



**MONTHLY LABOR REVIEW**

**November 1972**

U.S. DEPARTMENT OF LABOR  
Bureau of Labor Statistics

*In this issue:*  
New directions  
in grievance handling  
and arbitration







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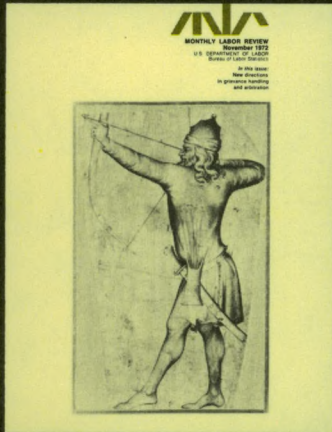
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"An Archer Drawing his Bow," a late 14th century drawing attributed to the Master of the Parlement de Narbonne, from the collection of Christ Church, Oxford, exhibited at the National Gallery of Art, Washington, D.C.

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## Labor Month in Review



*Focus on grievances.* In August 1971, a machine operator filed a grievance protesting his discharge for parking his car in a restricted area. This would seem to be a fairly common routine complaint. Yet it took 8 months before an arbitration award was handed down in April 1972.

This 8-month countdown illustrates what many commentators find wrong with grievance arbitration today. Representatives of workers and management, arbitrators, labor relations specialists, and government officials all have called attention to such delays and the costs that go with them. The consensus of their investigations is that the problems of grievance arbitration are essentially procedural, that grievance arbitration is still the useful system that in the past made a massive contribution to industrial peace.

Five articles in this issue of the *Monthly Labor Review* go beyond diagnosis to report on some possible remedies. Assistant Secretary of Labor W. J. Usery reports on programs intended to reduce delays and costs by developing a larger number of *acceptable* arbitrators. James F. Power of the Federal Mediation and Conciliation Service points out that labor and management tend to use only a minority of the qualified arbitrators available. For example, in fiscal year 1972, the most experienced one-third of the over 1,100 arbitrators on the FMCS roster were preferred overwhelmingly by the parties to handle most of the cases.

*Accelerated arbitration.* Another means to improve grievance handling has been undertaken in the steel industry. Ben Fischer, director of the Steelworkers' Contract Administration Department, discusses a 2-year experiment in which "routine" cases are handled in a special arbitration procedure which requires hearings within 10 days and an award within

2 days of the hearing. Complex grievances still go to regular arbitration, and there are safeguards to prevent potentially complex cases from winding up in the simplified procedure.

*Factfinding.* "Too often facts essential to settle a grievance are not obtained until there is an arbitration hearing." West coast attorneys Sam and John Kagel note in their article that "... union and employer too often assume a litigious stance, with each adopting the view, 'my man, right or wrong.' The results are deadlocked grievances. . . ."

To avoid this, the Kagels suggest use of factfinding before a case goes to arbitration. This technique makes the parties sift through to what happened, stipulating where they agree and disagree. Thus grievances become "mutual problems" and the parties deal with events rather than emotions or face-saving. This tends to shorten the time needed to consider a complaint and to eliminate marginal ones.

*Federal workers.* The situation of Federal (and other government) workers differs from that of workers in the private sector because grievance procedures for public employees are bound by civil service laws and regulations. However, Executive orders have carved out an area for bargaining between Federal agencies and worker representatives. William Kilberg, an associate solicitor of the U.S. Department of Labor, and attorneys Thomas Angelo and Lawrence Lorber report on nascent grievance procedures in the Federal service as expressed in labor-management contracts.

A recurring point in the articles is that labor and management created and control grievance arbitration. Consequently, they must spearhead reform. □



# Some attempts to reduce arbitration costs and delays

Experimental training programs  
in the public sector  
may ease shortage  
of acceptable neutrals

W. J. USERY JR.

LABOR AND MANAGEMENT have accepted the grievance procedure, culminating in final and binding arbitration as preferable to the strike or lockout for resolving disputes arising out of the interpretation of labor contracts. Currently, almost 95 percent of all collective bargaining contracts provide for a grievance procedure with binding arbitration as the final step. Few other procedures are so widely accepted in the labor management field. Because private arbitration of labor-management disputes has been an effective substitute for strikes and lockouts, it is in the public interest to encourage its growth and health.

Yet grievance handling and arbitration have developed problems, particularly at the plant level. Increasingly, employees appear to prefer direct action to the methodical and prolonged deliberations of the grievance-arbitration procedure. Approximately a third of U.S. strikes occur while a collective agreement is in force.<sup>1</sup> While no one at present can sort out the causes of these strikes, most experts agree that many of them occur because the grievance procedure involves extensive delays, red tape, complications, and rising costs.

The parties most concerned with the outcome of a grievance-arbitration proceeding—the worker, the shop steward, and the foreman—are often the participants left most in the dark once the grievance passes the initial stage of negotiation. Even union and management officials in many cases sit passively while attorneys iron out intricate legal questions which often appear far removed from the issues in dispute. In many cases, the time taken to resolve a grievance is such that workers are dissatisfied, confused, and frustrated even when they win the grievance. The upshot of these growing problems is that a number of public and private organizations have initiated programs to improve grievance-arbitration.

This article reports on some initiatives undertaken by the U.S. Department of Labor to contribute to these efforts. The Department's activities are focused presently on the development of additional arbitrators with the intent of reducing the delays and costs which plague arbitration. As background to these initiatives, it is useful to outline further some of the current drawbacks to grievance-arbitration that have evoked public and private efforts at improvement.

## How much and how long?

The arbitration process in far too many cases has become too legalistic, costly, and lengthy. Expenses associated with most arbitration hearings today include: the arbitrator's daily fee, which normally varies between \$150 and \$225; the arbitrator's travel time and study time, normally paid at the daily rate; the fees for the parties' attorneys, which usually exceed the arbitrator's fee; wage payments to plant personnel who take part in the proceedings; rental of a hearing room; payment to the American Arbitration Association for furnishing the parties a panel of arbitrators, if the association is used; and stenographic transcription costs, if a record of the hearing is desired. For a 1-day hearing, total costs could run as high as \$1,000 for each of the parties.

Complete data are not available on the time it takes to process a grievance from first-level negotiations until an arbitration award is issued. However, an examination of over 700 arbitration cases from the records of the Federal Mediation and Conciliation Service during July 1970 to June 1971 indicates that cases averaged 251 days from the time the initial grievance was filed until an arbitration award was rendered. The data further broke down into an average of 83 days (almost 3 months) from the time a grievance was filed until a request for an arbitration panel was received by the Federal Mediation and Conciliation Service, and an average of 168 days

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between the request and the arbitrator's award.

One reason for the long time between request for an arbitration panel and receipt of an arbitration award is the pressing need for additional competent arbitrators acceptable to labor and management. The ranks of active arbitrators are dwindling because of retirements and deaths and are not being refilled by younger, acceptable arbitrators. For example, in 1952, the average age of members of the National Academy of Arbitrators was 50; in 1969, it was 57.

Compounding the shortage problem is the increasing demand for arbitrators. In the fiscal year ending in June 1962, the Federal Mediation and Conciliation Service received approximately 3,100 requests for arbitration panels; in the year ending in June 1971, the number rose to over 12,000. The demand for arbitrators appears on the increase not only in the private sector but also in newly emerging collective bargaining in the public sector. Since strikes by public employees are generally prohibited, arbitration of interest disputes is more widely used in the public sector, and there are forecasts that the arbitration of negotiation impasses in the public sector will continue to increase, primarily at the State and local level.

Thus, the shortage of arbitrators and the deficiencies extant in the arbitration process threaten not only the peaceful resolution of grievances, but also the acceptance of voluntary arbitration of impasses in contract negotiations. It seems imperative that the arbitration process must be improved as an effective means of reducing industrial conflict and of avoiding costly strikes.

To improve the arbitration process as an effective and acceptable means of reducing industrial conflict, a two-pronged effort is needed: (1) Creation of simplified, swift, and less expensive arbitration procedures; and (2) training an adequate number of competent and acceptable arbitrators to meet growing demand.

The American Arbitration Association, the Federal Mediation and Conciliation Service, labor and management in the steel industry, and others concerned with this problem are experimenting with new arbitration procedures and taking steps to increase the supply of new arbitrators.

The American Arbitration Association in New York has recently developed an expeditious and less costly arbitration procedure. In it, parties do not select their own arbitrators, the latter being chosen by the association from a panel of qualified arbitra-

tors. Hearings are scheduled within a week or two, and an award is handed down shortly thereafter. Fridays are set aside for such hearings. The parties must be ready when called, written briefs and stenographic records are not permitted, and the arbitrators are not required to write opinions accompanying their awards. (Elsewhere in this issue of the *Review*, the steel industry and Federal Mediation and Conciliation Service initiatives are discussed.)

Most of today's active arbitrators obtained their initial training, experience, and developed acceptability in labor-management circles while working for the National War Labor Board or the Wage Stabilization Board. Most attempts to develop young arbitrators have failed because of a lack of trainers and training facilities, a dearth of financial support for training, and the inability of such programs to develop acceptability of newly trained arbitrators. This is a crucial failing, since acceptability is really the name of the game in any program which attempts to develop more arbitrators.<sup>2</sup>

### Public impasses and neutrals

Rapidly growing public sector employee-management relations provide an opportunity for further experimentation with improving arbitration and fact-finding. These experiments may develop new forms of dispute settlement for the unique problems of the public sector as well as provide solutions for problems that have arisen in the private sector.

The number of public employees more than doubled during the 1948-72 period, increasing from 5.9 million to 12.8 million. Four-fifths of this growth represented an increase in the number of State and local government workers.<sup>3</sup> Starting with Wisconsin enactments in 1959 and President Kennedy's Executive Order 10988 in the early 1960's for Federal employees, a number of executive and legislative policies affecting public employee labor-management relations were enacted. By the end of 1970, 40 States had legislation authorizing some form of formal employee relations covering some types of employees. Eight States had no legislation and two States prohibited such activities.

There are a number of reasons why labor relations in the public sector provides a unique opportunity for experimentation in the use of third-party neutrals for the resolution of disputes. First, since public sector labor relations are relatively new, and the use of neutrals also new, experiments can be undertaken

unencumbered by historical labor-management difficulties and a tradition which inhibits innovation.

Second, many of the new State laws provide for arbitration and factfinding, either by requiring them in impasses or by encouraging the use of arbitration to resolve grievances. Therefore, although the parties may not have fully accepted the idea of arbitration and factfinding, strong legislative encouragement and, in some instances, requirements for the use of arbitration and factfinding have resulted in and will continue to increase the demand for more neutrals to resolve disputes.

Third, the number of persons acting in a neutral capacity in public sector labor relations is relatively limited. Because of heavy workloads in private sector disputes, many experienced neutrals are not available for additional work assignments in the public sector. It is therefore necessary to look to other sources for persons to satisfy the considerable need for public sector neutrals.

Within recent months, the Department of Labor has undertaken a number of projects intended to utilize the unique opportunity provided by the public sector to implement and experiment with new forms of dispute resolution. Each of these projects possesses obvious implications for application in the private sector as well as in the emerging public sector.

Two of the major efforts of the Department are training projects at the University of California at Los Angeles and at Berkeley. Funded by the Labor-Management Services Administration, each of these projects will provide a minimum of 15 candidates with additional training and experience as third-party neutrals in the public sector. Counterpart or apprenticeship training for the candidates will be supplemented by classroom training, particularly in areas where the individual's background is deficient. The cooperation of arbitration and factfinding referral agencies has been assured to secure as much immediate experience and exposure as possible for the individuals once they have completed their training. The acceptability of the trainees by the parties will be enhanced by a tripartite advisory group, the prestige of the experienced arbitrator directing each project, and the willingness of other experienced arbitrators to assist with the apprenticeship training.

Although both projects have minority trainees, the Berkeley project will place special emphasis on training such candidates. An attempt will be made to help these individuals get initial experience in community type disputes rather than in labor relations disputes.

The career ladder for a successful arbitrator or mediator is uncertain so this project will attempt to influence career patterns by having minority group neutrals acquire experience in community disputes where it is anticipated that they can more easily acquire acceptability. After gaining acceptability and experience as a neutral, they should then be able to move into public sector disputes, some of which have racial overtones, and eventually, move into all types of disputes.

The Berkeley project also provides compensation for the neutrals during their training to supplement lost earnings from their regular employment. This arrangement was made because it is believed that the normal source of neutrals has been persons who could support themselves by their regular employment while gaining experience in dispute resolution. Indeed, this practice has been one of the factors which has made it difficult for persons from minority groups to find it financially feasible to break into the dispute resolution profession.

Thus far, the Department of Labor is very encouraged by the response to this recently initiated program. The hope is that it will provide new directions and insights into the development of public sector neutrals.

### Other projects

Another Department of Labor project to develop neutrals is underway in New England. That region has more public sector labor relations statutes than any other part of the country. Consequently, a large number of collective bargaining relationships have already been established. Most of the New England statutes provide for some type of impasse resolution and for the resolution of grievances by arbitration. The State impasse agencies depend primarily upon ad hoc neutrals to perform as mediators, arbitrators, and factfinders. Many ad hoc neutrals on impasse agencies' rosters are relatively inexperienced in public sector disputes. Therefore, the Labor Department has undertaken, through a contract with the National Center for Dispute Settlement, a series of conferences intended to expose these relatively inexperienced neutrals to conflict resolution in the public sector.

The conferences are being conducted in cooperation with the appropriate State impasse agency to assist their permanent and ad hoc staff in better understanding their respective responsibilities under



the State statute. These conferences are expected also to demonstrate the type of comprehensive training needed to enable public sector neutrals to carry out their responsibilities and to bring to the fore individuals who will be best suited to the training.

In the near future, most demands for public sector neutrals will continue to be filled by persons with experience gained primarily in the private sector. In this regard, the Department is attempting to develop an arbitration manual which will help arbitrators perform effectively in public sector disputes. The manual is intended to be used for reference and informal training of individual arbitrators as well as in formal training programs. It will discuss the factors which are unique to public sector arbitration and factfinding as well as to contrast them with the well-known procedures used in the private sector. It will also deal with the various State laws which affect the arbitration process in the public sector.

A large number of States have provided, by legislation, for arbitration of police and fire impasses.<sup>4</sup> Considerable experience has already been acquired in these types of disputes. As a consequence, the Department has provided financial support for a study of experience under the police and firefighter arbitration statutes in Michigan and Pennsylvania. This study will attempt to determine the impact of this type of dispute resolution and contrast the experience under these two State statutes.

Another project which the Department is viewing with a great deal of interest is being funded under

the Intergovernmental Personnel Act in cooperation with the Commonwealth of Massachusetts and administered by the American Arbitration Association. It is a program of expedited arbitration for municipal government and public employee organizations in Massachusetts. This experimental 6-month program will handle grievances in quick fashion, assuring the parties of a decision by an arbitrator within 3 weeks after a request for arbitration and no more than 7 days after the case has been heard. A reduced administrative fee will be charged by the project administrator and the fee of the arbitrator and other administrative costs will be borne by the program. This project, which will emphasize both speedy arbitration and shorter written awards, is aimed at two of arbitration's most serious problems—delay and expense.

NEW APPROACHES to resolving grievance issues before they reach the arbitration stage should also be fostered in the public sector. As in the case of arbitration, the public sector is still uninhibited by tradition which provides an excellent opportunity for experimentation and innovation in this area. Moreover, greater effort is needed to reduce the time and cost associated with current arbitration practices. Full cooperation of the parties and the arbitrator are crucial. Many cases could be handled without injustice by shortening hearings and reducing or eliminating briefs and lengthy opinions. □

—FOOTNOTES—

<sup>1</sup> The Labor-Management Services Administration of the U.S. Department of Labor is currently funding a study by the Bureau of Labor Statistics which, it is hoped, will supply further insights into the causes of such work stoppages.

<sup>2</sup> For example, in 1970, of the 1,475 arbitrators listed on the American Arbitration Association's national panel, 458 or only 30 percent, were responsible for all of the awards.

<sup>3</sup> Associated with this phenomenal growth in public employment, the American Federation of State, County and Municipal Employees increased its membership by 112 percent during the 1960's (210,000 to 444,500) and during the same period the American Federation of Teachers increased

its membership by 365 percent (56,200 to 205,200). Other public employee organizations also experienced large increases in membership. One response to the increase in the number of public employees and in the number organized has been the establishment of a framework in many areas for public employee-management relations.

<sup>4</sup> These States and cities have passed legislation which requires the arbitration of certain types of police and firefighter disputes: Florida, Hawaii, Maine, Michigan, Pennsylvania, Rhode Island, South Dakota, Vermont, Wisconsin; and Denver, Colo., Eugene, Ore., and New York City, N.Y. Georgia and Oklahoma provide for arbitration of these disputes at the option of the parties.

New arbitration procedure  
in the steel industry  
has sped up awards  
and cut costs  
in 'routine' cases

BEN FISCHER

# Arbitration: the steel industry experiment

IF THE PREVAILING PATTERN of private labor-management relationships is to be successful and remain private, a more effective system of private grievance handling and arbitration is essential. Alternatives to this are not feasible, or desirable. For example, government-established labor courts for resolution of grievances would be more frustrating and inefficient than the present private nongovernmental machinery. Moreover, use of courts is more likely to result in complete governmental regulation and domination of collective bargaining. Another major alternative—the wide use of strikes and lockouts instead of grievance arbitration—would involve prohibitively high direct costs in lost wages and production. In fact, such economic strife might well result in a backlash leading to imposition of some form of compulsory, government-controlled arbitration.

Thus it is imperative that labor and management face up to the deep-rooted worker dissatisfactions currently casting long shadows over many existing grievance and arbitration systems. The main actors in these systems—unions and management—should take steps to assure efficient and satisfactory handling of employee complaints. The American grievance-arbitration procedure is an inseparable part of the uniquely American system of private collective bargaining. It has served well but it has developed some illness and needs surgery.<sup>1</sup>

It is difficult to generalize concerning the steps in a normal grievance procedure prior to arbitration. Bargaining institutions and traditions differ so widely that only in-depth study of each situation could identify the weaknesses and point the way to needed changes. However, in the final step of grievance handling—the resort to arbitration—we do find some general traits. While these traits may not be univer-

sal, certain of them are sufficiently common to warrant generalized comment.

## Where the problems are

Most grievance arbitration has acquired characteristics which contradict the objectives and needs of the parties and thereby threaten its future:

*Arbitration takes too long.* A worker may understand delay in handling complex problems or even disputes having broad ramifications. But there is no way to explain away months and even years to resolve a complaint about a day's suspension, a reprimand on his record, a missed turn at overtime, or failure to award a grievant a promotion during an incumbent's absence. Delays have developed because the arbitrator, company representatives, and union representatives are usually busy people with great pressures on their time. Delays are also caused by requirements for pre- or post-hearing briefs and by the use of transcripts. These delays tend to aggravate each other. The further you get from the event causing the grievance, the more difficult it becomes to reconstruct the story. And the busier everyone concerned is, the more difficult it becomes for the arbitrator to get the facts and subsequently to review and reconstruct the hearing and record. The entire process becomes more prolonged.

Furthermore, the parties are often more elaborate in their presentation of evidence and argument than necessary, which in turn requires the arbitrator to spend more time reviewing the case. Such superfluous elaboration only increases the delay.

*Arbitration is too expensive.* It is costly for many reasons. Complex procedures and long delays result in extravagant amounts of time devoted to cases by the arbitrator who must be paid for this time. This is

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an additional expense to the parties, who must pay not only the arbitrator but also their own participants. Unnecessary use of transcripts raises costs, directly in terms of the record itself (a very substantial item), and indirectly by increasing the time the arbitrator spends on the case. It is not uncommon for a dispute over a day's suspension or a claim of denied overtime to cost the parties thousands of dollars, including several hundreds for the arbitrator's fee. It is also not uncommon, even in routine cases, to bring an arbitrator half way across the country, thus adding travel time and expenses to already substantial fees.

*The arbitration process is often frustrating and alien to the complaining worker and the supervisors immediately involved. Hearings tend to be unnecessarily technical and remote from the problem at hand. Procedures tend to be too rigid and do not promote a wholesome atmosphere between workers and supervisors. To top this off, the arbitrator's decision arrives, all too often written for posterity or in terms comfortable to lawyers and technicians but far removed from the needs of the clients. Many arbitration cases involve questions of fact arising in reasonably sharpened disputes over contract language or plant practice. The parties need a direct reply to the question with an explanation understandable to workers and supervisors. Unions and management have the responsibility of seeing that simple, direct answers are obtained from the arbitrator. Obviously, there are complex matters that go to arbitration and these are necessarily treated by all parties in a manner consistent with their importance as precedents in contract interpretation. The difficulty of fully exploring many facets and difficult background questions in these complex cases is fully realized. These cases neither lend themselves to simplistic treatment nor are they a major cause for trouble and disenchantment. But these cases are the exceptions and should not determine procedures and practices for handling most other cases.*

These are but a few of the kinds of problems faced by the basic steel industry<sup>2</sup> and the United Steelworkers of America when they decided late in 1970 that they had best take a long look at their grievance and arbitration problems. Both groups had already received many expressions of dissatisfaction from the people in the plants and had an opportunity to study an impressive speech by Ralph Seward, one of the nation's most prestigious arbitrators. In an

address to the Annual Meeting of the National Academy of Arbitrators in Montreal on April 8, 1970, Mr. Seward challenged the labor-management community to look at what has happened to private arbitration. Among other things, he questioned the use of a single procedure for all disputes, big and little, whether requiring sophisticated contract interpretation or merely finding facts, precedent-making or precedent-following.<sup>3</sup>

Since Mr. Seward had spent more than 25 years in the steel industry as the arbitrator for several major companies (including U.S. Steel and the Bethlehem Steel Corporation), the parties evinced considerable interest in his remarks, coming as they did when there were backlogs of unsettled grievances, many percolating complaints, and widespread frustration.

Preceding the 1971 steel contract negotiations, a joint task force of the industry and the union spent several months conducting a comprehensive study of grievance and arbitration statistics, experience, and attitudes of local representatives of both sides, including higher echelon personnel and the arbitrators of the major basic steel companies.<sup>4</sup>

### **New arbitration procedure**

As a result of these studies and of lengthy discussions, a report containing joint recommendations was issued. This report resulted in most 1971 company-by-company negotiations making important changes in the grievance procedure. It also resulted in inclusion as an appendix to the August 1, 1971, steel industry settlement, of a 2-year experimental expedited arbitration procedure to be implemented on a regional intercompany basis.

To staff the arbitration panels which would operate in each region under the expedited procedures, a task force composed of representatives of the companies and the international union recruited the panel members by obtaining nominees in each area from deans of area law schools and from other knowledgeable sources. This task force chose all panel members in each locality and conducted orientation sessions with each panel. Most, but not all, panel members are relatively young lawyers in local practice or on local university faculties who satisfied the task force that they had adequate interest in arbitration and an understanding of the parties' needs. The parties completed the job of setting up the panels in each major steel area—12 in all. The panels involve some 200 mostly inexperienced arbitrators, including

a significant number of blacks and women.<sup>5</sup>

The new procedure provides that after failing to settle a grievance, the local union and local management may refer an appropriate grievance to the expedited system. However, union district staff representatives or corporate headquarters representatives may veto the local decision to refer a case to the expedited procedure, thereby requiring handling through the grievance procedure and regular arbitration.<sup>6</sup>

Each arbitration panel has an administrative officer<sup>7</sup> who receives the referral and calls on panel members in alphabetical rotation. The date and place of the hearing are set by the local parties and the next arbitrator on the panel available for that date is assigned. The hearing date must be within 10 days of the appeal and the decision must be made within 48 hours of the hearing. A fee is paid only for the hearing day. Neither party can pick or choose arbitrators from the panel. Decisions are final and binding but do not become precedents and cannot be cited in any other proceeding.

The expedited arbitration agreement provides that the arbitrator must conduct a fair and informal hearing, is not bound by rules of evidence, and is charged with assuring that all necessary facts and considerations are brought to his attention by the parties. There are no briefs or transcripts—only grievance minutes are submitted in writing. In almost all instances, cases are presented by local plant and union personnel, not by the usual “pros” (lawyers and labor relations specialists) who handle regular arbitration. For steel, this is a unique departure.<sup>8</sup>

The regular arbitration system in each company remains intact but hopefully will be relieved of simpler, more routine matters and thereby can better deal with the substantial number of complex and precedent-making cases that continue to arise. Each major company has permanent arbitration arrangements for this purpose. Several of these permanent setups include long-standing, costly apprentice arrangements—a means of training new arbitrators—which have done much in the last 10 or 12 years to develop persons who today rank among the top younger arbitrators in the country.<sup>9</sup>

The need for many more qualified arbitrators is such that arbitration apprenticeships cannot begin to fill the need. The expedited procedure in steel will increase the flow of new blood into the field because of the instant exposure the new steel procedure permits. It is a kind of “throw him in the pool” method of teaching swimming, except that the parallel is

inexact in that each panel member comes to arbitration with significant credentials based on background, general competence, and interest.

### Experience thus far

After only a few months of operation—seven of the panels were set up after June 1, 1972—the parties are beginning to use the expedited procedure. About 100 cases have been heard and decided. More than one case can be heard a day. The arbitrator's fee is usually \$25 to \$75 a case, for each party. Fees and other costs to the parties are significantly lower than for the usual arbitration.

The parties seem reasonably pleased with the overall operation and results of the program. Another 4 to 6 months will be needed before a significant evaluation will be possible. Those observing the initial efforts, however, are quite satisfied that it is providing what the parties sought—prompt hearings and decisions, low-cost arbitration, and meaningful local participation and responsibility. The parties asked for prompt, concise, and clear-cut written awards which they definitely are receiving. The parties asked for fair hearings and seem to be getting them. They asked for lower costs and this too is being achieved.

This experiment poses some interesting questions for the rest of the labor-management community, especially that portion of it which depends on arbitration for final resolution of grievances. In fact, the basic steel expedited arbitration procedure raises challenging questions within the Steelworkers union because the majority of its members do not work in the basic steel companies covered by the new procedure. Steelworkers in smaller steel companies, fabricators, aluminum workers, nonferrous workers, chemical workers, can manufacturers, and many tens of thousands of others know about the basic steel procedure. These Steelworkers want and need a more efficient arbitration system just as the basic steel membership does.

Extensive discussions of what to do about arbitration have been taking place for a long time in labor circles, in management, in arbitration groups, and in the Government. While every idea and suggestion is helpful, it is labor and management that must provide the ultimate answers and leadership, money, and full participation in these institutions.

Admittedly, the highly developed steel industry arbitration systems, particularly the permanent arbitra-



tion systems, are the exception rather than the rule. In the more typical arbitration situation, solutions are more difficult; however, whatever solutions evolve, two prerequisites must be kept in mind: (1) New people must be recruited as arbitrators in large numbers and with emphasis on talent. There is no place for mediocrity. Arbitration is a field requiring skill and dedication. (2) The parties must be prepared to use the new recruits. This will be possible only if a new bold program is given high priority and if new recruits are supervised or somehow advised by widely accepted, prestigious arbitrators. Significant sums of money will have to be made available by labor and management to provide efficient administration for any new program. Widely accepted arbitrators are needed to supervise new recruits if local companies and unions are expected to submit cases to such experimental procedures.

These two prerequisites call for top-level decisions and subsidy by labor and management. In no other way can local acceptance be assured or adequate funds be made available. This kind of top-level support has not been readily forthcoming. In a field as complex and varied as arbitration, it is easy to over-

look the critical nature of the situation even though the shortcomings of arbitration significantly affects the outlook and morale of workers as well as internal union stability.

With the variety of problems companies and unions face daily, it is understandable that action to alleviate pressures that have created the arbitration crisis may be postponed. But reflection should reveal that a worker, unable to get prompt settlement of his complaint, is going to believe that fairness is not for him. He will resent it and he will lose faith in the grievance arbitration procedure. Such disappointments circulating among fellow employees can and do result ultimately in widespread and deep-rooted distrust, a sure forerunner of trouble and chaos.

Labor and management must not assume that solutions to the shortcomings of arbitration will be provided by arbitrators, government, or academic experts. The parties create arbitration and together dictate the terms, the rules, the personnel, and even the expectations. It is time that those in charge take charge and make the institution of arbitration responsive to their needs and their desires. No one else will or can do it for them. □

#### FOOTNOTES

<sup>1</sup> The United Steelworkers of America, for instance, use arbitration quite extensively and successfully. For example, the 1970 edition of the *Steelworkers Handbook on Arbitration Decisions*, prepared by Pike & Fischer, Inc., contains a digest of literally thousands of USWA arbitration awards.

<sup>2</sup> The Basic Steel Industry Coordinating Committee is composed of United States Steel Corp., Bethlehem Steel Corp., Republic Steel Corp., Jones & Laughlin Steel Corp., National Steel Corp., Inland Steel Co., Youngstown Sheet & Tube Co., Wheeling-Pittsburgh Steel Corp., Armco Steel Corp., Allegheny Ludlum Steel Corp.

<sup>3</sup> "Grievance Arbitration—The Old Frontier," by Ralph T. Seward, *Arbitration and the Expanding Role of Neutrals*, Proceedings of the 23rd Annual Meeting, National Academy of Arbitrators (Bureau of National Affairs, 1970), pp. 153-164.

<sup>4</sup> The joint task force on grievance and arbitration for steel consisted of: Union representatives: Ben Fischer, Director, Contract Administration Department, USWA, Co-Chairman; Dee W. Gilliam, Assistant Director, Contract Administration Department; Sam Camens, Representative, Contract Administration Department; Robert C. Roddy, Representative, Contract Administration Department; Bruce Thrasher, International Representative, USWA. Company representatives: C.T. Spivey, Vice President, Labor Relations, U.S. Steel Corp.; Co-Chairman; G.A. Moore, Jr., Manager, Labor Relations, Bethlehem Steel Corp.; W.C. Stoner, Director, Labor Relations, Republic Steel Corp.; J.E. Allison, Director, Personnel Relations, Jones & Laughlin Steel Corp.; W. A. Dillon, Director, Industrial Relations,

Inland Steel.

<sup>5</sup> These 12 panels serve the cities and surrounding areas of Buffalo, N.Y.; Chicago, Ill.; Cleveland, Ohio; Philadelphia, Pa.; Pittsburg, Pa.; Birmingham, Ala.; Seattle, Wash.; San Francisco, Calif.; Los Angeles, Calif.; Detroit, Mich.; Duluth, Minn.; and Salt Lake City, Utah.

<sup>6</sup> Not only is arbitration expedited but the often time-consuming final step of the grievance procedure between the district staff representative of union and the corporate headquarters is circumvented by use of the expedited arbitration procedure.

<sup>7</sup> For the Philadelphia, Pa., Cleveland, Ohio, and Chicago, Ill., panels which cover these heavily concentrated steel centers, the regional American Arbitration Association office is the designated administrative officer. Other panels are administered by the parties' own personnel.

<sup>8</sup> Union representation during regular arbitration usually involves a District Staff Representative or occasionally an attorney. The Company Representative most often is an attorney or a central headquarters Industrial Relations Representative. Some major companies are always represented by an attorney in regular arbitration.

<sup>9</sup> The arbitration systems of U.S. Steel Corp., Bethlehem Steel Corp., and Republic Steel Corp. have trained many arbitrators through these apprenticeship programs. The programs have been directed by Sylvester Garrett, Chairman of the Board of Arbitration, U.S. Steel; Ralph T. Seward, Chairman of the Office of the Umpire, Bethlehem Steel Corp., and Bert Luskin, Umpire, Republic Steel Corp.

# Using two new arbitration techniques

Mediation-arbitration  
can promote settlement  
of contract disputes;  
factfinding can speed  
handling of grievances

SAM KAGEL AND JOHN KAGEL

THE PUSH TO FIND some alternative to strikes, particularly in major labor-management disputes, still continues. Even so staunch a defender of the right to strike as AFL-CIO President George Meany said in a press interview: "Strikes are expensive. We'd like to see some mechanism that would eliminate strikes because we find that strikes are becoming more and more expensive not only to industry, but to those we represent."<sup>1</sup>

What must be and has been sought is an incentive to encourage the parties to negotiate their own settlement in tough situations but with voluntarily agreed-to provisions for terminal settlement if they cannot reach agreement. The use of orthodox mediation is not always successful in such an effort.

Another difficulty for which labor and management seek solutions exists in the handling of grievance procedures, the most important failure of which is the slowness with which grievances are resolved. What is occurring is an increased awareness among labor and management of the corrosive effect of protracted consideration of the individual employee's problem. It is not so much a question of whether or not the grievance has merit, but whether the unions are learning that employees with unresolved grievances are dissatisfied members and whether management is becoming aware that such dissatisfaction represents a hidden payroll cost in terms of not achieving full productivity from that employee.

There are two evolving techniques in collective bargaining that have gained increasing acceptance as possible remedies for stalemated negotiations and protracted grievance procedures. These are mediation-arbitration, or "med-arb," as a method for settling the substantive terms of a collective bargaining agreement, and a contract provision for a factfinding

step early in the grievance procedure designed to make that procedure more effective.

## Mediation-arbitration

The primary objective of labor and management in collective bargaining is to arrive at a substantive agreement on wages, hours, and other conditions of employment. To attain this objective, labor and management have developed and used a number of techniques which taken together add up to the collective bargaining process. Our purpose is briefly to note all of these techniques, paying particular attention to a new one which we have called mediation-arbitration.

The most frequently used technique is that of negotiation—direct discussions between the parties without outsiders participating—the use of advocacy and persuasion by each of the parties seeking to convince the other party as to the correctness and fairness of its position.

The mediation technique marks the entrance into negotiations of an outsider who seeks to aid the parties in reaching an agreement. The mediator has no authority to make decisions on disputed matters and thus cannot impose an agreement on the parties. He can only seek to guide the parties into an area where it may seem likely that the parties can then reach an agreement. But, he has no "muscle" by way of any grant of authority to make a final and binding decision.

In arbitration, on the other hand, a third party also enters the collective bargaining process. But, the arbitrator's position is significantly different from that of the mediator as he can impose a final and binding decision on the issues in dispute which is enforceable at law. His authority is a grant from the parties who agree in advance to accept his decision as final and binding. This technique has been seldom used, but its use is increasing, in arriving at the substantive terms of the agreement.

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Finally, there is the use of direct economic power—the strike and lockout. Contrary to statements that are often made, collective bargaining does not end when a strike or lockout begins. The purpose of either of these techniques is to bring about an agreement by using direct economic power to force the other party to accept certain terms of settlement.

Thus, negotiation, mediation, arbitration, and the use of direct economic power are the orthodox, accepted techniques which are used to achieve the objective of collective bargaining, namely, the settlement of the terms of the collective bargaining agreement. They are used individually or in combination, and one party's success, or lack of it, is determined by how well these techniques are used in the particular setting then existing, such as economic conditions, relative economic strength of the parties, the interest of government or the public, and so forth.

Over the years there has been a persistent clamor for compulsory arbitration in major labor disputes as an alternative to strikes or lockouts. This would have to be accomplished by legislation. Most of organized labor and a substantial portion of management in the private sector is not willing to accept compulsory arbitration. Public employers, particularly, have voiced objection to compulsory arbitration in the public sector.

A combination of mediation and arbitration, placing primary emphasis on negotiations, may be the type of approach to avoid the externally imposed settlement (compulsory arbitration) and heavy economic losses and disruption (strikes and lockouts in major industries). It must be agreed to voluntarily by the parties. Recourse to med-arb requires giving up the right to strike or to lockout.

In this process the mediator-arbiter has a dual role. When acting as a mediator he has in reserve the authority of an arbitrator. This gives the med-arbiter "muscle" which is not available to him if he acts solely as a mediator. It places the med-arbiter in a position where he does far more than transmit messages between labor and management. He, in effect, becomes a party to the negotiations in the sense that, while negotiating, each of the contending parties must necessarily seek to convince him that their position is reasonable and acceptable. In so doing, the parties no longer maintain the arm's length attitude normally assumed in orthodox mediation nor the semilegal stance assumed in an arbitration.

As one participant in a med-arb said, the process keeps both parties "honest." That is, each must

really seek a reasonable solution of the issues on the table. Each must disclose all of its respective positions and its reasoning and "evidence" to support them. Each party must face up to the merits of a particular issue under discussion because if either or both do not, the med-arbiter will make the decision. The incentive is for both parties to settle through negotiations rather than have the med-arbiter make the decision. The presence of the med-arbiter provides this incentive.

In short, the posture of the parties in the med-arb process changes from that normally assumed in either orthodox mediation or arbitration. The process encourages direct negotiation between the parties with supervision by the med-arbiter who, if he performs his job properly, will seek to emphasize the need for the parties to arrive at their own agreement. But he has available, if necessary, the authority to make a final decision on any points remaining in dispute.

### Med-arb experiences

Will parties accept med-arb knowing that, in effect, they are agreeing to the possibility that a third party—the med-arbiter—may decide key issues in dispute? Our experience has included the use of med-arb in situations prior to strikes and in cases after strikes have occurred. Here are some instances:

In 1970, the agreements of the California Nurses' Association expired with three groups of hospitals. Four thousand nurses and 33 hospitals were involved in this case. The parties agreed to med-arb giving up the right to strike or lockout. Of 89 issues to be settled, 88 were agreed to through negotiations in the presence of the med-arbiter, and the latter had to decide only one issue, a procedural one, in his capacity as arbitrator.

When the 1971–72 Pacific Coast longshore strike ended, 13 issues were left over for med-arb. In two all-day sessions all 13 were settled by negotiations. The issues were important and complicated. There is no doubt that the presence of the med-arbiter was an incentive to the parties to assume reasonable positions and settle the issues directly.

In a med-arb case involving some 40 disputed issues between the restaurants and bartenders in Oakland, Calif., all issues were settled in 1 long day's session without the need of an arbitrator's decision. And after a wildcat strike at a major San Francisco public hospital, over 80 unresolved issues were

worked out through med-arb.

The med-arb technique was used in a case involving a major commercial printing company and the Pressman's Union. This resulted in 8 out of 9 issues being settled directly between the parties. Some of these issues involved difficult problems of manning on presses.

Recently a 6-month strike occurred in the San Francisco Bay Area soft drink industry involving six Teamster local unions. When the strikers returned to work, the parties agreed to med-arb. Some 17 common issues were culled out of the over 140 proposals made by the parties. Fifteen of those were settled through med-arb. They included provisions dealing with grievance procedures, sick leave, health and welfare trust, vacations, holidays, mergers, and so on. Many local issues were then considered and only nine remain for decision by arbitration.

The important fact in med-arb is that it is voluntarily accepted, even though in this two-level technique the parties agree to be bound by the med-arbiter's decision if a direct settlement is not made. This technique avoids legislative compulsion, generally abhorred by labor-management negotiators. The parties are not fooled by the fact that they know that the med-arbiter has the authority to make the decision if the parties fail to work out their own arrangement. It is precisely that knowledge, however, that is the incentive for the parties to reach their own agreement. It is that knowledge which is the incentive to reasonableness.

### Public sector solution?

In the public sector med-arb would appear particularly appropriate. If strikes are to be outlawed, an alternative method of settling labor-management disputes must be provided. Med-arb would be a more viable technique than that of formal compulsory arbitration. The tradition of strikes in the public sector is not as entrenched as it is in the private sector. If an acceptable alternative to strikes in the public sector is offered, it is likely to gain approval.

It is not suggested that med-arb is the complete answer to those who insist that there be an absolute end to all strikes or lockouts. Such a condition will probably never be achieved regardless of what legislation might be passed for that purpose. Workers cannot be forced to work, and employers cannot be forced to offer employment. Techniques palatable to

both parties which encourage direct negotiations with some form of terminal settlement must be developed. Med-arb is one such technique.

### The factfinding step

Too often facts essential to settle a grievance are not obtained until there is an arbitration hearing. Meanwhile, in the steps preceding the arbitration, the union and employer too often assume a litigious stance, with each adopting the view, "my man, right or wrong." The result are deadlocked grievances which should have been settled or withdrawn.

The factfinding step is designed to repair some of these defects. This step in the grievance procedure must be tailored to the requirements of the parties.

If the employee fails to settle the grievance directly with his supervisor and then files a written grievance, this act triggers the factfinding step. The following outlines the factfinding process as contained in an agreement made in the San Francisco Bay Area soft drink industry between the employers and six locals of the Teamster Union:

The factfinders shall be organized and function as follows:

(a) One factfinder shall be designated by the employer and one factfinder shall be designated by the union.

(b) The object of the factfinders is to thoroughly investigate the grievance so that their report could be the basic source of stipulated facts concerning the grievance. Thus the factfinders shall mutually interview witnesses, including the grievant and the employer representative involved in the grievance, collect relevant written records, and carry out such other investigation as may be required by the specific grievance.

In the event an employee is appointed by the union as a factfinder, the employee shall perform his factfinding function with a minimum interruption of work. Except in discharge and suspension cases, the factfinding shall be performed on non-working time unless it is impracticable to do so.

(c) The factfinders shall put in writing all the facts upon which they agree and these will be considered stipulations. If the factfinders cannot agree on certain facts, each factfinder's view of such disputed facts shall also be placed in the written report.

(d) Upon the conclusion of the factfinders' investigation and written stipulations they shall thereafter within 1 working day seek to settle the grievance and shall have the authority to do so.

(e) If the factfinders are unable to settle the grievance, they shall give to the manager of the plant and a designated person in the union a copy of their written report. The manager (or his representative)



and the union representative shall then within 2 working days thereafter meet for the purpose of seeking to resolve the grievance.

If the manager and the union representative fail to settle the grievance, the parties will then refer the grievance to the next steps provided in the collective bargaining agreement, including arbitration.

One value in the factfinding step is that it collects immediately the relevant facts. When the parties then seek to negotiate a settlement of the grievance, they address themselves to the stipulated facts, not to what "my man" said or did not say. The posture of the negotiators changes from that of advocates to that of jurors.

Of equal importance, a stipulation of the facts lessens the political aspects of the grievance by providing both union and management officials objective reasons for advising their respective constituents to either drop or settle disputes by pinpointing the operative facts involved.

Factfinding as a technique for resolving labor-management grievances grew out of a backlog of over 1,000 pending grievances involving Aerojet General Corp., a major aerospace company, and its employees. The application of joint factfinding to these grievances sharply reduced the number eventually submitted to arbitration.

The factfinding procedure has been adopted by the Space Division of the North American Rockwell Co. and the United Automobile Workers. Its use has reduced drastically the time within which grievances are settled. As a result of its use, only one grievance went to arbitration in 1971. By contrast, previously many cases went to arbitration and most of them were over 2 years old by the time they reached arbitration. Other industries that have adopted the procedure include companies in the pulp and paper

industry and various public agencies. So far, its adoption has led to an improvement in employee attitudes and grievance processing.

An additional improvement has resulted from relabeling a grievance, at least at the first step, a "mutual problem." It does not become a "grievance" until the union wishes to pursue the matter beyond factfinding. The net effect of this simple transformation has been to lessen tensions in the employee-supervisor one-on-one informal first step, and to make labor and management view employee complaints as a *mutual* problem to be resolved.

Attitudes play a significant role in the early resolution of grievances. Because of the change in name, a grievance does not automatically raise a red flag, causing instant argument regardless of its merits. While this is especially true in public employment where supervisory decisions are just beginning to be questioned, it is of equal effect in the private sector and undoubtedly has contributed to North American Rockwell Company's and the United Automobile Workers' success with the new procedures.

The time, expense, and emotions involved in the grievance procedure or their absence is within the control of the parties. Blaming arbitrators for these problems is misplaced criticism. With a proper appreciation of the role of the grievance procedure, the effect of unresolved grievances on individual employees, and with a cessation of the practice of copying grievance procedures rather than drafting them to suit local conditions, the adoption of the techniques outlined can meaningfully reduce the parties' own problems in this area of collective bargaining. □

—FOOTNOTE—

<sup>1</sup> AFL-CIO press release.

The FMCS and other agencies  
can suggest improvements  
in arbitration but labor and  
management have prime  
responsibility for making changes

JAMES F. POWER

# Improving arbitration: roles of parties and agencies

RISING COSTS, increasing delays, and spreading worker dissatisfaction have generated considerable criticism of labor arbitration in the United States. Until recently, arbitration made its contribution to the American system of industrial relations inconspicuously, although its growth since World War II has been phenomenal.<sup>1</sup> (See table 1.) The process was not really taken for granted but was considered essentially so simple and responsive to the parties' requirements that people were slow to heed the signs of growing difficulties.

Today some claim that arbitration cannot meet the growing demands upon it. Critics suggest labor courts, strikes, and other alternatives as means of regaining advantages associated with arbitration in earlier years. When critics speak of rising costs, delays, and lack of arbitrators, they reflect proper concern about these problems but sometimes suggest solutions that have few of arbitration's advantages and possess their own undesirable characteristics.

Nonetheless, these critics have drawn attention to the problems of arbitration at a time when remedies are possible. Disillusionment with the process has not become so widespread that attempted solutions would be futile.

## What the parties can do

While it may appear a paradox, the problems of contemporary labor arbitration cannot be solved by anyone but labor and management. While the parties deal with individual cases, and thereby do not have any effective control over the entire process at any point, lasting remedies require the concurrence and active participation of the parties. Various agencies

which provide arbitration services may suggest certain innovations, but without the cumulative cooperation of the parties, those remedial efforts will be thwarted. One commentator has reflected that the current situation has been created by the parties because they want it that way.

Consequently, if reform is really desired, the parties must be willing to break with some traditional practices and undertake new approaches. This may not be as perilous as might first appear. Many reforms now being suggested tend to preserve the essentially advantageous aspects of labor arbitration while dealing with troublesome peripheral practices.

While the parties have prime responsibility for reform of the arbitration process, the agencies which provide arbitration services and the arbitrators themselves have a part to play. The appointing agencies such as FMCS and AAA are in good positions to see overall trends in the field and, through their administrative processes, to make available new services and suggest new approaches strategically designed to meet the needs of the process. Because no individual or organization has the authority to apply reform procedures, a price willingly paid to keep the process in the hands of those who use it, the appointing agencies can play a role in suggesting remedies and developing alternative procedures.

## Problems of the process

In 1971, a former General Counsel of the Federal Mediation and Conciliation Service outlined some arbitral problems of cost, delay, and lack of sufficient acceptable arbitrators.<sup>2</sup> These are the results of multiple causes and do not lend themselves to simple solutions. Though serious, they are not problems that go to the heart of arbitration itself. Answers to such questions as "Who is to arbitrate?," "How much will it cost?," and "How long will it take?" will not unduly affect the process or the confidence of the par-

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Table 1. Changes in the arbitration activity of the Federal Mediation and Conciliation Service, fiscal years 1960-72

Activity	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Request for panels or direct appointments.....	2,835	3,174	3,548	4,279	4,791	5,048	5,654	6,955	7,809	8,479	10,055	12,327	13,005
Panels submitted.....	2,993	3,347	3,808	4,497	5,172	5,453	6,255	7,623	8,630	9,679	11,124	13,235	13,842
Appointments.....	2,039	2,231	2,555	2,757	3,182	3,333	3,430	3,953	4,175	4,493	5,318	5,759	6,263
Awards.....	1,320	1,553	1,733	1,618	1,952	1,887	2,441	1,967	2,309	2,640	2,849	2,840	3,438

ties in it. Rather, solutions will unfetter the process and restore its capacity to do the job it was designed for.

### Supply of arbitrators

Despite occasional claims that there is a shortage of arbitrators, there are over 1,100 qualified arbitrators presently on the roster of the Federal Mediation and Conciliation Service. Many of these arbitrators have also been named to the panel of the American Arbitration Association and are listed with other appointing agencies. Moreover, there are several hundred arbitrators who are not listed with one or the other of these agencies but are assigned cases by the parties directly or through the permanent umpireship systems. The arbitrators on the FMCS roster are located all over the country but are more heavily concentrated in the traditional industrial areas. (See

table 2.) Increasing numbers of requests for arbitrators from areas of the country experiencing new industrial growth or the development of union representation have to be met by the nomination of arbitrators who reside some distance away because of a lack of local arbitrators.

The FMCS receives inquiries about new appointments to its roster of arbitrators at the rate of approximately 25 a month. During fiscal year 1972, 134 new arbitrators were appointed to the roster while 45 were advised after full evaluation that they lacked adequate qualifications or acceptability, or both. These determinations are based on an evaluation of an applicant's credentials and field checks of his acceptability to the labor-management community in a given area. The remainder of the inquiries received in 1971 was made up of applications still being evaluated or those that had been withdrawn.

In general, the FMCS has never considered its

Table 2. Geographical distribution of arbitrators on the Federal Mediation and Conciliation Service Roster, 1972

FMCS region	Number of arbitrators	FMCS region	Number of arbitrators	FMCS region	Number of arbitrators	FMCS region	Number of arbitrators
<b>Region 1</b>				<b>Region 5</b>			
New York, N.Y.....	67	Boston, Mass.....	29	Chicago, Ill.....	54	Evansville, Ind.....	1
Hempstead, N.Y.....	7	Worcester, Mass.....	3	Peoria, Ill.....	6	Milwaukee, Wis.....	31
Albany, N.Y.....	7	Hartford, Conn.....	10	Rockford, Ill.....	1	Green Bay, Wis.....	2
Syracuse, N.Y.....	23	Providence, R.I.....	1	South Bend, Ind.....	3	Minneapolis, Minn.....	22
Buffalo, N.Y.....	13	Concord, N.H.....	1	Indianapolis, Ind.....	14		
Newark, N.Y.....	19	Portland, Maine.....	3				
<b>Region 2</b>				<b>Region 6</b>			
Philadelphia, Pa.....	36	Allentown, Pa.....	4	St. Louis, Mo.....	40	Oklahoma City, Okla.....	18
Pittsburgh, Pa.....	38	Trenton, N.J.....	4	Cedar Rapids, Iowa.....	5	Springfield, Mo.....	3
Erie, Pa.....	2	Baltimore, Md.....	9	Des Moines, Iowa.....	7	Little Rock, Ark.....	11
Parkersburg, W. Va.....	6	Washington, D.C.....	49	Omaha, Neb.....	11	Dallas, Texas.....	19
Harrisburg, Pa.....	7	Richmond, Va.....	5	Kansas City, Mo.....	3	Houston, Texas.....	19
<b>Region 3</b>				<b>Region 7</b>			
Atlanta, Ga.....	26	Chattanooga, Tenn.....	1	San Francisco, Calif.....	55	Great Falls, Mont.....	4
Birmingham, Ala.....	17	Knoxville, Tenn.....	10	Los Angeles, Calif.....	68	Salt Lake City, Utah.....	4
Mobile, Ala.....	1	Charlotte, N.C.....	14	San Diego, Calif.....	3	Denver, Colo.....	16
New Orleans, La.....	13	Jacksonville, Fla.....	6	Fresno, Calif.....	2	Phoenix, Ariz.....	6
Memphis, Tenn.....	5	Tampa, Fla.....	8	Seattle, Wash.....	18	Albuquerque, N.M.....	2
Nashville, Tenn.....	4	Miami, Fla.....	18	Portland, Ore.....	11	Honolulu, Hawaii.....	4
<b>Region 4</b>				<b>Region 8</b>			
Cleveland, Ohio.....	41	Louisville, Ky.....	15	Spokane, Wash.....	3		
Akron, Ohio.....	8	Detroit, Mich.....	33				
Toledo, Ohio.....	6	Saginaw, Mich.....	1				
Columbus, Ohio.....	20	Grand Rapids, Mich.....	6				
Dayton, Ohio.....	2	Kalamazoo, Mich.....	1				
Cincinnati, Ohio.....	14						

roster to be a means of entry into the field of arbitration. It merely requires the successful applicant to have the level of professional experience and the reputation in a local labor relations community which presages his acceptance by the parties as a neutral.

In spite of the specific exclusions of those who are currently full-time advocates or Federal employees, the ranks of the FMCS roster seem quite full.

To obtain a better picture of the arbitrators appointed thus far from among the 1971 applicants, an analysis of their backgrounds was made. By age, 28 percent were between 30 and 40, 28 percent between 40 and 50, 23 percent between 50 and 60 and the remainder were over 60. By profession, the successful applicants categorized themselves as consultants (14.9 percent), full-time arbitrators (23.8 percent), professors (23.8 percent) and attorneys (37.5 percent). By education, 23 percent had master's degrees and over 10 percent had doctorates. These figures do not include professional degrees. Over 85 percent reported extensive experience in industrial relations while almost 27 percent reported public sector experience.

In addition to these qualifications, the successful applicant proved to be known to the parties and was recommended by them to the mediators conducting the field checks. The latter were conducted in the industrial relations community and were not limited to the references provided by the applicant.

The successful applicants all met established qualifications but the parties, once faced with the need to choose an arbitrator from an FMCS panel, tend to choose the more experienced arbitrator. While it is difficult to determine the criteria for selection of arbitrators in general, the parties appear reluctant to use newer arbitrators even though their availability assures prompt disposition of cases and in spite of the fact that their per diem fees are lower in most cases.<sup>4</sup>

In spite of the fact that FMCS has been making special efforts to assist newer arbitrators, the overwhelming majority of arbitrators selected from the almost 14,000 panels supplied last year were among the more experienced one-third.

*Current biographies.* To stimulate the use of newer arbitrators, the Federal Mediation and Conciliation Service had one feature of the new ARBIT computer system (described in the box on the next page) designed to automatically provide labor and management with up-to-date biographical information on ar-

bitrators on the FMCS roster. Because the arbitration awards supplied by the arbitrators will be fed into the computer, they will immediately be reflected in the experience shown for the arbitrators. Further, special efforts are being made to insure that newer arbitrators do not "slip through the cracks" and become lost in an administrative shuffle. The computerized ARBIT system has an "active memory" which treats each arbitrator in its files equitably. Panels selected by FMCS personnel usually include some of the newly appointed arbitrators. In the normal course of events, newer arbitrators may be chosen by parties who decide to use them after seeing their names repeatedly or who seek an arbitrator to hear a case expeditiously or less expensively.

In terms of numbers, if not geographical distribution, there are qualified arbitrators available to the parties. While many of those more recently appointed to the FMCS roster may lack the necessary level of familiarity at the moment, it is possible for the parties to help them gain that illusive quality by choosing them for use in selected cases.

### Training programs

Over the years, various schemes for the development of arbitration talent have been proposed or tried. Thomas J. McDermott, Chairman of the Committee for the Development of New Arbitrators of the National Academy of Arbitrators reported to the Academy's Board of Governors in March 1970, on the several programs he had studied and noted that most of the efforts had neither succeeded nor failed. One commentator suggested that the principal fruit of the experiments was not so much the generation of new acceptable arbitrators but rather an increased awareness among the parties of the problem and their consequent openness to the entry of new people into the field.

Academy officials reviewed several suggested training programs, among them a program of fellowships in conjunction with law schools and graduate schools of industrial relations, a program for assistants to practicing arbitrators, and an intern program associated with an arbitrator-in-residence. All programs (and variations on them) had some advantages and disadvantages. A recurring major problem was the relative youth and inexperience of the likely candidates for such programs which made it difficult subsequently for them to gain acceptability. Other disadvantages included the general reluctance of the



parties toward use of apprentices or interns by practicing arbitrators.

*A cooperative experiment.* Of the several programs which have been conducted under various auspices around the country, the current training program in western New York has been described as "By far the most important and most detailed program for devel-

oping new arbitrators. . . ." <sup>5</sup> While the program is being conducted by its sponsors as an experimental effort to test several approaches and techniques to develop arbitrators, its most important feature is the degree of local labor and management cooperation.

The program resulted from the convergence of interests of several groups. The need for new arbitrators in the western New York area generated discus-

## THE ARBIT SYSTEM

The reorganization of FMCS arbitration services during the last year was initially motivated by the increasing volume of requests and the difficulties attendant upon that growth. However, there were other, equally important, goals:

To improve arbitration selection and administrative procedures to expedite responses to requests from the parties.

To establish improved monitoring of arbitration activities conducted under FMCS regulations.

To create a flexible system which will absorb anticipated increases in arbitration requests, while maintaining the new time standards. Increases are anticipated from growth of activity in both private and public sectors of industrial relations.

To distribute cases equitably among available arbitrators.

To develop the capability of responding to requests specifying more refined arbitrator experience criteria.

To identify national arbitration requirements for the development of new arbitrator resources.

To determine substantive trends in ad hoc arbitration through research for policy and program purposes.

To attain these goals, a complete reorganization of FMCS Arbitration Services was necessary. The development program included the creation of a computerized data-processing system, the revision of administrative and monitoring procedures, and an expansion of the scope of attention given arbitration matters by this agency.

Fundamental to the revision of FMCS Arbitration Services was the creation of a computerized arbitration information system called ARBIT. The name was formed from the first letters of the larger descriptive title, the FMCS Arbitration Information Tracking System.

ARBIT, a time-shared on-line system, is capable of maintaining and producing data necessary for rapid and accurate arbitrator panel selection, with a virtually unlimited capacity of record storage and an ability to select arbitrator information from those records almost instantaneously.

Upon receipt of a request for a panel of arbitrators

from parties about to enter arbitration, FMCS requests the ARBIT system to supply the names of all the arbitrators on the roster who practice in or near the place where the arbitration is to be held, and who meet other specific criteria set by the parties.

Once the panel is selected, the records maintained by the computer will be automatically posted and letters will be produced by high speed printers, notifying the parties of the nominees. The ARBIT system will maintain current information on the status of cases by arbitrator's personal file, by company file, and by union file. Subsequent activity in the case will be monitored, posted, and followed up as it progresses through to the appointment of an arbitrator, the hearing of the case, and the filing of an award to close the case. By the use of automatic time thresholds established for each case, the ARBIT System will monitor the progress of each case and notify the General Counsel where delays at any stage seem imminent.

A special feature incorporated into the system is the automatic production of current biographical sketches which accompany panels sent to the parties. Such current information is important to those selecting arbitrators and the arbitrators themselves since they will insure more accurate evaluation and selection on the one hand and improved presentation of arbitrator skills and experience on the other. This feature is especially important to new arbitrators seeking increased acceptability since their biographical sketch will immediately reflect each increment of experience they gain in completing cases for which they are selected.

In addition to improving the quality and efficiency of FMCS arbitration services, it is expected that the ARBIT system will insure a more equitable distribution of cases among available arbitrators. Through the automatic display of current case nominations, appointments, and awards with each arbitrator's name, the operator will be able to choose arbitrators who are available for prompt hearings, avoiding the continued heavy use of arbitrators already burdened with case back-logs. Similarly, information on arbitrators who are currently unavailable, special requirements of parties, and other notes will be displayed in the system.

sion of a possible training program among local labor and management practitioners. This view was expressed at the local Industrial Relations Research Association for Western New York. The Federal Mediation and Conciliation Service and the American Arbitration Association were seeking a site for an experimental effort to test out a contemplated continuous effort in arbitrator development. The National Academy of Arbitrators lent its professional assistance but hewed to its policy of not recommending arbitrators. Accordingly, the Academy's involvement in the program was stipulated not to constitute endorsement or recommendation of any of the trainees. The final co-sponsoring institution involved in the western New York program was Cornell University, which would provide the academic portion of the training.

The proposed program was presented to a special labor-management committee formed by the IRRA for Western New York. In addition to developing a plan for a joint academic and counterpart experience program, it was suggested that the joint labor-management committee undertake screening and selecting candidates to insure their acceptability upon completion of the program. The committee, composed of 20 practitioners from both labor and management and 7 attorneys, not only accepted the task of recruiting and screening, but established the criteria for selection. These criteria differed in some aspects from those of the participating agencies.<sup>6</sup>

The 20 arbitrator-designates chosen by the committee reflected some of the current thinking on desirable characteristics but all were marked by high qualifications. Fourteen of the group had no previous experience as neutrals but nine were already listed as arbitrators with the appointing agencies. Six were attorneys, nine were on university faculties of law, business administration, economics, and industrial relations. The group included two blacks and one woman. In terms of age, 12 are under 35, two are between 35 and 40, and the rest were between 40 and 50.

In addition to a series of 9 day-long academic sessions conducted on a one-a-month basis during the year, except for the summer months, the arbitrator-designates have been accompanying practicing arbitrators on cases in the area. Once the NAA had enlisted the cooperation of its members active in the western New York area, the local offices of the FMCS (Buffalo) and the AAA (Syracuse) assigned arbitrator-designates to accompany the appointed ar-

bitrator to the hearing after securing the permission of the parties. The designate has the responsibility of preparing an award which was submitted for evaluation by the experienced arbitrator after he had submitted his official award.

The program designers established a minimum of six such awards as a requirement of the program with special emphasis on assigning arbitrator-designates to a variety of cases and a variety of arbitrators. This procedure not only allows the designate to gain experience in hearing different types of issues, but he also has the opportunity of seeing different arbitrators with varying styles of approaches. A subsidiary purpose of the on-the-job program was exposure of the arbitrator-designates to the parties in a given region to enhance their acceptability.

The key concepts in the western New York experiment are (1) the active, total involvement of representatives of labor and management responsible for arbitration activity, especially in the selection of the candidates, (2) the establishment of the need for arbitrators in a given region, (3) the identification of candidates who have extensive experience and are known in the field of labor relations, (4) inclusion of an academic program which stresses both precedural and substantive aspects of arbitration, (5) preparation of awards by the program participants with seasoned arbitrators' evaluations of their analysis, logic, and ability to communicate.

An essential feature of the training program is the considerable control by the local industrial relations community, even to the point of establishing their own selection criteria. The appointing agencies participating in the program reserved the right of appointment to national panels, pending a review of each graduate of the program. Automatic appointments were not contemplated. However, the likelihood is strong that graduates will be accepted on national panels.

Comparable programs which might be conducted elsewhere should have similar labor-management sponsorship of the industrial relations community. A variation on this same principle is evident in those industries which are currently attempting to train arbitrators to be used in the industry. The use of a labor-management committee such as that developed in western New York would provide the smaller industries and unions a similar means of developing an acceptable cadre of arbitrators for regional use.

The role of the IRRA for Western New York in this program cannot be overstressed. The local chap-



ter was the *locus* for the formation and maintenance of the Labor-Management Arbitrator Development Committee. In that sense, the commitment of this committee, representing the major users of arbitration in the area, is ascribable to the IRRA Chapter as well as to the Committee itself.

In summary, the problem of the supply of arbitrators is really a problem of a supply of arbitrators acceptable to the parties. The solution to the problem lies partially in the willingness of the parties to utilize newer arbitrators currently on the rosters of the appointing agencies. In those areas where there is a clear lack of sufficient arbitrators, the key is in the hand of the parties who, if they recognize the need, can establish a training program.

### Problems of cost and delay

Critics of contemporary labor arbitration frequently charge that arbitration has become too lengthy and that costs are becoming prohibitive. An examination of information on the average number of days required to complete arbitration cases (between 1968-72) shows that while the total time between the request for a panel from FMCS and the submission of an award dropped slightly between 1971 and 1972 (from 168.2 days to 166.4 days), the total time from the filing of a grievance to the submission of the award dropped from 251.5 days to 241.5 days. Even though this decline is significant, some maintain that even this improvement is not good enough for a process designed to be expeditious. Table 3 shows that the amounts of time consumed by the parties prior to requesting panels, choosing panels, setting hearing dates, and the period between hearing and award, are substantial. In each of these areas the parties can shrink the time by expediting a grievance, by meeting quickly to select an arbitrator, and by refraining from submitting extensive post-hearing briefs which frequently cause the delays in submission of the award. Moreover, the delay in setting hearing dates might be avoided altogether in certain cases by choosing newer arbitrators who may not have the caseload of the preferred experienced arbitrators.

This should not be taken to pin the responsibility for delays on the parties alone. It is a fact of industrial relations the parties may be using the arbitration procedure as a way of permitting negotiations between the parties to continue. The difference between the number of panels requested and total

Table 3. Changes in average costs and average time charged in arbitration cases, 1968-72

Cost items and time charged	Fiscal year				
	1968	1969	1970	1971	1972
Total charges (dollars).....	513.12	511.06	539.88	566.59	590.12
Rate per day (dollars).....	141.45	145.09	156.83	163.88	172.53
Fee charged (dollars).....	441.87	435.03	457.97	480.88	510.52
Expenses charged (dollars).....	71.25	76.03	81.91	85.71	79.60
Total time charged (days).....	3.07	3.03	2.93	2.96	2.96
Hearing time charged (days).....	1.00	.95	.92	.92	.91
Travel time charged (days).....	.32	.38	.35	.38	.36
Study time charged (days).....	1.75	1.70	1.66	1.65	1.69
Number of cases sampled.....	600	643	722	719	850

arbitration awards rendered demonstrates that the parties frequently settled the dispute by negotiation. The Federal Mediation and Conciliation Service certainly does not wish to influence the parties to complete arbitration cases when in time they would settle the dispute through negotiation.

In addition, in some cases the parties may be protracting the proceedings to provide time for a given grievance situation to mature. Then the matter may eventually go to arbitration, it may go to negotiation, or the case may even be closed without further action. When the parties wish to move a case quickly to arbitration, they can accomplish a great deal by speeding the matter through their own processes and then requesting the appointing agencies to handle their cases on an accelerated basis. The delays in arbitrators submitting awards are caused in a significant portion of cases by representatives of the parties requesting delays to submit post-hearing briefs. Then the arbitrator requires more time to study the case and to prepare his award. Many arbitrators feel that not only is there often no need for post-hearing briefs because of the nature of the case, but that prehearing statements would be more useful. They also would be instrumental in minimizing the time required for the hearing and preparation of the award.

*Role of ARBIT.* The Federal Mediation and Conciliation Service planned its new ARBIT system (computerized Arbitration Information Tracking system) to reduce the time required to fill requests for panels and to track cases through to completion. In addition to other functions, the system is monitoring each of the more than 13,000 cases handled this year, and after certain programmed time limits are reached, the ARBIT system will automatically notify

the parties and FMCS officials that the time allowed for individual steps in the normal processing of a given case have elapsed. Thus, reminders will go to the parties when they have not notified FMCS of their choice of an arbitrator from a panel submitted at their request, and to the arbitrators when awards are not filed timely. While the system permits extensions, its faculty of continuous reminding will assist the parties and arbitrator in moving a case along. Recurring bottlenecks can be identified for possible remedial assistance.

Since the FMCS does not have enforcement authority in any area of industrial relations, it can only assist the parties by monitoring the arbitration system. The parties, on the other side, can accomplish much more by expediting their own cases, even including fundamental simplification of the arbitration process.

**Costs.** Table 4 bears on the recurring questions about the mounting costs of arbitration. Based on a sample of 850 cases conducted under the auspices of the Federal Mediation and Conciliation Service, it was found that the average fees and expenses charged by arbitrators increased from \$566.55 in fiscal year 1971 to \$590.12 in fiscal 1972. While arbitrators' charges in individual cases may have exceeded the average amount, the overall trend to significantly increasing costs has to be attributed to factors other than arbitrators' charges. If the parties selected arbitrators in their own area and utilized simplified procedures in less complicated cases which would require fewer peripheral services (such as

**Table 5. Frequency of occurrence of issues in cases in which arbitrators selected from FMCS panels made awards, fiscal year 1972**

Issue <sup>1</sup>	Frequency of occurrence
<b>General issues:</b>	
New or reopened contract terms.....	29
Contract interpretation or application.....	2,586
<b>Specific issues:</b>	
Discharge and disciplinary actions.....	1,226
Incentive rates or standards.....	77
Job evaluation.....	387
Seniority <sup>2</sup> .....	646
Overtime <sup>3</sup> .....	363
Union officers—superseniority and union business.....	21
Strike or lockout issues.....	18
Vacations and vacation pay.....	132
Holidays and holiday pay.....	101
Scheduling of work.....	182
Reporting, call-in, and call-back pay.....	77
Health and welfare.....	51
Pensions.....	21
Other fringe benefits.....	92
Scope of agreement <sup>4</sup> .....	211
Working conditions, including safety.....	48
Arbitrability of grievance <sup>5</sup> .....	261
Miscellaneous.....	237

<sup>1</sup> Compilations based on the number of arbitration awards for which data were available; that is, 3,414 of the 3,432 awards. Some awards involved more than one issue.

<sup>2</sup> Includes promotion and upgrading (137), layoff, bumping, recall (327), transfer (96), and other matters (86).

<sup>3</sup> Includes pay (172), distribution of overtime (172), and compulsory overtime (19).

<sup>4</sup> Includes subcontracting (92), jurisdictional disputes (17), foreman, supervision, and so on (61), mergers, consolidations, accretion, other plants (11).

<sup>5</sup> Includes procedural (141), substantive (68), procedural/substantive (32), and other issues (20).

transcripts and briefs), some factors contributing to mounting costs would be eliminated. To illustrate the point, transcripts were taken in 186 of the 850 cases sampled. That same sample showed that briefs were filed in 553 instances, thus creating additional costs and contributing an average of over 26 days to the total time required for submission of an award.

**Table 4. Average number of days required to complete arbitration cases, 1968-72**

Events in the span	Fiscal year				
	1968	1969	1970	1971	1972
Time between filing of grievance and request for panel.....	77.9	77.6	81.3	83.3	75.1
Time between request and sending of list.....	8.1	9.2	7.8	11.1	15.1
Time between date list is sent and appointment.....	40.7	39.9	44.3	46.0	43.8
Time between appointment and hearing.....	61.2	63.7	63.1	63.4	61.1
Time between hearing and award.....	47.4	50.3	49.0	47.7	46.4
Total time between request for panel and arbitration award.....	157.5	163.1	164.2	168.2	166.4
Total time between filing of grievance and arbitration award.....	235.4	240.7	245.6	251.5	241.5
Number of cases sampled.....	600	643	722	719	850

THE Federal Mediation and Conciliation Service and other appointing agencies can suggest the use of expedited procedures or indicate that the inclusion of various services may tend to drive total arbitration costs upward. However, it is ultimately the parties who must trim some of their current practices if they are to reduce costs and time delays. Because the parties have ultimate control over arbitration, they are constantly redesigning procedural as well as substantive aspects of the process. That redesigning can tend toward simplification or increasing complication.

Aside from labor's and management's powers and responsibilities, there are several strong influences behind the current trends. The cases are becoming increasingly complicated and important in terms of issues. There is a natural reluctance to submit impor-



tant cases of consequence to simplified procedures or newer arbitrators for fear that inadequate handling of the case might prejudice the outcome. There is also a natural reluctance to abandon familiar processes for fear of repercussions even in cases which might have been lost regardless of process. However, the plurality of cases are discharge and disciplinary actions, as table 5 shows. While there may be difficult and complicated cases among them, generally these cases frequently lend themselves to innovative procedures.

The FMCS has undertaken a revision of its arbitration services and incorporated the use of a compu-

terized system. As a result, services to the parties will be improved. Certainly, the practical expansion of alternative choices among arbitrators and the effect of assistance to the parties through continuous monitoring, should be steps in the right direction. Beyond that, however, it is up to the parties to re-examine their purposes in arbitration and then change means to accomplish those ends more expeditiously. As in any democratic process, arbitration will accomplish the purpose which those who use it want. Hopefully, the users will opt for an effective process which will serve collective bargaining in the future as well as it has in the past. □

—FOOTNOTES—

<sup>1</sup> Arbitration's growth is indicated by more than 95 percent of major labor contracts now providing for arbitration. Moreover, the two principal agencies supplying arbitration services at the national level—the Federal Mediation and Conciliation Service and the American Arbitration Association—expect their combined requests for arbitration panels to exceed 20,000 this year.

<sup>2</sup> William J. Kilberg, "FMCS and arbitration: problems and prospects," *Monthly Labor Review*, April 1971, pp. 40-45.

<sup>3</sup> The regulations of the Federal Mediation and Conciliation Service are specific on the matter of requirements for qualification for listing on the agency's roster of arbitrators. For a full statement, see section 1402.2 of the FMCS regulations, "Arbitration Policies, Functions and Procedures."

<sup>4</sup> Twenty percent of the new appointees specify per diem fees of less than \$150, 46 percent set their rates at \$150 a day, and most of the rest specified fees over \$150 and up to \$200 a day.

<sup>5</sup> Statement by Dr. Thomas J. McDermott, National Academy of Arbitrators.

<sup>6</sup> Summarized, the selection criteria were as follows: (1) Age: Younger individuals should be encouraged but older ones with potential acceptability can be selected. (2) At least 5 years experience in labor relations with labor, management or both. Appropriate fields for the experience include government service, college teaching, research in labor relations, education degrees in industrial relations, law, personnel, management, industrial engineering, and so on; actual degree unnecessary where there is appropriate and extensive experience in labor relations work, for example, 10 years as a union representative. (3) Occupation: Candidates should normally be engaged in labor relations work, attorneys with interest and experience in labor relations, or educators with appropriate qualification in the field. (4) Geographical area: western New York particularly Rochester, Jamestown, Buffalo, Syracuse, Ithaca, and Niagara Falls area. (5) No racial, creed, color, national origin, age, or sex discrimination to be practiced. (6) Committee could accept highly qualified who did not meet each criterion.

Labor and management  
are working out  
a grievance system  
within the confines of  
Civil Service law and regulations

WILLIAM J. KILBERG, THOMAS ANGELO,  
AND LAWRENCE LORBER

# Grievance and arbitration patterns in the Federal service

THE GROWTH of grievance arbitration in the private sector has been traced to the need to maintain labor peace during World War II.<sup>1</sup> The National War Labor Board and the Wage Stabilization structure used during the Korean War produced a cadre of labor arbitrators sophisticated in dispute resolution procedures. Private dispute settlement has therefore evolved into a mature set of mechanisms by which the parties to an agreement are provided an expeditious, equitable and relatively inexpensive avenue of settlement although there are current complaints about rising costs and delays.

Unionization and collective bargaining in public employment are relatively recent phenomena, untested by the turmoil of wartime concerns. Thus when compared with the current state of the art in the private sector, public sector procedures may seem insufficient. It must be remembered, however, that these agreements were developed in an atmosphere significantly different from that in the private sector. Moreover, unlike the National Labor Relations Act, the Executive orders have provided restrictive guidance as to what may and may not be included within a negotiated grievance procedure.

In addition, the availability of alternate statutory procedures for dispute resolution provided by Civil Service regulation has lessened both the need for and the impact of negotiated grievance mechanisms. It is only in the past year since the most recent Executive order has been issued that arbitration in the Federal sector has had an opportunity to come into its own.

The authors have reviewed approximately 50 agreements entered into since the issuance of the latest Executive order in an effort to discern present

and evolving patterns of grievance arbitration in the Federal sector.

## Executive orders permit bargaining

In January 1962, the first of three Executive orders pertaining to labor-management relations in the Federal sector was signed by President Kennedy. Embodying the recommendations of the President's Task Force on Employee-Management Relations in the Federal Sector, Executive Order 10988 contained provisions in regard to grievance and arbitration procedures.<sup>2</sup>

Section 8 of that order permitted negotiation of grievance procedures if they conformed to Civil Service standards and did not "diminish or impair" any rights the employee already had. Arbitration provisions could also be negotiated so long as the arbitration award was only "advisory" rather than binding, dealt only with the interpretation or application of agreements or agency policy, and the employee or employees concerned approved of its use.

Thus, the Federal employee was presented with a bifurcated system for resolving his grievance, either through the applicable agency procedure or through the grievance procedure negotiated by his union. Furthermore, because the arbitral decision was advisory only, it left the ultimate resolution of the grievance in the hands of the appropriate agency head, essentially the situation predating the Executive order. After 5 years of operation under Executive Order 10988, only 19 percent of Federal employees were covered by any type of negotiated grievance procedure, and both management and labor found the dual systems for grievance resolution confusing.

As one consequence of this, in 1967 a second Task Force on Labor Relations in the Federal sector began analyzing the system. Its report, issued in 1969, commented that "so long as negotiated griev-

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ance procedures provided employees all rights prescribed by Civil Service Commission standards, they might properly be adopted by the agency and labor organization as the exclusive procedure available to employees." The report went on to state that "arbitration of grievances has worked well and has benefited both employees and agencies. . . ." They felt that arbitrators' decisions "should be accepted by the parties" and should be set aside only on "grounds similar to those applied by the courts in private sector labor-management relations. . . ."

In October 1969, President Nixon issued Executive Order 11491 which codified these recommendations in its sections 13 and 14. While permitting the negotiated procedure to be the "exclusive procedure available to employees in the unit when the agreement so provides," the new order barred extension of arbitration to "changes or proposed changes in agreements or agency policy."<sup>3</sup>

In contrast to Executive Order 10988 which allowed both negotiated and agency-imposed grievance procedures to exist side-by-side, Executive Order 11491 permitted the negotiated grievance procedure to be the exclusive method for resolving disputes during the life of the contract. It was soon discovered, however, that the conflict between employee rights established by law or regulation and rights created by the collective agreement was not resolved by allowing the negotiated grievance procedure to be the sole route open to employees.

In August 1971, the President issued Executive Order 11616, which amended Executive Order 11491 substantively in the areas of grievance and arbitration procedures. The new order provides that negotiated grievance procedures and arbitration can deal only with the interpretation or application of a negotiated agreement, and cannot deal with matters outside the agreement, including those for which statutory appeals procedures exist. These changes are codified as section 13 of the amended order, and are applicable to all agreements established, extended, or renewed beginning November 24, 1971.<sup>4</sup>

### Defining grievances

Under Executive Order 11616, an agreement must contain a grievance procedure (this differs from Executive Orders 10988 and 11491), although no similar requirement is placed on arbitration provisions. The order limits coverage of

negotiated grievance procedures to grievances which involve the interpretation or application of provisions in the agreement. Other types of grievances must be resolved through agency systems developed under Civil Service Commission regulations or other available agency procedures. Moreover, negotiated grievance procedures are not permitted to cover matters already dealt with by statutory appeals procedures. This prevents duplication or overlap in avenues of redress which could occur, for example, if a matter subject to a statutory appeals procedure also touches on provisions of the agreement.

Because the order makes specific reference to the right of "any employee or group of employees [to] present . . . grievances to the agency and have them adjusted," so long as the union (the exclusive representative) has the "opportunity to be present at the adjustment," a number of agreements reflect this injunction. Thus, in the agreement negotiated between the Germantown District of the Social Security Administration and Local 2327, American Federation of Government Employees, is the following:

A grievance is an employee's or group of employees', expressed (oral or written) feeling of dissatisfaction with Management's interpretation or application of this agreement. It is initiated by the employee(s) himself (themselves), not by the union.

This clause clearly precludes the union from bringing the grievance in its own name, thus channeling the grievance procedure into resolving disputes between individual employees and management.<sup>5</sup>

In the multiunit agreement negotiated by the National Weather Service and the National Association of Government Employees (NAGE), grievance is defined in the following manner:

A grievance, for purposes of this agreement, is any cause for dissatisfaction over the interpretation or application of this agreement, if the matter grows out of employment in the Agency and the remedy sought is within the authority of the Director of the Agency or other official to whom such authority has been delegated.

This clause contains the basic definition of a grievance without stating whether the grievance may be brought solely by the affected employee or employees. It also adds the important qualification that the remedy sought must be within the power of the agency head to grant.

However, in the agreement between Local 2486, American Federation of Government Employees,

and the Baltimore District of the Food and Drug Administration, power to initiate grievances was expanded to include the union:

The negotiated grievance procedure contained herein is applicable only to members of the unit and shall apply only to the consideration of grievances over the interpretation or application of this General Agreement. This procedure will be the only procedure for the consideration of such grievances. Grievances under this procedure may be submitted by an employee, a group of employees, or by the Union.

This alternate definition of a grievance by allowing the union to be the instigating party gives it an added incentive to monitor the application of the agreement and permits the collective bargaining grievance procedure to be used to clarify contract disputes without recourse to any particular aggrieved employee. This provision therefore allows the dispute settlement procedure of the grievance mechanism to be applied in a preventive manner and opens the door to the possible use of arbitration for declaratory judgments.

An interesting variation on both these approaches can be found in the agreement between the U.S. Department of Labor and the National Council of Field Labor Lodges, American Federation of Government Employees:

. . . Grievances initiated by individual employees or groups of employees in their own behalf, personally or through the union, are denominated as "Type A." Disputes initiated by the Union or affiliated lodges are denominated "Type B." Matters brought by the Union under this definition are not grievances within the meaning of the Civil Service Commission standards, and such standards do not apply to type B disputes.

A Type A grievance is a statement of dissatisfaction and request for adjustment of a management decision or some aspect of employment status or working conditions which is beyond the control of the aggrieved employee but within the control of the Department. This may include disputes over interpretation or application of this agreement or any law, rule, or regulation governing personnel practices or working conditions.<sup>6</sup>

A Type B grievance is a dispute initiated by the Union or an affiliated lodge concerning interpretation or application of this agreement. This procedure shall not be used in the adjustment of individual cases; however, arbitration decisions which are accepted by the Secretary shall be applied to appropriate individual cases.

Several of the agreements studied contain provisions allowing the public employer to file a grievance. In such instances, the grievance procedure often commences in one of the last steps of the process. An example of this can be found in the agreement negotiated between the Commissary Store at Quonset Point, Rhode Island, and Local 767, American Federation of Government Employees:

Grievances initiated by the Union or the Employer will be submitted to the Officer-in-Charge or the President of the Union as appropriate. Grievances must concern interpretation or application of the specific provisions of this agreement.

### Issues outside the grievance procedure

Executive Order 11616 clearly excludes from coverage in the negotiated grievance procedure matters which are subject to statutory appeals procedures.

The phrase "statutory appeals procedures" is construed broadly to include appeals procedures established by Executive order or regulations of appropriate authorities outside the agency which implement responsibilities assigned by statute. "Statutory" is thus defined as relating to or conforming to statute as well as created, defined or required by statute. The negotiated grievance procedure, for example, may not include grievances based upon disciplinary actions because appeals from "adverse actions" are subject to Civil Service Commission regulations. Thus discharge, suspension for more than 30 days, furlough without pay, or reduction in rank or pay cannot be taken through a grievance procedure negotiated by labor and management.<sup>7</sup> If, on the other hand, an employee wishes to grieve over the interpretation or application of the agreement, he *must* use the negotiated procedure, the exclusive method available for this purpose under the Order.

*Time limits.* While much has been written recently about the length of time it takes to process grievances in the private sector from initiation to binding arbitration, comparable studies of the length of time it takes to process grievances in the public sector are not available. Generally, however, civil service laws and regulations set firm limits on the time available for completing each step of the process. However, recognizing the realities of grievance processing, most regulations provide for some waiving of the rigid limits in particular circumstances or by mutual agreement of the parties. It is reasonable to assume



that some difficult grievances may spill out of this loophole and consume considerably more time than that allotted for their completion.

This suggests that two particularly crucial areas in any grievance procedure are the time limits set for filing a grievance and those set on completing each step in the procedure.

Generally, in the contracts studied two approaches were taken on the question of how much time an aggrieved employee has to file his grievance. The strict-time-limit approach provides that the employee must take action within a fixed period after the date the act complained of occurred. An example of this type of clause can be found in the agreement between the Chicago District of the Food and Drug Administration and FDA Lodge 112, AFGE:

Any employee or group of employees having a grievance coming within the purview of this article should take it up first with his immediate supervisor within 15 calendar days after the occurrence of the act on which the grievance is based.

The other approach generally followed is to provide that the grievance must be filed within a set time after the grievance is *discovered*. This approach indicates awareness of the possibility that an employee or a union might not have immediate knowledge of a grievable act. An example of this approach can be found in the agreement negotiated between the Naval Amphibious Base and the Tidewater Virginia Federal Employees Metal Trades Council. The clause provides:

It is agreed that an employee and the Council must file their grievance within 15 calendar days. The time is computed from the date of the occurrence of the incident which gives rise to the grievance or the date the employee becomes aware of the decision about which he is aggrieved.

A common variation on the latter approach is to provide for an extension on the original time limitation but to provide a final limitation after which the grievance cannot be brought. A representative example of this type of clause can be found in the agreement negotiated between the Washington Area Metal Trades Council and the Naval Research Laboratory:

An alleged grievance, to be acceptable, shall be taken up by the employee or employees and the appropriate supervisor of employees involved within 15 days of the incident leading to the alleged grievance unless it is clearly evident that the employee had no opportunity to become informed of the action leading to the alleged grievance. In no event will an alleged

grievance be accepted more than 3 months after the action or event leading to the alleged grievance.

Other contracts provide a specified initial time period but allow extensions upon showing of good cause or after mutual agreement between the parties.

The other area in which time limits may become an issue is when penalties are provided in the contract for failure by either party to follow the time limit set on each step in the grievance procedure. The penalty clause uses generally standard language and the only problems in this area occur when the contract fails to provide a procedure to follow when time limits are not met. In those instances, the limits are basically advisory and without force. The absence of such clauses can result in procedural grievances independent of the substantive matters which initiated the grievance. A standard example of the time limit clause including penalties can be found in the agreement negotiated between the Fleet Home Town News Center and Local 3229, American Federation of Government Employees, which provides an employee or union can move on to the next step in the grievance procedure if the employer fails to meet the time limits for any particular step. If the grievant or the union fail to meet time limits, the grievance is considered withdrawn and terminated.

### Steps in the process

Under Executive Order 11616, an agreement between an agency and a labor organization must provide a procedure for the consideration of grievances over the interpretation or application of the agreement. The form which this procedure is to take is not specified by the Order, nor is there any requirement that it culminate in any form of arbitration. However, a survey of contracts negotiated since the latest Executive order demonstrates that the most common procedure negotiated by the parties involves either a three- or four-step grievance procedure, with some form of third party determination at the end.

*The first step.* As a prerequisite to every formal grievance procedure, the employee bringing a grievance must exhaust his informal appeal rights. This usually consists of a discussion of the problem with his immediate supervisor. It may be an oral presentation, and the union representative need not be apprised of the situation.

In almost every contract, the immediate supervisor must make an oral decision within a set time limit. If the decision is unsatisfactory to the employee, or the supervisor fails to render a decision, the employee may then proceed to the next step.

A number of contracts take into account certain practicalities peculiar to their unit. For example, provision is sometimes made for the first-level supervisor to make an investigation within the scope of his authority before rendering his decision. (See, for example, the contract between the Coast Guard Aircraft Supply Center and Coast Guard Air Base, Elizabeth City, N.C., and Local 2203, International Association of Machinists.)

Other contracts, while not requiring a supervisory investigation, do require that the first step of the grievance procedure be at a supervisory level at which a decision can be rendered. As a result, when the employee's grievance involves a question which can only be dealt with by a second-echelon supervisor, the contract requires that he be so notified and the grievance be referred at the appropriate step of the grievance procedure to the official having such authority. (See, for example, the contract between the American Federation of Government Employees and the Portsmouth, Va. Naval Shipyard.) A further refinement is found in those contracts which provide that if the employee feels that he cannot discuss his grievance with his immediate supervisor, he may go directly to the next level of supervision. (See, for example, the contract between the United States Information Agency and Local 1812, American Federation of Government Employees.)

The employee must utilize the informal procedures in the first step. If he fails to do so, it could result in dismissal of his grievance at a later stage, which could have the effect of precluding him from re-instituting his claim due to the time limits in the contract. By the same token, supervisory personnel at the first level must be aware of their responsibilities in providing the employee an opportunity to resolve the grievance at the first level. Failure to do so, particularly where some form of investigation is required, could prove to be a prejudicial error at some latter stage of the grievance.

*The second step.* While some contracts provide that a grievance may be submitted in writing in the first step, the overwhelming number of contracts examined in this study indicate that the formal grievance procedure is initiated in step two by the submission,

in writing, of the grievance to the appropriate management official.

A most important consideration at this and succeeding grievance steps is the time requirements provided by contract. Equally as important is the requirement at this step that the written grievance conform to the requirements enumerated in the contract. While the agreements surveyed vary as to whether the name of the step one supervisor or the contract provision allegedly violated, and other such matters, should be included, those contracts requiring a written grievance be submitted provide that the following must be set out: (1) the basis of the grievance; (2) the facts out of which the grievance arose; and (3) corrective action requested. The person to whom the grievance should be sent is determined largely by contract, depending on the nature of the unit and the levels of supervisory contact. In one instance, provision is made for a "grievance control officer" whose duty it is to relay the written grievance to the appropriate management official. (See the contract between the U.S. Department of Labor and Labor Local 12, American Federation of Government Employees.)

Regardless of whether the employee has requested union representation, at this and at all succeeding grievance steps, the Executive order affords a union (if the exclusive representative) the right to attend all formal meetings between management and the aggrieved employee. It should be noted that some contracts have provided that an employee seeking to utilize this and subsequent grievance steps may do so only with the consent of the union. This language may well be in violation of the Executive order and deprives the employee of rights provided under it.

By requiring that a negotiated procedure be the only method available for the resolution of contract disputes, the Executive order requires an employee to rely on contractual methods of relief. Those contracts which prevent an employee from pursuing the contractual avenue of grievance resolution unless his union consents may perhaps extend too far beyond the language of the order.

In this step the appropriate management official is generally required to perform some factfinding or review based on the written allegation before him. The procedure requires generally that his analysis and decision be in writing, with a contractual time limit placed on his activities. The nature of the review required at this level varies. Some contracts provide only that the official "attempt to settle" the



grievance (for example, the contract between the Germantown District Social Security Administration and Local 2327, American Federation of Government Employees), while others require an actual factfinding investigation (for example, the contract between Williams Air Force Base and Local 1776, AFGE). Regardless of the specific contract provision, the supervisor must be careful to perform required functions under the contract. Even more than under the informal phase, a prejudicial error here will be strong grounds for reversal at a later date.

*The third step.* If the grievance is not resolved in a satisfactory manner during the second step, this allows invocation of the third and often final step of the grievance procedure. Depending upon the size of the unit and the structure of supervisory authority within the agency, this may be the last opportunity for settlement before arbitration. However, in those agencies having more than one tier of higher management authority, the formal grievance procedure may require a fourth step of managerial review, in which case the same considerations that prevail in the third step apply.

Most contracts require that the agency official meet with the aggrieved employee in an effort to resolve the grievance. The employee and his representative (if he has one) are given an opportunity to present their case orally and informally under most contracts. In any event, after a review of the grievance and pertinent evidence, a written decision is required within a period of time determined by the contract. Depending on the number of steps included in the procedure, the union or agency may request arbitration if it is provided for under the agreement.

### Unfair labor practices

One of the significant changes implemented by Executive Order 11616 was in the area of alleged unfair labor practices.<sup>8</sup> Prior to the adoption of the amending order, unfair labor practices were dealt with in a variety of ways depending upon which party was charged. Agency procedures and procedures under Executive Order 11491 were both utilized. This dual process prevented a uniform body of law respecting unfair labor practices from being developed. The amendments proposed by the Federal Labor Relations Council and adopted in the Executive order provide for alternate means of solving questions of unfair labor practice. The aggrieved

party now has the option of bringing an unfair labor practice charge to the Assistant Secretary of Labor or of dealing with the question under the negotiated grievance procedure. He may not, however, utilize both procedures with regard to the same allegation of unfair labor practices. If the contract course is followed, any decision issued would not have value as a precedent for other unfair labor practices charges. This follows the Council's recommendation that "all Unfair Labor Practice complaints be processed and decided only under the procedures provided by the Assistant Secretary and the Council." Executive Order 11616 contains clauses dealing with Unfair Labor Practice charges which reflect the view expressed by the Council and designate the Assistant Secretary as the only recipient of unfair labor practice charges. This Assistant Secretary's expanded role is also reflected in his authority to determine questions of grievability and arbitrability.

### Access to records

A question sometimes arises regarding the right of employees or their representatives to have access to agency records in order to facilitate the processing of grievances. Access to agency records, for example, can be crucial in determining the exact date of the grievable action. This is important when there is a strict time limit in effect for instituting grievances. The obvious problem here is potential conflict with the Freedom of Information Act and Civil Service Commission regulations.<sup>9</sup>

Most contracts are silent on the question of records access. Those that do contain clauses pertaining to the release of information provide for the release of all pertinent information subject to any statutory or regulatory prohibition. (See the agreement between Hill Air Force Base and Local 1592, American Federation of Government Employees.)

### Identical grievances

Finally, many of the contracts examined attempt to deal with the problem created by the submission of several identical grievances. Joint submission of identical grievances assures greater precedential consistency, binding all affected employees in the same manner. Two approaches appear to have been followed in those contracts which deal with the problem of identical grievances. One is to utilize the class-action approach, with one employee representing the

class and the decision binding on all members of the class. (See the agreement between Naval Support Activity, Mare Island and the International Association of Fire Fighters, Local F-48.) The other method is a joinder provision, joining all the grievances into one action. (See the agreement between the Naval Amphibious School, Norfolk and Local 1625, American Federation of Government Employees.)

### Arbitration under the orders

While grievance machinery has been refined by each succeeding Executive order, a similar impact has not occurred with regard to grievance arbitration. Under Executive Order 10988, the only type of grievance arbitration which could be utilized was advisory. In the two Executive orders issued since that order, the only refinements made have been in allowing the parties the option of final or binding arbitration where arbitration is provided for and to allow appeal from binding arbitration to the Federal Labor Relations Council.

*Binding or advisory arbitration.* In those contracts which provide for advisory arbitration, the agency head reviews the arbitrator's decision and issues a final ruling. There is no appeal to the Federal Labor Relations Council. Where the parties have agreed to binding arbitration, the simplest and most concise method of providing for arbitration under the contract has been to include the following:

1. That the scope of the arbitrator's authority is limited (that is, he may not add to, delete, or modify the terms of the contract);
2. that the decision of the arbitrator shall be binding on the parties; and
3. that any exception to the arbitrator's decision may be filed with the Federal Labor Relations Council by any party under terms of Executive Order 11491 (as amended), and any regulations issued by the Council. (See 5 Code of Federal Regulations, part 2410.)

Whenever the parties attempt to go beyond these provisions, a danger exists that additional language may result in ambiguity and confusion. As an example of this, the following taken from the agreement between Defense Depot Tracy and Local 2029, American Federation of Government Employees, should be examined.

Both parties will review the arbitrator's award and each will inform the other within 5 working days

of their decision to accept or take exception to the award. If both parties accept the arbitrator's recommendation it will become the final decision in the matter. If either or both of the parties object to the award they have 10 days to notify the other party, the Director [Defense Supply Agency], and the National President of AFGE of the full nature of their objections to the decision. If the matter cannot be resolved within a reasonable period of time, either party may appeal to the Federal Labor Relations Council in accordance with its rules. The Council, after a review of the records, briefs and other information will then issue a final decision.

It is not clear whether the parties agreement calls for binding or advisory arbitration. That either party can resort to the Federal Labor Relations Council would normally indicate binding arbitration was envisioned. However, an arbitrator's decision can hardly be considered binding where the parties have modification rights subsequent to the decision being rendered.

*Picking an arbitrator.* The mechanics of picking an arbitrator are generally set down in the negotiated agreement. Generally, as in the private sector, when arbitration is requested in a timely manner under the contract, a request is forwarded to the Federal Mediation and Conciliation Service for a list of five arbitrators. Some contracts provide that the parties shall attempt to pick an arbitrator prior to the request to the FMCS. (See the agreement between the Naval Air Station at Norfolk and the International Association of Machinists, Local 39.) This process might enable the parties to choose an impartial arbitrator who is familiar with the contract and working conditions at the facility. One contract expressly states that the parties should attempt to acquire an arbitrator within the Federal Government Service. (See the agreement between the Public Health Service Hospital and the National Maritime Union—Government Employees Division.)

After the list of five arbitrators is received from the FMCS, the parties attempt to choose an arbitrator from the list. If agreement is not reached, the general approach is for the parties to strike one name in turn. The last person on the list is designated the arbitrator. This process is modified in several contracts. After the decision is made to go to arbitration, a list of five arbitrators is requested from the FMCS. The parties then meet to attempt to pick an arbitrator. If agreement is not reached, a second list is requested. The strike-off method is then used to select an arbitrator. (See the agreement between Federal Aviation Administration, Eastern Regional

Headquarters and Local R2-72, National Association of Government Employees.)

Another clause appearing in several contracts provides that in the event of the refusal of either party to participate in the selection of an arbitrator, the FMCS would be empowered to make a direct designation of an arbitrator (agreement between Presidio Commissary and AFGE Local 1457). This provision serves to prevent a possible charge of an unfair labor practice for failure to participate in a negotiated grievance step by recognizing the right of either party not to participate at this step.

The problem of the phraseology of the questions

put before the arbitrator is dealt with in several contracts by allowing the arbitrator to phrase the question himself based on suggested language provided by the parties and examination of the entire contract file.

BASED UPON the study of these contracts, we conclude that grievance arbitration procedures in the Federal sector have made many advances since their inception. The refinements in Federal labor relations made by Executive Order 11616 strongly indicate that Federal labor-management relations should continue to evolve into a fair and effective means of dispute resolution. □

—FOOTNOTES—

<sup>1</sup> A discussion of this (including a review of developments since 1940) in the automobile and steel industries can be found in Merton C. Bernstein, *Private Dispute Settlement* (New York, The Free Press, 1968), p. 285.

<sup>2</sup> See sections 8(a) and (b) of Executive Order 10988.

<sup>3</sup> See section 13 (grievance procedures) and section 14 (arbitration of grievances) of Executive Order 11491.

<sup>4</sup> *Grievance and arbitration procedures.* An agreement with a labor organization which is the exclusive representative of employees in an appropriate unit may provide procedures, applicable only to employees in the unit, for the consideration of employee grievance and of disputes over the interpretation and application of agreements. The procedure for consideration of employee grievances shall meet the requirements for negotiated grievance procedures established by the Civil Service Commission. A negotiated employee grievance which conforms to this section, to applicable laws, and to regulations of the Civil Service Commission and the agency is the exclusive procedure available to employees in the unit when the agreement so provides.

(a) An agreement between an agency and a labor organization shall provide a procedure, applicable only to the unit, for the consideration of grievances over the interpretation or application of the agreement. A negotiated grievance procedure may not cover any other matters, including matters for which statutory appeals procedures exist, and shall be the exclusive procedure available to the parties and the employees in the unit for resolving such grievances. However, any employee or group of employees in the unit may present such grievances to the agency and have them adjusted, without the intervention of the exclusive representative, as long as the adjustment is not inconsistent with the terms of the agreement and the exclusive representative has been given opportunity to be present at the adjustment.

(b) A negotiated procedure may provide for the arbitration of grievances over the interpretation or application of the agreement, but not over any other matters. Arbitra-

tion may be invoked only by the agency or the exclusive representative. Either party may file exceptions to an arbitrator's award with the Council, under regulations prescribed by the Council.

<sup>5</sup> Merton C. Bernstein (*Private Dispute Settlement*) cites a U.S. Department of Labor (Bureau of Labor Statistics) study of 1,717 private sector collective bargaining agreements, which found that in approximately 47 percent of them grievance definitions covered any dispute or complaints; in 53 percent only disputes arising under or related to the specific provisions of the agreement.

<sup>6</sup> The scope of the grievance process, although broadly stated, may not be interpreted to be broader than those matters raised specifically in the agreement itself.

<sup>7</sup> Examples of matters which are outside the grievance procedure are reemployment priority rights (*Federal Personnel Manual*, Chapter 330; 5 United States Code 3502); reductions in force (FPM chap. 351, 5 USC 3502); reemployment or reinstatement rights (FPM chap. 352, 5 USC 2193(d), 2385(b)); military restoration (FPM chap. 353, 5 USC 3551); performance ratings (FPM chap. 430, 5 USC 4305); position classification (FPM chap. 511, 5 USC 5112(b)); level of competence (pay) (FPM chap. 531, 5 USC 5304, 5338); salary retention (FPM chap. 531, 5 USC 5338); job-grading (FPM chap. 532, 5 USC 5338); discrimination (FPM chap. 713, Executive Order 11478 (as amended)); national security (FPM chap. 732, 5 USC 7312, Executive Order 10430); political activity (FPM chap. 733, 5 USC 1504, 5, 6, 8); fitness-for-duty examinations (FPM chap. 831, 5 USC 8337); health benefits (FPM chap. 890, 5 USC 8912); injury compensation (FPM chap. 890, 5 USC 8121, et seq.).

<sup>8</sup> Section 19, Executive Order 11491, as amended.

<sup>9</sup> See *Federal Personnel Manual* S-294-3, 294-4; FPM Supplement 950-1, Part 294, III-32.01.



The rate of voluntary separations  
is a good economic indicator;  
the reasons for quitting are  
changeable and derive from workers'  
attitudes toward the economy

PAUL A. ARMKNECHT AND  
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LABOR MOBILITY is the sine qua non for the efficient allocation of labor factors in the production process. The only reliable labor mobility data available on a continuing and current basis are those reported by the Bureau of Labor Statistics in its monthly series on labor turnover in manufacturing, particularly the rate of voluntary separations. This article undertakes to lay a foundation for the use of the series in current economic analysis and to discover the reasons for variation in the quit rate over time and among industries.

### The quit rate as a cyclical indicator

In the post-World War II era, the quit rate in manufacturing has been a smooth, well-behaved series that has rather consistently led the business cycle at its peak and coincided with it at the trough. (See chart 1.) A test of its adequacy as an economic indicator by means of the methods adopted by Geoffrey H. Moore and Julius Shiskin<sup>1</sup> placed it on a par with the most commonly accepted indicators. Of a possible summary score of 100, the quit rate scored 71, compared with 69 and 65, respectively, for the layoffs and total accession rates. Tables 1 and 2 show the smoothness and small revisions in the quit rate which are two of the important factors contributing to its quality as an indicator. These desirable traits may arise, in part, from the fact that while the BLS labor turnover survey is based on a sample of approximately 38,000 establishments, the true size of the sample underlying the quit rate estimate is the 10.4 million workers employed in these establish-

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# Quits in manufacturing: a study of their causes

ments, since quit decisions are made by individual workers.

Since the beginning of the series, the quit rate has exhibited a median lead of 15 months at the business cycle peak and a median lead of 1 month at the trough. This long lead and the desirable statistical properties of the series make it a good forecaster of possible downturns in the economy.

### Time series regression

The highly cyclical nature of the quit rate has already been noted, but the literature on the subject has developed a controversy over the question of whether the rate also has a trend.<sup>2</sup> It has been argued (1) that there is no trend in the rate, (2) that there is a decline in the rate because of non-transferability of pensions and other fringe benefits—the so-called industrial feudalism hypothesis, and (3) that there has been a decline in the quit rate because of endemic factors, such as the aging of the work force. Our study supports the view that there has been no trend.

To determine whether there has been any measurable trend in the quit rate in the past two decades, a number of time-series regression models were tested, using both quarterly and annual data. Only the final equations for the quarterly model will be presented and discussed here. A more detailed description of other hypotheses tested and of statistical difficulties that had to be overcome will be found in a forthcoming BLS staff paper. The following is the two-stage least-squares estimate of the model which explains the data best over time. All insignificant terms, including the constant, have been removed.

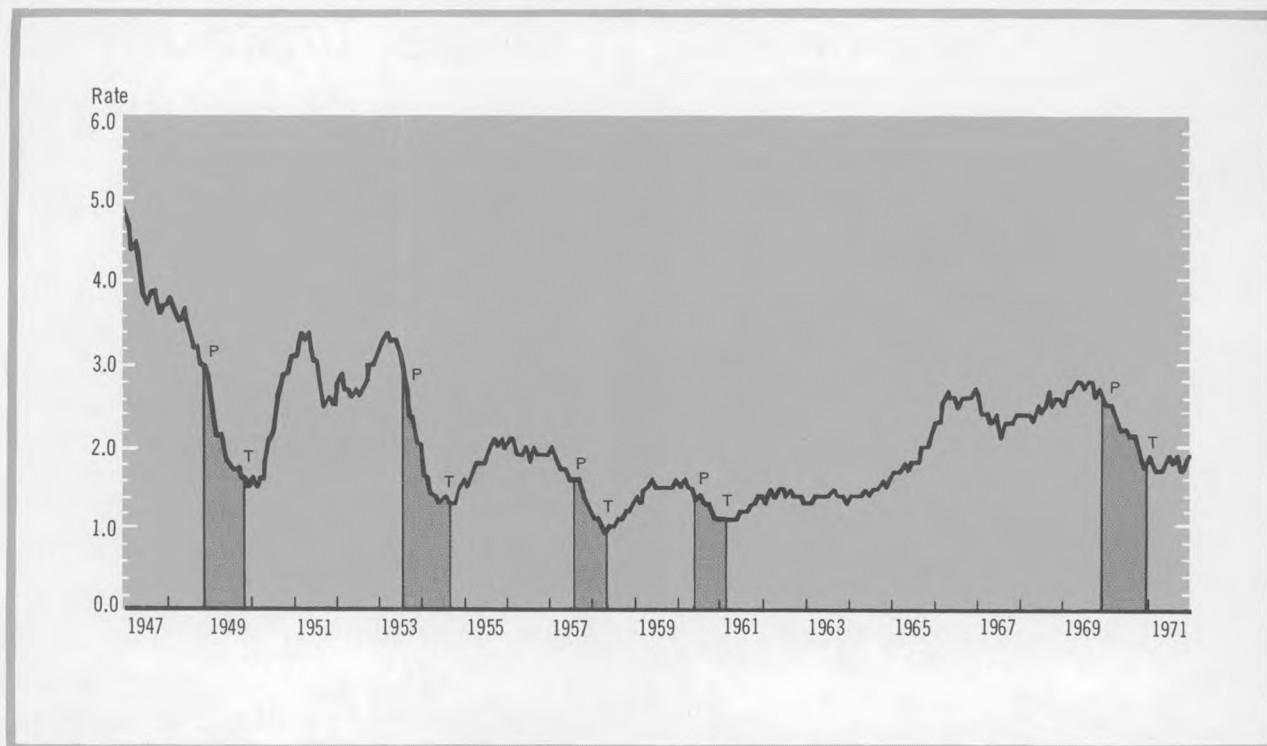
$$(1) \quad q_t = .238 A(h_t) + .405 D(h_t) + .310 h_{t-1}$$

(.074)                      (.064)                      (.043)

$$R^2 = .763$$

$$\text{Durbin-Watson} = 2.18$$

Chart 1. Manufacturing quit rate, seasonally adjusted, 1947-71



NOTE: Peaks (P) and troughs (T) refer to business cycle turning points determined by the National Bureau of Economic Research.

The standard errors are contained in parentheses, and the following definitions apply:

$q_t$  = the change in the quit rate in quarter  $t$ .

$A(h_t)$  = the positive change in the new hire rate in quarter  $t$ , zero if the change was negative.

$D(h_t)$  = the negative change in the new hire rate in quarter  $t$ , zero if the change was positive.

$h_{t-1}$  = the change in new hires in the quarter previous to  $t$ .

The new hire rate explains the quit rate so well probably because it is a measure of the jobs available and of job security, and it seems quite likely that the more jobs there are and the more secure a worker feels the more inclined he will be to seek a better paying job. As already indicated, the constant term in this equation was not significant, which means that there was no constant change in the quit rate for the past two decades—that is, there was no trend. Our model differs from the models used by those who have found negative trends in the quit rate in at least two important ways. First, our model was statisti-

cally much more rigorous than that employed by some who used a rather impressionistic mode of analysis. Second, the new hire rate seems to be a more appropriate measure of the cyclical swings in job availability and security than were the variables used by Pencavel to remove cyclical effects. The absence of a trend in the quit rate does not mean that there have been no long term shifts in the patterns of mobility. We will, in fact, show later that there have been some rather dramatic shifts. But the absence of a trend does suggest that, on the average, the manufacturing worker is no more or less mobile in seeking new employment than he was in the years immediately following World War II.

It will be noted that for the current quarter the effects of the new hire rate have been divided into two parts—the increases, or “absorption,” and the decreases, or “disabsorption.”<sup>3</sup> There appears to be a distinct asymmetry of behavior here. A decline in hiring during the current quarter will depress the propensity to quit by 70 percent more than a similar expansion in hiring would have increased it. In short, the manufacturing worker is very cautious and can have his confidence shaken much more readily than restored. Such behavior helps explain the difference

in the leading behavior of the quit rate at business cycle peaks and troughs.

One other hypothesis that we wanted to test was whether there was an additional, forward-looking attitudinal factor in the determination of the quit rate. It was our hypothesis that the workers' decisions to quit were based not only on recent hiring practices, but also on their views of the future, which might depart from past experience. We further hypothesized that this future expectation about the condition of the labor market would also be closely tied with the workers' consumption plans. As a result we expected two things: that the quit rate and the savings rate should be positively correlated; and that, even after the removal of current and past hiring effects, there should remain an unexplained portion of variation in the quit rate that would correlate positively with the growth of aggregate economic activity in the following quarter.

Our first test found a significant positive correlation between the savings ratio and the quit rate. The second resulted in the following equation, where  $G(Y_{t+1})$  is the rate of growth of the real Gross National Product in the next quarter:

$$(2) \quad q_t = .160 A(h_t) + .424 D(h_t) + .292 h_{t-1} + .019 G(Y_{t+1})$$

(.077)
(.062)
(.042)
(.007)

$$R_c^2 = .781 \quad \text{Durbin-Watson} = 2.11$$

Equation 2 preserves the essential characteristics of equation 1. The  $G(Y_{t+1})$  term has a significant positive coefficient, indicating the presence of a forward-looking attitude on the part of workers in their quit decisions. The only difference between equations 1 and 2 is the spread between the absorption and

**Table 2. Labor turnover rate revisions, 1966-69**

Change	Total accessions	New hires	Quits	Layoffs
Average monthly change.....	0.8	0.7	0.5	0.3
Average monthly revision.....	.1	.1	( <sup>1</sup> )	.1
Percent revision to change.....	11.9	9.0	9.0	27.2

<sup>1</sup> Less than .05.

disabsorption coefficients for new hires. This increase further emphasizes the cautious nature of the American manufacturing worker. When future expectations are indirectly entered into the equation, it becomes even more difficult to restore lost confidence unless expectations for future growth reinforce current improvements.

**Cross-section regression**

As noted above, changes in the quit rate over time seem to be largely caused by changes in economic factors as well as expectations about future changes. But there still remain questions about the causes of the variations in quit rate behavior among industries. One should certainly expect low-paying industries to experience higher quit rates since their employees are most likely to find higher paying jobs and have less to lose by quitting. Industries that are hiring large numbers of new employees may experience higher quit rates since workers will be less concerned about job security. Highly seasonal industries may offer lower job security, attract the casual worker, and, as a result, show a higher proportion of quits.

In addition to the characteristics of the industry, characteristics of the workers may also contribute to quit behavior. Women, for instance, may either exhibit a casual attachment to the labor force and thus have low opportunity costs associated with high quit propensities, or they may believe that they will face discrimination in hiring and thus be reluctant to quit. Production workers, who are generally affected more than other workers by seasonal and cyclical changes in the economy, may exhibit greater propensities to quit since the nature of their work is marked by such problems as work hazards, lack of opportunity for promotion, poor supervision, and low wages, all of which weigh more heavily in their evaluation of their jobs. On the other hand, it may be true that the lower education of the production worker may impede his mobility by reducing his knowledge of the market.

**Table 1. Labor turnover economic indicators, 1955-71**

Measure	Quits	Layoffs	Accessions	New hires
Average percent change:				
Original series.....	18.61	15.20	16.59	19.23
Seasonal factors.....	18.02	12.87	16.61	19.24
Seasonally adjusted series.....	3.87	8.09	4.18	4.27
Irregulars.....	3.41	6.94	3.72	3.48
Trend-cycle.....	1.86	2.62	1.16	2.14
Irregular/trend-cycle ratio.....	1.83	2.65	3.21	1.63
Number of months of cyclical dominance (MCD).....	2	3	4	2

NOTE: These statistics for the layoff and accession rates differ slightly from those published by the Bureau of the Census in Business Conditions Digest since seasonal adjustment methods used by the bureau differ.



*Procedure.* To test these hypotheses we ran ordinary least-squares regressions for each year from 1959 through 1971, using annual averages for the 94 industry groups in manufacturing for which the Bureau of Labor Statistics publishes labor turnover data. The model we used regressed the quit rate for each industry ( $Q$ ) on the average hourly earnings of production workers ( $E$ ), the ratio of production workers to all employees ( $P$ ), the amplitude of the seasonal factors for employment ( $S$ ),<sup>4</sup> the net new hire rate—calculated as the difference between the quit and new hire rates—( $H_n$ ), and the ratio of women to all employees ( $W$ ) for that industry. An equation was estimated for each year, using index forms of the data with the manufacturing average for that year as the base to remove secular trends from some of the data. The final regression coefficients were transformed to beta coefficients. This transformation was made for the purpose of allowing for differences in variation among the variables. (See table 3.) Those coefficients which are not significantly different from zero are in parentheses. With these transformations of the data it was possible to establish the importance and direction of each variable in determining the interindustry variation in quit behavior. It is interesting to note that for 1960 the results we obtained were very similar to those obtained by Pencavel using a somewhat different model.<sup>5</sup>

*Findings.* The results substantiate our qualitative assessments of the relationship between quits and the explanatory causes, even down to the indeterminacy of the role of women and production workers in overall quit behavior. By far the most important

factor determining interindustry variations in voluntary separations is the relative level of earnings. Next in order of importance are relative net hires, followed closely by the relative proportion of female employment. Finally, in the latter years of the decade, the relative proportion of production workers proved to be significant, while variations in seasonality were of minimal significance in all but a few key years.

### Earnings versus security

Pecuniary motivations cause relatively high levels of voluntary separations in low paying industries. Skill requirements in such jobs are generally low. Such positions are readily available to new or inexperienced workers, only to be vacated as soon as the workers develop some skill and become aware of other job opportunities. In high paying industries, voluntary turnover is lower because of the low probability of obtaining a better paying job.

The earnings variable may also reflect other related market phenomena. For example, industries with relatively low wage levels may be highly competitive, labor-intensive industries where cost conscious entrepreneurs have minimal regard for human capital. In such situations poor working conditions reflected in the low levels of earnings may also explain quit behavior. On the other hand, industries with higher wage levels may be highly unionized, in which case unionization may be a contributor to the higher earnings level as well as better working conditions. In addition, the greater importance of human capital in these latter industries may give management a stake in reducing turnover.

Earnings differentials may reflect, in part, skill and age differentials among industries. However, when variables for occupational and age differences among industries were introduced by Pencavel, the results were highly insignificant. Such industry occupational and age composition items are only available from the decennial census and could, of course, have changed substantially during the 1960's.

An examination of the coefficients for earnings in table 3 reveals that this pecuniary factor has become an increasingly important one in determining interindustry variations in quits. With the exception of periods of economic recession in the manufacturing sector (1960-61, 1967, and 1970-71), there has been a steady progression in the importance of this variable over the decade of the 1960's. The slight decline in relative importance for this factor in times of

**Table 3. Beta coefficients for variables in cross sectional analysis, 1959-71**

Year	E	P	S	H <sub>n</sub>	W
1959	-0.579	(0.048)	0.143	0.371	(0.114)
1960	-.559	(.030)	(.026)	.394	.249
1961	-.452	(.026)	(.040)	.422	.272
1962	-.602	(-.011)	(.000)	.408	.172
1963	-.695	(-.016)	(.054)	.364	(.056)
1964	-.788	(-.005)	(.041)	.386	(-.075)
1965	-.856	(.100)	(.074)	.301	-.219
1966	-.874	.209	.116	.298	-.287
1967	-.844	.192	(.046)	.300	-.197
1968	-.911	.180	.127	.184	-.234
1969	-.943	.149	.121	.253	-.229
1970	-.914	.164	(.165)	.224	-.188
1971	-.904	.164	(.110)	(.126)	-.289

NOTE: The variables in this table are: E=average hourly earnings of production workers; P=ratio of production workers to all employees; S=seasonal amplitude; H<sub>n</sub>=net new hire rate; W=ratio of women to all employees. Numbers in parentheses indicate insignificant coefficients.

business cycle downswings reflects the shift in importance from wage betterment to job security motivations.

The job security factor itself tends to show a gradual decline over the decade as net new hires become a less important variable, although this trend is also interrupted during periods of cyclical downturns. The shifts in degree of importance between the pecuniary and job security factors over the years tested, point out the counterbalancing relationship of these two factors in workers' motivations to leave their jobs voluntarily.

In analyzing these two trends, one must remember that the years studied are the only postwar period characterized by prolonged economic growth. Therefore, the increasing importance of pecuniary factors and the decreasing importance of job security may have been influenced to a degree by this extended period of growth. To some extent, the expansion of industrial centers from urban to suburban areas resulting in extended labor market areas has probably increased the worker's knowledge of opportunities within the market. Increasing educational attainment and mass communication also may have increased the information reaching the worker. Such information makes the jobholder's behavior more consistent with the neoclassical concept of "economic man" trying to increase his earnings and consumption power under the constraint of his pains for laboring.

### Women workers

In the manufacturing sector women tend to have higher quit rates than men, partially owing to the fact that industries with a high proportion of women employees are also among the lower paying ones. Hence, part of the reason for differences in quit propensities between the sexes is the concentration of women in lower paying jobs. Our model, however, takes account of earnings differentials, so that it can measure more accurately the true effect of women's employment as a factor in determining variations in quits among industries. Considering the beta coefficients shown in table 3, one can see that the role women play in determining quit propensities underwent a drastic reversal during the last decade. From 1960 to 1962 the proportion of women employed in an industry was a significant factor directly affecting the frequency of quits. As the relative proportion of women increased so did the quit rate. In the next 2 years their effect was not significant, but the direc-

tion of the relationship changed. In 1965, the proportion of female workers again became a significant factor, but the relationship with quits was inverse. As the relative proportion of women workers among industries increased, the quit rate decreased.

There were several important undercurrents in the labor market during the last half of the 1960's which could account for this reversal. The manufacturing labor market became very tight. This in part was due to the Vietnam war buildup, which increased the demand for war related goods, generated more income which increased demand for consumer goods, and produced a manpower shortage arising from the increased manpower needs in the military services. As a result, there was a large influx of women into the labor force. In addition, demographic factors may have had their effect as there was evidence of a slight "marriage squeeze" in 1963 and a more drastic one beginning in 1966.<sup>6</sup> This would also account for the rapid increase in labor force participation among women as well as declines in labor force withdrawal for reasons related to marriage.

Social, cultural, and technological changes are also quite relevant to this shift in quit behavior among women. Such factors as the social approval and safer methods of contraception, increasing educational attainment, antidiscriminatory legislation, introduction of labor saving equipment for household and office use, and many others have led to the acceptance of the modern woman as a productive worker and economic competitor.

Despite the decline in the attitude that a "woman's place is in the home," sex discrimination in hiring still may serve as a deterrent to voluntary job mobility for women. Since social and technological changes have lessened the necessity for the casual attachment of women in the labor force, the previously mentioned discrimination factor would seem to be a more plausible explanation of the women's influence on voluntary separations in recent years.

### Production workers and seasonality

The relative concentration of production workers does not emerge as a significant factor until 1966. It was in this period that demographic factors became important in labor supply. Many young workers born during the postwar period entered the labor market. With a tight market and low skill requirements, members of this group were available for many semi-skilled production line positions which may not have

been entirely to their liking. The sudden change in age composition and labor supply may account for part of this shift. Still another factor, somewhat related, is that in the tight market job information was diffused more widely to a workforce of increasing education and sophistication. This situation resulted in better knowledge of alternative opportunities and made it possible for the worker to behave more like the classical economic man. Combined with disillusionment of the young, job satisfaction among production employees may also have declined. As the labor market slackened in 1969 and 1970 the production worker effect became less important, as is borne out by the coefficients in table 3. Even in a very slack labor market the greater propensity of the production workers to quit remained, indicating the presence of a shift in the basic pattern of manufacturing quit behavior.

Finally, we come to the question of seasonality. As our beta coefficients indicate, it is the least important of our variables and proves to be significant only in the years when the manufacturing business cycle is at a peak (1959, 1966, 1969). This fact suggests that seasonality becomes an important factor only when jobs and alternative opportunities are plentiful.

The combined effects of these trends and shifts in the individual variables are manifested in differences among the various equations. We tested all pairs of regression equations based on Chow's test for differences between pairs of equations.<sup>7</sup> We noted that there are no significant differences among equations which are separated by 1 or 2 years. There are no significant differences in the quit experience among the 15 pairs of equations preceding 1965, and there are only two significant differences among the pairs which lie entirely in the latter half of the period. Of the remaining 36 pairs of equations that span both subperiods, however, there are only three which do not exhibit a significant difference in quit experience, and these are separated in time by 1 or 2 years. We can safely conclude, therefore, that the changes in the effects of the individual variables resulted in a sudden, dramatic shift in the overall basis for the interindustry quit rate variation in the middle of the last decade.

### Summary and conclusions

We have viewed voluntary separations in American manufacturing industries from three different perspectives: the properties of the average quit rate

for all manufacturing which make it a good economic indicator, the variations in the quit rate through time and the sources of these variations, and the differences in quit rates among industries and the changing bases for these differences. Through these analyses we have obtained several results which should be helpful in the examination of the quit rate itself, the functioning of the labor market, and the economic situation as a whole.

- The total manufacturing quit rate is a statistically reliable and well behaved series. Preliminary estimates are revised only rarely and only in the most unusual cases does this revision exceed 0.1 of a percentage point. The seasonally adjusted series is quite smooth and serves as a reasonably reliable economic indicator.

- Workers are very conscious of job security and can have their confidence easily shaken, while restoration of that confidence is quite difficult. As a result, the changes in the quit rate may precede aggregate economic activity by as much as five quarters during periods of prosperity, but remain quite close to movements in the total economy during periods of slowed economic activity. Worker assessment of job security seems to be built largely on the behavior of the labor market during the past two quarters or so, with extra weight being given to recent adverse developments. The variations in hiring among industries explains some of the variation in quits, although this effect has been declining in recent years, with the exception of recession years. This result suggests that a worker draws his clues to the labor market situation not only from the closest period in time but also from the situation that exists in the plant and industry in which he is employed. The decline in the importance of job security in the interindustry variations suggests that, with time, the worker's horizons are broadening and he keys his behavior to wider economic occurrences, although there is some reversion to the most immediate clues during times of uncertainty and insecurity.

- The quit rate may be the best summary measure of manufacturing workers' attitudes, which in turn make an important contribution to aggregate demand and the course of the total economy. It is possible that the observed correlation of quits and future aggregate economic activity arises from the fact that an uncertain worker is a cautious consumer. Such a dynamic of aggregate demand suggests that the public policy of creating jobs in time of slack economic activity will do more than just increase aggregate



demand through the usual accelerator-multiplier principles: it will also serve to restore the confidence of the worker as consumer and thereby increase aggregate demand in a shorter period of time.

● Through time, the average worker has based his decision to quit on different factors, and the importance he has attributed to each of them has been changing. But he seems to have retained essentially the same risk-taking posture which is modified only

by changes in the availability of jobs. The absence of a secular decline in the quit rate, the increasing importance of earnings levels in quit decisions, and the sudden emergence of the production worker's greater propensity to quit, all suggest that there are no structural shifts taking place in the economy which would impede the mobility of labor. The data on women, however, suggest that there still remain some structural deficiencies in the labor supply process. □

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FOOTNOTES

<sup>1</sup> Geoffrey H. Moore and Julius Shiskin, *Indicators of Business Expansions and Contractions* (New York, Columbia University Press, 1967).

<sup>2</sup> For example: Ewan Clague, "Long-Term Trends in Quit Rates," *Employment and Earnings*, December 1956, pp. iii-ix; Arthur Ross, "Do We Have a New Industrial Feudalism?," *The American Economic Review*, December 1958, pp. 903-920; John E. Parker and John F. Burton, Jr., "Voluntary Labor Mobility in the U. S. Manufacturing Sector," *Proceedings of the Twentieth Annual Winter Meeting of the Industrial Research Association*, pp. 61-70; John H. Pencavel, *An Analysis of the Quit Rate in American Manufacturing Industry* (Princeton, Industrial Relations Section, Princeton University, 1970).

<sup>3</sup> This type of formulation has been suggested, in a somewhat different context, by Lester C. Thurow, "The Changing Nature of Unemployment," *Review of Economics and Statistics*, May 1965, pp. 137-149.

<sup>4</sup> A detailed discussion of this method is presented in *The BLS Seasonal Factor Method*, which is available upon request at the Bureau of Labor Statistics.

<sup>5</sup> In the Pencavel model (equation IA) the beta coefficient for the earnings variable was  $-0.428$ , for the female ratio  $0.227$ , and for the hiring variable (accessions lagged)  $0.321$ . The  $R^2$  value for this equation is  $0.778$ . His equation also contained a significant unionization variable and an insignificant one for earnings variability. (See Pencavel, *op. cit.*, p. 21.)

<sup>6</sup> The marriage squeeze occurs when there is an abundance of women of marriageable age over men of marriageable age. See *Current Population Reports*, Series P-25, No. 388, U.S. Bureau of the Census, for a more detailed explanation.

<sup>7</sup> G. C. Chow, "Tests for Equality Between Sets of Coefficients in Two Linear Regressions," *Econometrica*, July 1960, pp. 591-605. The test outlined by Chow uses the F-ratio. The numerator is the difference between the sum of squared residuals from the regression of the pooled data less the sum of the squared residuals for the individual regressions. The denominator is the latter sum. Both numerator and denominator are adjusted for degrees of freedom.

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A note on communications

The *Monthly Labor Review* welcomes communications that supplement, challenge, or expand on research published in its pages. To be considered for publication, communications should be factual and analytical, not polemical in tone.

Communications should be addressed to the Editor-in-Chief, *Monthly Labor Review*, Bureau of Labor Statistics, U.S. Department of Labor, Washington, D.C. 20212.

# Educational attainment of workers, March 1972

Special Labor Force Report shows that the proportion of workers with 12 years of school continues to increase

WILLIAM V. DEUTERMANN

SINCE the end of World War II, the American worker who has had at least 4 years of high school has become the rule rather than the exception, and his numbers are steadily growing. According to the most recent survey on educational attainment taken by the Bureau of the Census in March 1972,<sup>1</sup> the proportion of 18- to 64-year-old workers who have completed at least 4 years of high school has more than doubled in the last 30 years—from 32 to 69 percent. Included in this group are workers with college degrees who represented less than 6 percent of the 18- to 64-year-old labor force in April 1940 and about 14 percent in March 1972. (See table 1.)

In 1972, for the first time, educational attainment data are available for workers 16 years old and over, instead of those 18 and over described in previous reports.<sup>2</sup> As shown in table 2, the inclusion of 16- and 17-year-olds had little effect on the educational distribution of the labor force, with the exception of those workers with 1 to 3 years of high school. In the civilian labor force, for example, the proportion with 1 to 3 years of high school is 19.2 percent for those 16 and over and 16.6 percent among those 18 years old and over. This effect stems, of course, from the fact that about 82 percent of the 3 million 16- and 17-year-old workers are still in high school,<sup>3</sup> whereas most persons 18 years old and over have had more than 3 years of high school.

The traditional American belief that education is essential to achievement of upward social mobility and the rising expectations of employers faced with an increasingly better educated work force are powerful forces that have influenced both jobseekers and workers to stay in school. As more young people delay entering the labor force until after high school graduation, employers have come to view the high

school diploma as a requirement for many occupations where an elementary school certificate was considered adequate 30 years ago. The general upgrading in workers' education over the past decade has increased the level of education within every major occupational group while the occupational distribution of workers has been largely unaffected.<sup>4</sup>

## Education and employment

*Men.* Among working men 18 years old and over, the proportion of high school graduates reached 65.9 percent in 1972, including almost 30 percent who had at least 1 year of college. In the past decade, this proportion has risen by 15.1 percentage points for

Table 1. Educational attainment of the civilian labor force 18 to 64 years old, by age and sex, selected years, 1940-72

Age group and date	Percent completing 4 years of high school or more			Percent completing 4 years of college or more		
	Both sexes	Men	Women	Both sexes	Men	Women
18 to 64 years:						
April 1940.....	32.0	27.8	44.0	5.7	5.4	6.5
October 1952.....	44.5	41.2	51.4	8.1	8.3	7.7
March 1962.....	54.9	51.9	60.6	11.1	11.9	9.7
March 1972.....	69.2	67.0	72.7	14.1	15.6	11.8
18 to 34 years:						
April 1940.....	40.5	35.5	51.3	5.4	5.2	5.9
October 1952.....	55.8	51.5	63.8	8.1	8.7	7.1
March 1962.....	66.1	63.0	72.0	11.7	12.8	9.5
March 1972.....	79.1	76.8	82.5	15.0	15.7	14.0
35 to 44 years:						
April 1940.....	27.3	24.6	36.3	6.7	6.4	7.9
October 1952.....	46.0	44.4	49.4	8.8	9.0	8.4
March 1962.....	57.4	55.4	61.4	12.7	14.4	9.5
March 1972.....	68.0	67.0	69.7	16.0	19.2	10.5
45 to 64 years:						
April 1940.....	21.6	19.5	30.8	5.5	5.1	7.2
October 1952.....	30.5	28.2	36.0	7.5	7.3	8.0
March 1962.....	42.6	39.1	49.2	9.6	9.3	10.0
March 1972.....	58.1	55.4	62.3	12.0	13.4	9.8

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**Table 2. Comparison of educational attainment of the labor force of persons 16 years old and over and those 18 years old and over, March 1972**

[Percent distribution]

Educational attainment	Civilian noninstitutional population		Civilian labor force		Employed		Unemployed		Not in labor force	
	16 years and over	18 years and over	16 years and over	18 years and over	16 years and over	18 years and over	16 years and over	18 years and over	16 years and over	18 years and over
<b>TOTAL</b>										
In thousands.....	142,572	134,583	85,410	82,459	80,195	77,859	5,215	4,600	57,162	52,124
Percent.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>ELEMENTARY</b>										
Less than 5 years.....	3.7	3.9	2.0	2.1	2.1	2.1	2.0	2.3	6.3	6.8
5 to 7 years.....	6.8	7.1	5.1	5.2	5.0	5.1	5.8	6.3	9.5	10.2
8 years.....	10.1	10.3	7.8	7.9	7.7	7.8	8.8	8.8	13.6	14.2
<b>HIGH SCHOOL</b>										
1 to 3 years.....	21.3	17.3	19.2	16.6	18.4	16.2	31.7	24.4	24.6	18.5
4 years.....	35.0	37.0	38.7	40.0	39.0	40.1	35.2	39.7	29.4	32.1
<b>COLLEGE</b>										
1 to 3 years.....	12.5	13.2	13.6	14.0	13.7	14.1	10.9	12.3	10.8	11.8
4 years.....	6.6	7.0	8.2	8.5	8.4	8.7	4.1	4.7	4.2	4.6
5 years or more.....	3.9	4.1	5.4	5.6	5.7	5.8	1.4	1.6	1.6	1.8

high school graduates, including a 7.7-percentage point rise for those with some college. However, the median educational attainment of men was 12.4 years in 1972, only a slight gain over 1962 when men had a median of 12.0 years of school. The relative stability of the median educational attainment reflects the tendency toward a concentration of men about the high school graduation level, which in turn tends to make the median a particularly insensitive measure of change. In contrast, the decade 1952 to 1962 saw the median educational attainment of working men increase from 10.4 to 12.0 years, as the proportion of high school graduates rose from 39.9 to 50.8 percent.

The tendency toward a median of slightly over 12 years of school was already apparent for some age groups in the late 1940's and has continued since. Thus, while the median education of working men in 1952 was only 10.4 years, that of 25- to 34-year-old working men was 12.1 years and had risen only .6 year by 1972. The proportion of 25- to 34-year-olds with 4 years of high school or more had risen from 53.9 to 77.8 percent over the same period.

*Working women.* The median educational attainment of both men and women in the civilian labor force 16 years old and over was 12.4 years in 1972. The proportion of women with high school educations or

better, however, was 69.2 percent compared with 63.8 percent of the men. Although a greater proportion of the men had graduated from college, 15 percent compared with 11.4 percent of the women, the difference was not enough to raise the median education of men above that of women.

For both men and women, the labor force participation rate is affected by the level of schooling

**Table 3. Labor force participation rates of men and women 18 years old and over, by age and educational attainment, March 1972**

Sex and age	Less than 4 years of high school	4 years of high school	1 to 3 years of college	4 or more years of college
<b>MEN</b>				
18-24.....	75.7	83.3	64.9	81.4
25-34.....	73.7	97.7	94.1	95.5
35-44.....	93.2	97.5	97.3	99.0
45-54.....	90.3	95.5	96.0	97.2
55-64.....	75.4	86.4	88.3	89.3
65 and over.....	21.4	29.6	35.2	37.7
<b>WOMEN</b>				
18-24.....	38.5	60.0	54.7	80.5
25-34.....	39.7	47.3	49.9	61.5
35-44.....	48.3	54.3	52.6	61.1
45-54.....	47.0	58.0	59.0	69.4
55-64.....	36.3	47.8	47.6	60.9
65 and over.....	7.7	11.5	11.8	19.4

NOTE: The labor force participation rate is the percent of the civilian noninstitutional population in the labor force.



**Table 4. Labor force participation rates of married women (husband present) by age, presence of children, and educational attainment, March 1968 and 1972**

Age of wife and presence of children	Total		8 years of school		4 years of high school		4 years of college or more	
	1972	1968	1972	1968	1972	1968	1972	1968
Total, 18-44 years..	45.4	40.7	38.2	38.9	45.9	40.9	57.2	49.0
With no children under 6 years.....	58.8	54.1	45.6	49.6	59.7	55.2	75.9	63.6
18 to 24.....	71.3	65.2	( <sup>1</sup> )	( <sup>1</sup> )	73.1	68.5	86.2	83.0
25 to 34.....	60.4	55.9	39.9	46.2	60.2	55.5	82.9	72.2
35 to 44.....	54.1	50.6	47.7	51.0	55.0	51.3	63.3	52.4
With children under 6 years.....	30.2	27.7	27.4	27.0	30.7	27.0	34.0	32.8
18 to 24.....	31.8	29.4	25.8	29.6	33.9	30.4	39.8	( <sup>1</sup> )
25 to 34.....	29.8	27.4	31.7	25.8	29.0	26.0	33.3	30.0
35 to 44.....	28.8	26.6	22.1	26.1	30.0	25.1	34.2	35.1

<sup>1</sup> Percent not shown when base is less than 75,000.

NOTE: The labor force participation rate is the percent of the civilian noninstitutional population in the labor force.

achieved—those with higher educational attainment being more likely to work. The effect of education is more pronounced among women, however. (See table 3.) In the youngest group shown, women with

4 or more years of college were twice as likely to be in the labor force as women with less than 4 years of high school.

Other factors affecting the labor force rates of women are marriage and children. As table 4 shows, the participation rates of women with children under 6 years old are significantly lower than are those of married women 18 to 44 years old without young children. However, for all married women, including mothers of young children, labor force participation rates are much higher for those with more years of schooling. Moreover, the changes in these rates since 1968 show the effect of both education and child-bearing on married women's labor force participation through time. While the rates for women with only an elementary school education have remained the same for mothers of young children and declined for those with no children under 6, those of more educated women have increased markedly, particularly among college educated wives with no young children.

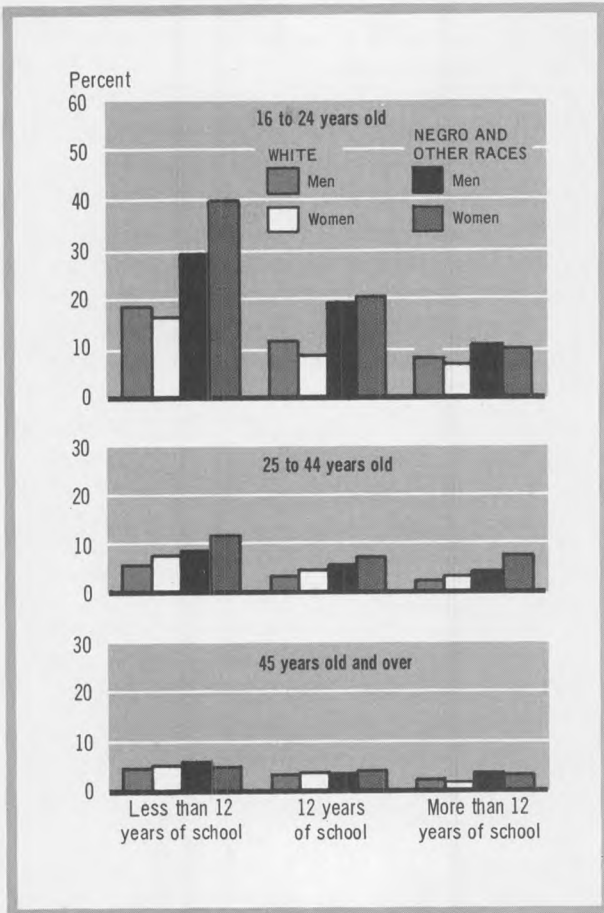
*Negro workers.* Negro and other minority workers <sup>5</sup> achieved a median of 12.0 years of education in

**Table 5. Educational attainment of workers age 18 and over, by race, selected years, 1952-72**

Years of school completed and date	Both sexes			Men			Women		
	Total	White	Negro and other	Total	White	Negro and other	Total	White	Negro and other
Percent of civilian labor force completing specified years of school									
Elementary—8 years or less:									
October 1952.....	37.9	34.9	66.5	41.2	38.7	69.5	31.0	26.5	62.3
March 1957.....	33.4	30.5	57.6	36.3	33.7	61.5	27.1	23.6	51.4
March 1962.....	27.0	24.7	45.2	29.6	27.2	50.5	21.8	19.5	37.6
March 1967.....	21.0	19.1	35.9	23.3	21.4	40.3	16.8	14.9	30.0
March 1972 <sup>1</sup> .....	14.9	13.7	24.7	17.0	15.7	28.7	11.6	10.4	19.6
High school—4 years or more:									
October 1952.....	43.3	46.1	17.4	39.9	42.1	15.1	50.6	55.1	20.4
March 1957.....	47.3	50.1	22.7	44.1	46.7	19.3	54.0	57.8	28.0
March 1962.....	53.8	56.6	31.5	50.8	53.5	27.3	59.4	62.7	37.6
March 1967.....	60.4	62.8	40.5	57.9	60.3	36.4	64.7	67.5	45.9
March 1972 <sup>1</sup> .....	65.9	67.9	49.7	63.8	65.8	45.7	69.2	71.3	54.8
College—4 years or more:									
October 1952.....	8.0	8.6	2.6	8.1	8.6	1.9	7.7	8.3	3.6
March 1957.....	9.1	9.8	3.5	9.6	10.3	2.6	8.3	8.8	4.7
March 1962.....	11.0	11.8	4.8	11.7	12.6	3.6	9.5	10.0	6.7
March 1967.....	12.0	12.8	5.8	13.2	14.1	5.3	9.9	10.4	6.4
March 1972 <sup>1</sup> .....	13.6	14.3	8.0	15.0	15.8	7.9	11.4	11.8	8.0
Median years of school completed									
October 1952.....	10.9	11.4	7.6	10.4	10.8	7.2	12.0	12.1	8.1
March 1957.....	11.6	12.1	8.4	11.1	11.5	8.0	12.1	12.2	8.9
March 1962.....	12.1	12.2	9.6	12.0	12.1	9.0	12.2	12.3	10.5
March 1967.....	12.3	12.3	10.8	12.2	12.3	10.2	12.3	12.4	11.5
March 1972 <sup>1</sup> .....	12.4	12.5	12.0	12.4	12.4	11.5	12.4	12.5	12.1

<sup>1</sup> Data are for 16-year-olds and over—see table 2.

**Chart 1. Unemployment rates by age, sex, race, and years of school completed, March 1972**



1972. The proportion with 4 years of high school or more reached 49.7 percent, including 8.0 percent who had completed 4 years or more of college. (See table 5.) Although these levels are still below the comparable statistics for whites, they reflect a very substantial long term improvement in Negro educational attainment, which has been augmented by increased educational opportunities in recent years. The median of 12 years is only .5 year below that of whites, compared with a difference of almost 4 years in 1952 when the median for Negro workers was 7.6 years.

In general, Negro men have less education than Negro women. Among the men, 45.7 percent of the labor force have at least a high school diploma, compared with 54.8 percent of the women. Although the difference has remained constant over the past 8 years, it may decrease, as it has for white workers, as older, less educated workers leave the labor force. The median age of Negro workers with an elemen-

tary school education or less is 49.0 years, compared with 36.5 years for the entire Negro labor force covering all levels of education.

The difference in median age of Negro and white workers at various educational levels was reported as follows:

	White	Negro and other
Total .....	38.5	36.5
Elementary: 8 years or less ...	50.8	49.0
High School: 1 to 3 years .....	36.6	35.0
4 years .....	37.0	31.3
College: 1 to 3 years .....	32.6	29.4
4 years or more .....	37.6	35.5

On average, Negro workers were younger than whites at every educational level, particularly Negroes with 4 years of high school who were over 5 years younger than their white counterparts. The difference in median age between Negro and white workers among the several educational levels reflects the recent upsurge in educational attainment among Negroes.

**Education and unemployment**

In March 1972, the average unemployed worker 16 years old and over had 12 years of school, almost a half year less than the median for the civilian labor force as a whole. In general, unemployment rates were higher for the less educated, the young, blacks, and women. Negroes, who made up about 11 percent of the population and of the labor force, constituted 18.6 percent of the unemployed, with young, less educated Negroes particularly hard hit. Chart 1 shows that, among 16- to 24-year-olds with a high school education or less, Negro workers had twice the unemployment rates of whites. In the central working ages, 25 to 54, the differences were not so pronounced, but at every educational level, women, particularly black women, fared worse than men.

The rising proportion of persons with 12 years of school or more has necessarily raised the educational attainment of the unemployed as well as of the employed. Nevertheless, the remaining gap between the median education levels of employed and unemployed workers demonstrates the continuing labor market advantages of workers of both sexes with 12 years of school or more:

	Employed	Unemployed
Both sexes .....	12.4	12.0
Male .....	12.4	11.9
Female .....	12.4	12.1

THE GENERAL UPGRADING in workers' education over the past decade has not been confined to occupations which require considerable formal training or education. In every major occupation group there has been a gain in educational attainment. These trends suggest a growing need for institutions offering specialized training and education beyond the high school level.<sup>6</sup> The community colleges represent a resource for providing specialized training at usually lower costs than the more traditional 4-year colleges or universities, and may be expected to give rise to further increases in the proportions of more educated young entrants to the labor force. □

—FOOTNOTES—

<sup>1</sup> This report is the 10th in a series on this subject. The most recent was published in the *Monthly Labor Review*, November 1971, pp. 30-35, and reprinted as Special Labor Force Report 140. Data on the educational attainment of the population are published by the Bureau of the Census in "Current Population Reports," Series P-20. Data relate to the civilian noninstitutional population 16 years old and

over (unless otherwise specified) in the week ending Mar. 18, 1972.

<sup>2</sup> In the past, 16- and 17-year-olds were not included in the survey due to the fact that the usual age of completion of public schooling is 18 years. The inclusion of 16- and 17-year-olds, however, will facilitate comparisons with other labor force data. In this report, data for those workers 16 years old and over will be used except when time series are discussed, as comparability with past surveys requires the use of data for those 18 years old and over.

<sup>3</sup> See Carl Rosenfeld and Kathryn Gover, "Employment of school age youth, October 1971," Special Labor Force Report 147, tables A and B.

<sup>4</sup> See William V. Deutermann, "Educational attainment of workers, March 1971," *Monthly Labor Review*, November 1971, pp. 30-35.

<sup>5</sup> Data for all persons other than white are used in the report to represent data for Negroes, since the latter constitute about 92 percent of all persons other than white in the United States.

<sup>6</sup> For a discussion of the role of community colleges and junior colleges, see Frank Newman et al., *Report on Higher Education* (Washington, U.S. Government Printing Office, 1971), pp. 57-61.

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### Grumbling about statistics

To grumble is one of the inalienable rights of a free people; and the American people have exercised their right to the full. To grumble over government statistics has been a favorite occupation since the First Census, and indulged in by all classes of people.

—JULIUS PARMALEE,

"The Statistical Work of the Federal Government—II,"  
*Yale Review*, February 1911, p. 384.

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Small cities as well as large  
now deal with unions  
or associations;  
contracts often feature  
some form of union security

RICHARD R. NELSON AND JAMES L. DOSTER

# City employee representation and bargaining policies

REPRESENTATION OF MUNICIPAL employees is no longer confined solely to major American cities. In fact, it encompasses a majority of the 2,064 municipalities studied, even towns of 10,000.<sup>1</sup> In total, more than three-fifths of the cities surveyed reported unions and associations within their jurisdictions. (See table 1.) These occurred in direct relation to city size. That is, all cities of 1 million or more reported employee organizations, more than 90 percent of cities having populations of one-quarter to 1 million, and over 80 percent of cities of 50,000 to one-quarter million. There was a significant drop in coverage among smaller cities but more than 50 percent noted the presence of organizations.

The growth of employee representation was helped in recent years by the passage of two kinds of enabling legislation. The first permitted cities to recognize unions and associations. The second permitted cities to engage in "meet and confer" and, in many cases, collective bargaining activities. Such legalization allowed organizations to become viable, rather than paper, units.

In the past, efforts to organize were directed toward large cities because of the concentration of workers. In recent years, the focus of organizing drives has shifted toward smaller towns. Aware of successes by unions and associations in large cities, employee associations in smaller towns have pressed for collective bargaining, in addition to their normal fraternal, social, and legislative activities, and have often been successful.

Most cities reporting unions and associations were in the East North Central and Middle Atlantic regions.<sup>2</sup> In both regions, the proportion of cities reporting unions and associations exceeded the national average. This was not unexpected, because

these States have strong traditions of unionism in the private sector. However, the highest proportions of cities reporting employee organizations were in New England and the Pacific States, where unions are also common in private industry. California also has a long history of dealing with public employee associations, many of which have now converted to collective bargaining representation.

## Representation heaviest in big cities

In terms of the number of city employees represented by unions and associations, large municipalities and the Middle Atlantic States dominate (table 1). For example, the 6 cities of 1 million or more account for almost half the employees represented (47.2 percent); and the 28 cities with populations of 500,000 or over are responsible for almost two-thirds of the total (64.1 percent). New York City alone reported almost 300,000 employees, or one-third of all such employees.

If New York City were excluded, the remaining top 5 cities would account for only 20 percent of organized employees, cities of 500,000 or more for 45.8 percent, and the Middle Atlantic region for only 16 percent. The largest number of represented employees would then be in cities of 500,000 to 999,999 and in the East North Central and Pacific States. Moreover, the proportion of employees represented in all cities would drop from 63.2 percent to 53.7 percent. Similarly, the proportion of employees in cities of 1 million or more and in the Middle Atlantic States would fall. New York City exerted an especially strong upward pressure on these rates because it reported almost total organization (96.7 percent).

City collective bargaining relationships are characterized by a multiplicity of employee organizations. Of the 1,302 cities studied, only one-quarter dealt with only one union or association, and about the

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same proportion dealt with 2 unions or 2 associations, or one of each. The proportion of represented employees involved in these relatively unfragmented relationships was small (2 percent in one organization and 5 percent in two). About half the cities (49.9 percent) were involved in more complex relationships.

The relatively unfragmented bargaining relationships were concentrated largely in cities of 25,000 or less, and usually involved a citywide organization or an organization for the protective services, typically the firefighters, and another for remaining city employees. The simplicity of the relationship was possible because of the small number of employees. On the average, for example, each city with one organization reported 53 represented employees, and each city with two organizations, 133 employees.

On the other hand, the large number of employees in major cities seems to result in a more fragmented bargaining relationship, because what may be of great importance to employees in one city department may not be equally significant to employees in another. In addition, unions compete as they strive to organize the large pools of workers. Cities reporting five organizations averaged 1,707 represented employees, and cities with six or more organizations

(excluding New York City) reported an average of 9,869.

City management is most likely to deal with both unions and associations, rather than exclusively with one or the other (table 2).

For the study as a whole, unions had the edge over associations in representation (60.0 percent of all employees represented). Again, the data were affected by New York City totals. More than 207,000 New York employees were represented by AFL-CIO affiliates and the Teamsters (Ind.) and just under 90,000 by associations. If New York City were excluded, the ratio of AFL-CIO to association representation would drop from 60 percent-40 percent to 55 percent-45 percent.

The American Federation of State, County and Municipal Employees (AFL-CIO) and the International Association of Fire Fighters (AFL-CIO) represented the largest number of workers. The former accounted for 30 percent of the represented employees and the latter 12 percent. The State, County and Municipal Employees were mostly in cities of 500,000 or more, while the firefighters were more evenly dispersed. The difference in these two distributions results from the greater employment levels of larger cities in non-protective services among which

Table 1. Employee representation in municipalities, by size and region, 1970-71<sup>1</sup>

City size and region	Cities	Employment	Cities reporting unions and/or associations						Cities reporting no unions and/or associations			
			Cities	Percent	Employment				Cities	Percent	Employment	Percent
					Represented	Percent	Unrepresented	Percent				
Total.....	2,064	1,393,241	1,302	63.1	880,579	63.2	351,719	25.2	762	36.9	160,943	11.6
<b>CITY SIZE</b>												
1,000,000 and over.....	6	462,185	6	100.0	415,635	89.9	46,550	10.1				
500,000-999,999.....	23	232,531	22	95.6	148,752	64.0	78,779	33.9	1	4.3	5,000	2.1
250,000-499,999.....	26	102,849	25	96.1	57,258	55.7	41,591	40.4	1	3.8	4,000	3.9
100,000-249,999.....	96	154,164	82	85.4	75,065	48.7	52,786	34.2	14	14.6	26,313	17.1
50,000-99,999.....	244	143,510	212	86.9	79,839	55.6	48,513	33.8	32	13.1	15,158	10.6
25,000-49,999.....	498	144,797	361	72.5	65,649	45.3	45,051	31.1	137	27.5	34,097	23.5
10,000-24,999.....	1,171	153,205	594	50.7	38,381	25.1	38,449	25.1	577	49.3	76,375	49.9
<b>REGION</b>												
New England.....	201	107,791	182	90.5	69,457	64.4	35,024	32.5	19	9.5	3,310	3.1
Middle Atlantic.....	389	448,740	266	68.4	390,369	87.0	46,102	10.3	123	31.6	12,269	2.7
East North Central.....	432	216,985	314	72.7	143,258	66.0	56,520	26.0	118	27.3	17,207	7.9
West North Central.....	178	67,179	106	59.6	24,736	36.8	28,644	42.6	72	40.4	13,799	20.5
South Atlantic.....	223	183,012	69	30.9	62,604	34.2	57,750	31.6	154	69.1	62,658	34.2
East South Central.....	97	50,781	37	38.1	15,111	29.7	22,276	43.7	60	61.9	13,394	26.4
West South Central.....	199	105,127	63	31.7	29,512	28.1	46,705	44.4	136	68.3	28,910	27.5
Mountain.....	86	39,153	51	59.3	15,502	39.6	18,764	49.2	35	40.7	4,887	12.5
Pacific.....	259	174,473	214	82.6	130,030	74.5	39,934	22.9	45	17.4	4,509	2.6

<sup>1</sup> Data in all tables are estimates, accounting for nonrespondents.

Table 2. Employee representation in municipalities, by types of organization, 1970-71

Organizations present	Cities with organizations		City size													
			1,000,000 and over		500,000-999,999		250,000-499,999		100,000-249,999		50,000-99,999		25,000-49,999		10,000-24,999	
	Cities	Em- ployees repre- sented	Cities	Em- ployees repre- sented	Cities	Em- ployees repre- sented	Cities	Em- ployees repre- sented	Cities	Em- ployees repre- sented	Cities	Em- ployees repre- sented	Cities	Em- ployees repre- sented	Cities	Em- ployees repre- sented
Total.....	1,302	880,579	6	415,635	22	148,752	25	57,258	82	75,065	212	79,839	361	65,649	594	38,381
Unions only.....	312	35,153			1	2,050	3	3,013	12	6,910	34	8,562	75	6,142	187	8,476
1 union.....	179	9,201					1	413	7	2,053	14	1,538	41	1,941	116	3,256
2 unions.....	98	17,120			1	2,050	2	2,600	4	2,810	12	3,452	30	3,529	49	2,679
3 unions or more.....	35	8,832							1	2,047	8	3,572	4	672	22	2,541
Associations only.....	281	36,600							6	5,076	39	11,628	75	10,448	161	9,448
1 association.....	155	8,403							1	458	10	1,098	40	3,462	104	3,385
2 associations.....	48	5,483							1	605	6	1,209	15	1,842	26	1,827
3 associations or more.....	78	22,714							4	4,013	23	9,321	20	5,144	31	4,236
Unions and associations.....	709	808,826	6	415,635	21	146,702	22	54,245	64	63,079	139	59,649	211	49,059	246	20,457
1 union, 1 association.....	173	19,957			1	2,800	1	1,039	8	2,817	23	4,180	43	4,144	97	4,977
2 unions, 1 association.....	243	99,550	1	27,313	3	7,903	5	6,961	19	15,471	42	16,620	78	16,274	95	9,008
2 associations, 1 union.....	90	23,129					1	1,283	4	2,705	15	5,882	36	9,764	34	3,495
2 unions, 2 associations.....	56	34,470			2	7,097			10	13,079	19	8,125	19	5,385	6	784
3 unions, 1 association.....	44	37,259			1	3,775	5	12,363	9	8,181	16	8,965	11	3,564	2	411
3 unions, 2 associations.....	29	64,284			5	31,988	6	18,353	5	7,725	8	5,257	3	648	2	313
3 associations, 1 union.....	28	16,107	1	6,426					3	2,788	4	1,756	10	3,668	10	1,469
3 associations, 2 unions.....	26	29,606			2	5,719	2	8,203	4	4,998	8	5,474	10	5,212		
3 unions, 3 associations or more.....	20	484,464	4	381,896	7	87,420	2	6,043	2	5,315	4	3,390	1	400		
Total.....	11,302	880,579	6	415,635	22	148,752	25	57,258	82	75,065	212	79,839	361	65,649	594	38,381
AFL-CIO.....	971	480,472	6	229,405	22	94,048	25	27,882	75	41,998	173	41,657	271	28,024	399	17,458
Selected major unions:																
Service Employees.....	57	23,524	4	8,582	3	8,314	4	1,101	6	2,029	23	2,887	4	262	13	349
Electrical Workers.....	93	10,600	2	4,659	7	1,566	6	175	10	1,209	16	667	25	1,543	27	781
Fire Fighters.....	757	109,203	5	23,203	21	22,267	23	12,275	67	16,318	157	17,091	216	12,283	268	5,766
State, County, Muni- cipal Employees.....	489	269,891	6	153,589	18	47,180	19	11,555	39	19,057	99	19,122	126	11,482	182	7,906
Transport Workers.....	6	34,546	1	30,293	1	4,086			1	71	3	96				
Independent unions.....	183	48,117	3	28,859	9	3,057	7	4,474	19	3,668	19	3,086	50	2,755	76	2,218
Selected major unions: Teamsters.....	164	44,413	3	28,859	9	3,057	6	2,723	19	3,668	17	1,886	45	2,399	65	1,821
AFL-CIO and Independent.....	1	57									1	57				
Associations.....	990	351,933	6	157,371	21	51,647	22	24,902	70	29,399	178	35,039	286	34,870	407	18,705
Selected major asso- ciations:																
Fraternal Order of Police.....	415	49,850	1	7,663	12	12,645	11	5,011	36	8,088	68	6,563	107	6,039	180	3,841
Other police association.....	486	90,831	4	37,895	10	16,415	13	7,248	31	6,832	96	8,861	151	8,709	181	4,871
Fire associations.....	148	11,387	1	1,792			1	440	8	1,710	31	2,874	48	3,039	59	1,532
Combination police and fire associations.....	9	28,657	2	28,289									1	74	6	294
Other city employee associations:.....	388	158,291	4	76,620	14	20,480	9	12,192	31	10,804	89	16,515	121	14,475	120	7,205
Local, citywide.....	200	32,294					1	375	9	4,317	48	10,596	71	11,464	71	5,542
Local, specific employee groups.....	188	125,997	4	76,620	14	20,480	8	11,817	22	6,487	41	5,919	50	3,011	49	1,663

<sup>1</sup> Cities data in vertical columns are nonadditive.

the State, County and Municipal Employees has its major jurisdiction.

Associations were clustered mainly in police protective services. However, they were clearly fragmented, in that various police associations out-

stripped the national Fraternal Order of Police in employee representation, 90,831 to 49,850. Citywide associations were located to a great extent in smaller cities and specific employee groups in larger municipalities.



### Three-fifths report agreements

Three-fifths of the cities with unions and associations reported collective bargaining agreements in effect at the time the questionnaire was prepared (table 3). It should be noted, however, that collective bargaining activity is more widespread than the number of agreements indicates. In part, this results from the absence of specific legislation authorizing written agreements with public employee unions. So many cities bargain with employee organizations but promulgate the results in personnel regulations or executive orders without any reference to the participation of employee organizations.

All six cities with populations of 1 million or more reported that some employees were represented by unions and associations. Yet, in only three (New York, Detroit, and Philadelphia) were agreements in effect. Of the remainder, Houston is in a State that has no law permitting collective bargaining for public employees, although there is a "meet and confer" statute. Los Angeles operates under a "meet and confer" statute, namely, the Myers-Milias-Brown Act of 1968 as amended.<sup>3</sup> The sixth city, Chicago, pays prevailing area wage rates but has no statutory authority to bargain.

The proportion of cities reporting agreements generally was higher for the smaller municipalities than for the larger. However, these data must be read cautiously. In larger population size groups, there are

fewer cities, and therefore a larger impact on percentages occurs when a city reports the presence or absence of agreements. Regional data, in which larger cities are more widely dispersed, avoid these broad swings. Regional data also tend to reflect with some degree of accuracy known attitudes and legislative situations which affect city collective bargaining. For example, the proportion of cities with agreements is highest in New England, Middle Atlantic, and East North Central States, and lowest in the South Atlantic, East South Central, and West South Central States. This conforms to other findings about those States where unions and collective bargaining have been accepted or resisted in private and public sectors.

The most complicated bargaining situations existed in Detroit, which listed 60 agreements, and New York City, where the Office of Collective Bargaining reported 237 agreements. In contrast, Philadelphia reported only three agreements—one each with the State, County and Municipal Employees, Fire Fighters, and Fraternal Order of Police.

Agreements per city averaged 3.2. Excluding the largest cities just referred to, the average ranged from 2.2 to 7.9 agreements. Averages, of course, conceal the wide variations which may exist within groups. For example, Milwaukee, in the size group averaging 7.9 agreements, reported 18 contracts, including three with the Electrical Workers (IBEW); two each with the State, County and Municipal Employees, Operating Engineers, and Fire Fighters; and single agreements with the Plumbers; Firemen and Oilers; Professional Policemen's Protective Association; Laborers; and Teamsters. Additional agreements were in effect with the Technicians, Engineers and Architects of Milwaukee; the Staff Nurses' Council; the Association of Scientific Personnel; and the Association of Physicians and Dentists. On a regional basis, the range for the average number of agreements per city narrowed substantially, with most regions clustering around the 3.2 average for all cities, in effect confirming that the key variable is city size, rather than region.

Two employee organizations—the State, County and Municipal Employees (600) and the Fire Fighters (441)—accounted for over two-fifths of the estimated 2,518 collective bargaining agreements. The only other organizations with more than 100 agreements were the Fraternal Order of Police (192) and the Teamsters (184). Together, the four organizations represented over half of all agreements. The

**Table 3. Collective bargaining agreements, 1970-71**

City size and region	All cities in study	Cities with organizations	Cities with agreements	Number of agreements	Average number of agreements per city <sup>1</sup>
Total.....	2,064	1,302	790	2,518	3.2
<b>CITY SIZE</b>					
1,000,000 and over.....	6	6	3	300	100.0
500,000-999,999.....	23	22	14	111	7.9
250,000-499,999.....	26	25	12	66	5.5
100,000-249,999.....	96	82	45	187	4.2
50,000-99,999.....	244	212	138	449	3.3
25,000-49,999.....	498	361	220	619	2.8
10,000-24,999.....	1,171	594	358	786	2.2
<b>REGION</b>					
New England.....	201	182	170	560	3.3
Middle Atlantic.....	389	266	194	717	3.7
East North Central.....	432	314	218	679	3.1
West North Central.....	178	106	54	115	2.1
South Atlantic.....	223	69	17	61	3.6
East South Central.....	97	37	10	31	3.1
West South Central.....	199	63	16	35	2.2
Mountain.....	86	51	23	38	1.7
Pacific.....	259	214	88	282	3.2

<sup>1</sup> Per city reporting agreements.

remaining agreements were widely dispersed among a variety of unions and associations.

### Prevalence of union security

Three forms of union security—the union shop, maintenance of membership, and agency shop—appeared in municipal labor agreements. Under the union shop, all employees who are not already members of the employee organization at the time the agreement is signed, must join the union or association within a given time period, usually 30, 45, or 60 days. For study purposes, the definition of union shop includes the modified union shop, whereby present employees are not obligated to join, but all new hires must. Maintenance of membership procedures obligate city employees who already are members to continue their membership, usually for the duration of the contract, but nonmembers do not have to join. Under the agency shop, nonmembers of the employee organization are required to tender amounts of money, usually the equivalent of dues, but they do not have to join. Consequently, they are not subject to the restraints and discipline that members undergo and are less likely to respond to appeals from the employee organization for unified action against management.

In total, 333 cities told the Bureau they had negotiated 942 agreements with union security provisions with some of the employee organizations with which they deal (see table 4). These municipalities represented over two-fifths of all cities that reported agreements in effect; again, cities below 50,000 inhabitants contained the bulk of the contracts with union security provisions, 624, or 66.2 percent; and the proportion of agreements in smaller cities that had union security provisions exceeded the average for all agreements.

Outside of the New England, Middle Atlantic and East North Central States, contracts with union security provisions were uncommon. In these three regions, 772 agreements with provisions were listed, or 82.0 percent of all reported union security arrangements. The number of union security provisions in the Middle Atlantic States was relatively high (153), but low as a proportion of all contracts in the region (21.3 percent), largely because New York City was reported to have no union security clauses in its agreements. If New York City were excluded, the ratio of contracts in the Middle Atlantic region having union security would rise to 32.1 percent, still below the average for all agreements. Among other regions, there was only a minor concentration in the Pacific States, with 73 agreements.

Table 4. Union security provisions in municipal agreements, by size and region, 1970-71

City size and region	Cities with organizations			Cities with union security provisions												
	Cities	Agreements	Employees represented	Total			Union shop			Maintenance of membership			Agency shop			
				Cities	Agreements	Employees represented	Cities	Agreements	Employees represented	Cities	Agreements	Employees represented	Cities	Agreements	Employees represented	
Total.....	1,302	2,518	880,579	333	942	140,940	149	358	53,199	141	360	40,036	69	224	47,705	
<b>CITY SIZE</b>																
1,000,000 and over.....	6	300	415,635	2	61	43,733	1	3	27,313	1	17	2,425	1	41	13,995	
500,000-999,999.....	22	111	148,752	5	50	31,058				3	24	15,533	2	26	15,525	
250,000-499,999.....	25	66	57,258	3	23	4,456	1	9	850	1	10	1,106	2	4	2,500	
100,000-249,999.....	82	187	75,065	17	54	18,120	7	24	8,475	5	11	3,639	7	19	6,006	
50,000-99,999.....	212	449	79,839	43	130	15,304	23	60	5,770	19	39	6,040	10	31	3,494	
25,000-49,999.....	361	619	65,649	98	259	17,047	45	110	6,865	33	78	4,956	28	71	5,226	
10,000-24,999.....	594	786	38,381	165	365	11,222	72	152	3,926	79	181	6,337	19	32	959	
<b>REGION</b>																
New England.....	182	560	69,457	79	256	32,105	45	132	10,366	32	78	6,283	10	46	15,456	
Middle Atlantic.....	266	717	390,369	77	153	43,107	34	64	30,150	33	71	10,282	10	18	2,675	
East North Central.....	314	679	143,258	114	363	48,747	38	90	6,434	45	119	14,161	45	154	28,152	
West North Central.....	106	115	24,736	10	22	386	4	4	88	6	18	298				
South Atlantic.....	69	61	62,604	8	20	2,436	4	12	1,454	4	8	982				
East South Central.....	37	31	15,111	4	13	1,510	4	12	910				1	1	600	
West South Central.....	63	35	29,512	11	25	1,885	2	3	493	8	20	1,042	1	2	350	
Mountain.....	51	38	15,502	7	17	765	6	12	664	4	5	101				
Pacific.....	214	282	130,030	23	73	9,999	12	29	2,640	9	41	6,887	2	3	472	

NOTE: Nonadditive. Some cities had agreements with and without union security provisions.

Employees coming under union security provisions constituted a small proportion of all represented employees. Even if New York City's employees were removed from the study, there would not be a substantial rise in the percentage of employees covered:

	<i>All represented employees</i>	<i>Covered by by union security provisions</i>	<i>Not covered by union security provisions</i>
Nationwide:			
Number . . . .	880,579	140,940	739,639
Percent . . . . .	100.0	16.0	84.0
Excluding New York City:			
Number . . . .	583,616	140,940	442,676
Percent . . . . .	100.0	24.1	75.9

Over half the represented employees were concentrated in seven cities having 500,000 inhabitants or more: Philadelphia, Detroit, Boston, Cleveland, Seattle, Buffalo, and Indianapolis. Philadelphia, Detroit, and Boston had the bulk of the employees. Most of the remainder were evenly distributed among cities having less than 250,000 inhabitants.

### Type of union security

Over two-fifths of the cities having union security arrangements had the union shop. The same proportion held for maintenance of membership, but only one-fifth of the cities had an agency shop.

The bulk of the cities reporting the union shop had populations below 100,000. Such cities accounted for all but 36 of the provisions. Major clusters of cities reporting the union shop appeared in the Middle Atlantic, East North Central, and most important, the New England States (table 4). Together, they represented more than three-quarters (78.5 percent) of the cities reporting such provisions. Over half the New England cities with union security arrangements had the union shop.

Cities reporting maintenance of membership provisions also tended to cluster in cities under 100,000 inhabitants and in the three northern, industrialized regions, as did cities reporting agency shops.

More employees were covered by agency shop provisions than by maintenance of membership, and the total covered by agency shop clauses was not far behind the number covered by the union shop. More than half the employees covered by the union shop (51.3 percent) were in cities of 1 million or more. The three northern regions accounted for the bulk of

the employees covered by union shop agreements, primarily because of Philadelphia, with over 27,000 employees.

Maintenance of membership contracts covered a strong concentration of employees in cities of 500,000 to 999,999, largely because of Cleveland, Buffalo, and Seattle.

Three-fifths (61.9 percent) of the employees covered by agency shop agreements were in the largest cities, particularly Detroit, Boston, and Indianapolis.

In terms of union coverage, the State, County and Municipal Employees negotiated more maintenance of membership provisions (183) than union shop or agency shop clauses (99 and 77, respectively). However, State, County and Municipal Employees union shop provisions covered the most employees (28,744), followed by agency shop arrangements (21,002), with maintenance of membership trailing (14,772). The Fire Fighters negotiated about the same number of maintenance of membership and union shop provisions (79 and 72) with little difference in worker coverage (6,755 and 7,263). Fewer agency shop clauses were negotiated by the Fire Fighters (39), but employee coverage differed little from the others (5,918). Other organizations which had negotiated union shop provisions were the Fraternal Order of Police and the Teamsters (Ind.), each with 29.

### Checkoff provisions

A checkoff system whereby the employer deducts union dues and, in many cases, other financial obligations to the union, may be granted unilaterally by a city in the absence of a collective bargaining agreement. Such a procedure can represent a substantial savings to employee organizations which otherwise would have to assign personnel to collection activities.

Of the 1,302 cities reporting employee organizations, 902 or 69.3 percent responded that one or more unions or associations had obtained checkoff rights (see table 5). Just over three-quarters of the represented employees in the study (75.4 percent) remitted dues to their organizations through a deduction from weekly, biweekly, or monthly pay.

Checkoff occurs once the employee has authorized the city to make the deduction from his salary and to turn it over to his union or association. Such authorizations may be valid unless specifically revoked or may provide an escape period, annually or at the termination of the collective bargaining agreement.



Table 5. Checkoff procedures in municipalities, 1970-71

Procedure	Cities	Employees
Cities reporting employee organizations.....	1,302	880,579
Cities reporting employees on checkoff and type of deduction	902	663,937
Single rate.....	882	414,210
Variable rate.....	140	240,481
Rate range (minimum-maximum).....	128	239,646
Percentage rate.....	12	835
Reference to checkoff; type of rate not available.....	6	9,246
No reference to checkoff.....	400	216,642

NOTE: Nonadditive. Cities may have more than one variety of checkoff with different employee organizations.

In most cases, there is a uniform deduction made for all employees. This was the case in 882 cities of the 902 with checkoff, and applied to 62.4 percent of the employees on checkoff.

The remainder were on variable rates, preponderantly situations providing a range of rates. Such ranges resulted from dues structures which were based upon the income of members. Dues checkoffs based upon a percentage of earnings similarly took into account level of individual earnings.<sup>4</sup>

Virtually all cities which reported negotiated union security arrangements also responded that they provided dues checkoff. Surprisingly, over three-fifths of

the cities having employee organizations but no union security arrangements nevertheless had dues checkoff:

	Cities with impasse provisions	Cities with checkoff provisions
Union shop .....	149	132
Maintenance of membership ..	141	129
Agency shop .....	69	69
No union security .....	969	597

### Negotiation impasse procedures

Only two States, Pennsylvania and Hawaii, specifically provide a limited right to strike in the public service. To achieve peaceful settlements, a number of States authorize the use of several impasse procedures, either alone or in combination. In many instances, these extend to local government levels, although there are counties and municipalities which have adopted their own resolutions and ordinances for expediting negotiations.

Half the cities reporting employee organizations said they used one or more contract impasse procedures (table 6). More significantly, over four-fifths (83 percent) of the cities with agreements had impasse procedures. The bulk of these cities followed

Table 6. Negotiation impasse procedures in municipalities by size and region, 1970-71

City size and region	Cities	Employees represented	Impasse procedures	Factfinding		Mediation		Advisory arbitration		Binding arbitration		Referral administration or legislative authority		Other <sup>1</sup>	
				Cities	Employees	Cities	Employees	Cities	Employees	Cities	Employees	Cities	Employees	Cities	Employees
Total.....	1,302	880,579	656	317	483,309	341	500,491	197	76,798	312	99,404	29	12,866	21	9,616
<b>CITY SIZE</b>															
1,000,000 and over.....	6	415,635	3	3	333,644	3	333,644	1	17,136	1	10,177				
500,000-999,999.....	22	148,752	10	5	59,264	7	69,937	6	25,296	6	29,098				
250,000-499,999.....	25	57,258	11	7	17,360	7	18,447	2	1,000	1	1,900	2	6,150	2	4,590
100,000-249,999.....	82	75,065	39	22	23,167	27	27,838	12	9,521	16	13,645	3	1,058	3	1,557
50,000-99,999.....	212	79,839	108	51	20,035	50	21,272	38	9,954	55	19,472	5	1,692	6	1,584
25,000-49,999.....	361	65,649	193	97	19,063	107	18,643	53	7,851	94	18,226	12	3,481	6	1,363
10,000-2,4999.....	594	38,381	292	132	10,776	140	10,710	89	6,040	139	6,886	7	485	4	522
<b>REGION</b>															
New England.....	182	69,457	151	74	33,735	54	31,052	46	12,002	108	32,046			6	1,580
Middle Atlantic.....	266	390,369	173	94	351,130	101	350,428	43	24,043	89	29,144	4	2,350	6	4,115
East North Central.....	314	143,258	160	81	50,652	90	59,944	39	5,805	86	19,099	4	466	1	293
West North Central.....	106	24,736	48	26	3,610	27	4,295	28	2,652	10	851			2	1,794
South Atlantic.....	69	62,604	12	6	31,589	3	30,421	8	27,389	3	10,978	1	3,787		
East South Central.....	37	15,111	5	2	292	2	292	5	610	2	292				
West South Central.....	63	29,512	8	3	718	5	490	2	650	1	380				
Mountain.....	51	15,502	17	6	934	4	734	6	369	7	534				
Pacific.....	214	130,030	82	25	10,649	55	22,835	20	3,278	6	6,080	20	6,263	6	1,834

<sup>1</sup> Includes 8 cities covering 6,170 employees which referred to some form of action by State Board, regulation, or law; 4 cities covering 536 employees had no specified procedures; 2 cities covering 1,529 employees referred to any method mutually agreed upon; 3 cities covering 600 employees referred to limited right to strike (Pa.); and 4 cities covering 781 employees referred to miscellaneous procedures such as unfair

labor practices charge leading to restraining order (failure to use impasse procedure), or local grievance procedure.

NOTE: Nonadditive. Agreements may contain more than one type of impasse procedure and different organizations within a city may have different impasse procedures.

patterns found in the survey of union security provisions in that they were small, having populations under 100,000, and were largely in the northern, industrialized regions of the New England, Middle Atlantic, and East North Central States. There was a smaller cluster in the Pacific Region.

As we know, factfinding involves an individual or group of individuals in the investigation, assembling, and reporting of facts in a labor dispute, sometimes with the authority to make recommendations for settlement. Mediation involves the attempt by a third party to help in negotiations or in the settlement of a dispute through advice or persuasion, short of dictating terms. Arbitration involves the submission of disputes for settlement by an impartial third party. The settlement can be advisory or it can be binding.

Of the three procedures, mediation and factfinding were somewhat more frequently available than arbitration and covered more employees. To a large degree, the prevalence of these two procedures could

be attributed to New York City, where more than 200,000 employees were covered. Even excluding New York City, factfinding and mediation would have larger coverage than arbitration and would have the largest concentration of employees in cities of 1 million or more and in the Middle Atlantic States.

In addition to mediation and factfinding, New York City, through its Office of Collective Bargaining, provides for a tripartite board to hold hearings, mediate, and secure arbitration, if necessary.

Just under two-fifths of the cities reported binding arbitration procedures; in about one-quarter, advisory arbitration could be used. Both binding and advisory arbitration covered substantial clusters of employees in cities of 500,000 or more and in cities in New England and the Middle Atlantic. While binding arbitration also covered a noticeable cluster in the East North Central States, the largest under advisory arbitration was in eight cities in the South Atlantic States. □

—FOOTNOTES—

<sup>1</sup> This article is part of the Bureau's series of studies of public sector labor-management relations. It deals specifically with the extent of organization, the number of negotiated agreements, union security and dues checkoff practices, and negotiation impasse procedures in municipalities. Data were obtained by means of a questionnaire mailed in late 1970 and early 1971 to municipal officials in all cities having a population of 10,000 or more according to the 1970 census. Excluded from the scope of this study were independent or special districts, such as transit authorities, separate boards of education, and bridge, port, or tunnel authorities. The results are limited, therefore, to situations in 1970-71 where the city was the direct employer. Questionnaires were mailed to 2,064 cities, and responses were returned by 1,320 or 64.0 percent. All cities but one having populations of 250,000 or more replied. Smaller cities answered at significantly lower rates, especially those having populations between 10,000 and 24,999, which represented over half the cities surveyed. The Bureau developed estimates for the full universe of 2,064 cities. Within each State, cities which returned questionnaires were matched to nonresponding cities with as close a population size as possible. The responding cities were then weighted to account for their nonresponding counterparts. To some degree, this weighting process may overstate the degree of organization since it is likely that responding cities as a group were somewhat more organized than nonresponding cities. However, followup correspondence with a 5-percent sample (41) of nonresponding cities, chosen on a regional

and city-size basis, indicated that such bias would be slight.

<sup>2</sup> The *East North Central* region consists of Ohio, Indiana, Illinois, Michigan, Wisconsin, and the *Middle Atlantic*; New York, New Jersey and Pennsylvania. Other regions: *New England*—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut; *West North Central*—Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas; *South Atlantic*—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida; *East South Central*—Kentucky, Tennessee, Alabama, Mississippi; *West South Central*—Arkansas, Louisiana, Oklahoma, Texas; *Mountain*—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada; and *Pacific*—Washington, Oregon, California, Alaska and Hawaii.

<sup>3</sup> California also passed the Winton Act of 1965 which provides "meet and confer" privileges for public school employees; however, the California Superior Court ruled in 1971 that the Act does not authorize schools to negotiate legally enforceable contracts.

<sup>4</sup> Taking into account the various methods of checkoff and the money rates of checkoff reported to the Bureau, it is estimated that roughly \$3 to \$3½ million are collected monthly by city management and transferred to employee organizations. This figure must be used with caution. At best, it is a very rough estimate, computed from single rates, averages, and midpoints of rate ranges and weighted by the number of employees for whom dues were checked off.

## Union Conventions



### AMERICAN FEDERATION OF GOVERNMENT EMPLOYEES 23D CONVENTION

DONALD L. BRENEMAN

THE 1,244 DELEGATES to the 23d biennial convention of the American Federation of Government Employees (AFL-CIO) achieved a measure of unity on several significant policy matters, but were deeply divided over other key issues. The meeting was held in Hollywood, Fla., August 21-25, 1972. Differences were greatest, first, over the eligibility of one national vice president to hold membership and high office in the union, and second, over a proposed increase in per capita taxes. Present officers were reelected, and the convention agreed on a legislative program directed towards the passage of a proposed labor-management relations bill and hammered out a policy for mergers with other unions.

#### Election of officers

On the second day of the convention, in a session lasting far into the early hours of the morning, the delegates overwhelmingly reelected John F. Griner to his sixth term as president over his principal opponent, National Vice President Joseph D. Gleason of the 2d District, 161,639 to 53,136. Mr. Gleason, in his campaign for the presidency, had condemned AFGE leadership for its "power-broker" politics and stressed the theme that "the AFGE must be given back to its owners, the dues-paying members." Trailing Mr. Gleason in the presidency race was Allen H. Kaplan of the 7th District, with 10,464 votes. Mr. Kaplan's platform, like Gleason's, stressed greater regional autonomy including the establishment of regional organizing staffs.

By wide margins, Clyde M. Webber was reelected to a fourth term as Executive Vice-President and

Douglas H. Kershaw to a second term as Secretary-Treasurer.

Following his unsuccessful bid for the presidency, Mr. Gleason's eligibility for AFGE membership and high office were questioned. Delegates charged Mr. Gleason with violation of Article VII, Section 1, and Article XII, Section 2(c) of the AFGE constitution, which, respectively, require that all officers be members of the union for a minimum of 3 years and list actions detrimental to the best interests of the union which are subject to discipline. Of all the issues the delegates confronted, none generated more heat than this particular one. If eligible, Mr. Gleason might have an increased chance of winning the presidency in 1974 when President Griner is expected to retire.

Mr. Gleason's eligibility had been reviewed by earlier national conventions. In 1968, he was not seated by the convention because he had not worked for the Government. He later won a court case which found him in compliance with the union requirements. The issue was again considered in 1970, but many delegates felt it had not been permanently resolved then.

After extensive debate, the delegates voted to refer all charges against Mr. Gleason to a factfinding committee which would report to the convention. The delegates approved by voice vote the committee's minority report, which rejected the charges against Mr. Gleason as unsubstantiated.

In other issues relating to elections, a proposal to establish a secret ballot for all future elections was approved, and a proposal to replace the 2-year term with a 4-year term was rejected. Most delegates felt that requiring a delegate's signature on ballots was an invasion of privacy. The majority of delegates also felt the 2-year term provided a better "check and balance" on elected officers and made them more accountable to the membership.

#### Per capita tax

To meet the increased demand for services by the membership and to offset rising operating costs, the

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Executive Council's Finance Committee recommended that the delegates approve a two-step revision of the per capita tax structure. The proposal as amended by the Constitution Committee provided for a 50-cent increase in the monthly per capita levy effective April 1, 1973, and for automatic per capita tax increases based on percentage pay gains made by Federal employees during a calendar year, beginning in April 1974.

Opposition to any form of a per capita tax increase was strong throughout almost all of the union's 15 districts. Delegates objecting to the increase argued that the costs incurred by the national office were too high relative to the services provided and that the per capita tax should be as consistent as possible with the earnings of the large number of members in the lower paying jobs.

After extensive debate and consideration of several similar substitute proposals, the delegates voted 647-367 against the per capita tax proposal. A motion was offered that no further discussion be made on the per capita tax until the 1974 convention. President Griner ruled this motion out of order. He stated that the matter was subject to reconsideration but not at that particular session, and adjourned the meeting, even though a division of the house had been called for. Many delegates, shocked at Griner's exercise of authority, formed caucuses to consider strategy for the following day.

The next day, after spokesmen from all levels of the union's structure pleaded for unity, the per capita tax again came up for consideration. After hearing several motions, the delegates voted 634-350 to defer any further consideration of the per capita tax increase to 1974. Rather than accepting a per capita tax increase, delegates decided to cut operating expenses by changing the union's official publication, the *Government Standard*, from a bimonthly to a monthly publication and to defer until 1974 all resolutions which would require an expenditure of funds. Among the many resolutions whose consideration was thus, in effect, postponed was one which had been supported by many women delegates, which called for the establishment of a women's department within the union to seek equal employment and training opportunities.

### Proposed legislation

The delegates and administration unanimously supported a resolution giving top priority in next

year's legislative program to a labor-management relations bill for Federal employees which the AFL-CIO will sponsor.

The proposed law would broaden the scope of collective bargaining, permit more widespread use of neutral parties in dispute settlements, and grant the union a voice in the interpretation of the law. The bill reflects widespread dissatisfaction over the scope of collective bargaining and the fear that the executive order establishing the right to organize and bargain collectively (Executive Order 11491) could possibly be revoked at any time.

Discussing the proposed law, delegates strongly advocated that the legislation also include a precise definition of a supervisor, a matter they found ambiguous now. Some delegates wanted a union security provision in which all employees within a bargaining unit would pay dues, whether or not a union member, but they left to the discretion of President Griner legislative provision for some form of union security.

At least four senators and representatives appearing before the convention supported greater employee participation in determining policies which affect them and backed effective representation of Government workers through employee organizations.

A resolution calling for a broad Federal labor-management relations law, which included the right to strike, was quickly defeated. After the vote, President Griner commented on the use of the strike by Federal employees, arguing that right now few members would support work stoppages and that, even if strikes were permitted, the union had no emergency strike fund to support such stoppages.

### Merger policy

As have other major unions, including the American Postal Workers Union and the National Association of Letter Carriers, the AFGE joined the merger movement.<sup>1</sup> The delegates overwhelmingly accepted the concept of a single union of Federal employees. They unanimously voted to seek merger with all unions representing Federal employees in order to obtain the most favorable legislation possible for Federal employees.

However, the delegates were strongly opposed to any merger with unions organizing outside the Federal service. They felt such a merger would require the union to disperse its energies, detracting the or-

ganization from its main goal, the representation of Federal employees. □

—FOOTNOTE—

<sup>1</sup> Both the Postal Workers and the Letter Carriers were studying merger with the Communications Workers of America (AFL-CIO) to form eventually one union for the communications industry.

## UNITED STEELWORKERS OF AMERICA CONVENTION

CARL A. BATLIN

ENDORSEMENT of a national presidential candidate, the question of productivity, and the problem of membership participation were among the major issues at the 16th biennial convention of the United Steelworkers of America. Almost 4,000 delegates met in Las Vegas, Nev., September 18–22 to consider nearly 2,500 policy resolutions and 500 constitutional changes. Elections for international officers, to be held in February 1973, became the backdrop against which the issues were debated.

### The state of the union

President I. W. Abel attempted to set the tone of the convention by emphasizing the Steelworkers' progress since their 1970 convention: "I can report to you that our union is today stronger than it has ever been in its entire history." Specifically, he pointed to the large gains made in 1971 contracts in the areas of wages and fringe benefits, in spite of difficult economic conditions. Moreover, he claimed, because of recent mergers with the United Stone and Allied Products Workers and District 50, Allied and Technical Workers, the USWA is now the second largest union in the world, with 1.5 million members.

President Abel then turned to problems which face the union. His pledge to lobby for legislation dealing with pension reform, better safety and health protection, and workmen's compensation improvements was received with enthusiasm, and resolutions later proposed in these areas were approved unani-

mously. However, there was also a vocal bloc of dissent, centering on other issues and coming from three organizations: RAFT (Rank and File Team), whose roots extend back to the Dues Protest movement of the early 1960's; the Ad Hoc Committee, a black caucus concerned for the past few years with achieving better black representation on the International Executive Board and among paid staff; and the Coalition of Concerned Steelworkers, which seeks to unite all union dissent under one political umbrella. All three organizations made their presence felt at the convention during floor debates and pledged to challenge Mr. Abel's leadership of the union in February.

### Endorsement of a presidential candidate

Conflict emerged early in the convention over a policy resolution urging the adoption of the AFL-CIO recommendation, announced by President George Meany shortly after the Democratic convention, calling for non-endorsement of either major candidate in the November presidential election. In support of the resolution, President Abel remarked, "We concluded that neither party is offering us the kind of candidate that has earned or would warrant our endorsement and support."

Stressing the election of pro-labor congressmen, President Abel finally carried the debate, as the non-endorsement resolution was adopted by a close voice vote. There were indications, however, that not all of the union's locals would maintain neutrality in the November election.

### Productivity-related issues

Another area of contention centered on the productivity clause negotiated into the basic steel contracts in 1971 as one means of stemming the threat to job security posed by foreign imports. The clause called for the establishment of a productivity council within each plant to implement methods of improving output per man-hour. A proposed resolution alleged that management violated the contract and pledged union resistance to such actions through the grievance procedure.

Delegates representing the Coalition of Concerned Steelworkers called for removal of the clause, maintaining that it "served to undermine the apparent gains of the bargaining team." They submitted an additional resolution demanding the right of locals to strike if management violates the provision. Presi-

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dent Abel took a strong stand against both proposals, denying that contract gains had been impeded. He maintained further that the removal of the no-strike clause from local contracts was inadvisable, and called for an end to strikes as "a must" toward building a healthy industry and preserving job security. Both challenges to the productivity resolution were defeated in voice votes.

### Membership participation

A more general issue—that of membership participation in the union—emerged through the debates around specific, policy-oriented resolutions. Delegates from dissident organizations introduced constitutional changes to reduce what they termed "power differentials" between locals and the International and between the rank and file and the International officers and staff. Some delegates alleged that the defeat of these measures resulted from the Executive Board's manipulation of convention proceedings through its control of the Resolutions, Constitution, and Appeals Committees, and through its appointment of staff representatives to vote by proxy for those locals which could not afford to send delegates.

A resolution pledging patient but persistent efforts in the area of civil rights was adopted after attack by the Ad Hoc Committee. Members of the black caucus criticized the Executive Board for the "unsatisfactory" number of appointments of black staff members, and argued that many minority group steelworkers were still confined to less skilled, more dangerous jobs in the mills. The Ad Hoc Committee

pledged continued efforts to put pressure on the Executive Board to seek improvements in this area.

### Other issues

Throughout the convention, the problem of foreign imports as a cause of layoffs was stressed. Delegates voted overwhelming support for the Burke-Hartke bill to establish steel quotas and condemned the activities of multinational corporations.

In a unanimously adopted resolution, the convention commended the newly introduced and experimental expedited arbitration procedure—which is expected to cut costs and time spent in grievance and arbitration—and urged the expansion of this or similar procedures to steel and nonsteel locals.<sup>1</sup> The convention also recommended a multiunion program to resolve problems in arbitration procedures.

In other resolutions, delegates pledged to strive for a shorter workweek, but not at the expense of the 8-hour workday; recognized the problems of solid waste pollution, but opposed legislation which would deal with the issue in a way that threatened job security in the container industry; and unanimously condemned the practice of contracting out, which, they claimed, results in lost jobs and jurisdictional disputes with other unions. □

### FOOTNOTE

<sup>1</sup> For a discussion of the grievance arbitration problem, see Ben Fischer, "Arbitration: the steel industry experiment," pp. 7-10, this issue.



## Foreign Labor Briefs



### FRANCE CURBS ITS TEMPORARY WORK AGENCIES

HOWARD S. CARPENTER

AFTER much controversy, France's Assemblée Nationale enacted legislation regulating temporary work agencies. Much of the controversy revolved around the definition of temporary help agencies. Are they placement agencies? are they the modern equivalent of the ancient "padrone" system? are they employers? The new law defines them as employers, but a very special kind requiring special regulation.

The statute, *la nouvelle loi sur le travail temporaire*, regulates some 930 agencies that provide short-term jobs in France for 250,000 workers, 45 percent of whom are women. This constitutes about 1 percent of the French labor force, and since these agencies are expected to place 5 percent of the labor force by the end of the decade, they would be among the largest employers in France. Under the new law, which went into effect January 6, 1972, temporary work agencies must be registered with the Government and are subject to all laws and controls applicable to other business enterprises, especially tax laws. They may not engage in any activity other than supplying employers with temporary workers, that is, they must cease acting as employment agencies in competition with the French national employment service. Every work contract signed with a private agency must be reported to the local public employment service office. If not, the agency can be fined or be ordered to close for periods ranging from 2 to 10 years.

Employers may use the services of temporary job agencies to fill vacancies pending recruitment of permanent employees; fill vacancies due to temporary

absences for vacations, sickness and maternity leave, or military leave; or meet limited extra manpower requirements resulting from temporary peak activity or the launching of new programs. Employers cannot use temporary employment agencies during strikes. One of the most important provisions is that temporary employees are entitled to the same trade union representation rights as permanent employees. In the past, many private agencies required applicants to sign "yellow-dog" contracts stating that they would not participate in plant grievance committees and other trade union activities. Temporary workers may now participate in union elections if they have worked 12 months or even run for union office after 18 months.

In addition to the wage stipulated in the agreement with the agency, a temporary worker (unless he quits before his contract ends) must be paid an extra sum at the end of the interim job to compensate for the "uncertainty of employment." The severance bonus will be related to the salary paid and the length of temporary service, and must not go below a minimum set through labor-management collective bargaining between the Temporary Work Employers Association and the national union covering the industry involved. The agencies are required to pay old age, unemployment insurance, and other social taxes; in case of failure to pay properly, the employer utilizing the services becomes liable. The Continuous Vocation Training Law (somewhat similar to the U.S. Manpower Development and Training Act) is being amended to permit an extension of its coverage to employees of temporary job agencies. The conditions-of-employment requirements of the Government, as well as those laid down in contracts between employers and trade unions, will now apply to temporary workers, including workmen's compensation for injury or occupational disease.

Interest in regulating temporary help agencies was spurred by concern over the contracting of foreign workers, mainly from northern Africa and the Iberian peninsula, who were willing to work for low

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wages. Many workers coming into France without being part of official Government labor importation took jobs as domestics or laborers at substandard wages; many could find jobs only through the temporary help agencies. The new legislation stipulates that agencies may not contract with foreigners already in France but without official authorization to work, nor are they permitted to recruit outside the country. Contributions must be made to any social security system existing in the employee's home country.<sup>1</sup> □

—FOOTNOTE—

<sup>1</sup> In 1971, the 22 member countries of the Organization for Economic Cooperation and Development had examined France on its manpower and social policies and noted the foreign worker problem, with its close connection to temporary help agencies. President Pompidou's administration led the fight to get the bill passed.

## CHILDREN'S ALLOWANCES IN FIVE COUNTRIES

CHILDREN'S ALLOWANCES—primarily cash benefits to families with children—are found in about half the countries of the world according to a recent study by the Social Security Administration.<sup>1</sup> Unlike the old-age, invalidity, and survivor insurance programs, children's allowances programs generally lack any mechanism for regular adjustment of benefits to cost-of-living or wage increases. Concern with the need to update allowance rates more frequently seems to be growing in some countries, perhaps because of renewed interest in the problems of poverty.

The study summarized below discusses children's allowances program in five countries—Canada, France, Sweden, the United Kingdom, and West Germany.

*Canada.* In Canada, a family allowance law became effective July 1, 1945. The original broad objective of the Canadian program was to help correct the imbalance between family income and family need. The Canadian National Labor Board viewed the program as an alternative to raising the general level of wages. It was hoped the program would channel significant amounts into the spending stream by increasing the purchasing power of the needy. It would, in addition, tend to stabilize purchasing power since payments would be continuous and nonseason-

al. And children's allowances paid during periods of unemployment and illness would help to ensure a steady income for social insurance and assistance recipients with large families. Finally, the allowances would aid employment by contributing to a higher level of aggregate demand.

A per capita rate of payment, graduated by age group, has existed in Canada since children's allowances began. No adjustment has been made in the rates since 1957, when they ranged from Can\$6 for each child under age 10 to Can\$10 for those age 16-17 who are in school or are invalids.

Children's allowances programs in Canada are universal and financed through the national budget.

*France.* Conditions arising from World War I had a strong effect on children's allowances in France. Because inflation and labor shortages exerted pressure for ever-higher wages, more and more employers turned to children's allowances—a fringe benefit for workers with families—as an alternative to more expensive wage increases for all.

Although children's allowances were included in a comprehensive social security plan in 1946, efforts of the French Government to influence the birth rate through children's allowances have continued. According to the Minister of Social Affairs, for example, the express aim of the 1969 increases in children's allowances was to halt the declining birth rate.

The French children's allowances program—considerably more complex than that of most countries—has three main components: basic children's allowances, single-wage allowances (*salaire unique* for wage or salary earners), and mother-at-home allowances (*mère au foyer* for the self-employed). All three types of benefits are fixed for five cost-of-living zones in France.<sup>2</sup>

Under the basic program, benefits start with the second child at the rate of 22 percent of the hourly minimum wage of manual workers in the metals industry. The rate is 37 percent for the third and fourth children and drops to 33 percent for the fifth and subsequent children.

In 1961, France discontinued granting young childless couples an allowance under the single salary program. Instead, the allowance to children under age 2 was raised to 50 percent of the base wage (97.25 francs or \$37.26) under both the single-wage and mother-at-home program. For children 2 years of age or older, the rates as a percent of the base wage are:

	<i>Single-wage program</i>	<i>Mother-at-home program</i>
1 .....	20	—
2 .....	40	10
3 .....	50	20

Under the mother-at-home program, an increase of 10 percentage points is allowed for each additional child until the total limit of 50 percent of the base wage is reached.

In France, programs covering the employed and the self-employed are separate. Benefits for wage earners derive from employer contributions exclusively. Such benefits accounted for 13.5 percent of payroll expenditures in 1968. Contributions by the self-employed (approximately 4 percent of income, according to an occupational scale) are applied only toward the benefits to which this group is entitled. France has, in addition, separate occupational programs that cover the agricultural sector, public utilities, and civil servants. State and public authorities bear the cost of family benefits for their employees. The agricultural sector, usually associated with low incomes and large families, historically has been unable to provide sufficient funds to support its family allowances program and has relied on subsidies by the National Government.

*Sweden.* A change in emphasis—humanitarian and social rights considerations over demographic considerations—produced after the war an allowances program that looked primarily to the welfare of families. There was thus a national acknowledgment that the economic burden of raising children belonged to some extent to society in general, not wholly to the individual household. No basic change has been made in the program since its introduction. The benefit rates have been adjusted upward, however, and are now at a considerably higher level in terms of purchasing power than they were when the program began.

The universality of coverage, together with the view that the burden of raising a family should be shared, led to allowances beginning with the first child. In 1948, the annual allowance was 260 kroner (\$53.40) per child. This amount was raised to 550 kroner (\$112.98) in 1952 and to 700 kroner (\$143.81) in mid-1964. The rate later reached a level of 900 kroner (\$186.93) and went to 1,200 kroner (\$246.51) as of January 1, 1971.

*United Kingdom.* During the late 1930's and early war years, demographic considerations in the United

Kingdom, as in Sweden, were noticeably pushed aside in favor of a greater concern for the welfare of children and their families. Children's allowances, preferably financed through general revenues, were regarded as a necessary part of a comprehensive social security system and the program was intended to contribute to the needs of families with children, not to provide full maintenance for each child.

The Family Allowances Act, adopted in June 1945, began in 1946 with benefits for the second and succeeding children, all at the same rate. For almost 25 years the only structural change increased the rate for the third and subsequent children as shown in the following tabulation (in shillings per week):

	<i>2d child</i>	<i>3d child</i>
1945 .....	5	5
1952 .....	8	8
1956 .....	8	10
1967 .....	15	17
1969 .....	18	20

Children's allowances programs in the United Kingdom are universal and are financed through the national budget. In the United Kingdom alone among the five countries studied, children's allowances are treated as taxable income. A part of the allowance is thereby recovered through the tax system.

*West Germany.* Assistance based on family burden began in Germany at the end of World War I. The tendency at first was to regard children's allowances as an alternative to higher wages, and were looked upon as earnings supplements.

In the program that emerged in West Germany after World War II, coverage started with the third child. In 1961, coverage was extended to the second child in families with yearly incomes below 7,200 Deutsche marks (\$2,208.58). Monthly rates had been DM25 (\$7.67) for the second child (when eligible) and DM40 (\$12.27) for the third and subsequent children. The income limit for the two-child family was raised in 1964 to DM7,800 (\$2,392.64), and an increasing benefit rate was made applicable for the third, fourth, and fifth and each subsequent child—DM50 (\$15.34), DM60 (\$18.41), and DM70 (\$21.49) monthly. The rate for the second child remained unchanged. In 1965, families with three or more children became eligible for the lower rate, second-child allowance, regardless of the amount of the family's income.



The program as introduced in 1954 called for depositing the contributions from employers and the self-employed in funds established within each occupational group. Ten years later the Federal Government took over the burden of financing the entire program. West Germany was the only country to make a transition from financing by employers to general revenue financing in an already existing program.

THE BENEFIT STRUCTURE of children's allowances programs varies with a nation's social policy. The five countries selected for analysis illustrate these variances. The report on the study also makes comparisons of children's allowances as a percent of average monthly earnings by size of family; shows expenditures for children's allowances as a percent of total social security expenditures and of gross

national product; and discusses changes in children's allowances rates and the consumer price index.

Effective January 1, 1972, Japan also set up a system of children's allowances based on population and welfare considerations. For a report on children's allowances in Japan, see Elizabeth Kreitler Kirkpatrick, "Children's Allowances in Japan," *Social Security Bulletin*, June 1972, pages 39 and 43.

—FOOTNOTES—

NOTE: All exchange rates used in this article are based on the rates in effect Dec. 31, 1971.

<sup>1</sup> Leif Haanes-Olsen, "Children's Allowances: Their Size and Structure in Five Countries," *Social Security Bulletin*, May 1972, pp. 17-28.

<sup>2</sup> The base wage for basic allowances in Paris (the highest cost-of-living area) is 377 francs (\$72.22) a month, that for the single-wage or mother-at-home allowances, 194.50 francs (\$37.26).

### Health as a determinant of labor market experience

The process of aging 3 years produces some changes in the personal characteristics of middle-aged men that are likely to have effects upon various aspects of their labor market experience. By all odds the most important of these is health. . . . Deterioration of health was more common than improvement in each of the three 5-year age categories, but the disparity was by far the greatest among the oldest group of men—those who in 1966 had been between 54 and 59 years of age. . . .

There are fascinating interactions among age, health condition, and color. For one thing, it is clear that both the cross-sectional and longitudinal relationships between age and labor force participation are to a substantial degree reflections of the greater incidence of health problems among older men in the sample. . . .

It is also true that the black-white difference in labor force participation both cross-sectionally

and longitudinally is primarily a reflection of the differential impact of health problems on black and white men. In the cross-section, the higher labor force participation rate that prevails on the average for white men does not exist when the comparison is confined to men in each color category who enjoyed continuously good health between 1966 and 1969. Indeed, the 1969 labor force participation rate of such blacks exceeds that of their white counterparts. Longitudinally, while the decline in labor force participation is greater on average for black than for white men, the situation is reversed when only the healthy whites and blacks are considered.

—HERBERT S. PARNES, GILBERT NESTEL,  
PAUL ANDRISANI,

*The Pre-Retirement Years: A Longitudinal Study of the Labor Market Experience of Men* (Columbus, Ohio State University, Center for Human Resource Research, 1972).

## Significant Decisions in Labor Cases



### Hatch Act definition unconstitutional

IN QUEST OF public servants' freedom to participate in political processes of the Nation, a postal union took the Hatch Act to court. It did not challenge the act's ban on public employees' "active part in political management or in political campaigns"; it only complained that the statute does not state precisely its prohibitions and, in this respect, potentially violates employee rights under the First Amendment to the Constitution.

Two members of a three-judge panel<sup>1</sup> of the U.S. District Court for the District of Columbia agreed with the union's position and held that the law's definition of prohibited activities and conduct is unconstitutional. (*National Association of Letter Carriers v. U.S. Civil Service Commission*.<sup>2</sup>)

The definition was provided by a 1940 amendment, section 15, which applied to both Federal and State employees. Now codified in identical language as part of 5 U.S.C. section 7324(a)(2) (applying to Federal employees) and as 5 U.S.C. section 1501(5) (applying to State employees),<sup>3</sup> it reads:

. . . the phrase 'an active part in political management or in political campaigns' [prohibited by the statute] means those acts of political management or political campaigning which were prohibited on the part of employees in the competitive [government] service before July 19, 1940 [the date of amendments], by determinations of the Civil Service Commission under rules prescribed by the President.

The alleged defect of the provision is that it fails to specify the nature of the prohibited conduct and, instead, incorporates in the act by reference the Civil Service Commission's rulings in disciplinary actions against violators of its no-politics rules prior to the 1940 amendments. Judge Gesell, who wrote the majority's opinion, said;

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<sup>1</sup>"Significant Decisions in Labor Cases" is written by Eugene Skotzko, Office of Publications, Bureau of Labor Statistics.

The definition is ambiguous and unsatisfactory. It incorporates by reference over 3,000 rulings made by the Commission between 1886 and 1940 . . . , which were not before the Congress when the act was passed. . . . [T]hey have a sweep and indefiniteness that no one could even attempt in these days to defend if analyzed against the strictures of the First Amendment. . . .<sup>4</sup>

Not only is section 7324(a)(2) vague of meaning, it clashes with another provision of the act (5 U.S.C. 7324(b)), which says, "An employee . . . retains the right to vote as he chooses and to express his opinion on political subjects and candidates." Judge Gesell wondered how this provision and the incorporation of the Commission's rules as parts of the act are supposed to operate together. To him, section 7324(b) appeared to be qualifying the definition and indicating that the pre-1940 rulings of the Commission "were subject to being cut back," rather than expanded, in future interpretations of the law, so as to be more consistent with the First Amendment right of free expression. "The difficulty, however, is," said the judge, "that no constitutionally acceptable mechanism was provided for accomplishing this result. Grave ambiguities remain. . . . Prohibitions are worded in generalities that lack precision. There is no standard. No one can read the act and ascertain what it prohibits. Neither the Commission nor any other agency was given any rulemaking power. Indeed even those most intimately concerned with its enforcement are in doubt and have sought legislative clarification."

Though thwarted by the lack of authority to make rules, the Commission, Judge Gesell noted, did its best to administer the ambiguous law so as to "accommodate rigidly incorporated prior rulings to the rapidly evoking court interpretations of the First Amendment." Permitting the expression of political opinion without "the intent to influence others" modulated the rigidity of prior rulings, but a Federal employee still is "at hazard if he ventures to speak on a political matter since he will not know when his

words or acts relating to political subjects will offend"; he is still "in doubt as to what he can do or say politically." And the judge went on:

Ours is not a form of government that will prosper if citizens, particularly Federal Government servants, must live by the mottoes 'better be safe than sorry' and 'don't stick your neck out.' Government employment should, of course, carry some well-defined limitations upon participation in partisan political matters, but Congress may not by reason of this desirable objective neutralize such a large segment of the populace from expressing any opinion on any 'political' issue with the intent of somewhat influencing someone else. In the end everything may appear political, all speech may intend to influence, and conformity is imposed in the fashion of more regimented, less democratic governments.

This is a classic case of a statute which in its application has a 'chilling effect' [in the sense that its overbreadth and vagueness inhibit a person in the exercise of constitutional rights] unacceptable under the First Amendment. To chill is to dispirit, and the First Amendment will not flourish but can be gradually suffocated in such an atmosphere.<sup>5</sup>

To the Commission's argument that the Supreme Court approved of the Hatch Act in its 1947 decision in *United Public Workers v. Mitchell*,<sup>6</sup> Judge Gesell replied that that decision "explicitly left open the question of constitutionality of the incorporation-by-reference section of the act." Viewed in the light of subsequent decisions<sup>7</sup> which developed the "least restrictive alternative test" for governmental incursions into the area of free speech," and considering changes in the "size and complexity of public service," the *Mitchell* decision must be considered "outmoded by passage of time."

In Judge Gesell's opinion, "If Congress undertakes to circumscribe speech, it cannot pass an act which, like this one, talks in riddles, prohibiting in one breath what it may be argued to have allowed in another, leaving the citizen unguided but at hazard for his job. . . . If there are impermissible areas of activity, the overriding governmental interest must be marked with utmost clarity by the Congress in a form that is obvious to the sophisticated and unsophisticated alike."

Section 7324(a)(2) of the Hatch Act was declared "unconstitutional in that its provisions are impermissibly vague and overbroad when measured against the requirements of the First Amendment to the Constitution. The injunction against enforcement is granted . . . pending determination by the Supreme Court. . . ."

In a lengthy, elaborate dissent, Circuit Judge MacKinnon argued that it was beyond the power of this court to consider a challenge to constitutional validity of a statute already upheld by the Supreme Court in *Mitchell* and *Oklahoma*. He did not find the challenged provisions of the act vague and overbroad, and concluded, "I see no necessity in this stage of our national existence to set aside a statute that is as soundly based in our governmental framework as is the Hatch Act. And I am unable to find any authority for this court to overrule, in effect, a decision of the Supreme Court to accomplish that result."

### More on safety disputes

Last month's issue of the *Review* reported a decision (*Gateway Coal Co.*<sup>8</sup>) of the Federal court of appeals in Philadelphia (Third Circuit) that employees who believe their employment conditions to be hazardous may justifiably refuse to work until the conditions are improved, and need not submit their dispute to arbitration even if their collective bargaining agreement so requires. The employees in question were coal miners. The ruling had the ring of an unqualified pronouncement, despite the extenuating circumstance that the collective agreement involved—the National Bituminous Coal Wage Agreement of 1968—had only a broad arbitration clause that did not specifically require submission of safety disputes to an umpire for decision. "Men are not wont to submit matters of life or death to arbitration, and no enlightened society encourages, much less requires, them to do so," was the position of the court.

Three days after the *Gateway* decision, the appellate court in St. Louis (Eighth Circuit), in a similar situation involving coal miners, issued a ruling that seemed to dilute the Philadelphia court's clearcut theory regarding safety disputes. It held that, indeed, the employees had the right to refuse doing dangerous work, but qualified its position by requiring that the dispute be submitted to arbitration in accordance with a specific provision of the union contract. (*The Hanna Mining Co. v. United Steelworkers*.<sup>9</sup>)

Present in each situation was a correctible danger that was in excess of the normal hazards of coal mining: in *Gateway* the employees refused to work under supervisors who had failed to report a highly dangerous condition in the mine; in *Hanna* the workers refused to change grates on a conveyor belt "on the fly." And both situations involved a work stop-



page that caused the employer to sue for a court injunction. On appeal, injunction was denied in the first instance, but granted in the second. Why?

The court in the present case saw a distinction between the contractual provisions of the two situations. In *Gateway*, where the employees were held free to reject arbitration concerning safety, the contractual arbitration clause was broad, stating only that "should any local trouble of any kind arise at the mine," an attempt to resolve it would follow a certain procedure including, as a last resort, a binding decision of an impartial umpire. In *Hanna* the provisions were explicit:

. . . If an employee shall believe that there exists an unsafe condition, changed from the normal hazards inherent in the operation, so that the employee is in danger of injury, he shall notify his foreman of such danger and of the facts relating thereto. Thereafter, unless there shall be a dispute as to the existence of such unsafe condition, he shall have the right, subject to reasonable steps for protecting other employees and the equipment from injury, to be relieved from duty on the job in respect of which he has complained and to return to such job when such unsafe condition shall be remedied. The management may in its discretion assign such employee to other available work at the mine. . . . [If a joint union-management investigation produces no agreement on the validity of the employee's allegation of danger], the employee shall have the right to present a grievance in writing to the management's representative . . . and thereafter to be relieved from duty on the job as stated above. Such grievance shall be presented without delay directly to an impartial umpire . . . , who shall determine whether such employee was justified in leaving the job because of the existence of such an unsafe condition.

The court in St. Louis gave this agreement a strict interpretation.

It should be noted that in *Gateway* the court conceivably could have considered the safety dispute as being within the meaning of a "trouble of any kind." But it did not do so. Instead, it took the position that employees cannot be compelled to entrust their safety to an arbitrator's judgment regardless of what their agreement says: "The arbitrator is not staking his life on his impartial decision. It should not be the policy of the law to force the employees to stake theirs on his judgment." In *Hanna*, the Eight Circuit did not subscribe to this philosophy; it only saw to it that the contract terms were fulfilled.

Obviously, the basic difference between the two cases was, to a degree, one of contractual provisions, but primarily it was a distinction in judicial thinking

between the two courts.

The appellate court in St. Louis also saw a technical distinction between the two suits. Section 502 of the Labor Management Relations Act (29 U.S.C. section 143) provides that ". . . quitting of labor . . . in good faith because of abnormally dangerous conditions for work at the place of employment [shall not] be deemed a strike. . . ." In *Gateway*, the defendant union did not seek protection of this provision; the court itself invoked this section in support of its reasoning that the National Bituminous Coal Wage Agreement of 1968 should not be construed as requiring arbitration of safety disputes. In *Hanna*, the union *did* claim protection under section 502, but the court of appeals disposed of the argument by saying, "The trial court did not make a finding that employees walked off the job in the good faith belief that the conditions for work were abnormally dangerous, and such a finding is necessary to bring that section into play." And it added, "Furthermore, the trial court did not base its decision on this statute [section 502]."

The court ordered, among other things, reinstatement of all *Hanna* employees suspended or otherwise penalized in connection with the dispute, resumption of work on the part of the employees, and submission of the controversy to arbitration.

### NLRB and arbitration awards

Recently the National Labor Relations Board adopted a policy of not accepting appeals from arbitrators' awards in disputes involving unfair labor practices. By a vote of 3 to 2, which reflected a fundamental and persistent disagreement among its members over the issue of deference to arbitration agreements in unfair-practice cases, the Board refused to play the role of a tribunal for the enforcement of such awards. (*Malrite of Wisconsin*.<sup>10</sup>)

The split within the Board has existed since the majority ruled over a year ago in *Collyer Insulated Wire*<sup>11</sup> that disputes of this kind "can better be resolved by arbitrators with special skill and experience . . . than by the application by this Board of a particular provision of our statute. . . ." The "particular provision" is section 10(a) of the LMRA, which reads in part, "This Board is empowered . . . to prevent any person from engaging in any unfair labor practice . . . affecting commerce. This power shall not be affected by any other means of adjustment or prevention that has been or may be estab-

lished by agreement, law, or otherwise. . . ." Members Fanning and Jenkins protested the ruling vehemently, saying the Board was abdicating its powers under the act, a step that was bound to deprive employees of statutory protection and of access to the Board by interposing private tribunals between them and the law. (The dissenting members' statements were extensively cited in the *Monthly Labor Review*, November 1971, pp. 64-66.) They adhered to this position in all subsequent cases involving the issue, including this one.)

Involved in the present case were a radio station's agreements with individual employees, reached without the knowledge of the union, on the use of engineers-announcers—so-called "combo" operators—for daytime broadcasting. The existing labor contract allowed the use of one "combo," for nighttime work only. These individual agreements amounted to a refusal to bargain on the part of the employer, an unfair labor practice under section 8(a)(5) of the LMRA. The parties agreed to bring the dispute before an arbitration panel for a binding decision, as provided by a contractual arbitration clause. The panel decided that the employer had violated the contract, but the employer refused to honor the decision and continued to use "combos" as before. The union then complained to the Board.

The trial examiner found that the arbitration had been carried out in full compliance with the standards established by the Board in 1955 in *Spielberg Manufacturing Co.*,<sup>12</sup> which must be met before the Board gives "full weight" to an arbitral award. The Board had said there, that to be acceptable, the arbitration must be "fair and regular, all parties [must have] agreed to be bound, and [the award must not be] clearly repugnant to the purposes and policies of the act."<sup>13</sup> Here these conditions were satisfied, but the trial examiner thought that the case should come before the Board nevertheless because the employer had refused to accept the award.

The Board's majority overruled the examiner:

In its formulation of the *Spielberg* standards the Board did not contemplate its assumption of the

functions of a tribunal for the determination of arbitration appeals and the enforcement of arbitration awards. If the Board's deference to arbitration is to be meaningful it must encompass the entire arbitration process, including the enforcement of arbitral awards. It appears that the desirable objective of encouraging the voluntary settlement of labor disputes through the arbitration process will best be served by requiring that parties to a dispute, after electing to resort to arbitration, proceed to the usual conclusion of that process—judicial enforcement—rather than permitting them to invoke the intervention of the Board.

In pursuing their basic arguments against the *Collyer* doctrine, the two dissenters made these points:

- "... In view of the failure of the arbitration panel to award damages, a remedy at law is not available to the union except in terms of an unfair labor practice"—that is, through NLRB proceedings. (To this the majority replied, as cited above, that remedial implementation of an arbitral award can best be achieved through a court order.)
- "Nothing in *Spielberg* suggests that the Board contemplated leaving the parties where it found them if, on the basis of the arbitrators' findings of fact, it was clear that an unfair labor practice had been committed."
- "This case, presumably, . . . is illustrative of the basic flaw in [the *Collyer* doctrine]. The majority appears to be willing to assume that there is little, if any, difference in the enforcement of a contract and the prevention of unfair labor practices involving contract interpretation. The forum for one is the court, with or without arbitration. The forum for the other is the Board exclusively, enforcing its orders through the courts. . . . Before the Board, the question of damages is considered in the context of employee rights and the responsibilities imposed on unions and employers under this statute. . . ."

The dissenters concluded, "We dissented in *Collyer* and subsequent cases and we dissent here because we believe that doctrine is unwise, mischievous, and destructive of important employee rights." □

#### —FOOTNOTES—

<sup>1</sup> Including Circuit Judge MacKinnon, who dissented, and District Judges Gesell and Parker.

<sup>2</sup> D.C.—D.C., civ. act. No. 577-71, July 31, 1972.

<sup>3</sup> The Hatch Act was signed into law August 2, 1939 (ch. 410, 53 Stat. 1147-1149). The original section 15, which

applied to Federal employees and those State employees within the coverage of the act, was added by the amendments of July 19, 1940 (ch. 640, 54 Stat. 767-772). As now codified, it appears as 5 U.S.C. section 1501(5), applicable to covered State employees, and as part of 5 U.S.C. section

7324(a)(2), applying to Federal employees.

The text of the original section 15 is a notable syntactic rarity: "The provisions of this act which prohibit persons to whom such provisions apply from taking any active part in political management and in political campaigns shall be deemed to prohibit the same activities on the part of such persons as the United States Civil Service Commission has heretofore determined are at the time this section takes effect prohibited on the part of employees in the classified civil service of the United States by the provisions of the civil-service rules prohibiting such employees from taking any active part in political management or in political campaigns." (No punctuation except the period.)

<sup>4</sup> In showing how the pre-1940 rulings of the Civil Service Commission (the "prior rulings") failed to measure up to the First Amendment standards, the judge cited some examples: "A disciplinary action was taken against Federal employees in situations where the employee engaged to some extent in the following: made a wager on an election; offensively discussed a 'political question'; disparaged the President; denounced a political party while in a jovial mood due to alcohol; publicly engaged in a political discussion; wrote a political letter; publicly expressed a political opinion; published a political article; wore a political button while on duty; stated unsubstantiated facts about ancestry of a candidate; made offensive political remarks; failed to dis-

courage a spouse's political activity; stated disapproval of treatment of veterans while acting as a Legion officer in a closed Legion meeting; was partisan in political views; allowed one's name to be associated with an objectionable political affair; authorized an anonymous political communication."

<sup>5</sup> The court's reference: "For a more lengthy discussion of the doctrine of overbreadth, vagueness, and chilling effect, see *Hobbs v. Thompson*, 448 F.2d 456, 459-460 (5th Cir. 1971), and cases cited therein."

<sup>6</sup> 330 U.S. 75 (1947); see also *Oklahoma v. U.S. Civil Service Commission*. 330 U.S. 127 (1947).

<sup>7</sup> The court's reference: appellate decision in *Hobbs v. Thompson*, supra; and the district court decision in *Mancuso v. Taft*, 341 F. Supp. (D.C.-R.I., 574, 1972).

<sup>8</sup> C.A. 3, Nos. 71-1641, 71-1642, and 71-1786, July 18, 1972; see *Monthly Labor Review*, October 1972, pp. 66-67.

<sup>9</sup> C.A. 8, No. 72-1428, July 21, 1972.

<sup>10</sup> *Malrite of Wisconsin, Inc. and Wisconsin Broadcast Engineers, Local 715 of Brotherhood of Electrical Workers*, 198 NLRB No. 3, July 18, 1972.

<sup>11</sup> 192 NLRB No. 150; see *Monthly Labor Review*, November 1971, pp. 64-66.

<sup>12</sup> 112 NLRB 1080 (1965).

<sup>13</sup> *Ibid.*, at p. 1082.

### Manpower policies in the 1970's

If we accept the notion that manpower programs should be primarily a vehicle for education . . . then I would agree . . . that questions facing manpower policy are going to be problems of the workplace, questions of upgrading and training, and so on. I think manpower programs have begun to deal with these questions and the real issue is going to be the reorganization of work. If manpower policy is primarily a matter of education, as a sociologist I must raise the classic kind of question that we ask: "If, in a period of high unemployment, one man can improve his opportunities for employment, can all men do that?"

The obvious answer is No. If they try to do that, then the value of the education is mitigated. Therefore, I think the question should be what kind of employment policies we should have in the 1970's so that manpower policies can be effectively used to increase the kinds of opportunities available to working people. The answer, I suppose obviously, is full employment.

—RONALD D. CORWIN,

in Dialogue on "U.S. Employment Policy From the 1960's to the 70's," *New Generation*, Spring 1972.



# Major Agreements Expiring Next Month



This list of collective bargaining agreements expiring in December is based on contracts on file in the Bureau's Office of Wages and Industrial Relations. The list includes agreements covering 1,000 workers or more in all industries.

Employer and location	Industry	Union <sup>1</sup>	Number of workers
American Cyanamid Co. (Bound Brook, N.J.)	Chemicals	Chemical Workers	1,600
Atlantic Richfield Co.:			
Arco Pipe Line Co. (Interstate)	Petroleum	Oil, Chemical, and Atomic Workers	3,700
California Statewide Agreement (California)	do.	do.	1,600
Branniff Airways, Inc., Clerical (Interstate) <sup>2</sup>	Air transportation	Teamsters (Ind.)	5,100
Campbell Soup Co., Central Division (Chicago, Ill.)	Food products	Retail, Wholesale, and Department Store Union	1,600
Cemetery Workers' Agreement (New York) <sup>3</sup>	Real estate	Service Employees	1,700
E.I. DuPont De Nemours and Co., Textile Fibers Department (Martinsville, Va.)	Chemicals	Martinsville Nylon Employees' Council Corp. (Ind.)	3,000
Eastern Airlines, Inc., Pilots (Interstate) <sup>2</sup>	Air transportation	Air Line Pilots	3,700
Green Shoe Manufacturing Co. (Boston, Mass.)	Leather	Boot and Shoe Workers	1,000
Gulf Oil Corp., Gulf Oil Co.—U.S. Division (Port Arthur, Tex.)	Petroleum	Oil, Chemical, and Atomic Workers	2,550
Gwaltney, Inc. (Smithfield, Va.)	Food products	Employees Beneficial Association No. 2 (Ind.)	1,100
Kosher Meat Markets Agreement (New York) <sup>3</sup>	do.	Meat Cutters	1,300
Manufacturers' Industrial Relations Association (Interstate)	Fabricated metal products	Molders	4,000
Mobil Oil Corp., Refinery (Beaumont, Tex.)	Petroleum	Oil, Chemical, and Atomic Workers	1,450
Montgomery Mills, Inc. (Montgomery, Pa.)	Textiles	Textile Workers Union	1,150
National Transient Members Agreement (Interstate) <sup>3</sup>	Construction	Boilermakers	5,000
New York Shipping Association, Inc., Port Watchmen Agreement (New York, N.Y.)	Water transportation	Port Watchmen's Union (Ind.)	1,200
Northern States Power Co., 4 Divisions (Minneapolis, Minn.)	Utilities	Electrical Workers (IBEW)	1,000
Northwest Airlines, Inc., Clerical (Interstate) <sup>2</sup>	Air transportation	Railway Clerks	2,000
Pennsylvania Heavy and Highway Contractors Bargaining Association (Pennsylvania)	Construction	Steelworkers (District 50, Allied and Technical Workers)	2,000
Seeburg Corp. (Chicago, Ill.)	Machinery	Teamsters (Ind.)	1,150
Shell Oil Co.:			
California Refineries (California)	Petroleum	Oil, Chemical, and Atomic Workers	1,350
Wood River Refinery (Wood River, Ill.)	do.	Electrical Workers (IBEW); Asbestos Workers; Painters; Sheet Metal Workers; Carpenters; Laborers; and Teamsters (Ind.)	1,100
Southern California Edison Co. (Los Angeles, Calif.)	Utilities	Electrical Workers (IBEW)	6,100
Southern Illinois Contractors Association, Heavy Building, Private, and Highway Construction (Illinois)	Construction	Operating Engineers	1,850
Standard Oil Co. of California, Western Operations, Inc. (Richmond, Calif.)	Petroleum	Oil, Chemical, and Atomic Workers	1,000
Stewart-Warner Corp. (Chicago, Ill.)	Electrical products	Electrical Workers (IBEW)	2,600
Tanners Association of Fulton County, Inc. (Gloversville and Johnstown, N.Y.)	Leather	Clothing Workers	1,000
Texaco, Inc., Port Arthur Terminal (Port Arthur, Tex.)	Petroleum	Oil, Chemical, and Atomic Workers	3,750
Warner & Swasey Co. (Cleveland and Solon, Ohio)	Machinery	Machinists	1,250
West Virginia Contractors Bargaining Association, Inc. (West Virginia)	Construction	Steelworkers (District 50, Allied and Technical Workers)	2,000
Weyenberg Shoe Manufacturing Co. (Beaver Dam, Portage, and Waterloo, Wis.)	Leather	Boot and Shoe Workers	1,200
Zenith Radio Corp. of Missouri (Springfield, Mo.)	Electrical products	Electrical Workers (IBEW)	2,350

See footnotes on the next page.

## Major agreements expiring next month—Continued

Company and location	Government activity	Employee organization <sup>1</sup>	Number of workers
Madison Board of Education; teachers (Wisconsin).....	Education.....	Madison Teachers, Inc. (NEA) (Ind.)...	1,800
Massachusetts Bay Transportation Authority; maintenance employees (Massachusetts).....	Public transportation.....	Amalgamated Transit Union.....	4,300
Massachusetts Department of Mental Health; registered nurses (Massachusetts).....	Health; medical.....	Nurses Association (Ind.).....	1,600
Massachusetts Division of Employment Security; Administrative Office Unit (Massachusetts).....	Employment; compensation.....	State, County and Municipal Employees.....	1,100
Monroe County Employees (New York).....	Multidepartment.....	Civil Service Employees Association, Inc. (Ind.).....	3,300
Nassau County Civil Service Employees (New York).....	.....do.....	Civil Service Employees Association, Inc. (Ind.).....	13,000
Onondage County Civil Service Employees (New York).....	.....do.....	Civil Service Employees Association, Inc. (Ind.).....	2,800
Toledo Police Division (Ohio).....	Law enforcement.....	Toledo Police Command Officers Association (Ind.); Patrolmen's Benevolent Association (Ind.); and Fraternal Order of Police (Ind.).....	3,700

<sup>1</sup> Affiliated with AFL-CIO except where noted as independent (Ind.).

<sup>3</sup> Industry area (group of companies signing same contract).

<sup>2</sup> Information is from newspaper.

## Indexes to the Monthly Labor Review

Each year the December issue of the *Monthly Labor Review* contains an index, by subject, of articles published in the *Review* in the current year. Also included are listings of statistical tables and of books reviewed, by author of book. In recent years, the index has also included an alphabetical list of authors.

At intervals, these yearend indexes have been combined and published as BLS Bulletins:

Bulletin 695, *Subject Index to the Monthly Labor Review, Volumes 1 to 11*, July 1915 to December 1920

Bulletin 696, *Subject Index to the Monthly Labor Review, Volumes 12 to 51*, January 1921 to December 1940

Bulletin 1080, *Subject Index of Volumes 52-71, Monthly Labor Review*, January 1941 to December 1950

Bulletin 1335, *Index of Volumes 72-83, Monthly Labor Review*, January 1951 to December 1960

Work is now in progress on the next bulletin in the series, to cover volumes 84 to 93, January 1961 to December 1970.

## Developments in Industrial Relations



### AFL-CIO reaffirms election stand

At its 2-day summer session held in Chicago, the AFL-CIO Executive Council declared the Federation's top priority to be the election of a new Congress dedicated to "progress for America." In the August meeting, the Council reaffirmed its July 19 decision that the AFL-CIO will refrain from endorsing either major candidate for President of the United States and will concentrate on electing pro-labor congressional candidates. Federation President George Meany said the endorsement issue was brought before the council because "five state federations of labor asked us to reconsider—five out of 50 and 10 local central bodies out of about 750."

The council also called for the passage of the Burke-Hartke bill as a necessity to "stop special tax advantages and import privileges of American companies operating in Mexico, Haiti, and other areas" and asserted that the 1-year record of the Nixon Administration's new economic policy had borne out AFL-CIO predictions that "it was inequitable and unfair."

On September 19, Mr. Meany suspended the Charter of the Colorado Labor Council and suspended from office President Herrick S. Roth and Secretary-Treasurer A. Toffoli and members of the executive board. He named Daniel J. Healy, the AFL-CIO's director for Illinois and Iowa, as trustee of the council's affairs during the suspension. The action followed the state body's endorsement of Senator George McGovern for the presidency on August 3, in the face of the AFL-CIO Executive Council's original decision not to endorse a presidential candidate. Mr. Meany had ordered the endorsement rescinded, but the Colorado Council balked by a vote of 27 to 1.

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"Developments in Industrial Relations" is prepared by Leon Bornstein and other members of the staff of the Division of Trends in Employee Compensation, Bureau of Labor Statistics, and is largely based on information from secondary sources.

Although the Executive Council's ruling permitted unions affiliated with the AFL-CIO to endorse candidates, the three-man hearing board that investigated the Colorado action backed Mr. Meany's assertion that "this freedom did not extend to AFL-CIO state or local central bodies, which, as subordinate bodies of the AFL-CIO, were required to conform their policies on national affairs to those of the AFL-CIO."

On September 21 Mr. Roth announced that he and the other members of the Colorado Labor Council would not obey Mr. Meany's order. He also asked the U.S. District Court in Denver to restrain Mr. Meany.

In early October, Judge Fred M. Winner issued a preliminary injunction barring the AFL-CIO's actions against the Colorado body. The AFL-CIO announced it would appeal the ruling.

### U.S. sues over pay increase

In a suit filed in Federal District Court in Louisville, the Government charged that Brown & Williamson Tobacco Co. and Local 320 of the Firemen and Oilers put into effect without Pay Board approval a 22-percent pay increase negotiated in November 1971. The Justice Department asked the Court to order the company to cease paying the increase. The Department also sought repayment of the excess wages paid (above the Pay Board's 5.5-percent standard) and \$2,500 civil penalties against both parties.

A company spokesman said the contract affected only 35 of the firm's 9,000 employees. Because of a strike by the Machinists, "we couldn't negotiate a contract with the Oilers," he said, so that "through no fault of the company or union members the contract wasn't ratified until November 19, 1971," shortly after Phase 2 began. The spokesman said the Oilers should not be penalized and "should have the same benefits as the other 9,000 employees." The previous agreement expired September 30, 1971.

The Board slashed deferred increases negotiated



by five printing trade unions representing 1,800 workers at The Washington Post and The Washington Star and Daily News. Reportedly, the increases were pared to 8 to 9 percent, from 9.5 to 12.5 percent. In addition, a 13.1-percent deferred increase for 1,000 Newspaper Guild members at the Post was reduced to 8.5 percent. A Board spokesman said employees would not be required to refund any money, even though they had been receiving the full increases for 4 months.

Approved by the Pay Board, however, was a 5-percent deferred increase due October 1 for some 135,000 railroaders. The increase was the second 5-percent deferred boost this year (the first was effective in April) under the agreement negotiated in 1971 between the United Transportation Union and the Nation's railroads (*Monthly Labor Review*, October 1971, p. 75). The October increase was approved after the Pay Board found that cost-saving work rules changes provided for by the settlement were being implemented.

### U.S. pay raise deferred

On the grounds that the Economic Stabilization Act amendments of 1971 supersede the Federal Pay Comparability Act of 1970, President Nixon postponed from October 1 to January 1 a scheduled raise for 3.6 million Federal employees. The President noted that Federal employees had received on January 1, 1972, the 5.5-percent-a-year maximum allowed under current economic controls. He said he would "recommend that the increases necessary to achieve comparability be paid effective January 1, 1973," the earliest the employees would be eligible under the Economic Stabilization Act.

The 1970 comparability law was designed to provide semiautomatic pay increases for military and white-collar Federal employees to keep their salaries "comparable" with private industry. Under its provisions, Federal pay rises to private industry levels every October 1, unless the President notifies the Congress otherwise by September 1 and submits an alternative plan, which can be rejected by either House of Congress.

### Executives' pay up in 1971

Pay increases for high-level executives in 31 major industries averaged 4.8 percent in 1971, compared with 0.6 percent in 1970. The results, compiled by McKinsey & Co., a management consulting firm, re-

vealed that in 14 of the 31 industries compensation rose at a rate above the 4.8-percent average and the 5.5-percent Phase 2 standard. The motor vehicle industry set the pace with pay increases of 21 percent, followed by air transportation with 16.6 percent. Executive compensation declined in four industries, led by a 13-percent decrease in nonferrous metals.

The annual surveys also cover bonuses and stock options of the four highest paid officials in each of the companies studied. In 1971, 23 of the 27 industries reporting average executive pay boosts posted profit gains, the largest, 97.3 percent, in the auto industry.

George H. Foote, a partner in McKinsey & Co., attributed over half of 1971's pay increases "to the sharp rise in profits and growth in company size." He added that "the wage freeze and Phase 2 controls undoubtedly played a role in keeping the overall increase in executive compensation below the wage increase guideline, particularly by limiting the size of bonus fund payouts for some companies."

### Shirt workers settle

On September 19, the Amalgamated Clothing Workers and major shirt manufacturers in various

### Hourly Earnings Index

The Hourly Earnings Index rose 0.5 in September to 138.8. The Index measures earnings of production or nonsupervisory workers in the private nonfarm economy. It is adjusted to exclude (1) the effects of inter-industry employment shifts, (2) overtime premium pay in manufacturing, and (3) seasonal variations. Data for periods prior to September 1972 are also shown in the following tabulation (1967 = 100).

	1969	1970	1971	1972
January	110.0	117.4	126.0	*134.6
February	110.8	118.0	126.7	*134.8
March	111.4	*118.9	*127.1	*135.5
April	112.0	119.3	128.1	*136.7
May	*112.6	*119.9	*128.9	*136.7
June	113.3	120.6	*129.4	*137.1
July	113.9	121.4	*130.1	137.8
August	114.4	*122.4	*130.8	*138.3
September	115.1	*123.1	131.4	*138.8
October	*115.9	*123.5	*131.8	—
November	*116.7	*124.2	*131.8	—
December	117.0	*124.9	*133.6	—

\* = Revised to 1971 benchmarks.

° = Preliminary.

States agreed to a 3-year contract for 20,000 workers. A union spokesman said the contract, subject to ratification and Pay Board approval, was expected to set a pattern for 100,000 other workers the union represents in the cotton garment industry.

Wages were increased by 15 cents effective September 4, 1972, 12.5 cents in September 1973 and April 1974, and 10 cents in January 1975. The employer payment to the welfare fund was increased to 9 percent (of gross wages), from 7.5 percent, to finance extension of hospital coverage to 120 days, from 60, and an increase in miscellaneous hospital expenses to \$1,000, from \$500. The basic pension was increased to \$85 a month, from \$75, for past and future retirees with 20 years of service, and two supplements to the basic benefit were established—\$1.50 a month for each year of service in excess of 20 (to a maximum 40) and \$7.50 a month for each \$1,000 of average annual pre-retirement earnings in excess of \$5,000. An eighth paid holiday becomes effective in 1973. The union said a dispute over imports of knitted shirts was resolved by requiring producers to place work with union contractors if possible.

### **Machinists, airline settle**

A breakthrough in negotiations between the Machinists and nine airlines occurred in mid-September when a settlement was reached with one of the carriers, United Air Lines. The new contract, which is subject to termination on August 31, 1973, was retroactive to the January 1 termination date of the prior agreement.

Effective January 1, 1972, the 9,500 line mechanics and related employees received a wage increase of 40 cents an hour, which reportedly amounted to 6.6 percent for the entire group and 6.9 percent for the mechanics alone. On January 1, 1973, the group will receive an increase of about 6.4 percent. The 5,200 ramp servicemen and stores workers received an initial increase of 31 cents an hour (about 6.5 percent) and will get 6.1 percent in January 1973. The 1,900 employees in other classifications received 5.5-percent increases on the same dates.

The pension plan was altered to provide for benefit levels based on length of service, rather than earnings. A company official said the change would more than double the benefit for employees who retire in the future, compared with those who retired just before the settlement.

Another pension improvement provides that employees retiring at age 55 or later whose age and years of service total 85 will receive a supplemental benefit until age 65, when they will receive a normal pension.

The company official said the settlement increased compensation costs by 5.5 percent on an annual basis, within the Pay Board guideline. Negotiations between the Machinists and the other eight carriers were continuing.

### **Gold miners accept 4-year offer**

On August 28, 1,500 striking members of Local 7044 of the Steelworkers ratified a 4-year agreement with Homestake Mining Co. of Lead, S.D. The previous 3-year agreement, scheduled to expire in November, had come up for renegotiation because the cost-of-living maximum had been reached. The nearly 6-week strike ended with a compromise on the escalator clause. Previously, each 50-cent rise in the price of gold between \$36 and \$49 an ounce triggered a 3-cent rise in hourly wages. Under the new agreement, the escalator clause was substantially revised. The 48-hour workweek was reduced to 40 hours every other week with weekly pay unchanged. If the price of gold reaches \$80 an ounce (it was \$67 at settlement) and remains there for 60 days, the workweek will be reduced to 40 hours each week. If the price rises to \$85 an ounce, there will be an increase in pension benefits. The agreement also provided for 5-percent wage increases at the beginning of each contract year, starting in August 1973.

### **Philadelphia teachers strike**

A strike by 13,000 Philadelphia schoolteachers highlighted scattered walkouts delaying the fall term. The Philadelphia School Board, reportedly \$52 million in debt, was seeking a 40-minute increase in the school day and elimination of 485 teaching positions. The Philadelphia Federation of Teachers was asking for a 34-percent salary boost, while the Board was offering 5 percent.

On September 19, the Washington Teachers Union struck District of Columbia schools in a dispute over pay and school conditions. The union, representing about half of the District's 7,000 teachers, was asking for a 17-percent pay rise, matching the boost granted the city's policemen and firemen in late August.

On September 7, a few days before the start of the fall term, the New York City Board of Education reached agreement on a 3-year contract with the United Federation of Teachers (UFT), averting a threatened strike by 70,000 public schoolteachers. The contract was described by Board of Education President Joseph Monserrat as "well within" the Pay Board's 5.5-percent guideline. Starting salaries were raised over 3 years to \$9,700 annually, from \$9,400, while maximums went from \$13,950 to \$16,650. The maximum additional payment for teachers completing extra credits was increased from \$3,000 to \$3,700 a year. Thus, in the third year, a teacher could earn a high of \$20,350 a year. The Board also agreed to hire 1,200 security personnel to patrol junior and senior high schools. The contract also raised stipends for teachers taking sabbatical leaves from 60 to 70 percent of their salary.

#### AT&T anti-bias accord

The General Services Administration announced an antidiscrimination agreement with the American Telephone & Telegraph Co., the Nation's largest private employer, with 800,000 employees. AT&T agreed to employ more blacks, other minority members, and women and provide more opportunities for promotion, all over the next 15 months. Robert D. Lilley, president of AT&T, said Bell System companies expected to move 50,000 women and 6,600 minority-group men into higher paying jobs. The Bell System also agreed to place 6,600 women in jobs traditionally held by men, such as installers and line workers, and 4,000 men in traditional female jobs, such as telephone operators and clerks.

The National Association for the Advancement of Colored People and the National Organization of Women both protested that the hiring pledges were uniform nationally, so that Bell companies that were allegedly most discriminatory would be permitted to catch up at the same rate as the others. They said the agreement failed to comply with the 1964 Civil Rights Act requirement that back pay be awarded for past discrimination. They also attacked continuation of personnel testing practices "that have an unfair impact on minorities."

The settlement was not related, in a legal sense, to the discrimination charge the Equal Employment Opportunity Commission filed with the Federal Communications Commission when AT&T asked for a rate increase (*Monthly Labor Review*, February

1972, pp. 77-78). Opportunity Commission Chairman William Brown said his agency would continue to press the charge.

After the settlement, the Department of Labor's Office of Federal Contract Compliance, in letters to both AT&T and the General Services Administration, announced that it was "assuming jurisdiction" over all matters relating to AT&T's employment policies as a Government contractor. Mr. Lilley issued a statement expressing confidence that the agreement "is a huge step toward true equal opportunity" and "will stand up under the most searching inquiry."

#### Hodgson cites minority-hiring record

Secretary of Labor James D. Hodgson said the Department of Labor has made "significant improvement" in its minority-hiring and advancement programs, and "leads, not lags behind" other Federal agencies. He said that during "a period of very limited overall growth in personnel," the ratio of minority employees in the Department grew from 29.7 percent to 31.7 percent in the year ending May 31, 1972. The Secretary's statement was issued after a published report said a 1971 Department of Labor study had criticized the Department's minority employment record.

#### Philadelphia Plan backed

Secretary Hodgson and other administration officials denied that a decision had been made to drop the Philadelphia Plan. The denials were prompted by minority-group reactions to President Nixon's order that all Cabinet officers and agency heads review their employment policies to ensure that no quota systems are in effect. In his order banning quotas in the Federal service, the President reiterated his commitment to increased minority employment opportunities. However, he added that the "criterion for selection I have employed and will continue to employ will be based on merit." In a Labor Day speech, he said, "Quotas are intended to be a shortcut to equal opportunity but in reality they are a dangerous detour away from the traditional value of measuring a person on the basis of ability."

The Philadelphia Plan was put into operation in 1969 (*Monthly Labor Review*, September 1969, pp. 60-61) and has led to the adoption of similar plans in 55 other cities. From its inception, unions



have attacked the plan, asserting it set "quotas" of minority employees for Federal construction projects. Comptroller General Elmer D. Staats agreed with the unions' position, holding that the plan did set job quotas, illegal under the Civil Rights Act of 1964. Subsequently, the Administration revised the plan to emphasize "goals" and Attorney General John Mitchell upheld this version. Later, a contractors' suit against the plan was dismissed in a Federal court and the decision was upheld by the Supreme Court. (See *Monthly Labor Review*, June 1972, p. 61, for an account of the Philadelphia Plan's progress in meeting its 1971 goals.)

### **Machinists approve dues increase**

Delegates to the Machinists convention in Los Angeles approved a dues increase after President Floyd E. Smith reported the union had spent \$5 million more than it took in since the 1968 convention. He described the last 4 years as a period during which "we have been caught in the tide of political reaction and economic recession." Mr. Smith said membership had dropped to 750,000 (from about 900,000), primarily because of cutbacks in defense and aerospace jobs.

The 1,800 delegates adopted a new minimum dues structure based on 2 hours' pay, or \$6.50 a month, whichever is greater. (The dues will be based on the average hourly pay of an entire local, rather than individual members.) Also approved was a \$1.10-a-month increase in the local per capita payment to the international, bringing the payment to \$4.50 by 1976. The convention endorsed Senator George McGovern for President and pledged an "all-out fight" for abolition of wage and price controls.

### **Rubber workers assail imports**

Layoffs and the resulting loss of operating income were also the chief topic at the 28th convention of the Rubber Workers, held in Bal Harbour, Fla. President Peter Bommarito blamed the union's problems

on 3½ years of "Nixonomics" and increasing imports. According to Mr. Bommarito, the "Big Five" American rubber companies have over 200 foreign subsidiaries that export to the United States, causing plant phaseouts that have cost 32,474 Rubber Workers' jobs in the past 10 years. To counter the union's financial problems, the delegates approved a formula providing for 2-cent automatic annual increases in monthly dues for each 1-cent-an-hour general wage increase won by any local during the previous 12 months, with the first adjustment in November 1973. The money will be split between the international and the local. Current dues were increased by \$1 a month.

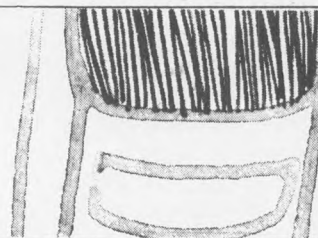
Mr. Bommarito also announced the union would concentrate on a single company within the Big Five in 1973 negotiations. He called current bargaining practices outmoded "as a result of the alliance established by the Big Five billion-dollar rubber corporations."

### **Griner wins reelection**

More than 1,500 delegates to the Government Workers' (AFGE) 23d biennial convention in Hollywood, Fla., elected John F. Griner to his sixth 2-year term as president. Also reelected were Executive Vice President Clyde M. Weber and Secretary-Treasurer Douglas H. Kershaw. The convention rejected the officers' recommendation for a 50-cent increase in monthly dues.

It also decentralized the union's organizing structure by dissolving the 18-member national organizing department and allocating the funds to district offices for organizing purposes. In another change, scheduled for the 1974 convention, the delegates instituted secret (in place of signed) ballots for election of union officers. In other actions, the convention protested President Nixon's decision to delay for 3 months a pay raise for Federal classified employees (see above) and called for revisions in the Hatch Act to permit Federal workers to participate in partisan politics. (See pp. 51-53 for a full account of the convention.) □

## Book Reviews and Notes



### A congeries of gloom and doom

*The Limits to Growth—A Report for the Club of Rome's Project on the Predicament of Mankind.* By Donella H. Meadows, Dennis L. Meadows, Jorgen Randers, and William W. Behrens III. New York, Universe Books, 1972. 205 pp. \$2.75.

*Are Our Descendants Doomed? Technological Change and Population Growth.* Edited by Harrison Brown and Edward Hutchings, Jr. New York, The Viking Press, 1972. 377 pp. \$12.50.

*Can We Survive Our Future? A Symposium.* Edited and introduced by G. R. Urban in collaboration with Michael Glenny. New York, St. Martin's Press, 1971. 400 pp. \$10.

*The Crowding Syndrome—Learning to Live with Too Much and Too Many.* By Caroline Bird. New York, David McKay Co., Inc., 1972. 337 pp. \$7.95.

*The Limits to Growth* has already prompted considerable discussion and controversy. Literate lay people have been conditioned, by now, to regard the printouts of our growing armamentarium of computers with something akin to idol worship. It is therefore particularly shocking for such an impressionable audience to be offered a printout which informs us, with all the trappings of scientific analysis, that we are on our merry way to hell in a technologically sophisticated hand-basket.

The basic elements in this tragedy-in-process can be readily summarized. You begin by selecting five major variables: world population, world production of industrial goods, world food production, the world supply of natural resources, and the worldwide production of pollution byproducts. You then examine the mass of data relating to the growth trends of these five variables over the past 70 years, selecting

some particular growth path which best describes the trend in each one separately. Then, by means of multivariate analysis, you devise a system of equations which reflects the mutual interactions which have been observed among these variables. Finally, this system is programmed into a computer so that you can generate a variety of extrapolations which reflect, by means of feedback loops, the effects of these observed interactions at different points in the future. The basic model utilized in this exercise was initially developed by Professor Jay W. Forrester of M.I.T., and is described in some detail in his recent book, *World Dynamics* (Cambridge, Mass., Wright-Allen Press, Inc., 1971).

From the graphic printouts of these computer simulations, the elemental facts of life (and death)

### Books reviewed in this issue

Donella H. Meadows and others, *The Limits to Growth—A Report for the Club of Rome's Project on the Predicament of Mankind*; Harrison Brown and Edward Hutchings, Jr., editors, *Are Our Descendants Doomed? Technological Change and Population Growth*; G. R. Urban, editor, *Can We Survive Our Future? A Symposium*; and Caroline Bird, *The Crowding Syndrome—Learning to Live with Too Much and Too Many*. Reviewed by Denis F. Johnston.

Angus Campbell and Philip E. Converse, *The Human Meaning of Social Change*. Reviewed by Alexander M. Mood.

Archie Green, *Only a Miner*. Reviewed by Joe Glazer.  
Bill Peterson, *Coaltown Revisited: An Appalachian Notebook*. Reviewed by David B. Brooks.

Bertell Ollman, *Alienation: Marx's Concept of Man in Capitalist Society*. Reviewed by Walter A. Weisskopf.

Lester G. Telser, *Competition, Collusion, and Game Theory*. Reviewed by Lee E. Preston.

Margaret Peil, *The Ghanaian Factory Worker: Industrial Man in Africa*. Reviewed by David R. Kammerschen.

emerge with dramatic inexorability: continued population growth and its attendant material production must eventually lead to the exhaustion of our natural resources, or of our food supplies, or to an overwhelming burden of pollution. As most students of population realize, Malthus is bound to be right in the long run. The only question is how long is the run? If the results of this study are reasonably sound, we must conclude that the run is almost over, unless we manage to drastically modify the growth paths of these key variables within the next 50 years. The only lasting alternative to disaster is the development of what the authors aptly term an "equilibrium" society—a rationally directed, worldwide social system designed to achieve and preserve an ecological balance between people and resources.

Despite its modest size, this book contains a wealth of illustrative material, and the style of its discussion is laudably nontechnical. Nevertheless, the book is just as disturbing for what it fails to say as for its basic message. In examining efforts of this kind, it is helpful to bear in mind two caveats: first, as every computer programmer knows, what you get out is no better than what you put in. Second, as every demographer knows, any extrapolation, at no matter how modest a rate of change, is bound to produce an absurd quantity at some point in the future. With respect to the inputs, neither this book nor Forrester's *World Dynamics* provides satisfactory information. The reader cannot find any critical discussion of the data incorporated in the model or of the process whereby the basic growth paths were determined. Nor can he evaluate the critical assumptions underlying the assumed operation of the feedback systems in the model. Nor is he informed as to the sensitivity of the several equations in the system to specified changes in the key parameters. As to the outputs, one is reminded of Robert Nisbet's caustic observation that trend extrapolations cannot reliably inform us as to likely changes in phenomena which are affected by geniuses, maniacs, prophets, or random events—to which he adds the historian's comment that phenomena which are free of such "disturbances" don't really matter much anyway.

But no study which attempts to grapple with such a vast and complex issue as global survival should be dismissed because of its limitations. Its authors are aware of the difficulties surrounding their ambitious undertaking, and they stress the preliminary nature of their findings. They offer these results in the hope

that their efforts will spur additional concern and further research on these awesome problems. Their basic message is that we inhabitants of spaceship earth must alter our ways if we are to avert disaster. Should the reader ask the obvious next question, "How?" this book can offer no guidance, save for one or two moralistic aphorisms.

*Are Our Descendants Doomed?* is a startling title for a compendium of informative and scholarly papers by a dozen experts whose areas of expertise range from economics to chemistry, but whose common concern is the growth and distribution of world population viewed in a broadly ecological perspective. All but one of the papers is followed by a brief discussion by another acknowledged authority.

The initial contributions (by Kingsley Davis and Roger Revelle) provide an overview of the dynamics and consequences of the world's current population growth. These papers are followed by an excellent summary of the problem of unemployment and underemployment in the less developed countries, by Bruce Johnston, and a discussion of population in relation to GNP and the environment, by Alan Sweezy. The remaining contributions provide highly informative summaries of the impact of family planning programs in India and Japan, the prospects for new forms of contraception, and the role of United Nations agencies in dealing with world population problems. The last two papers provide perceptive treatments of the crucial role of traditional or peasant belief systems in relation to the adoption of family planning in Latin America (Norman Miller) and the Moslem world (Laila Shukry El-Hamamsy).

In his concluding remarks, Harrison Brown cannot refrain from indulging in the scary extrapolations which characterize *The Limits to Growth*. He points out that if current growth rates in population and GNP were to continue unchanged, the poorer countries would achieve the per capita wealth which the richer countries now enjoy in 130 years. But under the same assumption, the richer countries would then have a per capita GNP 370 times larger than that of the poorer ones, and the population of the poorer countries would number 130 billion. Brown's message is the same as that contained in *The Limits to Growth*: the question posed by the book's title must be answered in the affirmative unless we change our ways.

A closer reading of the individual contributions offers some glimmer of hope, however. Bernard Berelson offers some evidence that the current efforts



toward the introduction of family planning, despite their uneven quality and incomplete coverage, are beginning to show statistically measurable results in the less developed countries. But if the picture drawn by these experts is not hopeless, it is undeniably sobering; the common thread in most of these essays is that the time for remedial action is very short indeed.

The symposium entitled *Can We Survive Our Future?* places the general issues of population growth, technological development, pollution control, and individual freedom in the broadest possible historical and philosophical perspectives. Instead of presenting the usual compendium of formal papers, the editors of this symposium offer a series of informal discussions, in loosely structured question-answer form, organized in three parts. Part 1, *The Impact of Science on the Moral Options of Man*, includes discussions with such distinguished thinkers as Arnold Toynbee, Werner Heisenberg, Jacques Ellul, and Erich Jantsch. Part 2, entitled *Growth, Controls, and Responsibility*, includes discussions with Edward Shils, Dennis Gabor, and Herman Kahn, among others. Part 3, entitled *Choosing the Future*, includes discussions which are designed to indicate the wide variety of approaches toward coping with the future, ranging from the utopian activism of student rebels to the policy-oriented projections of national governments.

The result is rich fare indeed, but given the wide-ranging subject matter of the discussions and the broad intellectual vision of the discussants, the jello tends to get mixed in the stew. Urban's introduction neatly describes the dilemmas posed by the issues of social control versus personal freedom, and the growing gap in levels of living versus international stability. The former dilemma arises from a recognition that the growing size and complexity of human organizations may soon pass a critical threshold beyond which existing control mechanisms will cease to function. At that point, we face the alternatives of descent toward chaos or the adoption of far more repressive and autocratic control mechanisms. The latter dilemma is no less depressing: if the richer nations continue to widen the already enormous gap between their own levels of living and those of the poorer countries, we can expect to encounter progressively severe social and political instabilities and breakdowns and the attendant threats to world peace. Alternatively, the richer nations face the prospect of diverting a much larger share of their own productive skills and energies toward meeting the

almost limitless needs of the poorer countries—a course of action which is hardly appealing to the short-run interests of the richer nations.

If Urban's introduction is plainly pessimistic, the discussions that follow offer little basis for a happier outlook. Toynbee, for example, is optimistic that the threat of nuclear destruction has been reduced, but he is less optimistic in regard to our ability to cope with the exponential growth of pollution which parallels that of population and production. He is even less sanguine concerning our ability to escape the restraints of unprecedented forms and degrees of social control which must be resorted to if we delay our response to the problems of unbalanced growth until they reach crisis proportions.

Other discussants, notably Philip Rieff, Edward Shils, and Théo LeFèvre, argue persuasively that the problems associated with unbalanced exponential growth are not amenable to purely technological solutions. Technology, they argue, is a necessary but insufficient means toward the needed solutions; it can only operate beneficently if it is directed toward appropriate goals. These goals can only be determined in the light of moral prescriptions, and the programs for their attainment can only be developed through political means.

The remarks of these thinkers are more impressive by virtue of their realistic grasp of historical realities. If they reject the radical utopianism of the technologist or systems analyst, they are equally dubious of the nostrums of the "new left" and the advocates of a "counterculture." They fully recognize that the care and feeding of the four billion inhabitants of this earth, and the preservation of their environment, offer challenges which can only be met by the continued development of technology. Their major concern is that such technology should not be permitted to be self-directing—as Ozbekhan has argued with respect to technological potentialities, "can" does *not* imply "ought."

The final section of this fascinating book provides perceptive interpretations of the student protest movements in France and Germany, examined as serious, if confused, manifestations of a search for new solutions to the problems to which students everywhere are particularly sensitized. These discussions are followed by informative discussions of the trend toward technological convergence between the developed capitalist and communist nations. Readers who are unfamiliar with Galbraith's thinking on this topic will profit from this exchange of views, and

those who agree with his thesis that technological convergence implies some measure of social and political convergence will find reason to wonder if such an outcome is either likely or desirable.

I think the outstanding contribution in this final section is that of Bernard Cazes, which provides a sensitive discussion of the methods of future-oriented research, and a realistic assessment of the role played by such research in the formulation of public policies. But the contributions of the editors are also outstanding; the many nuggets of understanding drawn from their fellow discussants are attributable, in large part, to the stimulating questions they have formulated.

For the reader who is repelled by the highly abstract intellectualizing of recognized social thinkers, but who nevertheless wishes to improve his grasp of the underlying causes of our malaise, Caroline Bird's *The Crowding Syndrome* is just the ticket. She has done a remarkable job of translating her extensive scholarly research findings into a highly personalized and readable style of presentation.

The focus of this book is the problem of coping—how does one manage to live in the blooming confusion of affluent America without losing one's sanity or identity or sense of worth? Senator Muskie's brief foreword captures the book's essential theme when he stresses the author's solid understanding of the flexibility of our modern social institutions and the inventiveness and adaptability of our human resources. Bird's central argument, expressed with a fine blend of wit and wisdom, is an elaboration of Franklin Roosevelt's famous pronouncement: "We have nothing to fear but fear itself." Perhaps the most valuable insight to be gained from this book is the understanding that evidence of strain and breakdown is also evidence of change and reconstruction; if many inherently worthy pursuits are laden with unintended and harmful side-effects, it is also true that many inherently wasteful and destructive actions are associated with beneficial side-effects.

Not all readers will be persuaded by Bird's message of hope. It may be true that a problem perceived is a problem on the way to being solved, but too many problems, interacting in too many counter-intuitive ways, tend to confound our perceptions, so that we fall victim to despair or indifference or escapism. The burden of problems described by these four books taken together is far weightier than the tentative solutions which are suggested. As Toyn-

bee might say, the challenge is there—what about the response?

—DENIS F. JOHNSTON

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### A new growth industry

*The Human Meaning of Social Change*. Edited by Angus Campbell and Philip E. Converse. New York, Russell Sage Foundation, 1972. 547 pp. \$15.

"The volume was commissioned by the Russell Sage Foundation as a companion piece to *Indicators of Social Change* (W. E. Moore and E. B. Sheldon, editors, New York, Russell Sage Foundation, 1968) which . . . was concerned with various kinds of hard data, typically sociostructural; this book is devoted chiefly to softer data of a more social-psychological sort: the attitudes, expectations, aspirations, and values of the American population." It comprehensively points out important aspects of society which presently have no measures; it also prescribes what must be done to make present crude and ambiguous measures of other aspects more meaningful. In describing its contents I use quotation marks because I have either copied sentences verbatim from the editors' overview or trivially paraphrased them.

"The chapter on people's use of time, by John P. Robinson, is concerned not only with the ways in which people use their 24 hours each day but with the meaning these activities have for them—their motive-serving, their replaceability, their satisfaction-giving. The 1966 national study of time use (Converse and Robinson) described in this chapter will serve as a substantial baseline for subsequent measurement.

"Peter H. Rossi discusses the difficult concept of community. Rejecting more global definitions of the term, he chooses to speak of the residential locality, with its solidarity (the identification of the residents with the locality), its integration (the extent to which the residents are linked by ties of exchange), and its political autonomy (its ability to make collective decisions which are binding on the residents).

"Marvin B. Sussman describes the functions of the family and the kinship network, especially in their

linkage with the bureaucratic systems with which the family members must deal. He proposes research on the effect on the family of the developing value of 'personal happiness,' on the changing roles of husbands and wives with the increasing employment of women, and on the experimental family forms which have sprung up as part of the 'counterculture.'

"Robert L. Kahn considers the meaning of work, the area of life which has perhaps been subjected to more empirical study than any other, and discusses the inadequacies of this extensive body of research. He proposes the development of indicators of the personal strains and rewards of the work life and suggests that the evaluation of work may be shifting from an almost exclusive interest in the contribution of work to economic production to a growing concern with its psychological consequences for the worker.

"Rolf Meyersohn finds that the bulk of the available research on leisure is limited to counts of the activities which fill the individual's free time. He proposes a redirection of emphasis toward a concern with the experienced quality of leisure rather than with its content and duration.

"George Katona discusses the human factor in economic affairs. The great increase since the Second World War in the proportion of the population with 'discretionary income' has led to rising aspirations and changing patterns of behavior. Consumers, who were taken for granted by an earlier school of economics, now contribute an important influence on the course of the nation's economy.

"Philip Converse considers the severe problems of interpretation that voting statistics pose. He then summarizes some of the insights provided by survey research evidence concerning a few of the most imposing recent changes in the nature of the electorate, including the political mobilization of the black population, the erosion of the Solid South, the educational upgrading of the electorate, and the increase in political alienation of the late 1960's.

"Herbert H. Hyman deals with the complexities of change in the social and psychological characteristics of American Negroes and outlines the kinds of dimensions on which measurement should be periodically taken. These include aspiration levels, sense of deprivation, feelings of hate and distrust, specific grievances and dissatisfactions, expectations and preferences regarding integration and separatism. He urges the special study of 'influentials' as well as of

the general public and the comparative analysis of age cohorts as an indicator of change.

"Albert J. Reiss, Jr. reviews the extensive literature describing the institutions of public order, the services they perform, the behavior of public officials performing the service, and the responses of those who are served. He would concentrate immediate research effort into continuing assessment of victimization by crime, the quality of discretionary authority and service for citizens, and the accountability of public servants.

"Melvin Seeman discusses the critical problem of alienation. He stresses the necessity of specific definition of the distinguishable components of alienation, develops the construction of the concept which has grown out of his own research, indicates the kinds of improvement in measuring techniques and study design that are needed, and suggests a program of research on the patterns and the consequences of alienation."

These are expert and insightful analyses. They contain some nice illustrations of how misleading simple statistics can be; for example, Converse reasons convincingly that much of the recorded abrupt decline of participation of qualified voters in national elections at the turn of the century was not decline of voter interest but decline of election fraud.

The book as a whole leads me to believe that the social indicators project may turn out to be the growth industry of the century. Society and its institutions are so complex that a given indicator inevitably raises more questions than it answers and hence generates a requirement for more indicators. The divorce rate went up this year. Is that good or bad? Well, you must look deeper: at the husbands and wives and children separately, at the older and younger children, at the boys and girls, at the children that went to the mother and those that went to the father, at the quality of family life before the divorce, at the basic causes of the divorce, at the characteristics and attitudes of the principals, at those who remarried, at the outcomes of the remarriages, at the children of those who remarried, and so on, and so on.

—ALEXANDER M. MOOD

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### Homage to 'the movers and shakers'

*Only a Miner.* By Archie Green. Urbana, University of Illinois Press, 1972. 520 pp., bibliography. \$12.50.

Before you start reading this beautiful book about recorded coal mining songs, flip through it and savor the nuggets of coal mining history and folklore scattered generously throughout:

- A photo of a young Gene Autry and the story of his recording of a union ballad, *The Death of Mother Jones*, in 1931. Yes, this is the same Autry who later became the millionaire, singing cowboy, and movie idol.

- A reprint of an ILGWU ad with the redoubtable Mother Jones herself marching in a workers' parade, with one of her famous sayings printed alongside: "I reside wherever there is a good fight against wrong."

- The story of *Sixteen Tons*, a coal mining song about a company store and how it became one of the greatest hits ever recorded. We also learn for the first time the meaning behind the phrase *Sixteen Tons*: In the 1920's, young men in Kentucky, on their beginning day in the mines, had to dig 16 tons (even though the normal average was 8 or 10 tons) to show that they were real men.

- A reference to an anti-miners' union song, a rare item indeed in the history of mining folklore:

*Idle men and a roving band  
Strike the tools from a miner's hand.*

And the artwork! Professor Green has selected with tender loving care, and with an eye for dramatic impact, more than 100 photographs and artifacts from a thousand or more items that he reviewed—pictures of a company store, a company town, breaker boys at work (can they be more than 10 years old?), the oldtime miner with his pick and shovel, the modern "miner"—a mechanical monster 10 stories high, the first UMWA executive board (five fine mustaches, one magnificent beard, and one cleanshaven face), a mine disaster, a mine rescue, folklorist George Korson recording songs and dances in the heart of a coal mine.

And wonder of wonders, the photos are not stuck together in a clump in the middle of the book, they are carefully placed throughout the book exactly where they are supposed to be. When Green refers to a chain gang song on page 201, behold we have a fine photo of a Georgia chain gang on the opposite page 200. And when he is talking about the Carter Family's recording of *Coal Miner's Blues* on page 388, we find on page 389 a replica of a 1929 Carter Family handbill which states: "The program is mor-

ally good, Admission 15¢ and 25¢."

Archie Green has become the nation's leading labor folklorist, with a unique background of 20 years as a rank-and-file carpenter and 12 years as an academic practitioner. He is surely the only Ph.D. in the country with 32 consecutive years as a dues-paying member of a building trades union! He is now a folklore consultant to the Smithsonian Institution. In this book, Green draws on ballad scholarship, labor history, and popular culture studies to explore 10 important coal mining songs which have had a fascinating recording history between the 1920's and 1970. As Green points out: "There are few precedents in the United States for academic book-length investigations based exclusively on sound recordings . . . because sound technology was perfected well after folklore became an established discipline in Europe, the notion that a recording might be a useful tool was slow in reaching folklorists." Green reminds traditional folklorists that the phonograph record which preserves ballads and other topical songs can perform the same function as the old broadside: "Printed broadsides normally carried words only. When notes were present they had meaning to music readers alone. A disc was a broadside in which one heard rather than saw text and tune . . . recordings fused sounds and ideas in a manner beyond the limits of print." In fact, a song heard on a disc "imparts a sense of emotional immediacy and tension beyond the feeling evoked in letters. Sound recordings preserve the subtle inflection, unique accent, pulsating rhythm, or irregular tempo of a singer which is inherent in live performance but which is extremely difficult to convey in textual and musical transcription."

In *Only a Miner*, Green has not only broken fresh ground in folklore studies by investigating sound recordings, but his subject matter—industrial song—has not been a favorite of traditional folklorists who oriented themselves to country life. Notes Green: "Their [traditional folklorists] work consisted mainly in rescuing rural lore from the destructive onslaught of the industrial revolution or in cataloguing it in order to distinguish (good, old) material to be retained from that to be laid aside. The reasons for the choice are complex and may perhaps be found in an ideology of primitivist romanticism, an inability to cope with grime or noise, or just a warm feeling for peasants and mountaineers, linked with a concomitant distrust of their factory progeny."

But Green reminds us that the labor movement's

attitude toward its own folklore is not much better than that of traditional folklorists who are strong on songs about millers and milkmaids but uncomfortable with songs about truckdrivers or autoworkers. For example, says Green, the fact that Mother Jones, the greatest woman folk hero the labor movement has produced, lies in an obscure resting place says something about the labor movement's attitude towards its folklore and traditions.

Except for John L. Lewis, who subsidized folklorist George Korson to search out coal mining songs, stories, legends, and life-style (resulting in two invaluable books), the labor movement has ignored much of its own heritage and traditions. (The UAW should be favorably mentioned here. It is giving strong support to the Wayne State University Labor Archives.) At his own expense, Archie Green tracked down David McCarn in Gastonia, N.C., to get the story of his classic composition, *Cotton Mill Colic*:

*I'm going to starve  
Everybody will  
Cause you can't make a living  
In a cotton mill.*

In the same way he found and recorded a 70-year-old ex-weaver, Dorsey Dixon, in North Carolina. Dixon had written a number of fine textile songs including *Babies in the Mill*, one of the few industrial songs about child labor. Dixon died several years after the interview. This marvelous song would have been lost forever, if Green had not searched out Dixon and recorded him.

Is it possible in these days to get a major union—textile, clothing, steel, building trades—spending the amount of money it would cost to run one big banquet—to put talent like Archie Green to work digging up the old songs and stories of the union and the industry, preserving them for generations to come, on record and in print? One hopes so, but sometimes one loses heart as the years go by and oldtimers who are the only repository of historic songs, stories and traditions, pass away, one by one, unrecorded and unnoticed.

I still feel a pain in my heart when I think of that day a dozen years ago when Archie Green had finally saved up enough bus fare to go from his home in San Francisco to Tacoma, Wash. (he was working as a carpenter at the time) to interview Ralph Chaplin, the man who had written *Solidarity Forever*. The interview never took place because Chaplin died in his seventies just before Green got to him. And

Chaplin took with him to the grave those intimate details about America's most important labor song that only he could have known and that a folklorist like Green could have preserved for all of us.

*Only a Miner* is the first of a new series on "Music in American Lives" published by the University of Illinois Press. It is a major book that belongs in every labor library. It also belongs in the library of every labor history buff.

—JOE GLAZER

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### Another time around

*Coaltown Revisited: An Appalachian Notebook.*  
By Bill Peterson. Chicago, Henry Regnery Co.,  
1972. 230 pp. \$6.95.

This book is just what it claims to be, the notebook of a journalist who—for a time—"came to believe in (the) promises" that the Great Society made to Appalachia. The reporter, Bill Peterson, works for the *Louisville Courier-Journal*, one of the few dailies in the country to take Appalachia seriously. The paper deserves credit for having given him the time to travel, and Peterson for having done more listening than talking during his travels (perhaps one third of the book consists of brief monologues by Appalachians).

*Coaltown Revisited* begins by looking at the coal industry and the United Mine Workers of America and goes on to cover the welfare system, discrimination in the schools, "poverty warriors," strip mining, political power, and "the rich hillbillies." The period covered is that of the third rediscovery of Appalachia. The first occurred when Yankee schoolmarm and industrialists moved in as Reconstruction in the South came to an end, and the second when union organizers and reformers moved in during the Depression. Sensibly, the book focuses not on the strange collection of counties in 13 states that forms political Appalachia (as defined by Congress), but on the more logical grouping in the coalfields of eastern Kentucky and Tennessee, southern West Virginia, and southwestern Virginia.

Because the book is well organized and easy to read, the story of exploitation that it chronicles will perhaps reach a new audience. If so, Peterson's efforts will have been worthwhile. If not, it might as well have been left unwritten. There is nothing new

in the book; even the interviews repeat stories, and sometimes the same voices, that we have heard before. Other surveys of Appalachian problems present the record more eloquently or more completely. Other studies of specific aspects are more incisive. The well-known survey by Harry Caudill is still among the best on the nature and sources of Appalachian problems: *Night Comes to the Cumberlands* (Boston, Little, Brown & Co., 1962). In quite a different style, see also *Appalachia's People, Problems, Alternatives: An Introductory Social Science Reader*, compiled by PARC, Peoples Appalachian Research Collective (Morgantown, West Va., 1971), 486 pp., photocopied. A useful anthology has been edited by David S. Walls and John B. Stephenson, *Appalachia in the Sixties: Decade of Reawakening* (Lexington, University of Kentucky Press, 1972). On the coal industry, see Brit Hume, *Death and the Mines* (New York, Grossman Publishers, 1971). On the problems of living in a mountain community, see John Fetterman, *Stinking Creek* (New York, E. P. Dutton, 1967).

Indeed, the notes of other journalists have focused more sharply on the same issues (and added a welcome touch of anger). Notable is *The Mountain Eagle*, published weekly in Whitesburg, Ky., by Tom Gish and a small army of supporters; as the masthead states, "It Screams." Moreover, Peterson specifically refrains from offering solutions or making many explicit evaluations, which is unfortunate, even in a notebook. Have the sums poured into new highways and vocational schools made no difference? Is there so little to say about the Appalachian Regional Commission, the most important local component of the Great Society?

Despite Peterson's reticence, readers will find it difficult to avoid two impressions. First, he does not appear to believe that the latest rediscovery of Appalachia is likely to have any greater impact on the region's basic problems than have the two previous rediscoveries. Second, despite the almost colonial-like power exercised by sources ranging from distant coal firms to local school superintendents, he finds a strength and a resilience in the Appalachian people that offers grounds for hope. With these two implicit conclusions, Peterson places himself in the majority among both the radicals and the reformers.

—DAVID B. BROOKS

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### Struggle toward clarity

*Alienation: Marx's Concept of Man in Capitalist Society.* By Bertell Ollman. London, Cambridge University Press, 1971. 325 pp. \$10.50.

This is an explanation of Marx's theory of knowledge and of his ideas about human nature and alienation. Much in the manner of early Biblical and Talmudic scholars, Ollman wants to elucidate the obscure terminology of Marx. However, his style is as involuted as that of the subject of his study. Ollman starts with the assumption that if "Marx means what he seems to . . . Marx is not only guilty of ridiculous exaggeration but of gross ignorance of history and the simplest facts of economic life. Furthermore, he frequently wrote sentences which are utter nonsense. . . ." This in itself may be partly a misunderstanding of the dialectical style of Marx. Also, these earlier writings were not clear presentations of a finished system of thought, but reflect a struggle to gain clarity about the dialectic process itself and about his own ideas.

Ollman sees in relationism the only way to make sense out of Marx's concepts. Things, persons, institutions such as capital, labor, commodities, are not separate, discrete, individual entities but exist only in terms of relations to other things, persons, institutions. They are part of a totality in which the parts and the whole are identical. "The truth is the whole. Things are identical with the whole they express." From the ontological and sociohistorical point of view, Ollman's concept of internal relations as the key to unlocking Marx's true meaning makes sense. That is, Marx believes the individual and the whole are not distinct, discrete entities. Further, in Marx's thought, every event in history is related to every other, and all factors are mutually interdependent. History is a dynamic process, not a series of static equilibria. (Ollman thus questions the popular interpretation of dialectical materialism in which economic conditions determine noneconomic ones.) However, Ollman's stress on the logical aspects of relationism—in which relations exist between distinct objects and persons—leads him astray.

In Part III, Ollman collects and paraphrases all Marx's statements about alienation. What strikes the reader is how applicable his ideas are today. The lack of community and cooperation between man stressed by Marx is widely deplored today, and the communes of the counterculture try to remedy the situation on a small scale. What is more, according



to Marx the capitalist also leads an alienated life; thus he foresaw the idea, widely held today, that everybody, including those in power, are enslaved by the "system."

However, Ollman's presentation of these ideas in Marxian terminology also brings home the fact that his terminology is hardly useful today. Marx defines alienation as the state of affairs that contrasts diametrically with communism, and communism as a society without alienation. This is circular reasoning. The author presents with great thoroughness Marx's ideas about communism. The rereading of these formulations shows clearly that to Marx communism is an ideal, a normative concept, a desideratum, a "should be." It is defined negatively by the absence of capitalist alienation, of everything that Marx—and many others—consider as "bad" in capitalism. However, Ollman denies that Marx had an ethical theory. He arrives at this conclusion by the tortuous argument that Marx never suspends his commitments and that an ethical system requires such a suspension before the "facts have been gathered and their relation to the standard of judgment clarified." I think that this is sophistry used to protect the "scientific" character of Marxism. Marx's idea of communism is a powerful vision of paradise on earth, a vision which has changed the world. The power of this vision can only be reduced by the attempts to demote it to the level of a "science." Only those who mythologize science will find this necessary.

Ollman does not deal with the many doubts of contemporary students of Marx about whether and how his communist vision might be realized. The proletariat and the class struggle is not likely to bring about communism in the Marxian sense: Class struggle has become complex and fragmented; the poor and exploited have become a minority; and reform and rebellion have become the province of various "elites" rather than of the downtrodden majority of workers.

Because Ollman does not want to see Marx's pure communism as an ideal, he regards the question of its realization as one of sufficient causal links between economic conditions and social action. But he admits irrationality creates a time lag between conditions and action.

Blaming the "character structure" of workers for the failure of Marxian ideas to materialize, Ollman neglects many authorities on the role of character structure in history, such as Freud, Kardiner, and Reisman, and ignores much of Fromm's more rele-

vant work. All these authorities give primacy to *unconscious* aspects of the psyche in determining human action and reaction. Ollman recognizes the importance of this element he calls "irrational." However, unconscious irrationality nullifies much of Marx's nineteenth century interpretation of action as conscious, deliberate, rational behavior. Professor Ollman's book thus does not distinguish clearly enough among the obsolete and the still valid ideas of Marx and contributes little to its modernization.

Fromm and a long line of recent socialist humanist writers have modified the Marxian system. Ollman takes one isolated concept of character structure from them, but ignores the humanist existential psychological revision of Marxism in recent times. However, his work is invaluable as a source of study of Marx's ideas about alienation and human nature. It will greatly facilitate the understanding of the texts of Marx in the United States.

—WALTER A. WEISSKOPF

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### Style and substance

*Competition, Collusion, and Game Theory.* By Lester G. Telser. Chicago, Aldine Atherton, Inc., 1972. 370 pp.

This impressive treatise contains at least three distinct elements: an extensive new development of game theory; a collection of sophisticated and insightful comments on the nature of markets and of market equilibrium; and two substantial pieces of empirical work dealing with the measurement and interpretation of market performance characteristics. The three elements are apparently closely connected in the mind of the author, and the first two are interwoven in chapters I–VI of the text; however, it remains true that each can be extracted by the interested reader without paying too much attention to the others. Indeed, the empirical chapters stand quite apart from the theoretical analysis, and are in no sense that I can determine tests or illustrations of the theory presented.

The game theory analysis, which comprises the bulk of the book, deals with the concept of the *core* of the game, or market. We imagine a given population of traders with given utility functions and re-

source endowments. They may trade or not, and may form various coalitions in order to improve their individual trading positions. A solution of the game takes the form of a vector of market allocations and utility imputations (the gains from trade). Any such solution is in the *core* of the game if it cannot be prevented by counteroffers from any of the market participants. Competitive supply-demand intersection is shown to be one type of core solution, but other types—related to other conditions of competitive structure—are also possible. Hence, to paraphrase Telser, a systematic study of the allocations and imputations arising from various market coalitions—and the necessary counterconditions strong enough to prevent them—becomes a theory of competition. The development of this approach makes very tough going indeed, but the exposition is brilliantly clear and the author takes great pains to link his contributions to the familiar Marshallian concepts. Even without following the argument in every detail, the reader can extract nuggets of analysis and gain some insight into the larger conception involved.

The second aspect of the book—an exposition of some fundamental theoretical characteristics of markets, illustrated by historical reference and convincing examples—is, paradoxically, both its most accessible (in terms of readability and general interest) and least accessible (in terms of location) feature. Here the author emphasizes the disjoint or stepwise character of actual supply and demand offers, and the effect of various types of market coalitions on the supply and demand characteristics themselves. (The airplane example on pp. 48–57 is particularly useful in this connection.) Although these literary sections are extremely useful in keeping the reader oriented to the thread of the formal analysis and its substantive implications, they could be extracted and woven almost verbatim into a valuable theoretical essay accessible to a wider audience. I would urge this project upon the author, and at the same time urge the symbols-dazed reader to skip on to the next page of literary text (instead of closing the book in despair!).

As in the earlier treatise of Shubik (*Strategy and Market Structure*, 1959), Telser's final chapters of empirical work are self-contained, and make only indirect reference to the preceding theoretical analysis. They are, however, no less interesting for this reason. Chapter VII is based almost entirely on Telser's 1962 article, "The Demand of Branded Goods

as Estimated from the Consumer Panel Data." Chapter VIII is a new piece of econometric work that attempts to explain the returns to gross book value of assets in Census manufacturing industries on the basis of industry characteristics such as concentration, average firm size, number of firms, and so on. The major innovation in this analysis is the inclusion of "specific human capital" as a critical variable. The resultant findings "are consistent with the view that companies in the more concentrated industries invest more heavily in their employees and that the workers increase their own specific human capital investment in step with the company's investment. Hence total specific human capital per worker rises with the concentration ratio" (p. 347). In spite of the inclusion of this variable, and in spite of the usual problems of specification and coverage encountered in such studies, the author concludes that "the belief that competition and concentration vary inversely is consistent with the evidence" (p. 356).

Three brief comments in conclusion: First, it appears that after a quarter-century of development at the hands of brilliant analysts, game theory has yet to offer its first empirically useful concept to economic analysis; Telser's contribution is substantial, but the gap is still wide. Second, even at the purely theoretical level, Telser's frame of analysis is entirely static, while students of market phenomena are increasingly impressed with the importance of time-related processes. The point here is not that every theoretical model needs to be "dynamized" with subscripts, but rather that processes of market communication and adaptation appear to exert a powerful influence on the solutions obtained from "given" resource endowments and utilities. It may be that Telser's greater generalization of the static analysis will facilitate the subsequent inclusion of dynamic process variables, but I detect no signs of this development in the present work. Finally, it remains to be said that this book is a major contribution by a major scholar and teacher of economic theory and econometrics. Serious professionals can learn much from the style of the presentation, as well as from the substance.

—LEE E. PRESTON

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## Social aspects of industrialization

*The Ghanaian Factory Worker: Industrial Man in Africa.* By Margaret Peil. London, Cambridge University Press, 1972. 254 pp., bibliography. \$18.50.

Professor Peil's germinal study of the social aspects of industrialization in a developing country in tropical Africa represents the matured views of a scholar who has spent 5 years teaching at the University of Ghana. This volume is the latest in the respected *African Studies Series*, embracing books on economic, historical, and social aspects of Africa, directed by the African Studies Centre at Cambridge. This particular volume surveys the industrialization process in Ghana and its effects through such other factors as migration. While the book will appeal to a fairly broad audience (the technical argot is at a minimum), it can most profitably be perused by a specialist.

Margaret Peil is a sociologist at the Centre for West African Studies at the University of Birmingham (on page 19, she indicates that most of the earlier studies of African factory workers had been conducted by "economists rather than sociologists"). Being an economist with an interest in developing countries in general, but not Africa in particular, it is beyond my ken to opine how this book will be received by sociologists. But regardless of one's major field of interest, this much is clear: Margaret Peil "knows her forks." She has her facts clearly in mind, her prose is crisp, her topic is of considerable social relevance, and her manuscript is remarkably clear of typographical blemishes. In short, the book was worthy of publication and compares quite favorably with similar studies in the area of which I am familiar.

Thus, having made it quite clear that I regard the book as a positive contribution to a burgeoning volume of literature examining the "industrial man," "bright lights," "reference group," and so on theses of sociologists, let me indicate briefly where I feel the book is deficient. A major disappointment about the book was that it was about 99.44 percent descriptive, reaching few conclusions, and employing almost none of the analytical tools of modern sociology. To be sure, in her fine chapter 8, "Ghanaian Factory Workers and Modernity," she breaks out of her rather limited role of cicerone to reach some conclusions. But this is rare. Chapters 1, "Introduction"; 2, "The Factories"; 3, "Occupations"; 4, "Job Satisfac-

tion"; 5, "Migration"; 6, "Urban Living"; and 7, "Family Ties" are devoted almost exclusively to enumerating statistics of various sorts. It is a tribute to her machete-like prose that she is able to hold a reader's attention as well as she does through this long march through Ghana's numerical jungle. While the data are imperfect in Ghana as in most developing countries, I personally would not regard this as an insuperable difficulty for the pioneering type of study which the author attempted in this volume.

There is one bothersome peccadillo in the Peil study which is worth a brief mention, as it has become so common in recent years in a number of the social sciences. In chapter 2, she has a section, pp. 23-31, entitled "Methodology" which is clearly a misuse of that word, for what is actually meant is "method" or "technique." Methodology is a branch of philosophy or logic and is not the same thing as "method." As Fritz Machlup so aptly pointed out in his remarks in the May 1962 issue of the *American Economic Review*, p. 204, ". . . The same method may be justified on very different methodological grounds and . . . from the same methodological position one may defend very different methods of research."

To an economist, Peil's chapter 5 on "Migration" is singularly disappointing. For one thing she fails to even mention the seminal contributions of E. J. Berg, "The Economics of the Migrant Labor System," H. Kruper, editor, *Urbanization and Migration in West Africa* (Berkeley, University of California Press, 1965); R. E. Beals, M. B. Levy, and L. N. Moses, "Rationality and Migration in Ghana," *Review of Economics and Statistics*, November 1967; R. E. Beals and C. F. Menezes, "Seasonal Migration and the Agricultural Economy of Ghana: An Interregional Model," in A. P. Carter and A. Brody, editors, *Applications of Input-Output Analysis* (Amsterdam-London, North-Holland Publishing Company, 1969); and J. R. Harris and M. P. Todaro, "Migration, Unemployment and Development: A Two-Sector Analysis," *American Economic Review*, March 1970, to name but four of the better, more recent efforts. While she does conclude (p. 149): "While economic factors are of primary importance in the decision to migrate and in the choice of destination, personal and social factors are also influential," there is no systematic analysis of migration. And I would submit that this is a fairly serious omission. For example, Beals and Menezes state (p.



168) and then carefully document that:

In Ghana, as elsewhere in West Africa, the principal form of labor mobility is temporary migration. The central thesis of this study is that temporary migration improves the allocation of resources and has contributed significantly to growth of output in Ghana. In particular, because of regional variations in production, temporary migration is more efficient than permanent migration.

In light of all the concerns about the viscosities and institutional impediments in the operations of labor markets in developing countries, the Beals-Menezes thesis should be taken into account in any comprehensive analysis of Ghana migration flows.

In peroration, although I have never met a payroll, harvested a millet-guineacorn crop, or talked to a "marginal man," I find the Peil volume of value within the rather modest domain within which she was concerned. Her careful reformulation of the "industrial man" hypothesis (pp. 236-237) is in itself an important contribution. My major regret about this nonmathematical, 254-paged volume is its breathtaking U.S. price of \$18.50. If there are any cost-of-production value theorists still skulking around after the "Marginalist Revolution," the pricing of this book will surely drive them completely underground.

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# Current Labor Statistics



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## NEW BENCHMARKS INTRODUCED

In the following section, the payroll employment estimates have been adjusted to reflect comprehensive employment counts as of March 1971. These adjustments affect all published categories, except Federal Government, appearing in tables 11 and 13 back to March 1970. Data on hours, earnings, job vacancies, and labor turnover (tables 15-19 and 21-23), which are weighted by employment, may also have been revised as a result of the changes in employment levels.

The benchmark review is an integral part of the Bureau of Labor Statistics' establishment survey program. It serves as a quality control check by providing an independent measure of employment levels for March of each year. New benchmarks are determined at the most detailed industrial classification for which estimates are made. If the benchmark differs from the estimate, the monthly series are adjusted back to the preceding benchmark. The new benchmark for each industry is then carried forward progressively to the current month by use of sample trends. The estimates adjusted to new levels are then aggregated through successively inclusive series to total nonagricultural employment.

The primary sources of benchmark information are employment data, by industry, compiled quarterly by State agencies from reports of establishments covered under State unemployment insurance laws. These tabulations cover three-fourths of the total nonagricultural employment in the United States. Benchmark data for the residual are obtained from the records of the Social Security Administration, the Interstate Commerce Commission, and a number of other agencies in private industry or government.

Differences between the benchmarks and estimates result not only from sampling and response errors, but also from changes in industrial classifications of individual establishments which are not reflected in the estimates levels until the data are adjusted to new benchmarks. At the more detailed industry levels, particularly within manufacturing, changes in classification are the major cause of benchmark adjustments.

The March 1971 total nonagricultural benchmark count of 69.7 million workers was 116,000 below the sample-based estimates, a difference of only 0.2 percent. Except for contract construction, relative adjustments for major divisions were less than 1 percent.

Of the 21 major groups in manufacturing, 20 were revised by less than 2 percent. Revisions were somewhat larger for the basic component industries, but two-thirds of these differed by less than 3 percent and only about one-tenth differed by 5 percent or more.

Benchmarks are not available for hours, earnings, job vacancies, and labor turnover. The levels are derived from the BLS reporting sample exclusively and are not subject to revisions at the primary estimating cell levels. Series for more inclusive categories, however, require weighting based on the employment levels of component estimating cells. Since the benchmark adjustment does affect the employment levels of component estimating cells, a reweighting is performed to assure that the broader industry averages are correct. Generally speaking the reweighting process changes average weekly hours, average hourly earnings, job vacancies, and labor turnover rates for broader groupings by no more than one-tenth of an hour, 1 cent, or one-tenth of 1 percentage point, respectively.

In accordance with regular practice, the seasonal adjustment factors for all industry-based series have been revised concurrently with the introduction of new benchmarks. The revisions incorporate data through June 1972 and affect the series for a period back to 5 years. Revised seasonally adjusted series are shown in tables 14, 16, 17, and 20. A detailed discussion of the benchmark adjustment, including a table of the revised seasonal adjustment factors, appears in the October 1972 issue of *Employment and Earnings*.

—GERALD STORCH  
Division of Industry Employment Statistics

## Schedule of release dates for major BLS statistical series

Title	November		December		MLR table number
	Release date	Period covered	Release date	Period covered	
Productivity, wages, and prices . . . . .	November 2	3d quarter	. . . . .	. . . . .	33
Wholesale Price Index . . . . .	November 2	October	December 7	November	27-31
Employment situation . . . . .	November 3	October	December 8	November	1-14
Consumer Price Index . . . . .	November 21	October	December 22	November	25-26
Real earnings . . . . .	November 21	October	December 22	November	18-23
Work stoppages . . . . .	November 29	October	. . . . .	. . . . .	32

## 1. Employment status of the noninstitutional population, 16 years and over, 1947-71

[In thousands]

Year	Total non-institutional population	Total labor force		Civilian labor force						Not in labor force
		Number	Percent of population	Total	Employed			Unemployed		
					Total	Agriculture	Nonagricultural industries	Number	Percent of labor force	
1947	103,418	60,941	58.9	59,350	57,039	7,891	49,148	2,311	3.9	42,477
1948	104,527	62,080	59.4	60,621	58,344	7,629	50,713	2,276	3.8	42,447
1949	105,611	62,903	59.6	61,286	57,649	7,656	49,990	3,637	5.9	42,708
1950	106,645	63,858	59.9	62,208	58,920	7,160	51,760	3,288	5.3	42,787
1951	107,721	65,117	60.4	62,017	59,962	6,726	53,239	2,055	3.3	42,604
1952	108,823	65,730	60.4	62,138	60,254	6,501	53,753	1,883	3.0	43,093
1953	110,601	66,560	60.2	63,015	61,181	6,261	54,922	1,834	2.9	44,041
1954	111,671	66,993	60.0	63,643	60,110	6,206	53,903	3,532	5.5	44,678
1955	112,732	68,072	60.4	65,023	62,171	6,449	55,724	2,852	4.4	44,660
1956	113,811	69,449	61.0	66,552	63,802	6,283	57,517	2,750	4.1	44,402
1957	115,065	69,729	60.6	66,929	64,071	5,947	58,123	2,859	4.3	45,336
1958	116,363	70,275	60.4	67,639	63,036	5,586	57,450	4,602	6.8	46,088
1959	117,881	70,921	60.2	68,369	64,630	5,565	59,065	3,740	5.5	46,960
1960	119,759	72,142	60.2	69,628	65,778	5,458	60,318	3,852	5.5	47,617
1961	121,343	73,031	60.2	70,459	65,746	5,200	60,546	4,714	6.7	48,312
1962	122,981	73,424	59.7	70,614	66,702	4,944	61,759	3,911	5.5	49,539
1963	125,154	74,571	59.6	71,833	67,762	4,687	63,076	4,070	5.7	50,583
1964	127,224	75,830	59.6	73,091	69,305	4,523	64,782	3,786	5.2	51,394
1965	129,236	77,178	59.7	74,455	71,088	4,361	66,726	3,366	4.5	52,058
1966	131,180	78,893	60.1	75,770	72,895	3,979	68,915	2,875	3.8	52,288
1967	133,319	80,793	60.6	77,347	74,372	3,844	70,527	2,975	3.8	52,527
1968	135,562	82,272	60.7	78,737	75,920	3,817	72,103	2,817	3.6	53,291
1969	137,841	84,239	61.1	80,733	77,902	3,606	74,296	2,831	3.5	53,602
1970	140,182	85,903	61.3	82,715	78,627	3,462	75,165	4,088	4.9	54,280
1971	142,596	86,929	61.0	84,113	79,120	3,387	75,732	4,993	5.9	55,666



2. Employment status, by color, sex, and age, seasonally adjusted,<sup>1</sup> quarterly averages

[Numbers in thousands]

Characteristic	Annual average		1969		1970				1971				1972		
	1970	1971	3d	4th	1st	2d	3d	4th	1st	2d	3d	4th	1st	2d	3d
<b>WHITE</b>															
Civilian labor force.....	73,518	74,790	72,019	72,417	73,174	73,324	73,604	74,210	74,317	74,422	74,843	75,673	76,417	76,768	77,190
Men, 20 years and over...	42,464	43,088	41,863	41,936	42,267	42,473	42,514	42,712	42,709	43,050	43,250	43,362	43,618	43,891	44,121
Women, 20 years and over...	24,616	25,030	23,970	24,121	24,450	24,459	24,687	24,916	24,777	24,980	25,434	25,584	25,584	25,697	26,042
Both sexes, 16-19 years...	6,440	6,672	6,186	6,360	6,457	6,392	6,403	6,582	6,678	6,595	6,613	6,877	7,215	7,180	7,026
Employed.....	70,182	70,716	69,667	70,052	70,389	70,134	70,070	70,220	70,237	70,328	70,762	71,572	72,402	72,733	73,305
Men, 20 years and over...	41,093	41,347	41,023	41,078	41,180	41,158	41,013	41,035	40,983	41,268	41,484	41,665	41,959	42,183	42,568
Women, 20 years and over...	23,521	23,707	23,144	23,289	23,524	23,425	23,536	23,622	23,617	23,458	23,662	24,081	24,370	24,371	24,712
Both sexes, 16-19 years...	5,569	5,662	5,500	5,685	5,685	5,551	5,521	5,563	5,637	5,602	5,616	5,826	6,073	6,179	6,026
Unemployed.....	3,337	4,074	2,352	2,365	2,785	3,190	3,534	3,990	4,080	4,094	4,081	4,101	4,014	4,035	3,884
Men, 20 years and over...	1,371	1,741	840	858	1,087	1,315	1,501	1,677	1,726	1,782	1,766	1,697	1,659	1,708	1,554
Women, 20 years and over...	1,095	1,324	826	832	926	1,034	1,151	1,294	1,313	1,319	1,318	1,353	1,214	1,326	1,330
Both sexes, 16-19 years...	871	1,010	686	675	772	841	882	1,019	1,041	993	997	1,051	1,141	1,001	1,001
Unemployment rate.....	4.5	5.4	3.3	3.3	3.8	4.4	4.8	5.4	5.5	5.5	5.5	5.4	5.3	5.3	5.0
Men, 20 years and over...	3.2	4.0	2.0	2.0	2.6	3.1	3.5	3.9	4.0	4.1	4.1	3.9	3.8	3.9	3.5
Women, 20 years and over...	4.4	5.3	3.4	3.4	3.8	4.2	4.7	5.2	5.3	5.3	5.3	5.3	4.7	5.2	5.1
Both sexes, 16-19 years...	13.5	15.1	11.1	10.6	12.0	13.2	13.8	15.5	15.6	15.1	15.1	15.3	15.8	13.9	14.2
<b>NEGRO AND OTHER</b>															
Civilian labor force.....	9,197	9,322	8,978	9,073	9,188	9,225	9,208	9,188	9,270	9,272	9,388	9,372	9,506	9,577	9,591
Men, 20 years and over...	4,461	4,773	4,583	4,631	4,697	4,703	4,765	4,755	4,748	4,752	4,792	4,805	4,767	4,842	4,879
Women, 20 years and over...	4,726	3,769	3,597	3,620	3,656	3,695	3,656	3,649	3,741	3,748	3,797	3,791	3,897	3,878	3,848
Both sexes, 16-19 years...	808	781	798	822	835	827	787	784	781	772	799	776	842	857	864
Employed.....	8,445	8,403	8,395	8,510	8,552	8,466	8,429	8,342	8,386	8,351	8,442	8,427	8,503	8,631	8,637
Men, 20 years and over...	4,461	4,428	4,409	4,454	4,490	4,436	4,478	4,437	4,426	4,424	4,431	4,427	4,435	4,500	4,533
Women, 20 years and over...	3,412	3,442	3,375	3,428	3,439	3,434	3,399	3,375	3,428	3,405	3,461	3,473	3,545	3,546	3,508
Both sexes, 16-19 years...	573	533	611	628	623	596	552	530	532	522	550	527	523	585	596
Unemployed.....	752	919	583	563	636	759	779	846	884	921	946	945	1,003	946	954
Men, 20 years and over...	265	345	174	177	207	267	287	318	322	328	361	378	332	342	346
Women, 20 years and over...	252	326	222	192	217	261	257	274	313	343	336	318	352	332	340
Both sexes, 16-19 years...	235	248	187	194	212	231	235	254	249	250	249	249	319	272	268
Unemployment rate.....	8.2	9.9	6.5	6.2	6.9	8.2	8.5	9.2	9.5	9.9	10.1	10.1	10.6	9.9	9.9
Men, 20 years and over...	5.9	7.2	3.8	3.8	4.4	5.7	6.0	6.7	6.8	6.9	7.5	7.9	7.0	7.1	7.1
Women, 20 years and over...	5.3	8.7	6.2	5.3	5.9	7.1	7.0	7.5	8.4	9.2	8.8	8.4	9.0	8.6	8.8
Both sexes, 16-19 years...	29.1	31.7	23.4	23.6	25.4	27.9	29.9	32.4	31.9	32.4	31.2	32.1	37.9	31.7	31.0

<sup>1</sup> These data have been adjusted to reflect seasonal experience through December 1971. For a discussion of seasonal adjustment procedures and the historical seasonally adjusted series, see the February 1972 issue of *Employment and Earnings*.

3. Full-time and part-time status<sup>1</sup> of the civilian labor force, seasonally adjusted<sup>2</sup>

[Numbers in thousands]

Employment status	1971				1972								
	Sept.	Oct.	Nov.	Dec.	Jan. <sup>3</sup>	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>FULL TIME</b>													
Total, 16 years and over:													
Civilian labor force.....	72,341	72,550	73,021	73,169	73,261	72,997	73,714	73,691	74,032	74,333	74,218	74,201	74,195
Employed.....	68,284	68,643	68,890	69,022	69,279	69,123	69,734	69,725	69,918	70,643	70,437	70,423	70,482
Unemployed.....	4,057	3,907	4,131	4,147	3,982	3,874	3,980	3,966	4,114	3,690	3,781	3,778	3,713
Unemployment rate.....	5.6	5.4	5.7	5.7	5.4	5.3	5.4	5.4	5.6	5.0	5.1	5.1	5.0
<b>PART TIME</b>													
Total, 16 years and over:													
Civilian labor force.....	12,293	12,190	12,125	12,083	12,595	12,540	12,596	12,466	12,406	11,867	12,208	12,759	12,983
Employed.....	11,280	11,158	11,094	11,072	11,476	11,482	11,497	11,369	11,403	10,825	11,211	11,630	11,866
Unemployed.....	1,013	1,032	1,031	1,011	1,119	1,058	1,099	1,097	1,003	1,042	997	1,129	1,117
Unemployment rate.....	8.2	8.5	8.5	8.4	8.9	8.4	8.7	8.8	8.1	8.8	8.2	8.8	8.6

<sup>1</sup> Persons on part-time schedules for economic reasons are included in the full-time employed category; unemployed persons are allocated by whether seeking full-time or part-time work.

<sup>2</sup> These data have been adjusted to reflect seasonal experience through December 1971. For a discussion of seasonal adjustment procedures and the historical seasonally adjusted series, see the February 1972 issue of *Employment and Earnings*.

<sup>3</sup> Figures for periods prior to January 1972 in the tables are not strictly comparable with current data because of the introduction of 1970 Census data into the estimation procedures. For example, the civilian labor force and employment totals for January 1972 were raised by more than 300,000 in the census adjustment. An explanation of the changes and an indication of the difference appears in "Revisions in the Current Population Survey" in the February 1972 issue of *Employment and Earnings*.

4. Employment and unemployment, by age and sex, seasonally adjusted <sup>1</sup>

[In thousands]

Employment status	Annual average		1971				1972								
	1970	1971	Sept.	Oct.	Nov.	Dec.	Jan. <sup>2</sup>	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>TOTAL</b>															
Total labor force.....	85,903	86,929	87,240	87,467	87,812	87,883	88,301	88,075	88,817	88,747	88,905	88,788	88,855	89,256	89,454
Civilian labor force.....	82,715	84,113	84,491	84,750	85,116	85,225	85,707	85,535	86,313	86,284	86,486	86,395	86,467	86,860	87,049
Employed.....	78,627	79,120	79,451	79,832	80,020	80,098	80,636	80,623	81,241	81,205	81,394	81,667	81,682	81,973	82,222
Agriculture.....	3,462	3,387	3,363	3,416	3,419	3,400	3,393	3,357	3,482	3,324	3,353	3,337	3,445	3,625	3,575
Nonagriculture.....	75,165	75,732	76,088	76,416	76,601	76,698	77,243	77,266	77,759	77,811	78,041	78,330	78,237	78,348	78,647
Unemployed.....	4,088	4,993	5,040	4,918	5,096	5,127	5,071	4,912	5,072	5,079	5,092	4,728	4,785	4,887	4,827
<b>MEN, 20 YEARS AND OVER</b>															
Total labor force.....	49,948	50,308	50,492	50,530	50,527	50,463	50,498	50,373	50,714	50,711	50,760	50,904	50,979	50,978	51,115
Civilian labor force.....	47,189	47,861	48,113	48,179	48,200	48,169	48,259	48,181	48,582	48,614	48,700	48,882	48,961	48,954	49,083
Employed.....	45,553	45,775	45,969	46,124	46,066	46,080	46,247	46,255	46,569	46,541	46,628	46,919	47,032	47,063	47,204
Agriculture.....	2,527	2,446	2,435	2,494	2,503	2,439	2,442	2,394	2,400	2,370	2,404	2,437	2,474	2,550	2,629
Nonagriculture.....	43,026	43,329	43,534	43,630	43,563	43,641	43,805	43,861	44,169	44,171	44,224	44,482	44,558	44,513	44,575
Unemployed.....	1,636	2,086	2,144	2,055	2,134	2,089	2,012	1,926	2,013	2,073	2,072	1,963	1,929	1,891	1,879
<b>WOMEN, 20 YEARS AND OVER</b>															
Civilian labor force.....	28,279	28,799	28,960	29,082	29,254	29,284	29,424	29,358	29,574	29,508	29,625	29,657	29,789	29,990	29,915
Employed.....	26,932	27,149	27,319	27,471	27,571	27,592	27,794	27,878	27,972	27,913	27,883	28,029	28,078	28,334	28,296
Agriculture.....	549	537	548	530	528	547	564	575	620	563	551	496	556	604	561
Nonagriculture.....	26,384	26,612	26,771	26,941	27,043	27,045	27,230	27,303	27,352	27,350	27,332	27,533	27,522	27,730	27,735
Unemployed.....	1,347	1,650	1,641	1,611	1,683	1,692	1,630	1,480	1,602	1,595	1,742	1,628	1,711	1,656	1,619
<b>BOTH SEXES, 16-19 YEARS</b>															
Civilian labor force.....	7,246	7,453	7,418	7,489	7,662	7,772	8,024	7,996	8,157	8,162	8,161	7,856	7,717	7,916	8,051
Employed.....	6,141	6,195	6,163	6,237	6,383	6,426	6,595	6,490	6,700	6,751	6,883	6,719	6,572	6,576	6,722
Agriculture.....	386	404	380	392	388	414	387	388	462	391	398	404	415	471	385
Nonagriculture.....	5,755	5,791	5,783	5,845	5,995	6,012	6,208	6,102	6,238	6,360	6,485	6,315	6,157	6,105	6,337
Unemployed.....	1,105	1,257	1,255	1,252	1,279	1,346	1,429	1,506	1,457	1,411	1,278	1,137	1,145	1,304	1,329

<sup>1</sup> These data have been adjusted to reflect seasonal experience through December 1971. For a discussion of seasonal adjustment procedures and the historical seasonally adjusted series, see the February 1972 issue of *Employment and Earnings*.

<sup>2</sup> See footnote 3, table 3, regarding the introduction of 1970 census population controls.

5. Employment totals, by occupation, with unemployment rates, seasonally adjusted,<sup>1</sup> quarterly averages

[Numbers in thousands]

Characteristic	Annual average		1969		1970				1971				1972		
	1970	1971	3d	4th	1st	2d	3d	4th	1st	2d	3d	4th	1st	2d	3d
<b>EMPLOYMENT</b> .....	78,627	79,120	78,126	78,577	78,875	78,610	78,531	78,550	78,546	78,723	79,221	79,984	80,833	81,422	81,959
White-collar workers.....	37,997	38,252	36,961	37,445	37,940	38,004	37,970	38,074	37,938	38,004	38,456	38,612	38,710	38,788	39,342
Professional and technical.....	11,140	11,070	10,742	10,918	11,055	11,139	11,226	11,143	10,872	11,081	11,139	11,192	11,232	11,387	11,618
Managers and administrators, except farm.....	8,289	8,765	7,983	8,122	8,220	8,295	8,259	8,381	8,646	8,642	8,799	8,612	7,988	7,860	8,048
Sales workers.....	4,854	5,066	4,714	4,777	4,787	4,813	4,877	4,934	5,074	5,018	5,037	5,133	5,300	5,360	5,369
Clerical workers.....	13,714	13,440	13,522	13,628	13,878	13,757	13,608	13,616	13,346	13,263	13,481	13,675	14,190	14,181	14,308
Blue-collar workers.....	27,791	27,184	28,428	28,332	28,203	27,768	27,653	27,566	27,071	27,051	27,090	27,524	28,295	28,595	28,538
Craftsmen and kindred workers.....	10,158	12,983	10,200	10,235	10,235	10,135	10,124	10,149	10,106	10,119	10,111	10,373	10,910	10,833	10,754
Operatives.....	13,909	4,022	14,570	14,369	14,196	13,957	13,793	13,696	12,912	12,958	12,946	13,116	13,346	13,557	13,505
Nonfarm laborers.....	3,724	10,676	3,658	3,728	3,772	3,676	3,736	3,721	4,053	3,974	4,033	4,035	4,039	4,205	4,280
Service workers.....	9,712	9,509	9,509	9,594	9,610	9,620	9,814	9,804	10,627	10,607	10,715	10,751	10,852	11,078	11,003
Farm workers.....	3,126	3,008	3,229	3,121	3,141	3,206	3,108	3,033	2,988	3,033	2,992	3,023	3,030	2,928	3,116
<b>UNEMPLOYMENT RATE</b> .....	4.9	5.9	3.6	3.6	4.2	4.8	5.2	5.8	6.0	6.0	6.0	5.9	5.8	5.7	5.6
White-collar workers.....	2.8	3.5	2.2	2.1	2.4	2.7	2.9	3.4	3.6	3.5	3.5	3.5	3.5	3.4	3.4
Professional and technical.....	2.0	2.9	1.4	1.5	1.8	1.9	2.0	2.4	3.2	2.9	2.9	3.0	2.7	2.2	2.3
Managers and administrators, except farm.....	1.3	1.6	.9	1.0	1.1	1.3	1.4	1.6	1.6	1.6	1.5	1.8	1.8	1.6	1.8
Sales workers.....	3.9	4.3	3.0	2.8	3.3	3.9	3.9	4.6	4.2	4.5	4.4	3.9	4.2	4.1	4.6
Clerical workers.....	4.0	4.8	3.2	3.1	3.4	3.9	4.1	4.8	4.9	4.8	4.9	4.8	4.8	4.0	4.7
Blue-collar workers.....	6.2	7.4	3.9	4.3	5.0	6.0	6.8	7.5	7.5	7.4	7.5	7.4	7.0	6.6	6.3
Craftsmen and kindred workers.....	3.8	4.7	2.1	2.3	2.7	3.9	4.5	4.6	4.7	4.3	5.3	4.7	4.2	4.5	4.3
Operatives.....	7.1	8.3	4.4	4.9	5.8	6.6	7.5	8.6	8.5	8.5	8.2	8.1	7.7	7.1	6.7
Nonfarm laborers.....	9.5	10.8	7.0	7.1	7.9	9.2	10.3	10.8	10.6	10.9	10.3	11.4	11.7	10.4	9.9
Service workers.....	5.3	6.3	4.5	4.0	4.7	5.0	5.5	6.0	6.1	6.3	6.5	6.4	6.2	6.0	6.7
Farm workers.....	2.6	2.6	2.1	1.9	2.1	2.6	2.9	3.0	2.8	2.1	2.7	2.8	2.4	2.6	2.6

<sup>1</sup> These data have been adjusted to reflect seasonal experience through December 1971. For a discussion of seasonal adjustment procedures and the historical seasonally adjusted series, see the February 1972 issue of *Employment and Earnings*.

NOTE: Comparisons with data prior to 1971 are affected by the reclassification of census occupations, introduced in January 1971. For an explanation of the changes, see "Revisions in Occupational Classifications for 1971" in the February 1971 issue of *Employment and Earnings*.

6. Unemployed persons by reason for unemployment, seasonally adjusted <sup>1</sup>

[Numbers in thousands]

Reason for unemployment	1971				1972								
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>NUMBER OF UNEMPLOYED</b>													
Lost last job .....	2,369	2,206	2,360	2,365	2,169	2,077	2,118	2,040	2,199	2,210	2,093	2,224	2,121
Left last job .....	583	541	629	666	564	603	674	611	649	624	616	644	635
Reentered labor force .....	1,536	1,486	1,493	1,432	1,652	1,503	1,542	1,557	1,460	1,238	1,455	1,427	1,452
Never worked before .....	603	663	651	736	742	713	737	917	802	621	564	640	649
<b>PERCENT DISTRIBUTION</b>													
Total unemployed .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Lost last job .....	46.5	45.1	46.0	45.5	42.3	42.4	41.8	39.8	43.0	47.1	44.3	45.3	43.7
Left last job .....	11.5	11.0	12.3	12.8	11.0	12.3	13.3	11.9	12.7	13.3	13.0	13.0	13.1
Reentered labor force .....	30.2	30.4	29.1	27.5	32.2	30.7	30.4	30.4	28.6	26.4	30.8	28.8	29.9
Never worked before .....	11.8	13.5	12.7	14.2	14.5	14.6	14.5	17.9	15.7	13.2	11.9	12.9	13.4
<b>UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE</b>													
Lost last job .....	2.8	2.6	2.8	2.8	2.5	2.4	2.5	2.4	2.5	2.6	2.4	2.6	2.4
Left last job .....	.7	.6	.7	.8	.7	.7	.8	.7	.8	.7	.7	.7	.7
Reentered labor force .....	1.8	1.8	1.8	1.7	1.9	1.8	1.8	1.8	1.7	1.4	1.7	1.6	1.7
Never worked before .....	.7	.8	.8	.9	.9	.8	.9	1.1	.9	.7	.7	.7	.7

NOTE: For additional detail or for data unadjusted for seasonal factors (formerly carried in this space), see Employment and Earnings.

7. Unemployment rates, by age and sex, seasonally adjusted <sup>1</sup>

Age and sex	Annual average		1971				1972								
	1970	1971	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>Total, 16 years and over</b> .....	4.9	5.9	6.0	5.8	6.0	6.0	5.9	5.7	5.9	5.9	5.9	5.5	5.5	5.6	5.5
16 to 19 years .....	15.3	16.9	16.9	16.7	16.7	17.3	17.8	18.8	17.9	17.3	15.7	14.5	14.8	16.9	16.5
16 and 17 years .....	17.1	18.7	18.4	19.9	18.3	18.8	19.1	22.0	20.7	19.1	16.6	16.5	16.5	20.5	19.9
18 and 19 years .....	13.8	15.5	15.8	14.5	15.4	16.3	16.8	16.7	15.8	1.5	15.8	12.9	13.5	14.0	14.1
20 to 24 years .....	8.2	10.0	9.6	9.2	10.4	10.1	10.1	8.8	9.9	10.0	9.9	8.7	9.8	9.0	9.1
25 years and over .....	3.3	4.0	4.0	4.0	4.0	4.1	3.7	3.6	3.7	3.8	3.9	3.9	3.7	3.6	3.5
25 to 54 years .....	3.4	4.2	4.3	4.3	4.2	4.3	3.9	3.7	3.9	3.8	4.0	4.0	3.8	3.7	3.7
55 years and over .....	2.8	3.4	3.2	3.0	3.4	3.4	3.1	3.1	3.3	3.6	3.6	3.6	3.4	3.7	3.1
<b>Male, 16 years and over</b> .....	4.4	5.3	5.4	5.3	5.4	5.4	5.3	5.3	5.3	5.3	5.3	4.8	4.7	4.9	4.9
16 to 19 years .....	15.0	16.6	16.3	16.5	16.2	17.3	17.3	19.6	17.8	16.7	16.6	13.8	13.6	16.5	15.9
16 and 17 years .....	16.9	18.6	18.6	20.3	18.1	19.0	18.7	21.8	21.4	19.3	18.0	15.4	14.6	20.0	20.8
18 and 19 years .....	13.4	15.0	14.6	13.7	14.7	16.0	16.1	17.6	15.1	14.8	16.2	12.4	12.8	13.2	12.3
20 to 24 years .....	8.4	10.3	10.2	9.7	10.7	10.5	10.4	9.2	10.4	10.7	9.4	8.3	9.6	8.4	8.6
25 years and over .....	2.8	3.5	3.5	3.5	3.5	3.5	3.2	3.2	3.2	3.3	3.4	3.3	3.0	3.1	3.0
25 to 54 years .....	2.6	3.5	3.7	3.7	3.7	3.6	3.3	3.2	3.1	3.2	3.4	3.3	3.0	3.0	3.0
55 years and over .....	2.9	3.4	3.0	2.9	3.2	3.1	3.0	3.2	3.4	3.5	3.5	3.5	3.1	3.4	3.3
<b>Female, 16 years and over</b> .....	5.9	6.9	6.9	6.7	6.9	7.0	6.9	6.4	6.8	6.8	6.8	6.5	6.9	6.8	6.7
16 to 19 years .....	15.6	17.2	17.6	17.0	17.3	17.3	18.4	17.9	17.9	18.0	14.6	15.4	16.4	17.5	17.3
16 and 17 years .....	17.4	18.7	18.0	19.2	18.7	18.5	19.6	22.3	19.8	19.0	14.8	18.1	18.9	21.3	18.6
18 and 19 years .....	14.4	16.2	17.3	15.6	16.2	16.7	17.7	15.6	16.8	16.4	15.3	13.5	14.4	14.9	16.3
20 to 24 years .....	7.9	9.6	8.9	8.6	10.0	9.6	9.6	8.4	9.2	9.0	10.6	9.2	10.1	9.5	9.6
25 years and over .....	4.1	4.9	4.9	4.9	4.8	5.0	4.6	4.3	4.7	4.6	4.8	4.8	4.8	4.6	4.5
25 to 54 years .....	4.5	5.3	5.3	5.3	5.2	5.4	4.9	4.7	5.1	4.9	5.0	5.1	5.1	4.8	4.9
55 years and over .....	2.8	3.4	3.4	3.0	3.7	3.9	3.3	2.9	3.1	3.6	3.8	3.8	4.0	4.3	2.9

<sup>1</sup> These data have been adjusted to reflect seasonal experience through December 1971. For a discussion of seasonal adjustment procedures and the historical seasonally

adjusted series, see the February 1972 issue of Employment and Earnings.



8. Unemployment rates, seasonally adjusted <sup>1</sup>

Selected categories	Annual average		1971				1972								
	1970	1971	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Total (all civilian workers).....	4.9	5.9	6.0	5.8	6.0	6.0	5.9	5.7	5.9	5.9	5.9	5.5	5.5	5.6	5.5
Men, 20 years and over.....	3.5	4.4	4.5	4.3	4.4	4.3	4.2	4.0	4.1	4.3	4.3	4.0	3.9	3.9	3.8
Women, 20 years and over.....	4.8	5.7	5.7	5.5	5.8	5.8	5.5	5.0	5.4	5.4	5.9	5.5	5.7	5.5	5.4
Both sexes 16-19 years.....	15.3	16.9	16.9	16.7	16.7	17.3	17.8	18.8	17.9	17.3	15.7	14.5	14.8	16.9	16.5
White.....	4.5	5.4	5.4	5.3	5.6	5.4	5.3	5.1	5.3	5.4	5.3	5.0	5.0	5.1	5.0
Negro and other.....	8.2	9.9	10.4	10.4	9.4	10.4	10.6	10.5	10.5	9.6	10.7	9.4	9.9	9.7	10.2
Married men.....	2.6	3.2	3.3	3.0	3.3	3.2	3.0	2.8	2.8	2.9	2.9	2.9	2.7	2.6	2.8
Vietnam Era veterans, <sup>2</sup> men:															
20 to 29 years.....	6.9	8.8	9.8	8.0	8.5	8.4	8.5	7.4	8.6	8.6	8.1	7.2	7.3	7.7	6.6
20 to 24 years.....	9.3	12.2	12.3	9.7	12.0	12.6	12.3	9.7	12.3	12.7	10.3	9.9	10.7	12.5	9.0
25 to 29 years.....	4.3	5.7	7.6	6.5	5.6	5.1	5.6	5.4	5.6	5.4	6.4	5.3	5.0	4.4	5.1
Nonveterans, men:															
20 to 29 years.....	6.0	7.3	6.7	7.3	8.1	7.7	7.5	7.0	7.5	7.6	7.1	6.5	6.5	6.2	6.1
20 to 24 years.....	8.0	9.5	8.6	9.3	10.3	9.6	9.8	9.0	10.1	10.0	9.1	8.0	8.6	8.1	7.8
25 to 29 years.....	3.8	4.7	4.4	4.9	5.5	5.2	4.5	4.4	4.1	4.6	4.5	4.6	3.7	3.8	3.8
Full-time workers.....	4.5	5.5	5.6	5.4	5.7	5.7	5.4	5.3	5.4	5.4	5.6	5.0	5.1	5.1	5.0
Unemployed 15 weeks and over <sup>3</sup> .....	8	1.4	1.5	1.5	1.5	1.5	1.4	1.5	1.4	1.3	1.4	1.3	1.3	1.4	1.3
State insured <sup>4</sup> .....	3.6	4.4	4.3	4.4	4.1	4.1	3.4	3.5	3.5	3.6	3.7	3.6	3.8	3.4	3.4
Labor force time lost <sup>5</sup> .....	5.4	6.4	6.3	6.5	6.4	6.4	6.4	6.1	6.3	6.3	6.3	5.5	6.0	6.2	5.9
<b>OCCUPATION</b>															
White-collar workers.....	2.8	3.5	3.4	3.4	3.4	3.6	3.6	3.3	3.5	3.4	3.6	3.1	3.4	3.5	3.3
Professional and managerial.....	1.7	2.9	2.2	2.4	2.5	2.5	2.6	2.2	2.3	2.1	2.0	1.7	2.2	2.2	2.0
Sales workers.....	3.9	4.3	4.1	3.9	3.9	4.0	4.4	4.0	4.1	3.7	4.5	4.0	4.3	4.8	4.7
Clerical workers.....	4.0	4.8	4.8	4.7	4.6	4.9	4.7	4.7	4.9	4.9	5.3	4.8	4.6	4.9	4.7
Blue-collar workers.....	6.2	7.4	7.7	7.1	7.5	7.5	7.1	7.0	6.9	6.8	6.8	6.4	6.4	6.5	6.1
Craftsmen and kindred workers.....	3.8	4.7	5.3	4.7	4.6	4.8	4.3	4.4	4.0	4.4	4.7	4.5	4.3	4.4	4.2
Operatives.....	7.1	8.3	8.3	7.8	8.2	8.2	7.9	7.5	7.7	7.4	7.1	6.8	7.1	6.7	6.4
Nonfarm laborers.....	9.5	10.8	11.2	10.6	11.8	11.9	11.6	11.8	11.7	10.7	10.9	9.5	9.3	10.9	9.6
Service workers.....	5.3	6.3	6.5	6.0	6.6	6.4	6.1	5.9	6.6	6.3	6.1	5.7	6.6	6.3	7.3
<b>INDUSTRY</b>															
Nonagricultural private wage and salary workers <sup>6</sup> .....	5.2	6.2	6.2	5.9	6.2	6.3	6.1	5.9	6.1	5.9	6.0	5.5	5.8	5.8	5.6
Construction.....	9.7	10.4	9.7	10.2	9.7	11.2	9.8	10.3	9.8	10.6	12.5	9.5	10.9	11.6	9.2
Manufacturing.....	5.6	6.8	6.9	6.2	6.6	6.9	6.4	6.0	6.2	5.8	6.0	5.6	5.7	5.4	5.1
Durable goods.....	5.7	7.0	7.0	6.4	6.7	6.7	6.7	6.1	6.3	5.8	6.3	5.7	5.7	5.0	4.8
Nondurable goods.....	5.4	6.5	6.8	5.8	6.3	7.1	6.0	6.0	6.1	5.9	5.7	5.5	5.6	6.0	5.5
Transportation and public utilities.....	3.2	3.8	3.6	4.3	4.4	4.1	4.1	3.9	4.0	3.7	3.5	3.1	3.6	3.8	3.7
Wholesale and retail trade.....	5.3	6.4	6.3	6.1	6.6	6.5	6.3	6.2	6.7	6.2	6.3	6.5	6.5	6.6	6.7
Finance and service industries.....	4.2	5.1	5.1	4.9	5.1	4.9	5.3	4.9	5.3	5.1	5.0	4.2	4.6	4.7	4.7
Government wage and salary workers.....	2.2	2.9	3.0	3.2	3.2	3.2	3.0	2.8	2.8	2.9	2.9	2.5	2.8	3.0	3.2
Agricultural wage and salary workers.....	7.5	7.9	8.5	7.0	9.6	7.5	8.6	8.3	6.0	6.0	8.8	7.5	6.0	6.5	8.9

<sup>1</sup> These data have been adjusted to reflect seasonal experience through December 1971. For a discussion of seasonal adjustment procedures and the historical seasonally adjusted series, see the February 1972 issue of *Employment and Earnings*.

<sup>2</sup> Vietnam Era veterans are those who served after August 4, 1964; they are all classified as war veterans. Over 80 percent of Vietnam Era veterans of all ages are 20 to 29 years old. Not included in these figures are post-Korean peacetime veterans in ages 20 to 29.

<sup>3</sup> Unemployment rate calculated as a percent of civilian labor force.

<sup>4</sup> Insured unemployment under State programs as a percent of average covered employment.

<sup>5</sup> Man-hours lost by the unemployed and persons on part time for economic reasons (that is, those persons who worked less than 35 hours during the survey week because of slack work, job changing during the week, material shortages, inability to find full-time work, and so on) as a percent of potentially available labor force man-hours.

<sup>6</sup> Includes mining, not shown separately.

9. Duration of unemployment, seasonally adjusted <sup>1</sup>

[Numbers in thousands]

Period	Annual average		1971				1972								
	1970	1971	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Less than 5 weeks.....	2,137	2,234	2,317	2,140	2,290	2,410	2,358	2,142	2,311	2,169	2,223	2,175	2,149	2,254	2,369
5 to 14 weeks.....	1,289	1,578	1,567	1,529	1,650	1,509	1,502	1,454	1,412	1,521	1,514	1,437	1,478	1,505	1,385
15 weeks and over.....	662	1,181	1,250	1,253	1,311	1,273	1,198	1,294	1,224	1,137	1,180	1,148	1,155	1,188	1,137
15 to 26 weeks.....	427	665	683	628	741	724	636	634	591	482	587	594	658	644	587
27 weeks and over.....	235	517	567	625	570	549	562	660	633	655	593	554	497	544	550
15 weeks and over as a percent of civilian labor force.....	.8	1.4	1.5	1.5	1.5	1.5	1.4	1.5	1.4	1.3	1.4	1.3	1.3	1.4	1.3
Average (mean duration, in weeks).....	8.8	11.4	12.0	12.5	11.8	11.4	11.8	12.5	12.4	12.4	12.5	13.5	11.8	12.1	12.2

<sup>1</sup> These data have been adjusted to reflect seasonal experience through December 1971. For a discussion of seasonal adjustment procedures and the historical seasonally

adjusted series, see the February 1972 issue of *Employment and Earnings*.

10. Unemployment insurance and employment service operations<sup>1</sup>

[All items except average benefits amounts are in thousands]

Item	1971					1972							
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
<b>Employment service:<sup>2</sup></b>													
New applications for work.....	779	767	663	763	679								
Nonfarm placements.....	366	353	288	317	266								
<b>State unemployment insurance program:</b>													
Initial claims <sup>3,4</sup> .....	1,277	1,043	1,048	1,336	1,623	1,643	1,241	1,095	947	991	1,095	1,378	-----
Insured unemployment <sup>5</sup> (average weekly volume) <sup>6</sup> .....	1,912	1,739	1,716	1,879	2,221	2,524	2,492	2,279	2,005	1,740	1,636	1,823	1,565
Rate of insured unemployment <sup>7</sup> .....	3.6	3.3	3.2	3.5	4.2	4.8	4.7	4.3	3.8	3.3	3.1	3.4	2.9
Weeks of unemployment compensated.....	6,503	5,923	5,561	6,177	7,546	8,972	8,871	9,372	7,320	6,927	5,903	5,778	-----
Average weekly benefit amount for total unemployment.....	\$56.08	\$56.25	\$53.46	\$53.96	\$54.58	\$55.35	\$56.71	\$56.63	\$56.90	\$56.32	\$55.23	\$55.75	-----
Total benefits paid.....	\$433,636	\$400,329	\$367,169	\$406,905	\$489,566	\$550,902	\$589,509	\$628,936	\$472,916	\$429,206	\$382,064	\$364,275	-----
<b>Unemployment compensation for ex-servicemen:<sup>8,9</sup></b>													
Initial claims <sup>3,8</sup> .....	54	48	43	51	59	68	57	54	48	47	43	40	-----
Insured unemployment <sup>6</sup> (average weekly volume).....	120	106	97	105	118	133	140	136	127	119	110	107	95
Weeks of unemployment compensated.....	525	478	409	426	498	530	550	623	508	525	493	437	-----
Total benefits paid.....	\$31,552	\$29,650	\$25,012	\$26,089	\$29,180	\$29,998	\$33,580	\$38,349	\$31,668	\$32,579	\$30,932	\$27,500	-----
<b>Unemployment compensation for Federal civilian employees:<sup>9,10</sup></b>													
Initial claims <sup>3</sup> .....	12	12	13	14	13	16	12	11	11	12	17	27	-----
Insured unemployment <sup>6</sup> (average weekly volume).....	35	33	35	35	35	37	36	34	30	28	29	38	39
Weeks of unemployment compensated.....	157	148	135	144	156	147	146	157	121	122	116	121	-----
Total benefits paid.....	\$9,261	\$9,026	\$8,224	\$8,960	\$9,811	\$8,755	\$9,008	\$9,911	\$7,674	\$7,460	\$7,129	\$7,304	-----
<b>Railroad unemployment insurance:</b>													
Applications <sup>11</sup> .....	98	100	48	19	7	8	4	4	4	2	11	27	10
Insured unemployment (average weekly volume).....	32	33	27	48	33	36	27	26	23	15	14	18	17
Number of payments <sup>12</sup> .....	105	163	124	106	857	87	63	64	48	40	33	35	43
Average amount of benefit payment <sup>13</sup> .....	\$83.28	\$69.35	\$61.95	\$100.32	\$101.32	\$97.79	\$99.11	\$98.70	\$88.74	\$91.27	\$94.84	\$88.76	\$96.95
Total benefits paid <sup>14</sup> .....	\$8,698	\$11,134	\$7,616	\$9,930	\$8,891	\$8,007	\$6,212	\$5,983	\$4,113	\$3,462	\$2,839	\$2,907	\$3,744
<b>All programs:<sup>15</sup></b>													
Insured unemployment <sup>6</sup> .....	2,349	2,174	2,129	2,311	2,666	3,097	3,123	2,923	2,431	2,105	1,952	2,088	1,763

<sup>1</sup> Includes data for Puerto Rico.<sup>2</sup> Includes Guam and the Virgin Islands.<sup>3</sup> Initial claims are notices filed by workers to indicate they are starting periods of unemployment. Excludes transition claims under State programs.<sup>4</sup> Includes interstate claims for the Virgin Islands.<sup>5</sup> Number of workers reporting the completion of at least 1 week of unemployment.<sup>6</sup> Initial claims and State insured unemployment include data under the program for Puerto Rican sugarcane workers.<sup>7</sup> The rate is the number of insured unemployed expressed as a percent of the average covered employment in a 12-month period.<sup>8</sup> Excludes data on claims and payments made jointly with other programs.<sup>9</sup> Includes the Virgin Islands.<sup>10</sup> Excludes data on claims and payments made jointly with State programs.<sup>11</sup> An application for benefits is filed by a railroad worker at the beginning of his first

period of unemployment in a benefit year; no application is required for subsequent periods in the same year.

<sup>12</sup> Payments are for unemployment in 14-day registration periods.<sup>13</sup> The average amount is an average for all compensable periods, not adjusted for recovery of overpayments or settlement of underpayments.<sup>14</sup> Adjusted for recovery of overpayments and settlement of underpayments.<sup>15</sup> Represents an unduplicated count of insured unemployment under the State, Ex-servicemen, and UCFE programs and the Railroad Unemployment Insurance Act. Includes claims filed under Extended Duration (ED) provisions of regular State laws. NOTE: Dashes indicate data not available.

SOURCE: U.S. Department of Labor, Office of Financial and Management Information Systems for all items except railroad unemployment insurance which is prepared by the U.S. Railroad Retirement Board.

r = revised.

11. Employees on nonagricultural payrolls, by industry division, 1947-71<sup>1</sup>

[In thousands]

Year	TOTAL	Mining	Contract construction	Manufacturing	Transportation and public utilities	Wholesale and retail trade			Finance, insurance, and real estate	Services	Government		
						Total	Wholesale trade	Retail trade			Total	Federal	State and local
1947	43,881	955	1,982	15,545	4,166	8,955	2,361	6,595	1,754	5,050	5,474	1,892	3,582
1948	44,891	994	2,169	15,582	4,189	9,272	2,489	6,783	1,829	5,206	5,650	1,863	3,787
1949	43,778	930	2,165	14,441	4,001	9,264	2,487	6,778	1,857	5,264	5,856	1,908	3,948
1950	45,222	901	2,333	15,241	4,034	9,386	2,518	6,868	1,919	5,382	6,026	1,928	4,098
1951	47,849	929	2,603	16,393	4,226	9,742	2,606	7,136	1,991	5,576	6,389	2,302	4,087
1952	48,825	898	2,634	16,632	4,248	10,004	2,687	7,317	2,069	5,730	6,609	2,420	4,188
1953	50,232	866	2,623	17,549	4,290	10,247	2,727	7,520	2,146	5,867	6,645	2,305	4,340
1954	49,022	791	2,612	16,314	4,084	10,235	2,739	7,496	2,234	6,002	6,751	2,188	4,563
1955	50,675	792	2,802	16,882	4,141	10,535	2,796	7,740	2,335	6,274	6,914	2,187	4,727
1956	52,408	822	2,999	17,243	4,244	10,858	2,884	7,974	2,429	6,536	7,277	2,209	5,069
1957	52,894	828	2,923	17,174	4,241	10,886	2,893	7,992	2,477	6,749	7,616	2,217	5,399
1958	51,363	751	2,778	15,945	3,976	10,750	2,848	7,902	2,519	6,806	7,839	2,191	5,648
1959 <sup>2</sup>	53,313	732	2,960	16,675	4,011	11,127	2,946	8,182	2,594	7,130	8,083	2,233	5,850
1960	54,234	712	2,885	16,796	4,004	11,391	3,004	8,388	2,669	7,423	8,353	2,270	6,083
1961	54,042	672	2,816	16,326	3,903	11,337	2,993	8,344	2,731	7,664	8,594	2,279	6,315
1962	55,596	650	2,902	16,853	3,906	11,566	3,056	8,511	2,800	8,028	8,890	2,340	6,550
1963	56,702	635	2,963	16,995	3,903	11,778	3,104	8,675	2,877	8,325	9,225	2,358	6,868
1964	58,331	634	3,050	17,274	3,951	12,160	3,189	8,971	2,957	8,709	9,596	2,348	7,248
1965	60,815	632	3,186	18,062	4,036	12,716	3,312	9,404	3,023	9,087	10,074	2,378	7,696
1966	63,955	627	3,275	19,214	4,151	13,245	3,437	9,808	3,100	9,551	10,792	2,564	8,227
1967	65,857	613	3,208	19,447	4,261	13,606	3,525	10,081	3,225	10,099	11,398	2,719	8,679
1968	67,915	606	3,285	19,781	4,310	14,084	3,611	10,473	3,382	10,623	11,845	2,737	9,109
1969	70,284	619	3,435	20,167	4,429	14,639	3,733	10,906	3,564	11,229	12,202	2,758	9,444
1970	70,593	623	3,381	19,349	4,493	14,914	3,812	11,102	3,688	11,612	12,535	2,705	9,830
1971	70,645	602	3,411	18,529	4,442	15,142	3,809	11,333	3,796	11,869	12,856	2,664	10,191

<sup>1</sup> The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data will be published in *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9). These series are based upon establishment reports which cover all full-time and part-time employees in nonagricultural establishments who worked during, or received pay for any part of, the pay period which includes the 12th of the month. Therefore, persons

who worked in more than one establishment during the reporting period are counted more than once. Proprietors, self-employed persons, unpaid family workers, and domestic servants are excluded.

<sup>2</sup> Data include Alaska and Hawaii beginning 1959. This inclusion has resulted in an increase of 212,000 (0.4 percent) in the nonagricultural total for the March 1959 benchmark month.

## 12. Employees on nonagricultural payrolls, by State

[In thousands]

State	Aug. 1971	July 1972	Aug. 1972 <sup>p</sup>	State	Aug. 1971	July 1972	Aug. 1972 <sup>p</sup>
Alabama	1,021.2	1,034.0	1,038.0	Montana	209.3	214.3	215.3
Alaska	104.1	112.7	108.4	Nebraska	486.7	503.5	503.0
Arizona	571.2	621.6	624.3	Nevada	215.0	222.0	222.5
Arkansas	549.7	570.9	571.5	New Hampshire	270.7	277.8	283.4
California	6,959.0	7,116.2	7,174.3	New Jersey	2,612.6	2,640.5	2,648.9
Colorado	777.7	810.5	813.9	New Mexico	302.5	323.8	324.5
Connecticut	1,158.4	1,173.6	1,170.2	New York	7,005.9	6,935.9	6,970.4
Delaware	211.0	218.4	220.6	North Carolina	1,784.2	1,839.3	1,847.3
District of Columbia	696.3	693.7	690.5	North Dakota	166.9	171.5	170.1
Florida	2,150.1	2,246.9	2,246.8	Ohio	3,809.3	3,862.2	3,872.6
Georgia	1,576.3	1,604.9	1,612.0	Oklahoma	782.8	807.8	809.5
Hawaii	309.3	315.3	313.0	Oregon	748.0	776.8	787.6
Idaho	219.5	230.6	232.5	Pennsylvania	4,285.3	4,313.1	4,326.6
Illinois	4,316.8	4,316.2	4,331.6	Rhode Island	343.4	340.2	344.5
Indiana	1,821.9	1,880.6	1,884.3	South Carolina	864.1	908.4	903.9
Iowa	880.4	904.6	910.9	South Dakota	181.9	181.9	182.1
Kansas	667.7	685.8	685.3	Tennessee	1,361.9	1,413.2	1,417.6
Kentucky	929.7	954.3	954.4	Texas	3,671.5	3,783.3	3,786.3
Louisiana	1,051.9	1,078.9	1,077.8	Utah	371.2	387.4	387.4
Maine	339.2	340.5	345.5	Vermont	153.8	155.3	157.0
Maryland	1,311.7	1,359.4	1,358.1	Virginia	1,508.2	1,552.5	1,556.5
Massachusetts	2,248.1	2,256.9	2,263.2	Washington	1,055.5	1,081.9	1,093.4
Michigan	2,919.5	2,907.8	2,975.1	West Virginia	534.2	533.6	524.7
Minnesota	1,319.7	1,305.9	1,337.4	Wisconsin	1,546.8	1,571.3	1,578.0
Mississippi	594.9	610.4	611.5	Wyoming	118.2	123.9	124.7
Missouri	1,620.1	1,615.7	1,628.4				

NOTE: Current State employment data by major industry division are published in *Employment and Earnings*, table B-7. For historical data in available industry detail, see the annual compendium, *Employment and Earnings, States and Areas, 1939-70* (BLS Bulletin 1370-8).

SOURCE: State agencies in cooperation with U.S. Department of Labor, Bureau of Labor Statistics. More detailed industry data are available from the State agencies. For addresses see inside back cover of *Employment and Earnings*.

<sup>p</sup> = preliminary.



13. Employees on nonagricultural payrolls, by industry division and major manufacturing group<sup>1</sup>

[In thousands]

Industry division and group	Annual average		1971				1972								
	1970	1971	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. <sup>p</sup>	Sept. <sup>p</sup>
<b>TOTAL</b> .....	70,593	70,645	71,162	71,378	71,643	72,039	70,642	70,775	71,393	71,979	72,612	73,463	72,469	72,983	73,592
<b>MINING</b> .....	623	602	625	520	522	607	603	598	601	600	605	614	614	617	613
<b>CONTRACT CONSTRUCTION</b> .....	3,381	3,411	3,663	3,684	3,624	3,388	3,174	3,096	3,210	3,374	3,528	3,717	3,740	3,831	3,772
<b>MANUFACTURING</b> .....	19,349	18,529	18,757	18,635	18,620	18,520	18,365	18,457	18,573	18,639	18,751	19,070	18,703	19,161	19,295
Production workers <sup>2</sup> .....	14,020	13,434	13,686	13,569	13,558	13,467	13,325	13,413	13,521	13,578	13,676	13,960	13,590	14,039	14,177
<b>Durable goods</b> .....	11,195	10,565	10,629	10,586	10,595	10,558	10,505	10,570	10,651	10,717	10,797	10,953	10,713	10,945	11,083
Production workers <sup>2</sup> .....	8,042	7,598	7,679	7,642	7,653	7,622	7,573	7,638	7,713	7,774	7,846	7,985	7,739	7,972	8,111
Ordnance and accessories.....	241.9	192.1	189.1	187.2	186.2	184.3	183.0	181.9	181.6	182.7	184.3	188.1	189.7	191.5	194.3
Lumber and wood products.....	572.7	580.8	602.9	603.4	599.7	593.2	585.6	588.1	592.8	596.9	605.2	630.0	629.3	635.5	625.1
Furniture and fixtures.....	459.8	458.5	467.8	472.0	475.6	477.6	477.2	478.9	480.4	481.5	482.5	491.4	485.1	498.2	498.3
Stone, clay, and glass products.....	640.2	633.7	650.0	643.3	642.0	632.6	625.3	626.7	636.0	646.7	658.4	675.4	672.9	679.8	677.2
Primary metal industries.....	1,315.6	1,227.4	1,179.6	1,168.7	1,168.7	1,172.0	1,183.9	1,190.1	1,217.0	1,226.0	1,235.0	1,246.2	1,232.3	1,242.6	1,258.0
Fabricated metal products.....	1,380.4	1,328.2	1,348.9	1,344.3	1,345.7	1,338.2	1,328.0	1,333.3	1,343.3	1,350.0	1,360.3	1,382.8	1,354.7	1,375.6	1,393.1
Machinery, except electrical.....	1,982.1	1,805.3	1,803.3	1,789.3	1,794.9	1,803.5	1,799.3	1,825.7	1,828.0	1,835.3	1,849.3	1,871.2	1,855.3	1,858.7	1,871.7
Electrical equipment.....	1,917.0	1,768.5	1,783.1	1,780.5	1,787.6	1,785.7	1,774.5	1,782.2	1,787.4	1,792.6	1,803.3	1,830.2	1,813.0	1,838.4	1,869.2
Transportation equipment.....	1,799.1	1,723.9	1,737.9	1,726.9	1,728.0	1,721.7	1,709.1	1,715.5	1,729.9	1,743.1	1,750.2	1,750.6	1,610.5	1,725.2	1,789.3
Instruments and related products.....	460.4	437.0	439.6	441.1	441.8	440.1	440.0	441.6	443.0	445.8	449.9	457.9	455.9	460.6	464.0
Miscellaneous manufacturing.....	425.7	409.6	426.9	428.8	425.0	409.4	399.3	406.4	411.9	416.1	418.1	428.9	414.2	437.4	442.9
<b>Nondurable goods</b> .....	8,154	7,964	8,128	8,049	8,025	7,962	7,860	7,887	7,922	7,922	7,954	8,117	7,990	8,216	8,212
Production workers <sup>2</sup> .....	5,978	5,836	6,007	5,927	5,905	5,845	5,752	5,775	5,808	5,804	5,830	5,975	5,851	6,067	6,066
Food and kindred products.....	1,782.8	1,758.3	1,887.0	1,809.6	1,776.7	1,738.7	1,691.5	1,672.2	1,679.4	1,675.6	1,689.6	1,767.1	1,794.0	1,871.2	1,865.8
Tobacco manufactures.....	82.9	76.3	88.5	83.8	79.8	76.2	72.6	70.7	69.3	67.9	66.5	66.8	67.0	78.9	78.4
Textile mill products.....	975.9	957.0	959.4	960.9	969.0	971.9	967.8	971.9	980.4	980.9	984.8	1,001.6	975.6	997.5	995.8
Apparel and other textile products.....	1,364.6	1,335.7	1,345.6	1,350.6	1,352.0	1,327.9	1,308.4	1,336.8	1,343.0	1,336.8	1,332.4	1,345.1	1,263.5	1,341.0	1,345.2
Paper and allied products.....	705.5	683.6	692.7	687.8	689.6	689.9	680.2	680.1	683.0	687.1	691.9	706.3	699.0	706.3	705.6
Printing and publishing.....	1,101.6	1,071.2	1,064.8	1,070.7	1,071.3	1,074.6	1,068.6	1,070.8	1,074.7	1,075.1	1,074.8	1,079.7	1,074.1	1,076.6	1,078.0
Chemicals and allied products.....	1,049.0	1,008.2	1,003.0	999.2	997.8	995.1	989.8	990.8	994.7	956.5	998.5	1,009.4	1,003.9	1,007.9	1,006.0
Petroleum and coal products.....	190.8	190.6	192.7	191.3	189.8	189.3	183.9	187.7	187.5	188.6	190.2	193.7	193.8	193.7	191.1
Rubber and plastics products, nec.....	580.1	580.9	594.7	536.4	536.0	536.5	536.4	602.1	607.8	611.6	617.9	632.3	620.3	632.3	642.4
Leather and leather products.....	320.4	302.4	300.0	298.6	302.9	302.3	300.4	303.6	302.5	302.0	307.1	314.7	298.6	311.0	303.6
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	4,493	4,442	4,469	4,415	4,407	4,432	4,393	4,367	4,442	4,445	4,481	4,549	4,531	4,536	4,539
<b>WHOLESALE AND RETAIL TRADE</b> .....	14,914	15,142	15,213	15,300	15,509	16,061	15,237	15,120	15,248	15,436	15,570	15,749	15,653	15,676	15,755
Wholesale trade.....	3,812	3,809	3,832	3,849	3,857	3,867	3,822	3,817	3,844	3,851	3,875	3,946	3,956	3,973	3,970
Retail trade.....	11,102	11,333	11,381	11,451	11,652	12,194	11,415	11,303	11,404	11,585	11,695	11,803	11,697	11,703	11,785
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	3,688	3,796	3,825	3,823	3,832	3,836	3,828	3,839	3,862	3,880	3,909	3,966	3,990	3,995	3,995
<b>SERVICES</b> .....	11,612	11,869	11,930	11,963	11,973	11,970	11,864	11,967	12,066	12,218	12,338	12,487	12,489	12,486	12,450
Hotels and other lodging places.....	767.7	793.1	833.3	779.8	755.9	766.1	769.7	780.6	793.1	808.8	834.7	899.6	971.3	982.8	-----
Personal services.....	989.0	935.1	922.3	928.9	935.3	924.4	911.2	908.7	910.5	914.9	919.6	925.8	911.9	905.3	-----
Medical and other health services.....	3,057.2	3,256.8	3,298.0	3,312.4	3,324.0	3,331.1	3,344.9	3,363.9	3,380.7	3,393.9	3,416.1	3,453.1	3,466.7	3,472.2	-----
Educational services.....	1,125.2	1,138.4	1,090.3	1,189.5	1,209.0	1,199.5	1,173.1	1,209.7	1,224.0	1,217.7	1,208.9	1,112.4	1,007.4	994.8	-----
<b>GOVERNMENT</b> .....	12,535	12,856	12,680	13,038	13,156	13,225	13,178	13,331	13,391	13,387	13,430	13,311	12,749	12,681	13,193
Federal.....	2,705	2,664	2,666	2,659	2,655	2,684	2,654	2,656	2,656	2,664	2,662	2,659	2,645	2,644	2,639
State and local.....	9,830	10,191	10,014	10,379	10,501	10,541	10,524	10,675	10,735	10,723	10,768	10,652	10,104	10,037	10,554

<sup>1</sup> The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data will be published in **Employment and Earnings, United States, 1909-72** (BLS Bulletin 1312-9).

<sup>2</sup> Production workers include working foremen and all nonsupervisory workers (including leadmen and trainees) engaged in fabricating, processing, assembling,

inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance, repair, janitorial, and watchman services, product development, auxiliary production for plant's own use (e.g., powerplant), and recordkeeping and other services closely associated with the above production operations.

NOTE: For additional detail, see **Employment and Earnings**, table B-2.  
p=preliminary.

14. Employees on nonagricultural payrolls, by industry division and major manufacturing group, seasonally adjusted <sup>1</sup>

[In thousands]

Industry division and group	1971				1972								
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. <sup>p</sup>	Sept. <sup>p</sup>
<b>TOTAL</b> .....	70,843	70,861	71,103	71,291	71,552	71,744	72,011	72,246	72,592	72,699	72,661	72,980	73,221
<b>MINING</b> .....	618	521	524	611	615	613	614	605	604	600	599	603	606
<b>CONTRACT CONSTRUCTION</b> .....	3,436	3,475	3,518	3,468	3,523	3,494	3,512	3,493	3,535	3,550	3,489	3,537	3,538
<b>MANUFACTURING</b> .....	18,517	18,495	18,534	18,519	18,551	18,612	18,685	18,790	18,892	18,931	18,861	18,932	19,019
Production workers <sup>2</sup> .....	13,454	13,426	13,468	13,453	13,492	13,544	13,616	13,711	13,798	13,846	13,785	13,849	13,913
<b>Durable goods</b> .....	10,552	10,547	10,560	10,552	10,575	10,621	10,673	10,755	10,837	10,857	10,843	10,899	10,969
Production workers <sup>2</sup> .....	7,606	7,600	7,616	7,608	7,637	7,680	7,729	7,805	7,876	7,899	7,889	7,946	8,002
Ordnance and accessories.....	188	187	185	183	183	182	182	185	186	188	190	191	193
Lumber and wood products.....	592	596	601	601	604	604	606	610	610	611	613	616	613
Furniture and fixtures.....	465	467	470	474	477	481	483	486	488	490	494	496	495
Stone, clay, and glass products.....	637	637	639	638	645	646	650	651	660	662	660	663	664
Primary metal industries.....	1,192	1,191	1,187	1,184	1,192	1,190	1,209	1,215	1,228	1,222	1,214	1,235	1,271
Fabricated metal products.....	1,338	1,334	1,334	1,329	1,335	1,341	1,347	1,360	1,370	1,373	1,370	1,376	1,382
Machinery, except electrical.....	1,805	1,804	1,808	1,809	1,803	1,815	1,814	1,824	1,848	1,858	1,855	1,870	1,874
Electrical equipment.....	1,765	1,773	1,773	1,779	1,778	1,786	1,795	1,805	1,818	1,830	1,826	1,835	1,851
Transportation equipment.....	1,720	1,708	1,713	1,705	1,699	1,712	1,720	1,747	1,754	1,740	1,743	1,733	1,737
Instruments and related products.....	439	441	441	438	442	443	444	447	452	457	456	458	463
Miscellaneous manufacturing.....	411	409	409	412	417	421	423	425	423	426	422	426	426
<b>Nondurable goods</b> .....	7,965	7,948	7,974	7,967	7,976	7,991	8,012	8,035	8,055	8,074	8,018	8,033	8,050
Production workers <sup>2</sup> .....	5,848	5,826	5,852	5,845	5,855	5,864	5,887	5,906	5,922	5,947	5,896	5,903	5,911
Food and kindred products.....	1,762	1,737	1,756	1,755	1,758	1,751	1,759	1,756	1,755	1,771	1,757	1,739	1,742
Tobacco manufactures.....	75	73	74	72	73	73	76	77	76	75	75	71	66
Textile mill products.....	957	960	965	969	973	976	981	984	988	991	986	993	993
Apparel and other textile products.....	1,332	1,336	1,341	1,331	1,328	1,336	1,334	1,344	1,334	1,329	1,311	1,330	1,332
Paper and allied products.....	690	689	686	686	684	685	687	691	700	699	698	699	703
Printing and publishing.....	1,067	1,069	1,067	1,068	1,072	1,072	1,074	1,076	1,080	1,079	1,076	1,078	1,080
Chemicals and allied products.....	1,002	1,002	1,001	999	998	997	997	996	1,002	1,001	995	998	1,005
Petroleum and coal products.....	190	190	190	192	189	193	191	191	190	190	188	189	189
Rubber and plastics products, nec.....	589	592	593	594	600	605	609	615	621	630	627	630	636
Leather and leather products.....	301	300	301	301	301	303	304	305	309	309	305	306	304
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	4,420	4,406	4,403	4,432	4,455	4,438	4,487	4,481	4,490	4,491	4,473	4,487	4,490
<b>WHOLESALE AND RETAIL TRADE</b> .....	15,232	15,250	15,299	15,333	15,379	15,456	15,508	15,561	15,632	15,682	15,692	15,743	15,774
Wholesale trade.....	3,817	3,822	3,830	3,840	3,849	3,863	3,883	3,894	3,914	3,926	3,913	3,934	3,954
Retail trade.....	11,415	11,428	11,469	11,493	11,530	11,593	11,625	11,667	11,718	11,756	11,779	11,809	11,820
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	3,821	3,835	3,847	3,855	3,867	3,874	3,885	3,892	3,913	3,931	3,927	3,936	3,951
<b>SERVICES</b> .....	11,918	11,951	11,997	12,042	12,069	12,112	12,139	12,206	12,252	12,290	12,341	12,424	12,438
Hotels and other lodging places.....	811	806	808	819	828	831	834	829	837	858	843	860	860
Personal services.....	926	925	930	922	920	921	917	917	914	911	907	910	910
Medical and other health services.....	3,301	3,312	3,324	3,345	3,355	3,371	3,384	3,404	3,430	3,429	3,436	3,458	3,458
Educational services.....	1,147	1,147	1,148	1,146	1,145	1,150	1,156	1,161	1,159	1,161	1,155	1,165	1,165
<b>GOVERNMENT</b> .....	12,881	12,928	12,981	13,031	13,093	13,145	13,181	13,218	13,274	13,224	13,279	13,318	13,405
Federal.....	2,663	2,662	2,666	2,666	2,673	2,669	2,667	2,664	2,665	2,646	2,621	2,618	2,636
State and local.....	10,218	10,266	10,315	10,365	10,420	10,476	10,514	10,554	10,609	10,578	10,658	10,700	10,769

<sup>1</sup> The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data will be published in *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9)

<sup>2</sup> Production workers include working foremen and all nonsupervisory workers (including leadmen and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance,

repair, janitorial, and watchman services, product development, auxiliary production for plant's own use (e.g., powerplant), and recordkeeping and other services closely associated with the above production operations.

NOTE: These data have been seasonally adjusted to reflect experience through June 1972. For additional detail, see October 1972 issue of *Employment and Earnings*.

<sup>p</sup>=preliminary.

15. Labor turnover rates in manufacturing, 1962 to date <sup>1</sup>

[Per 100 employees]

Year	Annual average	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total accessions													
1962	4.1	4.1	3.6	3.8	4.0	4.3	5.0	4.6	5.1	4.9	3.9	3.0	2.4
1963	3.9	3.6	3.3	3.5	3.9	3.9	4.8	4.3	4.8	4.8	3.9	2.9	2.5
1964	4.0	3.6	3.4	3.7	3.8	3.9	5.1	4.4	5.1	4.8	4.0	3.2	2.6
1965	4.3	3.8	3.5	4.0	3.8	4.1	5.6	4.5	5.4	5.5	4.5	3.9	3.1
1966	5.0	4.6	4.2	4.9	4.6	5.1	6.7	5.1	6.4	6.1	5.1	3.9	2.9
1967	4.4	4.3	3.6	3.9	3.9	4.6	5.9	4.7	5.5	5.3	4.7	3.7	2.8
1968	4.6	4.2	3.8	4.0	4.3	4.7	5.9	5.0	5.8	5.7	5.1	3.9	3.1
1969	4.7	4.6	3.9	4.4	4.5	4.8	6.6	5.1	5.6	5.9	4.9	3.6	2.9
1970	4.0	4.0	3.6	3.7	3.7	4.2	5.4	4.4	5.1	4.7	3.8	3.0	2.4
1971	3.9	3.5	3.1	3.5	3.6	4.0	4.9	4.0	5.3	4.8	3.9	3.3	2.5
1972	4.1	4.1	3.7	4.0	4.0	4.8	5.2	4.6	5.9				
New hires													
1962	2.5	2.2	2.1	2.2	2.4	2.8	3.5	2.9	3.2	3.1	2.5	1.8	1.2
1963	2.4	1.9	1.8	2.0	2.3	2.5	3.3	2.7	3.2	3.2	2.6	1.8	1.4
1964	2.6	2.0	2.0	2.2	2.4	2.5	3.6	2.9	3.4	3.5	2.8	2.2	1.6
1965	3.1	2.4	2.4	2.8	2.6	3.0	4.3	3.2	3.9	4.0	3.5	2.9	2.2
1966	3.8	3.2	3.1	3.7	3.6	4.1	5.6	3.9	4.8	4.7	4.2	3.1	2.1
1967	3.3	3.0	2.7	2.8	2.8	3.3	4.6	3.3	4.0	4.1	3.7	2.8	2.0
1968	3.5	3.0	2.7	2.9	3.2	3.6	4.7	3.7	4.3	4.6	4.0	2.9	2.2
1969	3.7	3.3	3.0	3.4	3.5	3.8	5.4	3.9	4.3	4.8	4.0	2.8	2.1
1970	2.8	2.9	2.5	2.6	2.6	2.8	3.9	3.0	3.5	3.4	2.7	1.9	1.4
1971	2.5	2.0	1.9	2.2	2.3	2.6	3.5	2.7	3.4	3.4	2.7	2.2	1.6
1972	2.6	2.6	2.4	2.7	2.9	3.6	4.1	3.4	4.5				
Total separations													
1962	4.1	3.9	3.4	3.6	3.6	3.8	3.8	4.4	5.1	5.0	4.4	4.0	3.8
1963	3.9	4.0	3.2	3.5	3.6	3.6	3.4	4.1	4.8	4.9	4.1	3.9	3.7
1964	3.9	4.0	3.3	3.5	3.5	3.6	3.5	4.4	4.3	5.1	4.2	3.6	3.7
1965	4.1	3.7	3.1	3.4	3.7	3.6	3.6	4.3	5.1	5.6	4.5	3.9	4.1
1966	4.6	4.0	3.6	4.1	4.3	4.3	4.4	5.3	5.8	6.6	4.8	4.3	4.2
1967	4.6	4.5	4.0	4.6	4.3	4.2	4.3	4.8	5.3	6.2	4.7	4.0	3.9
1968	4.6	4.4	3.9	4.1	4.1	4.3	4.1	5.0	6.0	6.3	5.0	4.1	3.8
1969	4.9	4.5	4.0	4.4	4.5	4.6	4.6	5.3	6.2	6.6	5.4	4.3	4.2
1970	4.8	4.8	4.3	4.4	4.8	4.6	4.4	5.3	5.6	6.0	5.3	4.3	4.1
1971	4.2	4.2	3.5	3.7	3.9	3.7	3.8	4.8	5.5	5.3	4.3	3.7	3.8
1972	4.0	4.0	3.5	3.8	3.7	3.9	4.2	4.8	5.5				
Quits													
1962	1.4	1.1	1.1	1.2	1.3	1.5	1.5	1.4	2.1	2.4	1.5	1.1	0.8
1963	1.4	1.1	1.0	1.2	1.3	1.4	1.4	1.4	2.1	2.4	1.5	1.1	.8
1964	1.5	1.2	1.1	1.2	1.3	1.5	1.4	1.5	2.1	2.7	1.7	1.2	1.0
1965	1.9	1.4	1.3	1.5	1.7	1.7	1.7	1.8	2.6	3.5	2.2	1.7	1.4
1966	2.6	1.9	1.8	2.3	2.5	2.5	2.5	2.5	3.6	4.5	2.8	2.1	1.7
1967	2.3	2.1	1.9	2.1	2.2	2.2	2.3	2.1	3.2	4.0	2.5	1.9	1.5
1968	2.5	2.0	1.9	2.1	2.2	2.4	2.3	2.4	3.8	4.2	2.8	2.1	1.6
1969	2.7	2.3	2.1	2.4	2.6	2.7	2.6	2.7	4.0	4.4	3.0	2.1	1.6
1970	2.1	2.1	1.9	2.0	2.1	2.1	2.1	2.1	3.0	3.3	2.1	1.4	1.2
1971	1.8	1.5	1.3	1.5	1.6	1.7	1.8	1.8	2.8	2.9	1.9	1.5	1.2
1972	1.7	1.7	1.6	1.9	2.0	2.2	2.2	2.2	3.6				
Layoffs													
1962	2.0	2.1	1.7	1.6	1.6	1.6	1.6	2.2	2.2	1.9	2.2	2.3	2.5
1963	1.8	2.2	1.6	1.7	1.6	1.5	1.4	2.0	1.9	1.8	1.9	2.1	2.3
1964	1.7	2.0	1.6	1.6	1.4	1.4	1.3	2.1	1.4	1.5	1.8	1.7	2.1
1965	1.4	1.6	1.2	1.2	1.3	1.1	1.1	1.8	1.6	1.3	1.4	1.5	1.9
1966	1.2	1.3	1.0	1.0	1.0	.9	1.0	2.0	1.1	1.0	1.1	1.3	1.7
1967	1.4	1.5	1.3	1.5	1.3	1.1	1.1	1.9	1.2	1.2	1.3	1.3	1.6
1968	1.2	1.5	1.2	1.1	1.0	1.0	.9	1.8	1.3	1.1	1.2	1.2	1.4
1969	1.2	1.2	1.0	1.0	.9	.9	.9	1.6	1.1	1.1	1.3	1.3	1.8
1970	1.8	1.7	1.5	1.6	1.7	1.5	1.5	2.3	1.7	1.7	2.2	2.1	2.2
1971	1.6	1.9	1.4	1.4	1.4	1.2	1.2	2.1	1.8	1.5	1.5	1.5	1.8
1972	1.4	1.4	1.1	1.1	1.0	.8	1.1	1.7	1.9				

<sup>1</sup> The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data will be published in *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9).

shown by the Bureau's employment series because (1) the labor turnover series measures changes during the calendar month, while the employment series measures changes from midmonth to midmonth, and (2) the turnover series excludes personnel changes caused by strikes, but the employment series reflects the influence of such stoppages.

p=preliminary.

r=revised.



16. Labor turnover rates in manufacturing, by major industry group <sup>1</sup>

[Per 100 employees]

Major industry group	Accession rates						Separation rates								
	Total			New hires			Total			Quits			Layoffs		
	Aug. 1971	July 1972	Aug. 1972 <sup>p</sup>	Aug. 1971	July 1972	Aug. 1972 <sup>p</sup>	Aug. 1971	July 1972	Aug. 1972 <sup>p</sup>	Aug. 1971	July 1972	Aug. 1972 <sup>p</sup>	Aug. 1971	July 1972	Aug. 1972 <sup>p</sup>
<b>MANUFACTURING</b> .....	5.3	4.6	5.9	3.4	3.4	4.5	5.5	4.8	5.5	2.8	2.2	3.6	1.8	1.7	0.9
Seasonally adjusted <sup>2</sup> .....	4.2	4.3	4.7	2.7	3.2	3.5	4.4	4.4	4.4	1.9	2.2	2.4	1.9	1.2	1.0
<b>Durable goods</b> .....	4.8	4.1	5.3	2.8	2.9	3.9	5.4	4.6	4.9	2.2	1.8	3.1	2.2	1.9	.8
Ordnance and accessories.....	2.1	2.9	-----	1.2	1.9	-----	2.8	2.6	-----	1.2	.9	-----	1.1	.7	-----
Lumber and wood products.....	6.5	5.9	6.9	5.5	5.2	6.4	6.7	5.5	7.5	4.9	3.8	5.8	.8	.6	.6
Furniture and fixtures.....	7.5	6.7	9.1	6.4	6.0	8.0	7.2	6.6	8.9	4.7	4.1	6.5	1.2	1.3	.8
Stone, clay, and glass products.....	4.7	4.4	5.3	3.6	3.6	4.4	5.1	3.9	5.7	3.0	2.2	3.9	1.2	.8	.6
Primary metal industries.....	3.8	2.7	3.7	1.4	1.6	2.5	9.0	2.9	3.5	1.6	1.0	2.0	6.3	.9	.5
Fabricated metal products.....	5.0	4.6	-----	3.5	3.4	-----	5.1	4.1	-----	2.6	2.0	-----	1.4	1.2	-----
Machinery, except electrical.....	2.9	2.9	3.7	1.6	2.3	2.9	3.3	2.8	3.9	1.4	1.2	2.2	1.2	.8	.8
Electrical equipment.....	3.9	3.3	-----	2.2	2.3	-----	3.4	3.2	-----	1.8	1.5	-----	.7	.8	-----
Transportation equipment.....	7.2	4.6	-----	2.4	2.6	-----	7.2	9.5	-----	1.8	1.5	-----	4.5	7.0	-----
Instruments and related products.....	3.1	3.0	4.1	2.3	2.4	3.5	3.2	2.6	3.6	1.8	1.4	2.5	.6	.5	.3
Miscellaneous manufacturing.....	6.6	7.2	8.3	5.4	5.1	6.8	6.0	6.6	7.1	3.6	2.9	4.6	1.3	2.7	1.1
<b>Nondurable goods</b> .....	5.9	5.3	6.7	4.2	3.9	5.2	5.7	5.0	6.3	3.4	2.7	4.4	1.4	1.6	1.0
Food and kindred products.....	9.4	8.1	10.4	6.9	5.8	8.2	7.8	6.0	8.3	4.5	3.1	5.6	2.5	2.3	1.9
Tobacco manufactures.....	19.1	7.9	10.8	12.5	3.4	8.1	10.5	2.9	7.4	4.2	1.3	3.9	5.2	.9	2.4
Textile mill products.....	6.1	5.6	7.7	4.9	4.5	6.4	6.7	5.9	8.0	4.7	4.1	6.3	.7	.8	.4
Apparel and other textile products.....	7.4	6.7	8.5	4.5	4.5	5.8	6.3	7.8	7.6	4.0	3.7	5.3	1.3	3.1	1.1
Paper and allied products.....	3.3	3.2	3.6	2.6	2.6	3.0	4.0	3.0	4.4	2.4	1.6	3.0	.7	.7	.5
Printing and publishing.....	3.3	3.4	3.5	2.5	2.7	2.9	3.9	3.1	4.0	2.3	1.8	2.7	.9	.7	.7
Chemicals and allied products.....	2.0	2.1	2.4	1.5	1.6	1.9	2.9	2.2	3.1	1.5	.9	1.8	.7	.6	.5
Petroleum and coal products.....	1.9	1.6	1.9	1.7	1.4	1.5	3.0	1.9	2.9	1.7	.7	1.6	.5	.6	.3
Rubber and plastics products, nec.....	5.4	5.0	6.9	3.8	4.0	5.2	5.6	4.8	6.0	3.1	2.7	4.2	1.4	1.0	.5
Leather and leather products.....	5.8	7.9	7.9	4.2	5.3	5.6	8.0	8.6	8.6	4.3	4.3	5.8	2.5	3.1	1.6

<sup>1</sup> The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data will be published in **Employment and Earnings, United States, 1909-72** (BLS Bulletin 1312-9).

Month-to-month changes in total employment in manufacturing and nonmanufacturing industries as indicated by labor turnover rates are not comparable with the changes shown by the Bureau's employment series because (1) the labor turnover series measures changes during the calendar month, while the employment series measures

changes from midmonth to midmonth, and (2) the turnover series excludes personnel changes caused by strikes, but the employment series reflects the influence of such stoppages.

<sup>2</sup> These data have been seasonally adjusted to reflect experience through June 1972. For additional detail, see October 1972 issue of **Employment and Earnings**.

NOTE: For additional detail, see **Employment and Earnings**, table D-2.

<sup>p</sup> = preliminary.

17. Job vacancies in manufacturing <sup>1</sup>

Industry	Annual average		1971					1972							
	1970	1971	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June <sup>p</sup>	July	Aug. <sup>p</sup>
Job vacancies in manufacturing (number in thousands).....	132	88	106	98	90	79	78	90	97	110	124	127	124	134	159
Seasonally adjusted <sup>2</sup> .....	-----	-----	86	86	92	92	93	98	106	111	117	118	127	130	130
<b>JOB VACANCY RATES <sup>2</sup></b>															
Manufacturing.....	0.7	0.5	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.6	0.7	0.8
Seasonally adjusted <sup>2</sup> .....	-----	-----	.5	.5	.5	.5	.5	.5	.6	.6	.6	.6	.6	.7	.7
Durable goods industries.....	.6	.4	.5	.5	.4	.4	.5	.5	.5	.6	.6	.6	.6	.7	.8
Nondurable goods industries.....	.7	.6	.6	.6	.5	.5	.5	.5	.6	.6	.7	.7	.7	.7	.9
Selected durable goods industries:															
Primary metal industries.....	.5	.2	.2	.2	.2	.2	.1	.2	.2	.2	.3	.3	.3	.3	.5
Machinery, except electrical.....	.7	.4	.4	.5	.4	.4	.4	.5	.5	.6	.7	.7	.7	.8	.8
Electrical equipment and supplies.....	.7	.5	.6	.5	.6	.5	.5	.6	.7	.7	.8	.8	.8	1.0	1.0
Transportation equipment.....	.5	.4	.6	.5	.5	.4	.3	.4	.5	.5	.7	.6	.6	.6	.7
Instruments and related products.....	1.0	.7	.8	.8	.7	.6	.6	.7	.7	.9	1.1	1.1	1.4	1.3	1.7
Selected nondurable goods industries:															
Textile mill products.....	.9	.8	1.0	.9	.9	.8	.8	.8	.9	1.1	1.2	1.2	1.1	1.2	1.5
Apparel and other textile products.....	1.4	1.2	1.4	1.3	1.2	1.0	1.1	1.2	1.3	1.4	1.3	1.4	1.4	1.5	1.6
Printing and publishing.....	.6	.4	.4	.3	.4	.3	.3	.3	.3	.4	.4	.4	.3	.4	.4
Chemicals and allied products.....	.7	.4	.4	.4	.4	.3	.3	.4	.4	.5	.6	.5	.5	.5	.5

<sup>1</sup> Data have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and are not comparable with those published in issues prior to November 1972. Comparable back data will be published in **Employment and Earnings, United States, 1909-72** (BLS Bulletin 1312-9).

<sup>2</sup> These data have been seasonally adjusted to reflect experience through June 1972. For additional detail, see October 1972 issue of **Employment and Earnings**.

<sup>3</sup> Computed by dividing the total number of job vacancies by the sum of employment plus the total number of job vacancies and multiplying the quotient of 100.

NOTE: For additional detail on this series, see **Employment and Earnings**, tables E-1, E-2, E-3, and E-4.

<sup>p</sup> = preliminary.

<sup>r</sup> = revised.

**18. Gross average hours and earnings of production or nonsupervisory workers<sup>1</sup> on private nonagricultural payrolls, by industry division, 1947-71**

Year	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
	Total private			Mining			Contract construction			Manufacturing		
1947	\$45.58	40.3	\$1.131	\$59.94	40.8	\$1.469	\$58.87	38.2	\$1.541	\$49.17	40.4	\$1.217
1948	49.00	40.0	1.225	65.56	39.4	1.664	65.27	38.1	1.713	53.12	40.0	1.328
1949	50.24	39.4	1.275	62.33	36.3	1.717	67.56	37.7	1.792	53.88	39.1	1.378
1950	53.13	39.8	1.335	67.16	37.9	1.772	69.68	37.4	1.863	58.32	40.5	1.440
1951	57.86	39.9	1.45	74.11	38.4	1.93	76.96	38.1	2.02	63.34	40.6	1.56
1952	60.65	39.9	1.52	77.59	38.6	2.01	82.86	38.9	2.13	67.16	40.7	1.65
1953	63.76	39.6	1.61	83.03	38.8	2.14	86.41	37.9	2.28	70.47	40.5	1.74
1954	64.52	39.1	1.65	82.60	38.6	2.14	88.91	37.2	2.39	70.49	39.6	1.78
1955	67.72	39.6	1.71	89.54	40.7	2.20	90.90	37.1	2.45	75.70	40.7	1.86
1956	70.74	39.3	1.80	95.06	40.8	2.33	96.38	37.5	2.57	78.78	40.4	1.95
1957	73.33	38.8	1.89	98.65	40.1	2.46	100.27	37.0	2.71	81.59	39.8	2.05
1958	75.08	38.5	1.95	96.08	38.9	2.47	103.78	36.8	2.82	82.71	39.2	2.11
1959 <sup>2</sup>	78.78	39.0	2.02	105.68	40.5	2.56	108.41	37.0	2.93	88.26	40.3	2.19
1960	80.67	38.6	2.09	105.44	40.4	2.61	113.04	36.7	3.08	89.72	39.7	2.26
1961	82.60	38.6	2.14	106.92	40.5	2.64	118.08	36.9	3.20	92.34	39.8	2.32
1962	85.91	38.7	2.22	110.43	40.9	2.70	122.47	37.0	3.31	96.56	40.4	2.39
1963	88.46	38.8	2.28	114.40	41.6	2.75	127.19	37.3	3.41	99.63	40.5	2.46
1964	91.33	38.7	2.36	117.74	41.9	2.81	132.06	37.2	3.55	102.97	40.7	2.53
1965	95.06	38.8	2.45	123.52	42.3	2.92	138.38	37.4	3.70	107.53	41.2	2.61
1966	98.82	38.6	2.56	130.24	42.7	3.05	146.26	37.6	3.89	112.34	41.3	2.72
1967	101.84	38.0	2.68	135.89	42.6	3.19	154.95	37.7	4.11	114.90	40.6	2.83
1968	107.73	37.8	2.85	142.71	42.6	3.35	164.93	37.4	4.41	122.51	40.7	3.01
1969	114.61	37.7	3.04	155.23	43.0	3.61	181.54	37.9	4.79	129.51	40.6	3.19
1970	119.46	37.1	3.22	164.40	42.7	3.85	195.98	37.4	5.24	133.73	39.8	3.36
1971	126.91	37.0	3.43	171.74	42.3	4.06	212.24	37.3	5.69	142.04	39.9	3.56
	Transportation and public utilities			Wholesale and retail trade			Finance, insurance, and real estate			Services		
1947				\$38.07	40.5	\$0.940	\$43.21	37.9	\$1.140			
1948				40.80	40.4	1.010	45.48	37.9	1.200			
1949				42.93	40.5	1.060	47.63	37.8	1.260			
1950				44.55	40.5	1.100	50.52	37.7	1.340			
1951				47.79	40.5	1.18	54.67	37.7	1.45			
1952				49.20	40.0	1.23	57.08	37.8	1.51			
1953				51.35	39.5	1.30	59.57	37.7	1.58			
1954				53.33	39.5	1.35	62.04	37.6	1.65			
1955				55.16	39.4	1.40	63.92	37.6	1.70			
1956				57.48	39.1	1.47	65.68	36.9	1.78			
1957				59.60	38.7	1.54	67.53	36.7	1.84			
1958				61.76	38.6	1.60	70.12	37.1	1.89			
1959 <sup>2</sup>				64.41	38.8	1.66	72.74	37.3	1.95			
1960				66.01	38.6	1.71	75.14	37.2	2.02			
1961				67.41	38.3	1.76	77.12	36.9	2.09			
1962				69.91	38.2	1.83	80.94	37.3	2.17			
1963				72.01	38.1	1.89	84.38	37.5	2.25			
1964	\$118.37	41.1	\$2.88	74.28	37.9	1.96	85.79	37.3	2.30	\$69.84	36.0	\$1.94
1965	125.14	41.3	3.03	76.53	37.7	2.03	88.91	37.2	2.39	73.60	35.9	2.05
1966	128.13	41.2	3.11	79.02	37.1	2.13	92.13	37.3	2.47	77.04	35.5	2.17
1967	131.22	40.5	3.24	81.76	36.5	2.24	95.46	37.0	2.58	80.38	35.1	2.29
1968	138.85	40.6	3.42	86.40	36.0	2.40	101.75	37.0	2.75	84.32	34.7	2.43
1969	148.15	40.7	3.64	91.14	35.6	2.56	108.70	37.1	2.93	90.57	34.7	2.61
1970	155.93	40.5	3.85	95.66	35.3	2.71	113.34	36.8	3.08	96.66	34.4	2.81
1971	168.84	40.2	4.20	100.74	35.1	2.87	121.36	37.0	3.28	102.94	34.2	3.01

<sup>1</sup> The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data will be published in *Employment and Earnings, United States 1909-72* (BLS Bulletin 1312-9).

Data relate to production workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and

public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

<sup>2</sup> Data include Alaska and Hawaii beginning 1959.

NOTE: For additional detail, see *Employment and Earnings*, table C-1.

**19. Gross average weekly hours of production or nonsupervisory workers<sup>1</sup> on private nonagricultural payrolls, by industry division and major manufacturing group**

Industry division and group	Annual average		1971				1972								
	1970	1971	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. <sup>P</sup>	Sept. <sup>P</sup>
	<b>TOTAL PRIVATE</b> .....	37.1	37.0	37.0	37.0	37.0	37.3	36.7	36.8	36.9	37.0	36.9	37.4	37.6	37.6
<b>MINING</b> .....	42.7	42.3	42.1	42.8	42.3	42.7	42.4	41.9	42.2	42.4	42.3	43.0	42.4	42.7	43.4
<b>CONTRACT CONSTRUCTION</b> .....	37.4	37.3	36.9	38.2	37.9	36.4	35.8	36.0	36.8	36.6	36.8	37.6	37.9	38.2	38.3
<b>MANUFACTURING</b> .....	39.8	39.9	39.8	40.0	40.2	40.7	39.8	40.1	40.3	40.5	40.5	40.9	40.4	40.6	40.9
Overtime hours.....	3.0	2.9	3.1	3.1	3.1	3.2	2.8	3.0	3.1	3.3	3.3	3.5	3.3	3.5	3.8
<b>Durable goods</b> .....	40.3	40.4	40.0	40.5	40.7	41.4	40.3	40.7	41.0	41.2	41.2	41.6	40.9	41.1	41.5
Overtime hours.....	3.0	2.8	3.0	3.0	3.0	3.2	2.8	3.0	3.2	3.4	3.4	3.6	3.4	3.6	4.0
Ordnance and accessories.....	40.5	41.7	41.9	41.7	42.0	42.4	41.7	42.2	42.2	42.1	42.0	42.2	41.8	42.7	42.4
Lumber and wood products.....	39.7	40.3	40.5	41.0	40.6	40.8	40.0	40.3	40.8	41.1	41.3	41.8	41.0	41.4	41.2
Furniture and fixtures.....	39.2	39.8	40.0	40.4	40.4	40.9	39.7	39.8	40.1	40.1	40.2	41.0	40.0	41.0	41.1
Stone, clay, and glass products.....	41.2	41.6	41.9	42.2	41.9	41.6	40.9	41.2	41.8	41.9	42.0	42.4	42.1	42.2	42.1
Primary metal industries.....	40.5	40.4	39.5	39.7	39.9	41.0	40.6	41.0	41.3	41.6	41.5	41.8	41.4	41.6	41.8
Fabricated metal products.....	40.7	40.4	40.0	40.4	40.6	41.3	40.2	40.5	40.7	41.0	41.2	41.6	41.0	41.4	41.5
Machinery, except electrical.....	41.1	40.6	40.6	40.8	41.1	41.9	41.0	41.4	41.7	41.8	41.8	42.2	41.6	41.9	42.5
Electrical equipment.....	39.8	39.9	39.9	40.1	40.4	40.8	39.9	40.1	40.2	40.4	40.3	40.7	39.9	40.4	40.8
Transportation equipment.....	40.3	40.7	39.1	40.9	41.1	42.5	40.5	41.1	41.6	41.9	42.0	42.1	41.2	40.4	41.7
Instruments and related products.....	40.1	39.8	40.0	40.1	40.5	40.8	40.1	40.3	40.3	40.5	40.5	40.7	40.1	40.4	40.8
Miscellaneous manufacturing.....	38.7	38.9	39.0	39.4	39.5	39.5	38.7	39.2	39.3	39.5	39.3	39.6	38.8	39.6	39.6
<b>Nondurable goods</b> .....	39.1	39.3	39.5	39.4	39.6	39.8	39.1	39.2	39.4	39.5	39.5	39.9	39.7	40.0	40.0
Overtime hours.....	3.0	3.0	3.4	3.2	3.1	3.1	2.9	3.0	3.1	3.2	3.1	3.4	3.3	3.4	3.6
Food and kindred products.....	40.5	40.3	40.8	40.1	40.1	40.6	39.7	39.5	40.0	40.0	40.2	40.6	40.8	40.9	40.9
Tobacco manufactures.....	37.8	37.0	37.9	36.1	35.6	36.1	34.1	33.1	33.3	33.1	33.5	34.8	34.1	35.8	35.5
Textile mill products.....	39.9	40.6	40.6	41.0	41.4	41.5	40.8	41.0	41.3	41.3	41.1	41.7	40.9	41.4	44.4
Apparel and other textile products.....	35.3	35.6	35.6	35.9	36.4	35.9	35.4	36.0	36.0	36.0	35.6	36.0	36.0	36.4	36.0
Paper and allied products.....	41.9	42.1	42.2	42.3	42.4	42.8	41.9	42.2	42.4	42.6	42.4	43.0	42.8	43.1	43.3
Printing and publishing.....	37.7	37.5	37.7	37.5	37.6	38.0	37.0	37.2	37.6	37.8	37.6	37.9	38.0	38.2	38.5
Chemicals and allied products.....	41.6	41.6	42.1	41.5	41.6	41.9	41.6	41.6	41.8	41.9	41.6	42.0	41.6	41.4	41.9
Petroleum and coal products.....	42.7	42.4	42.9	42.6	42.1	42.3	41.7	41.5	41.6	42.5	42.3	42.4	42.3	42.1	42.7
Rubber and plastics products, nec.....	40.3	40.3	40.4	40.6	40.7	41.2	40.6	40.7	40.7	41.0	41.0	41.4	40.7	41.4	41.5
Leather and leather products.....	37.2	37.7	36.9	37.7	38.4	38.8	38.2	38.5	37.9	38.0	38.7	39.2	38.9	38.8	38.1
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	40.5	40.2	40.8	40.4	40.6	40.6	39.8	40.2	40.2	39.9	40.3	40.8	40.7	40.7	40.6
<b>WHOLESALE AND RETAIL TRADE</b> .....	35.3	35.1	35.2	35.0	34.9	35.5	34.7	34.6	34.8	34.8	34.8	35.5	36.0	36.0	35.1
Wholesale trade.....	40.0	39.8	39.7	39.8	39.8	40.2	39.6	39.7	39.8	39.7	39.8	40.0	40.1	39.9	39.8
Retail trade.....	33.8	33.7	33.7	33.5	33.4	34.1	33.2	33.0	33.2	33.3	33.3	34.1	34.7	34.8	33.6
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	36.8	37.0	36.9	37.1	37.0	37.0	37.3	37.1	37.1	37.3	37.0	37.2	37.4	37.2	37.0
<b>SERVICES</b> .....	34.4	34.2	34.1	34.1	34.0	34.2	33.9	34.0	34.0	34.0	33.8	34.2	34.8	34.5	34.3

<sup>1</sup> The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data will be published in **Employment and Earnings, United States, 1909-72** (BLS Bulletin 1312-9).

Data relate to production workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and

public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

NOTE: For additional detail, see **Employment and Earnings**, table C-2.

<sup>P</sup>=preliminary.



20. Gross average weekly hours of production or nonsupervisory workers<sup>1</sup> on private nonagricultural payrolls, by industry division and major manufacturing group, seasonally adjusted

Industry division and group	1971				1972								
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. <sup>P</sup>	Sept. <sup>P</sup>
<b>TOTAL PRIVATE</b> .....	36.9	37.0	37.1	37.1	37.0	37.2	37.1	37.3	37.0	37.1	37.2	37.1	37.3
<b>MINING</b> .....	42.1	42.5	42.3	42.4	42.7	42.5	42.8	42.4	42.3	42.6	42.1	42.5	43.4
<b>CONTRACT CONSTRUCTION</b> .....	35.8	37.6	39.0	36.8	37.1	37.3	37.2	36.7	36.7	36.9	37.0	37.1	37.1
<b>MANUFACTURING</b> .....	39.6	39.9	40.1	40.2	40.1	40.4	40.4	40.8	40.5	40.7	40.6	40.6	40.7
Overtime hours.....	2.8	3.0	3.0	3.1	2.9	3.2	3.3	3.5	3.4	3.4	3.4	3.4	3.5
<b>Durable goods</b> .....	39.7	40.4	40.6	40.9	40.6	41.1	41.0	41.4	41.1	41.3	41.2	41.3	41.2
Overtime hours.....	2.8	2.8	2.9	3.0	2.9	3.2	3.3	3.7	3.5	3.4	3.5	3.6	3.7
Ordnance and accessories.....	41.8	41.7	41.9	41.9	41.7	42.2	42.0	42.2	42.0	42.0	42.4	42.8	42.3
Lumber and wood products.....	40.3	40.7	40.7	40.7	40.9	40.8	40.9	41.1	41.0	41.2	41.1	41.2	41.0
Furniture and fixtures.....	39.5	39.8	40.0	40.0	40.3	40.6	40.4	40.7	40.5	40.8	40.4	40.5	40.6
Stone, clay, and glass products.....	41.4	41.9	41.8	41.6	41.9	42.0	42.0	42.0	41.8	42.0	41.9	41.7	41.6
Primary metal industries.....	39.5	40.3	40.4	40.9	40.6	41.0	41.1	41.4	41.3	41.4	41.4	41.6	41.8
Fabricated metal products.....	39.6	40.2	40.5	40.9	40.6	41.0	40.9	41.4	41.1	41.2	41.3	41.3	41.0
Machinery, except electrical.....	40.6	40.8	41.1	41.2	41.0	41.4	41.4	41.9	41.8	42.1	42.0	42.4	42.5
Electrical equipment.....	39.7	39.9	40.1	40.2	40.0	40.6	40.2	40.8	40.4	40.5	40.3	40.4	40.6
Transportation equipment.....	38.6	40.4	40.7	41.5	40.9	41.7	41.7	43.0	41.9	41.6	41.3	41.2	41.2
Instruments and related products.....	39.8	40.0	40.1	40.4	40.3	40.6	40.3	40.7	40.6	40.6	40.4	40.6	40.6
Miscellaneous manufacturing.....	39.0	39.1	39.1	39.2	39.1	39.4	39.2	39.6	39.4	39.5	39.3	39.5	39.6
<b>Nondurable goods</b> .....	39.2	39.3	39.5	39.5	39.4	39.6	39.6	39.8	39.6	39.7	39.6	39.8	39.7
Overtime hours.....	3.1	3.0	3.0	3.0	3.1	3.2	3.3	3.5	3.2	3.3	3.3	3.2	3.2
Food and kindred products.....	40.0	40.1	40.0	40.3	40.0	40.1	40.6	40.7	40.4	40.5	40.4	40.3	40.1
Tobacco manufactures.....	36.5	35.1	35.6	35.5	34.6	34.1	34.5	34.1	33.7	34.2	34.3	35.4	34.2
Textile mill products.....	40.5	40.8	41.1	41.0	41.2	41.2	41.4	41.7	41.2	41.3	41.2	41.3	41.3
Apparel and other textile products.....	35.7	35.9	36.2	35.9	35.9	36.2	35.8	36.2	35.6	35.9	36.0	36.1	36.1
Paper and allied products.....	41.9	42.1	42.3	42.4	42.2	42.6	42.7	42.9	42.5	43.0	42.8	42.9	43.0
Printing and publishing.....	37.4	37.5	37.6	37.5	37.4	37.6	37.6	38.0	37.7	37.9	37.8	38.0	38.2
Chemicals and allied products.....	42.0	41.5	41.5	41.7	41.7	41.8	41.8	41.7	41.6	42.0	41.8	41.6	41.8
Petroleum and coal products.....	42.4	42.3	42.0	42.6	42.4	42.2	42.2	42.4	42.0	42.2	41.6	41.9	42.2
Rubber and plastics products, nec.....	40.0	40.4	40.6	40.8	40.8	41.0	41.0	41.3	41.0	41.3	40.9	41.4	41.1
Leather and leather products.....	37.5	37.9	38.2	38.0	38.1	38.5	38.2	39.1	38.6	38.6	38.4	38.9	38.7
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> ...	40.5	40.2	40.4	40.5	40.2	40.3	40.4	40.4	40.6	40.6	40.3	40.6	40.4
<b>WHOLESALE AND RETAIL TRADE</b> .....	35.1	35.2	35.2	35.3	35.1	35.1	35.2	35.2	35.1	35.3	35.1	35.1	35.0
Wholesale trade.....	39.7	39.8	39.9	39.8	39.8	39.9	39.9	39.9	40.0	39.9	39.8	39.7	39.8
Retail trade.....	33.6	33.7	33.7	33.9	33.7	33.6	33.6	33.7	33.7	33.8	33.7	33.7	33.5
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> ...	37.0	37.1	37.0	37.0	37.3	37.1	37.1	37.3	37.1	37.2	37.3	37.1	37.1
<b>SERVICES</b> .....	34.2	34.2	34.1	34.2	34.1	34.2	34.1	34.1	34.0	34.1	34.3	34.0	34.4

<sup>1</sup> The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data will be published in *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9).

Data relate to production workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and

services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

NOTE: These data have been seasonally adjusted to reflect experience through June 1972. For additional details see October 1972 issue of *Employment and Earnings*.

<sup>P</sup>=preliminary.

21. Gross average hourly earnings of production or nonsupervisory workers<sup>1</sup> on private nonagricultural payrolls, by industry division and major manufacturing group

Industry division and group	Annual average		1971				1972								
	1970	1971	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. <sup>p</sup>	Sept. <sup>p</sup>
	<b>TOTAL PRIVATE</b> .....	\$3.22	\$3.43	\$3.50	\$3.50	\$3.49	\$3.52	\$3.55	\$3.56	\$3.58	\$3.61	\$3.62	\$3.63	\$3.64	\$3.65
<b>MINING</b> .....	3.85	4.06	4.16	3.92	3.93	4.28	4.34	4.33	4.32	4.36	4.33	4.34	4.35	4.37	4.44
<b>CONTRACT CONSTRUCTION</b> .....	5.24	5.69	5.83	5.87	5.87	5.90	5.96	5.95	5.94	5.96	6.01	5.94	5.96	6.02	6.14
<b>MANUFACTURING</b> .....	3.36	3.56	3.60	3.59	3.59	3.69	3.70	3.72	3.74	3.76	3.78	3.79	3.78	3.80	3.85
<b>Durable goods</b> .....	3.55	3.79	3.82	3.82	3.82	3.92	3.94	3.96	3.98	4.01	4.02	4.03	4.01	4.04	4.10
Ordnance and accessories.....	3.61	3.84	3.89	3.90	3.87	3.98	3.98	4.03	4.01	4.06	4.07	4.09	4.10	4.11	4.15
Lumber and wood products.....	2.96	3.15	3.22	3.22	3.21	3.19	3.21	3.21	3.23	3.26	3.29	3.33	3.34	3.34	3.36
Furniture and fixtures.....	2.77	2.90	2.95	2.93	2.93	2.98	2.98	2.99	3.02	3.03	3.03	3.05	3.04	3.07	3.12
Stone, clay, and glass products.....	3.40	3.66	3.75	3.73	3.72	3.74	3.76	3.78	3.82	3.85	3.87	3.91	3.93	3.96	3.99
Primary metal industries.....	3.93	4.23	4.34	4.34	4.36	4.49	4.53	4.54	4.56	4.60	4.61	4.62	4.64	4.69	4.74
Fabricated metal products.....	3.53	3.74	3.77	3.76	3.77	3.86	3.88	3.89	3.92	3.94	3.95	3.98	3.97	4.00	4.05
Machinery, except electrical.....	3.77	3.99	4.04	4.04	4.04	4.15	4.16	4.18	4.20	4.22	4.24	4.26	4.24	4.26	4.34
Electrical equipment.....	3.28	3.48	3.51	3.50	3.50	3.58	3.59	3.60	3.62	3.62	3.64	3.65	3.66	3.68	3.72
Transportation equipment.....	4.05	4.41	4.39	4.41	4.41	4.59	4.57	4.62	4.64	4.69	4.71	4.69	4.63	4.69	4.77
Instruments and related products.....	3.35	3.52	3.56	3.54	3.55	3.61	3.66	3.68	3.69	3.70	3.71	3.71	3.70	3.72	3.74
<b>Miscellaneous manufacturing</b> .....	2.83	2.97	2.98	2.97	2.98	3.06	3.08	3.07	3.07	3.09	3.10	3.10	3.09	3.09	3.12
<b>Nondurable goods</b> .....	3.08	3.26	3.31	3.29	3.29	3.37	3.39	3.40	3.41	3.43	3.44	3.45	3.48	3.47	3.51
Food and kindred products.....	3.16	3.38	3.38	3.38	3.41	3.52	3.53	3.54	3.56	3.59	3.61	3.59	3.59	3.56	3.59
Tobacco manufactures.....	2.91	3.15	3.01	3.00	3.07	3.29	3.32	3.38	3.40	3.46	3.49	3.53	3.57	3.36	3.33
Textile mill products.....	2.45	2.57	2.58	2.59	2.59	2.62	2.69	2.71	2.71	2.71	2.71	2.72	2.71	2.73	2.75
Apparel and other textile products.....	2.39	2.49	2.52	2.51	2.51	2.54	2.55	2.57	2.57	2.58	2.57	2.59	2.58	2.62	2.64
Paper and allied products.....	3.44	3.67	3.76	3.73	3.73	3.80	3.81	3.83	3.84	3.86	3.87	3.92	3.97	3.98	3.99
Printing and publishing.....	3.92	4.20	4.29	4.27	4.28	4.36	4.36	4.36	4.40	4.44	4.47	4.47	4.47	4.49	4.57
Chemicals and allied products.....	3.69	3.94	4.03	4.00	4.00	4.06	4.10	4.12	4.11	4.12	4.16	4.20	4.23	4.22	4.26
Petroleum and coal products.....	4.28	4.57	4.66	4.65	4.64	4.64	4.83	4.87	4.88	4.93	4.95	4.94	4.97	4.95	5.02
Rubber and plastics products, nec.....	3.20	3.40	3.46	3.45	3.44	3.51	3.52	3.52	3.52	3.55	3.55	3.56	3.61	3.63	3.65
Leather and leather products.....	2.49	2.60	2.62	2.63	2.62	2.65	2.68	2.70	2.70	2.70	2.71	2.70	2.70	2.71	2.72
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	3.85	4.20	4.33	4.31	4.32	4.40	4.45	4.47	4.50	4.55	4.57	4.58	4.66	4.68	4.71
<b>WHOLESALE AND RETAIL TRADE</b> .....	2.71	2.87	2.90	2.90	2.91	2.91	2.97	2.98	2.98	3.00	2.99	3.00	3.01	3.00	3.04
Wholesale trade.....	3.44	3.67	3.72	3.72	3.74	3.78	3.82	3.82	3.83	3.86	3.84	3.85	3.87	3.86	3.90
Retail trade.....	2.44	2.57	2.60	2.60	2.60	2.61	2.66	2.66	2.67	2.68	2.69	2.69	2.70	2.69	2.72
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	3.08	3.28	3.30	3.31	3.30	3.34	3.40	3.40	3.40	3.45	3.43	3.43	3.45	3.44	3.45
<b>SERVICES</b> .....	2.81	3.01	3.06	3.06	3.06	3.09	3.12	3.13	3.14	3.16	3.15	3.14	3.14	3.15	3.20

<sup>1</sup> The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data will be published in **Employment and Earnings, United States, 1909-72** (BLS Bulletin 1312-9)

Data relate to production workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and

public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

NOTE: For additional detail, see **Employment and Earnings**, table C-2.

<sup>p</sup>=preliminary.

**22. Gross average weekly earnings of production or nonsupervisory workers<sup>1</sup> on private nonagricultural payrolls, by industry division and major manufacturing group**

Industry division and group	Annual average		1971				1972								
	1970	1971	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. <sup>P</sup>	Sept. <sup>P</sup>
<b>TOTAL PRIVATE</b> .....	\$119.46	\$126.91	\$129.50	\$129.50	\$129.13	\$131.30	\$130.29	\$131.01	\$132.10	\$133.57	\$133.58	\$135.76	\$136.86	\$137.24	\$138.75
<b>MINING</b> .....	164.40	171.74	175.14	167.78	166.24	182.76	184.02	181.43	182.30	184.86	183.16	186.62	184.44	186.60	192.70
<b>CONTRACT CONSTRUCTION</b> .....	195.98	212.24	215.13	224.23	222.47	214.76	213.37	214.20	218.59	218.14	221.17	223.34	225.88	229.96	235.16
<b>MANUFACTURING</b> .....	133.73	142.04	143.28	143.60	144.32	150.18	147.26	149.17	150.72	152.28	153.09	155.01	152.71	154.28	157.47
Durable goods.....	143.07	153.12	152.80	154.71	155.47	162.29	158.78	161.17	163.18	165.21	165.62	167.65	164.01	166.04	170.15
Ordnance and accessories.....	146.21	160.13	162.99	162.63	162.54	168.75	165.97	170.07	169.22	170.93	170.94	172.60	171.38	175.50	175.96
Lumber and wood products.....	117.51	126.95	130.41	132.02	130.33	130.15	128.40	129.36	131.78	133.99	135.88	139.19	136.94	138.28	138.43
Furniture and fixtures.....	108.58	115.42	118.00	118.37	118.37	121.88	118.31	119.00	121.10	121.50	121.81	125.05	121.60	125.87	128.23
Stone, clay, and glass products.....	140.08	152.26	157.13	157.41	155.87	155.58	153.78	155.74	159.68	161.32	162.54	165.78	165.45	167.11	167.98
Primary metal industries.....	159.17	170.89	171.43	172.30	173.96	184.09	183.92	186.14	188.33	191.36	191.32	193.12	192.10	195.10	198.13
Fabricated metal products.....	143.67	151.10	150.80	151.90	153.06	159.42	155.98	157.55	159.54	161.54	162.74	165.57	162.77	165.66	168.08
Machinery, except electrical.....	154.95	161.99	164.02	164.83	166.04	173.89	170.56	173.05	175.14	176.40	177.23	179.77	176.38	178.49	184.45
Electrical equipment.....	130.54	138.85	140.05	140.35	141.40	146.06	143.24	144.36	145.52	146.25	146.69	148.56	146.03	148.67	151.78
Transportation equipment.....	163.22	179.49	171.65	180.37	181.25	195.08	185.09	189.88	193.02	196.51	197.82	197.45	190.76	189.48	198.91
Instruments and related products.....	134.34	140.10	142.40	141.95	143.78	147.29	146.77	148.30	148.71	149.85	150.26	151.00	148.37	150.29	152.59
Miscellaneous manufacturing.....	109.52	115.53	116.22	117.02	117.71	120.87	119.20	120.34	120.65	122.06	121.83	122.76	119.89	122.36	123.55
Nondurable goods.....	120.43	128.12	130.75	129.63	130.28	134.13	132.55	133.28	134.35	135.49	135.88	137.66	138.16	138.80	140.40
Food and kindred products.....	127.98	136.21	137.90	135.54	136.74	142.91	140.14	139.83	142.40	143.60	145.12	145.75	146.47	145.60	146.83
Tobacco manufactures.....	110.00	116.55	114.08	108.30	109.29	118.77	113.21	111.88	113.22	114.53	116.92	122.84	121.74	120.29	118.22
Textile mill products.....	97.76	104.34	104.75	106.19	107.23	108.73	109.75	111.11	111.92	111.92	111.38	113.42	110.84	113.02	113.85
Apparel and other textile products.....	84.37	88.64	89.71	90.11	91.36	91.19	90.27	92.52	92.52	92.88	91.49	93.24	92.88	95.37	95.04
Paper and allied products.....	144.14	154.51	158.67	157.78	158.15	162.64	159.64	161.63	162.82	164.44	164.09	168.56	169.92	171.54	172.77
Printing and publishing.....	147.78	157.50	161.73	160.13	160.93	165.68	161.32	162.19	165.44	167.83	168.07	169.41	170.62	171.52	175.95
Chemicals and allied products.....	153.50	163.90	169.66	166.00	166.40	170.11	170.56	171.39	171.80	172.63	173.06	176.40	175.97	174.71	178.49
Petroleum and coal products.....	182.76	193.77	199.91	198.09	195.34	196.27	201.41	202.11	203.01	209.53	209.39	209.46	210.23	208.40	214.35
Rubber and plastics products, nec.....	128.96	137.02	139.78	140.07	140.01	144.61	142.91	143.26	143.26	145.55	145.55	147.38	146.93	150.28	151.48
Leather and leather products.....	92.63	98.02	96.68	99.15	100.61	102.82	102.38	103.95	102.33	102.60	104.88	105.84	105.03	150.15	103.63
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> .....	155.93	168.84	176.66	174.12	175.39	178.64	177.11	179.69	180.90	181.55	184.17	186.86	189.66	190.48	191.23
<b>WHOLESALE AND RETAIL TRADE</b> .....	95.66	100.74	102.08	101.50	101.56	103.31	103.06	103.11	103.70	104.40	104.05	106.50	108.36	108.00	106.70
Wholesale trade.....	137.60	146.07	147.68	148.06	148.85	151.96	151.27	151.65	152.43	153.24	152.83	154.00	155.19	154.01	155.22
Retail trade.....	82.47	86.61	87.62	87.10	86.84	89.00	88.31	87.78	88.64	89.24	89.58	91.73	93.69	93.61	91.39
<b>FINANCE, INSURANCE, AND REAL ESTATE</b> .....	113.34	121.36	121.77	122.80	122.10	123.58	126.82	126.14	126.14	128.69	126.91	127.60	129.03	127.97	127.65
<b>SERVICES</b> .....	96.66	102.94	104.35	104.35	104.04	105.68	105.77	106.42	106.76	107.44	106.47	107.39	109.27	108.68	109.76

<sup>1</sup> The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data will be published in *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9).

Data relate to production workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and

public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

NOTE: For additional detail, see *Employment and Earnings*, table C-2.

<sup>P</sup> = preliminary.



**23. Gross and spendable average weekly earnings of production or nonsupervisory workers<sup>1</sup> on private nonagricultural payrolls, in current and 1967 dollars, 1960 to date**

Year and month	Private nonagricultural workers						Manufacturing workers					
	Gross average weekly earnings		Spendable average weekly earnings				Gross average weekly earnings		Spendable average weekly earnings			
			Worker with no dependents		Worker with 3 dependents				Worker with no dependents		Worker with 3 dependents	
	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars
1960-----	\$80.67	\$90.95	\$65.59	\$73.95	\$72.96	\$82.25	\$89.72	\$101.15	\$72.57	\$81.82	\$80.11	\$90.32
1961-----	82.60	92.19	67.08	74.87	74.48	83.13	92.34	103.06	74.60	83.26	82.18	91.72
1962-----	85.91	94.82	69.56	76.78	76.99	84.98	96.56	106.58	77.86	85.94	85.53	94.40
1963-----	88.46	96.47	71.05	77.48	78.56	85.67	99.63	108.65	79.82	87.04	87.58	95.51
1964-----	91.33	98.31	75.04	80.78	82.57	88.88	102.97	110.84	84.40	90.85	92.18	99.22
1965-----	95.06	100.59	78.99	83.59	86.30	91.32	107.53	113.79	89.08	94.26	96.78	102.41
1966-----	98.82	101.67	81.29	83.63	88.66	91.21	112.34	115.58	91.57	94.21	99.45	102.31
1967-----	101.84	101.84	83.38	83.38	90.86	90.86	114.90	114.90	93.28	93.28	101.26	101.26
1968-----	107.73	103.39	86.71	83.21	95.28	91.44	122.51	117.57	97.70	93.76	106.75	102.45
1969-----	114.61	104.38	90.96	82.84	99.99	91.07	129.51	117.95	101.90	92.81	111.44	101.49
1970-----	119.46	102.72	95.94	82.49	104.61	89.95	133.73	114.99	106.62	91.68	115.90	99.66
1971-----	126.91	104.62	103.51	85.33	112.12	92.43	142.04	117.10	114.68	94.54	123.93	102.17
1971:												
September-----	129.50	105.97	105.42	86.27	114.16	93.42	143.28	117.25	115.59	94.59	124.89	102.20
October-----	129.50	105.80	105.42	86.13	114.16	93.27	143.60	117.32	115.83	94.63	125.14	102.24
November-----	129.13	105.33	105.15	85.77	113.86	92.87	144.32	117.72	116.36	94.91	125.70	102.53
December-----	131.30	106.66	106.75	86.72	115.57	93.88	150.18	122.00	120.64	98.00	130.25	105.81
1972:												
January-----	130.29	105.75	107.31	87.10	116.47	94.54	147.26	119.53	119.84	97.27	129.78	105.34
February-----	131.01	105.82	107.85	87.12	117.04	94.54	149.17	120.49	121.25	97.94	131.26	106.03
March-----	132.10	106.53	108.65	87.62	117.89	95.07	150.72	121.55	122.39	98.70	132.47	106.83
April-----	133.57	107.46	109.73	88.28	119.05	95.78	152.28	122.51	123.54	99.39	133.68	107.55
May-----	133.58	107.12	109.74	88.00	119.06	95.48	153.09	122.77	124.14	99.55	134.31	107.71
June-----	135.76	108.61	111.35	89.08	120.78	96.62	155.01	124.01	125.55	100.44	135.81	108.65
July-----	136.86	109.05	112.16	89.37	121.65	96.93	152.71	121.68	123.86	98.69	134.02	106.79
August <sup>p</sup> -----	137.24	109.18	112.44	89.45	121.95	97.02	154.28	122.74	125.02	99.46	135.24	107.59
September <sup>p</sup> -----	138.75	109.94	113.56	89.98	123.14	97.58	157.47	124.78	127.29	100.84	137.72	109.13

<sup>1</sup> The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data will be published in *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9).

Data relate to production workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

Spendable average weekly earnings are based on gross average weekly earnings as published in table 22 less the estimated amount of the worker's Federal social security and income tax liability. Since the amount of

tax liability depends on the number of dependents supported by the worker as well as on the level of his gross income, spendable earnings have been computed for 2 types of income receivers: (1) a worker with no dependents and (2) a married worker with 3 dependents.

The earnings expressed in 1967 dollars have been adjusted for changes in purchasing power as measured by the Bureau's Consumer Price Index.

These series are described in "The Spendable Earnings Series: A Technical Note on its Calculation," in *Employment and Earnings and Monthly Report on the Labor Force*, February 1969, pp. 6-13.

NOTE: For additional detail, see *Employment and Earnings*, table C-5.

<sup>p</sup>=preliminary.

24. Consumer and Wholesale Price Indexes, annual averages and changes, 1949-71<sup>1</sup>

[1967 = 100]

Year	Consumer prices						Wholesale prices					
	All items		Commodities		Services		All commodities		Farm products, processed foods and feeds		Industrial commodities	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change
1949	71.4	-1.0	78.3	-2.6	56.9	4.8	78.7	-5.0	89.6	-11.7	75.3	-2.1
1950	72.1	1.0	78.8	.6	58.7	3.2	81.8	3.9	93.9	4.8	78.0	3.6
1951	77.8	7.9	85.9	9.0	61.8	5.3	91.9	11.4	106.9	13.8	86.1	10.4
1952	79.5	2.2	87.0	1.3	64.5	4.4	88.6	-2.7	102.7	-3.9	84.1	-2.3
1953	80.1	.8	86.7	-.3	67.3	4.3	87.4	-1.4	96.0	-6.5	84.8	.8
1954	80.5	.5	85.9	-.9	69.5	3.3	87.6	.2	95.7	-3	85.0	.2
1955	80.2	-.4	85.1	-.9	70.9	2.0	87.8	.2	91.2	-4.7	86.9	2.2
1956	81.4	1.5	85.9	.9	72.7	2.5	90.7	3.3	90.6	-.7	90.8	4.5
1957	84.3	3.6	88.6	3.1	75.6	4.0	93.3	2.9	93.7	3.4	93.3	2.8
1958	86.6	2.7	90.6	2.3	78.5	3.8	94.6	1.4	98.1	4.7	93.6	.3
1959	87.3	.8	90.7	.1	80.8	2.9	94.8	.2	93.5	-4.7	95.3	1.8
1960	88.7	1.6	91.5	.9	83.5	3.3	94.9	.1	93.7	.2	95.3	.0
1961	89.6	1.0	92.0	.5	85.2	2.0	94.5	-.4	93.7	.0	94.8	-.5
1962	90.6	1.1	92.8	.9	86.8	1.9	94.8	.3	94.7	1.1	94.8	.0
1963	91.7	1.2	93.6	.9	88.5	2.0	94.5	-.3	93.8	-1.0	94.7	-.1
1964	92.9	1.3	94.6	1.1	90.2	1.9	94.7	.2	93.2	-.6	95.2	.5
1965	94.5	1.7	95.7	1.2	92.2	2.2	96.6	2.0	97.1	4.2	96.4	1.3
1966	97.2	2.9	98.2	2.6	95.8	3.9	99.8	3.3	103.5	6.6	98.5	2.2
1967	100.0	2.9	100.0	1.8	100.0	4.4	100.0	.2	100.0	-.4	100.0	1.5
1968	104.2	4.2	103.7	3.7	105.2	5.2	102.5	2.5	102.4	2.4	102.5	2.5
1969	109.8	5.4	108.4	4.5	112.5	6.9	106.5	3.9	108.0	5.5	106.0	3.4
1970	116.3	5.9	113.5	4.7	121.6	8.1	110.4	3.7	111.6	3.3	110.0	3.8
1971	121.3	4.3	117.4	3.4	128.4	5.6	113.9	3.2	113.8	2.0	114.0	3.6

<sup>1</sup> Historical price changes are shown in greater detail and for earlier years in the Bureau's Handbook of Labor Statistics, 1971 (BLS Bulletin 1705).

## 25. Consumer Price Index—U.S. average—general summary and groups, subgroups, and selected items

[1967 = 100 unless otherwise specified]

General summary	Annual average 1971	1971				1972								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
All items	121.3	122.2	122.4	122.6	123.1	123.2	123.8	124.0	124.3	124.7	125.0	125.5	125.7	126.2
All items (1957-59=100)	141.0	142.1	142.4	142.6	143.1	143.3	143.9	144.3	144.6	145.0	145.4	145.9	146.2	146.8
Food	118.4	119.1	118.9	119.0	120.3	120.3	122.2	122.4	122.4	122.3	123.0	124.2	124.6	124.8
Food at home	116.4	116.9	116.6	116.7	118.2	118.2	120.5	120.6	120.4	120.2	120.9	122.4	122.7	122.8
Food away from home	126.1	127.6	128.0	128.2	128.3	128.6	128.9	129.4	130.0	130.4	130.9	131.3	131.9	132.5
Housing	124.3	125.5	125.9	126.4	126.8	127.3	127.6	127.9	128.2	128.5	129.0	129.5	129.9	130.1
Rent	115.2	116.1	116.4	116.6	116.9	117.1	117.5	117.7	118.1	118.3	118.8	119.0	119.4	119.9
Homeownership	133.7	135.1	135.7	136.7	137.0	137.8	138.0	138.2	138.5	138.9	139.6	140.7	141.3	141.5
Apparel and upkeep	119.8	120.6	121.6	121.9	121.8	120.2	120.7	121.3	121.8	122.5	122.1	121.1	120.8	123.1
Transportation	118.6	118.6	119.3	118.8	118.6	119.0	118.3	118.4	118.6	119.5	119.8	120.3	120.5	121.0
Health and recreation	122.2	123.6	123.5	123.7	123.9	124.3	124.7	125.0	125.5	125.8	126.1	126.3	126.5	126.8
Medical care	128.4	130.4	129.6	129.7	130.1	130.5	131.0	131.4	131.7	132.0	132.4	132.7	132.9	133.1
Special groups														
All items less shelter	119.3	120.2	120.3	120.4	120.9	120.9	121.5	121.8	122.0	122.4	122.7	123.1	123.2	123.8
All items less food	122.1	123.1	123.5	123.7	123.9	124.0	124.2	124.5	124.9	125.4	125.7	125.9	126.1	126.7
All items less medical care	120.9	121.7	122.0	122.2	122.7	122.8	123.4	123.6	123.9	124.3	124.6	125.1	125.3	125.9
Commodities	117.4	118.1	118.4	118.5	118.9	118.7	119.4	119.7	119.9	120.3	120.7	121.2	121.4	121.9
Nondurables	117.7	118.7	118.8	118.9	119.5	119.2	120.3	120.6	120.7	121.0	121.2	121.7	122.0	122.8
Durables	116.5	116.4	117.1	117.4	117.2	117.3	117.1	117.3	117.7	118.4	119.2	119.6	119.7	119.8
Services	130.8	129.8	129.9	130.3	130.7	131.5	131.8	132.1	132.4	132.7	133.1	133.5	133.8	134.1
Commodities less food	116.8	117.4	118.0	118.1	118.1	117.7	117.8	118.2	118.5	119.2	119.4	119.4	119.5	120.3
Nondurables less food	117.0	118.2	118.7	118.7	118.8	118.1	118.4	118.9	119.1	119.7	119.5	119.3	119.4	120.8
Apparel commodities	120.1	120.9	122.0	122.4	122.2	120.3	120.9	121.6	122.1	122.9	122.4	121.3	120.9	123.5
Apparel commodities less footwear	119.9	120.7	121.9	122.3	122.1	119.9	120.6	121.3	121.8	122.6	122.0	120.7	120.0	123.0
Nondurables less food and apparel	115.2	116.6	116.8	116.5	116.8	116.8	117.0	117.3	117.4	117.9	117.9	118.2	118.6	119.3
Household durables	112.9	113.5	113.6	113.6	113.7	113.7	113.6	114.1	114.4	114.8	115.1	115.3	115.4	115.6
Housefurnishings	114.3	114.9	115.1	115.1	115.3	114.9	115.0	115.6	115.9	116.2	116.4	116.4	116.3	116.7
Services less rent	130.9	132.3	132.4	132.8	133.3	134.1	134.4	134.6	135.0	135.3	135.7	136.1	136.4	136.7
Household services less rent	132.6	134.1	134.6	135.3	136.0	136.9	137.3	137.6	138.0	138.4	138.8	139.5	140.0	140.3
Transportation services	133.1	133.8	133.9	134.0	134.2	135.6	135.6	135.5	135.6	135.8	136.0	136.3	136.3	136.3
Medical care services	133.3	135.6	134.6	134.8	135.3	135.8	136.4	136.9	137.3	137.6	138.0	138.4	138.6	138.9
Other services	122.5	123.7	123.8	124.0	124.1	124.3	124.5	124.7	125.1	125.3	125.6	125.8	125.9	126.7

25. Continued—Consumer Price Index—U.S. average

Group, subgroup, and selected items	Annual average 1971	1971				1972								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>FOOD</b> .....	118.4	119.1	118.9	119.0	120.3	120.3	122.2	122.4	122.4	122.3	123.0	124.2	124.6	124.8
Food away from home.....	126.1	127.6	128.0	128.2	128.3	128.6	128.9	129.4	130.0	130.4	130.9	131.3	131.9	132.5
Restaurant meals.....	125.8	127.3	127.7	127.9	128.0	128.3	128.6	129.3	129.9	130.4	130.9	131.3	132.0	132.6
Snacks.....	127.5	128.6	129.5	129.4	129.6	130.0	130.0	130.2	130.6	130.7	131.0	131.1	131.6	131.8
Food at home.....	116.4	116.9	116.6	116.7	118.2	118.2	120.5	120.6	120.4	120.2	120.9	122.4	122.7	122.8
Cereals and bakery products.....	113.9	114.6	114.3	114.1	113.8	113.7	114.3	114.8	115.0	114.7	114.5	114.4	114.4	114.6
Flour.....	101.0	101.5	101.1	101.1	100.5	100.8	100.9	100.8	100.4	100.2	99.4	99.2	99.2	99.4
Cracker meal.....	129.8	131.5	131.6	131.7	131.9	132.2	133.9	134.9	135.4	135.5	135.9	135.9	135.9	136.2
Corn flakes.....	107.3	104.2	103.6	103.5	103.0	102.5	102.2	102.0	101.4	101.0	100.3	100.0	99.9	99.8
Rice.....	109.4	110.1	109.9	109.8	110.0	110.3	110.3	110.0	110.0	109.7	109.3	109.6	109.2	109.3
Bread, white.....	112.3	113.4	112.1	112.0	111.4	111.2	112.7	113.2	113.3	112.7	113.0	112.7	113.9	113.0
Bread, whole wheat.....	117.5	119.1	119.2	119.3	118.5	118.9	119.3	119.2	120.5	120.3	119.3	119.7	119.9	120.6
Cookies.....	108.7	109.9	109.9	108.7	109.3	109.2	109.7	110.7	111.2	111.4	109.5	109.9	109.1	110.6
Layer cake.....	120.1	121.5	120.7	120.5	120.8	119.6	119.2	120.4	120.1	119.8	119.9	120.2	119.9	120.0
Cinnamon rolls.....	118.2	118.6	119.6	119.2	118.5	119.0	119.2	120.0	120.8	120.8	121.3	120.7	119.0	120.8
Meats, poultry, and fish.....	116.9	119.1	118.4	118.1	118.9	120.7	126.3	126.8	125.9	124.8	126.4	129.9	130.8	130.9
Meats.....	116.7	118.8	118.3	118.2	119.1	121.1	127.5	127.9	126.9	125.6	127.5	131.3	132.5	132.3
Beef and veal.....	124.9	127.7	127.1	126.6	128.0	130.8	136.1	137.1	135.9	134.1	135.8	139.4	140.2	138.3
Steak, round.....	123.5	126.1	125.5	125.2	126.3	130.8	137.2	137.5	134.0	130.6	132.6	137.3	137.0	133.7
Steak, sirloin.....	122.8	127.8	125.3	123.5	125.5	128.5	132.1	132.3	130.9	127.5	131.9	136.9	136.6	135.2
Steak, porterhouse.....	124.1	129.5	127.3	125.7	127.5	131.1	134.4	134.8	132.2	130.4	134.0	139.2	139.3	137.6
Rump roast.....	122.4	124.0	125.2	124.0	124.4	128.1	134.6	135.4	132.7	129.2	132.1	135.6	136.5	133.6
Rib roast.....	126.2	130.8	129.3	128.8	131.8	135.2	139.2	140.1	138.2	136.6	136.7	141.0	141.0	138.9
Chuck roast.....	124.4	125.9	125.6	125.9	128.9	131.0	139.5	141.2	137.6	133.9	132.4	138.4	140.2	136.5
Hamburger.....	126.2	128.3	127.6	127.6	129.1	130.8	135.9	137.3	136.6	135.7	136.6	138.7	140.9	139.2
Beef liver.....	113.7	114.0	114.8	114.7	114.6	114.8	118.3	121.3	128.5	123.2	133.0	133.0	133.3	134.3
Veal cutlets.....	141.7	146.0	146.7	147.2	148.0	150.1	156.2	157.4	159.1	159.6	162.0	164.5	165.6	165.5
Pork.....	105.0	106.4	105.8	106.3	107.2	109.2	119.4	118.2	116.7	115.4	118.0	124.0	125.4	127.1
Chops.....	107.4	109.9	109.8	110.5	111.2	111.4	124.2	119.0	115.9	114.7	119.8	130.7	128.0	131.6
Loin roast.....	106.6	110.0	108.7	109.2	109.7	111.1	121.4	119.5	115.8	114.7	119.0	130.1	128.7	130.2
Pork sausage.....	111.4	113.0	112.8	112.0	111.4	112.9	120.3	123.5	124.6	124.9	126.1	129.1	132.6	135.2
Ham, whole.....	103.9	103.8	102.0	102.4	105.9	110.0	112.6	114.3	112.7	110.5	112.0	113.9	114.5	115.5
Picnics.....	108.0	106.7	107.9	108.7	111.3	113.3	122.7	123.8	122.8	121.0	119.9	122.7	128.3	128.2
Bacon.....	96.6	97.7	96.6	97.4	97.3	101.0	114.0	112.6	112.3	110.8	113.1	116.3	120.7	121.2
Other meats.....	115.6	117.0	116.5	116.5	116.6	116.8	120.3	121.6	122.0	121.7	122.8	124.0	125.9	126.7
Lamb chops.....	121.5	124.7	123.4	124.5	124.4	124.8	127.1	127.3	126.7	126.6	129.5	131.6	131.5	130.8
Frankfurters.....	115.1	116.0	116.0	115.9	115.2	115.4	121.3	123.3	123.1	122.1	122.4	124.4	127.6	128.6
Ham, canned.....	107.2	108.0	107.8	108.3	107.8	109.0	111.4	112.7	112.6	113.6	112.8	113.0	114.7	116.2
Bologna sausage.....	118.8	120.4	120.1	119.9	120.1	120.0	124.5	126.3	127.8	126.8	128.1	128.9	131.9	133.3
Salami sausage.....	116.3	117.7	116.8	116.4	117.4	116.9	119.8	122.5	123.8	124.2	125.4	126.8	128.3	129.0
Liverwurst.....	114.3	114.8	114.5	113.8	114.1	114.2	117.4	117.5	118.3	117.1	118.4	119.3	121.3	122.2
Poultry.....	109.0	112.2	110.0	108.1	107.5	108.4	110.7	111.6	109.4	108.4	108.9	111.8	110.6	112.6
Frying chicken.....	108.5	111.9	109.0	106.8	106.2	107.5	110.1	108.3	107.2	107.6	111.5	109.7	112.7	112.7
Chicken breasts.....	109.5	112.7	111.3	109.7	109.8	110.4	112.0	112.5	111.6	111.9	112.4	113.7	114.3	114.3
Turkey.....	111.1	113.3	113.7	112.9	111.4	111.1	112.2	113.7	112.9	110.9	114.4	111.6	111.4	110.5
Fish.....	130.2	132.5	132.8	132.9	133.2	134.7	137.0	138.3	139.8	140.2	141.3	142.0	142.8	144.4
Shrimp, frozen.....	117.6	119.7	120.1	120.6	120.4	123.1	128.3	131.9	133.9	133.7	136.3	136.5	136.8	137.6
Fish, fresh or frozen.....	140.2	142.5	143.0	142.7	142.7	144.7	145.0	144.9	146.2	147.7	147.1	151.5	154.2	156.1
Tuna fish, canned.....	128.4	129.2	128.9	128.2	128.7	128.6	130.4	132.0	133.3	133.7	134.0	133.3	132.3	133.2
Sardines, canned.....	134.7	138.5	139.1	139.7	140.9	142.2	144.1	144.1	145.4	145.7	145.6	146.6	147.8	150.3
Dairy products.....	115.3	116.1	116.0	115.9	116.1	116.4	116.9	117.3	117.4	117.3	117.0	116.8	116.6	116.9
Milk, fresh, grocery.....	114.6	115.4	115.3	115.2	115.2	115.7	116.4	116.9	116.9	116.8	116.3	116.0	115.6	115.7
Milk, fresh, delivered.....	117.6	118.1	118.1	118.1	118.5	118.8	119.4	120.0	120.0	120.3	120.3	120.3	120.4	120.6
Milk, fresh, skim.....	119.7	120.8	120.3	120.1	120.1	120.5	121.3	121.8	121.9	122.0	121.9	121.9	121.7	122.1
Milk, evaporated.....	118.6	121.2	121.4	120.2	120.6	120.9	120.9	120.8	120.8	120.5	118.8	118.1	117.9	118.6
Ice cream.....	106.2	106.9	106.1	106.4	107.2	106.7	106.1	107.1	106.8	106.5	106.7	106.5	106.1	106.8
Cheese, American process.....	121.0	121.8	122.1	122.3	122.1	122.3	123.4	123.4	124.2	124.1	125.4	124.5	124.7	125.5
Butter.....	105.8	105.8	105.8	105.7	105.4	105.8	105.8	105.8	105.7	105.3	104.8	104.7	104.6	104.7
Fruits and vegetables.....	119.1	116.6	115.6	117.8	124.4	120.9	123.9	121.4	122.1	123.9	127.2	128.4	128.1	125.7
Fresh fruits and vegetables.....	121.0	115.3	113.6	117.3	128.2	122.1	126.8	122.3	123.2	126.7	132.2	134.1	133.4	128.9
Fresh fruits.....	117.5	124.0	115.9	113.0	112.2	112.6	115.2	115.5	120.1	121.0	130.8	134.2	134.8	131.9
Apples.....	114.2	125.3	101.8	98.5	102.1	106.8	109.9	112.2	114.1	121.8	131.4	140.3	144.5	135.1
Bananas.....	95.5	98.5	101.8	94.1	92.2	92.6	100.4	98.3	109.4	104.8	108.4	105.0	100.2	102.4
Oranges.....	125.5	138.3	137.1	133.1	128.4	123.7	122.0	121.3	117.3	118.0	123.3	126.9	134.8	133.9
Orange juice, fresh.....	124.3	129.4	129.1	129.9	130.5	130.8	130.6	130.7	131.3	130.6	130.6	130.8	131.9	130.1
Grapefruit.....	135.7	171.6	153.5	126.8	120.6	121.2	121.1	124.6	122.4	131.9	145.1	152.4	180.3	182.9
Grapes <sup>1</sup> .....	143.8	120.3	119.6	138.2	-----	-----	-----	-----	-----	119.2	103.3	115.0	180.9	147.4
Strawberries <sup>1</sup> .....	114.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	144.8	-----	-----	-----
Watermelon <sup>1</sup> .....	141.7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	121.0	124.2	-----
Fresh vegetables.....	123.9	108.6	111.8	120.8	141.3	129.8	136.3	127.9	125.9	131.4	133.4	134.2	132.	



## 25. Continued—Consumer Price Index—U.S. average

Group, subgroup, and selected items	Annual average 1971	1971				1972								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>FOOD—Continued</b>														
Spinach.....	129.2	128.1	130.8	131.0	140.0	143.8	143.8	135.8	135.5	136.5	135.2	137.9	142.8	142.6
Tomatoes.....	131.8	95.4	106.0	121.7	159.1	139.1	140.2	112.9	130.7	135.2	155.1	130.4	121.0	110.2
Processed fruits and vegetables.....	116.2	118.6	118.4	118.5	118.8	119.2	119.5	119.9	120.3	119.8	119.9	120.0	120.2	121.0
Fruit cocktail, canned.....	117.9	120.2	120.0	119.9	120.2	121.4	120.9	121.4	122.2	121.6	121.1	121.3	121.0	121.3
Pears, canned.....	116.7	117.7	117.5	116.9	116.5	116.9	117.3	117.2	117.3	117.3	117.7	117.7	118.1	119.3
Pineapple-grapefruit drink.....	113.6	114.0	114.5	115.1	114.4	114.7	114.4	115.2	115.6	114.8	114.3	115.6	115.1	115.2
Orange juice concentrate, frozen.....	127.2	136.3	136.0	135.3	135.6	135.8	135.9	136.6	136.6	136.2	135.3	136.0	135.6	136.0
Lemonade concentrate, frozen.....	113.9	115.5	115.9	115.3	116.9	117.4	117.5	117.8	118.0	117.3	117.3	115.5	115.2	116.6
Beets, canned.....	115.1	117.5	117.4	116.8	117.0	118.3	119.0	119.8	120.2	120.4	121.4	121.4	123.0	123.4
Peas, green, canned.....	106.6	108.0	107.0	108.0	108.6	108.6	108.5	107.9	108.7	107.4	107.2	107.6	107.0	108.1
Tomatoes, canned.....	115.6	116.6	115.7	115.7	115.1	114.9	115.3	115.5	115.4	115.6	115.5	115.8	117.3	118.0
Dried beans.....	122.8	129.5	130.6	131.9	133.2	133.9	135.4	136.5	137.1	137.0	136.9	137.2	138.1	139.8
Broccoli, frozen.....	117.7	118.4	117.9	117.8	117.9	117.8	118.5	119.0	119.2	118.1	118.9	118.7	118.1	118.5
Other food at home.....	115.9	115.5	116.2	115.6	116.6	116.2	115.6	116.7	116.2	116.0	114.5	115.3	116.0	117.6
Eggs.....	108.4	102.4	106.7	103.2	110.5	108.0	101.4	107.5	102.9	101.7	94.2	101.9	105.0	114.0
Fats and oils:														
Margarine.....	116.0	117.6	118.1	117.8	117.7	117.3	118.1	118.6	118.4	117.8	118.2	117.4	117.4	117.7
Salad dressing, Italian.....	109.3	110.2	109.9	110.6	110.9	110.2	110.4	110.8	111.4	110.6	109.1	109.5	109.2	109.7
Salad or cooking oil.....	120.1	123.3	123.4	123.5	123.5	123.9	124.0	123.7	123.0	122.3	121.5	120.1	120.0	119.7
Sugar and sweets.....	119.3	120.2	120.1	120.0	120.1	120.1	120.5	121.2	121.4	121.4	120.6	120.4	120.5	120.7
Sugar.....	112.5	113.5	113.4	113.5	113.5	113.6	114.3	114.9	115.3	115.4	114.8	114.5	114.4	114.8
Grape jelly.....	119.3	121.6	121.2	121.4	121.6	121.5	122.7	124.5	125.1	125.5	124.9	125.0	125.1	125.8
Chocolate bar.....	130.9	131.4	131.5	131.3	131.3	130.8	130.7	130.6	130.8	130.8	130.6	130.5	130.6	130.4
Syrup, chocolate flavored.....	113.2	113.2	113.0	112.5	112.7	113.3	113.4	113.5	113.4	112.6	111.1	110.4	110.7	110.5
Nonalcoholic beverages.....	121.6	121.0	121.2	120.9	120.5	120.4	120.7	120.9	120.9	121.0	120.5	120.3	120.6	121.7
Coffee, can and bag.....	121.8	119.1	119.2	119.0	118.5	118.2	118.3	118.3	118.2	118.1	117.2	117.2	118.4	120.6
Coffee, instant.....	124.7	125.4	125.3	125.1	125.1	124.7	125.5	125.1	125.0	125.0	124.3	123.4	122.3	123.0
Tea.....	107.6	108.0	107.8	107.8	106.0	106.1	107.1	108.1	108.2	108.9	109.0	108.8	109.4	109.3
Cola drink.....	125.9	127.0	127.3	127.1	127.1	127.7	127.8	128.1	128.2	128.2	127.8	128.2	128.0	128.0
Carbonated fruit drink.....	126.4	127.6	127.8	127.7	127.9	127.9	127.6	128.2	128.2	128.3	128.3	127.8	127.6	127.8
Prepared and partially prepared foods.....	112.7	113.4	113.4	113.2	113.3	113.5	114.1	114.4	114.5	114.7	114.4	114.3	114.8	115.0
Bean soup, canned.....	114.1	114.7	114.7	114.7	114.7	114.5	115.7	116.2	116.3	116.6	116.3	116.2	115.9	116.1
Chicken soup, canned.....	106.4	106.6	106.5	106.0	105.7	106.4	106.9	106.4	106.6	105.8	104.2	104.4	104.5	104.7
Spaghetti, canned.....	117.3	117.7	117.7	117.7	117.5	118.1	117.8	116.8	117.4	118.3	118.9	119.5	121.4	120.8
Mashed potatoes, instant.....	110.8	110.4	110.4	110.7	111.0	111.5	112.2	112.3	111.3	112.2	112.3	111.5	111.9	112.3
Potatoes, French fried, frozen.....	110.1	110.3	109.9	108.5	109.3	108.5	110.0	110.4	111.0	110.8	111.0	110.8	111.3	111.9
Baby food, canned.....	110.9	111.8	111.6	111.3	111.1	111.1	111.2	111.4	111.4	111.3	110.4	110.1	110.1	110.2
Sweet pickle relish.....	117.4	119.5	120.0	120.6	121.2	122.0	122.5	124.4	125.2	125.2	124.3	124.1	125.5	126.4
Pretzels.....	113.1	114.5	114.4	114.0	114.5	114.1	114.5	115.2	115.0	115.5	116.1	115.1	115.3	115.3
<b>HOUSING.....</b>														
Shelter.....	124.3	125.5	125.9	126.4	126.8	127.3	127.6	127.9	128.2	128.5	129.0	129.5	129.9	130.1
Rent.....	128.8	130.1	130.6	131.3	131.6	132.4	132.6	132.8	133.1	133.5	134.1	135.0	135.5	135.7
Homeownership.....	115.2	116.1	116.4	116.6	116.9	117.5	117.8	118.0	118.4	118.6	119.0	119.2	119.6	119.9
Mortgage interest rates.....	133.7	135.1	135.7	136.7	137.0	137.8	138.0	138.2	138.5	138.9	139.6	140.7	141.4	141.5
Property taxes.....	120.4	118.7	119.1	118.9	118.6	118.4	118.2	117.7	117.1	117.0	117.1	117.2	117.3	117.2
Property insurance rates.....	131.1	133.1	134.6	136.3	137.6	141.1	141.8	143.6	144.7	145.0	144.8	144.9	145.7	147.2
Maintenance and repairs.....	119.9	121.5	122.4	122.4	122.4	122.4	122.4	122.4	122.6	122.7	122.6	123.4	123.4	123.6
Commodities.....	133.7	136.8	137.0	137.1	137.4	137.8	138.0	138.6	139.2	139.9	140.6	141.1	141.9	142.2
Exterior house paint.....	119.0	120.9	120.9	120.8	120.8	121.3	121.3	122.0	122.4	123.3	123.9	124.2	125.2	125.9
Interior house paint.....	115.9	116.5	116.5	116.5	116.8	117.7	117.9	118.2	118.5	117.5	117.4	117.2	117.6	117.9
Services.....	114.5	115.5	115.6	115.3	115.4	115.8	115.6	116.3	116.4	117.2	117.5	117.4	117.5	117.2
Repainting living and dining rooms.....	140.0	143.7	144.0	144.1	144.6	144.9	145.2	145.9	146.5	147.1	147.8	148.5	149.1	149.2
Reshingling roofs.....	148.3	153.0	153.1	153.6	154.0	154.4	155.1	155.6	156.5	157.7	159.5	160.5	161.3	162.5
Residing houses.....	144.8	150.1	150.7	150.6	151.6	152.0	152.3	153.0	154.3	155.0	156.2	156.2	157.1	156.7
Replacing sinks.....	130.6	132.8	133.1	133.2	133.3	133.4	133.7	133.9	134.5	135.0	135.2	135.9	136.4	137.1
Repairing furnaces.....	140.6	143.4	143.4	143.6	143.7	143.9	144.2	145.1	145.5	145.7	145.8	146.1	146.7	147.7
Fuel and utilities.....	144.3	148.9	149.2	149.1	150.2	150.9	151.2	152.2	152.4	152.8	153.6	154.6	155.0	152.9
Fuel oil and coal.....	*115.0	*116.0	*116.0	*116.5	*117.6	*118.4	*119.0	*119.3	*119.6	*119.9	*119.8	*120.0	*120.1	*120.3
Fuel oil, #2.....	117.5	117.8	117.8	118.1	118.1	118.7	118.7	118.7	118.6	118.7	117.8	117.7	117.9	118.0
Gas and electricity.....	116.1	116.4	116.4	116.4	116.4	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.6	116.6
Gas.....	114.7	115.7	115.7	116.2	118.2	119.0	119.4	119.7	122.2	120.5	120.3	120.3	120.5	120.5
Electricity.....	116.3	116.8	116.8	118.1	120.5	121.7	121.9	122.2	122.3	122.2	121.2	121.2	121.4	121.3
Other utilities.....	113.2	114.6	114.6	114.5	116.0	116.6	117.0	117.2	118.2	118.9	119.5	119.4	119.6	119.8
Residential telephone.....	*107.5	*109.1	*109.1	*109.1	*109.5	*110.6	*112.4	*112.4	*112.6	*112.9	*113.7	*113.9	114.1	114.6
Residential water and sewerage.....	133.4	135.0	135.0	136.4	136.4	136.4	136.4	137.7	137.7	137.7	137.7	138.8	138.8	138.8
Household furnishings and operations.....	118.1	119.4	119.5	119.5	119.6	119.5	119.6	120.1	120.5	120.8	121.0	121.1	121.2	121.6
House furnishings.....	114.3	114.9	115.1	115.1	115.3	114.9	115.0	115.6	115.9	116.2	116.4	116.4	116.3	116.7
Textiles.....	111.6	111.9	112.2	112.9	113.1	110.8	112.1	113.2	113.7	113.6	114.2	113.4	113.0	114.0
Sheets, percale, or muslin.....	113.9	114.0	113.4	116.5	116.5	110.1	114.1	114.4	116.0	114.9	116.7	113.3	111.7	116.5
Curtains, tailored, polyester marquisette.....	110.0	111.3	111.5	110.9	110.6	110.3	111.2	110.9	111.3	112.2	112.1	112.5	112.8	112.2
Bedspreads, chiefly cotton.....	107.8	107.4	107.8	108.4	108.8	105.1	106.9	109.8	111.0	111.5	111.6	110.3	109.9	111.4
Drapery fabric, cotton or rayon/acetate.....	118.4	118.8	119.5	119.0	119.1	11								

## 25. Continued—Consumer Price Index—U.S. average

Group, subgroup, and selected items	Annual average 1971	1971				1972								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>HOUSING—Continued</b>														
Furniture and bedding.....	119.1	119.7	119.9	119.9	120.1	119.8	119.5	120.7	121.0	121.7	121.5	121.3	121.1	121.4
Bedroom furniture, chest and dresser <sup>2</sup> .....	103.6	104.6	104.7	104.8	104.7	104.6	104.1	104.6	104.9	105.3	105.1	104.8	105.0	105.4
Dining room chairs <sup>2</sup> .....	103.0	103.4	103.3	103.4	103.5	103.4	103.3	104.2	104.9	105.3	105.1	104.1	103.2	104.0
Sofas, upholstered.....	117.5	117.5	119.4	119.1	119.5	119.3	119.0	119.7	120.2	120.6	120.8	120.6	120.4	120.5
Sofas, dual purpose.....	116.4	116.3	116.4	116.4	116.9	116.7	115.9	116.9	116.8	117.2	116.9	116.9	116.7	117.5
Bedding, mattress, and box springs <sup>3</sup> .....	103.4	103.7	104.1	103.9	104.4	103.7	104.4	104.4	104.5	104.5	104.5	104.9	104.9	105.2
Cribs.....	117.9	118.4	118.0	119.2	118.8	118.0	118.1	119.0	117.6	118.0	119.0	119.3	118.4	118.0
Cocktail table <sup>4</sup> .....	-----	-----	-----	-----	100.0	100.1	99.7	99.5	100.6	100.4	100.4	100.0	101.8	101.2
Recliner, upholstered <sup>4</sup> .....	-----	-----	-----	-----	100.0	99.2	98.2	98.6	98.7	98.7	98.0	98.0	98.1	98.5
Floor coverings.....	106.3	106.5	106.5	106.3	106.6	106.3	106.1	106.3	106.5	106.7	106.4	106.8	106.5	106.6
Broadloom carpeting, manmade fibers.....	102.3	102.2	102.3	101.8	102.1	101.9	101.4	101.5	101.6	101.8	101.4	101.7	101.4	101.3
Vinyl sheet goods.....	114.7	116.1	116.0	116.3	116.5	115.6	116.3	116.7	117.7	117.7	117.9	118.6	118.7	119.1
Vinyl asbestos tile.....	116.6	116.7	116.7	117.0	117.4	117.6	117.6	117.8	117.9	118.3	118.2	118.2	118.4	118.4
Appliances.....	105.5	105.8	105.8	105.7	105.8	105.8	105.7	105.8	105.7	105.7	105.8	105.8	105.7	105.7
Washing machines, automatic.....	109.4	110.1	110.0	110.0	110.0	110.2	110.4	110.6	110.4	110.4	110.5	110.6	110.4	110.6
Vacuum cleaners, canister type.....	103.8	104.3	104.1	103.9	103.6	104.0	103.8	103.7	103.7	103.8	104.0	103.8	103.5	103.6
Refrigerator-freezers.....	108.1	108.3	108.3	108.2	108.3	108.2	108.3	108.3	108.0	107.9	107.9	107.9	107.8	108.1
Ranges, free standing, gas or electric.....	111.0	111.2	112.0	111.0	111.3	111.2	110.8	110.5	110.4	110.0	111.0	111.3	111.3	110.8
Clothes dryers, electric.....	112.4	113.4	113.1	113.0	113.0	113.3	113.5	113.6	113.6	113.7	114.4	114.5	114.0	114.7
Air conditioners <sup>1</sup> .....	110.2	-----	-----	-----	-----	-----	-----	110.4	110.4	111.1	111.0	110.9	110.4	-----
Room heaters, electric, portable <sup>1</sup> .....	108.1	-----	108.0	108.5	108.9	108.6	108.4	108.5	-----	-----	-----	-----	-----	-----
Garbage disposal units.....	110.1	110.3	110.2	110.3	110.4	110.9	111.0	111.0	111.2	111.0	111.0	111.0	111.0	110.9
Other house furnishings:														
Dinnerware, earthenware.....	117.8	119.2	119.3	119.2	119.4	120.1	121.0	122.2	122.6	122.9	123.7	125.4	125.7	126.2
Flatware, stainless steel.....	120.4	121.7	122.1	122.0	121.8	122.0	122.2	121.4	121.8	121.6	122.9	123.7	124.7	128.6
Table lamps, with shade.....	121.0	122.2	122.0	122.2	121.8	122.0	122.2	121.7	122.2	121.8	123.0	124.4	124.8	124.7
Housekeeping supplies:														
Laundry soaps and detergents.....	109.8	111.1	110.9	110.6	110.8	111.0	111.0	111.2	111.1	110.9	111.0	111.1	111.1	111.3
Paper napkins.....	126.7	128.3	128.8	128.9	128.6	128.6	128.4	128.9	129.5	130.8	130.6	131.7	131.9	131.2
Toilet tissue.....	123.6	123.7	123.9	123.6	123.8	124.5	124.8	125.1	125.6	126.0	125.2	124.4	123.9	124.9
Housekeeping services:														
Domestic service, general housework.....	133.8	135.1	135.3	136.0	136.1	136.4	136.4	136.9	138.4	138.9	139.2	139.4	139.6	140.5
Baby sitter service.....	130.0	132.1	132.3	132.4	132.8	133.4	133.8	134.8	135.0	135.3	135.6	136.6	136.9	137.9
Postal charges.....	138.1	146.6	146.6	146.6	146.6	146.6	146.6	146.6	146.6	146.6	146.6	146.6	146.6	146.6
Laundry, flatwork.....	133.3	135.0	135.4	135.6	136.3	136.4	136.6	137.0	137.6	138.0	138.5	139.0	139.5	139.8
Licensed day care service, preschool child.....	118.2	119.1	119.4	119.1	119.4	119.4	120.0	120.3	120.8	121.3	122.2	123.4	123.0	124.0
Washing machine repair.....	135.3	137.4	137.6	138.2	138.2	138.1	138.4	138.9	138.9	140.4	140.8	141.1	141.4	141.7
<b>APPAREL AND UPKEEP</b> .....	119.8	120.6	121.6	121.9	121.8	120.2	120.7	121.3	121.8	122.5	122.1	121.1	120.8	123.1
<b>Men's and boys'</b> .....	120.3	120.8	121.8	121.8	121.6	119.9	119.7	120.3	121.9	122.4	121.9	120.4	120.4	122.5
<b>Men's:</b>														
Topcoats, wool or all weather coats, polyester blend <sup>1</sup> .....	122.3	121.9	123.4	124.4	124.2	121.2	119.5	119.3	-----	-----	-----	-----	-----	127.4
Suits, year round weight.....	129.0	130.5	132.4	133.0	131.5	126.5	125.6	-----	131.1	132.4	131.8	128.1	128.6	131.0
Suits, tropical weight <sup>1</sup> .....	129.2	-----	-----	-----	-----	-----	-----	130.9	136.3	138.0	136.8	131.3	130.8	-----
Jackets, lightweight.....	112.5	112.2	112.9	114.2	114.3	113.0	112.7	115.0	115.1	115.7	114.8	114.0	113.7	113.6
Slacks, wool or blend.....	116.8	118.2	118.2	117.6	116.8	115.7	116.3	115.7	117.2	116.7	114.9	113.5	114.4	115.8
Slacks, cotton or blend.....	132.3	132.5	133.9	134.7	134.7	134.0	137.1	137.4	137.0	137.3	133.9	132.1	135.3	137.7
Trousers, work, cotton.....	113.0	113.7	114.0	114.0	114.0	114.1	114.4	114.4	114.6	114.7	114.7	115.0	115.1	114.9
Shirt, work, cotton.....	113.3	114.2	114.6	114.8	114.5	114.5	114.2	114.5	114.9	115.1	115.5	115.4	115.4	115.3
Shirt, business, cotton.....	112.7	113.0	113.0	114.4	114.4	112.6	112.4	112.4	113.1	113.4	113.7	112.1	111.5	111.7
T-shirts, chiefly cotton.....	119.0	118.8	118.9	118.4	118.2	118.3	118.0	117.8	117.4	117.4	117.4	117.4	117.6	118.4
Socks, cotton or manmade fibers.....	115.5	115.2	115.7	115.7	115.8	114.3	114.9	116.2	116.6	116.7	116.7	115.9	116.0	115.7
Handkerchiefs, cotton.....	114.9	115.4	115.7	115.7	116.1	116.3	116.0	116.2	115.4	115.7	116.2	116.3	116.5	117.0
<b>Boys':</b>														
Coats, all purpose, cotton or cotton blend <sup>1</sup> .....	118.3	-----	119.2	120.3	118.3	115.8	114.8	122.3	-----	-----	-----	-----	-----	-----
Sport coats, wool or blend <sup>1</sup> .....	122.0	123.5	128.1	118.3	121.3	118.1	-----	-----	-----	-----	-----	-----	-----	-----
Dungarees, cotton or blend.....	122.5	123.2	123.2	125.2	125.8	126.4	126.1	126.3	127.1	127.1	127.3	127.5	127.4	127.7
Undershorts, cotton.....	119.5	119.6	119.6	119.6	119.6	119.9	120.6	120.5	120.5	120.5	120.5	120.8	120.2	120.3
<b>Women's and girls'</b> .....	120.1	121.3	122.7	123.4	123.2	120.2	121.7	122.5	122.3	123.4	122.6	121.2	119.8	123.9
<b>Women's:</b>														
Coats, heavyweight, wool or wool blend <sup>1</sup> .....	122.9	121.7	127.2	127.7	126.0	116.2	-----	-----	-----	-----	-----	-----	-----	129.5
Skirts, wool or wool blend <sup>1</sup> .....	131.7	131.1	135.7	142.1	142.1	135.0	125.3	-----	-----	-----	-----	-----	-----	141.3
Skirts, cotton or polyester cotton or manmade fibers.....	114.0	-----	-----	-----	-----	-----	-----	-----	115.5	121.3	121.4	116.7	110.4	-----
Blouses, cotton.....	121.9	122.1	120.0	122.2	121.6	117.6	122.9	1 2 2	123.7	124.3	122.8	123.4	120.8	124.3
Dresses, street, chiefly manmade fiber.....	127.6	127.5	129.4	131.1	130.1	129.6	131.3	320.4	130.1	129.6	128.8	127.4	126.5	130.2
Dresses, street, wool or wool blend <sup>1</sup> .....	140.4	140.3	144.3	143.8	142.7	138.4	-----	-----	-----	-----	-----	-----	-----	-----
Slips, nylon.....	110.7	111.1	111.1	110.4	111.2	111.2	111.0	110.5	110.9	110.9	111.0	110.8	110.8	111.4
Panties, acetate or nylon.....	115.2	115.8	115.4	116.2	116.2	116.7	116.3	116.5	116.6	117.0	118.1	118.1	118.3	118.8
Girdles, manmade blend.....	116.2	117.1	117.7	117.9	118.1	116.1	117.2	117.4	118.2	118.2	116.9	116.9	117.9	117.9
Brassieres, nylon lace.....	120.9	122.2	123.0	123.4	123.4	122.3	121.3	121.6	121.9	121.9	121.9	122.1	122.5	122.9
Hose, or panty hose, nylon, seamless.....	98.9	97.9	98.1	98.2	98.3	97.4	97.7	97.5	96.1	96.5	96.0	96.4	96.0	95.8
Anklets or knee-length socks, various fibers.....	115.8	114.8	114.6	115.6	116.4	115.9	115.8	116.1	115.9	114.9	114.4	114.4	113.8	113.7
Gloves, fabric, nylon or cotton.....	109.6	109.9	109.5	109.7	109.8	110.2	109.8	110.3	110.7	111.2	111.7	109.9	110.6	111.0
Handbags, rayon faille or plastic.....	132.4	135.6	134.8	136.8	138.2	138.9	140.2							

## 25. Continued—Consumer Price Index—U.S. average

Group, subgroup, and selected items	Annual average 1971	1971				1972								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>APPAREL AND UPKEEP—Continued</b>														
Girls':														
Raincoats, vinyl plastic or chiefly cotton <sup>1</sup> .....	116.5	115.6	118.5	119.5	119.3	117.1	117.3	116.8	-----	-----	-----	-----	-----	-----
Skirts, wool or wool blend <sup>1</sup> .....	106.8	105.2	109.0	107.1	108.6	100.2	-----	-----	-----	-----	-----	-----	109.1	111.8
Dresses, cotton, manmade fibers or blends.....	107.4	109.3	110.3	109.4	109.3	108.9	107.2	119.2	121.4	125.3	119.2	120.0	122.6	121.2
Slacks, cotton <sup>1</sup> .....	131.3	-----	-----	131.5	131.7	131.1	-----	-----	-----	-----	-----	-----	-----	135.3
Slips, cotton blend.....	110.4	111.0	110.9	111.3	111.9	111.7	112.1	112.1	111.1	111.0	110.2	110.5	110.3	110.3
Handbags.....	129.0	128.3	129.3	130.0	129.3	124.1	127.5	-----	130.6	129.8	124.7	122.6	120.6	123.7
Footwear.....	121.5	122.2	122.7	132.2	123.1	122.7	122.7	123.5	124.1	124.6	124.7	124.6	125.1	125.7
Men's:														
Shoes, street (oxford or buckle strap).....	119.6	120.9	119.8	121.1	121.0	119.7	119.9	121.6	121.4	123.1	123.8	124.2	124.5	125.1
Shoes, work, high.....	118.7	120.0	120.1	120.4	120.6	121.1	121.4	121.3	121.3	121.5	120.9	123.2	122.8	123.7
Women's:														
Shoes, street, pump.....	123.4	123.2	124.5	125.2	125.1	124.3	123.8	124.6	125.8	126.6	125.9	125.1	126.5	127.5
Shoes, evening, pump.....	120.2	120.3	121.0	121.0	121.1	120.7	120.5	121.4	122.0	122.1	122.3	121.8	122.1	123.1
Shoes, casual, pump.....	124.1	124.3	125.7	126.0	125.8	125.1	124.7	125.5	126.5	125.9	126.1	122.8	123.3	124.2
Houseslippers, scuff.....	121.9	123.4	123.5	123.6	123.4	124.0	124.0	124.2	124.5	124.3	124.8	125.4	125.6	125.8
Children's:														
Shoes, oxford.....	122.3	122.8	123.8	124.4	124.1	122.4	123.6	124.6	125.9	126.5	126.9	127.3	128.3	128.2
Sneakers, boys', oxford type.....	118.8	119.5	119.7	119.9	120.3	121.0	121.5	122.3	122.6	123.1	123.5	124.2	124.2	124.3
Dress shoes, girls', strap or pump.....	125.8	127.3	128.4	128.6	128.4	128.6	128.7	128.7	129.5	129.8	129.8	130.1	130.4	130.5
Miscellaneous apparel:														
Diapers, cotton gauze or disposable.....	112.0	112.7	112.8	113.3	113.3	113.0	113.0	113.2	113.5	114.0	114.5	115.3	116.0	116.9
Yard goods, polyester blend.....	122.1	122.1	122.1	122.3	121.9	120.6	120.5	118.9	118.1	117.8	119.0	119.1	119.3	119.4
Apparel services:														
Drycleaning, men's suits and women's dresses.....	116.6	117.1	117.2	117.0	117.1	117.2	117.4	117.4	117.4	117.5	117.5	117.6	117.7	117.8
Automatic laundry service.....	113.8	113.3	113.8	113.9	113.9	113.7	114.3	114.2	114.9	115.1	114.8	114.9	114.9	115.1
Laundry, men's shirts.....	119.1	119.1	119.2	119.2	120.4	120.5	120.7	120.9	120.6	120.8	121.0	121.6	122.2	122.5
Tailoring charges, hem adjustment.....	128.5	129.6	130.0	131.2	131.6	131.7	131.8	132.1	132.1	132.5	132.5	132.9	133.7	133.9
Shoe repairs, women's heel lift.....	112.0	113.5	114.0	114.0	113.8	113.8	113.8	114.0	114.6	115.1	115.4	115.6	116.7	117.1
<b>TRANSPORTATION</b>														
Private.....	118.6	118.6	119.3	118.8	118.6	119.0	118.3	118.	118.6	119.5	119.8	120.3	120.5	121.0
Automobiles, new:														
Automobiles, used.....	112.0	105.6	109.1	109.6	110.4	112.2	111.9	111.7	111.7	111.4	111.3	111.0	110.6	109.6
Gasoline, regular and premium.....	106.3	108.7	108.8	106.9	107.3	106.7	105.7	106.1	105.0	106.2	105.6	106.9	108.4	110.6
Motor oil, premium.....	120.0	121.5	121.7	121.8	121.9	122.3	122.5	122.7	122.9	123.3	123.4	123.9	124.2	124.5
Tires, new, tubeless:														
Auto repairs and maintenance.....	129.2	131.2	131.3	131.6	131.9	133.1	133.6	134.0	134.3	134.6	134.9	135.2	135.7	136.3
Auto insurance rates.....	141.4	142.9	141.8	141.8	141.8	141.0	140.8	140.9	140.7	140.6	140.7	141.1	141.1	140.4
Auto registration.....	123.2	123.7	123.7	123.7	123.7	127.1	127.1	127.1	127.5	127.5	127.5	127.5	127.5	127.5
Public:														
Local transit fares.....	137.7	139.3	139.3	139.3	139.7	143.4	143.5	142.3	142.7	142.7	143.0	143.3	143.3	144.0
Taxicab fares.....	143.4	144.0	144.0	144.0	144.4	150.2	150.3	148.4	149.1	149.1	149.9	150.3	150.3	150.6
Railroad fares, coach.....	126.5	131.7	131.7	132.8	132.8	132.8	132.9	132.9	132.9	133.6	133.6	133.6	133.6	133.7
Airplane fares, chiefly coach.....	126.9	127.7	127.7	127.6	128.2	128.2	128.2	128.2	127.0	127.0	127.2	127.2	127.2	127.0
Bus fares, intercity.....	132.7	135.9	135.9	135.9	136.1	136.1	136.1	137.6	137.6	138.2	138.1	138.1	138.1	142.1
<b>HEALTH AND RECREATION</b>														
Medical care.....	128.4	130.4	129.6	129.7	130.1	130.5	131.0	131.4	131.7	132.0	132.4	132.7	132.9	133.1
Drugs and prescriptions:														
Over-the-counter items.....	110.2	110.3	110.4	110.5	110.2	110.3	110.6	110.8	110.9	111.7	111.6	111.2	111.5	111.6
Multiple vitamin concentrates.....	96.6	95.1	95.4	95.4	95.1	95.0	95.0	95.1	95.2	95.3	95.0	95.1	95.3	95.3
Aspirin compounds.....	114.1	115.1	115.8	115.4	114.0	114.1	114.5	115.0	115.4	117.7	118.1	116.6	116.8	117.1
Liquid tonics.....														
Adhesive bandages, package.....	122.6	124.1	123.6	123.6	124.1	123.8	123.7	123.9	124.1	124.1	123.6	123.4	124.1	124.6
Cold tablets or capsules.....	111.3	112.0	112.0	113.2	112.9	112.8	113.1	113.5	113.2	113.9	113.9	114.2	114.5	114.1
Cough syrup.....	112.4	111.4	111.4	111.2	111.3	111.7	112.7	112.9	112.8	114.1	113.9	113.5	113.7	113.5
Prescriptions:														
Anti-infectives.....	80.2	79.9	79.6	79.4	79.1	78.9	77.4	76.7	76.0	75.2	75.4	74.7	74.3	73.4
Sedatives and hypnotics.....	122.9	124.2	123.8	124.6	124.8	124.7	124.9	125.1	125.2	125.9	126.5	127.4	127.6	127.9
Ataractics.....	101.7	102.6	102.5	102.6	102.6	102.6	102.7	102.8	102.8	102.7	102.9	103.3	103.3	103.3
Anti-spasmodics.....	107.1	108.1	107.9	107.8	108.0	107.9	107.7	107.8	107.8	107.9	108.0	108.0	108.0	108.1
Cough preparations.....														
Cardiovasculars and antihypertensives.....	126.0	127.9	127.4	127.2	127.2	127.1	127.8	128.5	128.9	129.7	130.7	131.9	132.2	131.8
Analgesics, internal.....	111.1	112.0	112.0	112.0	112.1	112.0	111.8	111.8	111.8	111.4	111.4	111.5	111.7	111.8
Anti-obesity.....	107.8	108.3	107.7	107.9	108.3	108.2	109.1	109.2	109.4	109.5	109.5	109.6	109.8	109.6
Hormones.....	114.9	117.1	117.0	117.0	117.3	117.7	117.7	117.5	116.7	117.1	117.2	118.0	118.0	118.0
Professional services:	94.9	94.9	94.7	94.6	94.8	94.0	94.0	93.8	94.0	92.9	92.8	92.5	92.9	92.9
Physicians' fee:														
General physician, office visits.....	129.8	131.5	131.7	132.0	132.2	132.3	132.6	132.9	133.2	133.3	133.9	134.0	134.2	134.4
General physician, house visits.....	131.4	133.0	133.0	133.1	133.3	133.3	133.5	134.0	134.2	134.3	135.0	135.1	135.2	135.5
Obstetrical cases.....	131.0	133.6	133.9	134.1	134.6	134.8	135.1	135.5	135.6	135.8	137.0	137.2	137.3	137.8
Pediatric care, office visits.....	129.0	131.3	131.5	131.5	131.6	132.0	132.3	132.8	133.9	134.0	134.0	134.2	134.3	134.4
Psychiatrist, office visits.....	132.0	133.5	133.6	134.7	135.3	135.3	135.6	135.5	135.6	135.6	135.8	135.9	136.1	136.3
Herniorrhaphy, adult.....	124.8	125.7	125.9	127.2	127.3	127.9	128.3	128.5	128.5	129.0	129.2	129.2	129.3	129.2
Tonsillectomy and adenoidectomy.....	123.4	124.4	125.2	126.2	126.4	126.8	127.0	127.4	127.8	127.9	128.2	128.2	128.6	128.8
	125.2	128.0	128.2	128.7	128.7	128.7	129.2	129.2	129.6	129.8	130.0	129.8	130.4	130.5

See footnotes at end of table.



## 25. Continued—Consumer Price Index—U.S. average

Group, subgroup, and selected items	Annual average 1971	1971				1972								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>HEALTH AND RECREATION—Continued</b>														
Dentists' fees.....	127.0	128.2	129.6	129.8	130.0	130.5	130.6	131.0	131.6	131.9	132.4	132.7	132.8	133.1
Fillings, adult, amalgam, one surface.....	128.0	129.5	131.0	131.0	131.3	131.8	131.8	132.3	133.0	133.4	133.9	134.2	134.3	134.6
Extractions, adult.....	126.9	127.7	128.9	129.4	129.6	130.4	130.6	131.0	131.5	131.9	132.6	132.8	132.9	133.1
Dentures, full uppers.....	124.9	126.0	127.7	127.7	127.7	128.2	128.3	128.3	128.8	129.0	129.1	129.5	129.5	129.8
Other professional services:														
Examination, prescription, and dispensing of eyeglasses.....	120.3	122.1	122.6	122.9	122.9	123.1	123.8	124.0	124.5	124.7	125.0	125.0	125.3	125.5
Routine laboratory tests.....	116.1	117.6	117.8	117.8	118.6	118.7	118.9	119.4	119.7	120.7	120.7	120.7	120.8	121.1
Hospital service charges <sup>1</sup>														
Semiprivate rooms.....	163.1	166.8	167.0	167.0	167.9	169.6	171.1	172.2	172.7	173.2	173.8	174.9	175.3	175.6
Operating room charges.....	156.2	158.0	159.1	159.0	162.6	163.5	165.0	166.0	166.6	167.3	167.2	168.6	170.0	170.8
X-ray, diagnostic series, upper G.I.....	124.9	126.5	126.5	126.6	126.9	127.7	127.9	128.6	129.0	128.9	128.8	129.3	129.6	129.6
Laboratory test, urinalysis <sup>2</sup> .....						100.0	100.9	101.4	101.5	101.9	102.0	102.3	102.4	102.4
Anti-infective, tetracycline, HCL <sup>3</sup> .....						100.0	99.7	100.0	100.9	100.3	100.1	99.8	100.0	100.0
Tranquilizer, chlordiazepoxide, HCL <sup>4</sup> .....						100.0	99.7	99.9	100.6	101.1	101.9	101.7	101.9	102.2
Electrocardiogram <sup>5</sup> .....						100.0	101.9	102.5	102.8	102.8	102.8	102.8	102.8	102.8
Intravenous solution, saline <sup>5</sup> .....						100.0	100.5	101.4	101.5	101.9	102.2	102.3	102.4	102.4
Physical therapy, whirlpool bath <sup>5</sup> .....						100.0	100.5	100.7	100.8	101.9	102.0	102.1	102.2	102.3
Oxygen, inhalation therapy <sup>5</sup> .....						100.0	101.2	101.5	101.6	101.7	101.9	102.0	102.0	101.9
Personal care.....	116.8	117.6	117.9	117.9	117.9	118.1	118.4	118.7	119.1	119.7	120.0	120.0	120.2	120.5
Toilet goods.....	113.8	114.6	114.9	114.8	114.8	115.1	115.4	115.8	116.3	117.1	117.4	117.3	117.4	117.6
Toothpaste, standard dentifrice.....	107.7	108.6	108.8	108.3	109.3	109.9	109.6	119.5	108.8	109.9	109.4	110.0	109.9	110.6
Toilet soap, hard milled.....	114.1	115.2	118.4	118.8	119.7	119.7	120.3	121.1	121.0	122.9	122.6	122.5	121.9	122.3
Hand lotions, liquid.....	119.5	119.7	120.5	120.0	120.4	121.2	124.0	123.8	125.1	125.2	126.0	124.9	127.1	126.8
Shaving cream, aerosol.....	106.6	107.2	107.1	107.8	107.3	107.1	106.4	107.2	107.5	108.0	108.2	107.0	107.1	107.3
Face powder, pressed.....	123.5	124.1	123.9	122.4	122.0	122.0	123.1	125.1	126.2	131.4	133.3	135.0	134.2	134.3
Deodorants, aerosol.....	105.6	106.4	106.3	105.9	105.9	104.9	105.0	105.6	105.6	106.0	105.5	105.6	105.1	104.6
Cleansing tissues.....	123.3	124.1	122.6	123.6	121.8	124.4	123.1	123.4	125.4	124.3	125.1	124.5	124.7	124.9
Home permanent wave sets.....	110.9	111.7	111.8	111.7	111.6	111.3	111.3	110.5	110.9	109.1	109.1	109.2	109.6	109.7
Personal care services.....	120.0	120.8	121.0	121.2	121.2	121.3	121.5	121.7	122.0	122.4	122.7	122.9	123.2	123.6
Men's haircuts.....	122.6	123.4	123.7	123.7	124.9	123.9	124.1	124.2	124.4	124.9	125.1	125.3	125.4	125.8
Beauty shop services.....	118.2	118.9	119.1	119.4	119.2	119.4	119.7	119.9	120.4	120.7	121.0	121.2	121.6	122.1
Reading and recreation.....	119.3	120.5	120.5	120.8	121.1	121.4	121.5	121.7	122.3	122.5	122.9	123.0	123.0	123.7
Recreational goods.....	106.6	107.1	107.2	107.2	107.3	107.4	107.3	107.6	107.7	107.8	108.0	108.1	108.1	108.2
TV sets, portable and console.....	100.1	100.0	100.2	100.3	100.3	99.9	99.7	100.0	99.8	99.6	99.5	99.4	99.4	99.0
TV replacement tubes.....	122.5	123.4	124.1	124.5	124.7	126.4	126.9	128.8	129.8	130.6	131.1	131.8	132.6	133.1
Radios, portable and table model.....	98.5	98.5	98.1	98.4	98.4	98.4	98.4	98.5	98.9	99.0	99.1	99.1	99.2	99.2
Tape recorders, portable.....	94.2	93.0	92.7	92.5	93.1	93.4	93.3	93.3	93.8	94.4	94.7	94.9	95.1	94.9
Phonograph records, stereophonic.....	103.5	106.5	106.5	106.5	107.1	107.2	107.0	106.6	106.4	106.5	107.2	107.5	107.6	107.6
Movie cameras, Super 8, zoom lens.....	89.4	89.1	89.2	88.9	88.9	88.3	88.7	88.8	88.8	87.5	88.2	88.3	88.3	88.4
Film, 35mm, color.....	108.3	108.4	108.3	108.5	108.7	108.6	108.3	108.3	108.3	108.2	108.1	108.0	108.2	108.1
Bicycle, boys <sup>6</sup> .....	112.6	113.7	114.0	113.6	113.3	113.8	114.2	114.9	114.8	116.0	117.0	117.4	117.1	117.3
Tricycles.....	111.2	112.0	111.9	111.7	112.2	112.6	113.0	113.4	112.7	113.1	114.0	114.3	114.5	115.1
Recreational services.....	125.2	126.3	126.2	126.6	126.4	126.9	127.0	127.3	127.8	128.0	128.7	128.9	128.6	128.8
Indoor movie admissions.....	137.6	138.9	138.3	138.7	137.9	139.0	138.6	139.2	140.7	141.2	142.5	144.1	143.3	143.2
Drive-in movie admissions, adult.....	140.1	142.5	142.3	142.3	142.5	143.1	143.5	143.7	143.8	145.9	147.8	146.7	147.1	146.6
Bowling fees, evening.....	116.3	116.1	116.7	117.7	117.6	117.9	118.4	119.1	119.3	118.9	118.6	118.4	117.8	118.7
Golf greens fees <sup>1</sup> .....	127.5	128.4	128.3						129.6	129.0	130.7	130.8	130.9	131.5
TV repairs, picture tube replacement.....	98.0	98.5	98.4	98.5	98.6	98.6	98.5	98.3	98.1	98.0	98.2	98.0	98.1	98.1
Film developing, color.....	116.7	118.3	118.1	118.3	118.2	118.2	118.3	118.2	118.1	117.8	116.6	116.5	116.4	116.1
Reading and education:														
Newspapers, street sale and delivery.....	129.6	130.6	130.5	130.6	130.7	130.7	130.9	130.8	131.6	131.8	132.8	133.1	133.1	133.1
Piano lessons, beginner.....	121.0	121.4	121.5	121.5	121.5	121.6	122.0	122.1	122.1	122.2	122.2	122.3	122.5	123.9
<b>OTHER GOODS AND SERVICES</b>														
Tobacco products.....	120.9	122.4	122.6	122.8	123.0	123.5	124.3	124.6	125.1	125.4	125.6	125.8	126.0	126.2
Cigarettes, nonfilter tip, regular size.....	126.4	128.9	128.9	129.0	129.2	130.2	132.0	132.5	132.7	133.2	134.0	134.0	134.1	134.2
Cigarettes, filter, king.....	127.9	130.2	130.2	130.3	130.6	131.6	133.2	133.7	133.9	134.4	135.6	135.6	135.9	135.9
Cigarettes, filter, king.....	128.1	130.8	130.8	130.8	131.1	132.2	134.3	134.8	135.0	135.5	136.1	136.1	136.1	136.2
Cigars, domestic, regular.....	107.1	108.5	108.7	109.3	109.5	109.7	110.3	110.6	110.7	110.7	110.9	110.9	111.0	111.3
Alcoholic beverages.....	116.9	117.6	117.9	118.3	118.4	118.5	118.7	118.9	119.3	119.5	119.1	119.6	119.9	120.2
Beer.....	112.9	113.4	113.6	113.7	113.8	113.5	113.6	113.9	114.1	114.2	113.1	113.4	113.9	114.2
Whiskey, spirit blended and straight bourbon.....	106.4	107.0	106.8	106.9	107.0	107.4	108.5	108.5	108.6	108.6	108.5	109.0	108.9	108.8
Wine, dessert and table.....	122.3	124.5	124.7	124.9	125.1	125.3	125.6	125.9	126.4	126.5	126.7	127.5	127.6	127.8
Beer, away from home.....	126.4	127.1	127.7	128.8	128.8	129.3	129.0	129.1	130.1	130.5	130.7	131.2	131.5	132.2
Financial and miscellaneous personal expenses:														
Funeral services, adult.....	117.2	118.4	118.8	119.1	119.2	119.5	120.2	120.6	120.6	120.7	121.1	121.3	121.4	121.7
Bank service charges, checking accounts.....	110.6	110.9	109.3	109.3	109.5	109.7	108.5	108.2	107.4	107.4	107.4	107.0	107.0	107.1
Legal services, will.....	135.5	137.4	139.9	140.2	141.4	141.7	141.8	141.9	149.3	149.3	150.6	150.2	150.3	150.4

<sup>1</sup> Priced only in season.<sup>2</sup> March 1970=100.<sup>3</sup> June 1970=100.<sup>4</sup> December 1971=100.<sup>5</sup> January 1972=100.

NOTE: For a description of the general method of computing the monthly Consumer Price Index, see BLS Handbook of Methods for Surveys and Studies (BLS Bulletin 1711, 1971), chapter 10.

°=corrected.

\*==revised.

26. Consumer Price Index<sup>1</sup>—U.S. city average, and selected areas

[1967 = 100 unless otherwise specified]

Area <sup>2</sup>	Annual average 1971	1971				1972								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>All items</b>														
<b>U.S. city average<sup>3</sup></b> .....	121.3	122.2	122.4	122.6	123.1	123.2	123.8	124.0	124.3	124.7	125.0	125.5	125.7	126.2
Atlanta, Ga.....	121.7	122.0	(*)	(*)	123.5	(*)	(*)	123.8	(*)	(*)	124.8	(*)	(*)	126.9
Baltimore, Md.....	123.4	124.4	(*)	(*)	125.1	(*)	(*)	124.9	(*)	(*)	125.5	(*)	(*)	127.7
Boston, Mass.....	122.8	(*)	124.5	(*)	(*)	124.9	(*)	126.2	(*)	(*)	127.1	(*)	(*)	128.1
Buffalo, N.Y.....	121.8	(*)	(*)	123.1	(*)	124.9	(*)	126.1	(*)	(*)	126.8	(*)	(*)	127.8
Chicago, Ill.-Northwestern Ind.....	120.8	121.7	121.7	121.8	122.3	122.1	123.0	123.2	123.3	123.7	124.2	124.4	125.0	125.3
Cincinnati, Ohio-Kentucky.....	120.7	121.4	(*)	(*)	121.9	(*)	(*)	123.0	(*)	(*)	124.6	(*)	(*)	126.3
Cleveland, Ohio.....	122.8	(*)	(*)	124.4	(*)	(*)	125.9	(*)	(*)	126.1	(*)	(*)	126.2	(*)
Dallas, Tex.....	121.3	(*)	(*)	122.4	(*)	(*)	123.7	(*)	(*)	124.6	(*)	(*)	125.5	(*)
Detroit, Mich.....	121.7	122.8	122.8	123.4	123.7	124.2	124.9	125.0	125.0	125.5	126.0	126.7	126.9	127.3
Honolulu, Hawaii.....	118.9	121.2	(*)	(*)	121.1	(*)	(*)	122.4	(*)	(*)	122.2	(*)	(*)	123.1
Houston, Tex.....	120.9	(*)	122.4	(*)	(*)	123.2	(*)	(*)	124.8	(*)	(*)	125.2	(*)	125.5
Kansas City, Mo.-Kansas.....	120.5	121.5	(*)	(*)	121.4	(*)	(*)	122.4	(*)	(*)	123.9	(*)	(*)	125.5
Los Angeles-Long Beach, Calif.....	118.5	+119.9	+120.2	+119.9	+120.0	+120.0	+120.3	+121.1	+121.2	+121.3	+121.6	+122.7	+112.8	+123.8
Milwaukee, Wis.....	120.1	(*)	(*)	120.9	(*)	(*)	122.2	(*)	(*)	122.8	(*)	(*)	124.6	(*)
Minneapolis-St. Paul, Minn.....	121.7	(*)	123.4	(*)	(*)	123.8	(*)	124.2	(*)	124.2	(*)	125.5	(*)	126.4
New York, N.Y.-Northeastern N.J.....	125.9	127.3	127.5	127.6	128.0	+128.6	+129.6	+130.1	+130.4	+130.7	+131.0	+131.4	+131.7	+132.9
Philadelphia, Pa.-N.J.....	123.5	124.6	125.0	124.7	125.0	124.7	125.2	125.8	126.0	126.1	126.5	127.0	127.4	128.4
Pittsburgh, Pa.....	121.5	(*)	122.9	(*)	(*)	123.2	(*)	(*)	124.7	(*)	(*)	125.5	(*)	(*)
Portland, Oreg.-Wash. <sup>5</sup> .....	116.1	(*)	117.4	(*)	(*)	118.1	(*)	(*)	118.4	(*)	(*)	119.6	(*)	(*)
St. Louis, Mo.-Ill.....	119.6	120.5	(*)	(*)	120.9	(*)	(*)	120.8	(*)	(*)	121.9	(*)	(*)	123.6
San Diego, Calif.....	+119.8	(*)	(*)	+120.8	(*)	(*)	+122.1	(*)	(*)	+123.6	(*)	(*)	125.1	(*)
San Francisco-Oakland, Calif.....	+120.1	+120.7	(*)	(*)	+121.6	(*)	(*)	+122.7	(*)	(*)	+124.1	(*)	(*)	+125.6
Scranton, Pa. <sup>6</sup> .....	121.4	(*)	(*)	122.6	(*)	(*)	123.6	(*)	(*)	125.1	(*)	(*)	126.8	(*)
Seattle, Wash.....	116.4	(*)	(*)	117.6	(*)	(*)	119.0	(*)	(*)	118.8	(*)	(*)	119.9	(*)
Washington, D.C.-Md.-Va.....	122.7	(*)	(*)	124.2	(*)	(*)	124.7	(*)	(*)	125.6	(*)	(*)	127.7	(*)
<b>Food</b>														
<b>U.S. city average</b> .....	118.4	119.1	118.9	119.0	120.3	120.3	122.2	122.4	122.4	122.3	123.0	124.2	124.6	124.8
Atlanta, Ga.....	118.1	119.0	118.4	118.7	119.6	120.6	122.1	122.6	123.7	123.3	123.6	124.3	126.0	126.2
Baltimore, Md.....	121.0	122.2	121.8	121.7	123.2	121.9	123.2	123.9	122.7	122.7	123.2	125.0	126.0	126.4
Boston, Mass.....	118.5	118.5	118.4	118.8	119.9	119.5	121.2	122.3	122.5	122.8	122.9	124.0	125.2	125.4
Buffalo, N.Y.....	119.7	119.6	119.8	119.8	120.9	121.1	122.9	122.8	122.5	122.5	123.2	124.4	124.6	124.1
Chicago, Ill.-Northwestern Ind.....	118.5	119.4	118.9	119.2	119.6	119.8	122.8	122.7	122.3	123.9	124.3	125.9	124.8	124.8
Cincinnati, Ohio-Kentucky.....	118.4	118.7	118.9	118.9	120.7	120.5	123.6	123.6	123.2	123.5	122.4	125.6	125.3	125.8
Cleveland, Ohio.....	118.9	118.2	118.1	118.4	119.2	118.9	121.7	122.1	121.7	121.6	122.9	124.4	124.7	125.4
Dallas, Tex.....	117.8	118.6	118.7	118.5	120.6	120.8	122.5	122.1	121.4	121.6	122.1	123.0	123.7	124.1
Detroit, Mich.....	117.3	118.4	117.8	117.8	119.2	119.7	122.1	122.0	121.3	121.1	122.4	124.2	124.1	123.6
Honolulu, Hawaii.....	118.1	121.4	121.8	120.4	120.9	120.7	123.7	123.2	122.8	122.3	121.3	122.1	122.9	123.8
Houston, Tex.....	118.8	120.1	120.2	120.0	121.5	121.9	123.2	124.0	123.6	123.2	123.6	124.8	125.4	126.1
Kansas City, Mo.-Kansas.....	118.6	120.0	119.5	119.8	120.8	120.9	122.8	122.8	122.5	122.0	123.2	124.1	124.2	125.0
Los Angeles-Long Beach, Calif.....	114.9	115.1	115.3	115.8	116.6	117.5	118.9	118.8	119.2	119.0	120.0	121.3	121.2	121.7
Milwaukee, Wis.....	115.7	116.8	116.3	116.3	117.2	117.0	119.4	119.4	119.1	119.4	120.1	120.9	122.2	121.8
Minneapolis-St. Paul, Minn.....	119.2	119.5	119.1	119.2	120.6	120.5	122.0	122.8	122.9	123.3	124.1	125.3	125.9	126.6
New York, N.Y.-Northeastern N.J.....	123.1	124.2	124.3	124.3	125.2	125.2	126.9	127.4	127.4	127.3	128.1	129.5	129.8	130.4
Philadelphia, Pa.-N.J.....	120.1	121.4	121.0	120.6	122.0	122.2	123.8	124.3	124.2	123.0	123.0	124.0	124.3	124.9
Pittsburgh, Pa.....	118.9	119.4	119.0	119.4	120.9	120.9	122.6	123.1	122.4	121.5	121.5	123.0	123.0	123.4
Portland, Oreg.-Wash. <sup>5</sup> .....	113.4		112.5			114.9			116.4			118.9		
St. Louis, Mo.-Ill.....	118.0	118.8	118.3	118.5	119.4	119.7	120.9	120.8	121.0	121.4	122.0	123.5	123.8	123.8
San Diego, Calif.....	117.3	117.8	117.7	118.6	119.5	120.0	121.8	121.8	122.0	122.3	123.4	124.2	124.2	124.4
San Francisco-Oakland, Calif.....	116.1	115.5	116.3	116.9	118.9	119.1	120.2	119.8	119.7	120.9	121.2	122.4	122.0	122.7
Scranton, Pa. <sup>6</sup> .....	120.1			119.6			123.6			121.7			125.2	
Seattle, Wash.....	115.9	116.8	116.3	116.5	+118.2	118.4	119.6	119.0	119.1	119.3	120.4	121.1	121.7	121.8
Washington, D.C.-Md.-Va.....	120.2	121.3	121.4	121.2	122.0	120.9	123.7	124.0	123.8	122.9	124.8	126.1	127.5	128.9

<sup>1</sup> See table 25. Indexes measure time-to-time changes in prices. They do not indicate whether it costs more to live in one area than in another.

<sup>2</sup> The areas listed include not only the central city but the entire urban portion of the Standard Metropolitan Statistical Area, as defined for the 1960 Census of Population; except that the Standard Consolidated Area is used for New York and Chicago.

<sup>3</sup> Average of 56 "cities" (metropolitan areas and nonmetropolitan urban places beginning January 1966).

<sup>4</sup> All items indexes are computed monthly for 5 areas and once every 3 months on a rotating cycle for other areas.

<sup>5</sup> Old series (old market basket components).

r = revised.

\* = corrected.

27. Wholesale Price Index,<sup>1</sup> by group and subgroup of commodities[1967 = 100 unless otherwise specified<sup>2</sup>]

Code	Commodity group	Annual average 1971	1971				1972								
			Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
	All commodities.....	113.9	114.5	114.4	114.5	115.4	116.3	117.3	117.4	117.5	118.2	118.8	119.7	119.9	120.2
	All commodities (1957-59=100).....	120.9	121.5	121.4	121.5	122.4	123.4	124.5	124.6	124.7	125.4	126.0	127.0	127.2	127.5
	Farm products and processed foods and feeds.....	113.8	113.0	113.0	113.6	115.9	117.4	119.6	119.1	118.3	120.0	121.3	124.0	123.8	124.5
	Industrial commodities.....	114.0	115.0	115.0	114.9	115.3	115.9	116.5	116.8	117.3	117.6	118.1	118.5	118.7	118.7
	<b>FARM PRODUCTS AND PROCESSED FOODS AND FEEDS</b>														
01	Farm products.....	112.9	110.5	111.3	112.2	115.8	117.8	120.7	119.7	119.1	122.2	124.0	128.0	128.2	128.6
01-1	Fresh and dried fruits and vegetables.....	120.1	103.6	115.8	127.1	126.3	124.9	127.5	112.8	117.6	120.6	121.7	129.9	138.9	138.1
01-2	Grains.....	100.9	89.0	88.3	87.8	95.3	94.1	93.0	93.8	96.0	97.5	94.5	96.3	99.8	109.5
01-3	Livestock.....	118.3	119.1	120.9	121.0	124.7	132.2	139.6	136.7	133.8	139.8	146.4	152.4	148.1	144.9
01-4	Live poultry.....	100.3	102.8	93.5	92.3	87.2	94.3	105.4	107.6	94.1	96.3	102.9	118.4	106.8	112.3
01-5	Plant and animal fibers.....	92.8	95.2	96.3	97.3	102.5	109.5	113.2	114.3	122.1	130.1	127.3	125.4	120.6	108.4
01-6	Fluid milk.....	118.8	119.2	119.2	118.8	119.0	120.5	120.5	121.8	122.1	122.5	121.7	122.0	122.0	122.8
01-7	Eggs.....	100.8	107.8	92.4	88.5	114.4	92.6	91.9	107.7	87.2	90.6	91.9	92.0	99.3	114.9
01-8	Hay, hayseeds, and oilseeds.....	109.2	108.9	107.9	109.0	109.2	108.7	110.2	114.4	118.5	116.9	116.9	116.8	115.9	118.0
01-9	Other farm products.....	115.4	115.6	115.4	111.8	117.3	118.0	116.8	117.5	118.0	119.5	119.9	121.8	134.6	132.7
02	Processed foods and feeds.....	114.3	114.6	114.1	114.4	115.9	117.2	118.8	118.6	117.7	118.6	119.6	121.5	121.0	121.8
02-1	Cereal and bakery products.....	111.4	111.3	111.3	111.5	111.6	112.2	112.4	112.6	112.8	113.3	113.3	113.6	115.3	116.1
02-2	Meats, poultry, and fish.....	116.0	117.5	116.9	117.1	120.4	125.4	130.5	127.3	123.6	126.8	131.4	135.8	132.3	131.7
02-3	Dairy products.....	115.4	115.4	116.4	116.3	117.4	117.3	117.5	118.0	117.5	117.4	115.3	117.7	118.6	119.0
02-4	Processed fruits and vegetables.....	114.3	115.7	115.3	115.4	115.8	116.0	116.1	116.7	118.3	119.0	119.5	119.6	120.2	120.1
02-5	Sugar and confectionery.....	119.2	119.8	118.7	119.1	120.2	120.1	121.1	121.9	121.1	120.8	121.3	122.2	121.3	121.6
02-6	Beverages and beverage materials.....	115.8	116.0	116.4	116.6	116.4	116.4	116.8	116.7	117.2	117.2	117.8	117.9	118.9	119.1
02-7	Animal fats and oils.....	130.9	136.5	132.1	130.1	122.3	121.4	133.5	130.4	127.8	127.3	125.8	124.1	124.0	126.7
02-72	Crude vegetable oils.....	128.8	135.6	128.9	128.6	118.2	114.2	116.8	115.6	118.9	112.8	112.0	106.9	104.1	100.7
02-73	Refined vegetable oils.....	134.8	133.6	127.9	130.4	122.7	121.0	120.1	120.6	120.9	119.6	119.1	115.8	107.5	107.0
02-74	Vegetable oil end products.....	121.1	123.3	122.8	122.8	122.0	121.7	121.1	120.8	120.7	120.7	121.5	121.4	121.5	121.5
02-8	Miscellaneous processed foods.....	113.2	113.0	112.7	113.0	113.1	113.6	113.8	113.7	113.8	115.0	114.4	114.4	113.9	116.4
02-9	Manufactured animal feeds.....	104.4	101.3	98.7	100.3	104.5	103.8	103.7	108.5	108.5	108.4	107.7	110.9	111.7	117.8
	<b>INDUSTRIAL COMMODITIES</b>														
03	Textile products and apparel.....	108.6	109.7	109.6	109.8	110.6	111.3	112.0	112.1	112.6	113.3	113.6	114.0	114.1	114.3
03-1	Cotton products.....	110.6	112.2	112.2	112.5	113.6	116.7	118.0	119.6	120.5	121.5	122.6	123.0	122.8	123.6
03-2	Wool products.....	93.5	92.5	92.4	92.3	91.5	92.0	92.2	92.0	93.0	98.3	99.2	100.0	101.1	102.5
03-3	Manmade fiber textile products.....	100.8	103.1	102.5	103.2	104.3	105.4	105.9	106.1	107.2	108.0	108.6	108.9	108.7	108.6
03-5	Apparel.....	112.9	113.8	113.8	113.8	113.8	113.8	114.0	114.1	114.1	114.3	114.6	115.1	115.1	115.3
03-6	Textile housefurnishings.....	104.2	104.1	104.1	104.1	106.1	106.2	108.5	108.7	108.7	109.3	109.8	109.5	109.9	110.0
03-7	Miscellaneous textile products.....	117.2	119.8	120.8	121.2	136.2	137.4	141.6	130.9	131.1	129.8	125.8	122.6	121.4	120.4
04	Hides, skins, leather, and related products.....	114.0	114.7	114.7	115.1	116.2	117.8	119.1	123.0	127.2	129.5	130.9	131.6	134.6	135.7
04-1	Hides and skins.....	115.1	117.7	117.2	123.1	128.6	136.0	148.9	173.8	188.6	200.3	204.1	212.5	243.0	244.0
04-2	Leather.....	112.5	113.4	113.4	113.5	117.0	120.0	120.6	128.4	138.1	137.8	138.6	138.1	140.6	143.5
04-3	Footwear.....	116.8	117.1	117.1	117.1	117.1	118.1	118.5	120.1	122.4	124.6	125.8	126.5	126.5	126.8
04-4	Other leather and related products.....	108.3	109.0	109.0	109.1	109.8	110.6	111.2	111.9	113.7	115.3	116.7	116.5	118.7	120.4
05	Fuels and related products and power.....	114.2	115.3	114.8	114.7	115.0	116.0	116.1	116.5	116.9	117.5	118.2	118.6	119.7	120.3
05-1	Coal.....	181.8	182.9	182.9	182.9	190.2	192.7	192.6	192.6	191.2	191.2	191.2	191.2	191.5	192.2
05-2	Coke.....	148.7	150.5	150.5	150.5	150.5	150.5	150.5	155.0	155.3	155.3	155.3	155.3	155.3	
05-3	Gas fuels.....	108.0	108.4	108.8	108.8	107.9	110.0	110.2	110.9	112.5	113.0	112.9	113.2	114.3	116.7
05-4	Electric power.....	113.6	116.4	116.3	116.2	116.3	118.9	120.0	120.0	120.5	121.2	121.5	122.1	122.1	122.6
05-61	Crude petroleum.....	113.2	113.2	113.2	113.2	113.2	113.2	113.2	113.2	113.2	113.2	113.2	113.2	114.7	114.7
05-7	Petroleum products, refined.....	106.8	107.3	106.3	106.2	106.1	106.1	105.5	106.3	106.6	107.3	108.5	109.1	110.7	111.3
06	Chemicals and allied products.....	104.2	104.3	104.2	103.8	103.4	103.4	103.5	103.4	104.1	104.4	104.3	104.2	104.4	104.4
06-1	Industrial chemicals.....	102.0	102.4	102.4	101.7	101.1	101.4	101.0	101.5	101.4	101.4	101.5	101.3	101.3	101.3
06-21	Prepared paint.....	115.6	115.9	115.9	115.9	115.9	116.2	117.3	117.9	118.3	118.3	118.3	118.3	118.3	118.3
06-22	Paint materials.....	101.5	99.7	99.7	99.7	101.9	102.7	102.7	102.7	103.0	103.5	103.9	104.2	105.2	105.2
06-3	Drugs and pharmaceuticals.....	102.4	102.6	102.6	102.4	102.5	102.3	102.2	102.5	102.4	102.8	103.1	103.2	103.3	103.1
06-4	Fats and oils, inedible.....	133.5	132.9	129.0	125.3	115.9	111.3	110.7	103.5	112.2	116.0	115.9	113.2	121.4	116.4
06-5	Agricultural chemicals and chemical products.....	92.2	91.0	90.4	90.3	90.3	90.3	90.2	90.6	92.2	92.1	92.3	91.9	92.0	92.0
06-6	Plastic resins and materials.....	88.9	89.5	89.9	89.2	89.0	88.6	89.3	88.9	88.3	88.6	87.9	87.9	88.2	88.9
06-7	Other chemicals and allied products.....	112.1	112.4	112.5	112.5	112.4	112.4	112.5	112.7	113.5	114.1	113.8	113.3	113.5	113.8
07	Rubber and plastic products.....	109.2	109.7	109.5	109.5	109.4	109.5	109.2	108.9	108.7	108.8	108.9	109.2	109.5	109.5
07-1	Rubber and rubber products.....	112.2	113.7	113.3	113.3	113.3	113.4	113.0	112.9	112.9	113.0	113.3	113.8	114.3	114.3
07-11	Crude rubber.....	99.3	99.3	99.0	98.5	98.5	99.2	98.8	98.5	98.2	98.6	98.6	98.8	98.7	98.8
07-12	Tires and tubes.....	109.2	110.8	110.8	110.8	110.8	110.3	108.4	108.4	108.4	108.4	108.7	109.9	109.7	109.7
07-13	Miscellaneous rubber products.....	118.0	119.8	119.2	119.2	119.2	119.7	120.4	120.4	120.4	120.4	120.8	121.3	122.1	122.1
07-21	Plastic construction products <sup>3</sup> .....	94.7	94.7	94.6	94.1	93.8	93.7	93.8	93.6	93.6	93.3	93.5	93.3	93.3	93.3
07-22	Unsupported plastic film and sheeting <sup>4</sup> .....	101.1	100.0	100.0	100.1	100.0	100.0	99.9	98.9	98.4	98.5	98.1	98.2	98.3	98.3
07-23	Laminated plastic sheets, high pressure <sup>4</sup> .....	99.2	98.6	98.2	98.0	97.9	98.2	98.6	98.1	98.4	98.4	97.9	98.3	97.9	97.9
08	Lumber and wood products.....	127.0	134.3	131.8	131.3	132.7	134.9	137.7	139.5	141.1	142.7	144.2	146.1	148.1	148.5
08-1	Lumber.....	135.5	146.8	142.7	141.9	143.8	146.9	150.4	152.4	155.1	157.0	159.0	161.6	164.1	165.1
08-2	Millwork.....	120.7	123.7	123.7	123.7	124.3	124.9	125.5							



27. Continued—Wholesale Price Index,<sup>1</sup> by group and subgroup of commodities[1967 = 100 unless otherwise specified<sup>2</sup>]

Code	Commodity group	Annual average 1971	1971				1972								
			Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>INDUSTRIAL COMMODITIES—Continued</b>															
09	Pulp, paper, and allied products	110.1	110.6	110.6	110.6	110.7	110.8	111.6	112.3	112.8	113.2	113.5	113.7	114.1	114.3
09-1	Pulp, paper, and products, excluding building paper and board	110.4	110.8	110.9	110.9	111.0	111.1	111.9	112.5	113.1	113.4	113.8	114.0	114.4	114.6
09-11	Woodpulp	112.0	111.5	111.5	111.5	111.5	111.5	111.5	111.5	111.5	111.5	111.5	111.5	111.5	111.5
09-12	Wastepaper	111.9	114.5	117.2	117.2	124.6	124.9	126.6	129.3	131.0	130.5	137.7	137.7	138.9	139.2
09-13	Paper	114.1	114.7	114.7	114.7	114.7	114.9	115.3	115.7	115.9	115.9	116.2	116.7	116.7	116.7
09-14	Paperboard	102.4	102.8	102.9	102.9	102.7	102.7	103.5	103.6	105.6	105.8	106.0	106.0	106.0	106.5
09-15	Converted paper and paperboard products	109.7	110.2	110.1	110.1	110.1	110.3	111.4	112.2	112.7	113.3	113.5	113.7	114.3	114.6
09-2	Building paper and board	103.0	104.5	104.6	104.7	104.6	104.7	104.7	105.6	106.1	106.5	106.6	106.8	107.2	107.3
10	Metals and metal products	119.0	121.1	121.0	120.9	120.8	121.4	122.6	123.4	123.5	123.6	123.6	123.5	123.7	124.0
10-1	Iron and steel	121.8	125.6	125.5	125.3	125.3	126.8	128.2	128.3	128.3	128.3	128.1	128.3	128.6	128.8
10-13	Steel mill products	123.0	128.2	128.1	128.2	128.2	129.6	131.0	130.9	130.9	130.7	130.4	130.3	130.2	130.2
10-2	Nonferrous metals	116.0	116.5	116.3	116.0	114.9	114.4	115.0	117.2	117.6	117.8	117.6	116.8	116.8	117.4
10-3	Metal containers	121.7	124.2	124.2	124.2	124.2	124.2	127.1	127.1	127.3	127.3	128.8	129.9	130.9	131.1
10-4	Hardware	116.5	117.7	117.7	117.7	117.7	118.4	119.0	119.2	119.6	120.2	120.4	120.5	120.7	120.8
10-5	Plumbing fixtures and brass fittings	116.4	118.3	118.3	118.3	118.4	118.2	118.6	118.9	119.0	119.0	119.7	119.7	120.2	120.5
10-6	Heating equipment	115.5	116.7	116.3	116.5	116.3	115.9	116.2	117.0	117.9	118.1	118.6	119.0	119.2	119.2
10-7	Fabricated structural metal products	118.2	120.3	120.3	120.3	120.4	121.6	122.0	122.1	122.1	122.0	122.2	122.2	122.5	122.7
10-8	Miscellaneous metal products	119.0	119.9	119.7	119.7	120.9	121.3	123.2	124.1	124.3	124.4	124.4	124.2	124.7	124.7
11	Machinery and equipment	115.5	116.0	116.0	115.9	116.2	116.5	117.1	117.3	117.6	117.9	118.1	118.3	118.3	118.3
11-1	Agricultural machinery and equipment	117.2	117.5	117.5	117.5	118.6	119.9	121.5	122.0	122.1	122.3	122.7	122.7	122.8	122.6
11-2	Construction machinery and equipment	121.4	121.8	121.8	122.0	123.2	124.3	124.7	125.0	125.7	125.6	125.9	125.9	126.1	126.1
11-3	Metalworking machinery and equipment	117.3	118.0	118.1	118.2	118.4	118.5	118.9	119.4	119.7	120.0	120.2	120.5	120.8	121.0
11-4	General purpose machinery and equipment	119.1	120.2	120.2	120.2	120.5	120.8	121.2	121.5	121.9	122.2	122.7	122.9	123.0	123.0
11-6	Special industry machinery and equipment	120.9	121.7	122.0	122.0	122.1	122.6	123.1	123.0	123.4	123.5	123.7	123.9	124.0	124.0
11-7	Electrical machinery and equipment	109.5	109.7	109.6	109.3	109.3	109.5	110.0	110.1	110.2	110.5	110.6	110.7	110.6	110.6
11-9	Miscellaneous machinery	117.2	117.8	117.8	117.8	117.9	118.3	118.8	119.0	119.6	120.3	120.7	120.8	120.8	120.9
12	Furniture and household durables	109.9	110.2	110.2	110.2	110.2	110.2	110.8	110.9	111.0	111.1	111.2	111.4	111.7	112.0
12-1	Household furniture	114.8	115.6	115.6	115.4	115.5	116.0	116.7	116.8	116.9	117.1	117.2	117.4	117.8	117.7
12-2	Commercial furniture	118.1	118.2	118.2	118.2	118.2	118.3	118.3	118.7	119.2	119.4	119.5	119.8	119.8	121.1
12-3	Floor coverings	98.8	97.6	97.6	97.6	97.9	98.1	98.2	98.2	98.2	98.2	98.6	98.8	98.8	99.0
12-4	Household appliances	107.2	107.6	107.5	107.6	107.4	106.9	107.5	107.4	107.5	107.2	107.1	107.3	107.7	108.1
12-5	Home electronic equipment	93.8	93.8	93.8	93.4	93.4	93.3	92.9	93.0	92.8	92.9	92.6	92.4	92.4	92.9
12-6	Other household durable goods	120.9	122.1	121.9	122.0	122.1	122.3	124.1	124.5	124.5	125.0	125.4	126.4	126.8	127.0
13	Nonmetallic mineral products	122.4	124.2	124.1	124.0	124.2	124.3	124.6	124.8	125.6	125.9	125.8	126.2	126.7	126.9
13-11	Flat glass	123.9	124.3	124.3	123.2	123.2	123.6	123.6	122.4	121.1	121.5	121.1	121.8	122.8	122.8
13-2	Concrete ingredients	121.9	124.1	124.1	124.3	124.2	124.4	124.6	124.6	126.4	126.7	126.8	126.9	128.1	128.3
13-3	Concrete products	120.6	122.6	122.6	122.6	122.9	123.4	123.8	124.5	125.1	125.1	125.3	126.0	126.1	126.3
13-4	Structural clay products excluding refractories	114.2	114.9	114.9	114.9	114.9	114.8	116.1	116.2	117.2	117.2	117.4	117.5	117.5	117.5
13-5	Refractories	126.9	126.9	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	129.6	132.1
13-6	Asphalt roofing	125.5	131.2	131.2	131.2	131.2	131.2	131.2	131.2	131.2	131.2	131.2	131.2	131.2	131.2
13-7	Gypsum products	106.8	114.5	113.6	112.1	114.1	113.4	112.8	115.3	114.9	113.4	113.9	115.7	116.1	115.2
13-8	Glass containers	131.6	131.5	131.5	131.5	131.5	131.5	131.5	131.5	136.2	136.2	136.2	136.4	136.4	136.4
13-9	Other nonmetallic minerals	124.1	125.7	125.7	125.6	125.6	125.7	125.9	126.4	126.4	128.4	127.4	127.1	127.1	127.3
14	Transportation equipment <sup>3</sup>	110.3	109.6	110.7	110.8	112.9	113.4	113.6	113.6	113.7	113.8	114.2	114.1	114.2	114.2
14-1	Motor vehicles and equipment	114.7	113.8	115.2	115.3	117.5	117.9	118.0	118.0	118.0	118.1	118.5	118.4	118.5	118.5
14-4	Railroad equipment	121.1	122.5	122.5	122.5	122.6	123.7	123.9	127.3	128.4	129.6	129.6	130.2	130.2	130.2
15	Miscellaneous products	112.8	113.0	113.0	113.1	113.2	113.7	114.0	114.2	114.1	114.1	114.2	114.9	115.1	115.2
15-1	Toys, sporting goods, small arms, ammunition	112.6	112.6	112.6	112.8	113.1	113.5	114.0	114.5	114.0	114.1	114.4	114.5	114.5	114.8
15-2	Tobacco products	116.7	116.8	116.8	116.8	116.7	117.4	117.4	117.4	117.4	117.5	117.5	117.5	117.5	117.5
15-3	Notions	111.6	111.7	111.7	111.7	111.7	111.7	111.7	111.7	111.7	111.7	111.7	111.7	111.7	112.9
15-4	Photographic equipment and supplies	106.1	106.3	106.3	106.5	106.5	106.4	106.7	106.9	106.2	106.2	106.2	106.3	107.0	107.0
15-9	Other miscellaneous products	112.3	112.9	112.9	112.9	113.0	113.9	114.4	114.5	115.0	114.9	115.2	117.4	117.6	117.6

<sup>1</sup> As of January 1967, the index incorporated a revised weighting structure reflecting 1963 values of shipments. Changes also were made in the classification structure, and titles and composition of some indexes were changed. Titles and indexes in this table conform with the revised classification structure, and may differ from data previously published. See Wholesale Prices and Price Indexes, January 1967 (final) and February 1967 (final) for a description of the changes.

<sup>2</sup> As of January 1971 the indexes were converted from the former base of 1957-59 = 100 to the new base of 1967 = 100. Technical details and earlier data on the 1967 base furnished upon request to the Bureau.

<sup>3</sup> December 1969 = 100.

<sup>4</sup> December 1970 = 100.

<sup>5</sup> December 1968 = 100.

° = corrected.

NOTE: For a description of the general method of computing the monthly Wholesale Price Index, see BLS Handbook of Methods (BLS Bulletin 1711, 1971), Chapter 11.

28. Wholesale Price Index for special commodity groupings<sup>1</sup>[1967 = 100 unless otherwise specified<sup>2</sup>]

Commodity group	Annual average 1971	1971				1972								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
All commodities—less farm products.....	114.0	114.9	114.8	114.8	115.4	116.1	116.9	117.1	117.3	117.8	118.2	118.7	118.9	119.3
All foods.....	115.5	115.1	115.3	116.3	118.1	118.9	120.8	119.3	118.0	119.4	120.7	123.4	123.3	123.9
Processed foods.....	115.6	116.4	116.1	116.2	117.5	119.2	121.2	120.3	119.1	120.2	121.5	123.5	122.7	122.9
Textile products, excluding hard and bast fiber products.....	103.7	105.0	104.7	105.1	106.1	107.6	108.7	109.1	110.0	111.4	112.2	112.5	112.6	113.0
Hosiery.....	95.6	95.5	95.5	95.5	96.0	96.0	96.0	96.0	96.0	96.4	96.2	96.1	96.2	96.2
Underwear and nightwear.....	108.1	108.4	108.4	108.4	108.4	108.7	109.6	109.6	109.6	109.8	110.0	110.1	110.2	110.3
Refined petroleum products.....	106.8	107.3	106.3	106.2	106.1	106.1	105.5	106.3	106.6	107.3	108.5	109.1	110.7	111.3
East Coast.....	120.0	120.8	120.4	119.2	119.2	119.2	119.9	119.9	119.9	119.9	119.9	119.9	119.9	119.9
Mid-Continent.....	103.3	103.1	101.6	101.6	101.6	101.6	100.2	100.2	103.1	103.1	103.1	103.1	103.1	103.1
Gulf Coast.....	100.0	100.7	98.4	98.4	98.4	98.4	98.4	99.2	99.2	99.2	102.3	103.8	107.2	108.7
Pacific Coast.....	112.7	113.3	113.8	113.8	112.7	113.3	114.1	113.3	113.3	113.3	113.3	113.3	114.3	114.3
Midwest.....	112.5	113.1	113.1	113.1	113.1	113.1	113.1	112.8	112.8	112.8	113.0	113.0	113.1	113.1
Chemicals and allied products, including synthetic rubber and manmade fibers and yarns <sup>3</sup> .....	103.2	103.3	103.3	103.0	102.9	103.0	103.2	103.2	103.7	103.9	103.8	103.7	103.8	103.9
Pharmaceutical preparations.....	102.2	102.5	102.5	102.3	102.4	102.2	102.1	102.5	102.4	102.8	103.1	103.2	103.1	103.1
Lumber and wood products, excluding millwork and other wood products <sup>4</sup> .....	130.1	139.7	135.9	135.3	137.2	140.1	143.9	146.4	148.4	150.2	152.1	154.3	156.9	157.3
Special metals and metal products <sup>5</sup> .....	117.6	118.7	119.0	119.0	119.7	120.3	121.1	121.6	121.7	121.8	121.9	121.8	122.0	122.2
Fabricated metal products <sup>6</sup> .....	118.4	120.0	119.9	119.9	120.4	121.0	122.2	122.7	122.8	122.9	123.2	123.3	123.7	123.8
Copper and copper products <sup>7</sup> .....	116.6	117.0	116.7	116.0	114.0	115.0	116.3	120.1	119.9	119.4	118.8	116.9	116.8	117.4
Machinery and motive products.....	115.3	115.3	115.8	115.8	116.7	117.2	117.6	117.7	117.9	118.2	118.5	118.5	118.6	118.6
Machinery and equipment, except electrical.....	118.9	119.6	119.6	119.7	120.1	120.6	121.1	121.4	121.8	122.1	122.4	122.6	122.7	122.8
Agricultural machinery, including tractors.....	117.3	117.7	117.7	117.7	118.9	120.4	122.1	122.6	122.7	122.8	123.2	123.2	123.3	123.0
Metalworking machinery.....	118.6	119.2	119.3	119.5	119.8	119.9	120.3	120.8	121.2	121.5	121.6	121.9	122.2	122.5
Numerically controlled machine tools (Dec. 1971 = 100).....					100.0	100.0	100.5	100.6	101.5	102.3	102.3	102.3	102.3	102.5
Total tractors.....	120.7	120.8	120.8	120.8	122.5	124.1	124.6	125.0	125.4	125.6	125.7	125.7	125.7	125.8
Industrial valves.....	116.3	118.6	118.6	119.1	119.1	119.1	120.2	120.2	120.2	120.5	121.3	121.3	121.4	121.5
Industrial fittings.....	122.4	122.6	122.6	122.6	123.0	123.8	123.1	123.1	124.2	124.2	121.9	121.3	121.0	119.2
Abrasive grinding wheels.....	122.1	123.5	123.5	123.5	123.5	123.5	123.8	126.5	126.8	126.8	126.8	126.8	126.8	126.8
Construction materials.....	119.5	123.0	122.2	122.0	122.4	123.2	124.2	124.9	125.7	126.2	126.6	127.2	127.8	128.0

<sup>1</sup> As of January 1967, the index incorporated a revised weighting structure reflecting 1963 values of shipments. Changes were also made in the classification structure, and titles and composition of some indexes were changed. Titles and indexes in this table conform with the revised classification structure, and may differ from data previously published. See Wholesale Prices and Price Indexes, January 1967 (final) and February 1967 (final) for a description of the changes.

<sup>2</sup> As of January 1971 the indexes were converted from the former base of 1957-59 = 100 to the new base of 1967 = 100. Technical details and earlier data on the 1967

base furnished upon request to the Bureau.

<sup>3</sup> Introduced in February 1971.

<sup>4</sup> Formerly titled "Lumber and wood products, excluding millwork."

<sup>5</sup> Metals and metal products, agricultural machinery and equipment, and motor vehicles and equipment.

<sup>6</sup> Introduced in July 1972. See Wholesale Prices in Price Indexes, July 1972 for a description.

<sup>7</sup> Formerly titled "Copper and copper base metals."

<sup>8</sup> = corrected.

29. Wholesale Price Index,<sup>1</sup> by durability of product[1967 = 100<sup>2</sup>]

Commodity group	Annual average 1971	1971				1972								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
All commodities.....	113.9	114.5	114.4	114.5	115.4	116.3	117.3	117.4	117.5	118.2	118.8	119.7	119.9	120.2
Total durable goods.....	117.0	118.2	118.2	118.1	118.6	119.2	120.0	120.4	120.7	121.0	121.2	121.4	121.6	121.8
Total nondurable goods.....	111.7	111.7	111.6	111.8	113.0	114.1	115.3	115.2	115.1	116.2	117.0	118.5	118.6	119.1
Total manufactures.....	113.8	114.7	114.5	114.5	115.1	115.7	116.5	116.7	116.9	117.4	117.8	118.3	118.5	118.8
Durable.....	117.0	118.3	118.3	118.3	118.8	119.3	120.0	120.4	120.8	121.0	121.3	121.5	121.7	121.9
Nondurable.....	110.5	111.0	110.6	110.7	111.3	112.0	112.8	112.9	112.9	113.6	114.3	115.1	115.1	115.6
Total raw or slightly processed goods.....	114.4	113.2	113.8	114.3	116.8	118.9	120.9	120.7	120.4	122.4	123.3	126.3	126.9	127.4
Durable.....	112.2	111.1	110.4	108.9	107.4	110.3	113.1	116.2	115.0	115.0	114.1	114.2	115.3	115.7
Nondurable.....	114.6	113.4	114.0	114.6	117.3	119.3	121.3	121.0	120.7	122.7	123.8	127.0	127.5	128.1

<sup>1</sup> As of January 1967, the index incorporated a revised weighting structure reflecting 1963 values of shipments. Changes were also made in the classification structure, and titles and composition of some indexes were changed. Titles and indexes in this table conform with the revised classification structure and may differ from data previously published. See Wholesale Prices and Price Indexes, January 1967 (final) and February 1967 (final) for a description of the changes.

<sup>2</sup> As of January 1971 the indexes were converted from the former base of 1957-59 = 100 to the new base of 1967 = 100. Technical details and earlier data on the 1967 base furnished upon request to the Bureau.

NOTE: For a description of the series by durability of product and data beginning with 1947, see Wholesale Prices and Price Indexes, 1957 (BLS Bulletin 1235, 1958).

30. Wholesale Price Index,<sup>1</sup> by stage of processing[1967 = 100<sup>2</sup>]

Commodity group	Annual average 1971	1971				1972								
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
All commodities.....	113.9	114.5	114.4	114.5	115.4	116.3	117.3	117.4	117.5	118.2	118.8	119.7	119.9	120.2
Crude materials for further processing.....	115.0	113.9	114.3	114.3	117.0	120.2	123.1	123.1	123.0	125.5	127.2	130.1	130.3	130.3
<b>RAW MATERIALS</b>														
Foodstuffs and feedstuffs.....	114.2	112.1	112.6	112.7	115.8	119.3	122.9	122.0	121.0	124.0	126.7	131.2	130.7	131.4
Nonfood materials except fuel.....	110.5	111.1	111.1	111.1	112.8	115.4	117.3	119.5	121.3	123.2	122.7	122.6	124.2	122.2
Manufacturing.....	109.7	110.3	110.3	110.2	112.2	115.1	117.1	119.5	121.5	123.5	123.0	122.8	124.6	122.4
Construction.....	119.1	120.3	120.3	120.5	120.4	120.7	120.9	121.0	121.2	121.5	121.5	121.5	122.1	122.1
Crude fuel.....	138.5	140.3	140.6	140.6	142.7	145.4	145.6	146.2	146.9	147.3	147.2	147.5	148.5	149.1
Manufacturing industries.....	129.6	131.4	131.8	131.8	132.8	135.5	135.7	136.5	137.6	138.1	138.0	138.4	139.5	140.1
Nonmanufacturing industries.....	150.4	152.0	152.2	152.2	155.7	158.4	158.6	159.0	159.1	159.4	159.4	159.6	160.4	160.9
<b>INTERMEDIATE MATERIALS</b>														
Intermediate materials: Supplies and components.....	114.0	115.4	115.0	115.0	115.4	115.9	116.7	117.2	117.7	118.2	118.5	118.8	119.2	119.7
Materials and components for manufacturing.....	113.0	114.4	114.2	114.2	114.4	114.9	115.7	115.9	116.4	116.9	117.1	117.3	117.5	117.7
Materials for food manufacturing.....	116.2	117.1	116.6	116.8	117.3	117.9	119.4	118.6	117.8	118.5	119.2	120.1	119.8	120.3
Materials for nondurable manufacturing.....	105.6	106.2	105.9	105.9	106.3	107.0	107.4	107.5	108.7	109.3	109.6	109.7	110.0	110.2
Materials for durable manufacturing.....	118.8	121.6	121.4	121.2	121.0	121.5	122.7	123.3	123.7	123.9	123.8	123.8	124.3	124.6
Components for manufacturing.....	114.7	115.6	115.4	115.6	115.8	116.0	116.5	116.6	117.0	117.6	118.0	118.1	118.2	118.1
Materials and components for construction.....	119.5	122.5	121.9	121.8	122.3	123.1	124.2	124.9	125.5	125.9	126.3	126.7	127.2	127.4
Processed fuels and lubricants.....	113.4	115.3	114.6	114.4	114.3	116.0	116.8	116.9	117.3	118.1	118.7	119.3	119.8	120.7
Manufacturing industries.....	115.2	117.5	117.2	117.0	117.0	119.2	120.4	120.4	120.8	121.7	122.0	122.5	122.5	123.4
Nonmanufacturing industries.....	110.6	111.9	110.6	110.4	110.1	111.0	111.1	111.5	111.9	112.6	113.7	114.4	115.6	116.7
Containers.....	116.6	117.6	117.6	117.6	117.6	117.8	119.5	120.0	121.2	121.3	122.0	122.4	123.1	123.4
Supplies.....	110.9	110.3	109.6	110.1	111.1	111.0	111.4	112.8	113.0	113.3	113.4	114.4	114.9	116.7
Manufacturing industries.....	113.1	113.2	113.2	113.2	113.2	113.2	113.9	114.2	114.5	114.8	114.9	115.0	115.5	115.9
Nonmanufacturing industries.....	109.9	109.0	107.9	108.6	110.2	110.1	110.3	112.3	112.4	112.8	112.8	114.2	114.7	117.2
Manufactured animal feeds.....	104.3	100.8	97.9	99.8	104.4	103.6	103.3	108.3	108.1	108.1	107.3	110.7	111.4	118.1
Other supplies.....	112.6	113.0	113.0	113.0	113.0	113.2	113.8	114.1	114.3	115.0	115.5	115.8	116.1	116.4
<b>FINISHED GOODS</b>														
Finished goods (including raw foods and fuels).....	113.5	113.6	113.8	114.0	115.0	115.5	116.3	116.1	115.8	116.4	116.9	117.8	117.9	118.2
Consumer goods.....	112.7	112.7	112.9	113.1	114.2	114.7	115.6	115.2	114.8	115.5	116.1	117.3	117.4	117.7
Foods.....	115.2	114.9	115.0	115.7	117.7	118.7	120.6	119.4	118.0	119.5	120.7	123.3	123.1	123.6
Crude.....	115.8	109.6	112.2	116.1	121.5	117.4	117.9	115.7	113.4	115.1	115.6	121.2	124.5	127.6
Processed.....	115.0	115.8	115.5	115.6	117.0	118.8	121.0	120.0	118.7	120.2	121.6	123.6	122.8	122.9
Other nondurable goods.....	111.3	111.9	111.7	111.7	111.8	112.0	112.1	112.4	112.7	113.1	113.5	113.8	114.2	114.5
Durable goods.....	110.9	110.4	111.3	111.3	112.6	112.9	113.2	113.1	113.2	113.1	113.2	113.5	113.6	113.7
Producer finished goods.....	116.6	116.9	117.1	117.0	117.8	118.4	118.8	119.0	119.3	119.4	119.6	119.7	119.8	119.9
Manufacturing industries.....	117.3	117.8	117.9	117.8	118.2	118.7	119.1	119.2	119.5	119.6	119.8	120.0	120.1	120.2
Nonmanufacturing industries.....	116.0	116.0	116.3	116.3	117.4	118.1	118.4	118.8	118.9	119.1	119.4	119.4	119.5	119.5
<b>SPECIAL GROUPINGS</b>														
Crude materials for further processing, excluding crude foodstuffs and feedstuffs, plant and animal fibers oilseeds, and leaf tobacco.....	122.7	123.0	122.9	122.6	123.4	125.6	127.0	129.1	129.3	129.9	129.8	130.2	132.3	132.6
Intermediate materials, supplies and components excluding intermediate materials for food manufacturing and manufactured animal feeds.....	114.3	115.9	115.7	115.6	115.8	116.4	117.2	117.6	118.2	118.6	119.0	119.2	119.5	119.8
Consumer finished goods, excluding consumer foods.....	111.2	111.3	111.6	111.6	112.1	112.3	112.5	112.7	112.9	113.1	113.4	113.7	114.0	114.2

<sup>1</sup> As of January 1967, the index incorporated a revised weighting structure reflecting 1963 values of shipments. Changes were also made in the classification structure, and titles and composition of some indexes were changed. Titles and indexes in this table conform with the revised classification structure, and may differ from data previously published. See Wholesale Prices and Price Indexes, January 1967 (final) and February 1967 (final) for a description of the changes.

<sup>2</sup> As of January 1971 the indexes were converted from the former base of 1957-59 = 100 to the new base of 1967 = 100. Technical details and earlier data on the 1967 base furnished upon request to the Bureau.

NOTE: For a description of the series by stage of processing see Wholesale Prices and Price Indexes, January 1967 (final) and February 1967 (final).



31. Industry-sector price indexes for the output of selected industries <sup>1</sup>[1967 = 100 unless otherwise specified<sup>2</sup>]

1963 SIC code	Industry	Annual average 1971	1971				1972									
			Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
<b>MINING</b>																
1111	Anthracite.....	144.9	145.6	144.7	144.7	144.7	146.4	146.4	146.4	146.4	146.4	146.4	146.4	146.4	150.5	159.1
1211	Bituminous coal.....	185.0	186.1	186.2	186.2	186.2	194.1	196.6	196.6	196.6	195.0	195.0	195.0	195.0	195.0	195.0
1311	Crude petroleum and natural gas.....	113.0	113.5	113.6	113.6	113.3	113.9	114.0	114.2	114.6	114.8	114.8	114.8	114.8	116.3	116.5
1421	Crushed and broken stone.....	117.7	118.5	118.5	118.8	118.8	119.1	119.4	119.4	119.4	119.7	120.1	120.1	120.1	120.8	120.8
1442	Construction sand and gravel.....	120.6	122.3	122.3	122.3	122.2	122.5	122.5	122.7	122.8	123.0	123.1	123.2	123.4	123.5	123.5
1475	Phosphate rock.....	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8
1476	Rock salt.....	118.3	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4
1477	Sulfur.....	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8
<b>MANUFACTURING</b>																
2011	Meat slaughtering plants.....	115.6	117.5	117.1	117.1	120.8	125.4	130.6	126.0	123.0	128.0	133.4	136.6	133.6	131.6	131.6
2013	Meat processing plants.....	110.7	110.2	112.0	112.4	114.9	117.4	124.5	124.0	122.1	123.5	125.2	128.6	130.5	131.7	131.7
2015	Poultry dressing plants.....	111.0	113.0	106.0	104.9	100.8	106.8	114.1	115.3	104.9	107.6	113.0	124.4	115.7	119.6	119.6
2021	Creamery butter.....	113.1	113.5	113.6	113.6	114.2	113.9	114.0	113.8	113.7	113.5	113.5	113.6	116.3	117.1	117.1
2033	Canned fruits and vegetables.....	111.7	113.0	112.5	112.6	113.0	113.3	112.9	113.6	114.6	114.9	115.6	115.5	116.5	116.5	116.5
2036	Fresh or frozen packaged fish.....	141.2	145.3	145.3	150.0	158.1	165.3	167.9	166.0	173.2	167.9	164.1	165.8	162.1	164.5	164.5
2041	Flour and other grain mill products (12/71=100).....						98.4	97.8	99.5	98.7	97.9	97.7	97.7	102.6	107.5	107.5
2042	Prepared animal feeds (12/71=100).....						100.5	100.2	101.7	101.9	102.2	101.6	102.8	103.7	106.4	106.4
2044	Rice milling.....	98.9	99.3	99.3	99.3	100.5	100.5	100.5	100.5	100.5	103.1	103.1	103.1	103.1	112.5	112.5
2052	Biscuits, crackers and cookies.....	119.3	119.6	119.6	119.6	119.6	119.6	120.6	122.2	123.0	123.1	121.2	122.2	126.0	121.3	121.3
2061	Raw cane sugar.....	116.9	116.7	116.7	118.1	121.3	126.7	123.5	126.1	123.6	119.5	120.9	125.0	128.2	128.9	128.9
2062	Cane sugar refining.....	118.3	119.4	119.4	119.6	120.0	120.9	123.0	123.6	125.4	124.9	125.1	125.5	125.7	126.8	126.8
2063	Beet sugar.....	116.8	117.0	117.0	117.0	117.3	118.0	119.7	120.2	121.2	120.8	120.9	121.5	121.8	121.9	121.9
2073	Chewing gum.....	123.6	126.2	126.2	126.2	126.2	125.9	125.9	125.9	125.9	125.9	125.9	125.9	126.0	126.0	126.0
2082	Malt liquors.....	110.2	110.2	110.2	110.9	110.6	110.7	110.9	110.4	110.7	110.6	110.7	110.7	110.8	110.8	110.8
2083	Malt.....	98.5	98.9	98.9	98.9	94.2	94.2	94.2	94.2	94.2	94.2	94.2	94.2	94.2	94.2	94.2
2084	Wines and brandy.....	117.0	120.4	120.5	120.5	119.4	119.7	125.0	125.1	125.2	125.2	125.3	126.1	126.1	126.1	126.1
2091	Cottonseed oil mills.....	111.4	118.1	105.2	104.9	108.5	106.7	106.4	106.4	104.9	103.6	102.7	107.2	107.1	113.8	113.8
2092	Soybean oil mills.....	111.4	109.2	110.3	110.9	111.3	109.6	112.7	120.0	123.1	121.8	120.0	125.7	122.5	129.7	129.7
2094	Animal and marine fats and oils.....	125.7	125.4	122.6	122.3	114.0	113.1	115.7	117.0	125.6	129.1	128.9	128.3	133.9	135.2	135.2
2096	Shortening and cooking oils.....	121.0	123.3	122.4	122.2	121.1	120.6	120.2	119.8	119.8	119.8	120.5	120.3	120.2	120.2	120.2
2098	Macaroni and noodle products.....	106.3	106.5	105.8	105.8	105.8	105.8	105.8	105.9	106.0	106.2	106.2	106.2	106.1	106.1	106.1
2111	Cigarettes.....	117.4	117.3	117.3	117.3	117.3	118.2	118.2	118.2	118.2	118.2	118.2	118.2	118.2	118.2	118.2
2121	Cigars.....	108.1	109.6	109.6	109.6	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.1	103.1	109.1	109.1
2131	Chewing and smoking tobacco.....	125.0	125.1	125.1	125.1	125.1	125.1	125.1	125.1	125.1	125.1	125.8	125.8	125.8	125.8	125.8
2254	Knit underwear mills.....	107.8	108.3	108.2	108.3	108.2	108.7	109.8	109.8	109.8	110.1	110.2	110.3	110.3	110.3	110.3
2272	Tufted carpets and rugs.....	96.0	94.2	94.2	94.2	94.5	94.8	95.1	94.9	94.9	94.9	95.5	95.8	95.8	96.1	96.1
2281	Yarn mills, except wool (12/71=100).....						101.0	102.5	103.1	104.2	105.4	106.2	106.6	106.5	106.0	106.0
2311	Men's and boys' suits and coats.....	128.0	131.0	131.2	131.3	131.3	131.5	131.3	131.2	131.0	131.3	131.8	132.7	132.7	133.6	133.6
2321	Men's dress shirts and nightwear.....	111.9	112.4	112.4	111.4	111.1	111.5	111.7	111.9	112.0	112.0	112.3	112.7	112.7	112.9	112.9
2322	Men's and boys' underwear.....	110.3	110.6	110.6	110.5	110.5	111.0	111.7	111.8	111.8	112.0	112.1	112.1	112.1	112.6	112.6
2327	Men's and boys' separate trousers.....	110.6	111.0	111.0	111.0	111.0	110.7	111.0	111.0	108.3	108.4	108.1	107.1	107.1	107.2	107.2
2328	Work clothing.....	113.7	114.6	114.6	114.6	114.9	115.0	115.1	116.3	116.9	117.1	117.1	117.1	118.0	118.0	118.0
2337	Women's suits, coats and skirts (12/71=100).....						100.0	100.0	100.0	100.0	100.0	100.0	100.5	100.5	100.5	100.5
2381	Fabric dress and work gloves.....	111.8	111.8	111.8	111.5	111.5	113.2	113.6	115.0	118.7	120.1	121.5	122.3	122.5	122.8	122.8
2421	Sawmills and planing mills (12/71=100).....						102.2	104.8	106.4	108.2	109.5	111.0	112.7	114.5	115.0	115.0
2426	Hardwood dimension and flooring.....	115.5	118.5	118.2	118.2	119.4	120.6	120.8	121.9	124.9	125.6	127.0	127.6	128.3	128.7	128.7
2431	Millwork plants (12/71=100).....						100.5	100.6	101.3	102.2	103.2	104.1	104.6	104.7	105.0	105.0
2432	Veneer and plywood plants (12/71=100).....						102.3	106.8	110.5	110.7	112.2	113.6	115.0	116.8	115.7	115.7
2442	Wirebound boxes and crates (12/67=100).....	117.6	117.9	117.9	118.3	118.5	119.8	120.1	120.5	121.6	122.3	123.9	123.9	126.5	126.5	126.5
2511	Wood furniture, not upholstered (12/71=100).....						100.7	101.4	101.7	101.7	101.8	101.9	102.0	102.3	102.2	102.2
2512	Wood furniture upholstered (12/71=100).....						100.3	100.6	100.2	100.6	100.6	100.6	101.2	101.6	101.5	101.5
2515	Mattresses and bedsprings.....	108.8	109.0	109.0	109.0	109.0	108.9	109.6	109.6	110.9	110.9	111.0	111.0	111.6	111.3	111.3
2521	Wood office furniture.....	117.1	117.3	117.3	117.5	117.5	117.5	117.5	117.9	118.5	118.9	119.1	119.1	119.1	121.6	121.6
2647	Sanitary paper products.....	119.1	119.5	119.5	119.5	119.5	119.5	119.6	119.6	120.1	121.1	121.1	121.1	121.2	121.2	121.2
2654	Sanitary food containers.....	106.0	106.2	106.2	106.2	106.2	106.2	106.3	106.4	107.2	107.6	107.7	107.7	107.2	107.2	107.2
2819	Inorganic chemicals, nec. (12/71=100).....						100.1	100.2	100.2	101.5	101.7	101.7	101.5	101.9	102.0	102.0
2822	Synthetic rubber.....	99.9	99.9	99.9	99.7	99.7	99.7	99.7	99.7	99.7	99.9	100.0	100.2	100.2	100.2	100.2
2823	Cellulosic man-made fibers.....	102.5	102.8	102.9	102.7	103.7	104.3	104.8	105.9	105.9	106.0	106.0	106.0	106.5	107.2	107.2
2824	Organic fibers, noncellulosic.....	98.0	98.0	98.0	98.0	98.0	98.0	98.1	98.1	98.1	98.1	98.1	98.1	97.8	97.9	97.9
2834	Pharmaceutical preparations (12/71=100).....						99.9	99.8	100.1	100.0	100.4	100.6	100.7	100.6	100.5	100.5
2841	Soap and other detergents (12/71=100).....						100.0	100.0	100.0	100.0	100.2	100.1	100.1	100.2	100.2	100.2
2844	Toilet preparations (12/71=100).....						100.0	100.1	99.8	100.0	99.7	99.7	99.9	98.1	98.1	98.1
2871	Fertilizers.....	91.8	89.7	89.8	89.8	89.7	89.7	89.5	90.2	90.6	90.5	90.6	90.6	90.4	90.4	90.4

See footnotes at end of table.

31. Continued—Industry-sector price indexes for the output of selected industries <sup>1</sup>[1967 = 100 unless otherwise specified<sup>2</sup>]

1963 SIC code	Industry	Annual average 1971	1971				1972								
			Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>MANUFACTURING—Continued</b>															
2872	Fertilizers, mixing only.....	102.5	102.4	102.5	102.4	102.3	102.3	101.5	102.9	103.3	103.1	103.3	103.3	102.9	103.0
2892	Explosives.....	112.8	112.8	112.8	112.8	112.7	112.7	112.7	112.9	113.1	114.6	114.9	114.4	114.4	115.2
2911	Petroleum refining.....	105.7	106.3	105.3	105.2	105.0	105.1	104.5	105.2	105.6	105.9	107.1	107.7	109.1	109.7
3021	Rubber footwear (12/71=100).....						102.9	106.7	106.7	106.8	106.8	106.9	106.9	106.9	107.0
3111	Leather tanning and finishing.....	113.0	113.9	114.0	114.0	117.5	120.4	121.1	129.0	139.0	138.7	139.5	138.9	141.4	144.4
3121	Industrial leather belting.....	125.5	125.6	125.6	126.3	126.3	125.6	126.6	125.8	126.9	127.0	136.8	136.2	137.2	136.2
3141	Shoes, except rubber (12/71=100).....						100.7	101.1	102.6	104.7	106.7	107.6	108.2	108.2	108.4
3211	Flat glass (12/71=100).....						100.0	100.0	99.5	99.0	98.9	98.8	98.9	99.4	99.4
3221	Glass containers.....	131.5	131.4	131.4	131.4	131.4	131.4	131.4	131.4	136.1	136.1	136.1	136.3	136.3	136.3
3241	Cement, hydraulic.....	124.6	127.8	127.8	127.8	127.8	127.8	128.1	128.1	131.5	131.8	131.9	132.1	134.0	134.2
3251	Brick and structural clay tile.....	119.1	120.0	120.0	120.0	120.0	119.9	122.5	122.7	123.2	123.3	123.5	123.5	123.5	123.5
3255	Clay refractories.....	128.7	128.7	128.9	128.9	128.9	128.9	128.9	128.9	128.9	128.9	128.9	128.9	131.5	133.5
3259	Structural clay products nec.....	109.2	110.0	110.0	109.9	109.9	109.9	109.9	109.9	109.9	109.9	109.9	110.5	110.5	110.5
3261	Vitreous plumbing fixtures.....	112.1	114.6	114.8	114.4	114.7	113.9	114.4	114.9	115.3	115.3	116.0	116.2	116.3	116.3
3262	Vitreous china food utensils.....	132.4	133.4	133.4	133.4	133.4	133.4	135.8	137.9	137.9	137.9	137.9	140.2	140.2	140.2
3263	Fine earthenware food utensils.....	125.5	131.1	131.1	131.1	131.1	134.6	134.8	140.3	140.3	140.3	140.3	140.4	140.4	140.4
3271	Concrete block and brick.....	118.4	119.1	119.1	119.1	119.1	120.0	120.5	120.8	122.0	122.5	122.9	123.8	124.1	124.1
3273	Ready mixed concrete.....	122.5	124.6	124.6	124.6	124.9	125.3	125.8	126.7	127.3	127.3	127.4	128.1	128.0	128.3
3275	Gypsum products.....	107.0	114.5	113.7	112.3	114.1	113.4	113.0	115.3	114.9	113.6	114.0	115.7	116.1	115.3
3291	Abrasive products (12/71=100).....						100.0	100.3	101.3	101.9	102.1	102.2	102.5	102.9	113.0
3312	Blast furnace and steel mills.....	123.4	128.3	128.3	128.3	128.3	129.6	130.9	130.9	130.9	131.0	130.6	130.6	130.6	130.6
3315	Steel wire drawing, etc.....	120.2	125.3	125.2	125.7	125.7	127.1	127.6	127.7	127.9	127.9	128.2	128.2	128.2	128.2
3316	Cold finishing of steel shapes.....	124.1	128.9	128.9	128.9	128.9	127.9	132.4	132.4	132.1	130.7	129.9	129.9	129.7	129.7
3317	Steel pipe and tube.....	121.9	128.4	128.2	128.2	128.2	128.6	128.5	128.7	129.2	129.2	129.2	129.4	129.4	129.4
3321	Gray iron foundries (12/68=100).....	115.1	116.2	116.3	116.4	116.4	116.1	116.7	116.9	116.8	116.9	117.7	117.9	118.3	119.1
3333	Primary zinc.....	113.3	118.8	118.8	118.8	118.8	119.0	119.1	119.2	122.3	126.1	126.0	126.1	126.1	126.1
3334	Primary aluminum.....	115.9	115.9	115.9	115.9	115.9	101.5	99.2	95.9	95.9	95.9	95.9	96.3	96.3	96.1
3339	Primary nonferrous metals, nec.....	112.8	106.5	104.9	105.1	107.2	110.4	112.2	114.2	115.4	117.8	120.4	123.6	126.8	126.8
3341	Secondary nonferrous metals (12/71=100).....						96.3	96.0	99.7	100.5	100.0	99.1	99.6	100.1	99.3
3351	Copper rolling and drawing.....	119.0	120.0	120.0	119.7	118.3	120.3	122.2	125.6	125.4	125.6	125.5	123.6	123.5	125.4
3352	Aluminum rolling and drawing (12/68=100).....	108.2	108.4	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.6	108.9	108.8	108.8	108.8
3356	Nonferrous rolling and drawing, nec. (12/71=100).....						100.1	101.1	101.3	101.8	102.2	102.1	102.1	102.0	102.0
3411	Metal cans.....	121.9	124.0	124.0	124.0	124.0	124.0	127.5	127.6	127.6	127.6	129.3	130.0	131.2	131.2
3423	Hand and edge tools (12/67=100).....	120.8	123.1	123.0	123.2	123.2	124.4	125.0	125.0	125.9	126.0	126.4	126.7	127.2	127.4
3431	Metal plumbing fixtures.....	114.0	117.7	117.6	117.8	117.8	116.9	116.9	117.5	117.9	118.0	119.3	119.4	119.6	120.5
3493	Steel springs.....	111.9	113.3	113.1	114.3	115.9	116.6	118.7	118.9	119.0	119.0	119.0	119.0	119.1	119.1
3494	Valves and pipe fittings (12/71=100).....						100.3	100.6	100.6	100.9	101.1	100.9	100.8	100.7	100.4
3496	Collapsible tubes.....	118.4	120.0	119.9	119.9	119.9	119.9	120.5	120.7	120.8	120.9	120.8	120.8	123.7	123.5
3498	Fabricated pipe and fittings.....	133.0	136.7	136.7	136.7	136.7	136.7	136.7	136.7	136.7	136.7	136.7	136.7	136.7	136.7
3519	Internal combustion engines.....	117.4	118.5	118.5	118.5	119.3	120.2	120.9	121.1	121.1	121.5	121.4	121.1	121.3	121.4
3533	Oil field machinery.....	123.3	123.9	123.9	123.9	123.9	125.3	125.6	125.6	126.5	128.4	128.7	129.6	129.4	129.4
3534	Elevators and moving stairways.....	121.0	122.2	122.2	122.2	122.2	122.3	122.3	122.3	122.3	122.3	122.3	122.3	121.8	121.8
3535	Conveyors and conveying equipment (12/71=100).....						100.2	101.1	101.1	101.2	101.5	102.1	102.1	102.2	102.2
3537	Industrial trucks and tractors.....	120.4	121.7	121.7	121.7	124.2	124.2	123.3	123.4	123.5	123.5	123.3	123.6	123.9	123.9
3541	Machine tools, metal cutting types (12/71=100).....						100.2	100.7	100.9	101.4	102.0	102.1	102.2	102.6	102.9
3542	Machine tools, metal forming types (12/71=100).....						100.3	100.7	101.4	101.4	101.4	101.4	101.6	101.8	102.3
3552	Textile machinery (12/69=100).....	108.9	110.1	110.4	110.4	110.4	111.0	111.3	111.3	111.4	111.4	111.1	111.2	111.5	111.5
3562	Ball and roller bearings.....	114.2	114.6	114.6	114.6	114.6	115.0	115.7	116.2	116.8	117.6	117.6	117.6	117.6	117.6
3572	Typewriters.....	103.4	103.5	103.5	103.5	103.5	103.5	104.0	104.4	104.5	104.5	104.7	104.7	104.7	104.6
3576	Scales and balances.....	114.3	114.1	114.5	114.5	114.5	116.5	116.5	117.6	117.8	118.5	118.6	119.0	118.6	118.6
3611	Electric measuring instruments (12/71=100).....						100.5	100.7	101.2	101.2	100.2	100.3	100.3	100.2	100.3
3612	Transformers.....	97.3	95.5	94.8	92.4	93.0	94.4	94.1	94.3	95.5	95.4	95.1	95.3	95.5	94.9
3613	Switchgear and switchboards.....	113.3	112.7	113.0	112.5	112.3	112.0	112.1	112.4	111.7	111.0	111.5	111.5	111.7	112.1
3624	Carbon and graphite products (12/67=100).....	113.1	113.3	113.3	113.3	113.3	113.4	113.4	113.4	113.4	113.6	114.3	114.1	114.2	114.3
3634	Electric housewares and fans (12/71=100).....						99.7	99.9	100.1	99.8	99.4	99.4	99.4	99.4	99.5
3635	Household vacuum cleaners.....	100.4	100.5	100.5	100.5	100.4	100.4	100.4	101.8	101.8	101.8	101.8	102.0	102.0	102.1
3641	Electric lamps.....	113.6	113.8	114.3	114.0	114.2	114.2	114.5	116.3	117.4	117.7	117.6	117.8	117.8	118.2
3642	Lighting fixtures (12/71=100).....						100.3	101.1	101.1	101.5	101.8	101.8	102.1	102.1	102.2
3652	Phonograph records.....	106.8	105.4	105.4	105.4	105.4	113.2	113.2	113.2	113.2	111.2	111.2	111.2	111.2	111.2
3671	Electron tubes, receiving type.....	132.0	132.2	132.2	132.2	132.2	132.1	139.8	139.9	139.9	141.1	144.1	144.1	144.1	144.1
3672	Cathode ray picture tubes.....	86.4	83.3	83.0	83.0	83.0	83.0	82.9	83.1	82.8	83.7	83.7	84.1	84.2	84.2
3673	Electron tubes, transmitting.....	111.4	111.6	111.6	111.6	111.4	111.4	111.2	112.4	112.4	114.1	114.1	114.1	114.2	114.4
3674	Semiconductors.....	93.9	93.5	93.5	93.5	93.0	93.0	93.0	92.5	92.3	92.5	92.5	92.6	91.1	90.6
3692	Primary batteries, dry and wet.....	118.9	123.0	123.0	123.0	123.0	123.0	123.0	123.0	123.1	123.1	123.1	123.2	123.2	123.1
3693	X-ray apparatus and tubes (12/67=100).....	128.5	129.5	129.5	129.5	129.5	132.1	132.1	132.1	132.1	132.1	131.9	132.1	132.3	133.0
3361	Photographic equipment (12/71=100).....						100.0	100.3	100.5	99.9	99.9	99.9	100.0	100.7	100.7
3941	Games and toys.....	112.9	113.0	113.0	113.0	113.1	113.3	114.3	115.5	115.7	115.7	115.8	115.8	115.8	115.8

32. Work stoppages resulting from labor-management disputes <sup>1</sup>

Month and year	Number of stoppages		Workers involved in stoppages		Man-days idle during month or year	
	Beginning in month or year	In effect during month	Beginning in month or year (thousands)	In effect during month (thousands)	Number (thousands)	Percent of estimated working time
1945	4,750		3,470		38,000	0.31
1946	4,985		4,600		116,000	1.04
1947	3,693		2,170		34,600	.30
1948	3,419		1,960		34,100	.28
1949	3,606		3,030		50,500	.44
1950	4,843		2,410		38,800	.33
1951	4,737		2,220		22,900	.18
1952	5,117		3,540		59,100	.48
1953	5,091		2,400		28,300	.22
1954	3,468		1,530		22,600	.18
1955	4,320		2,650		28,200	.22
1956	3,825		1,900		33,100	.24
1957	3,673		1,390		16,500	.12
1958	3,694		2,060		23,900	.18
1959	3,708		1,880		69,000	.50
1960	3,333		1,320		19,100	.14
1961	3,367		1,450		16,300	.11
1962	3,614		1,230		18,600	.13
1963	3,362		941		16,100	.11
1964	3,655		1,640		22,900	.15
1965	3,963		1,550		23,300	.15
1966	4,405		1,960		25,400	.15
1967	4,595		2,870		42,100	.25
1968	5,045		2,649		49,018	.28
1969	5,700		2,481		42,869	.24
1970	5,716		3,305		66,414	.37
1971	5,135		3,263		47,417	.26
1970: January	279	458	71.1	269.9	3,710.8	.25
February	330	529	116.3	329.6	2,110.6	.15
March	427	630	316.2	402.5	2,471.2	.16
April	640	884	451.1	523.1	5,431.1	.34
May	699	1,050	331.1	675.4	6,650.7	.46
June	657	1,060	288.1	538.0	5,845.6	.36
July	585	989	242.2	467.1	5,112.1	.32
August	527	950	127.3	340.7	3,851.8	.26
September	560	971	591.1	785.0	8,669.5	.57
October	448	881	231.1	753.9	11,573.6	.73
November	340	695	83.6	552.0	7,798.0	.54
December	224	529	455.5	919.9	3,188.7	.20
1971: January	416	647	234.5	319.9	2,868.2	.20
February	359	632	128.4	206.0	1,934.5	.14
March	457	725	150.0	260.0	2,489.5	.15
April	550	859	180.5	269.3	2,388.6	.15
May	612	957	726.9	817.7	4,000.1	.28
June	617	1,031	280.4	420.0	4,093.6	.26
July	499	938	747.8	937.6	7,894.8	.52
August	437	890	182.5	489.8	5,022.5	.32
September	351	668	108.2	316.0	3,109.5	.20
October	304	551	245.6	311.9	5,480.6	.36
November	315	561	234.6	450.3	5,032.4	.33
December	218	485	43.7	236.2	3,102.8	.20
1972: January <sup>r</sup>	310	470	80	155	2,303	.15
February <sup>r</sup>	320	480	61	140	1,618	.11
March <sup>r</sup>	400	580	127	165	1,544	.09
April <sup>r</sup>	440	640	146	217	2,031	.14
May <sup>r</sup>	510	720	126	203	2,139	.13
June <sup>p</sup>	425	670	311	388	3,513	.21
July	380	640	177	426	3,185	.21
August	360	630	108	198	2,492	.15

<sup>1</sup> The data include all known strikes or lockouts involving 6 workers or more and lasting a full day or shift or longer. Figures on workers involved and man-days idle cover all workers made idle for as long as 1 shift in establishments directly involved in a stoppage. They do not measure the indirect or secondary effect on other establish-

ments or industries whose employees are made idle as a result of material or service shortages.

<sup>p</sup> = preliminary.

<sup>r</sup> = revised.



## 33. Indexes of output per man-hour, hourly compensation, unit costs, and prices, private economy, seasonally adjusted

[Indexes 1967=100]

Year and quarter	Output		Man-hours		Output per man-hour		Compensation per man-hour <sup>1</sup>		Real compensation per man-hour <sup>2</sup>		Unit labor costs		Unit nonlabor payments <sup>3</sup>		Implicit price deflator	
	Private	Private non-farm	Private	Private non-farm	Private	Private non-farm	Private	Private non-farm	Private	Private non-farm	Private	Private non-farm	Private	Private non-farm	Private	Private non-farm
1969: 1st.....	107.3	107.4	103.4	104.0	103.7	103.2	112.5	111.9	104.9	104.2	108.5	108.3	102.6	102.6	106.2	106.2
2d.....	107.7	108.1	104.2	104.9	103.4	103.0	114.5	113.7	104.9	104.2	110.7	110.4	102.8	102.6	107.6	107.4
3d.....	108.2	108.5	104.5	105.4	103.6	103.0	116.7	115.6	105.5	104.5	112.7	112.3	103.0	103.0	108.9	108.8
4th.....	107.5	107.9	104.0	105.2	103.3	102.5	119.5	118.0	106.5	105.2	115.6	115.1	102.1	101.8	110.4	110.1
Annual average.....	107.7	108.0	104.0	104.9	103.5	102.9	115.8	114.8	105.5	104.5	111.9	111.6	102.6	102.5	108.3	108.1
1970: 1st.....	106.8	107.0	103.7	104.9	103.0	102.0	121.5	119.9	106.6	105.2	117.9	117.5	102.1	101.6	111.8	111.5
2d.....	107.3	107.3	103.1	104.0	104.0	103.2	123.1	121.9	106.4	105.3	118.3	118.1	104.2	104.1	112.8	112.8
3d.....	107.9	108.1	102.0	103.1	105.8	104.9	126.0	124.5	107.6	106.4	119.1	118.7	105.7	105.8	113.9	113.9
4th.....	106.5	106.5	100.8	102.0	105.6	104.4	127.7	126.1	107.7	106.3	120.9	120.7	107.4	107.9	115.6	115.9
Annual average.....	107.1	107.2	102.4	103.5	104.6	103.6	124.5	123.1	107.0	105.8	119.0	118.8	104.9	104.9	113.5	113.5
1971: 1st.....	108.7	108.7	101.3	102.5	107.3	106.1	130.1	128.4	108.8	107.5	121.2	121.1	110.3	110.6	117.0	117.1
2d.....	109.7	109.8	101.7	102.8	107.8	106.9	132.0	130.7	109.3	108.2	122.4	122.3	111.6	111.7	118.2	118.3
3d.....	110.4	110.5	101.4	102.6	108.8	107.6	134.1	132.5	109.9	108.6	123.2	123.1	112.5	112.5	119.0	119.1
4th.....	112.3	112.7	102.2	103.3	109.9	109.1	135.9	134.4	110.8	109.6	123.6	123.3	112.6	112.3	119.3	119.1
Annual Average.....	110.3	110.4	101.7	102.8	108.5	107.4	133.0	131.5	109.6	108.4	122.6	122.4	111.8	111.8	118.4	118.4
1972: 1st.....	114.3	114.9	103.1	104.2	110.8	110.3	138.6	137.3	112.0	110.9	125.1	124.5	113.5	113.1	120.6	120.2
2d.....	117.1	117.8	104.1	105.5	112.5	111.6	140.4	138.8	112.6	111.3	124.9	124.3	115.2	114.6	121.1	120.6
Percent change over previous quarter at annual rate <sup>4</sup>																
1969: 1st.....	3.6	3.2	3.4	4.2	0.2	-1.0	6.1	5.6	1.1	0.6	5.9	6.7	1.5	0.7	4.2	4.4
2d.....	1.8	2.5	3.3	3.6	-1.5	-1.1	7.0	6.6	.1	-3	8.6	7.7	.6	.1	5.5	4.9
3d.....	1.7	1.8	.9	1.9	.8	.0	8.2	7.0	2.2	1.1	7.3	7.1	1.0	1.5	4.9	5.0
4th.....	-2.5	-2.5	-1.6	-7	-1.0	-1.8	9.8	8.6	3.8	2.7	10.8	10.6	-3.6	-4.6	5.4	4.9
1970: 1st.....	-2.6	-3.0	-1.4	-1.2	-1.2	-1.8	-6.9	6.5	.6	.2	8.2	8.4	.2	.5	5.2	5.2
2d.....	1.7	1.1	-2.2	-3.6	4.0	4.8	5.4	7.1	-1.0	.5	1.4	2.2	8.2	10.2	3.8	4.9
3d.....	2.3	2.9	-4.3	-3.5	7.0	6.6	9.6	8.9	4.9	4.1	2.5	2.1	6.2	6.7	3.8	3.7
4th.....	-5.1	-5.7	-4.5	-4.0	-6	-1.7	5.6	4.9	.2	-4	6.3	6.8	6.4	8.1	6.3	7.2
1971: 1st.....	8.7	8.6	2.1	2.1	6.5	6.4	7.7	7.8	4.3	4.4	1.1	1.3	11.3	10.5	4.7	4.5
2d.....	8.7	4.1	1.7	1.0	2.0	3.1	6.1	7.2	1.6	2.7	4.0	4.0	4.9	4.0	4.3	4.0
3d.....	2.5	2.4	-1.2	-0.5	3.8	2.9	6.4	5.6	2.3	1.5	2.5	2.7	3.2	2.7	2.8	2.7
4th.....	7.2	8.1	3.0	2.6	4.1	5.4	5.6	6.0	3.3	3.6	1.5	.5	.2	.6	1.0	.1
1972: 1st.....	7.0	8.1	3.6	3.5	3.3	4.5	8.1	8.7	4.6	5.1	4.7	4.0	3.5	3.0	4.2	3.7
2d.....	10.2	10.6	4.0	5.3	6.0	5.0	5.4	4.4	2.2	1.3	-6	-5	5.9	5.4	1.7	1.5
Percent change over previous year <sup>5</sup>																
1st.....	1.8	1.6	-2.3	-2.3	4.2	4.0	7.1	7.2	2.1	2.1	2.8	3.1	8.0	8.8	4.7	5.1
2d.....	2.3	2.3	-1.3	-1.2	3.7	3.5	7.2	7.2	2.7	2.7	3.4	3.5	7.2	7.3	4.8	4.9
3d.....	2.3	2.2	-5	-4	2.9	2.6	6.4	6.4	2.1	2.0	3.4	3.7	6.4	6.3	4.5	4.6
4th.....	5.5	5.8	1.4	1.3	4.1	4.4	6.4	6.7	2.9	3.1	2.3	2.1	4.8	4.1	3.2	2.8
1972: 1st.....	5.1	5.6	1.8	1.6	3.3	4.0	6.6	6.9	2.9	3.2	3.2	2.8	2.9	2.3	3.1	2.6
2d.....	6.7	7.3	2.3	2.7	4.3	4.4	6.4	6.2	3.1	2.9	2.0	1.7	3.2	2.6	2.4	2.0

<sup>1</sup> Wages and salaries of employees plus employers contributions for social, insurance and private benefit plans. Also includes an estimate of wages, salaries and supplementary payments for the self-employed.

<sup>2</sup> Compensation per man-hour adjusted for changes in the consumer price index.

<sup>3</sup> Nonlabor payments include profits, depreciation, interest, rental income and indirect taxes.

<sup>4</sup> Percent change computed from original data.

<sup>5</sup> Current quarter divided by comparable quarter a year ago.

NOTE: Data for 1969, 1970, and the first two quarters of 1971 have been adjusted to new benchmarks and are not comparable to those previously published in the Monthly Labor Review.

SOURCE: Output data from the Bureau of Economic Analysis, U.S. Department of Commerce. Man-hours and compensation of all persons from the Bureau of Labor Statistics.

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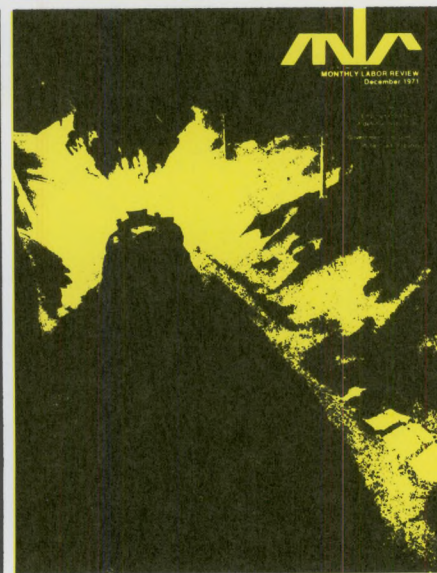
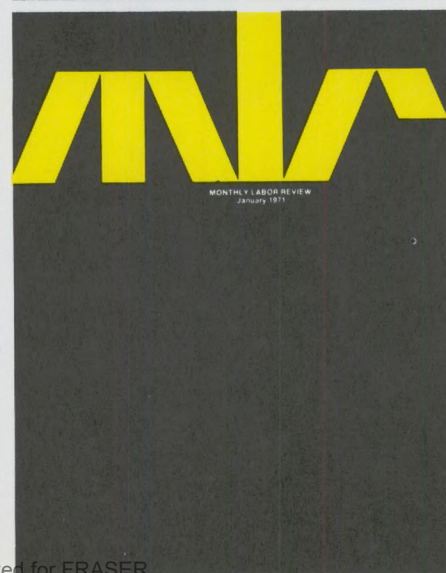
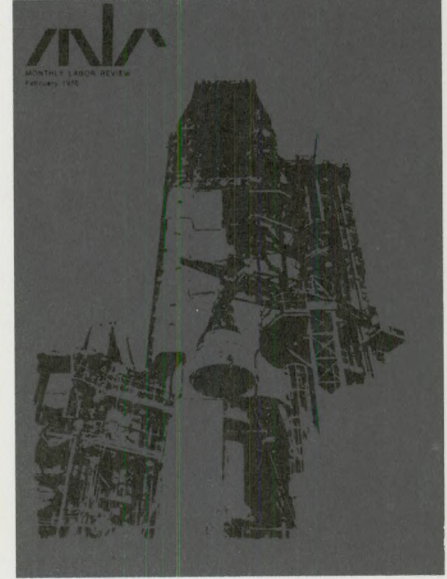
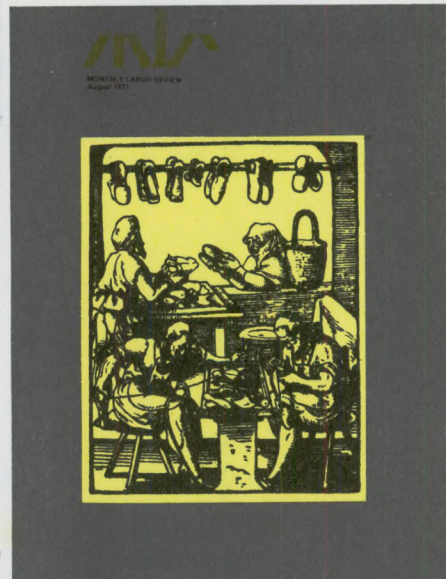
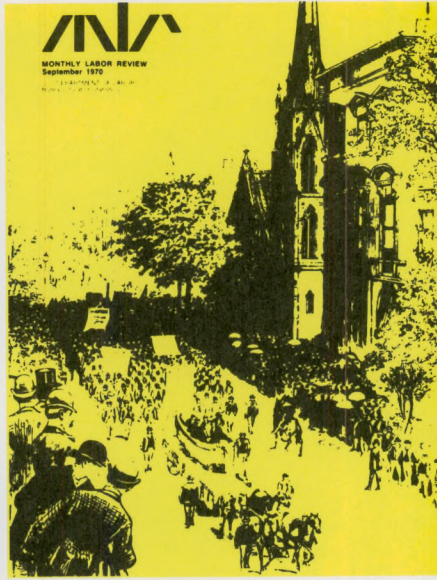
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