

would not be changed materially. As to our commandeering all our munitions output, the idea is preposterous. For six months or a year we should have no army to equip, and in the meantime we should have had time for indefinite expansion of the munitions industry. What limits the industry now is chiefly the question of the willingness and ability of the Allies to pay. With the Allies' credit underwritten by our own colossal resources, there could be no possibility of lack of means to pay for munitions. And that we should deliberately withhold our resources from nations fighting a war that has become ours would imply that we had gone mad with jealousy for our own military glory.

The entry of the United States into the war, it is said, would prolong the conflict. This is probably true. We are a pacific nation, and pacific nations are the most ruthless antagonists, when aroused. A militaristic nation may content itself with an inconclusive peace. It means to maintain its military power intact in any case, and can contemplate a renewal of the struggle with serenity. A pacific nation wishes to disband its armies and devote itself wholly to peaceful pursuits. Therefore it seeks to destroy its enemy completely. That is why there was never any serious doubt that the North would give its last man, if necessary, for the subjugation of the South. That is why England is more insistent than Russia and France upon the complete humiliation of Germany. If the United States entered the war it would align itself with England as the most irreconcilable of Germany's foes. As neutrals Americans may see that it is not in the interest of the world that Germany should be crushed. As belligerents they would feel, exactly as Englishmen do, that the German menace must be destroyed once for all. Such a spirit would prolong the war. Granted; but we should accept the present cost in return for what we should regard as future security.

It is of importance, too, to consider what bearing the entry of the United States would have upon post-bellum commercial relations—"the war after the war." The plan of placing Germany at a serious commercial disadvantage through a system of commercial treaties among the Allies is more or less illusory, with the United States left out. If German competition were excluded from the British, French and Russian markets, it would concentrate upon the American market, the most valuable of all. If the Allies sought to secure for themselves a specially favorable position in Latin America, with the United States left out, German and American commercial power would work hand in hand to thwart them. With the United States included in such a commercial system, Germany would meet

almost insuperable obstacles in her attempts to recover her foreign markets. What England and France could not supply to Russia and Italy, the United States could supply. What the European Allies could not take from one another or from Latin America, the United States could take. England can not afford to abandon free trade for a policy of commercial reciprocity with her European Allies. With a differential position, as against Germany in the American market, England could and probably would find it worth while to restore her customs duties.

We do not want war with Germany. We believe that the European war will come to an earlier close without our intervention. We believe that a peace attained through compromise between parties that have fully tried out each other's strength and have established a substantial equality is likely to prove a better and more lasting peace than one in which a party heavily preponderant, even through our aid, dictates terms. We believe that a commercial war following upon the present conflict would be inimical to the interests of the whole civilized world. Nevertheless we are certain to find ourselves at war with Germany, if the German government continues to hold our friendship so light as to sacrifice it to the trifling military gains attainable through submarine inhumanities. And once war is on, a complete transmutation of our values is bound to take place. In the interchange of injuries, during the war and after its close, we should endeavor to see to it that we did not come out worsted.

## Hours of Work Must Be Limited

**I**S there any good reason why the state should limit the hours of labor permitted to men? How does this matter directly concern the community? The answer is contained in the brief presented to the Supreme Court in the so-called Bunting case, in support of the Oregon ten-hour law. It is an appeal to the world's experience showing that over-long hours of labor are a menace to health and vitality, to industrial efficiency and to the proper exercise of citizenship.

The brief begins by pointing out that the most striking fact in regard to mortality rates in the United States is the increase of so-called degenerative diseases—diseases of the heart, blood vessels and kidneys. This increase goes side by side with a decrease in the death rate of all diseases like tuberculosis and typhoid fever, which can be fought by sanitation. There follows a mass of testimony from physicians and public-health workers support-

ing the proposition that the increase of the degenerative diseases has reached the proportions of a national menace.

From this the brief passes on to the more specific study of the dangers of long hours. It points out that science teaches that immunity from disease is due chiefly to adequate power of resistance. We have long recognized that in certain dangerous trades workers were especially subject to so-called "occupational diseases." Liability to such diseases is intensified by fatigue. But even in factories where no special occupational diseases threaten, fatigue itself constitutes a great peril to health by undermining vitality. Laboratory experiments show that fatigue markedly diminishes the power of the blood to overcome bacteria and their toxic products. Moreover, it is asserted that over-fatigue predisposes not only to the infectious but to the general diseases.

Too long hours and too great strain predispose also to nervous disorders. Physicians have recently found that nervous exhaustion is alarmingly prevalent not merely among brain workers as is commonly supposed, but among the industrial workers as well. In fact, so prevalent have neurasthenia and nervous disorders become that physicians in Europe have come to call them "modern occupational diseases." Fatigue may not, however, result in a specific immediate disease. More frequently it saps the physical energy of the worker and leads to general weakness, anemia or premature old age. Excessive working hours often, too, result in serious injury to the eyes and ears, and tend to overstrain any muscles and organs used in doing a particular kind of work. In modern industry there has been an increase of strain due to increased speed of machines. This is also intensified by the extreme monotony of many kinds of work. The minute specialization of labor results in a constant repetition of some motions, which brings on added fatigue. The abuses of piece-work in manufacture put a premium upon feverish activity. All this acts cumulatively as a burden on the disease-resisting power of the worker.

The conditions under which work is carried on add to the strain. Bad air, humidity, extremes of temperature, bad lighting and vibration, though not by any means to be found in all factories, nevertheless constitute a frequent environment of work. For example, employees in a cotton mill are constantly subjected to the danger of inhaling cotton dust and fluff, to a combination of heat and humidity, great noise, lack of ventilation, vibration of machinery and nauseating odor. It is not always possible, according to manufacturers, to eliminate such conditions, but at least we need not intensify their debilitating effect by long hours. The number

of occupations in which the worker comes in contact with dangerous gases and poisons is much larger than the list usually called "dangerous trades." Among the dusty trades are such industries as baking, printing, the rag industry, and the manufacture of boots and shoes, brushes, shoddy, woolen and worsted.

Then follows a study of the nature and effects of fatigue. It is pointed out that an over-tired person is literally a poisoned person, poisoned by his own waste products. These wastes are impurities arising from chemical processes of cellular life. Recent medical research shows that fatigue is due not only to actual poison but to a specific toxin of fatigue analogous in its nature to other bacterial toxins. Excessive fatigue may not at first be noticed by the worker himself and the serious damage of over-long hours may be done before he has felt the effects. In recent years it has become possible to measure the fatigue of a single muscle or group of muscles, and the records show that after a certain degree of fatigue has set in the muscle becomes incapable of performing as much work as it did before without a proper period of rest. The working of fatigued muscles is a cumulative strain, both on the muscles and the nervous system. Adequate rest simply means that the fatigue of one day must be completely repaired before the next day's work begins.

The danger of long hours has a direct relation to industrial accidents. Thus, for example, in 126 cotton mills there are recorded:

73	accidents	between	6	and	7	A.M.
95	"	"	7	"	8	"
126	"	"	8	"	9	"
161	"	"	9	"	10	"
128	"	"	10	"	11	"
78	"	"	11	"	12	M.

The same rise and fall is shown for the afternoon work. Statistics drawn from all countries which keep records of industrial accidents tend to confirm this general curve showing a steady rise to the fourth or fifth hour of work, followed by a decline in the last hour owing probably to a decreased rate of output and the anticipation of rest. The liability to accident is of course increased by fatigue.

The effect of too long hours on the general morale is emphasized by authorities the world over. After excessive labor the overtaxed worker is left stupefied and responds only to the more obvious excitements. This means often that he seeks relief in drink, for alcohol is a solace after extreme heat and the inhalation of dust, and it is a stimulant for exhausted energies.

It is hardly necessary to insist that since health is the foundation of the state, a nation which allows

its workers to be exhausted by continuous over-exertion is corrupting its own foundation. Not only does it weaken its vitality, but it makes it impossible for the worker to share any kind of decent family life or use his leisure effectively.

The brief then turns to the discussion of the advantages of short hours. The communities which have reduced their hours of labor show an extraordinary improvement in physique, intelligence and morals. For adequate rest is a necessity, without which the worker is unable to take advantage of the civilizing forces in a community's life. It is impossible for an overtired man to learn anything. These statements, obvious enough to common sense, are supported by the experience of Germany and Australia and the United States, and the brief adduces a mass of testimony on this point.

If the great experiment of democracy is to have any chance of success the education of the citizen must not end on his fourteenth birthday, when wage-earning ordinarily begins. He must have leisure outside of working hours for continuing education and recreation, and he must not be too exhausted to make use of that leisure. The Americanization of the immigrant depends upon the limitation of hours, for Americanization means that the immigrant must learn to speak English and to understand American ideals and conditions. For this, night schools are being provided all over the country; but unless the worker can come to those schools with some freshness of mind the task is almost hopeless. If the citizen is to be a soldier his effectiveness depends upon maintaining his physique. Some notion of what this problem means may be realized when we read that in 1915, 41,000 men applied for enlistment in the U. S. Marine Corps, and of these not quite 4,000 were found physically fit for the service. In the city of New York, 11,012 men applied and 316 were found fit for service.

Shortening of hours does not in the long run destroy commercial prosperity. On the contrary, the increase of efficiency more than pays for the decrease of hours actually at work. The evidence here covers not only the textile industry, which has long been a classic, but iron, steel, tin, mining, glass work, chemicals, cigars, shoes and many other industries. The shorter working day also acts as a stimulus to maintain efficiency on the part of the employer. It has led to a new scrutiny of methods and regulation and to the invention of ways of eliminating lost time by a better flow of work and materials through the factory. It has acted as an incentive to the installation of improved machinery and new processes. Too long hours on the other hand are fatal to efficiency and the work deteriorates at the end of the day both in quality and in quantity. Wages are almost invariably higher in indus-

tries in which the short work day has been established than they are in unregulated trades. And the shorter work day also tends to regularize industry and to substitute a normal distribution of work throughout the year, for alternating periods of intense overwork and idleness.

The shorter working day should be enforced by law because uniformity is essential to justice between different employers. It is the best method by which the unscrupulous employer who undermines the health of his labor can be compelled to reach the same standard as that of the intelligent and enlightened employer. In many industries the trend towards a shorter work day is plainly visible. It has come about in part through legislation, in part through the intelligence of certain employers and in large measure through the activity of organized labor. Nevertheless a very large number of men are still employed twelve hours a day or more. The census of 1910 showed that the 72-hour week prevailed for 95 per cent of employers in sugar and molasses, 85 per cent in blast furnaces, 64 per cent in the ice industry, 57 per cent in the glucose and starch industry, and 57 per cent in the gas industry, and so on.

In the face of evidence like this, it seems farcical to pretend any longer that the hours of labor are merely a detail of a private contract between a workman and an employer, and that they are of no public concern. The state employs its police power to regulate traffic on city streets, to protect the lives of wild animals and birds, to prohibit the sale of beer and cigarettes. Surely the state has power to guard its citizens against an insidious and widespread vital danger. Unless we deal radically with this issue, the modern industrial system in many instances is bound to lead to a pronounced degeneration of our national stock.

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### EDITORS

HERBERT CROLY  
PHILIP LITTELL  
WALTER E. WEYL

WALTER LIPPMANN  
FRANCIS HACKETT  
ALVIN S. JOHNSON

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# Universal Service as Education

## I

IT is our American habit if we find the foundations of our educational structure unsatisfactory to add another story or a wing. We find it easier to add a new study or course or kind of school than to reorganize existing conditions so as to meet the need. Manual training schools, trade schools, vocational schools and courses, now pre-vocational schools—and next year perhaps pre-pre-vocational and post-vocational—testify how we manage when it is seen that our system does not conform to the demands of present life. Just now we have discovered new defects and are having another addition to our educational scheme urged upon us. The defects are that our educational measures do not assimilate the foreign born and that they do not develop public-mindedness, a sense of public service and responsibility. Some persons might think that the remedy is to improve our existing educational agencies and to make our existing public institutions—including government—more serviceable to the people so that they would arouse greater devotion. But no: let everything else be as it is, and let us add a new agency devised *ad hoc*. Let us have the school of universal and compulsory military service, and the trick is done.

It is a pleasure to acknowledge that there is an awakening to the presence in our country of large immigrant masses who may remain as much aliens as if they never entered our gateways. It is questionable, however, if there is much gain in passing at one bound from seeing nothing to seeing red. Having formerly lulled ourselves to sleep with the word "melting-pot" we have now turned to the word "hyphenate" as denoting the last thing in scares with a thrill. Casting about for some magic, universal military service is to replace the school-house as the melting and brewing pot. In the words of Major General Wood, "Great portions of our population develop in racial areas, reading a dialect press and controlled in the intervening years by dialect interests. Some sort of community of service must be established in order to develop a proper and necessary appreciation of the duties and obligations of American citizenship. I believe that the best method is by some sort of a systematized military training of a universal character." Is it then axiomatic that nothing socializes the mind and enables it to think in public terms so much as a service rendered under military auspices, with the accustomed environment of military paraphernalia and by the traditional rules of military command and obedience?

A speech of Major General Wood as reported in a Philadelphia newspaper puts the matter more vividly. "It is a pretty dangerous situation to turn loose in this country all kinds of humanity seen on the docks at Ellis Island, to turn them loose with no sense of responsibility to their new land. They come in racial groups, drift through our schools in racial groups and are controlled by a dialect press. We are doing absolutely nothing to make these people understand that they are Americans, at least in the making." Then with swift intuition comes the remedy. "There is nothing like compulsory military service to accomplish this." I will not ask how much ignorance, and how much of the snobbery of those who, having been longer in the country, look with contempt and suspicion upon new comers there may be in this view, though I suspect that it is safer to idealize with Mary Antin's "Promised Land" than it is to take after-dinner long-distance surveys of Ellis Island hordes. I will not even inquire whether inter-racialism is not a truer definition of America than that provided by even the most cultivated New England provincialism, or whether the melting-pot metaphor is not itself traitorous to the American ideal. It is enough that there is a genuine intellectual and moral problem in connection with the heterogeneously diversified factors of our population.

But the problem is not to reduce them to an anonymous and drilled homogeneity, but to see to it that all get from one another the best that each strain has to offer from its own tradition and culture. If authentic America is not to be a cross-fertilization of our various strains, it had better be a juxtaposition of alien elements than an amalgam of the barracks, an amalgam whose uniformity would hardly go deeper than the uniforms of the soldiers. Admit everything which can be said in favor of the European system of military service, admit that we ought to turn from our previous wholesale condemnation to an equally wholesale glorification, and there is yet something childishly undisciplined in supposing that we could reduplicate its merits by establishing compulsory system on American soil. We forget how largely its efficacy there is due to the prior existence of just the uniformity of tradition and outlook whose absence is the reason urged in support of it here. We forget how real and how constant in the mind of every continental European is the sense of an enemy just over the border, and how largely the sense of cohesion is a common sense of enmity. Shall we deliberately proceed to cultivate a sense of the danger of aggres-