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ABSTRACT

This booklet recounts the history of apprenticeship and describes its practice in the United States today. The booklet is organized in five sections. The first section outlines the early days of apprenticeship, telling how the system of indenture was imported from Europe, giving various examples of apprenticeship under that system, and describing the production of apprentices' "masterpieces"--test pieces to prove an apprentice artisan's mastery of his craft and his right to the status of "freeman." The second section details the changes that apprenticeship has undergone, discussing graduated wages, wage rate lags, beginning careers, first apprenticeship legislation, labor standards, equal employment opportunity, and the national apprenticeship law. In the third section, modern apprenticeship programs are described. Topics covered include certificates of completion, joint apprenticeship committees, basic standards for apprenticeship, and apprenticeship values for youth and industry. The fourth section explores new directions in apprenticeship, such as women in apprenticeship, apprenticeship preparatory courses and preemployment programs, and veterans in apprenticeship. The final section briefly suggests ways apprenticeships may go in the future. The booklet includes a directory of regional and state offices of the Bureau of Apprenticeship and Training as well as a list of state and territorial apprenticeship agencies. (KC)

Apprenticeship: Past and Present

U.S. Department of Labor
Employment and Training Administration
Bureau of Apprenticeship and Training
Revised 1987

Contents

Apprenticeship—Past and Present

Know all men that I, Thomas Millard, with the Consent of Henry Wolcott of Windsor unto whose custody and care at whose charge I was brought over out of England into New England, doe bynd myself as an apprentise for eight yeeres to serve William Pynchon of Springfield, his heirs and assigns in all manner of lawful employmt unto the full ext of eight yeeres beginninge the 29 day of Sept 1640. And the said William doth condition to find the said Thomas meat drinke & clothing fitting such an apprentise & at the end of this tyme one new sute of apparell and forty shillings in mony: subscribed this 28 October 1640.

What it was like to be an apprentice in early New England is indicated by these words from a 1640 indenture. As it turned out, apprentice Millard lost out on the cash mentioned. The following statement is made at the foot of the indenture:

Tho Millard by his owne consent is released & discharged of Mr. Pynchons service this 22. of May 1648 being 4 months before his tyme comes out, in Consideration whereoff he looses the 40s in mony wch should have bin pd him, but Mr. Pynchon givith him one New sute of Aparell he hath at present.

Indentures were forerunners of our modern apprenticeship agreements. Today the apprentice's situation is far different from Thomas Millard's. Apprentices are no longer bound body and soul to their masters. They no longer live in a master's house nor are dependent upon a master for handouts of food, a little clothing, or a few uncertain shillings.

Nowadays, apprentices are members of a production force as they train on the job and in the classroom. They are paid wages, work a regular workweek, and live in their own home rather than that of a master. Their apprenticeship agreements set out the work processes in which they are to be trained and the hours and wages for each training period. At the end of their apprenticeship, they receive certificates that are similar to the diplomas awarded the engineering graduates of universities.

Annually there are nearly one-half million registered apprentices in training in American industry.

They are learning under the guidance of experienced craft workers in such skilled occupations as computer operator, machinist, bricklayer, dental laboratory technician, tool and dye maker, electrician, drafter, electronic ...n, operating engineer, maintenance mechanic, and many more.

Management, labor, and government work together to promote apprenticeship and to develop sound standards for its practice. In many communities, joint management-labor apprenticeship committees conduct and supervise the local programs.

Looking Backward

Since time immemorial, people have been transferring skills from one generation to another in some form of apprenticeship. Four thousand years ago, the Babylonian Code of Hammurabi provided that artisans teach their crafts to youth. The records of Egypt, Greece, and Rome from earliest times reveal that skills were still being passed on in this fashion.

When youth in olden days achieved the status of craft workers, they became important members of society. Their prestige in England centuries ago is reflected in a dialog from the *Red Book of Hergest*, a 14th-century Welsh Bardic manuscript:

"Open the door!

"I will not open it.

"Wherefore not?

"The knife is in the meat, and the drink is in the horn, and there is revelry in Arthur's Hall; and none may enter therein but the son of a King of a privileged country, or *a craftsman bringing his craft.*"

The status given the craft worker was well placed. As we all know, many countries no longer have kings but still have craft workers.

Indenture Imported From Europe

When America was settled, craft workers coming to the New World from England and other European countries brought with them the practice of indenture and the system of master-apprentice relationships. Indenture derived its name from the English practice of tearing indentions or notches in duplicate copies of apprenticeship forms. This uneven edge identified the copy retained by the apprentice as a valid copy of the form retained by the master.

In those days, both the original and the copy of the indenture were signed by the master and the parent or guardian of the apprentice. Most of the apprentices were 14 years of age or younger. By comparison, today most apprentices begin training between the ages of 18 and 24. The modern apprenticeship agreement is signed by the employer; by a representative of a joint management-labor apprenticeship committee, or both; and by the apprentice. If the apprentice is a minor, the parent or guardian also signs.

Apprenticeship Agreement

Bureau of Apprenticeship and Training

U.S. Department of Labor

Employment and Training Administration

Warning: This agreement does not constitute a certification under Title 29, CFR, Part 5 for the employment of the apprentice on Federally financed or assisted construction projects. Current certifications must be obtained from the Bureau of Apprenticeship and Training or the recognized State Apprenticeship Agency shown below.

The program sponsor and apprentice agree to the terms of Apprenticeship Standards incorporated as part of this Agreement. The sponsor will not discriminate in the selection and training of the apprentice in accordance with the Equal Opportunity standards in Title 29 CFR Part 30 3, and Executive Order 11246

Privacy Act Statement. The information requested herein is used for apprenticeship program statistical purposes and may not be otherwise disclosed without the express permission of the undersigned apprentice. Privacy Act of 1974 (P L 93-579)

This agreement may be terminated by either of the parties, citing cause(s) with notification to the registration agency, in compliance with Title 29, CFR, Part 29 8

Part A: To be completed by sponsor

1 Sponsor (Name and address) Program No

2a. Trade (The work processes listed in the standards are part of this agreement)

2b DOT symbol | 3 Term (Hrs., Mos. Yrs.) | 4 Probationary period (Hrs., Mos., Yrs.)

5 Credit for previous experience (Hrs., Mos. Yrs.) | 6 Term remaining (Hrs. Mos. Yrs.) | 7 Date apprenticeship begins (indenture date)

8 Related instruction a Number of hours per year

b Method: ☐ Classroom ☐ Shop ☐ Correspondence

c Source: ☐ Voc Ed ☐ Sponsor ☐ Other

d Apprentice wages for related instruction: ☐ Will be paid ☐ Will not be paid

9 Apprenticeship wages. The apprentice schedule of pay shall be listed for each advancement period

Period	1	2	3	4	5	6	7	8	9	10
b Term (Hrs., Mos., Yrs.)										
c. Percent										

10a. Signature of committee (If applicable) Date Signed

10b Signature of committee (If applicable) Date Signed

11 Signature of authorized representative (Employer/Sponsor) Date Signed

12 Name and address of sponsor designee to receive complaints (If applicable)

Part B: To be completed by apprentice

13. Name (Last, first, middle) and address (No. Street, City, County, State Zip Code) Social Security number

14 Date of birth (Mo. day, Yr.)

15 Sex (X one) ☐ Male ☐ Female

16 Apprenticeship school linkage ☐ Yes ☐ No

17 Race/Ethnic Group (X one)
- ☐ White (Not Hispanic)
- ☐ Black (Not Hispanic)
- ☐ Hispanic
- ☐ Am. Indian or Alaska Native
- ☐ Asian or Pacific Islander
- ☐ Information not available
- ☐ Not elsewhere classified

18 Veteran Status
- ☐ Vietnam era veteran (8/15/64 to 5/7/75)
- ☐ Other veteran
- ☐ Non Veteran

C #

19 Highest education level (X one)
- ☐ 8th grade or less
- ☐ 9th to 12th grade
- ☐ GED
- ☐ High School Graduate

20. Signature of apprentice Date

21 Signature of parent/guardian (If minor) Date

Part C To be completed by registration agency

22. Registration agency and address

23 Signature (Registration agency) Date registered

ETA 671
(Rev 12/88)

Ap p Agreement between Apprentice and. a) Employer, b) Joint Committee, and c) Committee.

Crafts in Family Tradition

Today's apprenticeships are keeping alive a knowledge of many crafts and skills that in other times were passed on largely by family tradition. Fathers taught their sons the crafts in generation after generation. This tradition is exemplified still in stonecutting, one of the most ancient of crafts.

American patriot Paul Revere was a member of a famous family of silversmiths. Paul and his younger brother, Thomas, learned their craft from their father. In turn, two of Paul's sons served apprenticeships in the family's Boston shop.

Paul Revere's skill in crafting silver can still be appreciated today. As many as 500 of his pieces are known to exist. During his lifetime, he produced a great quantity of church silver, flagons, christening bowls, tankards, cups, spoons, tea sets, and trays.

He also became a coppersmith and cast church bells that may still be heard in New England cities. He founded the American copper and brass industry when, in 1802 at the age of 67, he set up in Canton, Mass., the first copper rolling mill. This mill remained in operation under its original name for 100 years. Later the business became part of the present-day Revere Copper and Brass Co. In many of the plants of this company, apprenticeship programs in the metalworking trades are conducted today.

A famous contemporary of Paul Revere's, Benjamin Franklin, was indentured in 1718 at the age of 12 to his elder brother, James. Their father paid James 10 pounds to teach the printing art to Benjamin and to pay for Benjamin's food, lodging, and other "necessaries."

The indenture provisions were especially generous for those days. They specified that Benjamin was to receive a journeyman's wage in the last year of his apprenticeship just before he became 21 years old—if he remained on the job that long. Moreover, when the precocious Benjamin was 15 years old, he arranged for a cash payment for his food. This was a big financial advantage to him because he had become a vegetarian and found vegetables and fruit cheaper than meat. Out of his savings he was able to buy books. He says in his autobiography that he was frequently able to subsist with only a "bisket and a stick of bread, a handful of raisins, a tart from the pastry cook's, and a glass of water."

Benjamin quit, however, before he completed the 9 years of apprenticeship specified in the indenture because of quarrels with James who, he says, sometimes beat him. He adds, "Thinking my apprenticeship very tedious, I was continuously wishing for some opportunity of shortening it."

Printing was also the trade of Daniel S. Glackens, who became father grandfather to noted craft workers. Glackens published the news-

paper, *The Lafayette,* in the 1820's in Pottstown, Pa. One of his sons, Henry O. Glackens, became a craft worker in the shops of the Pennsylvania Railroad after serving an apprenticeship and later was a manufacturer and business executive. Another son, William J., was engaged in art plastering and worked on the Capitol Building in Washington, D.C. Among the early printer's grandchildren were William J. Glackens, a celebrated artist, and Louis Glackens, cartoonist and illustrator for the magazine, *Puck.*

The bricklaying trade has been well represented in the McGlade family of Waterloo, Iowa. Eight bricklayers had appeared on the family tree by the middle of this century, descended from an Irish stonemason who settled in Cedar Falls, Iowa, during the last part of the 1800's. Bricklaying has also been carried forward by the McKenna family of Philadelphia. There have been six bricklayers in that family, one of them for many years a member of the Bureau of Apprenticeship and Training's field staff.

Poor Children Indentured

In colonial New England, many youngsters less than 10 years old whose parents could not support them were indentured to masters who agreed to teach them a trade. This practice was legalized by the poor laws. The indenture quoted below, for example, required a youthful apprentice in 1676 to serve more than 12 years to learn masonry. As apprentices then were usually bound to masters until they were 21 years old, apprentice Nathan Knight apparently began his service when he was about 8½ years. These were the conditions of his servitude:

> *This Indenture witnesseth that I, Nathan Knight . . . have put myself apprentice to Samuel Whidden, of Portsmouth, in the county of Portsmouth, mason, and bound after the manner of an apprentice with him, to serve and abide the full space and term of twelve years and five months . . . during which time the said apprentice his said master faithfully shall serve. . . . He shall not . . . contract matrimony within the said time. The goods of his said master, he shall not spend or lend. He shall not play cards, or dice, or any other unlawful game, whereby his said master may have damage in his own goods, or others, taverns, he shall not haunt, nor from his master's business absent himself by day or by night, but in all things shall behave himself as a faithful apprentice ought to do. And the said master his said apprentice shall teach and instruct, or cause to be taught and instructed in the art and mystery as mason; finding unto his said apprentice during the said time meat, drink, washing, lodging,*

and apparel, fitting an apprentice, teaching him to read, and allowing him three months towards the latter end of his time to go to school to write, and also double apparel at end of said time...

Even though this apprentice probably did not get a chance to go t school until he was about 20 years old, his master showed a sense c community and civic responsibility, for schooling of some sort—eve though limited to reading and writing—was desperately needed in th Colonies. Although the school instruction for an apprentice at that tim was inadequate, it may be considered another link with present-da apprenticeship, which provides technical classroom instruction to sup plement on-the-job training.

Explc'tation of Poverty-Stricken

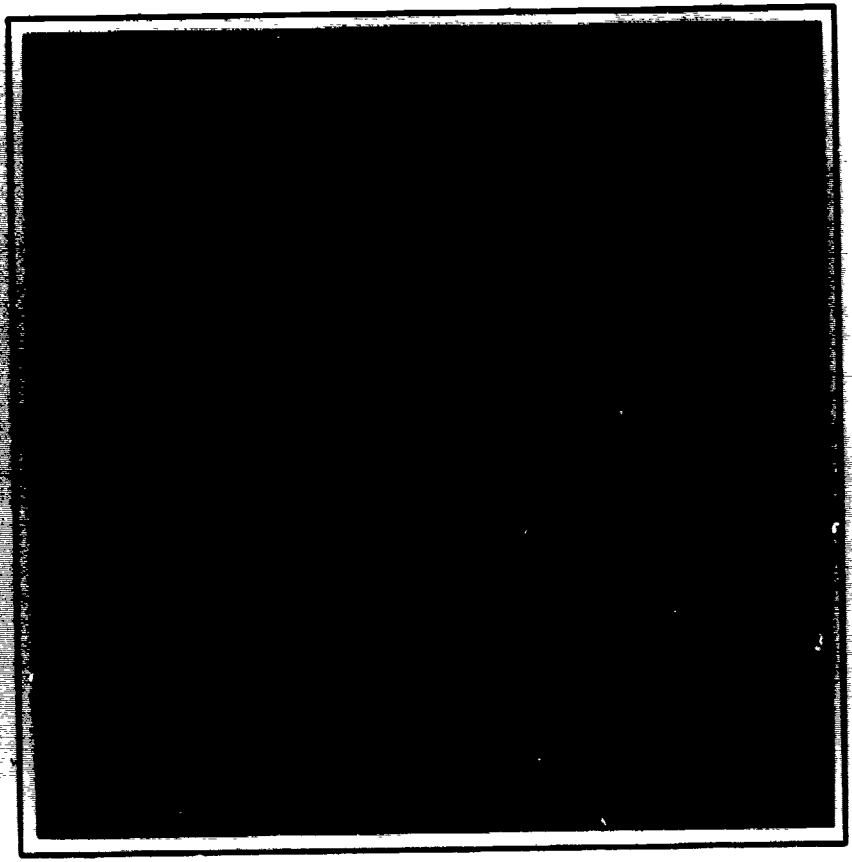
One chapter in the history of apprenticeship caused a stigma difficul to outlive—the exploitation of poor men, women, and children as inden tured servants who were given little or no opportunity to learn a trad It was a system that can hardly be classified as apprenticeship.

The practice of indenturing servants, some of them former prisoner imported from abroad, took place largely in the Southern States, wher labor was needed on the plantations. Workers paid off the cost of thei transportation by serving as so-called apprentices. Tempted into th traffic in these workers were the ships' captains and bartering agents wh profited by it. This exploitation of unfortunates was finally erased afte public sentiment brought about regulative acts.

Leatherwork—An Early Craft

The development of craft workers in the early leather industry is re flected in the indenture of Gould Brown:

North Kingston, April the 7th 1792. We the subscribers this day have mutially agreed that I Gould Brown, am to work with Mr. Benjamin Greene the term of twenty four months, for the sum of three pounds lawful silver money to me in hand paid at the expiration of said time; and the said Benjamin is to allow the said Gould Brown the Privilege of Tanning and Curring Six Calves Skins and two large sizes only tan'd; and is to find him two pair of thick Double Sould shoes, and as many frocks and trousers to ware as he needs in the tan-yard to work, and to Board him the said Gould Brown and Wash his Clothes the said time. Further, I the said Gould Brown, Do agree to Bring with me One Sett of Shoemakers tools for to work with, and Mr. Benjamin Greene agrees to let him have another Sett to Bring away with him When his time is Expired



Apparently, the apprentice named in this indenture had to make shoes during his spare time as he agreed to bring with him a set of shoemaker's tools to work with.

It was a great deal to expect of a young apprentice, for "tanning and curring" were tiring tasks. Usually both the tanning vat and the tanning mixture had to be made. The vat was made by sinking boxes of planks into the ground. The tanning mixture was made by using large boulders to crush bark, twigs, and leaves. Skins were salted down and dried, then thoroughly garnished with this mixture and piled on top of one another over the vat. The whole glorious mess was then swamped with quantities of water and left in the enclosure to soak and smoke for half a year.

Gould Brown may have known how to make shoes, for the indenture does not say that he was to be shown how. He may have been a journey-[illegible]ft worker in the shoemaking trade who wanted a chance to learn make leather.

An Early Carpentry Apprenticeship

That the construction industry, which has led apprenticeship activities in this country in recent years, used the formalized indenture more than a century ago is shown by the indenture of a "house carpenter" in 1832. This indenture bound a 16-year-old apprentice in New Bedford, Mass., to his master until 1837—exactly 100 years before the enactment of the National Apprenticeship Law (Public Law 308, 75th Congress). The indenture states that John Slocum "doth by these Presents bind Lyman Slocum, his son, a minor . . to Thomas Remington . . . to learn the art, trade, or mystery of a House-Carpenter." The master promised "to teach and instruct, or cause the said Apprentice to be instructed in the art, trade or calling of a House-Carpenter . . . (if said Apprentice be capable to learn)."

Skill in Apprenticeable Trades

Very little is recorded on exactly how apprentices were trained in the early days. But whether or not craft workers acquired their skills in training here or abroad or through their own devices, they apparently deserved the title. They were amazingly skillful, judging for example by the excellent condition of many of the buildings erected in this country more than 150 years ago.

These traditions are still carried on. A contemporary columnist, Rudolph Elie of the *Boston Herald*, vividly set forth his observations of the craft worker's skill in an article written in 1954.

He described it as follows:

> *For the last half hour, I have been standing, mouth ajar, down on Arch Street watching them lay bricks in the St. Anthony Shrine now 'abuilding,' and I have come to the conclusion that laying bricks is a fine and noble and fascinating art. It must be a very ancient art . . . and those fellows down on Arch Street are the inheritors of an old tradition. And, curiously enough, to watch them work you get the notion that they are somehow aware of it. . . .*
>
> *The bricklayer has a sort of rhythm and grace and fluency in his work. . . . Apparently they can execute the most intricate designs in brick, though there certainly seemed to be no blueprints in evidence.*

Apprentice Masterpieces

In England, early apprentices were required to make a masterpiece or piece after completing their apprenticeships. This sample of work submitted for inspection by a group of masters to gain guild recog-

nition of their status as "freemen." In the textile trade, for example, apprentices were required to produce several pairs of silk stockings before being freed. Shoemaker apprentices were required to make shoes, and needlemakers submitted examples of needles of various sizes that they had made.

Since modern apprentices in U.S. industry start producing almost immediately, and each job they do is carefully inspected, the production of a final test piece is not generally considered necessary. Moreover, the care with which apprenticeship candidates are selected and the entrance tests they are required to pass help to assure that those accepted for training will become skilled craft workers.

A modern equivalent of the early masterpiece, however, exists in the Chicago areawide apprenticeship program in which apprentices are trained in patternmaking for the production of foundry castings. As part of the final examination, each apprentice is required to produce, without supervision, a contract job ordered by a customer or a patternmaking shop. This job is judged by the area joint labor-management apprenticeship committee in charge of the program before the completion certificate is awarded.

Products made today by apprentices competing in national and area contests may also be likened to the final masterpiece of apprentices in early days. In several trades, such as bricklaying, electrical or sheetmetal work, painting, carpentry, plumbing, and pipefitting, cash prizes are awarded to apprentices who produce the best example of their craft. Public demonstrations of apprentices' abilities are also made in convention exhibits and at county fairs.

Apprenticeship Undergoes Change

With the expansion of industry following the industrial revolution, the apprenticeship system was revolutionized to apply to the new machine age. The early system of "domestic apprenticeship," in which the apprentice lived with a master and was dependent upon the master for food and clothing as well as shelter, disappeared.

Compensation was changed by employers to the payment of wages that were, although insignificant compared with today's wages, graduated in accordance with a predetermined scale. The term "master," however, continued in some trades, and "master machinist" and "master er" are still familiar terms.

The effect of the modern system of division of function began to make itself felt in the first half of the 19th century. In many trades, craft workers who in the past had engaged their apprentices for 5 years to teach them all aspects of the trade began to teach them only one part of the job that could be learned in a few months.

Apprenticeship systems, in keeping with the new era, were gradually developed in the growing industries, at first in the iron foundries and shipbuilding yards, and later in machinery and electrical equipment plants, government arsenals, navy yards, and printing shops.

Not until the latter part of the 19th century were any apprenticeship systems begun that were at all comparable with those of today. But the number of plants in which apprentices were trained was limited and the training was, for the most part, somewhat sketchy when measured by modern standards. The great majority of skilled workers still came from abroad. Most of the workers who acquired their skills in this country learned on their own by watching and getting the advice of experienced workers, by sheer persistence, and by trial and error.

10

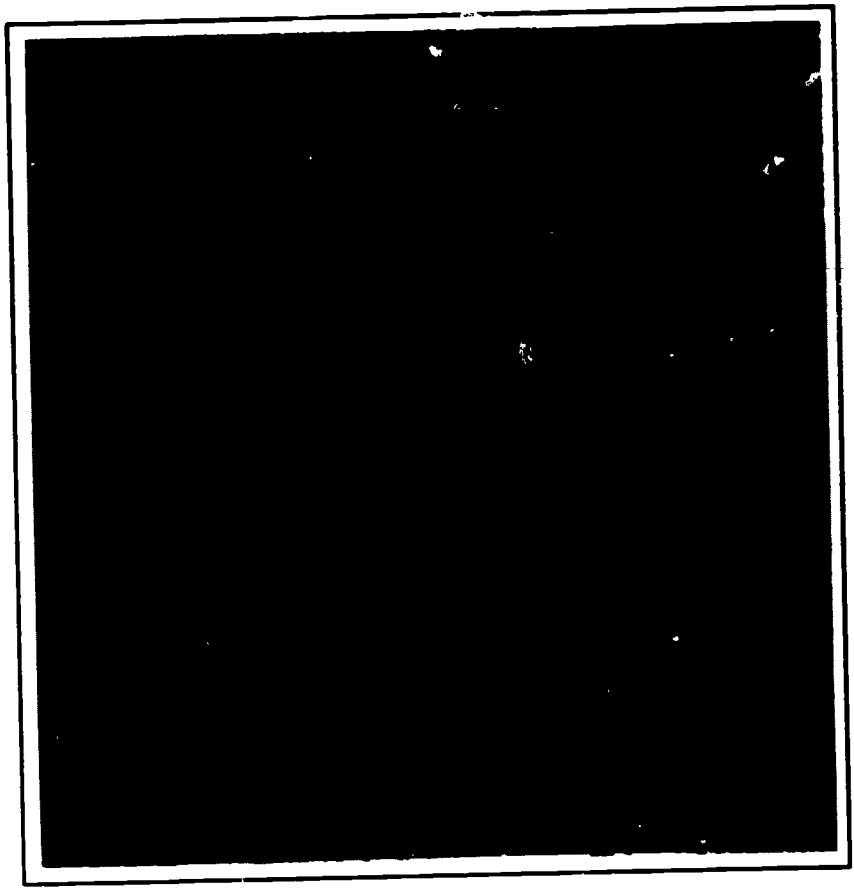
Graduated Wages for Apprentices

An 1865 indenture used by the Pennsylvania Railroad provides one of the first examples of the graduated wage scale paid apprentices. It prescribed 50 cents for a 10-hour day in the first 620 days of training, 60 cents a day in the next 310 days, and 80 cents a day for the balance of the apprenticeship term. A bonus of $124 was paid if and when an apprentice completed training.

In the late 1960's, the starting wage for maintenance-of-equipment apprentices employed by railroads averaged $2.54 an hour—more than five times the starting wage for 10 hours in 1865—and increased to $2.94 during the final period.

Wage Rates Lag

The machine age brought rapid advances in production, but working conditions and wages—especially for apprentices—lagged behind the times. What it was like to be an apprentice in an industrial plant in 1883 is described by a man who began his career in this way—Fred H. Colvin, later the editor of the *American Machinist* and a technical consultant and author. In his book, *60 Years with Men and Machines*, he says: "An apprentice in the machine shops of 1883 faced a situation not wholly unlike that of the craft guilds of the Middle Ages. In many cases the boy's parents had to reimburse the shop owner for teaching him the secrets of the trade."



He said of the Philadelphia machine shop in which he worked:

A revolutionary new system was in effect—the shop owner actually paid the apprentice wages. He was careful, of course, not to turn the apprentice's head with money. In my own case, I began at the rate of 5 cents an hour for a sixty-hour week; or, to put it more impressively, I was paid $3 in cash every Saturday night. . . . All overtime was paid at the regular straight-time rate of 5 cents an hour for young apprentices like myself. . . . At the end of the first month's apprenticeship, the wages were boosted by 16⅔ percent, which meant a half a dollar a week extra in the pay envelope. What with promises of an additional 50-cent raise every six months thereafter, a young apprentice could see himself developing into a substantial citizen if he but lived long enough.

A similar experience was that of John P. Frey, president of the American Federation of Labor's metal trades department for 16 years and a former labor member of the Federal Committee on Apprenticeship, the national body recommending policy to the Bureau of Apprenticeship and Training. He began his career in 1887 as a molder apprentice. In his first year of training, he was paid 75 cents for a 10- to 12-hour day, 6 days a week. His wage was increased 25 cents a day in his second year and another 25 cents in his third and last year as an apprentice. From the beginning of his apprenticeship, he did practically the same work as helpers who then received $1.50 a day.

But both Fred Colvin and John Frey fared better at the start of their training than some other apprentices of the time. The 1895 indenture of Harley F. Nickerson, who later became a general vice president of the International Brotherhood of Machinists, shows that he worked for nothing during a probationary 3-month apprenticeship period. In the next 9 months, he was paid $3 a week. His earnings from then on were about the same as Colvin's were 12 years before. No agreement was made to teach the youthful Nickerson the trade of machinist, nor was there any commitment on the part of the employer to do anything except pay the rates agreed upon for time actually worked, plus $100 when and if the apprenticeship was completed.

Important Careers Begin With Apprenticeship

Many other industrial and government leaders began their working careers in apprenticeable trades. One was Charles E. Sorensen, a skilled patternmaker (and son of a patternmaker) who became a production genius.

Sorensen for many years was Henry Ford's right-hand man and, according to the *New York Times*, "He formulated the concept for the moving assembly line, worked out on a blackboard the economics of the $5 day, and built the River Rouge Plant. He also built the mile-long Willow Run bomber plant which turned out a B-24 bomber every hour during World War II."

Ralph E. Flanders of Vermont, who became a distinguished U.S. Senator, began his working life as a machinist apprentice in 1897. He worked 10 hours a day and received 4 cents an hour in the first year, and a few cents more during the second and third years of his apprenticeship. His annual wage in his last year of training was $295. He has described his apprenticeship as an old-fashioned one because he was legally indentured. His father was required to post a cash bond to be forfeited if the training was not completed. Young Flanders successfully finished training, however, and later received degrees from various universities. He had an extensive industrial career before entering public life.

TERMS OF APPRENTICESHIP

Brown & Sharpe Manufacturing Company,

PROVIDENCE R I

Manufacturers of Fine Machinery and Machine Tools, &c

This Agreement, made and entered into this 11th day of January A D 1877 by and between the Brown & Sharpe Manufacturing Company a corporation duly incorporated and located and doing business in the City of Providence, of the first part Ralph E Flanders of Syracuse N Y of the second part and Albert M Flanders of Syracuse N Y of the third part

Witnesseth, That whereas the party of the second part is desirous of becoming an apprentice to said party of the first part for the purpose of acquiring the art or trade of machinist the said party of the first part in consideration of the sum of One Hundred Dollars to it paid by said party of the third part hereby accepts said party of the second part as an apprentice to the art or trade of machinist in accordance with and subject to the Terms of Apprenticeship hereto annexed and made a part hereof

And the party of the second part in consideration of such acceptance hereby agrees to become the apprentice of said party of the first part in the machinists art or trade, in accordance with the "Terms of Apprenticeship" hereto annexed, and to faithfully conform with the provisions thereof

And the party of the third part in consideration of the execution of this agreement by said party of the first part, for himself his heirs, executors and administrators, covenants and agrees to and with said party of the first part that the party of the second part shall well and truly conform to and abide by all the provisions of said "Terms of Apprenticeship" and in case said party of the second part shall in any wise violate any of the provisions thereof or shall abandon such apprenticeship before the expiration thereof without the consent of said party of the first part to pay to said party of the first part the sum of One Hundred Dollars as ascertained and liquidated damages for such breach of contract

And the parties of the second and third parts respectively for the consideration above set forth, also hereby covenant and agree to and with said party of the first part that in the event that said apprentice shall be discharged for unfaithfulness, non-conformity with the rules and regulations which are or may be adopted for the good government of the shop, want of diligence indifference to his business, or improper conduct in or out of the shop, or shall abandon such apprenticeship before the expiration thereof without the consent of said party of the first part all wages then earned by said party of the second part and unpaid shall be forfeited.

And the party of the first part further convenants and agrees, that in the event that said party of the second part shall remain its apprentice during the full term of apprenticeship (including the making up of lost time) as provided in the annexed "Terms of Apprenticeship" and shall in all respects comply with the provisions of said "Terms of Apprenticeship" and shall not be discharged by reason of non-compliance therewith to pay to said party of the third part in consideration of such faithful service on the part of said apprentice the sum of One Hundred Dollars.

In Witness Whereof, the parties aforesaid have hereunto set their hands and seals (the party of the first part by Lucian Sharpe its Treasurer duly authorized for that purpose) the day and year first above written.

Executed in presence of

Brown & Sharpe Mfg Co.
L. Sharpe Treas.

George Hunter Jr.
Ralph E Flanders
Albert M Flanders

This is to certify that Ralph E Flanders has served the full term of apprenticeship according to the above agreement

Feb 9 1880 Brown & Sharpe Mfg Co. R. Riddle Supt.

ce Indenture of Ralph E. Flanders

Patrick V. McNamara of Michigan was another apprentice who became a U.S. Senator. Encouraged by his father, he began as a plumber apprentice in 1913 with a wage of only 9 cents an hour for an 8-hour day. By his third year he was paid 14 cents an hour, or $1.12 a day. He completed his apprenticeship a year ahead of schedule by working additional hours on special assignments. Following his apprenticeship in the plumbing trade, he worked as journeyman and then as a supervisor on construction jobs. He was active in labor affairs, and served for 20 years as president of the Detroit branch of the United Association of Journeymen and Apprentices in the Pipe Fitting Industry.

Clyde Webber, who was president of the largest union representing government employees, the American Federation of Government Employees (AFGE), began his working career as an apprentice machinist helper in 1936. He attended evening school and completed his high school education while working in the round-house for the Union Pacific Railroad in Ogden, Utah.

After becoming a journeyman machinist, he continued to educate himself while serving as the Ogden city recorder until he was appointed to the staff of the Bureau of Apprenticeship and Training, where he served in many important capacities. He was active in national and international labor affairs and served on the AFL-CIO Executive Council as vice-president.

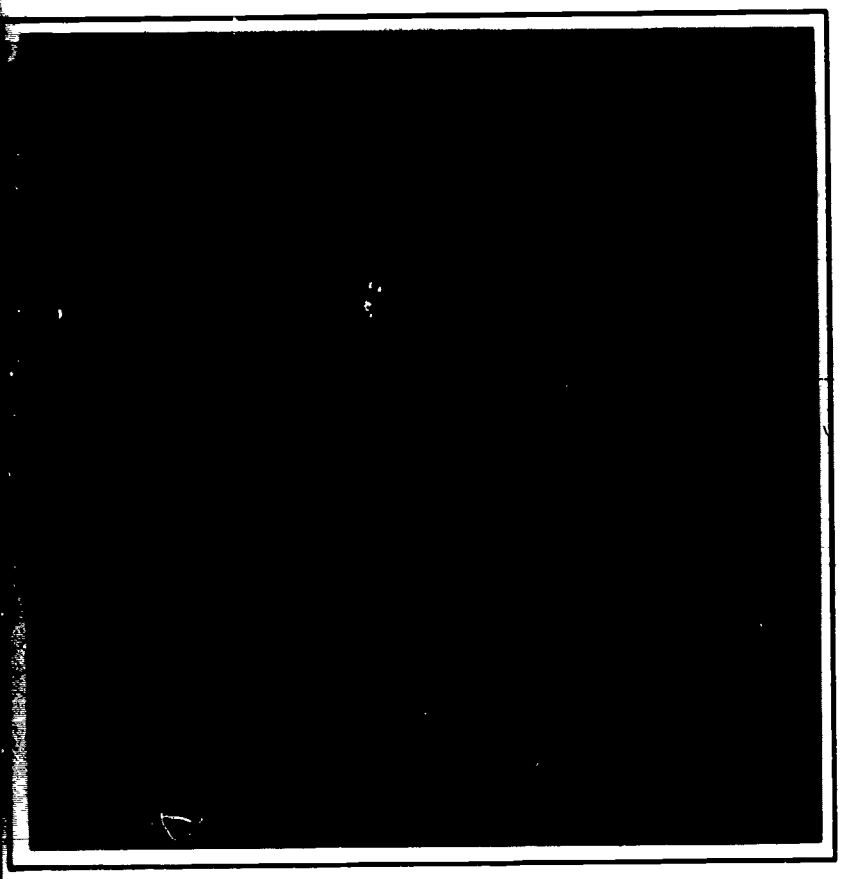
First Apprenticeship Legislation

The first legislation in the United States to promote an organized system of apprenticeship was enacted in Wisconsin in 1911. The law placed apprenticeship under the jurisdiction of an industrial commission. This followed the enactment of State legislation requiring all apprentices to attend classroom instruction 5 hours a week.

In the 1920's national employer and labor organizations, educators, and Government officials began a concerted effort to bring about a national, uniform apprenticeship system. In the forefront of this movement were representative groups of the construction industry.

The need for comprehensive training of apprentices had become a vital necessity in the boom days following World War I. Immigration was curtailed after the war, so fewer skilled workers were entering from other countries.

The combined effort of the various groups led in 1934 to the participation of the Federal Government in the national promotion of apprenticeship. The Federal Committee on Apprenticeship, composed of representatives of Government agencies, was appointed by the Secretary of Labor to serve as the national policy-recommending body on apprenticeship



in the United States. It was to assume the responsibilities with respect to apprentices and their training under industrial codes formulated by the National Recovery Administration.

Labor Standards for the Registration of Apprenticeship Programs (Title 29 CFR Part 29)

This new part sets out labor standards, policies and procedures relating to the registration, cancellation and de-registration of apprenticeship programs and of apprenticeship agreements by the Bureau of Apprenticeship and Training (BAT), the recognition of a State Apprenticeship Council or Agency (SAC) as th riate agency for registering local apprenticeship programs for certain F rposes.

Equal Employment Opportunity in Apprenticeship and Training (Title 29 CFR Part 30)

This part sets forth policies and procedures to promote equality of oppo nity in apprenticeship programs registered with the U.S. Department of La and in state apprenticeship programs registered with recognized state appr ticeship agencies. These policies and procedures apply to the recruitment selection of apprentices, and to all conditions of employment and trai during apprenticeship.

National Apprenticeship Law Is Enacted

In 1937 Congress passed the National Apprenticeship Law. This l popularly known as the Fitzgerald Act, was enacted "to promote furtherance of labor standards of apprenticeship . . . to extend application of such standards by encouraging the inclusion thereof contracts of apprenticeship, to bring together employers and labor the formulation of programs of apprenticeship, to cooperate with S agencies in the formulation of standards of apprenticeship."

Modern Apprenticeship Programs

The Fitzgerald Act of 1937 set the pattern for today's system of F eral Government assistance in apprenticeship programs. The Fede Committee on Apprenticeship was reorganized and enlarged to inclu equal representation of employers and labor, plus a representative of U.S. Office of Education. The Apprentice-Training Service (now Bureau of Apprenticeship and Training) was established as the natio administrative agency in the Department of Labor to carry out the jectives of the law, guided by the recommendations of the Federal C mittee on Apprenticeship.

Since 1937, the Bureau of Apprenticeship and Training has wor closely with employer and labor groups, vocational schools, State prenticeship agencies, and others concerned with apprenticeship grams in U.S. industry. It has field representatives in the 50 States. functions are advisory and promotional. It does not itself conduct tr ing programs.

A major means for promoting apprenticeship is through a wide range of information on the advantages and methods of well-organi d well-run apprenticeship programs. The Bureau of Apprentice d Training disseminates this information widely through newspap

THE NATIONAL APPRENTICESHIP ACT
(50 Stat. 663; 29 U.S.C 50)

To enable the Department of Labor to formulate and promote the furtherance of labor standards necessary to safeguard the welfare of apprentices and to cooperate with the States in the promotion of such standards.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of Labor is hereby authorized and directed to formulate and promote the furtherance of labor standards necessary to safeguard the welfare of apprentices, to extend the application of such standards by encouraging the inclusion thereof in contracts of apprenticeship, to bring together employers and labor for the formulation of programs of apprenticeship, to cooperate with State agencies engaged in the formulation and promotion of standards of apprenticeship, and to cooperate with the National Youth Administration and with the Office of Education of the Department of the Interior in accordance with section 6 of the Act of February 23, 1917 (39 Stat.932), as amended by Executive Order Numbered 6166, June 10, 1933, issued pursuant to an Act of June 30, 1932 (47 Stat.414), as amended.

SEC.2. The Secretary of Labor may publish information relating to existing and proposed labor standards of apprenticeship, and may appoint national advisory committees to serve without compensation. Such committees shall include representatives of employers, representatives of labor, educators, and officers of other executive departments, with the consent of the head of any such department. 17

SEC.3. On and after the effective date of this Act the National Youth Administration shall be relieved of direct responsibility for the promotion of labor standards of apprenticeship as heretofore conducted through the division of apprentice training and shall transfer all records and papers relating to such activities to the custody of the Department of Labor. The Secretary of Labor is authorized to appoint such employees as he may from time to time find necessary for the administration of this Act, with regard to existing laws applicable to the appointment and compensation of employees of the United States: *Provided, however,* That he may appoint persons now employed in division of apprentice training of the National Youth Administration upon certification by the Civil Service Commission of their qualifications after nonassembled examinations.

SEC.4. This Act shall take effect on July 1, 1937, or as soon thereafter as it shall be approved.

Approved, August 16, 1937.

industrial periodicals, discussions at annual conventions of employer ciations and unions, and regional apprenticeship conferences.

About 800 apprenticeable occupations — most of them in the construc manufacturing, transportation, and service industries — are covered registered programs.

Certificates of Completion

When apprentices finish their training, they receive certificate completion of apprenticeship. These are issued by the State appren ship agencies or, in those States not having such an agency, by Bureau of Apprenticeship and Training in accordance with its rec mended standards.

Joint Apprenticeship Committees

Joint apprenticeship committees, composed of representatives of m agement and labor, work together to develop and administer l apprenticeship training programs. In addition to local groups, nati
18 trade committees represent national organizations. With the help of Bureau of Apprenticeship and Training, the national committ formulate policies on apprenticeship in the various trades and i basic standards to be used by affiliated organizations.

Basic Standards for Apprenticeship

Programs registered by the Bureau of Apprenticeship and Train must provide that—

- √ the starting age of an apprentice is not less than 16;
- √ there is full and fair opportunity to apply for apprenticeship;
- √ there is a schedule of work processes in which an apprentice i receive training and experience on the job;
- √ the program includes organized instruction designed to pro apprentices with knowledge in technical subjects related to t trade (a minimum of 144 hours per year is normally consid necessary);
- √ there is a progressively increasing schedule of wages;
- √ proper supervision of on-the-job training with adequate facil to train apprentices is insured;
- √ the apprentice's progress, both in job performance and related struction, is evaluated periodically and appropriate records maintained;


Certificate of Completion of Apprenticeship

United States Department of Labor
Bureau of Apprenticeship and Training

This is to certify that

has completed an apprenticeship for the occupation

under the sponsorship of

in accordance with the basic standards of apprenticeship established by the Secretary of Labor

DEPARTMENT OF LABOR
UNITED STATES OF AMERICA

19

A Certificate of Completion

A Certificate of Completion of Apprenticeship, awarded an apprentice upon completion of training, is issued by the State apprenticeship agency or the Bureau of Apprenticeship and Training in States in which no such agency is established

- √ there is employee-employer cooperation;
- √ successful completions are recognized; and
- √ there is no discrimination in any phase of selection, employment, or training.

Apprenticeship Values for Youth and Industry

For young persons just starting out in the world of work, apprenticeship has important advantages. It offers an efficient way to learn skills, for the training is planned and organized and is not hit-or-miss.

The apprentices earn as they learn, for they are already workers. When their apprenticeship is completed, youth are assured of a secure future and a good standard of living because training is in the crafts where skills are much in demand. Opportunities for employment and advancement open up with the recognition that the apprentices are now skilled workers.

Industry, too, benefits greatly. Out of apprenticeship programs com all-round craft workers competent in all branches of their trades and abl to work without close supervision because their training has enable them to use imagination, ability, and knowledge in their work. Whe changes are made in production, these workers provide the versatilit needed for quick adaptation of work components to suit the changin needs. An adequate supply of skilled workers with these qualities is vit to industrial progress.

One important way that apprenticeship-trained workers contribute t industry is in supervisory positions. Apprenticeship provides not onl many supervisors on our production lines, but also many top-level of ficials in American business. A survey conducted by the Associated Gen eral Contractors of America showed that 90 percent of the top official of construction companies who replied—presidents, vice president owners, and partners—began their careers as apprentices. Many of th project managers, superintendents, and craft supervisors employed b those companies also began as apprentices.

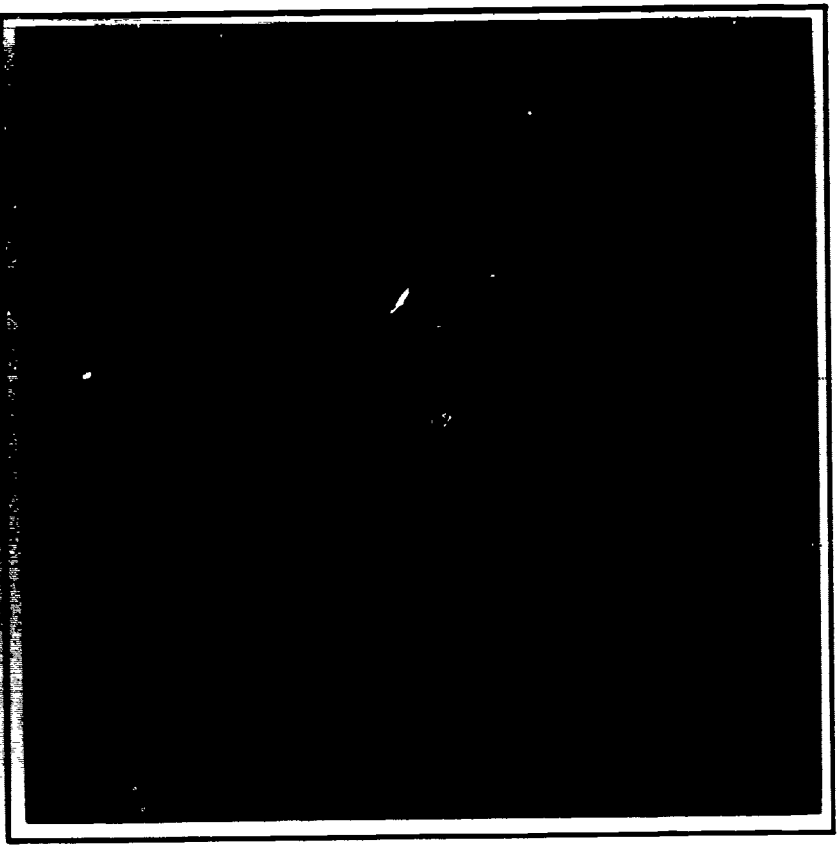
Another survey, conducted by a large manufacturer of electrical an automotive equipment, revealed that 40 percent of the 300 apprentic graduates still on the company's payroll held important supervisory o executive positions.

New Directions in Apprenticeship

The apprenticeship system has grown up with America. Like America, it still growing and changing. Today it serves a far different Nation from the on of pioneer days. Scientific discoveries, new teaching methods, expanding indus try, an increasing population, a determination of people to live not only free bu equal—these are among the demands of our present-day technological an social systems to which apprenticeship is responding.

To meet the need for changes in production methods and product apprenticeships have been set up in new trades, and apprenticeships i many of the older trades have been updated.

For example, in recent years a new apprenticeship program has bee created to train orthotic and prosthetic technicians. Workers in thi expanding field fabricate devices known as orthoses and prostheses, whic help thousands of people who have disabling conditions of the limbs an ne or other crippling ailments to move around on their own. Thes hnicians are expected to keep abreast of all new fabricating technique



Women in Apprenticeship

Increasing numbers of women in apprenticeship reflect some of our changing attitudes about whose hands may do our skilled work.

From 1900 to 1960, each decennial census showed that women held only 2 to 3 percent of the jobs in skills trades, a figure that varied only during World War II. But by 1982 women had more than doubled their share, holding nearly 6.5 percent of the jobs in skilled trades. They account for nearly a million skilled trade workers.

All skilled trades now report at least some women at work. They include such traditionally "men's" jobs as automobile mechanics, carpenters, heavy equipment mechanics, and telephone installation and repair workers.

Despite this progress, many women still do not use the apprenticeship [illegible] a well-paid occupation. The majority of women in apprentice[illegible] ound in cosmetology and a few other trades. Through federally

funded outreach programs, the Department of Labor and local and national organizations are trying to broaden the horizons of women, counselors, prospective employers, and apprenticeship councils.

Apprenticeship Preparatory Courses

To attract more able young men and women to apprenticeship in the years when they are making career decisions, apprenticeship preparatory courses are given in high schools and vocational and technical schools. These acquaint youth with the great opportunities in crafts and trades and give them some theoretical and technical instruction in specific fields.

Apprenticeship Prejob Programs

Apprenticeship prejob programs provide on-the-job training for 6 to 8 weeks. Their purpose is to introduce potential apprentices to specific skilled trades and to determine their suitability for the particular work involved. When students successfully complete the introductory period, they may continue with placement in regular apprenticeship training programs.

Veterans in Apprenticeship

For eligible veterans, apprenticeship offers special opportunities. When they enter approved apprenticeship programs, they may receive—in addition to their wages—a monthly training assistance allowance for up to 3 years under the Veterans' Pension and Readjustment Assistance Act of 1967. The amount they may receive is determined by the period of training they are in and the number of dependents they have.

In addition, some veterans will be already eligible for craftworker status when they are discharged, as the result of an agreement between the armed services and the Department of Labor. Under the plan, they will develop training programs in apprenticeable occupations, such as operation and repair of heavy equipment, with the help of labor and management representatives of that craft. Work experience in the craft will be counted toward the credits required for craftworker status. Those who fall short of the required credits at the time of discharge will receive counseling on how to meet the remaining requirements.

Looking Forward

Rapid changes in our industrial system require a large body of skilled workers who are able to carry out technical specifications and who can

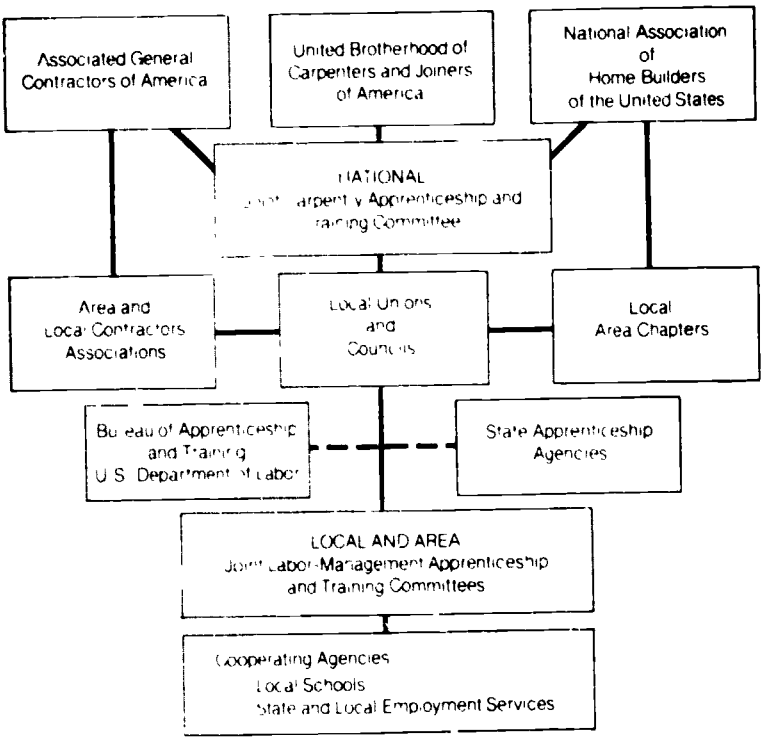
supervise less skilled members of the work force.

Women in apprenticeship and in skilled craft jobs will become more numerous, and new opportunities will open up for minorities as non-discrimination requirements are enforced.

Projections of employment opportunities show great needs for skilled workers. National projections of skilled worker requirements prepared by the Bureau of Labor Statistics, U.S. Department of Labor, indicate a rise in the number of skilled workers from 11 million in 1980 to 14 million in 1990.

Apprenticeship has served in many periods of history. Today it is clear that this method for teaching and learning skills systems remains one of the best ways of training skilled craft workers. But there is still much work to do.

APPRENTICESHIP AND TRAINING SYSTEM OF THE CARPENTRY TRADE



Industry and labor work together to form apprenticeship standards in the crafts and trades and oversee programs. The chart above is an example of how this cooperation works in the carpentry trade.

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