

# *An End to Juror Waiting*

by WILLIAM R. PABST

Through the years, the federal, state and local governments have summoned citizens—supposedly a random cross-section of the population—to serve as jurors in the interests of the courts. These jurors have been paid for their services, but usually at rates much less than their regular salaries. Because jurors' pay was meager and since total expense was not their concern, the clerks of the courts tended to bring in as many jurors as they thought necessary to meet all possible needs. The clerks could be criticized only when they could not furnish enough jurors to make up a panel when a judge wished to start a trial. The net result was, and still is, considerable overstaffing of jurors month after month.

Seldom has it been realized how expensive the operation of a jury system is. Estimates place the imputed manpower costs of jurors for our federal, state and local courts at nearly half a billion dollars a year. Some portion of this cost, perhaps a quarter (a substantial \$100,000,000), can be saved by better management in this small sub-system of the court system.

Reduction in costs is only part of the possible gain from better management, for action to reduce costs is likely to improve the efficiency of the jury system and to increase the willingness of those called upon to serve. Since citizens view the workings of the courts more frequently as jurors than in any other role, their respect for the courts is likely to be raised by removing some of the undesirable aspects of jury duty, especially by reducing the costly and unnecessary waiting traditionally involved. The end of juror waiting leads not only to lower jury costs but also to greater respect for law and order.

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This paper explores some of the ways in which a jury system can be made more efficient within the existing structure of the court system. The study is based on records of the United States District Court for the District of Columbia.<sup>1</sup> These records, made available by the Clerk of the Court James F. Davey and his assistant Mrs. Nan Gold make it possible to calculate the number of people and the amount of time involved in each of the jury operations and to explore how the available juror time might be used more effectively. Computer simulation has been used to show what happens when the jury operation is conducted under alternate hypotheses. The study has produced some suggestions, of which the better ones have already been implemented by Mr. Davey and his staff. What is needed is the development of effective practical rules that can be carried out in other courts as well as in this one.

## **Jury operations**

Jury system practice at the time of the study consisted of calling in a pool of 250 jurors each month. Their names were selected by a random process from Polks City Directory. Those selected responded to a questionnaire through which ministers, doctors, lawyers, women, if they desired, and others were eliminated from the list. This number (250) was reached by gradual reduction from a pool size of 350 which had been used in previous years.

Each jury case involved two operations in which there are different numbers of jurors. The first of these, the

<sup>1</sup>William R. Pabst, Jr., "A Study of Juror Waiting Time Reduction," prepared for the Law Enforcement Assistance Administration, U. S. Department of Justice, May 31, 1971.

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voir dire or "the right to see and speak," involved a panel from which the jury was selected. The purpose of the voir dire was to prevent the use of jurors who have knowledge of the case, the parties or witnesses involved, or a bias or preformed opinion on the issues. Usually 30 jurors made up the panel, but as few as 22 were used in civil cases and as many as 60 in criminal cases. The median time of a voir dire was 45 minutes, and the individual times varied from 25 minutes to 120 minutes at the 10 and 90 percentiles, respectively.

The second juror operation was the trial, which included the presentation of the case and the deliberation of the jury. The usual jury consisted of 12 people with 2 alternates. The median trial time was 9 hours, but the individual trial times varied from 4 to 23 hours at the 10 and 90 percentiles, respectively. The active time of the jurors can be calculated by multiplying panel sizes by panel times, plus jury sizes by trial times, and summing. During the study period, this active time was almost half of the available time of those in the jury pool. The efficiency of juror use was thus about 50 per cent.

### Daily peaks

A jury system can be described as an operation requiring a large but variable "start-up crew" for a short but variable time, plus a relatively constant "production crew" for the relatively long and variable production run. The panel is akin to the start-up crew and the jury

to the production crew. If only one court were involved, the jury pool would be required to be as large as the largest expected panel, but in eight hours out of nine only about a third of the pool would be busy serving as jurors. A daily peak would be observed each time a judge started a case. The "daily peak" is defined as the largest number of jurors involved simultaneously in panels or in trials at some time, however long, during a day. When several court rooms use a common jury pool, as in the case studied, the peak requirements are more evenly scattered over time, except when many judges request panels simultaneously. Simultaneous panel requests cause a sharp peak in the number of jurors required, but this daily peak usually lasts for only 20 to 30 minutes. Estimation of the largest daily peak during a month is thus a crucial matter under this jury pool operation, for the pool size should be just equivalent to the largest daily peak for most satisfactory operation; that is, no delay to judges.

The smaller the pool, the less unnecessary waiting on the part of jurors there will be, but the greater the chance of not having jurors available when a judge wishes to start a case. Judges each day request the panels they expect to use on the morrow, but only half of these starts materialize due to pleadings (guilty) of defendants, settlement of cases, continuances, illnesses and other causes. Meanwhile, the jury pool waits patiently in the jury lounge for each jury clerk knows that his greatest sin is to keep a judge waiting, no matter when the call comes or how many other judges are requesting panels at the same time.

### Simulations

The daily peaks averaged 173.5 jurors for the 59 days of the study, but individual days had peaks as low as 105 and as high as 283. The distribution was so widely scattered that it could not, itself, be used as a good predictor

of future daily peak behavior. A large part of the scatter in the daily peaks is attributable to variation of the number of courts in session, which ranged from 4 to 15. (The number of authorized judges is 15.) If daily peaks had been found to follow a normal distribution or some other known distribution, the jury pool size associated with a probability point; e.g., 96 per cent, could be easily determined.

Simulation studies were conducted to study the component elements of the distribution of the daily peaks. These studies involved using the data of the 245 cases over and over again, selecting a new case in random order as soon as a judge finished a previous case. The court system was considered to be a continuous operation, and 20 months (400 court days) experience was simulated for a six-court system, a nine-court system and a twelve-court system.

The simulation of the continuous operations proved to be extremely useful in showing the nature of the daily peaks. The nine-court system had an average daily peak of 170, almost the same as the 173.5 observed in actual court operations, but the distribution was more sharply peaked. It approximates a Gumbel Extreme Value<sup>2</sup> distribution fairly well. Thus, it can be inferred that most of the unwanted scatter in the daily peaks observed in court operations comes from the non-continuous operation of the courts; that is, the variation of the number of courts in session. Simulation shows that the number of cases started per day is just half of the number of courts in session on the average, and that the daily peak

<sup>2</sup> Gumbel extreme value distribution is the theoretical distribution from which the probability of occurrence of extreme events can be predicted. The theory is named after E. J. Gumbel who studied the phenomena of flood, maximum bursting strength of fabric and pressures, and maximum annual temperatures and pressures and found that all these surges could be described by the same distribution.

averages 19 jurors per operating court. It also shows that the 96th percentile of the daily peak distribution is equivalent to 24 jurors per operating court.

Other simulations tried included delaying the start of a case if another had started within 30 minutes; similarly, if another had started within an hour. Simulations were also made using only morning starts, a situation that seemed to make sense in view of the findings that cases starting in the mornings were on the average two hours shorter than those starting in the afternoon. Unfortunately, the conditions used in these simulations seemed to reduce the number of cases started (and settled), and so they were not useful as recommendations.

### Possible improvements

These conclusions about the system have led to the search for improvements along three possible avenues: first, in actions to adjust the supply of jurors more closely to daily demands; second, in smoothing out demands for jurors; and third, in cutting down on the size of panels (and of juries).

The first avenue leads from the observation that a fixed monthly jury pool must involve a great unused capacity (about 35 per cent) if it is set high enough to meet the highest daily peak (with probability of 96 per cent). Instead of a fixed monthly jury pool, a different number of jurors is now called in each day. The number called in each day now is usually less than 200, sometimes much less, and is based on the judges' previous day's estimates of panels needed. Proper methods of estimating the daily need for jurors are being studied so that an easily-used manning table can be provided the jury clerk, indicating on the basis of the relevant factors the specific numbers of jurors to call each day. These estimates can be made daily, using inputs of the numbers of judges sitting, the

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judges' requests for next-day panels (possibly weighted for each of the judges), the day of the week, and other factors. The other avenues of improvement lead to spreading out the starting times of cases within the day to avoid simultaneous voir dires through the week to depress the Monday peak and raise the Thursday and Friday lows, and through the month by means of better scheduling of the infrequent cases of senior judges to avoid peak periods. More exact methods of estimating required panel sizes are also being studied in an effort to reduce the total demand for jurors.

The court has followed many of these suggestions in reaching major improvements in juror utilization during the past two years. A follow-up study is now in progress to determine the actual effect on juror utilization these changes have had and to sharpen the practical ways of reaching higher juror efficiency. In this new study, one important aspect will be to study the actual effect on the daily peaks from the six-man juries used in civil cases during the last six months of 1971. Since it is not the number in the jury but the number required in the daily jury pool that is the principal element of cost, this system approach will provide a fairly precise estimate of the saving attained by the six-man jury.

### Costs

The cost of a jury system is substantial, even at the official juror rate of \$20 per day. A daily pool of 250 people costs \$5,000 per day, or \$1,200,000 per year for juror manpower alone. Since the study period showed that only half of the available juror time was actually used in the courts, a saving of \$600,000 is potentially available. Because of the peak load nature of jury system operation, not all of this potential saving (perhaps only half; i.e. \$300,000) can be captured. If juror costs are estimated from the regular wages

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of jurors, the saving of \$300,000 will be doubled. If similar savings can be made in other federal, state and local courts, the total savings in imputed costs might possibly exceed \$100,000,000.

### Postscript

This study has analyzed the machinery of juror utilization by statistical methods common to those in operations research and in statistical quality control. The 50 per cent under-utilization of jurors found during the study period, while a considerable improvement over the 86 per cent encountered as a working juror two years previously, fell short of the practical goal of about 35 per cent theoretically attainable under the monthly pool-type operation. Now, with daily estimates of jurors needed being used, the situation is much improved and refinements of the daily estimates may reach a point of only 15 to 20 per cent under-utilization. The clerk of the court is anxious to put into practice any useful suggestions that may develop from theory.

The successful experience of this one federal court in cutting down on juror waiting may be useful to others. Meanwhile, studies of jurors in other courts have been made; and although all court systems differ in types of cases, trial times, and jurors used or required, there is ample corroboration that better machinery for jury services can be developed.<sup>3, 4</sup> Other courts are experimenting with quite drastic changes in juror selection practices. One of these now being used in Los Angeles, is that of

<sup>3</sup> William A. Stoeber, "Suggestions for Improving Juror Utilization in the United States District Court for the Southern District of New York" The Institute of Judicial Administration, New York, July 19, 1971, also, "Suggestions for Improving Juror Utilization in the Eastern District of New York," August 31, 1971.

<sup>4</sup> Frederic R. Merrill and Linus Schrage. *A Pilot Study of Utilization of Jurors*, American Bar Foundation, Chicago, 1970.

selecting on one day all of the juries needed for the next week or two. The large jury pool needs only to report on the day of selection, and the jurors selected need report only on the day their cases are called. This system saves juror waiting time and eliminates the continually waiting jury pool, but it does require a great number of people for the selection day. It may also require considerable waiting for those jurors selected in view of the uncertain day on which their trials might commence. Perhaps other court clerks and administrators have developed other practical approaches which might reduce juror waiting. All of these approaches can now be tried under simulation using the data base of case times and panel requirements now accumulated. A best system can be developed for all the known circumstances, and this can then be adapted to meet the needs of every jury system. What is essential is that the new meth-

ods be understood and utilized by the many court clerks, and that they be methods that will achieve a high utilization of jurors without slowing the process of justice in any way.

Once we learn enough about jury system operation through studies of this kind, the answers to what to do and how to do it will become clearer. Now all that can be claimed is that a start has been made toward the development of some partial, practical solutions. Much more needs to be done. The great potential money savings possible should help to stimulate and encourage this work, even though the greater social rewards may well come from improving the image of the courts in the eyes of those jurors forced to work in them.

With help from the jury clerks and with understanding and encouragement from the judges, an end to juror waiting may be in sight. ■■■

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