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Wartime 'Prosperity' and the Future

WESLEY C. MITCHELL

OUR ECONOMY IN WAR

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THE STIMULATION OF ECONOMIC ACTIVITY

The economic consequences of major wars follow a pattern that depends on the fortunes of war itself. Countries overrun by enemies are plunged into the direst misery known to modern times. Meanwhile, belligerents escaping that fate, and neutrals from whom they draw large supplies, have a season of hectic activity, resembling in its mechanism an intensified cyclical expansion. The economist's ideal of full employment of resources is approximated; production expands to the limits set by physical factors; commodity prices and wage rates rise rapidly; national income estimated in current dollars reaches its highest levels. While a nation is bending its energies toward destruction, it enjoys a specious prosperity.

This paradox stands out most clearly where work is organized mainly in private enterprises managed for money profit. Such an economy has remarkable powers of adapting itself to disturbing circumstances of diverse sorts, whether favorable or unfavorable, arising from acts of God or the wrath of man. It responds to huge governmental orders for military supplies as it responds to large private orders for civilian goods. In statistical records the economic fluctuations that occur during great wars appear to constitute a subspecies of business cycles.

So far as the heightening of activity by war orders follows the model of cyclical expansions, we can apply what experience has taught us about business cycles to wartime 'pros-

* This paper is the annual report of the Director of Research submitted to the Directors of the National Bureau at their meeting on February 15, 1943. The writer is indebted for aid to several of his colleagues, especially Geoffrey H. Moore, who prepared the table, Arthur F. Burns, Frederick C. Mills, and Ruth P. Mack.

perity'. But one of the clearest teachings of experience is that every cyclical expansion is influenced by the special conditions amidst which it occurs and to which men must adapt their business behavior. The semblance of a cyclical expansion worn by wartime prosperity cloaks profound changes in economic organization.

THE SHIFT IN VALUATIONS

Most fundamental of the changes that occur when war is thrust upon a peace-loving nation is the reordering of its aims. Popularly we say that self-seeking yields to patriotism. But it is well to speak more thoughtfully. At all times a citizen is supposed to identify his own deepest interests with the preservation of his country's freedom. But so long as this precious possession seems secure, it is taken for granted and men focus attention upon their individual wants, duties, and ambitions. The outbreak of war does not create a new scale of values or even revise an old one; but it does put what had been a 'free good' highest on the list of 'cost goods'. The living generation finds it must pay a great price to keep the heritage received from ancestors who in their time paid the price now exacted once more.

The signal evidence of readiness to pay whatever price may be necessary is the passing of a draft law requiring those fittest for military service to leave their homes and wonted occupations, accept low pay and physical discomforts, and risk their lives in the horrible job of killing others. After common consent has been given to that act, civilians are morally bound to accept the lesser sacrifices war imposes on them. Men may still pursue happiness, but under the changed conditions they must seek it in striving for victory. Nor is the reorientation difficult for all temperaments; many folk seem to enjoy the release of combative urges that are suppressed in peacetime.

This passionate rediscovery by a nation of what it cherishes most can be drably translated into economic jargon as a shift in relative valuations. On such scales economists base their schematic explanations of prices, the allocation of resources, and the distribution of income. By analyzing the implications of wartime valuations we can sharpen our insight into both the expansions that accompany the fighting and the contractions that come with peace.

THE CHANGE IN ECONOMIC ORGANIZATION

The shift in scales of valuation leads with startling suddenness to a drastic change in economic organization. The dominant single aim assures general assent to the mobilizing of economic resources under governmental direction. That step seems to be an extraordinary rupture of democratic traditions — the acceptance of 'national planning' by people who had believed fervently in private initiative. But this is a superficial view. In a democracy, government is conceived as the servant of the citizens, their common agent for promoting their welfare as they see it. In peacetime many of the numberless groups constituting the public strive to use government for putting over their conflicting plans. It is the diversity of aims among these groups that prevents the plans they are severally promoting from coalescing into a systematic program. A foreign enemy watching the turmoil of party politics, so different from the orderly subordination enforced by an autocracy, may be deluded into believing that a democracy is constitutionally incapable of unified action. When such an enemy attacks, his deed creates the unity of aim that had been lacking. As before, many groups want the government to carry out their wills; but now virtually all wills become one. The sovereign citizen does not feel that he surrenders his freedom when he demands that his government compel everyone to do what he wishes.

Goods and services are suddenly rated by a new criterion. Their relative importance now depends basically upon the contribution each good or service is credited with making to victory in war. When lives themselves are treated as a means toward this end, so also is property.

This new criterion is of necessity applied by public officials.

Experts of many kinds – military, naval, medical, and industrial – must be called in to judge the relative importance of numberless goods in varying quantities. Their opinions get embodied in definite orders which take precedence over ordinary business. Public opinion supports the authoritative regime, and aids in enforcing its regulations upon malcontents.

The wartime scale of values does not displace the peacetime scale. It prevails when the two scales conflict, but for the most part consumers keep their wonted preferences among goods. War creates scarcities, which usually lead to rationing of supplies, price controls, and limitations upon investment in non-essential industries; but subject to these interferences food, clothing, shelter, and most amenities are provided through the usual channels. Two economies run side by side: a war economy managed by government for victory, dependent on civilian production, supported by taxes and loans; a civilian economy managed by private enterprise for profit, dependent on governmental and consumer demand, subject to governmental regulation in larger degree than usual, providing the taxes and loans that finance the war economy. Both economies use the mechanism of exchange at money prices. In the civilian economy, prices play their customary role, modified at points of conflict with national policy. In the war economy, prices cease to be the guide to production and become an instrumentality for getting what the authorities think is needed for victory.

THE LOGICAL PROBLEM OF ADMINISTERING WARS

In peacetime the prices consumers are willing to pay for varying quantities of the different kinds of goods they like, taken in conjunction with limitations upon supply, determine the prices of all factors of production and their allocation among different uses. Pricing, the regulating of production, the distributing of income and its expenditure are part and parcel of one quasi-automatic process, wherein all the elements are interdependent. Despite numberless uncertainties, this process affords a workable basis for the operations of business enterprises managed for profit. In a formal sense, business is a highly rational activity, for all the widely different things an enterprise buys and sells can be valued in dollars, and dollars are what it strives to 'make'.

The organizers of a war effort face a vastly bigger job than the executives of the largest corporation. They cannot accept the valuations of an impersonal market as guides to what should be produced; instead they must accept responsibility for making their own estimates of what different goods and services will contribute to victory. This criterion of importance is hard to apply. Personal judgments or guesses play a large role, and decisions are subject to repeated revisions. The experts who value and allocate goods must think in a miscellany of what economists used to call 'real' terms: army divisions, gallons of gasoline, tons of shipping, millions of rations. In treating men they must fall back upon what is known or surmised about physiology and psychology, for it is part of their task to provide balanced diets, to guard against epidemics, to find what working hours yield the maximum product, to maintain good labor relations, to select the most promising recruits as officers, to maintain morale in the armed forces and among civilians. The business executive also does much of his thinking in 'real' terms, but that is a step toward arriving at the dollar values to which he reduces all outgoes and receipts, and in which he reckons profits. The war executive on the contrary reduces dollars to the 'real' things they will get him. The fundamental difficulty in his problem of administering resources is that he can compare the contributions to victory promised by qualitatively different 'real' things only in the crudest fashion.

Seemingly the most helpful concept for allocating resources in a war effort is that of 'bottlenecks'. The factor that sets the effective limit to accomplishment shifts from month to month, still more from year to year, and from country to country. An executive who can 'spot' the bottlenecks time after time and divert a larger proportion of resources toward breaking them attains at least a quasi-rational program. Should he succeed in abolishing one obstruction altogether, of course some other factor thereupon becomes the chief bottleneck; but the limits it sets upon accomplishment are supposedly less stringent, and perhaps it can be broken in turn. The concept is applicable both to highly specific and to very broad problems: for example, the distribution of a week's output of airplanes among several fighting fronts, and the manner in which a nation's manpower shall be used during the war. At best operations on bottlenecks are a crude approximation to the nice adjustments marginal theory prescribes for business, and presumably they are less precise than the adjustments business effects in practice.

THE ALTERED PERSPECTIVE OF PUBLIC FINANCE

The old saying 'money is the sinews of war' was still current in 1914. Respected authorities predicted that the struggle then beginning would soon be ended by financial exhaustion. In the present war few such predictions are ventured. So long as a nation has the physical resources and the will to resist, it finds some way to 'finance' its effort. Money will not create these vital factors at home; at most it may bring some commodities and services from abroad.

Yet, after its peacetime habit, every nation uses money in waging war. The government pays money wages to its armed forces and civil employees; it buys supplies from contractors or pays for making them in its own arsenals; it obtains money for these purposes by taxing and borrowing, or, as a last resort, by printing. The functioning of the whole economy remains as dependent as ever upon the continued circulation of money among individuals, among business enterprises, between enterprises and individuals, and between government and the public. Money is still essential to war. But it is an essential that a government can provide so long as people trust it. The crucial question is one of morale rather than of finance.

What the monetary standard shall be is not debated nowadays. However large the nation's stocks of gold and silver, a metallic standard is not considered. Everyone takes it for granted that the standard will be inconvertible paper, resting directly or indirectly upon the nation's faith in itself, and passes at once to the problem of management.

Like other economic policies of wartime, the management of the currency is designed primarily to promote the military effort. Though the government can draft men and requisition property, it must pay for what it commandeers as well as for what it buys. The prices it fixes or negotiates need not be commercially attractive; for the government can bring patriotic pressure as well as force to bear. But to sustain morale, it must offer what men feel is a 'fair deal'.

In view of the heavy costs of converting industry to a war basis and of establishing workers in new jobs in new places, in view also of the large risks taken by capital and labor in turning to war work, the prices government must pay are high judged by such peacetime standards as can be applied. High prices, together with approximately full employment of resources, swell the money incomes disbursed to consumers, which in turn augments the demand for consumers' goods. Since a sizable part of national output is conscripted, the supply of these goods is reduced. This combination of augmented monetary demand and diminished physical supply raises living costs rapidly.

At that point in the chain of repercussions, if not before, the government takes alarm. For a sharp rise in the prices of consumers' goods promises higher profits to their producers, which increases the difficulty of diverting resources to war industries. To push the war effort vigorously, the government must either check the rise in prices of consumers' goods or it must pay more for war goods. If it chooses the latter alternative, the process just sketched soon starts over again on a higher level; presently requires a second 'boosting' of the prices of war goods, then a third, and so on indefinitely. That way lies 'inflation', a geometrically accelerating rise in the price level, a corresponding increase in the public debt, a huge expansion in the volume of paper currency, and a progressive decline of public confidence in the government's ability to keep its promises. The first alternative, assuming control over the markets for consumers' goods, is difficult, uncertain, unpopular, and costly; but it is less appalling than inflation carried to its astronomical limit.

There are two methods of controlling consumers' prices: governmental price fixing supplemented by rationing, and taxing away or borrowing so large a fraction of their incomes that consumers cannot bid up the prices of whatever supplies the war production program allots them. In practice the two methods are combined. The taxing-borrowing method has the advantage of bringing into the national treasury funds needed to pay for the war.[1]

'Taxes for revenue only' is a familiar peacetime slogan. But recalling it recalls also that taxes are frequently used for other ends than defraying the expenses of government. Import duties 'to protect home industry' are merely the most conspicuous among many examples in the American record. The mixing of fiscal with other considerations is not a wartime innovation. But war does force a more pronounced subordination of fiscal to other considerations. When the nation's future is at stake, its present is sacrificed in matters of finance as in matters of life and death. Men who have feared unbalanced budgets become bold in approving enormous appropriations for war. Those who were appalled by a large public debt in peacetime now comfort themselves by reflecting that the far larger debts brought by war are assets of the citizens who own bonds to precisely the same amount as they are liabilities of the citizens collectively. Those who opposed governmental interference in private business now demand efficient governmental control over the production, distribution, and even consumption of consumers' goods in order to maximize the output of military supplies, and they sanction the adaptation of fiscal measures to that end. These changed attitudes toward governmental finances are not inconsistencies; on the contrary, they are logical results of the fundamental shift in scales of valuation brought about by war.

While fiscal considerations are thus subordinated to matters of greater moment, the practical importance of fiscal measures is exalted. That is a necessary consequence of economic mobilization. When government becomes incomparably the greatest buyer of goods and employer of men; when a third or a half of the national income is paid to it and by it, its policies concerning prices and wages, taxation and borrowing, monetary issues and interest rates become far more potent factors for weal or woe than such policies are in peacetime. It is harder to avoid fiscal errors when the strains upon the national treasury become so tense, and errors lead to graver consequences.

THE NATION AND ITS CITIZENS

A nation is both a single entity and an aggregate of millions of entities. As a single entity, it reaches decisions that are binding upon its citizens. When we say, 'the United States declared a state of war to exist', we are not using a figure of speech or a metaphysical concept transcending the facts. That act has stark reality. Its economic implications, sketchily suggested above, lead to momentous consequences amply attested by historical records. But these consequences are not precisely what logic suggests, because the nation is also an aggregate of citizens who continue to behave as individuals after the declaration of war.

To give effect to its decisive act, the nation depends upon numerous officials who determine in detail what policies shall be adopted and how they shall be administered. These officials should be men of different skills, experience, and acquaintance; they are certain to be men of different temperaments, economic interests, and social attitudes. Bringing dissimilar qualifications to an enormously complicated task that must be organized in a hurry, they cannot at once develop a consistent set of policies. What they will try to do as a body cannot be foreseen by following what any one among them, or any outsider, thinks are the logical implications of war.

Differences among the officials who lay down rules are equaled, perhaps exceeded, by differences among the private citizens who are supposed to obey. Attack by a foreign power produces the closest approach to unanimity of opinion in democratic nations; but among tens of millions there are always some who oppose war. Less wide in principle, but more important in practice, are the differences that presently appear in willingness to share the major risks and minor discomforts that war imposes. Assent to the nation's decision implies acceptance of its consequences, but logic does not rule conduct strictly. The one thing of which we can be sure is that men are far from uniform in their capacity for foreseeing the consequences of a decision, and in their moral stamina to take disagreeable consequences without flinching. Accordingly, no analysis of the economic implications of war can tell what actually happens. To learn that, we must shift to observation.

II Characteristics of Wartime Expansions

THEIR LONG DURATION

The National Bureau's studies of cyclical behavior furnish tolerably clear pictures of peacetime expansions in the United States since 1855, pictures that become more detailed and trustworthy as statistical records become fuller. Within this period the country has been involved in three major wars. Of economic developments during the Civil War the records are scanty, but we can make out a few salient features. What happened during World War I can be seen much better. Fuller still are the data for the present war; but as the current expansion may not have reached its peak, comparisons with earlier expansions must be marked 'provisional, subject to change'.

Mild depression prevailed in the northern states when Fort

Sumter was fired upon in April 1861. According to our chronology of business cycles, an expansion began in the following July and reached its peak in April 1865. A rather severe international contraction was in process when Germany invaded Belgium in August 1914. American business began to expand in January 1915. Prosperity was already at high tide when the United States declared war in April 1917; but, if our date is correct, activity did not slacken until after August 1918. Germany's invasion of Poland in September 1939 occurred in the midst of an American expansion that started in June 1938. This movement had attained a high level by the time Japan attacked Pearl Harbor in December 1941; but, as in World War I, our entry caused a further intensification of activity.

These wartime expansions have lasted notably longer than similar movements in peacetime, which have had an average duration of 24 months. The Civil War expansion of 46 months may be overstated; monthly data are scarce and hard to interpret in those years. Perhaps the peak should be placed in the summer of 1864; but that shift would still leave an expansion exceeding the peacetime average by half. For World War I we get a duration of 44 months, and February 1943 is the 57th month since the preceding trough of May 1938. Only one peacetime expansion in our American chronology has exceeded 36 months, the 'managed' (or 'mismanaged') recovery from March 1933 to May 1937, which lasted 50 months, probably because it suffered serious setbacks in its earlier stages and had to start over again.[2]

PRICE INFLATION

A peacetime revival of demand develops gradually out of a series of readjustments that take place during the preceding contraction. Sellers hesitate to check this longed-for increase in orders by raising prices, and when advances do begin they are moderate. Equally gradual may be the growth of war demands and the advance of prices in a nation that is plotting aggression and trying to camouflage its preparations.

The nation attacked, on the contrary, is often taken by surprise. In it war demands do not expand gradually; they explode.

Their volume is prodigious. In 'total war' demand has no limit short of the utmost that can be provided. The goods and services called for are largely of kinds not produced in peace, or produced on only a small scale. Short-period supply prices for such goods must be high, and they are the only prices considered, for deliveries are wanted sooner than they can be had. The demands are rigidly inelastic -- high prices do not reduce the quantities the government will order. Ideally, there should be only one buyer of war supplies; in practice, allied governments and even different procurement agencies of the same government often bid against one another. If and when better organization establishes a strict buyer's monopoly, the single buyer is still at a disadvantage in that he wants more goods than all the suppliers put together can furnish within the periods dictated by military need. While frantic efforts are being made to get into war production, the provision of necessaries for consumers must continue. Their money incomes are increased by fuller employment, longer working hours, and higher wage rates. This increase in civilian purchasing power swells the demand for many goods of which the supplies are being reduced.

Thus war sets the stage for price advances far greater than any peacetime expansion brings, unless the latter is accompanied by wild monetary disorders such as often follow wars. According to the index compiled by Warren and Pearson, wholesale prices rose during six peacetime expansions in 1855-91 only 4 per cent on the average; in the Civil War expansion they rose 75 per cent. According to the Bureau of Labor Statistics index, they rose 6 per cent on the average during ten peacetime expansions in 1891-1933, but rose 66 per cent during the World War I expansion.[3]

Large as these differences are, they probably understate the price revolutions brought by wars, though how much it is impossible to say. Economists have long recognized that the temporal comparisons to which their indexes of prices and production tempt are dubious, and become more so the longer the intervals between the years compared. For the goods that are produced and priced by a nation change with the passage of time, and how can one compare figures that represent qualitatively unlike variables? The transition from peace to war makes even comparisons between successive years highly dubious. A considerable fraction of the output of a nation at war consists of goods and services not used in times of peace; the output of familiar producers' and consumers' goods is likely to shrink. When the criterion by which goods are valued has shifted, when the kinds of goods produced have altered, the logical basis for comparing 'price levels' becomes tenuous indeed. Added to this fundamental difficulty are the obvious uncertainties concerning quotations in a land of price controls and evasions.

THE ACCELERATION AND SLOWING DOWN OF PRODUCTION

Supply can rise quickly and vigorously in peacetime expansions because industry is operating below capacity when a revival occurs, and is geared to produce goods of the sorts demanded.

When a peaceful nation is attacked, its authorities do not have and cannot quickly get a clear view of war requirements. Before production can begin on a large scale, planning agencies must be created to work out in detail what is wanted. To organize these agencies takes time, and the changing pressures under which they work prevent them from ever attaining the efficiency of routine peacetime operations. War is cutthroat competition in its extremest form; what one belligerent does, the other must surpass if anywise possible. In practice, estimates of the number of men to be placed under arms are revised again and again, generally upward. The technology of war progresses at a dizzy pace; every belligerent must keep changing designs while it strives for bigger and quicker deliveries. At first, a democracy does its planning piecemeal. Every procurement agency strives to place as quickly as possible contracts large enough to assure an adequate supply of the goods for which it is responsible. This helter-skelter procedure quickly demonstrates that certain resources are inadequate to meet the demands for them. Then begins a second stage: over-all planning based upon a better (though far from adequate) knowledge of requirements, of the resources immediately available, and of how they can be augmented. Not until that stage is reached can tolerably systematic allocation begin.

How much a nation can expand its total output depends upon the cyclical stage through which its business is passing when the war demands explode. If depression prevails, a considerable increase can be achieved by putting idle resources to work. This increase, however, requires a more than usual intensification of effort, because so many of the strongest workers are transferred to the armed forces. If war breaks out when prosperity is at or approaching high tide, idle resources are small, and it would be hard to increase output above the high levels already attained even if the industrial army were not reduced by enlistments.

As measured by the most comprehensive monthly indexes of production, peacetime expansions of physical output in this country have averaged some 20, 25, or 35 per cent, according to the industries covered. Corresponding figures for price indexes range from 4 to 10 per cent. Thus, unless the indexes are grossly misleading, cyclical expansions during peace are much larger in production than in wholesale prices. In past wars, this relation has been reversed. While our major wars have multiplied the rise of prices ten times or more, they have not doubled the rise in physical output. Presumably, the production indexes understate wartime increases, but so also do the price indexes.

More significant than the best totals that can be cast up are the figures for different branches of production. We have scarcely any monthly data on output during the Civil War, but for World War I we can draw a suggestive sketch, or better, two sketches, one of developments before and the other of developments after the American entry. That division we approximate roughly by observing, first, changes in production between the three months centered on the cyclical trough of December 1914 and the middle third of the following expansion (March 1916 to May 1917); second, changes in production between the middle third of the expansion and the three months centered on the peak of August 1918.

If we break peacetime expansions into halves on a similar basis, comprehensive production indexes show few significant differences between the rise in the first and in the second half, except that the output of durable goods increases less in the second half than in the first.

The first half of the World War I expansion was greatly stimulated by foreign orders. There was a 64 per cent rise in exports, as compared with the peacetime average of 10 per cent. Price advances account for a substantial part of this extraordinary gain, but much of it must represent an increase in the physical volume of shipments. The three production indexes we use all show a gain twice or more than twice as great as the peacetime average. Other evidence confirms this finding. In general, the increase in physical output during the first half of this expansion seems to have been equal to, perhaps greater than, the average increase during a full peacetime expansion. Thus, by the time this country entered the war, full employment of resources had probably been approached about as closely as it usually is at the peak of a typical business cycle.

Such being the state of affairs, production during the second half of the expansion could not match its growth during the first half. In view of the large enlistments in the army and the difficulty of getting war production organized, the wonder is that aggregate output did not decline. But even the defective indexes that omit finished war goods show gains. However, these gains were very slight, ranging from 2 to 4 per cent, instead of 25 to 30 per cent as in the first half. Supporting evidence is given by the indexes of factory employment compiled by Harry Jerome, the State of New York, and the federal Bureau of Labor Statistics. They rise respectively 20, 19, and 23 per cent in the first half, 3, 2, and 3 per cent in the second. So narrow are these margins of gain that we shall find many of them turning into slight losses when presently we shift slightly the periods compared.

The output of war goods proper after April 1917 has never been made public in systematic form.[4] But we do know that physical limitations forced the country to choose between 'guns and butter'. That is clear from comparisons of the increases in output during the first half of the expansion when we made some 'guns' for others and all the 'butter' we wanted, and the second half when we sacrificed 'butter' to get 'guns' for ourselves. Some of these sacrifices are represented by the percentage changes in five series.

	FIRST HALF (percentage)	SECOND HALF (percentage)
Passenger automobiles, production	+91	—63
Construction contracts, 27 states, value	+55	No change
Portland cement production	+18	—22
Oak flooring production	+52	—78
Cotton consumption by mills, bales	+20	— 5

Another set of series illustrate the varying difficulties of increasing the supply of basic materials for war production.

	FIRST HALF (percentage)	SECOND HALF (percentage)
Pig iron production	+52	+ 8
Steel ingots production	+58	+ 8
Copper, mine output	+67	— 9
Crude petroleum output	+16	+17
Bituminous coal output	+23	—20

Even a campaign of war production that began in the trough of a great depression would presently encounter limitations of the sort our figures illustrate. These limitations, though physical, are not rigid. By strenuous effort a nation can carry its total accomplishment, including fighting its enemies, well beyond the limits at which the most vigorous of peacetime booms stop. Despite the conversion of workers into soldiers, it can raise its industrial output as commonly measured above peacetime records. Its output of war supplies can be augmented much more than the industrial total, if its people are ready to sacrifice their comforts and have many comforts they can sacrifice. While the outbreak of war does not immediately create the spirit and the organization needed for the utmost effort, these essentials develop with the course of events and enable a nation to accomplish more than at first seemed possible, provided, of course, there is not a quick military collapse or loss of morale. But the increases come at a diminishing rate, and if the war lasts long enough, the point of actual decline may be reached even in the production of military supplies and the size of the armed forces. Theoretically one may say that the more quickly a nation mobilizes all its resources, the sooner a decline sets in. In practice, total mobilization is a shifting concept and declines may be postponed by increasing willingness to work and suffer for the national cause.

WARTIME PROFITS AND FINANCE

The widespread impression that war is profitable to business probably arises from an hypnotic fixation upon the fabulous gains of conspicuous contractors for military goods. A broad survey of actual experience shows that these examples are very bad samples of the business population. Income tax returns give the 'total net income of corporations reporting net income' as $8.8 billion in 1916, $10.7 billion in 1917, and $8.4 billion in 1918;[5] but the federal taxes paid by these corporations increased from $0.2 billion in 1916, to $2.1 billion in 1917, and $3.2 billion in 1918. Subtract these taxes, and profits are reduced to $8.6 billion in 1916, the same sum in 1917, and $5.2 billion in 1918. One may object that the reduction of 'profits after taxes' was due in large measure to changes in methods of accounting; but the sequel suggests that whatever reserves were set up in corporate balance sheets during the war seldom proved adequate to meet the hazards of postwar readjustment. Making military supplies for other countries may be highly profitable; participating in a major war means sacrifice to most business enterprises as well as to most citizens.

What investors thought of current and prospective profits is best shown by the Cowles Commission index of common stock prices. In fourteen peacetime expansions it rose 27 per cent from trough to peak; in the expansion of 1915-18 it rose 3 per cent – the net resultant of a 25 per cent rise during the first half and a 22 percent fall after the United States entered the war. The number of shares sold on the Stock Exchange rose 98 per cent during the first half of the expansion, and fell 60 per cent in the second half. The corresponding changes in stock issues by corporations, according to the *Journal of Commerce* which includes refunding, were a rise of 138 and a fall of 98 per cent. Like other financial agencies, the Stock Exchange devoted itself in large measure to distributing government bonds. While stock transactions fell heavily after our entry into the war, the par value of bond sales increased 83 per cent. In the second half of 10 peacetime expansions, they fell 21 per cent on the average.

Of course, the great rise in commodity prices, which was accelerated during the second half of the 1915-18 expansion from 27 to 39 per cent, swelled the dollar volume of business transactions. Clearings outside New York City rose 34 per cent during the first and 40 per cent during the second half of the expansion. In New York, where bank clearings arise preponderantly from financial transactions, the corresponding figures are 52 and 10 per cent. Rising prices make it easier to pay debts; in consequence, business failures declined roughly ten times as much during the wartime expansion as they do on the average. That is the most cheerful aspect of war from the financial viewpoint; but it means that the test of efficiency supposedly imposed upon business managers was greatly relaxed – a doubtful blessing in the long run.

Concerning interest charges before 1919, we have records only of open market rates, which apply to a relatively small volume of business and fluctuate much more violently than the rates charged by banks to their customers. In peacetime the market rates usually advance somewhat during the first half of an expansion and two to four or six times as much during the second half. That pattern prevailed in 1915-18, but the differences between movements in the two halves of the expansion were accentuated. Call loan and commercial paper rates actually declined a bit during the first half, while 90-day time money rose less than usual. In the second half, all three rates rose much more sharply than their peacetime averages. *Mutatis mutandis,* the like is true of high-grade bond yields; they fell more than usual in the first half of the war expansion, and rose sharply, instead of a trifle, in the second half.

AMERICAN EXPANSION IN WORLD WAR II

Not until the current business cycle is complete will it be possible to compare its expansion phase with average peacetime performance. But we can compare the expansions during the two World Wars, though not without reservations concerning the significance of the similarities and the differences. Table 1 suggests four conclusions about the present expansion, two fairly definite and two highly tentative.

1) Expansion still prevails in the United States according to the latest data available on the first of March.

Production has expanded since we entered the war in most of the industries represented by the table. Three of the declines — the drastic cut in passenger automobiles, the much smaller cut in motor trucks, and the substantial cut in oak flooring — are due to purposive action. Crude petroleum output is another war casualty. Though the table shows a vigorous rise in construction contracts, they seem to have passed their peak last summer. If so, construction should be added to the list of declines in process. The very slight fall in the Federal Reserve Board index of industrial production, when roughly adjusted to match its coverage in World War I, is the only evidence of general shrinkage, and this evidence is more than offset by that of the other indexes of production, includ-

TABLE 1

Percentage Change per Month in Economic Activities during World Wars I and II[a]

	WAR I	WAR II
A *Production, Employment, and Freight Movements*		
Industrial production, F. R. B. Index, adjusted to 1914-18 coverage		
Start of war to U. S. entry	+1.0	+1.1
U. S. entry to November 1918, November 1942	—0.6	—0.1
Industrial production, F. R. B. Index, present coverage		
Start of war to U. S. entry	. . .	+1.5
U. S. entry to November 1942	. . .	+1.2
General business activity, A. T. & T. Co. Index		
Start of war to U. S. entry	+1.0	+1.2
U. S. entry to November 1918, November 1942	—0.5	+0.3
Physical volume of business activity. Babson Index		
Start of war to U. S. entry	+1.0	+1.0
U. S. entry to November 1918, November 1942	—0.6	+0.5
Pig iron production, long tons		
Start of war to U. S. entry	+1.6	+1.3
U. S. entry to November 1918, December 1942	+0.2	+0.3
Steel ingot production, long tons		
Start of war to U. S. entry	+2.1	+1.2
U. S. entry to November 1918, December 1942	+0.2	+0.3
Copper production, mine, short tons		
Start of war to U. S. entry	+2.7	+0.6
U. S. entry to November 1918, April 1942	—0.7	+1.5
Bituminous coal production. short tons		
Start of war to U. S. entry	+0.9	+0.8
U. S. entry to November 1918, October 1942	—0.01	+0.4
Crude petroleum production, barrels		
Start of war to U. S. entry	+1.0	+0.5
U. S. entry to November 1918, October 1942	+0.6	—0.6
Electric power production, dollars, kilowatt hours[b]		
Start of war to U. S. entry	+1.3	+1.0
U. S. entry to November 1918, October 1942	+1.4	+1.0
Cotton consumption by mills, running bales		
Start of war to U. S. entry	+0.9	+1.3
U. S. entry to November 1918, October 1942	—1.0	+0.5
Automobile production, passenger cars, number		
Start of war to U. S. entry	+3.6	—1.5[c]
U. S. entry to November 1918, March 1942	—6.1	—68.9
Automobile production, trucks, number		
Start of war to U .S. entry	+5.0	+1.0
U. S. entry to November 1918, March 1942	+4.3	—4.5
Construction contracts, total. Dodge, 27 and 37 states, dollars		
Start of war to U. S. entry	+2.8	+2.5
U. S. entry to November 1918, October 1942	—1.0	+3.0
Oak flooring production, board feet		
Start of war to U. S. entry	+1.5	+0.6
U. S. entry to November 1918. October 1942	—5.8	—8.8

	WAR I	WAR II
Portland cement production, barrels		
Start of war to U. S. entry	+0.4	+1.4
U. S. entry to November 1918, October 1942	—2.8	+0.7
Factory employment, New York State, Index		
Start of war to U. S. entry	+0.8	+1.0
U. S. entry to November 1918, November 1942	—0.1	+0.8
Factory employment, B. L. S. Index		
Start of war to U. S. entry	.....	+1.1
U. S. entry to November 1942	.....	+1.1
Railroad revenue freight ton-miles, Babson and I. C. C.		
Start of war to U. S. entry	+1.0	+1.3
U. S. entry to November 1918, September 1942	—0.1	+3.8
B *Volume of Domestic and Foreign Trade*		
Bank clearings outside New York City, dollars		
Start of war to U. S. entry	+1.9	+1.4
U. S. entry to November 1918; November 1942	+1.2	+1.0
Bank debits outside New York City, dollars		
Start of war to U. S. entry	...	+1.3
U. S. entry to October 1942	.....	+1.4
Exports, total, dollars		
Start of war to U. S. entry	+3.7	+2.3
U. S. entry to November 1918, October 1942	—0.2	+3.1
Imports, total. dollars		
Start of war to U. S. entry	+1.7	+1.6
U. S. entry to November 1918, October 1942	+0.2	—1.4
C *Wholesale Prices of Commodities*		
Wholesale prices, all commodities, B. L. S. Index		
Start of war to U. S. entry	+1.6	+0.7
U. S. entry to November 1918, October 1942	+0.9	+0.6
Wholesale prices, non-agricultural commodities, B. L. S. Index		
Start of war to U. S. entry	+1.5	+0.6
U. S. entry to November 1918, October 1942	+0.9	+0.4
D *Wage Rates and Payrolls*		
Composite Wages, Federal Reserve Bank of New York Index		
Start of war to U. S. entry	+0.6	+0.5
U. S. entry to November 1918, August 1942	+1.6	+1.0
Factory payrolls, New York State, Index		
Start of war to U. S. entry	+1.5	+2.0
U. S. entry to November 1918, September 1942	+1.7	+2.4
Factory payrolls, total, B. L. S. Index		
Start of war to U. S. entry	..	+2.3
U. S. entry to October 1942	...	+3.2
E *Financial Activities*		
Common stock prices. Cowles Commission and Standard & Poor's Corp. Index		
Start of war to U. S. entry	+0.6	—1.0
U. S. entry to November 1918, October 1942	—0.7	—0.1

	WAR I	WAR II
Shares sold on New York Stock Exchange, number		
Start of war to U. S. entry	+2.8	—1.9
U. S. entry to November 1918, November 1942	—0.7	—0.04
Bond sales, par value, on New York Stock Exchange, dollars		
Start of war to U. S. entry	+1.1	+1.2
U. S. entry to November 1918, September 1942	+5.1	+2.1
Corporate issues, stocks, incl. refunding, United States, Canada, and foreign. *Journal of Commerce,* dollars		
Start of war to U. S. entry	+3.8	—1.9
U. S. entry to November 1918, September 1942	—2.6	—11.4
Bank clearings, New York City, dollars		
Start of war to U. S. entry	+3.6	+0.4
U. S. entry to November 1918, November 1942	+0.1	+0.3
Call money rates, New York City, per cent		
Start of war to U. S. entry	—1.8d	0.0
U. S. entry to November 1918, October 1942	+2.8	0.0
90-day time money rates, New York City, per cent		
Start of war to U. S. entry	—1.2d	0.0
U. S. entry to November 1918, October 1942	+1.9	0.0
Commercial paper rates, New York City, per cent		
Start of war to U. S. entry	—0.5	—0.3
U. S. entry to November 1918, November 1942	+1.7	0.0
Weighted average of rates charged customers by banks, all leading cities, F. R. B., per cent		
Start of war to U. S. entry	....	—0.4
U. S. entry to August 1942	..	+0.7
Yields of 45 high-grade corporate bonds, Standard Statistics Co., per cent		
Start of war to U. S. entry	+0.1	—0.4
U. S. entry to November 1918, November 1942	+0.6	+0.1
F *Profits and Losses*		
Net operating income, U. S. Steel Corp., dollars		
Start of war to U. S. entry	+4.4	+2.5
U. S. entry to November 1918, December 1942	—3.8	+0.9
Business failures, number of concerns, Bradstreet and Dun & Bradstreet		
Start of war to U. S. entry	—0.5	—1.3
U. S. entry to November 1918, September 1942	—3.9	—2.3
Business failures, liabilities, Bradstreet and Dun & Bradstreet, dollars		
Start of war to U. S. entry	—2.9	—1.5
U. S. entry to November 1918, September 1942	—0.8	—3.5

[a] The series are adjusted for seasonal variation. For several series, however, no seasonal adjustment was thought necessary for part or all of the war period.

The percentage change per month was computed according to the compound interest rule from three-month average standings centered at August 1914 and September 1939 (Start of war), April 1917 and December 1941 (U. S. entry), November 1918 and the central month of the latest standing it is possible to compute from available data. Exceptions to the three-month ing the fuller form of the Reserve Board series itself. Of course the rapidly increasing output of finished war goods, such as guns, ammunition, tanks, airplanes, and ships, is kept secret; but these branches of production are included by the Federal Reserve Board aggregate, the Bureau of Labor Statistics index of factory employment, and the Interstate Commerce Commission's record of freight movements, all of which show rapid growth. The exceptionally great increase in railroad freight is due largely to diversion of traffic from other agencies of transportation and an increase in average length of haul.

Among other factors, wage rates, payrolls, commodity prices, exports, bank clearings and debits, U. S. Steel Corporation profits,[6] bond sales on the Stock Exchange, bond yields, and interest rates charged customers by banks have risen since our entry into the war. Of course the decline in the number and liabilities of business failures is a sign of active trade at rising prices. The significant shrinkages listed are confined to imports, common stock prices, shares sold on the Stock Exchange, and corporate issues of securities.

2) The rate of expansion has become slower since the American entry into the war than it was between that event and the start of the war in Europe.

Notes to Table 1 concluded:

average (constituting about 10% of the total number of standings) were made when one-, two-, five-, seven-, or nine-month averages seemed to represent better the general level of the series at the date in question.

[b] The series for World War I is dollar value of central station sales; for World War II, physical volume of total electric power production. Annual data on physical volume of total electric power generated yield slightly higher percentage rates of increase from 1914 to 1917 and from 1917 to 1918 than are indicated by the corresponding annual figures on dollar value of central station sales.

[c] The decline from the start of World War II to the U. S. entry is the resultant of a vigorous increase in production from the start of the war to July 1941 (2.8% per month), and a sharp decline afterwards.

[d] The decline from the start of World War I to the U. S. entry is influenced by the high level of call and time money rates from August to November 1914. The general level of rates immediately before and after this period was lower than at the U. S. entry.

Production shows a retarded rise or a fall except in electric power production (which has risen at a constant rate), copper mining (for which we have no data later than April 1942), and contracts for construction work (which, as said above, rose very rapidly for six or seven months after we entered the war but seem now to have passed their peak).

Outside the field of production, the changes in direction and pace of movement have been less uniform, as the accompanying tabulation shows.

BEFORE U. S. ENTRY	AFTER U. S. ENTRY	SERIES
Rising	Rising at faster rate	Freight ton-miles, Exports, Wage rates, Payrolls, Bank debits outside New York, Bond sales on Stock Exchange
Rising	Rising at same rate	Factory employment, B. L. S. index
Rising	Rising at slower rate	Wholesale prices, Bank clearings, U. S. Steel Corporation profits, Factory employment, N. Y. State index
Rising	Falling	Imports
Constant	Constant	Call-money rates, 90-day time money
Falling	Falling at faster rate	Corporate issues of securities, Business failures: number and liabilities
Falling	Falling at slower rate	Common stock prices, Shares sold on Stock Exchange
Falling	Constant	Commercial paper rates
Falling	Rising	Rates charged customers by banks, Bond yields

There seems small doubt about the acceleration in the rise of wage rates and payrolls, but the retardation in the rise of wholesale prices may be questioned. As they stand, the price indexes have changed pace only a little and it is probable that they understate the actual rise since price controls were instituted. However, prices did not begin to rise until the end of 1940. If we compare the rate of advance during the last twelve months before our entry with the rate since then, the retardation is substantially greater than Table 1 suggests.

Apart from the issuing of corporate securities, the financial activities that had been shrinking have shrunken less rapidly since our entry into the war, and interest rates have shown some slight symptoms of hardening.

3) The expansion in World War II after the American entry seems to have been more vigorous than the corresponding expansion in World War I.

Production, as represented in the table, has a better record in the second World War than in the first. Two of our indexes of production, also copper mining, coal output, cotton consumption by mills, construction contracts, and cement production fell after our entry into the first war and rose in the second. Iron and steel production rose in both wars, but a little faster in the second. The Federal Reserve Board index, adjusted for similar coverage, fell in both wars, but more slowly in the second. The production of passenger automobiles and oak flooring fell in both wars, but faster in the second, while the production of motor trucks rose in the first war and fell in the second[7]—differences of which at least the first two represent more effective mobilization in the second war. Against this considerable list of important series, we can enter on the other side of the ledger only the output of crude petroleum, which rose in the first war and fell in the second, and electricity, which rose faster in World War I thanks to a steeply rising trend in the days when conversion from other types of motive power was proceeding apace.

Employment, freight hauled, exports, and the operating net income of the U. S. Steel Corporation follow the pattern of most production series in our sample—falling after our entry into the first war, rising after our entry into the second. Wholesale prices of commodities and wage rates rose in both wars, but less rapidly in the second; so also did bank clearings outside New York, bond sales on the Stock Exchange, and yields of high-grade corporate bonds. The series that rose in both wars but faster in the second are factory payrolls in New York State and clearings in New York City. Several financial series fell in both wars. The fall has so far been more rapid in the second war in capital issues and the liabilities of business failures, less rapid in the prices of common stocks. shares sold on the Stock Exchange, and the number of business failures. Open market rates of interest rose in the first war and have remained constant in the second. Imports have fallen since December 1941, whereas they rose after April 1917.

Two questions can be raised concerning these comparisons in addition to those suggested by the limitations of our sample. First, the comparisons cover 19 months, from April 1917 to November 1918, in the first war, and in the second intervals ranging from three to twelve months. Are not these differences in duration responsible for the better record of production in the second war and for the slower rise of prices and wage rates? One might expect production to expand more slowly the longer a war lasts and finally to shrink. Also one might expect prices and wage rates to rise faster during the later than during the earlier stages of a major war.

To test this doubt about the comparisons, we made supplementary computations in which changes during the first war were taken for the same number of months as during the second. On that basis, production during the first war makes an even less favorable showing than in Table 1. But this result is due primarily to a fortuitous happening. For most of our series we now have data for nine to eleven months since December 1941. If we count off nine to eleven months after April 1917 we get into the exceedingly severe winter of 1918. Bitter cold and heavy snows interfered seriously with railway traffic, reducing shipments of raw materials, especially fuel, and the output of manufacturing plants. So far during this war the flow of production has encountered no comparable difficulty. The majority of our production series have a better record in the later months of World War I, when the bad weather was over and the railway congestion was moderated, than between our entry and the winter. There are a few exceptions, notably factory employment, which in New York State rose 0.2 per cent per month from April 1917 to March 1918, and fell 0.5 per cent per month from March to November. The employment index of the U. S. Bureau of Labor Statistics, which seems less representative than the New York index in 1917-18, behaves in much the same way, falling 0.03

per cent per month from April 1917 to February 1918, and 0.3 per cent per month from February to November.

As for commodity prices and wage rates, both the comparisons based on periods of equal length in the two wars and those in Table 1 indicate a slower rate of rise during this war. The Bureau of Labor Statistics index of the wholesale prices of 'all' commodities rose 0.9 per cent per month during the first ten months after our entry into the first war and 0.6 per cent during the corresponding period in the second. When agricultural commodities are excluded, the ten-months rise averaged 0.6 per cent per month in World War I and 0.4 per cent in World War II. The New York Federal Reserve Bank index of composite wages for 8-month periods gives a rise of 1.3 per cent per month in the first and 1.0 per cent in the second war. We do not know how accurately these indexes of prices and wages represent the changes they purport to summarize, but they seem to be the least dubious evidence available.

Second, granted that our method of comparison is not biased against World War I, can we ascribe the differences shown by Table 1 to better management in World War II? May they not be due mainly to cyclical and secular factors, as genuinely fortuitous for the present purpose as the bad weather of the 1918 winter?

At the time of our entry into World War I, American business was enjoying an intense boom. At the time of our entry into World War II, business had been expanding for forty-three months; but full employment of resources may not have been approximated as closely as it was in April 1917. If so, the better record of production in this war can be attributed, at least in part, to the possibility of utilizing relatively larger idle resources of men and equipment. Another way of putting much the same idea starts by saying that after 1929 American business failed to grow at the rate characteristic of earlier decades. True, economic activity expanded in jerky fashion from March 1933 to May 1937, but in few indexes was the peak of 1937 appreciably higher than the peak of

1929. Meanwhile technology had continued to progress, making it possible for the nation to increase output in extraordinary fashion whenever demand should justify an all-out effort. That moment came when the Japanese attacked Pearl Harbor. On this view, the subsequent rapid increase in production should be interpreted primarily as a delayed catching up with the secular trend of American efficiency.

Both these notions are rather fuzzy. Even so, they are useful warnings against hasty explanations of the better record made by production in World War II. Random factors in the form of exceedingly bad weather in the winter of 1917-18 were partly responsible for the somewhat poorer showing during the earlier war. Perhaps cyclical and secular conditions are partly responsible for the somewhat better showing in this war. What matters is that some combination of conditions among which we cannot apportion the credit at present have enabled the nation to increase its output of goods rather faster since Pearl Harbor was attacked than after unrestricted submarine warfare was begun in 1917. Also we have been able to prevent prices and wage rates from rising as rapidly as during the first experience, though factory payrolls have risen faster.

4) Table 1 tempts anyone who examines it to speculate about the possibility of maintaining the rapid expansion of output that has prevailed since our entry into the present war.

Experience in World War I gives little guidance. As noted above, our supplementary computations indicate that production expanded rather faster on the whole in the later than in the earlier months of that struggle; but this improvement coincided with recovery from the setback given by a severe winter and provides no precedent for expecting a similar acceleration in the months to come. More significant is the failure of factory employment to increase after March 1918, according to the New York State index – a fact that is confirmed by the imperfect national index of factory employment then compiled by the Bureau of Labor Statistics. The latter index, which now covers a vastly larger sample of factories, shows no retardation in its rise since our entry into this war. But, with further large withdrawals of men into the armed forces, can the factory army continue to grow at the rate of 1.1 per cent per month? We have seen that the increase of production has slowed down since December 1941 in all the lines represented in Table 1 except electric power, doubtfully copper mining, and again doubtfully construction work. Is it not prudent to expect that this flattening out will continue? And can the railways, which have made such extraordinary gains so far, go on increasing their service at the recent rate?

Another bit of evidence is provided by the 65 subdivisions of the Federal Reserve Board index of industrial production for which annual approximations can be made covering 1940-42, and which represent over 94 per cent of the total weights in the base period (1935-39). Of these 65 subdivisions 61 rose in 1940-41; 39 rose in 1941-42. On a weighted basis, the increases dropped from 93 per cent of the total in the first year to 68 per cent in the second. Moreover, 30 of the 39 series rising in 1941-42 rise at slower rates than in the preceding year. These retardations in the rate of rise represent 49 per cent of the total weights, the declines in 1941-42 represent 26 per cent — a total of 75 per cent. The picture is like that presented by Table 1: increases in output prevailed in 1942, but slowing down in the rate of growth or actual shrinkage characterized three-fourths of American industry.

An expectation of retardation or decline in the types of production represented by statistical series now made public does not necessarily imply a similar expectation regarding the output of war supplies. We may reasonably expect that the organization of the war effort will improve with practice, and that the operations of new plants will become increasingly efficient. Presumably, less energy will be absorbed by preliminary planning, tooling, and construction; more energy will go into making the goods we have been getting ready to make. Further diversion of resources from civilian to military uses may be feasible, and in some industries working hours may be lengthened without an offsetting decline in productivity. At the end of World War I, many who participated in the economic mobilization felt that we were just getting into our stride when Germany collapsed, and would have vastly improved our record in another few months. On the other hand, we must expect further 'dilution' of our labor force through the introduction of inexperienced workers; also we must expect increasing fatigue, perhaps more 'absenteeism', the deterioration of some equipment from insufficient repairs and renewals, and a dwindling of stock piles. The crucial limiting factor in a long war is likely to be manpower. Studies made by the National Bureau of both British and German experience in 1914-18 point to that conclusion, and current reports about conditions in Germany reenforce it. The United States seems to be close to the stage at which not only total output but also the output of war supplies will depend primarily upon the way in which this vital resource is used.

Whether the nation will avert a great inflation of commodity prices and wage rates is another grave uncertainty, but one that turns less on physical factors than on morale. We may gravely compromise the success of the war effort by indulgence in political and economic dissensions – a remark that applies to production, to price and wage controls, to the use of manpower, and to strategy itself. The one conclusion that seems tolerably safe is that we can prevent a slowing down and eventual decline in war production, an acceleration in the rise of prices and wages, only by efficient management, strenuous effort, cheerful acceptance of minor privations, and by sinking our personal differences in devotion to the common cause.

III Economic Problems and the Return of Peace

PEACETIME VALUES AND GOVERNMENTAL PLANNING

Victory brings the attainment of the great aim that united the citizens of a democratic nation during war. Having assured their freedom to govern themselves as they choose in the future they can foresee, people resume 'the pursuit of happiness' in ways more constructive than destroying enemies.

One may call the pursuit of happiness by peacetime methods an aim common to all; but, unlike the pursuit of victory, it has not led in democracies to the imposition by government of an authoritative scale of values. On the contrary, each citizen has pursued happiness in whatever way suits his individual temperament, abilities, and circumstances. Similarities of value scales have produced, not united action under governmental direction, but competition among individuals for goods that many want. The cooperation required by modern methods of production has been arranged mainly through private associations. Though this form of economic organization has not maintained full employment of resources, it has been approved in principle by public opinion.

At the close of past wars, no national aim requiring unified action has so dominated men's minds that they have been ready to sacrifice their individual aims to attain it. Hence the sovereign citizens have no longer felt the need of mobilizing their resources under centralized direction. With a vast sense of relief, they have turned their attention once more to their private concerns, which they have believed they could manage best by making their own plans. Almost as suddenly as they enlarged the responsibilities of their government on the outbreak of war, they have restricted these responsibilities again on the return of peace.

This sharp reversal of policy is not inevitable, and may not happen again when the present war ends. It is conceivable that some peacetime aim may arouse emotions scarcely less uniform and intense than the emotions aroused by war. It is conceivable, also, that this aim may be one that most men think can be achieved best under governmental management. If American imaginations are captivated by any aim that meets both these specifications, victory will not bring back 'business as usual'.

The basic question concerning postwar organization in this country, then, is whether some plan of governmental management will eclipse the appeal of traditional ways. It seems safe to say that one or more plans of this sort will be vigorously urged. Current discussion of 'an economy of plenty', 'full employment of resources', 'freedom from want' is more than an expression of human hopes. It is also an earnest of concerted efforts to turn these hopes into realities in a 'brave new world'. Sanguine engineers will repeat their assurances that the application of their best techniques on a continental scale can provide comfort for all. Confident economists will add that, given a free hand, they can prevent depressions. Imposing projects for accomplishing these grand aims through governmental agencies will be urged upon the nation.

No less assured is the presentation of business plans to provide jobs for everyone who wishes to work. High hopes for the future are not monopolized by those who think it necessary to reconstruct the economic organization; they are avowed also by those who extrapolate past progress under private initiative into the years to come.

Thus, when victory seems near, Americans will be offered two bright promises. It will be a time of rejoicing and great expectations, but also of lively controversy. The advocates of novel plans will enjoy one great advantage: they will celebrate the merits of an invention in the blueprint stage. Toward which side public opinion will lean we do not know, but it is not unlikely that the irritations left by the governmental planning of wartime will have more weight than the arguments of experts. However firmly people approve authoritative control during war as a dire necessity, they find its interferences with their own plans exceedingly irksome. Business and labor, civilians and soldiers will be eager to rid themselves of hampering regulations it has been their duty to obey for trying months. The prospect of subjecting themselves to a new set of controls will be especially unwelcome when they are just freeing themselves from an old set. Popular acceptance of over-all economic planning by government would be much more likely in a severe depression than when most people are expecting good times to come. Logically, this emotional state may have little to do with the merits of the rival plans put before the nation; psychologically, it may decide the issue in favor of private enterprise. But that is by no means a foregone conclusion. Memories of sufferings during the Great Depression and the slow recovery from it are still keen. No one knows how many Americans now set security of income as their economic goal and believe it can be reached only by extending governmental controls over business activities.

Before the confused popular controversy begins is the best time to examine rival methods of approximating full employment of resources, or, better, of assuring a high and rising level of real incomes. While the plans that will be put forward are not known definitely, and probably have not been formulated in detail, current literature suggests the lines advocates of governmental control will follow. The crucial question is whether and how cyclical contractions can be prevented. We know that major wars overtax economic resources; that is, they maintain compulsory over-employment as long as they last, despite which they reduce the standard of living in numerous respects. Large-scale preparations for war have less intense but otherwise similar effects. If so, cannot enormous public expenditures for constructive ends keep an economy running continuously at capacity levels in peacetime? Or can legislation create a system that will induce individual and business expenditures so huge and so steady that the full output of industry will sell at profitable prices year in and year out? Is an active demand for goods by consumers all that is necessary to keep the economy operating continuously at a high level? Can free enterprise develop methods that will enable it to avoid such disasters as overtook business in 1920-21 and 1929-33?

The analysis and observations bearing most directly upon these questions are found in the literature of business cycles, and the National Bureau's studies in cyclical behavior should prove helpful to those who grapple seriously with the problem, whatever their line of approach. One of our most pressing duties is to make our summaries of experience available to everyone concerned as promptly as we can put them into intelligible form. A workable plan for maintaining full employment that would not blight the development of personality or check social progress would be one of the greatest achievements in history. Competently thought out proposals to that end merit the most sympathetic attention and the most searching criticism.

BUSINESS PROBLEMS

We are on firmer ground in considering what will happen if the American people prefer a return to their traditional form of organization.

No matter how emphatic that preference might be, it seems clear that governmental activities will not soon be reduced to their prewar level. Either through some international organization formed for the purpose, or as separate nations, the democracies will keep under arms forces adequate to safeguard the peace they establish. Presumably, agencies to relieve the misery of the peoples now exploited by armies of occupation will be organized by governments, and governments will aid directly or by guarantees in the longer task of economic reconstruction abroad as well as at home. Similar help may be extended to our present enemies. It is generally believed that some of the current controls over domestic prices and trade must be continued for a time. To pay interest on the national debt, the federal treasury will be collecting from taxpayers and disbursing to bondholders perhaps five billion dollars a year. Almost certainly a larger fraction of the national income than before the war will pass through the hands of government. But fulfilling international duties and maintaining public credit will impose no such staggering burden as the war itself. The greater part of the nation's energy can be devoted once more to meeting consumers' wants.

In the short run, the prospects of profits on postwar business look exceedingly bright. There will be an eager demand for goods that have been off the market during the war or curtailed in supply, and millions of people will have more money than usual to spend. During peacetime expansions, the general public absorbs an increasing fraction of the currency in circulation outside of the Treasury. Recent statistics indicate that the absorption now going on will far surpass previous records. Billions of dollars now 'fructifying in the pockets of the people', as Mr. Bryan used to say, will be spent freely to satisfy keen appetites, and behind this cash is a secondary reserve of billions in government bonds. Bank deposits also promise to be larger than ever before. Foreign needs will be even more insistent than those of our own people, and presumably ways will be found to finance the most pressing. Many goods will be short in supply and the rise in prices may match the sensational advance of 1919-20. From a narrow business viewpoint this outlook is dangerously enticing.

Recollection of what happened at the close of World War I suggests less sanguine expectations. The first economic effects of peace were depressing. From the summer or autumn of 1918 business activity declined until the spring of 1919. There were grave uncertainties about the future course of prices and wage rates. Terms of the peace to be imposed upon the enemy, financial settlements with our allies, and the resumption of commercial intercourse had still to be fixed by the slow and chancy processes of treaty making. No one knew how quickly the armed forces would be demobilized. Industry faced the need of reorganizing for civilian production. Similar conditions will prevail at the close of the present war, and it is hard to see how business can avoid a brief contraction even if the war has a double ending — first the collapse of Italy and Germany, later the collapse of Japan.

It is much more disturbing to recall that after a period of hesitation at the end of World War I American business went off on one of its wildest sprees. The expansion of April 1919 to January 1920 is the shortest we have dated. During these nine months wholesale prices rose nearly three times as much as they rise in an average peacetime expansion, which lasts two years. Production reckoned in physical units, on the contrary, expanded less than usual. The output of pig iron, for example, rose 17 per cent instead of its peacetime average of 56 per cent; steel ingots rose 32 instead of 61 per cent; passenger automobiles 48 instead of 71 per cent; bituminous coal 14 instead of 27 per cent; electrical energy 13 instead of 20 per cent; cotton consumption 21 instead of 27 per cent. The most notable exception to this rule of less than average expansion was building construction, which had been sharply restricted during the war. Contracts awarded rose 52 instead of 16 per cent. Speculation was confined mainly to the commodity markets. After a very brief but violent spurt, transactions on the Stock Exchange declined as sharply as they had risen. Corporate issues of stocks behaved in a similar fashion. Stock prices, according to the comprehensive index of the Cowles Commission, advanced much less than usual, while bond sales and bond yields rose instead of falling. Clearings in New York City rose less than outside, whereas they usually rise more during an expansion.

Few men who were in business during those exciting years have forgotten the reckoning that came in 1920-21 with its collapse of prices, epidemic of bankruptcies, wiping out of paper profits, and grievous sufferings among the unemployed. Not until the country recovered from this severe contraction lasting twenty months did it enter upon a period of well sustained prosperity.

If American business resumes its wonted way, will it repeat this performance by first slowing down for a few months under the impact of peace, then grasping for the big profits promised by an enormous consumer demand at skyrocketing prices, thus bring upon itself staggering losses, and delay its resumption of efficient operations for three years after the close of World War II? If the performance is repeated, the popular appeal of over-all economic planning by government will be enormously strengthened, and the nation may decide to try that bold experiment, not immediately after the war, but a few years later.

Given the most prudent of management, the postwar world will have troubles aplenty in which this most favored of nations will share. Unconditional surrender by the Axis Powers will give the United Nations an opportunity to reorganize international relations for keeping the peace. How they will discharge this responsibility we cannot foresee, but we may be sure the settlement will have economic consequences of the first moment. Will American agriculture again be stimulated by an enormous foreign demand and then depressed by a drastic reduction of exports? Will most of the nations, our own among them, again bar the importation of goods they might produce for themselves at higher cost? How many of the substitute materials now made of necessity can hold their markets in peacetime? What dislocations will new products cause in trade? There are those who believe that the technological progress fostered by war will revolutionize industry. If so, the long-run gain will be great, but how will our economy adapt itself in the short run to technological unemployment and the devaluation of old equipment on a larger scale than ever before? Requiring the mass production of highly standardized goods, war favors the concentration of industry in huge plants. It seems doubtful that the effort to spread work by subcontracting does more than mitigate this trend. When peace returns, can small enterprises make up the ground they seem now to be losing? Will an increase in 'administered' and a decrease in competitive prices make the price system less flexible?

The future of public and private finance presents as many question marks as does the future of commerce and industry. Reduction of public debt has been a traditional postwar policy in the United States. Will it be resorted to again? If so, tax revenues must exceed the large expenditures in prospect. Will the enormous volume of currency in circulation and of bank deposits shrink when the war ends? If so, what will be the effect upon prices, profits, and employment? Banks already have an unprecedented fraction of their assets invested in government bonds, and presumably will increase their holdings. Will this load handicap them in meeting business demands for credit after the government has ceased to be the chief financing agency? Can the load be shifted, and if so how? Will an attempt be made to redistribute the world's stock of gold? Will a free exchange market be allowed to develop? Will the nations again compete by depreciating their own currencies?

Add to this incomplete list of the uncertainties we shall face when peace returns the problem we have never been able to solve — how to maintain approximately full employment for more than a year or two at a time — and we have a faint premonition of the demands that will shortly be made upon our economic intelligence. Yet what we are now accomplishing should give us confidence. The nation as a whole, not merely the small segment of it called government, is doing a supremely difficult and most unwelcome job with considerable success. Within itself the nation finds resources of public spirit, steadfastness, and ingenuity of which it was scarcely conscious. Its very readiness to recognize shortcomings in its own performance is evidence of strength. The qualities revealed by war should enable the American people to work out solutions if they realize that the problems of peacetime call for all the constructive ability they possess.

NOTES

1 For a fuller analysis, see *Fiscal Planning for Total War* by W. L. Crum, J. F. Fennelly, and L. H. Seltzer (National Bureau of Economic Research, 1942).

2 In Great Britain, France, and Germany also the expansion of 1914-18 exceeded the peacetime average, though not by so wide a margin as in the United States. According to our dates for business-cycle troughs and peaks, the comparisons come out as follows:

	PEACETIME EXPANSIONS			WARTIME EXPANSION
	Period	Number	Mean duration	1914-18
			(months)	
Great Britain	1855-1932	14	34	49
France	1879-1932	10	29	46
Germany	1879-1932	9	36	46
United States	1855-1938	19	24	44

The Boer War can hardly be counted a major conflict. The Franco-Prussian War of July 1870 to April 1871 was accompanied by a contraction in France (August 1870 to February 1872), for much of the country was promptly occupied by the enemy. Our business-cycle chronology for Germany does not begin until 1879, and we restrict the French figures to the same period.

3 These measures, like those which follow, are percentages of the average value of a series during the months included in successive business cycles marked off by the National Bureau's chronology. They show the change from the standing of a series during the three months centered on the initial trough of a cycle to its standing during the three months centered on the peak. Larger amplitudes are obtained when we use the trough and peak dates of each series analyzed, instead of the dates we have chosen to represent the troughs and peaks of business cycles. The present comparisons of price, production, and financial series do not tell the full story of wartime changes, but they are kept relatively simple in meaning by the use of a single set of turning dates. For fuller explanations see the National Bureau's forthcoming publication, *Methods of Measuring Cyclical Behavior*, by Arthur F. Burns and Wesley C. Mitchell.

The business cycles of 1868-70 and 1919-21 are omitted from the peacetime averages, because during them prices were dominated by postwar influences, of which more will be said later.

4 For such figures as are available see *Munitions Industry*, Final Report of the Chairman of the United States War Industries Board to the President of the United States, February 1919; and Benedict Crowell, *America's Munitions, 1917-1918* (Washington, 1919).

5 The heavy fall in 1918 is ascribed by George O. May partly to the fact that in 1917 the tax was retroactive. Hence, there was less opportunity than in

later years to arrange transactions that would reduce taxable income. See *Recent Economic Changes* (National Bureau of Economic Research, 1929), p. 855, footnote.

6 A chart of this series suggests that they may have reached their highest point in the third quarter of 1941, just before our entry into the war.

7 The decline in motor truck production after December 1941 rests on slender and rather dubious evidence. No data are available since March 1942, and the seasonal adjustment for that month may be faulty.

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