1833—LABOR—1933
THROUGH THE CENTURY

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THROUGH THE CENTURY
1833 — 1933

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IN 1933 the Bureau of Labor Statistics of the United States Department of Labor presented at the Century of Progress Exposition at Chicago a series of forty pictures designed to portray the history of American labor, its progress and its problems, since 1833. A booklet in which these pictures were reproduced in miniature, amplified and interpreted by text giving a partial record of labor's part in the progress of the century, was published by the Bureau for distribution at the exposition.

Because of the popularity of the booklet, the Bureau of Labor Statistics presents this second edition, in the hope that visitors to the exposition in its second year who are interested in the worker's past as well as his present and his future will find it of interest, even though the pictures themselves are no longer part of the Department of Labor exhibit.

Instead of revising the original booklet for the second edition, the Bureau preferred to let it remain unchanged as the story of a century that had ended. But the moving finger of history has been writing rapidly since the Century of Progress Exposition opened in May 1933 and some revision was necessary to record the changes that had taken place by May 1934, when the exposition opened for the second time. Accordingly, a brief review of labor history in the one hundred and first year has been added.
The New England Blacksmith Was Typical of the Early Free Mechanic

BEFORE the industrial era, which began about 1840, labor in America was divided into three classes—slave, indentured, and free. Free labor was almost wholly skilled labor, and skilled craftsmen held an important place in the development of the new country. The blacksmith, for example, was wagonwright, manufacturer of farm and household implements, and nail maker, as well as horseshoer.

Skilled labor was scarce in the early days and remained so until increasing immigration brought craftsmen from Europe in greater and greater numbers. But while work was plentiful and unemployment was perhaps not a serious problem, hours were long, work was hard, and standards of living were low. The artisan’s food was simple, often coarse, confined to the bare necessities of life, and his clothes, McMaster, the historian, remarks, “would now be thought abominable.” His home was a small, rather dreary, crowded place, heated by open fires and furnished with handmade furniture crudely constructed.

Working tools were primitive compared to those of today, and the workday was from “sunrise to sunset,” with brief periods of rest for breakfast and dinner. When the carpenters of Boston struck in 1832 for a 10-hour day, the master builders offered a rate of $2 a day to break the strike. That rate was 50 cents a day higher than carpenters were receiving at the time. The prevailing wages for skilled labor in 1833 ranged from $1.12½ to $1.75 a day, and a workday might be 13 or even 14 hours.
But Thousands of White "Indentured Servants" Served Terms of Bondage for Passage Money

The first laborers to migrate to America in large numbers were "indentured servants" from Great Britain and "redemptioners" from Europe. An indentured servant, before leaving his home country, signed a contract to work for the master who transported him, but a redemptioner, or "free-willer", came on his own responsibility, expecting to find upon his arrival a master to whom to sell his services in order to obtain passage money.

A servant became the property of his master as soon as the sale was effected. The indenture specified the duration of bondage, the kind of service to be given, the obligations of both master and servant, and the amount of money or goods to be paid the servant at the expiration of his term, which, for adults, was usually either four or five years.

A servant had practically the same status as a slave. He could be resold without his consent, he could not marry without his master’s consent, and his living and working conditions were wholly beyond his control. Running away was a crime, punished by extending the time in bondage.

Some early industries in Pennsylvania and Maryland were manned almost entirely by these workers, in some instances skilled craftsmen, to whom even personal liberty was denied until they had worked out their terms as bondsmen.

The indenture system died out as the population of the country grew and labor became more plentiful. A few contracts were drawn up as late as 1833, however, and many were still in force in that year.
In the Southern States the Heavy Work Was Done by Negro Slaves

The year before the Pilgrims landed at Plymouth Rock a Dutch ship unloaded at Jamestown, Virginia, a cargo of African Negroes who were sold to the planters as slaves. Thus at the very beginning of colonization was introduced the system of slave labor which obtained in America for nearly 250 years, and by which most of the heavy, menial labor of a new country was performed.

Slavery was at first general throughout the New World settlements, but it proved impracticable in the North and was gradually eliminated as an economic system. Within a few years after the establishment of the Republic all the States north of Maryland had abolished slavery.

On the great tobacco and cotton plantations of the South, however, slave labor was regarded as the only possible method of meeting their labor needs. While slaves were used chiefly as agricultural laborers, a great many were also employed, even outside the plantation country, in domestic pursuits and as skilled workers.

When the Emancipation Proclamation in 1863 and the defeat and collapse of the Confederacy in 1865 ended slavery, four million Negroes were thrown upon the labor market for their livelihood. The two generations of freed men following emancipation remained agricultural laborers and domestic servants almost entirely, but as greater educational opportunities opened up for them they extended their fields of employment. During and since the World War, especially, Negroes have become industrial workers and skilled craftsmen, and are rapidly entering the professions.
A CENTURY ago merchant shipping and the building of the beautiful "Yankee clippers" were among the foremost American industries. American sailing ships were the fastest up to that time, and New England shipyards were kept busy turning them out for use at home and for sale abroad.

Merchant shippers sent their fleets out from Boston, New York, Philadelphia, and Charleston to the ports of the world, and especially to the Orient. Officers and crews in the employ of the great shippers received what were in those days high salaries—often $50 a month for the captain, $30 for the mate, and $20 for able seamen and cooks, in addition to maintenance.

The story of the maritime industries changed abruptly, however, with the development of the steamship in the middle of the nineteenth century. American labor was not attracted to the new method of transportation as it had been to the old. Consequently, a different type of worker and a different labor policy were introduced, and standards tended constantly to degenerate. During the latter half of the century hours of labor on shipboard increased to appalling length, and living conditions became intolerable. Seamen deserted in great numbers, and their recapture was attended with violence and severe punishment.

These conditions continued until the Seaman's Act, passed in 1915, brought about material improvements. It requires that decent and sanitary living quarters shall be provided for crews, regulates their hours, and protects their earnings against exploitations formerly practiced.
Whaling Was a Very Important Industry, Employing Some Seventeen Thousand Persons

A MAJOR industry a century ago, whaling is practically extinct today. It is difficult now to realize that whales were once of the greatest importance, industrially and commercially. Whale oil was used for lubricating and for general illuminating; sperm oil provided the finest grade of illuminant for lighthouse beacons; high-grade candles were made from the spermaceti. Whalebone was extensively used in the manufacture of many articles, and ambergris provided an essential element in perfumes.

To meet the demand for these products ten thousand whales were needed annually, and to keep the industry supplied with ships, men, and equipment, related enterprises were developed on a large scale.

Whaling was an occupation of youth. The rank and file of whalemen were boys still in their teens, and only officers were men of middle age. But the lure of adventure and daring was probably counteracted by the living and working conditions on the whalers, and one voyage was apt to prove quite enough.

Danger, privation, and grueling monotony were inherent in the work. Voyages were very long, often as many as four years. Earnings were ludicrously low, averaging as little as 10 cents a day for some voyages. While wages were in addition to maintenance, they were subject to many charges and deductions, such as purchases from the ship's stores and indebtedness for the outfits sold at extortionate prices. It was not unusual for a whaleman to find himself actually in debt to his employer after working on a vessel throughout a long voyage.
A Century Ago Most Workers Had Only Hand Tools—
Iron Was Wrought in Simple Forges

PRACTICALLY all the development in the iron industry has occurred within the past century. In 1830 many of the old colonial forges and furnaces were still in use, and new ones were built upon the old designs and operated with the same primitive methods. The productive capacity of blast furnaces was as great in 1800 as in 1850.

Discoveries and inventions between 1830 and 1850, including the hot blast and substitution of anthracite and coke for charcoal, and increased demand resulting from railroad building and power machinery, stimulated the expansion of the industry.

 Shortly after the Civil War the “United Sons of Vulcan,” the organized ironworkers, undertook to stabilize wages and end the almost constant strife between employers and workers by introducing a sliding-scale system in fixing wages. An agreement was reached which fixed a basic minimum and provided for additional earnings conditioned upon the selling price of iron.

Three outstanding characteristics have colored the history of iron and steel—the long workday and workweek, the frequency and bitterness of industrial disputes, and the physical hazards of the work.

Recent years have seen pronounced changes in all three. Working conditions and industrial relations in the industry, probably more than in any other American enterprise, have been subjected to study and severe criticism by outside forces, and radical reforms have resulted in consequence.
SHOE MAKING, a hundred years ago, was strictly a handicraft, and machine production had not been heard of. Since even the most skillful shoemaker could not turn out more than two pairs of shoes in a day, a good many of these workers were required to keep the country in shoes, and little one-man shops were found everywhere. These shoemakers did only "bespoke work" to order for individual customers.

Even before the introduction of machinery, however, the one-man custom shop was giving way to big shops manufacturing for the market instead of on individual order. In these shops a worker sometimes made the whole shoe, but more often, in order to speed production, the work was divided into separate operations. Stitching the uppers, which was known as "binding", was done by women in their own homes. This work was so heavy and the pay so low that the exploitation of women who earned their living "binding shoes" was vigorously protested in the literature of the period. Machinery introduced in the 1850's ended that practice.

At Lynn, Massachusetts, the center of the industry, workers were paid in orders on the store operated by the employing shoe manufacturers. A writer comments thus on that system as it prevailed in 1830:

Fortunately, necessities of life were cheap. So a shoemaker who got an order on the store in payment for his wages was usually able to exchange that order for enough goods to keep himself and his family alive for the week.
In the Print Shop, Type Was Set by Hand and the Presses Were Primitive

HORACE GREELEY, a hundred years ago, saw in conditions and changes affecting journeyman printers “the passing of the ‘golden age’ of printing.” While in 1833 power machinery had not yet been introduced, craft standards were breaking down. Printers up to that time had always been highly skilled craftsmen, for the most part educated far beyond other workers. Their status was in fact comparable to the professional man of today; often they were editors and writers as well as printers. They had had organizations since 1802 which had been effective in maintaining wages and trade standards of skill and long apprentice training. But many conditions, among which were the stereotyping process, an improved type of printing press, and disruption of the unions through unsuccessful strikes, were operating to destroy these high standards.

Apprentices were allowed to become journeymen long before their terms had expired, “roller boys” were put to running the new presses, and women were employed as compositors at very low rates. Wages were materially lower in 1831 than they had been in 1815.

A revival of unionism began about 1845, which resulted in the organization in 1851 of what is now the International Typographical Union, and the apprentice system was restored.

Machinery has produced radical changes in the character of the printer’s work and has increased output enormously in the past fifty years. We of today take for granted a daily paper which, in size and price, would have been impossible a century ago with the facilities available then.
Machinery, However, Was Developing—The Whitney Cotton Gin Was Already in Use

THE cotton gin, invented by Eli Whitney in 1793, has been credited with causing more epoch-making changes than any other American invention. To make cotton of value commercially the seed must be removed from the fiber. Before the gin was introduced this work was done by hand or with rollers. Five pounds of lint cotton was considered a good day’s output for a slave, using rollers to separate fibers from seed. With the Whitney machine 300 pounds could be ginned by slave labor in a day.

The effect of this simplification was immediate and tremendous. It made possible the manufacture of cotton textiles on a large scale and led directly to the establishment of the first factories. The textile industry, on its part, created a great demand for lint cotton, which was met by expanding cotton culture enormously.

For years before the cotton gin was adopted the feeling had been growing throughout the South that slave labor cost more than it was worth, and slavery was on the decline. The gin and the consequent demand for lint cotton changed that situation. Slavery was not only retained but was greatly increased. Out of that stimulation of a waning economic system grew the “slavery problem,” which was a political controversy for generations and which only war solved.

Now cotton ginning is done by automatic machinery, which practically does away with all human labor and produces ten times as much lint in a day as did the revolutionary Whitney gin.
Cotton Mills Were Spreading Rapidly, Creating a Demand for Woman and Child Labor

The American factory system began in the early 1800's, with the establishment of textile mills in which all the processes of manufacture, from raw material to finished product, were carried on. These factories used machinery run by water power. Spinning and weaving had always been the work of women and children in the homes, and when this work went from the homes into the mills the women and children went with it. Some mills employed whole families; others hired women and children almost entirely, leaving the men free to run the farms. The attitude of the day toward industrial employment of women and children was expressed by Alexander Hamilton:

The husbandman himself experiences a new source of profit and support from the increased industry of his wife and daughters. . . . It is worthy of particular remark that in general women and children are rendered more useful, and the latter more early useful, by manufacturing establishments than they will otherwise be.

Working hours were from 5 a.m. to 7 p.m., with half-hour recesses for breakfast and dinner. In 1842 Massachusetts passed a law limiting the hours of work for children under twelve years of age to 10 a day. Weekly earnings averaged about $1 for children and $2.50 to $3 for women. Often they were paid in goods instead of money.

The introduction of automatic machinery, child-labor laws enforced by State labor agencies, and compulsory school attendance have combined to eliminate largely the child-labor evil, with its attendant physical degeneration and illiteracy.
IN 1830 only twenty-six towns in the United States had a population of 8,000 or more, and city dwellers constituted only 6.7 percent of the total population. Agriculture was the principal occupation of the American people, and over 90 percent of them lived on farms and in small rural villages.

Farming methods were simple—almost primitive. Practically all the work on the farm except plowing and hauling was done by hand. Grain was sown by hand, reaped with a cradle, and threshed with a flail. Mowing was done with a scythe, and the hoe was used to plant and cultivate corn.

The year 1831 saw the introduction of two agricultural machines—a reaper and a mower. They were forerunners of a development in mechanization which within the next hundred years was to revolutionize farming and almost reverse the proportion of agricultural and nonagricultural workers in the total population.

Young Cyrus McCormick demonstrated the first McCormick reaper one July day in 1831 before a crowd of curious, skeptical Virginia farmers. By 1840 successful inventions had practically eliminated hand methods in threshing.

Because farming was a hand industry, the demand for farm laborers was great. This demand was met in large part by slavery and the indenture system, but free workers were also employed as farm hands. They were paid almost as much as tradesmen in some cases. The usual rate for day work on the farms in the years 1830 to 1840 was $1 for a “sunrise to sunset” day.
The Canal Boat Was the Latest Word in Transportation

Pioneers and early settlers from the beginning of American history had moved inland from the seacoast. Their transportation facilities at first were of the crudest—wagon trails through the wilderness and dirt roads, poor at best and impassable at times. Then came turnpikes and plank roads. By 1838 the "National Pike", a macadam road out of Cumberland, Maryland, had been completed as far west as Vandalia, Illinois, and over this highway much of the westward migration flowed.

Steamboats made possible navigation of the Great Lakes, the many eastern rivers, the Ohio, and the Mississippi. Sailors and boatmen employed on inland waterways numbered 32,000 in 1846, and the volume of business was great and constantly growing.

But communication between the Atlantic States and the interior for the exchange of the agricultural products of the new settlements and the manufactured articles of the East was still very difficult. This problem was met by building canals to connect the waterways. The most important of these was the Erie Canal, completed in 1825, which connected Lake Erie and the Hudson River. Freight rates between Buffalo and New York fell from $100 to $5 a ton and time in transit from 20 to 6 days, while transportation costs between Ohio and the seacoast fell about 90 percent.

The success of the Erie Canal led to the construction of many more canals. Inland waterways connected by canals became the most important medium of transportation of both passengers and freight until the rise of the railroads.
The Steam Railroad Was Beginning, Although in 1830
It Lost a Famous Race at Relay, Maryland

POPULAR skepticism toward the innovation of the railroad in 1830 was very much what it was about seventy years later, when the derisive cry of "get a horse" greeted the first automobiles. One point of difference was that in 1830 skepticism expressed itself in a literal challenge to the new to prove its superiority over the old. And in the race between locomotive and horse which resulted from that challenge the horse actually won. That was, of course, due to an accident to the mechanism and not to an inherently wrong principle, as America soon learned. It was not long before the railroad had demonstrated its superiority over all other existing methods of transportation.

For fifty years the building, equipping, and operating of railroads constituted a major industry, the ramifying activities of which created many new occupations and varied opportunities for the workers.

Thirty-nine years after the train drawn by the little locomotive, Tom Thumb, was beaten by a horse-drawn car, another public gathering near Ogden, Utah, watched in a very different spirit the driving of a silver spike which connected the eastern and western railroads into a railway system reaching from the Atlantic to the Pacific. Thus, within the span of one generation, invention, capital, and American labor had conquered the transportation problems of a continent.

Improvement, maintenance, and operation of our vast network of railways give employment, in normal times, to nearly two million workers who are for the most part well organized.
With New Means of Transportation the Great Movement to the Central West Was Accelerated

At the time of the purchase of the Louisiana territory from France in 1803, which more than doubled the area of the United States, Thomas Jefferson predicted that it would take a thousand years to settle and populate the new region. But his vision did not encompass the rise of industrialism in the East, the economic effects of the War of 1812, the growth of seaboard cities through immigration, or the development of canal and railroad transportation. All these factors and others, combined with the desire for land and the pioneering spirit inherent in the American people, produced a westward movement which in half a century had exceeded what Jefferson had expected of ten centuries.

The western migration of families and groups of individuals, by covered wagons, canal boats and flatboats, and by railroads, constitutes probably the most picturesque phase of American history.

Land could be purchased from the Government at prices ranging from $1 to $2 an acre, and even the more daring pioneers who “squatted” outside the areas opened to settlement by purchase were later protected in their rights to the preempted land if they had established a homestead and had cleared the land for cultivation.

Within twenty years after the Louisiana Purchase the Mississippi and Ohio Valleys were settled and made into States; in the next two decades the Southwest was developed; by 1860 these regions were “old.” Towns and cities, with schools, industries, and commerce, had taken the place of the Indians and fur traders of Jefferson’s day.

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Lured by Gold and Land, Many Moved On to the Pacific Coast

Gold was discovered in California in 1849, and one historian says that "almost overnight we became a nation of gamblers." Rather, a considerable part of the Nation became adventurers and fortune hunters, caught up in the fever of the "gold rush."

The earlier westward migration was a movement of individuals, families, and small groups. During the gold rush whole towns were sometimes depopulated by the lure of quick, easy wealth. But tradesmen and laborers soon learned that their prosperity was to be found in building towns and providing for the constant flow of people, rather than in the very uncertain fortunes of the prospectors and the gold miners.

Settlers were at the same time moving out to the coast over the Oregon trail. After the Civil War the homestead laws opened to free settlement the great public domains lying between the Missouri River and the far West. This legislation granted 160 acres of arable land to any American citizen on the sole condition that he establish a home. Thus anyone desiring land to farm had the opportunity to obtain it, and the property became his own after five years' continuous residence upon it. This movement resulted in extensive settlement of the Northwest.

While the homesteading policy was adopted largely in the interest of discharged soldiers of the Union Army, it served also to afford an outlet for surplus labor in the East. Accordingly, wages stayed up after the war, in spite of the steadily increasing immigration from Europe.
While the East Continued to Receive Increasing Numbers of Immigrants from Europe

IMMIGRATION as a mass movement, characterized by horrible overcrowding on shipboard and the herding of aliens through our ports of entry in vast numbers, was unheard of a century ago. In the ten years from 1830 to 1840 the entire immigration from Europe was a little more than half a million. Between 1880 and 1904 that number was entering annually, and in the decade following 1904 aliens came in at the rate of a million a year.

While increased immigration resulted in part from political, social, and economic conditions in the Old World, the stronger stimulus lay in rapid economic developments in the New World and in the "land of promise" tradition.

Because of the rise of the factory system, the loss of many sturdy young workers who migrated to the West, and the opening of markets through improved transportation facilities, American industries faced a shortage of labor, particularly in unskilled and semiskilled occupations calling for strength and endurance.

To meet that demand, manufacturers, railroads, and steamship companies in 1865 began the system of recruiting workers in Europe under contract which became a medium for breaking strikes, demoralized wage scales, and threatened to overthrow American working and living conditions. At the insistence of the Knights of Labor alien contract labor was later prohibited by law.

The unregulated flow of illiterate, low-wage immigrants has been protested by organized labor ever since. Immigration fell off during the World War, and afterward was so regulated as virtually to have ceased.
Meanwhile Labor's Long Struggle for Better Working Conditions Had Begun

From the doggedly persistent struggle of organized labor to break down the "sun-to-sun" workday to serious consideration of a statutory 30-hour workweek runs the century's record on hours of labor.

The 13- and 14-hour day was practiced and accepted as a matter of course in the early days because agriculture, predominantly the basic industry, set work standards.

The first organized effort to shorten the workday was the "10-hour movement" of the decade 1830-1840, a frankly militant undertaking which made extensive use of the strike to attain its end. The first spectacular success was achieved by the building trades in Philadelphia in 1833. After that the movement spread rapidly and, for the building trades, successfully in most cities.

Shipbuilding workers had been prominent in the movement from the start, and after a campaign of 10-hour strikes nearly all private shipbuilding plants had adopted the plan. Government building in navy yards, however, did not respond to the change but continued the old sun-to-sun system. Then on March 31, 1840, President Van Buren issued a proclamation fixing 10 hours as the standard workday for mechanics in the employ of the Government.

Manufacturing industries proved more difficult, and the movement made so little headway that legislation was demanded to relieve factory workers, especially children, from the inhumanly long workday.

By the close of the nineteenth century the 8-hour day had been accepted in many trades, and the World War accelerated this movement.

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The Sweatshop Developed After the Civil War and Created New Labor Problems

ONE of the most serious and menacing problems arising out of greatly increasing immigration was the development and spread of "sweatshop" manufacture, particularly of clothing and tobacco. Tenement sections of cities, crowded with recently arrived aliens with low-living and low-wage standards, with no definite occupational training and unable to speak English, proved to be fertile ground for its development.

Machinery, if needed at all, was inexpensive, and the subcontractors operating sweatshops required little capital, since material was obtained from the large manufacturers. Men, women, and children worked shockingly long hours for ludicrously low piece rates in airless, poorly lighted quarters reeking with dirt and disease.

Even after factory regulation and inspection had been established by law, control of sweatshops was practically impossible because of their mobility and the ease with which they escaped detection. Child-labor laws improved conditions somewhat, and a system of licensing was established as a public-health measure to check infection.

The efforts of consumers' leagues to create a demand for goods produced only under decent standards gave publicity to the evils of the sweating system and resulted in some amelioration of conditions.

The rise of the modern factory, with its power machinery and highly organized productive methods, did much to eliminate the sweatshop by making factory production cheaper, better, and more profitable. More recently, however, the current depression seems to be causing a reversion to sweating in some of its worst phases.
The American labor movement has traveled far from the days when union meetings were called by cabalistic symbols written on sidewalks and shop walls and held in secret. Because the blacklisting and victimizing of leaders had defeated many promising efforts to organize workers, the Knights of Labor started its movement in 1869 in strictest secrecy. Instead of a name the symbol of the "Five Stars" was used in all the activities of the order. This policy was later discontinued, but not until the membership had become large and powerful enough to make secrecy unnecessary.

The Knights of Labor, the first successful movement toward national organization of workers, differed radically both from the organizations which preceded and those which followed it. Early trade unions were purely local in character and included only skilled workers. The underlying philosophy of the Knights of Labor was working-class solidarity irrespective of trade or occupation.

Trade unionism as we know it grew out of the movement of craftsmen away from general organization under the Knights of Labor for the declared purpose of preserving their own craft entities. This development was both a cause and a result of the founding, in 1881, of the American Federation of Labor.

The Order of the Knights of Labor has passed into history, but it left behind it the educational influence of its leaders and its many labor papers, as well as the tangible results of the movements it sponsored. Chief among these are the Federal and State labor agencies created at its insistence.
Efforts of Labor to Maintain Wages Led to the 
First General Strike, 1877

The United States developed so rapidly from an agricultural to an industrial nation that evils inherent in that haphazard growth went unnoticed and unrecognized. The serious industrial disputes which have characterized our economic history have been dramatic evidence of the existence of those evils.

Major labor disturbances of national significance have largely involved the steel, mining, and transportation industries. The first general strike in our history occurred in 1877, when the eastern railroads cut wages 10 percent, in addition to reductions following the panic of 1873.

The answer of the railroad employees was unpremeditated and unorganized revolt. The strike started in Pennsylvania and spread to San Francisco. In some parts of the country car-shop workers and miners in mines supplying the roads joined the striking trainmen. Riots, fires, and mob violence, causing death and injury, resulted from clashes between strikers and State troops, and for the first time the United States Army was called upon to act in an industrial disorder.

Many other serious strikes, the reverberations of which have been Nation-wide, have focused public and governmental attention upon the conditions in industry and in the lives of the workers which could produce such conflicts.

Today railroad strikes very rarely occur. The United States Government has provided machinery in the Board of Mediation for the orderly settlement of disputes through mediation or arbitration. State and Federal agencies also serve as conciliation mediums for the adjustment of actual or threatened disputes in other industries.
The New Machine Era, Beginning in the 1880's, Produced the Distinctive Skyline of Our Industrial Cities

MECHANICAL progress and the change from hand labor to machine production between 1830 and 1880 were so remarkable that an economist, writing in 1889, said:

To one whose present memory and life experience do not extend over a period of time more extensive than what is represented by a generation, the recital of the economic experiences and industrial conditions of the generation next preceding is very much akin to a recurrence to ancient history.

The latter half of that era saw the discovery and development of many of the basic elements which made technological progress possible. Among these are petroleum and the adaptation of electricity to motor power. Some of the important changes, however, represented only improvements upon principles and practices of earlier periods.

Shoemaking machinery, power printing presses and typesetting machines, the regenerative furnace, power sewing machines, electroplating, photography, the telephone, and agricultural machinery are illustrative of the extent to which industrial mechanization had spread by the close of the nineteenth century. The job opportunities and new occupations created by this expansion are as notable as is the change in the character of the product and the speed and comparative ease with which it was produced.

Suggestive of our own day is the comment made by Carroll D. Wright in 1895, that—

It is fair to say, perhaps, that it would require from fifty to one hundred million persons, working under the old system, to . . . do the work performed by the workers of today with the aid of machinery.

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IT HAS been said that the first machine-equipped textile factories of the early nineteenth century changed the method of production “from daughter power to water power.” Then invention and mechanical development changed water power to electrical energy, which produced the second industrial revolution in production methods and productivity that we now call the machine age. When a textile factory was established in South Carolina in 1893 equipped entirely with electrically driven machinery a new era was entered.

The first survey of the amount of power used in industry, made in 1870, showed 2,346,142 horsepower employed, about equally divided between water and steam. By 1929 the number of horsepower had grown to 43,079,000. During the twenty-five years from 1899 to 1923 the horsepower equipment utilized per wage earner increased from 1.40 to 3.76 in manufactures, from 3.36 to 6.53 in mines and quarries, and from 2.32 to 4.74 in agriculture.

The change in the kind of power produced is even more significant than the increase in volume. Electric power and the internal-combustion engine, both of which are available at practically any point and any time, have been revolutionary in their effects not only upon industry and transportation but upon our entire social life.

The metaphorical number of “slaves” placed at our command by pushing a button or starting a gasoline motor becomes rather more than a figure of speech when mechanical power estimated at the rate of 1 horsepower to 10 manpower is thus made immediately available.
The Combine Harvester Symbolizes the Mechanization of Agriculture

Throughout the ages many of the advantages of rural life have been offset by its isolation and by the excessive labor in the field and the household drudgery necessary for making even the most meager livelihood.

Now, if the facilities that science and invention have provided can be properly utilized, all that may be changed. Almost every kind of farm work, from plowing and harvesting to milking the cows, can be done by machinery. Machines adaptable to every purpose are manufactured, and gasoline or oil engines and electric motors are available to drive them.

Instead of living in a continuous round of household drudgery, farm women may now use electric devices in wide variety both for their housework and for their distinctive farm duties. The telephone and the radio afford ready contact with the world outside the farm, and the railroad and the automobile provide swift and economical transportation. With the full utilization of these facilities, the farms will be linked up with the interests and activities of the whole civilized world.

The effect of the use of modern farm equipment is vastly to reduce the total amount of labor necessary for the production of the raw materials required to feed and clothe the Nation. Free time will bring the farmer opportunities for travel, for enjoyment, and for culture. In fact, he may in the future enjoy all the advantages that are available to dwellers in cities without sacrificing any of the blessings that spring from life on the land.

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The Automobile, Barely Thirty Years Old, Had Created Some Three or Four Million Jobs in 1929

In less than three decades the automobile changed from a toy to one of the dominant factors in American society. Probably no other single development in history has so quickly exerted such profound influence on the life of a nation.

Figures of increase in the registration of automobiles, from 8,000 in 1900 to 25,814,103 in 1931, staggering as they are, convey no suggestion of the extent of that influence. Primarily, the automobile created a mighty industry, employing, directly and indirectly, millions of workers. The ramifications of its secondary effects go all the way from rubber plantations in the Tropics to the little "tourist cabins" which spring up all over the country beside the magnificent highways which are themselves a byproduct of the automobile.

Socially, inexpensive cars have revolutionized the recreation habits and the leisure time, and added to the experiences of great numbers of American workers. Economically, having transportation facilities at their fingers' ends made employment easier to find, and in prosperous times gave greater mobility to seek advancement.

These advantages have not depended wholly upon private ownership of an automobile, since development of the bus system has reduced the transportation costs to a point where travel is no longer the privilege of the few.

Depression caused the registration of private automobiles to shrink about 3 percent between 1930 and 1932. But "the car" has become so vital a part of life that it is one of the last items to be sacrificed, even when unemployment demands retrenchment.
At Modern Docks Ships Are Loaded and Unloaded
By Powerful Machines

THE mechanization of industry has progressed from comparatively simple machines applicable to a few manufacturing processes a century ago to the point where the "mechanical man" also performs the grueling tasks of lifting, carrying, and digging which formerly could be done only by tremendous exertion of human labor power.

Mechanical devices, not overstrained human muscles, now load and unload ships and freight cars; conveyor belts move merchandise easily and speedily; automatic stokers fire engines. Even that picturesque figure so often used to personify manual labor, the ditch digger, has been supplanted by a motor-driven shovel which digs in one hour a ditch which would require the labor power of 40 or 50 men working with hand shovels.

Machinery is now used in varying degrees in the production of practically all manufactured goods. In some instances it has displaced human labor almost wholly; in others it has resulted in the elimination of craft skill. Glass bottles, for example, are made by automatic machines which produce in an hour 41 times the possible output under hand production. The skill of the old glass-bottle maker is gone, but with it has gone the extensive employment of children for long hours which was characteristic of glass factories of the old days.

On the other hand, the technological developments which have made possible the production of 390,000 copies of a 62-page newspaper every day in the year have so expanded the market that the demand for labor in that industry has increased enormously.
High-Power Lighting Has Converted Night Into Day for Both Work and Pleasure

One of the hardships of the 14-hour day in the early textile factories was having to spin and weave properly in the feeble light of the oil lamps with which the mills were inadequately equipped. A custom grew up of celebrating the lengthened daylight in the spring by ceremoniously blowing out the lamps and decorating them with garlands.

Now a great many workers, particularly in offices, work and prefer to work under artificial light all day. But it is a very different light.

Midway of the hundred-year span, 1833–1933, the electric lamp made a somewhat timorous entrance upon the scene, when at a public demonstration in New York two electric engines produced light "simultaneously in thirty little balloon-shaped globes." From that point the history of electric lighting has been one of continuous progress, from the experimental pioneering on the part of a few hotels and newspaper offices in the 1880's to practically universal adoption.

The evenness of electric light and the ease with which it may be diffused throughout work places make it a better illuminant than daylight for some processes. A windowless factory has recently been constructed which will depend entirely upon artificial lighting and air conditioning.

Just as we have reversed tradition by burning artificial light in daytime, we have turned night into day by the same medium. Darkness no longer interferes with anything we wish to do, whether it is flying or playing baseball, because high-power flood lights and beacons conquer darkness everywhere.

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But Modern Industry Has Brought New Hazards, Such as the Perilous Life of the Building Worker

One of the penalties of industrial progress is the increase in industrial hazards. Skyscraper construction, high-speed machinery, fast transportation, fatigue, and nervous tension are among the factors contributing to the American casualty record.

Through heartlessness or inability to meet the problem, the "human scrap heap" was accepted during the early periods of machine production as the inescapable price of advancement. That attitude was challenged by two viewpoints—that of humanitarianism, which declared that the value of human life transcends all other considerations, and that of practical economics, which contended that industrial slaughter cost more than prevention.

Beginning with the enactment of laws requiring installation of mechanical safeguards on certain types of machinery, the movement to control hazards in industry has been slowly gaining ground. Mandatory legislation is enforced by State labor agencies, or, in the case of interstate railroads, by the Federal Government.

A broader, more comprehensive effort lies in the educational work of the safety movement, which undertakes to instill the doctrine of "safety first" into the consciousness of workers, employers, and the general public. The objective of that educational work is not, however, to shift responsibility to the worker. Rather, the accident-prevention movement attempts primarily to secure the cooperation and practical support of employers in all industries. This effort is greatly stimulated by workmen's compensation laws, which assess industry for the social cost of industrial accidents.
A workman on his way to work, passing a coal miner, or, perhaps, seeing a structural-iron worker hundreds of feet above his head, or a lineman handling a high-tension wire, might, with a grateful sense of his own security, enter the flour mill or the starch factory where he earned a living for himself and his family. And it would be entirely within the realm of probabilities for the man whose precarious job had impressed him to be making every possible effort, a few hours later, to rescue him from death or serious injury resulting from the terrific dust explosion which had just wrecked his “safe” work place.

Many jobs are inherently dangerous. The risks are recognized and understood, and in many instances guarded against. Other industries, on the other hand, are subject to dangers as insidious as the explosion of accumulated dust, against which protection is not provided because of lack of realization of the risk.

What is true of threatened accident is even truer of disease. That hidden danger lies back of many occupations in trades which appear wholly safe. Dust is not only an accident risk but a menace to health. The painter spraying an automobile and the girl painting a watch dial with radium paint are exposed to serious hazards, just as are the building-trades man and the worker in high explosives, except that the risk is of slow instead of sudden death.

Recognition and control of these insidious dangers are imperative for the protection of workers.
High-Speed Production Tends to Discard the Worker at Early Middle Age

That there should be any question of the employability of the worker of middle age and older, with his skill, experience, and years of service, his probable dependability and loyalty, would undoubtedly have astonished the employer not only of a century ago but of a decade ago. Those very qualities were looked for in taking on new workers, and commanded respect and remuneration.

Nevertheless, under modern industrialism the question has not only arisen but has become a definite menace to the worker whose youth is past, because it has introduced the idea of age limitation as an employment policy.

Among the reasons given for the adoption by industry of maximum age limits in hiring workers are these: Mass production by machinery requires speed, not skill; older workers do not adapt to changing methods; under group life insurance and pension plans the employment of any but young workers is poor business practice; older workers are more liable to injury, and hence increase compensation costs.

So far discharge of employees of long standing because of age has not been practiced extensively. On the contrary, many socially minded employers, while agreeing that new methods of production need the elasticity and alertness of young people, place a compensating valuation upon the experience and judgment gained by years of service. Realizing the danger in unemployment which is threatening older workers, they are in some instances keeping their old employees by reassigning them to tasks within their capacity.
Irregularity of Employment Is Accentuated By the New Industrial Conditions

Mass production, mechanization of industry, and world markets have become catchwords of the society which a century of progress has created. Pride in these developments is an American characteristic.

But pride in a record output or enthusiasm over the marvelous performance of a new machine can very quickly turn to fear in the heart of a workman who sees his factory close because that record output filled all the available orders, or of one who finds his labor no longer needed because the marvelous machine is doing his work better, faster, and more cheaply.

"Hard times" throughout our industrial history have resulted in nationwide unemployment and the destitution which loss of wages entails.

But the menace is not confined to hard times. The condition which economists call "unemployment within employment" and which workers know as "being laid off" is characteristic of seasonal industries, such as the construction and clothing industries. In any industry or trade situations apparently beyond control may suddenly throw employees out of work for indefinite periods.

The worker’s fear of being displaced by a machine is as old as machinery. When machinery was an innovation confined to the manufacture of a very few products its labor-displacing tendencies were offset by the greatly increased consumption which followed lower production costs. With mechanization of industry practically universal, the old terror is revived by what we call technological unemployment.
Concentration of Industry and Commerce in Large Centers Leads to Overcrowding of Cities

One of the most pronounced and significant changes in American life is the shift of population from the country to the city. In 1880 the United States was still an agricultural country, with 71.4 percent of its people living in rural areas. Fifty years later that proportion had been cut to 43.8 percent, and 56.2 percent of the people were living in urban areas. In 1930 the twelve largest cities contained one sixth the population of continental United States.

This enormous growth of cities and urban population produces increasingly distressing problems. Difficulties of housing, sanitation, traffic, safety, and health grow with the congestion produced by concentration of population.

The trend of the heavy immigration of the early twentieth century was toward the seaboard cities and the great industrial centers of the Middle West. Industries in the same period tended to concentrate in localities where conditions proved peculiarly advantageous for their development. The workers employed in these industries of necessity gravitated to these centers, and with rents high and wages low, congestion in poor quarters was the inevitable consequence.

Later, changed conditions in agriculture aggravated the situation, because of unprofitable farming on one hand and mechanization on the other, both of which displaced farm workers, who then drifted to the cities.

Some headway has been made in the past twenty years toward improved living standards and control of housing conditions in the congested areas of our great cities, but the solution of the problem is still far in the future.
Hopeful Signs—Safety and Compensation Laws Afford Some Protection to the Worker and His Family

The scientific inquisitiveness of our day has produced tenets which are of distinct value to the workers, however much like heresy they would have seemed a hundred years ago. An illustration of this is the slogan: “Accidents don’t just happen.”

Far from accepting accidents as acts of God, and hence beyond human control, industry and Government today maintain that most accidents are preventable. From that starting point they are developing on a scientific foundation principles and methods of accident prevention.

The United States Bureau of Mines is constantly striving to lessen the frequency and severity of mine disasters. State mine inspectors require the installation of safety devices as dictated by law, and inspect their operation. The safety activities of the Interstate Commerce Commission serve the same ends for workers engaged in railroad transportation. The factory inspectors of State labor departments are primarily concerned with accident prevention and the enforcement of safety laws.

But effective as these efforts are, they have not eliminated the evil. The social cost of death and injury from work accidents is so great that legislation has been necessary to compel industry to carry some of the burden, since it is chiefly responsible. Compensation for death and injury on duty is now the right of a considerable portion of American workers.

In addition, State agencies, with the aid of the Federal Government, and to a limited extent private employers as well, have undertaken the retraining of injured workers whose earning power is seriously impaired.
Some Employers Furnish Excellent Working Conditions in Healthful Surroundings

Labor laws administered by State agencies set minimum standards of acceptable working conditions to which employers are required to conform. Organized workers are often able to secure for themselves standards of hours, wages, safety and health, and plant equipment considerably in advance of the legal minimum.

In still other instances found in many industries the labor policies of individual establishments create working conditions designed to promote the welfare of the workers not only in matters covered by labor legislation but with regard to recreation and health, and sometimes housing.

Among the welfare activities of plants of the type suggested are rest rooms and recreation facilities, cafeterias, medical and dental service and health clinics, and personnel management dealing directly with employment relations, occupational adjustment, and problems of individual workers.

An outstanding characteristic of plant welfare programs is the medical service furnished free to employees. First-aid rooms, dispensaries, and sometimes hospital quarters are part of the factory equipment. Nurses, and not infrequently doctors and dentists, are regularly employed.

Safety and protection from industrial disease are the primary considerations in this type of welfare work. These institutions are carrying out the theory and practice of the principles of industrial hygiene which State labor agencies and public health services are trying to instill into industry as a whole.
Crowded, insanitary living quarters, with insufficient light and air, without comfort or conveniences and devoid of the spirit of home, are not a new development. Present-day slum conditions are probably different only to the extent that they concern so many more people than were affected by the city housing problems of an earlier period in our history. Investigations of slum areas in Boston, Philadelphia, and New York City during the 1850's disclosed conditions quite similar to those with which we are now familiar, and movements for improved housing began about that time.

The "battle of the slums," which was vigorously waged in the early 1900's, resulted in tenement-house laws and an inspection system which undertook to control some of the worst evils of city congestion. City health departments directed attention to the menace to public health.

Plans for eliminating slums and starting all over with rebuilding projects have been broached from time to time with little progress. Such development as has come in that line has been due in considerable degree to efforts of the workers themselves. Two organized groups of workers in New York City, the Amalgamated Clothing Workers and the Jewish National Workers' Alliance, have carried through successfully a number of apartment-house projects, in some cases razing old tenements and erecting modern buildings in their stead.

The cooperative apartment movement in New York, under the stimulation of the State housing law, is also tending slowly to afford good housing facilities, with modern equipment, at a price which workers can afford.
Public and Private Provision for the Aged Makes Old Age Less to Be Feared

The worker of a century ago who reached old age worn out, without money, earning power, or means of support outside himself, went to the poorhouse as a matter of course. Once there, he probably ended his days in surroundings far more dismal and squalid than those which he had been able to provide for himself out of his meager earnings.

But while in too many cases the poorhouse is still the only refuge of workers whose earning power is gone, even that traditionally awful place has, generally speaking, responded somewhat to the standards and ideals of progress.

And it is no longer taken for granted that the poorhouse offers the only answer to the problem of the broken-down, dependent worker, for a different viewpoint is developing. The workers themselves in some trades are dealing with the problem through their own organizations. Five international unions operate homes for their aged and disabled members, where provision is made for medical care and recreation. Other international unions, in the building trades chiefly, grant pensions to their superannuated members.

The system of State assistance to the indigent old has now been adopted by practically half the States, and public service retirement systems afford protection to many Federal and State employees and municipal teachers, policemen, and firemen who are no longer able to work because of age or disability.
Industrial as Well as General Education Has
Vastly Improved

UNIVERSAL free education as practiced in the United States is very definitely attributable to the democratic ideals of the workers of a century ago and to the determination which organized workers have shown in realizing the goal they advanced in the 1840's—"a complete and systematic course of instruction for every child at public expense."

The effort to attain that goal has continued ever since, and is a vital part of the story of the century. A hundred years ago the public-school movement was confined to the cities, where workers predominated. When urban workers began migrating west, the principle of free schooling had become so ingrained that they built their schoolhouses and their dwellings at the same time.

From such beginnings have evolved practically Nationwide compulsory schooling up to a minimum of 14 years of age, and the assumption, at least, that all children in the United States have equal opportunity to share in the Nation's public educational institutions.

The workers of later eras in our history have shared this interest in education, and have tried to make the system founded by their predecessors serve the needs of an industrial society. Trends toward undemocratic formalism discernible in our educational system have been opposed and have been countered with demands for the inclusion of industrial and vocational training in school curricula.

Since 1917 the Federal Government has fostered the objective of adequate vocational training for those whose schooling must be limited to the grammar and high schools.
A Representative of Labor Takes His Place in the President's Cabinet, 1913

One of the most forceful demands of the Knights of Labor was for the creation of governmental agencies, State and Federal, to deal with labor problems and workers' welfare. Precedent was found in Massachusetts, where the first bureau of labor statistics had been established in 1869, in response to the need of both employers and employees for some means of determining facts about industrial conditions, uncolored by bias and self-interest.

The agitation developed so effectively that by the time the Federal Bureau of Labor was created, in 1884, eleven State bureaus were in existence. Out of the nucleus of State factory inspection and statistical and investigative agencies State departments of labor and industrial commissions have evolved, as the medium for the enforcement of labor laws, the study of working conditions, the mediation of industrial disputes, and the promotion of the welfare of the workers so far as State authority and influence may be directed to that end.

While a Federal Department of Commerce and Labor was established in 1903, that was not a satisfactory response to the specific demand for recognition of labor by the Government through a department equal in rank to other executive departments.

With the consummation of this effort in the creation of the United States Department of Labor on March 4, 1913, a representative of the workers of the country, in the person of the Honorable W. B. Wilson, took his place in the Cabinet of the President of the United States as the first Secretary of Labor.
Organized Labor, Grown Vastly in Significance, Is Represented at the Peace Conferences, 1919

In the years from 1869 to 1919 organized labor advanced from the secrecy imposed upon it by the antagonism of employers and the suspicion of the public to official recognition by the United States Government.

The American Federation of Labor, established in 1881, never adopted the policy of secrecy. Instead, it took the position that the right of labor to organize is absolute, and began the long struggle for recognition which triumphed during and immediately after the World War.

One of the methods used to create for unionism a place in national affairs was to undertake the election of trade unionists to Congress and the State legislatures. The idea of acceptance of trade unionism as a factor in the national life was present also in the demand for the inclusion of "labor planks" in party platforms.

Formal recognition came when the United States Government called upon organized labor as such to take part in developing and carrying out measures for control of war production. Boards of adjustment were created to deal with labor relations in the important war industries, and representatives of the organized trades in each industry were appointed to membership. President Wilson appointed five men to represent organized labor on the National War Labor Board.

Organized labor's prestige was further strengthened when, in 1919, Samuel Gompers, president of the American Federation of Labor, was appointed by President Wilson to represent the United States on one of the advisory boards of the International Peace Conference.
Industrial Disputes Are Often Satisfactorily Adjusted by Conciliators Representing Federal and State Governments

A HUNDRED years ago strikes were crimes. When organized workers struck they were in danger of prosecution for "criminal conspiracy"; unorganized strikes were called riots and treated as such.

The right to strike is no longer questioned. Rather the issue now is whether the exercise of that right is good policy, or whether, in the interest of workers, employers, and the public, a better method of adjustment can be found.

Governmental agencies have been established to help find a better way. Threatened or actual strikes on interstate railroads and on American ships have long been subject to Federal intervention, through the United States Board of Mediation in the former instance and the shipping commissioners of the United States Department of Commerce in the latter.

The Conciliation Service of the United States Department of Labor is organized to act either to avert or to adjust strikes in any industry and in any part of the country at the request of employers, workers, or the public involved.

The labor departments of most of the industrial States provide machinery both for prevention and adjustment of industrial disputes within the State, through conciliation or voluntary arbitration.

Through trade agreements and adjustment agencies within the industry, employers and workers in various lines have developed plans for reconciling differences before they develop into strikes and lockouts.
The Great Problem of the Future: Security of Employment

One hundred years of social and economic progress and industrial development have brought advancement and achievement to the American worker. He has won leisure through shorter hours, and through education, higher living standards, and better wages he has attained appreciation of the cultural value of leisure. His work is less arduous and he has acquired some voice in determining the conditions under which he works.

But partly because of this phenomenal industrial development, a factor vital to complete emancipation has been sacrificed. That is security of employment.

Organized workers in some trades have tried to meet unemployment emergencies with "out-of-work benefits", but that plan of necessity falls down when great numbers are displaced. Insurance to cover periods of unemployment has been undertaken experimentally by a few employers, and the principle has been enacted into law in Wisconsin.

Long-term planning to end seasonal production, and the shorter workday and workweek to "spread employment" among all attached to the industry are among the plans projected as a means of attaining labor's next goal, security of employment and a dependable income.

With all our dramatic progress, the curtain falls upon a period of continued, widespread unemployment, with greatly depressed wages and breakdown of industrial standards, such as the country never before experienced, a condition which of itself is a challenge to the spirit that achieved the "Century of Progress."
EARLY in 1934 a convention of organized workers adopted a resolution which declared that "the century of struggle for economic and industrial freedom has found its nearest approach to realization in the National Industrial Recovery Act."

Some of the elements in that struggle have been touched upon in this story of labor from 1833 to 1933. Objectives and ideals of the workers have included a shorter workday and workweek, the right to organize and to secure through collective bargaining a voice in determining their wages, hours, and working conditions, particularly those which concerned their health and safety. They have sought in many ways to abolish child labor and sweatshops. They have accepted squalid, overcrowded living quarters in city slums because they saw no way out. And the specter of unemployment has been with them always.

As the curtain rises on the next hundred years, perhaps the greatest gain is a widespread recognition that in the interest not merely of the workers but of national well-being and progress, many of the problems with which workers have been grappling for a hundred years must be solved.

That is the spirit in which the National Industrial Recovery Act was drawn up and passed by the United States Congress in June 1933, and which is motivating the slowly forming plans for slum clearance and decentralization of industry, and the effort to establish some protection against unemployment and want through stabilization measures and national unemployment insurance.

In short, the people of the United States have launched, through the National Industrial Recovery Act and the agency administering it, the first comprehensive experiment in national labor legislation. Instead of organizing
in secrecy and fear, the workers are now organizing under the provisions of a Federal statute which declares explicitly that "employees shall have the right to organize and bargain collectively through representatives of their own choosing." Codes for the regulation of industry have been inaugurated with the cooperation of the Federal Government which eliminate child labor, fix minimum wage rates, regulate apprenticeship, establish machinery whereby working conditions and industrial relations may become subject to the joint control of workers and employers, and under which has already come the most drastic reduction in working hours in American industrial history.

These steps are put forth as experiments, and to meet and end an emergency. But with the positive recognition of the vital need for correcting economic maladjustments should come an equally positive, permanent program to meet that need.