. 1,

if work were available;[6] and a third applies the theoretical test of actively seeking work.[7] The definition now in vogue is the one which employs this test of seeking work. It is the test used by the 1930 and 1940 censuses and the monthly WPA poll. In spite of claims of objectivity, the mere statement of the unemployed worker that he is seeking work is probably the chief reliance in large communities. Moreover, this latter statistical definition ignores the dependence of willingness and ability to work upon economic conditions, and in this respect may be inferior to those previously mentioned, which define employability in terms of usual or normal conditions. But the really fundamental defect of all the statistical definitions is the same as that of the theoretical definitions of the scientific group: the failure to recognize that there is more than one definition and estimate of unemployment.

The idea of the multiplicity of economic concepts in general and of unemployment in particular has not gone unrecognized. David Friday applied it in relation to value theory twenty years ago,[8] and Frederick Mills to unemployment several years earlier.[9] Solomon Blum has expressed it best:[1] "In accordance with the

pp. 5–13. Estimates of unemployment based on the 1930 census as a benchmark: National Industrial Conference Board, American Federation of Labor, Congress of Industrial Organizations, R. R. Nathan.

6. Cincinnati, Ohio, surveys (1929–40).

7. Census of Partial Employment, Unemployment, and Occupations: 1937. Final Report, Vol. 4, the Enumerative Check Census, pp. 2–3. Sixteenth Census of the United States: 1940, Instructions to Enumerators — Population and Agriculture, pp. 49–56. Number of persons, 14 years old or more, who were seeking work or, if not seeking work, were employed on public emergency work. The WPA current poll uses the same definition. U. S. National Institute of Health, the National Health Survey, 1935–36; Characteristics of the Urban Unemployed, Preliminary Reports, Population Series D (1938), p. 2n; WPA surveys of Birmingham, Toledo and San Francisco (1939); John N. Webb and Joseph C. Bevis, Facts About Unemployment (Social Problems, No. 4, 1939), p. 7; John N. Webb, "Concepts Used in Unemployment Surveys," Journal of the American Statistical Association, Vol. 34 (1939), pp. 54–57; Aryness Joy and Loring Wood, Discussion of Webb, "Concepts Used in Unemployment Surveys," Journal of the American Statistical Association, Vol. 34 (1939), pp. 59–60. Local Surveys: Brazil, Indiana (1936); Philadelphia, Pennsylvania (1929–38).

8. David Friday, "An Extension of Value Theory," this JOURNAL, Vol. XXXVI (1921–22), pp. 197–219.

9. Frederick C. Mills, Contemporary Theories of Unemployment and Unemployment Relief (1917), pp. 8–9.

1. Labor Economics (1925), p. 185. See also G. S. Watkins and P. A. Dodd, Labor Problems (third edition, 1940), pp. 173–74; Willford I. King, "Changes in Employment in the Principal Industrial Fields, January 1, 1920 to March 31, 1922," Ch. VI of Business Cycles and Unemployment.

general rule of all economic definition, it [unemployment] is not to be defined absolutely . . . but in terms of social consciousness at a given time and in terms of the uses to which the definition is to be put."

As it stands now, the prevailing concept of unemployment is overspecialized. In the default of classical theory the concept owes nearly everything to either the administrative problems of unemployment insurance or the problems of measuring unemployment statistically in order to present the public with a number. As a result, both the concept and the statistics have not been adaptable for other uses. Some of these uses, such as measuring war potential or the relief problem, may seem rather remote from the unemployment problem, though the latter is incontrovertibly an important part of both; but certainly measures of unemployment should test the need or effectiveness of programs for maximizing the efficiency of the economic system. Unemployment in its manifold aspects may furnish our best indexes of a nation's *morale* and *productive* efficiency in relation to its potential. The present concepts and measures, in their efforts to be omniscient, do not seem well adapted even to the uses out of which they grew, let alone to uses which are foremost in economic and political affairs.

The concept of unemployment must be analyzed through interpretations of (1) willingness to work, (2) employability, and (3) employment, and these interpretations must not consist of absolute meanings but rather meanings tied to the purposes underlying investigations of unemployment. The following outline indicates the chief problems:

A. Willingness to work — gross and net unemployment

B. Employability
   1. Marginal Employables — varying with economic and social conditions
   2. Legal Unemployables — actual and potential
   3. Cumulative Unemployment — unemployables from economic and social causes
   4. Institutional Unemployables — strikers

C. "Suppressed" Unemployment
   1. Part-time unemployment of wage workers
   2. Part-time unemployment of non-wage workers
   3. Unproductive employment

Willingness to Work

Many theoretical definitions and all statistical definitions give the impression that willingness to work is what mother love ought to be — independent of the character and mood of the subject and of the attractiveness of the object. Actually, of course, willingness to work may be interpreted to mean willingness to work *long* or willingness to work *hard*, and in either case is some sort of function of a great many factors: money wage rates, real wage rates, wage incomes of family units, non-wage real incomes, working conditions, difficulty and expense of getting jobs,[2] expectations of future employment possibilities, attitude of labor unions toward elasticity of demand for labor,[3] and state of indebtedness. These functions themselves change in shape over time with institutional developments such as in advertising, credit, and education.

It is sometimes recognized that the number of persons unemployed at a given time may differ from the number of jobs needed. Here are two magnitudes to which it seems convenient to apply the contrasting terms *gross* and *net* unemployment. A more rigorous statement of the two concepts would be: Gross unemployment is the additional number of equivalent "full-time"[4] jobs needed to offer all "normally employable" persons as much work as they desire under *current* economic and social conditions. Net unemployment is the number needed under "*normal*" economic and social conditions. The conceptual relationship between gross and net unemployment, as well as the limits of the problems of interpreting employability and employment, to be discussed at length below, are diagrammed on Chart I.

The difference between gross and net unemployment is the

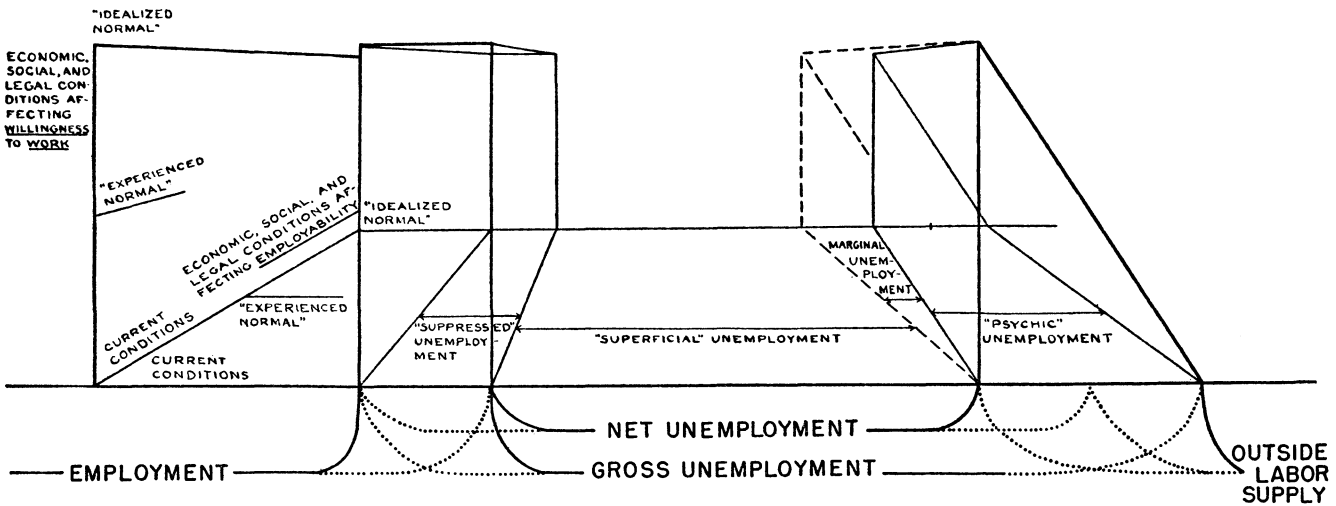
2. Many persons who would be glad to work for current wages and under current conditions are not willing to undergo the fatiguing, embarrassing, and discouraging business of job-hunting. It is not only unpleasant and unrewarding work in itself, but it is expensive. Consequently, many persons become willing to work when jobs become easily available and lose their willingness when job-hunting becomes more difficult. This relation of labor supply to ease of getting work applies especially to young women of the middle class, college students during vacation or even during the year, and reasonably well-off married women.

3. Nevertheless, however unsound may be the attitude of labor as a group, that lower efficiency wages will not solve unemployment, it does not help its members to class them as unwilling to work at an employable wage when as individuals their willingness may be boundless.

4. See pp. 25–26, 29 (a) n, 30–32 for discussion of the meaning of "full-time."

CHART I

CONCEPTUAL LIMITS OF UNEMPLOYMENT AS FUNCTIONS OF "SETS" OF ECONOMIC, SOCIAL, AND LEGAL CONDITIONS



The limits diagram unemployment linearly rather than spatially. Contained within the limits of interpretation of employment ("suppressed" unemployment) are part-time unemployment of wage and non-wage workers and unproductive employment of all types of workers. Contained within the limits of interpretation of employability (marginal unemployment) are economic, legal and institutional unemployables and marginal employables. Contained within the limits of interpretation of willingness to work ("psychic" unemployment) is the difference between gross and net unemployment.

difference in willingness to work under current and under "normal" economic conditions. It is the difference in counter-movements of two classes. One class is composed of persons who would wish more work, if times were "normal," than they wish under current conditions. If current conditions be those of depression, many comfortably situated persons, "normally" employable and wishing to work, refuse either to work at depression wages and working conditions, to accept the only kind of work they can get, or to undergo the fatigue, embarrassment, and expense of hunting for work at difficult times, considerations not often recognized at their true importance.[5] These persons will accept jobs and overtime work as conditions change to their liking. The other class contains successful and unsuccessful job seekers, forced into the job market by unemployment of the primary wage earner or by reduced family income, who withdraw from either a job or the search for a job upon arrival of better conditions — the familiar case of forced entries. The problem of the statistician is to determine which of these two counter-movements is greater at a given time, and whether, therefore, gross unemployment is larger or smaller than net unemployment and "psychic" unemployment is positive, zero or negative.

Some economists believe that the additions to the labor supply in depressions are greater than the subtractions from it,[6] and W. S. Woytinsky undertook to show statistically that depression additions to the labor market of secondary workers seeking employment are an important part of the general volume of unemployment.[7] Two criticisms of his method have been made. The first is that of D. D. Humphrey, that Woytinsky's assumptions produce

5. The traditional calculus between working or not working has been the marginal utility of the money-wage $\gtrless$ the marginal disutility of the work. More realistically, the choice is between (*a*) the subjective expectation of marginal utility of the probable money wage of the probable job, minus the probable marginal utility of the probable money expense of finding the job, and (*b*) the expectation of the probable marginal disutility of the probable job, plus the probable embarrassment, discouragement and fatigue of hunting the job.

6. Testimony of Leon Henderson before the Temporary National Economic Committee, Part 1, Economic Prologue (75th Congress, third session, 1938), p. 162.

7. W. S. Woytinsky, Additional Workers and the Volume of Unemployment in the Depression (Social Science Research Council, Pamphlet Series No. 1, 1940), pp. 1, 17, 26.

his results.[8] Another criticism, also noted by Humphrey, is that Woytinsky concerns himself only with depression entrants into the labor market and overlooks depression withdrawals.

One may recognize the importance of depression withdrawals without accepting Humphrey's thesis that the existence of a net increase in labor supply in depression is merely "loose talk" or that the value of measuring the volume of additional workers is "largely negative."[9] No one has proved that contrary movements in the labor supply always cancel out, even approximately.[1] If there should turn out to be, at times, a substantial difference of a million or so between gross and net unemployment, it would be risky to say that the value of measuring it would be "largely negative."[2] Each concept is important for a purpose. The unemployment of one person is not necessarily compensated, for him, by the overemployment of another. Nor is an unemployed person necessarily an admirer of a system that denies his usefulness, in spite of Senior's faith in the fascination of irregular work. Indeed, thoughtful people were concerned with the effects of unemployment upon morale in times which now appear serene. Addison, for example, observed that "Men, soured with poverty, and unemployed, easily give into any prospect of change."[3] From this view, unemployment should be measured so as to reveal the number of morale-cases which exist at any one time.

The definition of gross unemployment recognizes this problem of people who consider themselves unemployed, though their unemployment may stem from an increase in the labor supply not

8. D. D. Humphrey, "Alleged 'Additional Workers' in the Measurement of Unemployment," Journal of Political Economy, Vol. 48 (1940), pp. 412–19. See also W. S. Woytinsky, "Additional Workers on the Labor Market in Depressions: A Reply to Mr. Humphrey," Journal of Political Economy, Vol. 48 (1940), pp. 735–39.

9. Don D. Humphrey, op. cit., p. 418.

1. Humphrey does not overlook the possibility that withdrawals from labor supply in depression may substantially exceed entries. P. 419.

2. As Woytinsky observes, "Mr. Humphrey thinks that 'the value of measuring the volume of additional workers, if that were possible, is largely negative.' As the questioned measuring is a necessary part of a realistic measurement of unemployment, he seems to imply that the analysis of the volume of unemployment and of its structure would likewise be of negative value. In this I disagree with him decidedly." Op. cit., p. 739.

3. Quoted by Samuel Johnson under "Unemployed" in his Dictionary of the English Language . . . (1806), Vol. 2, p. 5Y2 (Paging irregular). Cf. Thomas Carlyle, "A man willing to work and unable to find work is, perhaps, the saddest sight that fortune's inequality exhibits under the sun."

independent of the volume of unemployment itself, and may be no loss from a production point of view. This is the definition most closely approximated both by statisticians and theoretical economists, even though the latter have traditionally concerned themselves with the productive efficiency rather than the psychology of the economic system.

Net unemployment has entered into economists' definitions only through an occasional attempt to exclude unemployed additional workers.[4] This view of unemployment is implicitly concerned with loss in national income when fewer persons work than would work under what is usually described loosely as full employment. However, nothing in my statement of net unemployment considers the inefficiency of this potential labor power or the manipulation required to swap re-employed labor time for withdrawing labor time. Net unemployment is truly complex, and its measurement, dealing with simultaneous motivations, must always be a delicate problem.

In time of deep depression net unemployment may well be very different from the gross unemployment which all our measures approximate. At difficult times income reductions reach families of ordinarily comfortable circumstances, who normally rely on the family head for full support. From these families may come a significant percentage increase in supplementary wage seekers, especially wives, as additions to the labor force. On the other hand, in the many families still relatively insulated from unemployment and income reductions, persons of marginal employability or willingness to work may withdraw from the labor force because of the fierce and apparently hopeless struggle for jobs. It may be impossible to predict on *a priori* grounds whether gross unemployment will exceed or fall short of net unemployment, but one should not suppose the counter movements will always cancel out and that gross and net unemployment will always be equal.

A tentative statistical indication, however, exists that gross and net unemployment were approximately equal and that psychic unemployment was zero for 1940. This may be derived from the monthly estimates for April to August 1940 and 1941 of the variations in employment, unemployment, and the labor force based on the WPA monthly sample poll. The basis of these estimates has not yet been released in detail, but a general description is given

4. With the possible exception of Keynes' definition.

by Howard B. Myers in a recent article.[5] At the end of 1940, the poll was based on as many as 20,000 households selected at random within 50 representative counties. The surveys cover the week preceding the fifteenth of each month and follow in general the definitions of the 1940 census of population.

The amount of psychic unemployment is indicated by a comparison of the ratio which the decline in the labor force bears to the decline in number seeking work in similar months in 1940 and 1941.[6] An average drop between April–August 1941 of three millions in the number seeking work resulted in the percentage of population in the labor force remaining practically the same. Of course, the equivalent of half these unemployed were absorbed by the military services, and for many families military service of one of its wage earners amounted to his unemployment, or employment at a low wage. On the other hand, many thousands of married women have failed to enter the labor market, or have withdrawn out of hope that their dependency will prevent their husbands from being drafted. Moreover, April–August 1941 was not a period of normal economic conditions, either experienced or idealized. The data are used, however, because they offer the only basis that could be found for computing a short-run supply curve of labor. Although they do not enable us to say positively that no psychic unemployment existed in 1940, they do suggest the absence of any important amounts and, indeed, may even indicate that important differences between gross and net unemployment exist only in extremes of high and low unemployment.[7]

5. "Dynamics of Labor Supply," Journal of the American Statistical Association, Vol. 36 (1941), pp. 175–84.

6. Data received through the courtesy of H. B. Myers, Director of Research of the Works Projects Administration. Federal Works Agency, Works Projects Administration, "Unemployment Drops 300,000 in August, WPA reports," Release to Newspapers, September 4, 1941, p. 3. The labor force percentages have been modified by restoring the number in the armed forces (based on the Bureau of Labor Statistics employment data) to the population estimate of the WPA and restoring 93 per cent of the number in the armed forces to the labor force estimate of the WPA.

7. Howard B. Myers (op. cit., pp. 183–84) offers some very interesting comments on cyclical variations in the labor supply. Recent WPA surveys indicate a considerable jump in labor force percentages since Pearl Harbor, with a small net drop in unemployment since that date. Whether this increase is due to patriotism, to a "catching-hold" of increased wage rates, overtime earnings, and prices, or to a shift to all-out-production psychology of employers is difficult to say.

EMPLOYABILITY

Marginal employables. Ability to work is likewise usually conceived in an absolute sense. Some writers realizing, of course, that a person able to work may not be able either to work with other men and expensive equipment or to produce marginal selling value greater than the extra living expenses of working, use the expression "employable."[8] Employability, however, is relative to still other factors: real wage rates;[9] willingness and ability to work intensively, themselves functions of both real wage rates and many other factors;[1] employers' attitudes toward elasticity of product demand;[2] employers' expectations of the relation of future product demand to future wage rates; and efforts made by the social system to fit a marginal employable into his least comparative disadvantage.[3]

The usual statistical solution to this perplexing problem is to leave the question up to the worker and the census enumerator. The 1940 census and the WPA monthly poll, which follow the same general definition, imply that the worker is employable if he says he is employed in public emergency work or is actively seeking work, though where active search would be futile, he may qualify

8. Ability to work is a necessary but not a sufficient condition of employability.

9. The higher the real wage rates, the fewer workers out of a given scale of productivity will be worth hiring, unless, of course, the height of the scale of productivity is itself an appropriate function of real wage rates.

1. Real wage rates doubtless do influence willingness or ability to produce or coöperate in producing a large number or high quality of product. The effect of real wage rates on employability thus becomes rather complex.

2. Economists often generalize the case of employability under pure competition, in which elasticity of demand for the product of an individual business man is infinite and a worker is employable if his net marginal product sells for the money wages he demands: $P\left(\frac{\partial x}{\partial L}\right) = P_L$

But the usual case, in which employer's individual demand is less than infinitely elastic, imposes a higher standard of employability: that the marginal product of the worker bring in marginal revenue equal to or exceeding the wage of the worker. The expression for this employability equation can be shown to be: $P\left[1 - \frac{1}{\eta}\right]\frac{\partial x}{\partial L} \geq P_L$, where the production function is linear and homogeneous and η is the price-elasticity of demand for the final product. See R. G. D. Allen, Mathematical Analysis for Economists (1938), p. 519.

3. Workers of borderline employability may find their niche only after much idleness. Organizations for job analysis and fitting could turn many borderline unemployables into employables.

by merely expressing a wish for work. The assumed employability is relative to normal conditions, however, for if the worker were currently employable he would, except for certain labor market imperfections, be currently employed.

Such a solution is not satisfactory, but the only alternatives are individual job histories or judgments of employers. The collection and analysis of job histories is expensive, and millions of marginal employables have no job histories worth analyzing. Judgments of employers could relate only to particular jobs, and only a congress of employers could determine that a worker was unemployable for any job whatsoever. Moreover, in times of low expectations employer judgments would be too rigorous. Indeed, under depression conditions, practically all the unemployed might be ruled economically unemployable. The census practice of accepting the worker's appraisal of employability, based on his own notion of normal, is more sensible in such cases than some standard resting on profitability.

A worker, however, may vary his own opinion of his employability with economic conditions. If so, the census statistics contain an error. In 1940 a worker might have described himself as unable to work, because he could not then see any chance of getting a job he could hold. In 1942 he might alter his self-appraisal, merely because employment conditions had improved. The statistics doubtless do contain such variations as this, which a continuous record of the proportion of persons describing themselves as unable to work could give us a means of isolating. Unfortunately, the disability percentages of the monthly WPA survey seem excessively influenced by the draft. A consolation may be that the census, if properly carried out, would reflect the number of persons who *feel* unemployed, and thus approximate the concept of gross unemployment.

Legal unemployables. An economic system may not injure the well-being of its members if it cannot furnish employment to very young or old persons, or women pregnant or with young children. However, since we do not prohibit or make unnecessary their employment, we ought to count their idleness as a separate problem from that of the legitimate unemployed.

Very few children aged 10 to 13 were listed as to employment status in 1930, and in 1940 no enumeration of them was made. If they had been enumerated, the number reported unemployed

would not have been much more than 1,000. Most of the employed in this age group are on farms. Children aged 14 to 17 are in the normal secondary school span. They are potential legal unemployables, since a strong movement, backed by groups such as organized labor, would ban the employment of children under 18. The 411,676 persons of these ages listed by the 1940 census as unemployed ought, therefore, to be kept in a separate classification from other unemployed. The same reasoning may apply to women seeking work who are pregnant or have young children. No statistics for this group were provided by the census, and no basis for an estimate exists.

Inmates of institutions are legal unemployables, to the extent that they do not perform useful labor in the institutions. A great deal of this unemployability is doubtless inevitable. However, it is often claimed that crime and mental disorder are caused in part by environmental factors.[4] The evidence is not conclusive. If it were true that the number of persons in institutions would be smaller under improved economic and social conditions, the differential would represent potential employability, and the potential employables would be persons who owe their idleness to current economic and social conditions. They should be listed, for certain purposes, with the unemployed. From a human viewpoint they would deserve to be so listed, even if their institution product were as great as their potential civil-life product.

Cumulative Unemployment. Persons sick or disabled by preventable industrial accidents and diseases and persons unemployable from physical, mental, or nervous impairment brought on by unemployment itself, constitute another problem in interpreting normal employability. This broad category would include some of the institutionalized legal unemployables discussed in the previous section. At a given moment, these groups seem unemployable enough, whatever the cause, yet not a single statistical study, including the 1930 and 1940 censuses, recognizes in principle the economic background of the sick and injured. If

4. "For your information, during the past twenty-seven years I have in many cases given employment to men who have served time for both minor and major crimes, and the percentage of men who have failed to make good is so small that it leads me to believe that oftentimes crime results from improper employment or no employment." A letter from a business man in a survey by J. B. Knox, "Employment of Handicapped Persons," The Conference Board Management Record, Vol. 3 (1941), p. 152.

"normal" conditions be interpreted to cover rigorous safeguards of workers from industrial accidents and diseases, and insulation, through housing and medical and dietary care, of the poor and unemployed from cumulative effects of their misfortune, could not many of these so-called unemployables be classified as "normally" employable and therefore unemployed? Reasoning conversely, if we were harsh to the unemployed and let them deteriorate, we could ultimately write off all but the hardiest as unemployable.

A very rough estimate of the number of persons who, though absolutely unemployable, are in that condition because of economic and social conditions perhaps not beyond remedy, is about three-quarters of a million (Table II). This estimate was made by applying a differential income disability ratio, computed from National Health Survey data, to the 1940 census data on number

TABLE II

ROUGH ESTIMATE OF NUMBER UNEMPLOYED FROM DISABILITIES OF ECONOMIC BACKGROUND

	(1) Persons Unable to Work[1]	(2) Per Cent of Population Age Groups in the Labor Force[1]	(3) Persons Who Might Have Been in Labor Force if not Unable Col. 1 x Col. 2
Males:			
14–64	1,216,000	82.6	1,004,000
65 and over	1,738,000	41.7	725,000
Females:			
14–64	858,000	27.5	236,000
65 and over	1,408,000	5.7	80,000
			2,045,000
Ratio of differential disability rate for low income groups to disability rate for all income groups[2] $\frac{10.74-7.1}{9.8}$ =			.371
Rough estimate of persons unemployed from disabilities with economic and social background			759,000

1. Preliminary data from the Sixteenth Census of the United States: 1940.
2. Data of the National Health Survey, 1935–36. Sickness and Medical Care Series, Bulletin No. 2 (1938), p. 4; Relief and Income Status of the Urban Population of the United States, Population Series, Bulletin C (revised, 1939), p. 1. The rates for relief and nonrelief incomes under $2,000 were computed by weighting data for subclasses, given in the source just cited, by the simple average percentages of populations in these classes in the four main regions of the country. There is a slight error in these weights due to the use of an average of regional percentages rather than one set of national percentages.

of persons unable to work. The National Health Survey estimated, by income groups, the number of days of disability suffered by the average person with a disability lasting a week or longer during the preceding twelve months. The disability rate for persons in the family income bracket $2,000 to $3,000 was chosen as the "minimum."[5] This is the standard rate assumed if everybody were raised to this attainable economic condition, or if everybody, without necessarily being given that income, were given the working and living conditions, *relevant to health*, that persons in that income bracket now get.

Little confidence, however, can be placed in the estimate of three-quarters of a million "economically disabled." The disability data include occupational accidents, and may even include some unwillingness to work. Moreover, there is some strain in applying 1935–36 differentials to 1940 disabilities. The chief weakness, however, of such an estimate is that it is not based on proof that poverty and unemployment are the cause, or increased income and reform the remedy, even in the long run, for excessive disability. Such proof waits upon annual, stratified, health statistics representative of the whole population, which will reveal cyclical and secular movements as functions of changes in income and employment. The most convincing statistics now existing are those of the eight-city survey made in 1932 by the United States Public Health Service and the Millbank Fund. These data, summarized by S. D. Collins and G. S. Perrott, show not only that the *chronically* poor suffered about 25 per cent more cases of illness than the perennially comfortable but that the *depression* poor suffered about 30 per cent more cases of illness than the chronically poor.[6] Moreover, the fact that the cases of illness referred to begin during the three-month survey period decreases, though it does not abolish, the possibility that illness was the cause of the poverty. With misgivings I have allowed the estimate to stand, not as a

5. Under present medical knowledge.

6. "The Economic Depression and Sickness," Proceedings of the American Statistical Association, Vol. 29 (1934), p. 50. It is sometimes held that the fact that mortality of the whole population declined during the last depression indicates a general improvement in health. Collins and Perrott definitely challenge this assumption, pointing out that the most important causes of illness are not the most important causes of death, and that the ratio of illness to death averages more than 100 to one. P. 47. Moreover, the great lag existing between sickness and death could make the drop in mortality a result of the previous prosperity.

quantity to be relied upon, but as a challenge to be met by improved statistics of causes and cyclical variations of disablement of wage workers.

Institutional unemployables. An average of 14,900 persons were idle throughout March, 1940, because they were (seemingly directly) involved in strikes.[7] This number was insignificant, but it was unusually low. The average for the year was about 22,000 persons. This also was low, less than a quarter of the number involved in 1937, the peak of recent years. Of course, it is recognized that mere number of persons idle in strikes is not an adequate index of their seriousness. Idleness due to labor disputes has greater multiplier effect than idleness due to most other causes, because the ground chosen for the dispute is apt to be where damage is maximum: the workers are likely to be highly skilled, the timing unpredictable, the process vital to a large economic area.

On the question whether strikers are unemployed there is little agreement among economists or statisticians. The 1930 census reported most of them as unemployed, distributing them about equally between Classes A and B. The 1940 census required them to say that they were seeking work; otherwise they were listed in the "with job but not at work" category or perhaps in the other and unknown categories. The 1940 practice is equivocal, since many strikers would certainly not seek work at their regular occupation and might consider it useless, for a short period or in a one-industry locality, to seek other work. In the local surveys and special censuses, strikers are often specifically excluded from the unemployed; occasionally they are included; usually they are not mentioned.

The economists who do not consider strikers unemployed argue that they are voluntarily idle.[8] The argument implies that workers strike because they refuse to accept real wage rates based on their marginal productivity. Of course, the implication is not acceptable, especially if consideration is given to the institutional setting and the numerous and complicated causes of industrial

7. U. S. Bureau of Labor Statistics, "Trend of Strikes," Monthly Labor Review, Vol. 52 (1941), p. 945.

8. Edgar S. Furniss, Labor Problems — a Book of Materials for Their Study (1925), p. 19. Others who exclude strikers from unemployed are Warren B. Catlin, op. cit., p. 48; Karl Pribram, "Unemployment," Encyclopaedia of the Social Sciences, Vol. 15 (1934), p. 147.

warfare. Such idleness must, for some purposes, though by no means for all,[9] be regarded as a type of unemployment.[1]

Suppressed Unemployment

Part-time unemployment of wage workers. Definitions and measures of unemployment vary in the interpretation of full-time. Except for the Voluntary Registration of 1937, statistical surveys and censuses of unemployment tend to ignore part-time unemployment or to treat it only through part-time employment. For example, the 1940 census treats as employed a person who worked any part of the census week, and inquires how many hours the person worked without also asking how many hours he would have wished to work or what would have been the "normal" or "legal" quota. *Yet from the standpoint of income potential, part-time unemployment may at times be more significant than full-time unemployment.* Only crudely, if at all, can trends in labor efficiency, real wages, and "permanent" unemployment be traced without some light on the background of part-time unemployment.

Failure to cope with part-time unemployment is doubtless due to difficulties of definition and measurement. Economic theory has left the question of full-time to the individual, but it has long been questioned whether the individual is the best judge. Laws and union regulations continue to supersede individual choice. For each investigator the definition and quantity of unemployment depend on whether he sympathizes with the individual judgment or with the legal and union restrictions, or has some criterion of his own. The solution must again be found in purpose, with statistics of part-time unemployment based on one or more standards, such as (*a*) hours the worker would have liked to work; (*b*) hours the worker would have worked if times were "normal"; (*c*) hours stipulated by law for each occupation; and (*d*) hours the worker could work effectively for sustained periods in case of war emergency.

9. Strikers have usually been excluded from unemployment benefits under both joint agreements and trade union compensation plans in the United States. Bryce M. Stewart and others, Unemployment Benefits in the United States, the Plans and their Setting (1930), pp. 161–64.

1. King regards the problem of classification as empirical. Willford I. King, op. cit., p. 79. W. A. Berridge pointed out the necessity for separate study of this and other types of unemployment. "Statistics on Employment: A Rejoinder," Journal of the American Statistical Association, Vol. 18 (1922–23), p. 521.

Part-time unemployment of non-wage earners. Non-wage workers include farmers; unpaid workers on family farms, in stores and other business enterprises; business men; and other self-employed, such as independent professional men. Their idle time offers a problem in interpretation of employability. Theoretical definitions are silent on the question, and statistical definitions, including those of the 1930 and 1940 censuses, do not consider such idleness as unemployment, although an unpaid family worker could be listed by the 1940 census as unemployed, if idle and seeking work. Exclusion of this idle time may rest on the idea that unemployment springs from the contractual relation between labor and capital. Unemployment is surely too complex in concept and cause, however, for so simple a view. Consider the case of a farmer and his unpaid family workers in the off season on one of the many farms without livestock to care for or buildings and equipment to improve. If because of isolation or lack of information they are unable to find work for which they are employable, they offer problems in morale and wasted income potential. We need to know about them in order to estimate war potential or to judge how well the economic system is functioning, if not to furnish them with work relief or to make appropriate policy to employ them on the farm.

Unproductive employment. Work beneath the capabilities of the worker or productive of no net marginal social income[2] may be regarded as unproductive. It may be questioned whether such employment can be regarded as unemployment. From one point of view unproductive employment may be merely part of the larger problem of waste or welfare inefficiency.[3] However, if cyclical movements could be detected in the amount of such unproductive employment, relative to employment as a whole, then a case might be established for regarding it as part of the unemployment problem.[4] For example, if a greater percentage of those employed

2. R. A. Nixon lists the classes of inferior employments as: (1) skilled workers in semi-skilled and unskilled jobs; (2) workers doing unnecessary work — work which makes no addition of goods or services; (3) workers making a bare living on marginal land; (4) workers self-employed on a subsistance basis. Op. cit., pp. 81–87. J. Douglas Brown adds a fifth class, young persons who are prevented by depression from advancing to jobs in which they would develop skill and sense of responsibility.

3. J. H. G. Pierson, Full Employment (1941), p. 43.

4. R. A. Nixon and P. A. Samuelson make the same suggestion: "We would argue that the concept of disguised unemployment should not include

in "current" compared with "normal" times were holding jobs beneath their capabilities or were capable of no net marginal productivity, the persons involved in this increase might be considered as unemployed. The common assumption is that a shift to less productive employments occurs in depression and adds disguised unemployment to the volume of outright unemployment; but one hears equally often that in depression business comes to its senses and slashes ruthlessly at dead wood, so that, with fewer employed, average man-hour efficiency of those remaining increases up to a point. Of course, the unemployments regarded as unproductive are largely the self-employments, so that counter movement is possible, but a shift to unproductive employments during depression cannot be assumed.[5] Evidence of such a shift must be statistical.

It is not feasible to estimate the *separate* classes of part-time unemployment and unproductive employment, chiefly because in the self-employments they become so indistinguishable. But rough estimates of the combination of the two, which may be called "suppressed" unemployment, are given in Table 3 for March 1940. The estimates are secured from the difference between the number nominally at work and the number of workers actually needed to produce the March 1940 rate of income, at the 1941 level of full-time and efficiency adjusted for changes in effort and technology. The two methods of estimation yield similar results, although the similarity may be manipulated somewhat by varying in Method 2 the assumptions of what constitutes a full-time week.

all deviations from optimal allocation, *but only those which are due to cyclical variations in the level of effective demand.*" Op. cit., p. 103.

5. Compare this with Joan Robinson's statement: "In all those occupations which the dismissed workers take up, their productivity is less than in the occupations that they have left. For if it were not so they would have engaged in them already." "Disguised Unemployment," Essays in the Theory of Employment (1937), p. 84. Surely this is economic theory at its lowest ebb in realism. For all anybody knows, everybody in the world, including Mrs. Robinson and the present writer, may from the standpoint of maximizing productivity be in the wrong job.

Nixon and Samuelson point to the net migration back to the farm in the early 1930's, in the face of an indicated reduction in farm workers needed, as the outstanding case of cyclical increase in unproductive employment. Op. cit., p. 104. But this movement may be offset partly by the fact that many of those returning to farms left jobs of no greater productivity, and partly by the desperate effort of non-agricultural industries to secure more efficient combinations of factors of production.

TABLE III

TWO METHODS OF ESTIMATING SUPPRESSED UNEMPLOYMENT IN MARCH 1940
(In equivalent full-time workers)

Method No. 1		*Millions of Persons*
Number *nominally* at work, March 1940[1]		43.6
Real net national product, 1941[2]	$ 89 billions	
Average monthly employment, 1941[3]	50 million	
Real net product per worker, 1941[4]	$1,780	
× productivity level in March 1940[4]	.98	
	$1,744	
Rate of income flow, March 1940[5]	$ 70 billions	
Number actually needed ($70 billion ÷ $1,744) + .5 million in armed forces		40.6
Suppressed unemployment		3.0
With job but not working and probably unemployed		.5
(With job, but not working: 1.3 million — U. S. Census)		
Method No. 2		
Number nominally at work, March 1940[1]		43.6
× rough weighted average of deficit of weekly hours of work in March, 1940, compared with 1941[6]		2.8
Aggregate deficit of weekly hours in March 1941		122.1 million
÷ full-time week for all industry[7]		45
Part-time unemployment in equivalent workers		2.7
With job, but not at work and probably unemployed		.5

1. U. S. Census, preliminary data. Subtraction made of .5 millions, probably on public emergency work, and 1.3 millions, employed but not at work. The census defines as at work: (a) persons over 14 at work (presumably including military service) any part of the census week, even though only a fraction of time desired or normally worked; (b) farmers and self-employed persons, if they own or operate their farms or businesses, whether they work or not; and (c) unpaid workers in family enterprises. The census excludes persons on emergency work and inmates of institutions, and puts in a separate category the 1.3 millions with a job or business but not at work due to illness, lay-off, vacation, strike, or other reasons.

2. Income data are those of the Department of Commerce adjusted by that agency for price changes.

3. Employment data are those of the Conference Board, revised by that agency to conform to the usage of the 1940 census. The former differs in not counting persons in military service as employed. Estimates of part-time unemployment using WPA survey employment data yielded still higher approximations. Deduction was made of .6 million, corresponding to the with-job-but-not-at-work category of the Census in March 1940.

4. The extent to which the March, 1940, productivity level was lower than that of 1941 was approximated in two ways: one, as one-twelfth of the difference in worker productivity between 1923–1929 and 1941:

$$\left[\frac{\frac{15 \text{ months}}{15 \text{ years}}\ (1780-1360)}{1780}\right] = 2\%;$$

the other as the rough difference in income produced per *man-hour* of employment between March, 1940 and 1941, in manufacturing, mining, public utilities, transportation, and building construction. The latter method indicates no significant change in productivity, but the two per cent adjustment was made as a gesture toward conservatism.

5. The rate of production of income in March, 1940, was estimated from the annual

(See footnote 7 to Table 3.) This fact causes us to resist the temptation to subtract the 2.7 million part-time unemployed (Method No. 2) from the 3.0 million suppressed unemployed (Method No. 1) and call the remaining .3 million disguised unemployment. Moreover, the first method relies partly on income estimates, which in turn rest on loose concepts and often inadequate or unreliable statistics,[6] and partly on employment estimates, which may be no more firmly founded, though that series was chosen which yielded the smallest estimate of suppressed unemployment.

On the whole, the two methods seem reasonably reliable statistically, but an important theoretical objection must be overcome before they can be accepted as yielding estimates of suppressed unemployment. It may be objected that the results do not measure suppressed unemployment in 1940, but rather *overtime* and *increased effort* in 1941.

In regard to overtime, it must first be pointed out that the present hours of work in organized industry are largely the result of attempts to suppress or spread the great unemployment of the last decade; for, as Leo Wolman shows, the trend of reduction of hours had halted during the period 1922–1929.[7] From the employers' point of view, a recent study has shown the 48-hour week to represent the consensus of business men as to the optimum for average worker productivity.[8] From the worker's point of view, many question the wisdom of the 40-hour week, in view of the low

aggregate on the basis of the Federal Reserve monthly index of industrial activity. Estimates of suppressed unemployment for the year indicate that error in this rough calculation of March income could not significantly alter the result.

6. The deficit of average weekly hours was estimated by comparing rough weighted averages of weekly hours worked in March, 1940 and 1941, as reported to the Bureau of Labor Statistics by firms in manufacturing, mining, public utilities, street railways and buses, Class I railroads, and building construction. The estimate assumes that this average applies to agriculture, trade, and service industries also, an assumption which is not necessarily justifiable.

7. The full-time week is a rough weighted average which assumes 40 hours as "full time" for manufacturing, mining, building, and public utilities; 48 hours for transportation; 44 hours for service and trade; 56 hours for agriculture and forestry and fishing.

6. For example, the attempt to secure an indication of real income by deflating with indexes of prices and cost of living is always risky. Everybody making or using such statistics should read W. L. Crum's discussion of Carl Snyder's "Deflated Dollar-Value Series as Measures of Business," Review of Economic Statistics, Vol. VIII (1926), pp. 92–100.

7. Hours of Work in American Industry, National Bureau of Economic Research Bulletin 71 (Nov. 1938), p. 2. When the suppression of unemployment takes the form of a rigid standard, unemployment is not abolished but prolonged. Cf. Wolman, "Employment and Unemployment," The State in Society, 1940, p. 75.

8. J. Douglas Brown and Helen Baker, Optimum Hours of Work in War Production, Industrial Relations Section, Princeton University, 1942, pp. 20–22.

living standards of many workers. But even statistically, there is no evidence of average overtime employment in 1941. If forty hours is the standard for manufacturing, mining, public utilities, and building, only in manufacturing was there even slight average overtime employment in 1941, and that overtime disappears in the average for the group of industries. And whatever standard is assumed for transportation and trade, either no average overtime existed in 1941 or it existed in both periods.[9]

No hours data, of course, are available for a great mass of agricultural and trade and service employments; and it may be argued that the increase of income in excess of the increase of persons employed may be due to increased effort in 1941 of the self-employed workers in response to the incentive of an increase in size and elasticity of demand for their services and products. *Even this increased effort, however, may be interpreted as a fall in suppressed unemployment.* A store owner who sits idle in his store for a half-hour for lack of business is unemployed for half an hour. Or a salesman who must make an excessive number of calls before making a sale may be regarded as being *partly* unproductively employed.

Thus increased effort may be regarded as reflecting a type of suppressed unemployment, and certainly this type was a factor in the disproportionate increase of income. But it is probably easier, even for a self-employed person, to increase the hours than the pace of work. The great part of the increase in income relative to number of persons employed must have been in number of additional hours and days of all types of work.

In making the estimates of suppressed unemployment every benefit of doubt was resolved in favor of the smallest estimate: (1) Conference Board employment statistics were used instead of WPA data, because the former yielded much lower suppressed unemployment; (2) a two per cent lower productivity level was assumed for March, 1940, in spite of other evidence that no difference probably existed at all; (3) only .6 million as not at work were deducted from 1941 employment data, although such a large reduction from 1.3 million in March, 1940, seems improbable; (4) the smaller estimate of Method No. 2 was selected, and (5) there was undoubtedly a great deal of part-time unemployment during the 1941 period which we have taken as the standard of

9. Hours of work as reported to the Bureau of Labor Statistics.

full-time. All in all, the estimate of 2.7 million is probably a minimum. It would be possible to construct a case for double this number of suppressed unemployed.

There remains the problem of classifying the 1.3 million employed but not at work, due to a perplexing combination of short-period layoff, bad weather, strike, temporary illness, vacation, and other reasons. Idleness due to the first three could be classed as unemployment, but persons not at work due to vacation and temporary illness (not stemming from economic conditions) should be classed as outside the labor supply during that week. It was decided arbitrarily to class .8 million as outside the labor supply and .5 million as unemployed. Thus the minimum estimate of suppressed unemployment is 3.2 million equivalent full-time workers.

As pointed out above, a case could be made for perhaps double this amount of suppressed unemployment. Moreover, the averages do not tell us how much of an even larger volume of individual part-time unemployment was blocked out statistically by *overtime* of other individual workers. A statistical compensation is not a real compensation. It hardly consoles a partly unemployed worker to reflect that some worker, not in his own family, is working overtime, except in the partial extent that such overtime is a measure of his own overtime at some earlier date. All things considered, the significant volume of part time unemployment may have been larger than the statistics are capable of showing or than we have the courage to admit.

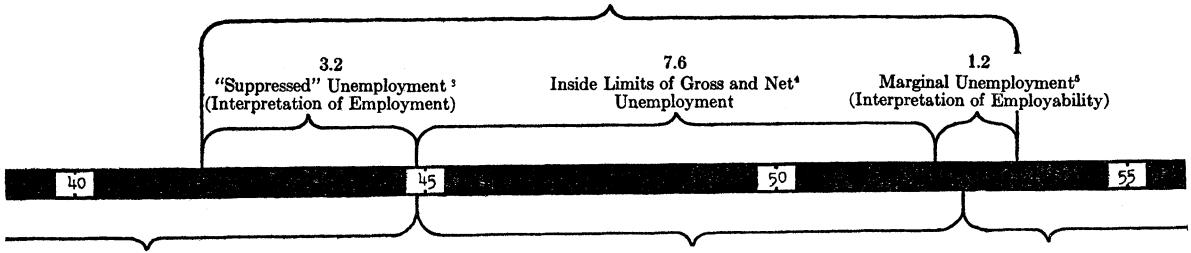
Summary of the Statistical Approximations

Approximations of the conceptual limits are compared on Chart II with the statistics of the 1940 census. It must be emphasized that the estimates are based on different normals. The estimates dealing with gross and net unemployment and suppressed unemployment used 1941 as normal, and the estimates of economic unemployables used an idealized normal. The purpose, however, has not been to establish safe functional estimates. Such a purpose could only be accomplished by a census or poll after overcoming great theoretical and practical obstacles. Our purpose has been to set off in crude outline the quantitative importance of concept in the measurement of unemployment. It will be observed that the outside limit of gross and net unemployment based on by no

CHART II. Conceptual Limits of Unemployment in Relation to 1940 Census Statistics[1]

(Population 14 years and over)

12.0 Outside Limits of Gross and Net Unemployment[2] (Equivalent Full-time Workers)



What Census Regards as Employed[6]	
At work	43.6
Employed but not working	1.3
	44.9

What Census Regards as Unemployed[7] ("Superficial" Unemployment)	
Seeking work	5.1
On public emergency work	2.9
	8.0

What Census Regards as Outside Labor Force[7]	
At housework	28.8
In school	9.1
Unable to work	5.2
In institutions	1.2
Other	2.0[8]
Unknown	1.8[8]
	48.1

1. Preliminary data from a five per cent sample of the census. Millions of persons.
2. Plus the unestimated number of marginal employables — persons who might be employable under "experienced" normal conditions, but might not have considered themselves employable in March, 1940. See pp. 19 and 20, for discussion of full-time.
3. Part-time Unemployment and Unproductive Employment of Wage and Non-Wage Workers — number of equivalent workers.
4. Minus the unestimated number of women pregnant or with small children, listed in 1940 as unemployed, but who are potential legal unemployables.
5. Legal, Institutional and Economic Unemployables, including those listed in note 4.
6. See Table III, note 1.
7. Sixteenth Census of the United States 1940. Release Series P-4, No. 5 (April 25, 1941), p. 1. Of course, the whole question of definition is in the hands of the actual enumerators. The enumerators are not necessarily persons of great training or imagination; the questions are often complicated and impose burdens on memory; and persons answering are often young children, neighbors, or boarding-house keepers. Of great importance is the fact that rates of pay to enumerators are rather rigid and do not readily allow for the effort required to solve difficult questions of interpretation or to reach out-of-the-way places. Indeed, it is not unlikely that our censuses have always missed millions of people of the poorer classes, subject to heavy unemployment rates.
8. The 1.8 million persons listed as unknown are believed by the census to be mostly school children or housewives. Editing of the final returns in eight states has not thrown much additional light on their status. The non-labor force status of these persons, as well as those listed as "Other," a total of 3.8 million persons, has been challenged by the CIO, which charges that these groups really constitute a catch-all for harassed enumerators, who, having perhaps written in wrong returns in black ink, used these categories to resolve a problem of inconsistency. Ralph Hetzel, Jr., Memorandum on Census Unemployment Sample (CIO Economic Division, mimeographed), February 17, 1941. On the other hand, Drs. Philip Hauser and A. Ross Eckler, who directed the tabulations, indicated in conversation with the present writer their conviction that most of the persons in these classes were outside the labor force, as originally classified. Against this conviction, Loring Wood, of the Bureau of Labor Statistics, has pointed out that lack of funds prevented the Census Bureau from editing the returns definitively.

means liberal interpretation of employability and employment was probably more than 12.0 millions,[1] and that the inside limit of gross and net unemployment was 7.6 millions. Thus, even in 1940, a rather prosperous year, there seems to have been a wide range of interpretation between the innermost and the outermost limits of unemployment. The range in the years of deep depression may have been enormous. The study suggests that the more unemployment there may be, the greater our measures tend to underestimate it both absolutely and relatively.

Recommendations for Remedying Current Estimates

So much thought and experience have gone into the development of the census and the WPA usage that the writer has hesitated long before presuming to offer his own criticisms and recommendations. Even where criticism seems clearly justified it should be kept in mind that statistical estimates resemble military positions: easy to attack, but difficult to build and defend. Nevertheless, both the census and the WPA measures would be more useful and defensible, if reconstructed upon the principle that unemployment is multiconceptual and that each concept depends upon the purpose for which the knowledge of unemployment is wanted. Its application should result in certain specific alterations.

The concept should be narrowed for certain purposes, to exclude or place in separate units persons seeking work because of abnormal economic or social conditions or persons who ought perhaps to be in school or caring for young children.

The concept should be broadened, for similar purposes, to include or place also in separate units the following classes of unemployment:

(1) Part-time unemployment of farm owners, business men, professional men, and unpaid workers on family farms and in family enterprises, who may find the search for supplementary wage work futile, impracticable, or too expensive. Included in this class are those farmers, business men, and professional men who may not have worked at all, but are classed as employed by sheer virtue of status.

(2) Part-time unemployment of wage workers.

1. Plus the unestimated number of marginal employables — persons who might be employable under "experienced" normal conditions, but might not have considered themselves employable in March, 1940.

(3) Persons not seeking work because unemployable, but whose unemployability is due to unemployment and poverty.

(4) Persons employable in better times but not seeking work, because they consider themselves unemployable in time of great competition for jobs.

(5) Persons who would seek work in better times, but do not seek it at abnormally low wages and working conditions.

(6) Strikers not seeking work, because to seek work would be unethical or impracticable.

The first two classes compose what I have called suppressed unemployment, and are not only extremely important but probably far more important than we realize. Classes 3, 4 and 5 are of unknown importance, but may at times cumulate into a sizable quantity of unemployment. Class 6 would only occasionally be of more than minor importance.

As the measures stand, they do not indicate either the volume or fluctuation of unemployment for any real purpose. The immediate basis of the inadaptability is the practice of both census and WPA poll of forcing the concept of unemployment into a mold of "seeking work." No single criterion of unemployment exists, and the test of "seeking work" does not even approximate such singleness. The device need not be scrapped, but it should be supplemented by additional devices to bring in or earmark the unemployed not seeking work (for the various important and valid reasons), and exclude or earmark persons "seeking work" but not necessarily unemployed. If the classes mentioned were earmarked and presented in detachable and interchangeable parts, the data could be converted by the user for his own needs. Indeed, the WPA already gathers data on reasons for not seeking work, which, if reported in greater detail, would enhance the usefulness of their present estimates.

Conclusion

Unemployment is a family name for a whole brood of concepts, but the concepts vary so widely in size and character that no one of them represents the others. The single, all-use measure of the WPA is not unemployment at all, but some magnitude of illegitimate conception with the courtesy title.[2] The father of the magnitude is more likely to be statistical expediency than economic

2. The census has usually, and commendably, avoided the term.

theory, social philosophy, or even government policy. The magnitude, forced to serve all purposes, cannot safely be used to serve any important purpose. Certainly we cannot use it to indicate the involuntarily unused productive power of the nation or the morale-efficiency of the sytem, for it does not count the enforced idleness of our most productive workers, either because they do not have the nominal status of employees, because they are employed part of the time or at token work, or because they do not seek work, though desperately needing and wishing work and definitely employable. We cannot even use the magnitude as an index of fluctuation of unemployment, for these classes of uncovered idleness, especially part-time unemployment, vary out of all proportion to the covered idleness — indeed, they have become institutional devices to suppress unemployment. In time of deep depressions it is possible that half of the real unemployment would be outside the current concept of superficial unemployment. Thus we cannot use it to answer questions about seasonal and cyclical variations, the existence of permanent unemployment, or trends in real wages and in worker productivity.

In this study I have developed two chief concepts of unemployment, both of which cover the suppressed unemployment excluded by current estimates. These two concepts are gross and net unemployment. The former, measuring the persons who *feel* unemployed, approaches unemployment as a psychological, social, or political problem. The latter, measuring the persons who *would go back to work*, approaches unemployment as a production problem. There are other concepts, to serve purposes of comparable importance.

Whatever concept we choose for carrying out a certain purpose, its application will vary with the states of mind of the workers and the social scientists who study them. The quantitative limits of any concept are indistinct; and, as the economist has always maintained, they are highly variable with economic and social conditions. Furthermore, however important the quantitative aspects of unemployment concepts, the qualitative aspects may have even more significance. For example, in connection with net unemployment, we inquire into what kind of persons would, under appropriate conditions, go back to work; and in connection with gross unemployment, we inquire how badly people feel about their unemployed status and what they blame for it.

Concerning the structure of gross unemployment, it is important to point out that all our measures count statistical persons. They do not indicate the number of different persons who suffer unemployment at one time or another. Yet the population that passes through the unemployed area at one time or another is far larger than the number there in any one week. Whether continuous unemployment of 15 per cent of the working population is more or less serious than unemployment one-third of the time of 45 per cent, the difference is not a matter of unconcern to sociologists, political scientists, or practical politicians. In addition, it may be unjustifiable to express, as I have, unemployment as full-time equivalents of part-time unemployed. Neither as a morale nor as a production problem do ten million persons unemployed half time necessarily equal five million unemployed full time. Nor does the overtime employment of some workers necessarily affect the part-time unemployment of others, expecially if the over- and under-employed are not in identical families.

I hope this paper has demonstrated that we do not yet know what unemployment is, *even for practical purposes*. Our current surveys have come a long way in the last few years, but they still measure only *superficial* unemployment, a magnitude which not only need not approximate the *absolute* amount of purposeful unemployment, but underestimates, perhaps by 50 per cent, the *fluctuations* in it. In developing the monthly survey the WPA deserves credit for applying to unemployment a great innovation in statistical research. Before we shall receive the full advantages of that innovation, another innovation must be applied to the concept of unemployment.

CLARENCE D. LONG.

INSTITUTE FOR ADVANCED STUDY
PRINCETON, NEW JERSEY