Statistical Decision Theory and the Selection Of Grand Jurors: Testing for Discrimination In a Single Panel*

by
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Introduction

The contemporary American grand jury has suffered a significant decline in public esteem. Among the more serious charges levelled are that grand juries lack independence from the state and consequently act as mere "rubber stamps" for the district attorney; that grand jurors have permitted themselves to be utilized for purposes of harassing unpopular political groups; and that grand juries have become the preserve of the middle-class establishment.[1] As observed by Judge Melvin P. Antell of the Essex County District Court in New Jersey:

> Actually, the concern of protecting the individual from wrongful prosecution is one about which grand juries in general show little interest. It is edifying indeed to a new prosecutor to learn how willing people are to let trouble descend upon their fellows. In positions of authority, many are prepossessed by fancied obligations to "back up" the police, to "stop mollycoddling", to "set examples". Attitudes of understanding, of patient inquiry, of skeptical deliberation, so needed in the service of justice, recede in the presence of duly constituted officials and are replaced by a passive acceptance

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1. *See* Antell, *The Modern Grand Jury: Benighted Supergovernment*, 51 A.B.A.J. 153-56 (1965) [hereinafter cited as Antell]; Goodell, *Where Did The Grand Jury Go?* 247 HARPER'S MAGAZINE 14 (May, 1973); Kaufman, *The Grand Jury: Sword and Shield*, 20 ATLANTIC MONTHLY 54-60 (April, 1962); Wickersham, *The Grand Jury: Weapon Against Crime and Corruption*, 51 A.B.A.J. 1157 (1965). *See also* The Pro and Con Discussion, *The Question of Curtailing the Size of Juries*, 50 CONG. DIGEST 210 (1971).

of almost anything which seems to bear the sovereign's seal of approval.[2]

Grand juries have also been assailed as being unrepresentative of the communities from which they are drawn. This shortcoming, which has been emphasized repeatedly by members of various minority groups, is most certainly related to the grand jury's lack of independence. In many states grand juries consist almost exclusively of members of "advantaged" social groups with fairly conservative social and political philosophies. It would be idle to pretend that the personal and social characteristics of the jurors have no effect on the proceedings and action of the jury. A jury that does not include the full range of social experiences existing in the community which it represents will not be able to respond properly to the broad scope of issues and problems that come before it.[3]

Challenges to the selection processes used to empanel grand juries have vastly increased in the past few years.[4] At least for the states, the case law governing selection remains vague and occasionally contradictory. It is essential that both judicial and legislative leaders make a concerted effort to clarify the existing law, with a view toward granting access to the political process to all groups.

Implementation of statistical decision theory methods in the area of jury selection would lend predictability and clarity to a segment of the law which has lacked both qualities since it first emerged. The purpose of this article is to provide a statistical formula which will accurately determine whether or not the use of discriminatory methods has occurred in the selection of a particular jury panel.

The Constitutional Requirements[5]

The 1968 Jury Selection and Service Act,[6] governing the selection

2. Antell, *supra* note 1, at 154-55.

3. As stated by the Court in Peters v. Kiff, 407 U.S. 493, 504-05 (1972): "When any large and identifiable segment of the community is excluded from jury service, the effect is to remove from the jury room qualities of human nature and varieties of human experience, the range of which is unknown and perhaps unknowable. It is not necessary to assume that the excluded group will consistently vote as a class in order to conclude, as we do, that its exclusion deprives the jury of a perspective on human events that may have unsuspected importance in any case that may be presented."

4. *See* AMERICAN BAR ASS'N., THE IMPROVEMENT OF THE ADMINISTRATION OF JUSTICE, 62-64 (5th ed. 1971).

5. For a comprehensive treatment of the constitutional requirements, see Sperlich & Jaspovice, *Grand Juries, Grand Jurors, and the Constitution,* 1 HAST. CONST. L.Q. 63 (1974) [hereinafter cited as Sperlich & Jaspovice].

6. 28 U.S.C. §§ 1861-1871 (1968).

of federal grand and petit juries, provides that "all citizens shall have the opportunity to be considered for service on grand and petit juries"[7] and that "[n]o citizen shall be excluded from service . . . on account of race, color, religion, sex, national origin, or economic status."[8] The Act requires the random selection of jurors from voter registration lists[9] and from supplemental sources when necessary,[10] in an effort to produce jury panels which constitute "a fair cross section of the persons residing in the community . . . wherein the court convenes."[11]

While state selection procedures lack uniformity, two predominant types of state selection statutes can be identified. Some states utilize random selection methods resembling the federal selection procedures in constituting grand juries. Other states employ what has come to be known as the "key man" selection system, which allows jury commissioners or judges to select prospective grand jurors from among their friends or acquaintances, the so-called key men, or from persons suggested by their friends or acquaintances. In this manner a grand jury panel or venire is established, and a drawing by lot from the list of compiled names is then used to determine the makeup of the actual grand jury.

Regardless of the method of selection employed, all states are bound to comply with the basic constitutional requirements governing the selection of grand jurors. Shortly following the adoption of the Fourteenth Amendment, the Supreme Court held in *Strauder v. West Virginia*[12] that the due process and equal protection clauses of the amendment proscribe the statutory exclusion of persons from jury service solely because of their race or color. Thereafter, in *Neal v. Delaware*,[13] the High Court ruled that the equality of protection secured by the Fourteenth Amendment and 8 U.S.C. § 44[14] prohibits the discriminatory application of racially neutral jury selection statutes.

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7. 28 U.S.C. § 1861 (1968).
8. 28 U.S.C. § 1862 (1968).
9. 28 U.S.C. § 1863(b)(2) (1968).
10. *Id.*
11. 28 U.S.C. § 1863(b)(3) (1968).
12. 100 U.S. 303 (1879).
13. 103 U.S. 370 (1880).
14. 8 U.S.C. § 44 is now embodied in 18 U.S.C. § 243 (1970), which provides: "No citizen possessing all other qualifications which are or may be prescribed by law shall be disqualified for service as grand or petit juror in any court of the United States, or of any State on account of race, color, or previous condition of servitude; and whoever, being an officer or other person charged with any duty in the selection or summoning of jurors, excludes or fails to summon any citizen for such case, shall be fined not more than $5,000."

Since the *Strauder* and *Neal* opinions, the Supreme Court has articulated the constitutional requirement that all jury panels, both petit and grand, must be drawn from a cross-section of the eligible community.[15] At the same time, the Court has consistently rejected the notion that proportional representation of community groups is required by the provisions of the Fourteenth Amendment.[16]

The principle of cross-sectional representation requires that all eligible persons residing in the community be afforded an equal opportunity of being selected for jury service. As stated in *Smith v. Texas*:

> It is part of the established tradition in the use of juries as instruments of public justice that the jury be a body truly representative of the community. For racial discrimination to result in the exclusion from jury service of otherwise qualified groups . . . violates our Constitution and . . . is at war with our basic concepts of a democratic society and a representative government.[17]

The concept of cross-sectional representation creates severe management problems. In recognition of that fact, the Supreme Court in *Hernandez v. Texas*[18] held that only "distinct" community groups need be considered by jury selectors in choosing a representative jury panel.[19]

Absent extraordinary efforts on the part of the selectors involved, utilization of the key man selection system is highly unlikely to produce the necessary cross-section in anything other than an unusually homogeneous community. In light of that fact the Supreme Court has developed two constitutionally grounded affirmative duties to be adhered to by key man selectors. The first requires that key man selectors fa-

15. Glasser v. United States, 315 U.S. 60, 85 (1942); Smith v. Texas, 311 U.S. 128, 130 (1940).

16. Cassel v. Texas, 339 U.S. 282, 286-87 (1950); Akins v. Texas, 325 U.S. 398, 402 (1945).

17. 311 U.S. 128, 130 (1940).

18. 347 U.S. 475 (1954).

19. *Id.* at 348-49. The loose formulation of the term "distinct group" by the Court in Hernandez, coupled with the just recognition of the uniqueness of communities there, tends naturally to enlarge the scope of the jury pool. Black persons aside, myriad groups have been recognized as "distinct" since the Hernandez opinion, based upon national origin, name types, work status, religion, age, education, sex, and even political affiliations. At least one court has recognized as a distinct group a hybrid of two of the above classifications. *See* Sperlich & Jaspovice, *supra* note 5, at 73-74.

The additional input required by Hernandez and its progeny is likely to have a noticeable effect upon the product of the grand jury system. This conclusion may fairly be inferred from the comprehensive study conducted at the University of Chicago Law School by Professors Kalven and Zeisel in THE AMERICAN JURY (1966). The data from the Chicago study indicates that Black jurors vote differently from Caucasian jurors, that working men vote differently from businessmen, and that persons of different national ancestry have statistically significant divergent voting patterns.

miliarize themselves with all of the community's population elements in which qualified jurors may be found.[20] The second constitutional duty requires that key man selectors refrain from following a course of conduct which naturally tends to exclude any group of potential jurors from jury service.[21]

In the setting of a criminal case, challenges to grand jury selection procedures must generally be raised before commencement of trial, by pretrial motion to quash the indictment returned by the grand jury.[22] Recently, the Supreme Court condoned the use of a civil class action suit to attack allegedly discriminatory jury selection methods.[23] In either case, the issue of standing to raise the particular challenge is no longer a serious barrier. In federal court it has long been recognized that any party to a criminal action has standing to attack the validity of the selection system employed by the district court, whether or not that party is a member of the class of persons allegedly excluded from jury service.[24] The Supreme Court in *Peters v. Kiff*[25] made applicable to the states the same liberal standing interpretation adopted by the federal courts, at least with regard to exclusions based upon race.[26]

20. Smith v. Texas, 311 U.S. 128, 131-32 (1940); Cassell v. Texas, 339 U.S. 282, 287-90 (1950). For a comprehensive discussion of the familiarization requirement, see Brooks v. Beto, 366 F.2d 1 (5th Cir. 1966).

21. Avery v. Georgia, 345 U.S. 559, 561 (1943); Akins v. Texas, 325 U.S. 398, 403-404 (1945).

22. *See, e.g.*, 28 U.S.C. § 1867(a)-(c) (1970).

23. Carter v. Jury Commission, 396 U.S. 320 (1970). The Court stated: "Defendants in criminal proceedings do not have the only cognizable legal interest in nondiscriminatory jury selection. People excluded from juries because of their race are as much aggrieved as those indicted and tried by juries chosen under a system of racial exclusion. Surely there is no jurisdictional or procedural bar to an attack upon systematic jury discrimination by way of a civil suit such as the one brought here. *Id.* at 329-30.

24. *See* Rabinowitz v. United States, 366 F.2d 34, 37 n.1 (5th Cir. 1966); United States v. Leonetti, 291 F. Supp. 461, 473-74 n.3 (S.D.N.Y. 1968).

25. 407 U.S. 493 (1972).

26. At least one court has held that the decision in Peters v. Kiff is applicable only to challenges asserting racial discrimination. In People v. Superior Court, 38 Cal. App. 3d 966, 975, 113 Cal. Rptr. 732, 739 (1974), the *Peters* opinion was given the following interpretation: "Where racial balance is not in issue, the rule of standing remains unaffected; the accused may not assign discriminatory impanelment practices as a ground of attack on the criminal prosecution unless he is a member of the excluded class or otherwise shows a likelihood of bias."

The author of the opinion in People v. Superior Court, *supra*, failed to supply any logical reason for the artificially drawn distinction between racial exclusion and exclusions premised upon characterisitcs other than race. Three arguments are presented in an effort to support the result: first, that the Peters decision dealt only with racial exclusion; second, that racial balance is an especially assured guarantee and thus entitled to more widespread protection; and, third, that challenges to grand jury selection are

A challenge to the selection procedure employed in choosing grand or petit jurors can be presented in either or both of two basic forms: (1) the challenge can assail the constitutional validity of the statute or plan which prescribes the manner of selection, asserting that it is incapable of yielding the results demanded by law; or (2) the challenge may concede the constitutionality of the governing statute, but attack the way in which the statute is applied. *Strauder v. West Virginia*[27] embodies the classic example of the first form of challenge. Because there are no longer any state statutes such as that struck down in *Strauder*, the second form of challenge prevails today.[28]

The discriminatory application of racially neutral statutes can be attacked in three ways. The first entails a demonstration of discriminatory outcome of the selection procedure. Pursuant to this method the challenger has the burden of establishing a prima facie case by producing evidence which proves that there is a substantial disparity over time between the percentage of the cognizable community group on the jury roll or venire and that group's percentage in the relevant population.[29] Once a prima facie case has been proven, the burden shifts to the state to justify the discrepancy.[30] The second method involves a showing

time consuming and since they may be pursued through the civil processes, only a limited number of such challenges should be allowed a criminal court forum.

None of these factors change the fundamental principle that an accused is denied his right to due process and equal protection of the law if he is tried or indicted by a jury which has not been drawn from a fair cross-section of the eligible community. The notion of a fair cross-section necessarily contemplates all community characteristics, and not just those of race.

27. 100 U.S. 303 (1879).

28. *Id.* See text accompanying note 12 *supra.*

29. As stated in People v. Newton, 8 Cal. App. 3d 359, 390, 87 Cal. Rptr. 394 (1970): "While each jury roll or venire need not be a perfect mirror of the community . . . any substantial disparity, over a period of time, between a group's percentage thereon and its percentage in the eligible population is prima facie evidence of discrimination, regardless of the source of jurors, and shifts the burden to the prosecution to justify the discrepancy."

30. In the majority of cases presenting this form of attack which have reached the Supreme Court, the decision as to whether or not a prima facie case has been established has turned on whether the outcome in question can be explained away by chance or accident. Thus, in Eubanks v. Louisiana, 356 U.S. 584, 587 (1958), the Court declared, "the uniform and long-continued exclusion of Negroes from grand juries shown by this record cannot be attributed to chance [or] to accident . . . ." More recently the Court discussed "chance" in terms of statistical probability, suggesting that the existence or nonexistence of a valid prima facie case may be determined in other than an arbitrary manner: "While unnecessary to our disposition of the instant case, it is interesting to note the 'probability' involved in the situation before the Court. The record does not indicate how many Negroes were actually on the 'revised' jury list of approximately 600 names. One jury commissioner, however, said his best estimate was 25% to 30%, which

that discriminatory selection procedures have been indulged in by the selectors. Thus, evidence proving that the selectors have failed to take affirmative steps to comply with the two-fold constitutional duty imposed upon them and described above will allow the challenger to succeed. The actual outcome of the selection process is wholly inconsequential to the success or failure of this method.[31] The third and final method requires a demonstration of a combination of factors indicative of discrimination and may involve proof called for by the first and second methods, in addition to other evidence.[32]

While it is incumbent upon the challenging party to prove "systematic" or "purposeful" discrimination[33] in pursuit of each of the foregoing formulae, he need not expose the specific intent of the selectors. The intent to discriminate will be inferred by the court from proper presentation of the method chosen. As stated in *Rabinowitz v. United States*, "[i]f a fair cross-section is consistently lacking, then, without more, it is established that the [jury] commissioners have failed in their duty."[34]

The predominant method of challenge to date has been that involving the statistical prima facie case. Given the fact that innumerable court hours have been consumed by attorneys pursuing this method, it is regrettable that the court has yet to delineate clear standards

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is close proximity to the 27.1% who were admittedly on the tax digest for 1964. Assuming that 27% of the list was made up of the names of qualified Negroes, the mathematical probability of having seven Negroes on a venire of 90 is .000006. See Finkelstein, The Application of Statistical Decision Theory to the Jury Discrimination Cases, 80 HARV. L. REV. 338 (1966)." Whitus v. Georgia, 385 U.S. 545, 552 n.2 (1967). See also Alexander v. Louisiana, 405 U.S. 625, 630 n.9 (1972), in which the Court took note of the petitioner's demonstration of statistical probability.

31. As stated by the Court in Cassell v. Texas: "Discrimination may be proved in other ways than by evidence of long-continued unexplained absence of Negroes from many panels. The statements of the jury commissioners that they chose only whom they knew, and that they knew no eligible Negroes in an area where Negroes made up so large a proportion of the population, prove the intentional exclusion that is discrimination in violation of petitioner's constitutional rights." 339 U.S. 282, 290 (1950).

32. For an example of the application of this method see Alexander v. Louisiana, 405 U.S. 625, 630-31 (1972).

33. Whitus v. Georgia, 385 U.S. 545, 550 (1967); Hernandez v. Texas, 347 U.S. 475, 476-78 (1954); *see* People v. Nero, 19 Cal. App. 3d 904, 910, 97 Cal. Rptr. 145, 148 (1971).

34. 366 F.2d 34, 58 (5th Cir. 1966). As stated in Davis v. Davis, 361 F.2d 770, 773 (5th Cir. 1966): "Thus we need not delve into the subjective intent of the jury commissioners . . . nor need we credit their general assertions that they did not participate in any system or plan by which Negroes were systematically excluded from jury service . . . since it is clear that they did not fulfill their duty of familiarizing themselves with the qualifications of Negroes eligible for jury service."

against which statistical evidence could be measured to determine whether or not a prima facie case has been established. This deficiency, however, can be remedied. As noted by one commentator:

> The court's continued reliance on intuitive and untutored understanding of the laws of chance is both unfortunate and unnecessary. Statistical theory supplies mathematical means for determining the likelihood that chance is responsible for a given discrepancy between the ratio of Negroes in the eligible population and their ratio on jury lists, venires or panels. Logic and objectivity would seem to compel the application of such an analysis in determining when the size of the discrepancy eliminates chance as its likely source and thus requires the state to come forward with evidence explaining the discrepancy on non-discriminatory grounds.[35]

The Computation of Probabilities for Single Grand Jury Panels

It is but seldom that a community group (test group) will be represented on a grand jury panel in exact proportion to its size in the eligible population. Nor, as seen, does the Court require exact proportionality. The task is to discover whether or not the magnitude of the divergence is within the range of chance fluctuation which is likely to occur even when the selection methods are truly unbiased, i.e., random.

Probability theory provides the principles and rules for the determination of the statistical significance of any particular selection outcome. When the outcome is found to have statistical significance,[36] it is *not* consistent with the assumption that an unbiased selection took place. Outcomes that do not have statistical significance, on the other hand, are consistent with such an assumption, and therefore can be said to have resulted from a selection process that provided everyone an equal chance of being chosen.

The literature on the application of statistical methods in jury se-

35. Kuhn, *Jury Discrimination: The Next Phase*, 41 S. CAL. L. REV. 235, 255 (1968).

36. Statistical significance refers to a particular pre-selected level of probability. The levels most often employed are .10, .05, and .01. A significance level of .01 means that there is one chance in one hundred of an error, that is, that there is one chance in one hundred that an unbiased selection will be judged biased. Significance can be set at any level, e.g., .001, which would mean that there is only one chance in a thousand of such an error. As it happens, however, as this type error is decreased another type error is increased, namely, the error of letting a biased selection pass as unbiased. The level of .05 represents an acceptable "compromise" in the effort to reduce all types of error.

lection cases is not large and is of fairly recent origin. An article by Finkelstein is the best known single component of this literature.[37] In fact, Finkelstein's article has gained the status of a "classic." It has been cited by the Supreme Court,[38] and many discussions and evaluations of the grand jury system make reference to it.[39]

The present discussion of testing for discrimination in a single panel is similar to that of Finkelstein. It differs from Finkelstein's discussion, however, in that it emphasizes more strongly that ranges of outcomes must be considered rather than single outcomes, in that it provides concrete examples to demonstrate the importance of "range" computations, and in that it offers a number of possible computational shortcuts to reduce the large number of calculations associated with "range" testing.

Probability theory indicates that the probability of a particular selection outcome is determined by two factors, the unique likelihood of the outcome, and the number of the ways in which this outcome can be obtained. For example, if a population has three members, two White and one Black, and if one person is to be selected, and if the selection process is truly unbiased (random), then each of the three persons has the identical chance (one out of three) of being selected. Now, to compute the probability that a White person will be selected, the unique likelihood of the selection of any White (⅓) must be multiplied by the number of ways in which a White person can be selected. There are two such ways, namely, selecting White One and selecting White Two. Therefore, the probability of selecting a White person in a single draw is equal to ⅓ x 2, or ⅔.

The computing principle can be extended to any number of persons to be chosen at a particular time. The following formula is used to compute the probability of selecting a certain number of persons from a particular population for a grand jury panel of a certain size, given the proportion of the test group in the eligible population:[40]

$$Pr = \binom{N}{r} \left(p^r \; q^{n-r} \right) \qquad (1)$$

The first component of the formula consists of a series of factorials.

37. Finkelstein, *The Application of Statistical Decision Theory to the Jury Discrimination Cases*, 80 HARV. L. REV. 338 (1966).

38. Whitus v. Georgia, 385 U.S. 545, 552 n.2 (1967).

39. *E.g.*, UNITED STATES COMMISSION ON CIVIL RIGHTS, MEXICAN AMERICAN AND THE ADMINISTRATION OF JUSTICE IN THE SOUTHWEST at 131-45 (1970).

40. *See, e.g.*, BLALOCK, SOCIAL STATISTICS 152-55 (2d ed. 1972).

Thus:

$$Pr = \left(\frac{N!}{(r!)\ (n\text{-}r!)}\right)\ \left(\ p^r\ \ q^{n-r}\ \right) \qquad (2)$$

Pr stands for the probability of the selection outcome, *N* for the size of the panel[41] (number of persons), *r* for the number of test group members on the panel, *n-r* for the number of all other panel members, *p* for the proportion of the test group in the eligible population, and *q* for the proportion of all other groups in the population. Necessarily:

$$r + n\text{-}r = N \qquad (3)$$

and

$$p + q = 1 \qquad (4)$$

The following example shows a concrete application of the computing formula. Two Black persons have been selected for a jury panel of five members; the proportion of Blacks in the eligible population is .40. Is this selection outcome consistent with the assumption that there has been an *un*biased selection process? The question can be answered *yes* if the probability of the outcome does *not* reach statistical significance.

$$Pr = \left(\ \begin{matrix}5\\2\end{matrix}\ \right)\ \left[\ (.40)^2\ \ (.60)^3\ \right]$$

$$= \left[\ \frac{(5)\ (4)\ (3)\ (2)\ (1)}{[(2)\ (1)]\ \ [(3)\ (2)\ (1)]}\right]\ \left[(.16)\ (.216)\right]$$

$$= (10)\ (.03456)$$

$$= .346$$

The probability of .346 is larger than the chosen significance level of .05, which means that the result is not significant, or, in other words, that the selection outcome of two Blacks *is* compatible with the assumption of an unbiased selection process.[42] This conclusion, of course, is not surprising: the proportion of Black persons in the population and on the panel was exactly the same, namely 40%.

The formula just now used to compute Pr is a standard formula

41. The selection of grand juries proceeds in several stages. Panels or venires are chosen from among the members of the eligible population. The grand jury is chosen from among the members of the panel. In most cases the second step is truly random. Discrimination, when it occurs, results from procedures used in the first step. The grand jury *panel*, thus, is the proper body for tests of discrimination.

42. The tests for underrepresentation and overrepresentation are known as "one-tailed" tests in the statistical literature. If the direction of the bias could not be predicted and a more general determination of fairness were to be made, a "two-tailed" test would be employed. In practical terms, this would mean cumulating the specific probabilities simultaneously, step-wise, from both ends of the distribution. Because underrepresentation had been predicted in the example, a one-tailed test is employed here.

and is mathematically correct. However, important limitations attach to this formula when it is applied to jury selection cases. An unadjusted use of the formula will produce erroneous results in many instances. The formula works fairly well when the panel is *small.* As the panel becomes larger, an adjusted approach is required.

The point that must be recognized is that for large panels there are so many different possible selection outcomes that every one of them, even the single most likely, has but a very small probability of actually occurring. For large panels, every possible selection result can be significant and, therefore, incompatible with the assumption of an unbiased selection. Clearly, this makes no sense.

Two sets of computations will illuminate the problem. Table 1 presents the probabilities associated with each of all possible selection outcomes for a panel of ten. The assumed proportion of the test group

Table 1. Probabilities for Compositions of Grand Jury Panel of Ten Members, One Year

Number of Test Group Members on Jury Panel	Probability of this Outcome; Test Group is 40% of Eligible Population	Interpretation (One-tailed test=.05 level; two tailed test=.10 level)
0	.00605	underrepresentation
1	.04031	
2	.12090	nondiscriminatory range
3	.21500	
4	.25080	
5	.20070	
6	.11150	
7	.04247	overrepresentation
8	.01062	
9	.00157	
10	.00010	

in the eligible population of .40.[43] Testing for underrepresentation

43. The *test group* is the group for which it has been alleged that the selection procedures discriminated against its members.

only with the standard formula, we find that the results of obtaining zero members or one member are significant at the .05 level, which means that these results are not compatible with the assumption of an unbiased selection and must be rejected as discriminatory. Testing for a fair outcome, rather than only underrepresentation, the outcomes of zero, one, seven, eight, nine, and ten group members must be rejected, that latter four identifying overrepresentation. Or, to state the matter in positive terms, the outcomes of two, three, four, five, and six test group members are compatible with random assumptions and can be regarded as nondiscriminatory, given a significance level of .05 (.10).

Table 2 presents the probabilities for all selection outcomes from zero to 150 test group members for a panel of 300 members.[44] The assumed proportion of the test group in the eligible population is 50%.[45] It can be seen immediately, that, using the significance level of .05, *all* outcomes are significant, meaning, that *none* of them is compatible with the assumption of an unbiased selection. Not even the outcome of 150 test group members in the panel can be regarded as unbiased, although this outcome corresponds to exact proportionality: 50% in the population and 50% on the panel.[46]

The point of interest in the analysis of jury probabilities is not really the specific likelihood of obtaining a certain panel, but rather it is in the inference about the selection process which the computed probability enables us to make, namely, whether or not the particular selection result is compatible with the assumption of a fair selection process, i.e., one in which every eligible person had the same chance of being chosen. Bias in the selection process has been demonstrated when the selection outcome is not compatible with the equal chance assumption. Someone was favored and someone else disfavored in that case.

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44. The probabilities for the outcomes from 151 to 300 test group members are not reported here in order to save space. These values would be required only for tests of overrepresentation, or for the simultaneous testing of overrepresentation and underrepresentation. Their absence does not affect the basic methodological point of this paper.

45. The numbers in parentheses following the decimal point identify the number of zeros to be inserted in the space. Thus, .(5)17 corresponds to .0000017. This notational system was adopted to avoid the inconvenience of having to write out numbers which would fill a complete line on the pages, such as .(90)49. It also saves the reader the task of having to count out a long string of zeros to identify the value of the figure.

46. If the more demanding .01 level of significance had been adopted, the results of 135 to 150 would not have been significant. This may seem to be somewhat more reasonable. However, the different significance level is not a solution to the general problem. With a larger panel, even .01 would have produced only significant results,

Table 2. Specific Probabilities for Composition of Grand Jury Panel of 300 Members; One Year; Proportion of Test Group in Population = .50

Number of Test Group Members on Jury Panel	Specific Probability	Number of Test Group Members on Jury Panel	Specific Probability	Number of Test Group Members on Jury Panel	Specific Probability
0	.(90)49				
1	.(87)15	51	.(32)75	101	.(8)40
2	.(85)22	52	.(31)36	102	.(8)79
3	.(83)22	53	.(30)17	103	.(7)15
4	.(81)16	54	.(30)77	104	.(7)29
5	.(80)96	55	.(29)34	105	.(7)54
6	.(78)47	56	.(28)15	106	.(7)99
7	.(76)20	57	.(28)64	107	.(6)18
8	.(75)73	58	.(27)27	108	.(6)32
9	.(73)24	59	.(26)11	109	.(6)56
10	.(72)69	60	.(26)44	110	.(6)98
11	.(70)18	61	.(25)17	111	.(5)17
12	.(69)44	62	.(25)67	112	.(5)28
13	.(68)96	63	.(24)25	113	.(5)47
14	.(66)20	64	.(24)94	114	.(5)77
15	.(65)38	65	.(23)34	115	.(4)12
16	.(64)67	66	.(22)12	116	.(4)20
17	.(62)11	67	.(22)42	117	.(4)31
18	.(61)18	68	.(21)14	118	.(4)48
19	.(60)26	69	.(21)49	119	.(4)74
20	.(59)37	70	.(20)16	120	.(3)11
21	.(58)49	71	.(20)52	121	.(3)17
22	.(57)62	72	.(19)17	122	.(3)24
23	.(56)75	73	.(19)52	123	.(3)35
24	.(55)87	74	.(18)16	124	.(3)50
25	.(54)96	75	.(18)48	125	.(3)71
26	.(52)10	76	.(17)14	126	.(3)98
27	.(51)10	77	.(17)41	127	.0014
28	.(50)10	78	.(16)12	128	.0018
29	.(50)94	79	.(16)33	129	.0024
30	.(49)85	80	.(16)92	130	.0032
31	.(48)74	81	.(15)25	131	.0042
32	.(47)62	82	.(15)67	132	.0053
33	.(46)50	83	.(14)18	133	.0067
34	.(45)40	84	.(14)45	134	.0084
35	.(44)30	85	.(13)12	135	.0103
36	.(43)22	86	.(13)29	136	.0125
37	.(42)16	87	.(13)71	137	.0150
38	.(41)11	88	.(12)17	138	.0177
39	.(41)74	89	.(12)41	139	.0206
40	.(40)48	90	.(12)96	140	.0237
41	.(39)30	91	.(11)22	141	.0269
42	.(38)19	92	.(11)50	142	.0301
43	.(37)11	93	.(10)11	143	.0332
44	.(37)66	94	.(10)25	144	.0362
45	.(36)37	95	.(10)54	145	.0390
46	.(35)21	96	.(9)11	146	.0414
47	.(34)11	97	.(9)24	147	.0434
48	.(34)59	98	.(9)50	148	.0448
49	.(33)30	99	.(8)10	149	.0457
50	.(32)15	100	.(8)20	150	.0460

When the size of the jury panel is fairly large, a large number of possible selection outcomes exists. For example, there are 301 possible selection outcomes for a panel of 300 members, even when only two

groups are taken into account. Necessarily, the probability of any one of these 301 outcomes is quite low. Even the outcome of exact proportionality, the relatively most likely result, has a likelihood of only 46 occurrences in 1000 selections.[47] An unadjusted application of the standard computing formula thus leads to the astonishing result that selection bias must be inferred from every single outcome.

The solution to the problem is found in changing the focus of the analysis from specific probabilities to cumulative probabilities, and from single outcomes to *ranges* of outcomes.

The first step in the adjusted method is to discover the range of discriminatory outcomes.[48] Assuming a test for underrepresentation, the specific probabilities for all outcomes in the lower tail of the distribution must be computed, beginning with the probability for the outcome of "zero test group members on the panel" to the outcome where the cumulative probability becomes larger than the pre-set significance level.[49] The outcome of "zero test group members" and the outcome just prior to getting a cumulative probability larger than the significance level identify the boundaries of the range of discriminatory outcomes.

The second step in the adjusted method is to determine whether or not the actual outcome is within the range of discriminatory outcomes. This is a matter of simple inspection.

The third step is the resulting inference about the selection process. If the actual outcome is outside this range, bias has not been demonstrated.

Table 3 presents the *cumulative* probabilities for all selection outcomes from zero to 150 test group members for a panel of 300 members, the test group constituting 50% of the eligible population. Table 3 is identical to Table 2, except for the shift from specific to cumulative probabilities.

For the purpose of having some concrete examples by which to illustrate the three steps discussed above, it will be assumed that two selection outcomes are to be tested. In the first case 118 test group members were selected for the panel, and in the second case 146. In

47. *See* Table 2, *supra.*

48. The present term "range of discriminatory outcomes" corresponds to the term "critical region" in the statistical literature.

49. In a test for overrepresentation, the upper tail probabilities would be computed and cumulated, beginning with the outcome of "300 test group members on the panel," if a panel of 300 persons is assumed.

Table 3. Cumulative Probabilities for Composition of Grand Jury Panel of 300 Members; One Year; Proportion of Test Group in Population = .50

Number of Test Group Members on Jury Panel	Cumulative Probability	Number of Test Group Members on Jury Panel	Cumulative Probability	Number of Test Group Members on Jury Panel	Cumulative Probability
0	.(90)49				
1	.(87)15	51	.(32)94	101	.(8)80
2	.(85)22	52	.(31)45	102	.(7)16
3	.(83)22	53	.(30)21	103	.(7)31
4	.(81)16	54	.(30)98	104	.(7)60
5	.(80)98	55	.(29)44	105	.(6)11
6	.(78)48	56	.(28)19	106	.(6)21
7	.(76)20	57	.(28)84	107	.(6)39
8	.(75)75	58	.(27)35	108	.(6)71
9	.(73)24	59	.(26)15	109	.(5)13
10	.(72)71	60	.(26)59	110	.(5)23
11	.(70)19	61	.(25)23	111	.(5)40
12	.(69)45	62	.(25)91	112	.(5)68
13	.(67)10	63	.(24)35	113	.(4)11
14	.(66)21	64	.(23)13	114	.(4)19
15	.(65)40	65	.(23)47	115	.(4)31
16	.(64)71	66	.(22)17	116	.(4)51
17	.(62)12	67	.(22)59	117	.(4)82
18	.(61)19	68	.(21)21	118	.(3)13
19	.(60)28	69	.(21)70	119	.(3)20
20	.(59)40	70	.(20)23	120	.(3)31
21	.(58)53	71	.(20)75	121	.(3)48
22	.(57)68	72	.(19)24	122	.(3)72
23	.(56)82	73	.(19)76	123	.0011
24	.(55)95	74	.(18)24	124	.0016
25	.(53)11	75	.(18)72	125	.0023
26	.(52)11	76	.(17)21	126	.0033
27	.(51)11	77	.(17)63	127	.0047
28	.(50)11	78	.(16)18	128	.0065
29	.(49)11	79	.(16)51	129	.0089
30	.(49)96	80	.(15)14	130	.0121
31	.(48)84	81	.(15)39	131	.0163
32	.(47)71	82	.(14)11	132	.0216
33	.(46)50	83	.(14)28	133	.0283
34	.(45)45	84	.(14)73	134	.0367
35	.(44)35	85	.(13)19	135	.0470
36	.(43)26	86	.(13)48	136	.0595
37	.(42)18	87	.(12)12	137	.0745
38	.(41)13	88	.(12)29	138	.0922
39	.(41)86	89	.(12)70	139	.1128
40	.(40)57	90	.(11)17	140	.1365
41	.(39)36	91	.(11)39	141	.1634
42	.(38)22	92	.(11)89	142	.1935
43	.(37)14	93	.(10)20	143	.2267
44	.(37)79	94	.(10)45	144	.2629
45	.(36)45	95	.(10)98	145	.3019
46	.(35)25	96	.(9)21	146	.3433
47	.(34)14	97	.(9)45	147	.3867
48	.(34)73	98	.(9)95	148	.4315
49	.(33)38	99	.(8)20	149	.4772
50	.(32)19	100	.(8)40	150	.5232

both cases the panel size was 300 and the population proportion of the test group .50.

Using the unadjusted method, the specific probability of .(4)48

for the outcome of 118 test group members would result in the inference that bias in the selection process has been demonstrated. The probability of .(4)48 is smaller than the significance level of .05, and thus the outcome is significant. Using the adjusted method, the cumulation of specific probabilities (Table 3) shows that the range of discriminatory outcomes extends from zero to 135. The cumulative value for this range equals .0470, which is smaller than the significance level of .05. If the specific probability for 136 had been added, the cumulative value of .0595 would have been larger than the significance level. As the second step, the outcome of 118 is found to be *inside* the range of discriminatory outcomes. Therefore, as the third step, it must be concluded that the outcome of 118 test group members demonstrates bias in the selection process. Here the two methods lead to the same conclusions.

In the second case, the unadjusted method once more would lead to the conclusion that bias has been demonstrated. The specific probability of .0414 for 146 test group members is smaller than the significance level of .05. Using the adjusted method, as above, the outcome of 146 test group members is found to be *outside* the range of discriminatory outcomes. Bias in the selection process, therefore, has not been demonstrated. Now the two methods lead to opposite conclusions.

To state the matter more generally, under the conditions of a panel of 300, 50%, and .05 significance, the unadjusted method infers bias from all outcomes. The adjusted method, in contrast, infers bias only from the outcomes between zero and 135 test group members. This of course, refers only to the test for *under*representation. If all biases were to be taken into account, the adjusted method would identify the outcomes from zero to 135 as belonging to the range of underrepresentation, and the outcomes from 164 to 300 as belonging to the range of over-representation.[50] The outcomes from 136 to 165 would be identified as the range of nondiscriminatory outcomes. The unadjusted method, of course, would still identify all outcomes as belonging to the range of discriminatory outcomes.

The adjusted method is correct for all panel sizes including very small ones, i.e., panels of ten members.[51] The only difference is that

50. Table 6, *infra.*

51. The size of grand jury panels and venires varies considerably. None are as small as ten. Most commonly they consist of more than 100 members, often including as many as 300 or 400 persons.

in the case of very small panels the unadjusted method can provide a fairly close approximation of the correct results. Table 1 showed that the unadjusted method would infer underrepresentation bias in the selection process from outcomes zero and one, and overrepresentation bias from the outcomes seven, eight, nine, and ten. Table 4 shows that the adjusted method comes to the same conclusion for the bias of underrepresentation, and to nearly the same conclusion for the bias of overrepresentation. The difference regards the outcome of seven test group members. In spite of the occasional close approximation, however, there is no legitimate reason to use the unadjusted method.

Table 4. Cumulative Probabilities for Compositions of Grand Jury Panel of Ten Members, One Year

Number of Test Group Members on Jury Panel	Cumulative Probability of this Outcome; Test Group is 40% of Eligible Population	Interpretation (One-tailed test=.05 level; two-tailed test=.10 level)
0	.00605	underrepresentation
1	.04636	
2	.16726	nondiscriminatory range
3		
4		
5		
6		
7	.05476	
8	.01229	overrepresentation
9	.00167	
10	.00010	

The unadjusted method, of course, has the advantage of requiring only a single computation to test for bias in the selection of a particular panel. The adjusted method, however, does not always require as large a set of computations as the foregoing paragraphs seem to indicate. There are two important shortcuts that can be taken.

First, the specific probability of the actual selection outcome should be computed before any of the others. If this specific probabil-

ity by itself is larger than the selected significance level, it is evident that it cannot be part of the range of discriminatory outcomes. The addition of this probability would necessarily raise the cumulative probability to a value above the significance level, if prior additions had not already done that. Any outcome, then, with a specific probability larger than the significance level cannot demonstrate bias in the selection process. Only a single computation is required for this determination, yet the logic of the adjusted method remains preserved.

Second, the specific tail probabilities need not be computed to the point where the cumulative value exceeds the significance level; they need to be computed only to the point of the actual outcome.[52] If the cumulative probability up to and including the specific probability of the actual outcome is smaller than the significance level, it is evident that the outcome is part of the range of discriminatory outcomes. Frequently, the actual outcome will be much closer to the end of the tail than to the point at which the cumulation crosses significance. Thus, fairly few computations may be required. For example, if the actual outcome is twenty test group members given a panel of 300 (with 50% and .05), only twenty-one probability computations are needed to determine the case, though 136 computations are required to find the point of "crossing." (See Table 3.)

Table 5 shows the range of discriminatory outcomes for a series of test group proportions in the population. The entries in the body of the table are actual outcomes, that is, the number of test group members on the panel. Table 5, as Table 6, includes only the figures for the lower tail of the distribution. The upper tail tends to have only theoretical interest. Actual jury selection litigation always involves the underrepresentation of a particular group.[53] The table also delineates the range of discriminatory outcomes for two different significance levels. The purpose of this is to show what difference a change in significance level would produce. As can be seen, the differences increase from two outcomes for 5% to four outcomes for 15%. For a population proportion of 50%, the difference is six outcomes. Given the total number of outcomes, these differences are not very large.

52. This assumes, of course, that the interest is exclusively in what inference about the selection process can be derived from the actual outcome, rather than in a determination of ranges of discrimination and nondiscrimination.

53. When one group is underrepresented, some other group or groups must be overrepresented, of couse. However, a test for the overrepresentation of one group is equivalent to the test for the underrepresentation of another group only when these two groups together constitute all of the relevant population.

Table 5. Selection Results Belonging to Range of Discriminatory Outcomes (Underrepresentation) for Grand Jury Panel of 300 Members

Number of Test Group Members on Jury Panel	Proportion of Test Group in Population				
	.05	.08	.10	.12	.15
	0	0	0	0	0
	1	1	1	1	1
	2	2	2	2	2
	3	3	3	3	3
	4	4	4	4	4
	5	5	5	5	5
	6	6	6	6	6
	7	7	7	7	7
	8	8	8	8	8
	9	9	9	9	9
	10	10	10	10	10
	11	11	11	11	11
	12	12	12	12	12
	13	13	13	13	13
	14	14	14	14	14
	15	15	15	15	15
	16	16	16	16	16
	17	17	17	17	17
	18	18	18	18	18
	19	19	19	19	19
	20	20	20	20	20
	21	21	21	21	21
	22	22	22	22	22
	23	23	23	23	23
	24	24	24	24	24
	25	25	25	25	25
	26	26	26	26	26
	27	27	27	27	27
	28	28	28	28	28
	29	29	29	29	29
	30	30	30	30	30
	31	31	31	31	31
	32	32	32	32	32
	33	33	33	33	33
	34	34	34	34	34
	35	35	35	35	35

— — — at .01 significance level
——————— at .05 significance level

The significance level of .05, in any case, is most appropriate to the particular problem area of jury selection litigation.[54]

Table 6 is included as an appendix to this article to allow the

54. *See* note 35 *supra*. This problem will be the subject of a separate paper.

reader to inspect a fairly comprehensive set of data, and to obtain a feeling for the behavior of specific and cumulative probabilities in various situations. Both types of probabilities are given, so that the reader can see that the unadjusted and the adjusted method lead to different conclusions even when the test group is only a very small part of the population. The different methods lead to increasingly different conclusions as the test group proportions increase in size.

In sum, the *specific* probability of any actual jury selection outcome (of any particular grand jury panel composition) is inadequate for the determination of whether this outcome is compatible with the assumption of a fair (equal chance) selection, or of whether it demonstrates bias in the selection process. To determine the question of fairness or bias in the selection process which gave rise to a particular jury panel, a series of specific probabilities must be computed and cumulated to identify the *range of discriminatory outcomes.* The inference about bias, then, results from the location of the actual outcome. If it is found inside the range of discriminatory outcomes, bias in the selection process has been demonstrated. If it is found outside that range, bias has not been demonstrated.

Appendix

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 1

Proportion of Test Group in Population

Number Of Test Group Members On Jury Panel	.01		.02		.03		.04		.05	
	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative
0	.0490	.0490	.0023	.0023	.(3)11	.(3)11	.(5)48	.(5)48	.(6)21	.(6)21
1	.1486	.1976	.0143	.0166	.0010	.0011	.(4)60	.(4)65	.(5)33	.(5)35
2	.2244	.4221	.0436	.0602	.0046	.0057	.(3)37	.(3)44	.(4)26	.(4)29
3	.2252	.6472	.0883	.1485	.0142	.0199	.0015	.0020	.(3)13	.(3)16
4	.1689	.8161	.1338	.2824	.0325	.0524	.0048	.0068	.(3)53	.(3)69
5	.1010	.9171	.1617	.4441	.0596	.1120	.0118	.0186	.0016	.0023
6	.0502	.9672	.1623	.6063	.0906	.2026	.0242	.0428	.0042	.0066
7	.0213	.9885	.1391	.7454	.1177	.3203	.0423	.0851	.0094	.0160
8	.0079	.9964	.1040	.8493	.1333	.4536	.0646	.1497	.0181	.0341
9	.0026	.9990	.0688	.9182	.1338	.5874	.0873	.2370	.0309	.0650
10	.(3)76	.9997	.0409	.9590	.1204	.7078	.1059	.3429	.0473	.1123
11	.(3)20	.9999	.0220	.9810	.0982	.8060	.1163	.4593	.0657	.1780
12	.(4)49	1.0000	.0108	.9918	.0731	.8791	.1167	.5760	.0833	.2612
13	.(4)11	1.0000	.0049	.9967	.0501	.9292	.1077	.6837	.0971	.3583
14	.(5)23	1.0000	.0020	.9988	.0318	.9610	.0920	.7758	.1047	.4630
15	.(6)44	1.0000	.(3)80	.9996	.0187	.9797	.0731	.8489	.1051	.5681
16	.(7)79	1.0000	.(3)29	.9999	.0103	.9900	.0543	.9031	.0985	.6666
17	.(7)13	1.0000	.(4)99	1.0000	.0053	.9954	.0378	.9409	.0866	.7533
18	.(8)21	1.0000	.(4)32	1.0000	.0026	.9979	.0247	.9657	.0717	.8250
19	.(9)32	1.0000	.(5)96	1.0000	.0012	.9991	.0153	.9810	.0560	.8810
20	.(10)45	1.0000	.(5)27	1.0000	.(3)52	.9997	.0090	.9899	.0414	.9224
21	.(11)61	1.0000	.(6)75	1.0000	.(3)21	.9999	.0050	.9949	.0291	.9514
22	.(12)78	1.0000	.(6)19	1.0000	.(4)84	1.0000	.0026	.9975	.0194	.9708
23	.(13)95	1.0000	.(7)48	1.0000	.(4)31	1.0000	.0013	.9989	.0123	.9832
24	.(13)11	1.0000	.(7)11	1.0000	.(4)11	1.0000	.(3)64	.9995	.0075	.9907
25	.(14)12	1.0000	.(8)25	1.0000	.(5)38	1.0000	.(3)29	.9998	.0044	.9950
26	.(15)13	1.0000	.(9)55	1.0000	.(5)12	1.0000	.(3)13	.9999	.0024	.9974
27	.(16)13	1.0000	.(9)11	1.0000	.(6)39	1.0000	.(4)55	1.0000	.0013	.9987
28	.(17)13	1.0000	.(10)23	1.0000	.(6)12	1.0000	.(4)22	1.0000	.(3)66	.9994
29	.(18)13	1.0000	.(11)43	1.0000	.(7)34	1.0000	.(5)87	1.0000	.(3)33	.9997
30	.(19)11	1.0000	.(12)80	1.0000	.(8)96	1.0000	.(5)33	1.0000	.(3)16	.9999
31	.(20)10	1.0000	.(12)14	1.0000	.(8)26	1.0000	.(5)12	1.0000	.(4)71	.9999
32	.(22)88	1.0000	.(13)24	1.0000	.(9)67	1.0000	.(6)41	1.0000	.(4)32	1.0000
33	.(23)70	1.0000	.(14)40	1.0000	.(9)17	1.0000	.(6)14	1.0000	.(4)14	1.0000

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 2

Proportion of Test Group in Population

Number Of Test Group Members On Jury Panel		.06		.07		.08		.09		.10	
		specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative
	0	.(8)87	.(8)87	.(9)35	.(9)35	.(10)14	.(10)14	.(12)52	.(12)52	.(13)19	.(13)19
	1	.(6)17	.(6)17	.(8)79	.(8)83	.(9)36	.(9)37	.(10)15	.(10)16	.(12)62	.(12)64
	2	.(5)16	.(5)18	.(7)89	.(7)97	.(8)46	.(8)50	.(9)23	.(9)24	.(10)10	.(10)11
	3	.(4)10	.(4)12	.(6)67	.(6)76	.(7)40	.(7)45	.(8)22	.(8)25	.(9)11	.(9)13
	4	.(4)48	.(4)59	.(5)37	.(5)45	.(6)26	.(6)30	.(7)16	.(7)19	.(9)94	.(8)11
	5	.(3)18	.(3)24	.(4)17	.(4)21	.(5)13	.(5)16	.(7)96	.(6)11	.(8)62	.(8)73
	6	.(3)57	.(3)80	.(4)61	.(4)82	.(5)57	.(5)73	.(7)46	.(6)58	.(7)34	.(7)41
	7	.0015	.0023	.(3)19	.(3)28	.(4)21	.(4)28	.(5)19	.(5)25	.(6)16	.(6)20
	8	.0035	.0059	.(3)54	.(3)81	.(4)66	.(4)94	.(5)70	.(5)95	.(6)64	.(6)84
	9	.0073	.0132	.0013	.0021	.(3)19	.(3)28	.(4)22	.(4)32	.(5)23	.(5)32
	10	.0136	.0268	.0029	.0050	.(3)47	.(3)75	.(4)65	.(4)97	.(5)75	.(4)11
	11	.0230	.0497	.0057	.0107	.0011	.0018	.(3)17	.(3)26	.(4)22	.(4)33
	12	.0352	.0850	.0103	.0210	.0023	.0041	.(3)40	.(3)67	.(4)59	.(4)92
	13	.0498	.1348	.0172	.0381	.0044	.0085	.(3)88	.0015	.(3)15	.(3)24
	14	.0652	.2000	.0265	.0646	.0078	.0163	.0018	.0033	.(3)33	.(3)57
	15	.0793	.2793	.0380	.1026	.0129	.0292	.0034	.0067	.(3)70	.0013
	16	.0902	.3695	.0510	.1536	.0200	.0493	.0059	.0126	.0014	.0027
	17	.0962	.4657	.0641	.2177	.0291	.0784	.0098	.0224	.0026	.0052
	18	.0965	.5623	.0758	.2935	.0398	.1181	.0152	.0376	.0045	.0097
	19	.0915	.6537	.0847	.3782	.0514	.1695	.0223	.0599	.0074	.0171
	20	.0820	.7357	.0896	.4678	.0627	.2322	.0310	.0909	.0116	.0287
	21	.0698	.8056	.0899	.5577	.0727	.3049	.0409	.1318	.0171	.0458
	22	.0565	.8621	.0858	.6436	.0802	.3851	.0513	.1831	.0241	.0699
	23	.0436	.9056	.0781	.7216	.0843	.4694	.0613	.2444	.0324	.1024
	24	.0321	.9378	.0678	.7895	.0846	.5540	.0700	.3144	.0416	.1439
	25	.0226	.9604	.0564	.8458	.0812	.6353	.0764	.3908	.5190	.1949
	26	.0153	.9757	.0449	.8907	.0747	.7100	.0799	.4708	.0599	.2548
	27	.0099	.9856	.0343	.9250	.0659	.7759	.0802	.5510	.0676	.3224
	28	.0062	.9917	.0252	.9501	.0559	.8318	.0774	.6284	.0732	.3956
	29	.0037	.9954	.0178	.9679	.0456	.8774	.0718	.7001	.0763	.4719
	30	.0021	.9975	.0121	.9800	.0358	.9132	.0641	.7643	.0766	.5484
	31	.0012	.9987	.0079	.9879	.0271	.9403	.0552	.8195	.0741	.6225
	32	.(3)63	.9994	.0050	.9929	.0198	.9601	.0459	.8654	.0692	.6917
	33	.(3)33	.9997	.0031	.9960	.0140	.9741	.0369	.9023	.0625	.7542

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 3

Proportion of Test Group in Population

Number Of Test Group Members On Jury Panel	.11		.12		.13		.14		.15	
	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative
0	.(15)66	.(15)66	.(16)22	.(16)22	.(18)72	.(18)72	.(19)22	.(19)22	.(21)67	.(21)67
1	.(13)24	.(13)25	.(15)90	.(15)93	.(16)32	.(16)33	.(17)11	.(17)11	.(19)35	.(19)36
2	.(12)45	.(12)47	.(13)18	.(13)19	.(15)72	.(15)75	.(16)27	.(16)28	.(18)93	.(18)97
3	.(11)55	.(11)60	.(12)25	.(12)27	.(13)11	.(13)11	.(15)43	.(15)46	.(16)16	.(16)17
4	.(10)51	.(10)56	.(11)25	.(11)28	.(12)12	.(12)13	.(14)52	.(14)57	.(15)21	.(15)23
5	.(9)37	.(9)43	.(10)20	.(10)23	.(11)10	.(11)12	.(13)50	.(13)56	.(14)22	.(14)25
6	.(8)23	.(8)27	.(9)14	.(9)16	.(11)77	.(11)89	.(12)40	.(12)46	.(13)19	.(13)22
7	.(7)12	.(7)14	.(9)78	.(9)94	.(10)48	.(10)57	.(11)27	.(11)32	.(12)14	.(12)17
8	.(7)53	.(7)67	.(8)39	.(8)49	.(9)26	.(9)32	.(10)16	.(10)20	.(12)93	.(11)11
9	.(6)21	.(6)28	.(7)17	.(7)22	.(8)13	.(8)16	.(10)86	.(9)11	.(11)53	.(11)64
10	.(6)76	.(5)10	.(7)69	.(7)91	.(8)56	.(8)72	.(9)41	.(9)51	.(10)27	.(10)34
11	.(5)25	.(5)35	.(6)25	.(6)34	.(7)22	.(7)29	.(8)18	.(8)23	.(9)13	.(9)16
12	.(5)74	.(4)11	.(6)81	.(5)12	.(7)79	.(6)11	.(8)69	.(8)91	.(9)54	.(9)70
13	.(4)20	.(4)31	.(5)25	.(5)36	.(6)26	.(6)37	.(7)25	.(7)34	.(8)21	.(8)28
14	.(4)51	.(4)83	.(5)69	.(4)10	.(6)80	.(5)12	.(7)83	.(6)12	.(8)77	.(7)10
15	.(3)12	.(3)20	.(4)18	.(4)28	.(5)23	.(5)35	.(6)26	.(6)37	.(7)26	.(7)36
16	.(3)27	.(3)47	.(4)43	.(4)72	.(5)61	.(5)95	.(6)75	.(5)11	.(7)81	.(6)12
17	.(3)55	.0010	.(4)99	.(3)17	.(4)15	.(4)25	.(5)20	.(5)31	.(6)24	.(6)36
18	.0011	.0021	.(3)21	.(3)38	.(4)36	.(4)60	.(5)52	.(5)83	.(6)66	.(5)10
19	.0020	.0041	.(3)43	.(3)81	.(4)79	.(3)14	.(4)13	.(4)21	.(5)17	.(5)28
20	.0034	.0075	.(3)82	.0016	.(3)17	.(3)30	.(4)29	.(4)50	.(5)43	.(5)71
21	.0056	.0131	.0015	.0031	.(3)33	.(3)64	.(4)62	.(3)11	.(4)10	.(4)17
22	.0088	.0219	.0026	.0057	.(3)63	.0013	.(3)13	.(3)24	.(4)23	.(4)40
23	.0131	.0350	.0043	.0100	.0011	.0024	.(3)25	.(3)49	.(4)48	.(4)88
24	.0187	.0538	.0067	.0166	.0019	.0043	.(3)47	.(3)97	.(4)99	.(3)19
25	.0256	.0793	.0101	.0267	.0032	.0076	.(3)85	.0018	.(3)19	.(3)38
26	.0334	.1128	.0145	.0412	.0051	.0126	.0015	.0033	.(3)36	.(3)74
27	.0419	.1547	.0201	.0613	.0077	.0203	.0024	.0057	.(3)64	.0014
28	.0505	.2052	.0267	.0881	.0112	.0316	.0039	.0096	.0011	.0025
29	.0586	.2638	.0342	.1222	.0157	.0473	.0059	.0155	.0018	.0043
30	.0654	.3292	.0421	.1643	.0212	.0685	.0086	.0241	.0029	.0072
31	.0704	.3996	.0500	.2143	.0276	.0962	.0123	.0364	.0045	.0117
32	.0732	.4728	.0573	.2717	.0347	.1309	.0168	.0531	.0066	.0183
33	.0734	.5462	.0635	.3351	.0421	.1730	.0222	.0753	.0095	.0279

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 4

Proportion of Test Group in Population

Number Of Test Group Members On Jury Panel		.16		.17		.18		.19		.20	
		specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative
	0	.(22)19	.(22)19	.(24)53	.(24)53	.(25)14	.(25)14	.(27)35	.(27)35	.(29)85	.(29)85
	1	.(20)11	.(20)11	.(22)33	.(22)33	.(24)92	.(24)93	.(25)25	.(25)25	.(27)63	.(27)64
	2	.(19)31	.(19)32	.(20)10	.(20)10	.(22)30	.(22)31	.(24)37	.(24)89	.(25)24	.(25)24
	3	.(18)59	.(18)62	.(19)20	.(19)21	.(21)66	.(21)69	.(22)20	.(22)21	.(24)59	.(24)61
	4	.(17)84	.(17)90	.(18)31	.(18)33	.(19)11	.(19)11	.(21)35	.(21)37	.(22)11	.(22)12
	5	.(16)94	.(15)10	.(17)37	.(17)41	.(18)14	.(18)15	.(20)49	.(20)53	.(21)16	.(21)17
	6	.(15)88	.(15)99	.(16)38	.(16)42	.(17)15	.(17)17	.(19)56	.(19)62	.(20)20	.(20)22
	7	.(14)71	.(14)81	.(15)32	.(15)37	.(16)14	.(16)15	.(18)55	.(18)62	.(19)21	.(19)23
	8	.(13)49	.(13)57	.(14)24	.(14)28	.(15)11	.(15)13	.(17)48	.(17)54	.(18)19	.(18)21
	9	.(12)30	.(12)36	.(13)16	.(13)19	.(15)79	.(15)92	.(16)36	.(16)42	.(17)15	.(17)18
	10	.(11)17	.(11)21	.(13)96	.(12)12	.(14)51	.(14)60	.(15)25	.(15)29	.(16)11	.(16)13
	11	.(11)85	.(10)11	.(12)52	.(12)63	.(13)29	.(13)35	.(14)15	.(14)18	.(16)74	.(16)87
	12	.(10)39	.(10)49	.(11)26	.(11)32	.(12)15	.(12)19	.(14)87	.(13)10	.(15)45	.(15)53
	13	.(9)16	.(9)21	.(10)12	.(10)15	.(12)75	.(12)94	.(13)45	.(13)55	.(14)25	.(14)30
	14	.(9)64	.(9)86	.(10)49	.(10)64	.(11)34	.(11)43	.(12)22	.(12)27	.(13)13	.(13)16
	15	.(8)23	.(8)32	.(9)19	.(9)25	.(10)14	.(10)19	.(12)97	.(11)12	.(13)61	.(13)76
	16	.(8)79	.(7)11	.(9)69	.(9)95	.(10)55	.(10)74	.(11)40	.(11)53	.(12)27	.(12)35
	17	.(7)25	.(7)36	.(8)24	.(8)33	.(9)20	.(9)28	.(10)16	.(10)21	.(11)11	.(11)15
	18	.(7)75	.(6)11	.(8)77	.(7)11	.(9)70	.(9)98	.(10)58	.(10)79	.(11)44	.(11)59
	19	.(6)21	.(6)32	.(7)23	.(7)34	.(8)23	.(8)33	.(9)20	.(9)28	.(10)16	.(10)22
	20	.(6)57	.(6)89	.(7)67	.(6)10	.(8)71	.(7)10	.(9)67	.(9)95	.(10)58	.(10)80
	21	.(5)14	.(5)23	.(6)18	.(6)28	.(7)21	.(7)31	.(8)21	.(8)30	.(9)19	.(9)27
	22	.(5)35	.(5)58	.(6)48	.(6)76	.(7)57	.(7)88	.(8)62	.(8)93	.(9)61	.(9)88
	23	.(5)80	.(4)14	.(5)12	.(5)19	.(6)15	.(6)24	.(7)18	.(7)27	.(8)18	.(8)27
	24	.(4)18	.(4)32	.(5)28	.(5)47	.(6)39	.(6)63	.(7)48	.(7)75	.(8)53	.(8)80
	25	.(4)37	.(4)69	.(5)63	.(4)11	.(6)94	.(5)16	.(6)12	.(6)20	.(7)15	.(7)23
	26	.(4)75	.(3)14	.(4)14	.(4)25	.(5)22	.(5)37	.(6)31	.(6)51	.(7)39	.(7)61
	27	.(3)14	.(3)29	.(4)28	.(4)53	.(5)48	.(5)86	.(6)73	.(5)12	.(7)98	.(6)16
	28	.(3)27	.(3)56	.(4)57	.(3)11	.(4)10	.(4)19	.(5)17	.(5)29	.(6)24	.(6)40
	29	.(3)48	.0010	.(3)11	.(3)22	.(4)21	.(4)40	.(5)37	.(5)66	.(6)56	.(6)96
	30	.(3)83	.0019	.(3)20	.(3)42	.(4)42	.(4)83	.(5)78	.(4)14	.(5)13	.(5)22
	31	.0014	.0032	.(3)36	.(3)78	.(4)81	.(3)16	.(4)16	.(4)30	.(5)28	.(5)50
	32	.0022	.0054	.(3)62	.0014	.(3)15	.(3)31	.(4)31	.(4)62	.(5)58	.(4)11
	33	.0034	.0088	.0010	.0024	.(3)27	.(3)58	.(4)60	.(3)12	.(4)12	.(4)23

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 5

Proportion of Test Group in Population

Number Of Test Group Members On Jury Panel		.25		.30		.35	
		specific	cumulative	specific	cumulative	specific	cumulative
	0	.(37)33	.(37)33	.(46)34	.(46)34	.(56)75	.(56)75
	1	.(35)33	.(35)33	.(44)44	.(44)44	.(53)12	.(53)12
	2	.(33)16	.(33)17	.(42)28	.(42)28	.(52)97	.(52)99
	3	.(32)54	.(32)56	.(40)12	.(40)12	.(50)52	.(50)53
	4	.(30)13	.(30)14	.(39)38	.(39)39	.(48)21	.(48)21
	5	.(29)27	.(29)28	.(38)96	.(37)10	.(47)66	.(47)68
	6	.(28)44	.(28)46	.(36)20	.(36)21	.(45)18	.(45)18
	7	.(27)61	.(27)66	.(35)36	.(35)38	.(44)40	.(44)42
	8	.(26)74	.(26)81	.(34)57	.(34)61	.(43)78	.(43)82
	9	.(25)81	.(25)89	.(33)79	.(33)85	.(41)14	.(41)15
	10	.(24)78	.(24)87	.(32)99	.(31)11	.(40)21	.(40)23
	11	.(23)69	.(23)77	.(30)11	.(30)12	.(39)30	.(39)33
	12	.(22)55	.(22)63	.(29)12	.(29)13	.(38)39	.(38)43
	13	.(21)41	.(21)47	.(28)11	.(28)12	.(37)47	.(37)51
	14	.(20)28	.(20)33	.(28)96	.(27)11	.(36)52	.(36)57
	15	.(19)18	.(19)21	.(27)79	.(27)89	.(35)53	.(35)59
	16	.(18)10	.(18)13	.(26)60	.(26)69	.(34)51	.(34)57
	17	.(18)58	.(18)71	.(25)43	.(25)50	.(33)46	.(33)52
	18	.(17)31	.(17)38	.(24)29	.(24)34	.(32)39	.(32)44
	19	.(16)15	.(16)19	.(23)18	.(23)22	.(31)31	.(31)36
	20	.(16)71	.(16)90	.(22)11	.(22)13	.(30)24	.(30)27
	21	.(15)32	.(15)41	.(22)63	.(22)77	.(29)17	.(29)20
	22	.(14)13	.(14)17	.(21)34	.(21)42	.(28)12	.(28)14
	23	.(14)54	.(14)71	.(20)18	.(20)22	.(28)75	.(28)89
	24	.(13)21	.(13)28	.(20)88	.(19)11	.(27)47	.(27)56
	25	.(13)76	.(12)10	.(19)42	.(19)53	.(26)28	.(26)33
	26	.(12)27	.(12)37	.(18)19	.(18)24	.(25)16	.(25)19
	27	.(12)91	.(11)13	.(18)82	.(17)11	.(25)86	.(24)11
	28	.(11)29	.(11)42	.(17)34	.(17)45	.(24)45	.(24)56
	29	.(11)92	.(10)13	.(16)14	.(16)18	.(23)23	.(23)29
	30	.(10)28	.(10)41	.(16)54	.(16)72	.(22)11	.(22)14
	31	.(10)81	.(9)12	.(15)20	.(15)27	.(22)52	.(22)66
	32	.(9)23	.(9)35	.(15)72	.(15)99	.(21)24	.(21)30
	33	.(9)61	.(9)96	.(14)25	.(14)35	.(20)10	.(20)13

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 6

Proportion of Test Group in Population

Number Of Test Group Members On Jury Panel		.40 specific	.40 cumulative	.45 specific	.45 cumulative	.50 specific	.50 cumulative
	0	.(66)28	.(66)28	.(77)13	.(77)13	.(90)49	.(90)49
	1	.(64)56	.(64)56	.(75)32	.(75)32	.(87)15	.(87)15
	2	.(62)56	.(62)56	.(73)39	.(73)39	.(85)22	.(85)22
	3	.(60)37	.(60)37	.(71)31	.(71)32	.(83)22	.(83)22
	4	.(58)18	.(58)19	.(69)19	.(69)19	.(81)16	.(81)16
	5	.(57)72	.(57)74	.(68)92	.(68)94	.(80)96	.(80)98
	6	.(55)24	.(55)24	.(66)37	.(66)38	.(78)47	.(78)48
	7	.(54)66	.(54)68	.(64)13	.(64)13	.(76)20	.(76)20
	8	.(52)16	.(52)17	.(63)38	.(63)40	.(75)73	.(75)75
	9	.(51)35	.(51)37	.(61)10	.(61)11	.(73)24	.(73)24
	10	.(50)68	.(50)71	.(60)24	.(60)25	.(72)69	.(72)71
	11	.(48)12	.(48)13	.(59)52	.(59)55	.(70)18	.(70)19
	12	.(47)19	.(47)20	.(57)10	.(57)11	.(69)44	.(69)45
	13	.(46)28	.(46)30	.(56)19	.(56)20	.(68)97	.(67)10
	14	.(45)39	.(45)42	.(55)31	.(55)33	.(66)20	.(66)21
	15	.(44)49	.(44)53	.(54)49	.(54)52	.(65)38	.(65)40
	16	.(43)58	.(43)63	.(53)71	.(53)76	.(64)67	.(64)71
	17	.(42)65	.(42)71	.(52)97	.(51)10	.(62)11	.(62)12
	18	.(41)68	.(41)75	.(50)12	.(50)14	.(61)18	.(61)19
	19	.(40)67	.(40)75	.(49)15	.(49)17	.(60)26	.(60)28
	20	.(39)63	.(39)70	.(48)17	.(48)19	.(59)37	.(59)40
	21	.(38)56	.(38)63	.(47)19	.(47)21	.(58)49	.(58)53
	22	.(37)47	.(37)54	.(46)20	.(46)22	.(57)62	.(57)68
	23	.(36)38	.(36)43	.(45)19	.(45)22	.(56)75	.(56)82
	24	.(35)29	.(35)34	.(44)18	.(44)21	.(55)87	.(55)95
	25	.(34)22	.(34)25	.(43)17	.(43)19	.(54)96	.(53)11
	26	.(33)15	.(33)18	.(42)14	.(42)16	.(52)10	.(52)11
	27	.(32)10	.(32)12	.(41)12	.(41)14	.(51)10	.(51)11
	28	.(32)67	.(32)79	.(41)95	.(40)11	.(50)10	.(50)11
	29	.(31)42	.(31)50	.(40)73	.(40)84	.(50)94	.(49)11
	30	.(30)25	.(30)30	.(39)54	.(39)62	.(49)85	.(49)96
	31	.(29)15	.(29)18	.(38)39	.(38)45	.(48)74	.(48)84
	32	.(29)82	.(28)10	.(37)26	.(37)31	.(47)62	.(47)71
	33	.(28)44	.(28)54	.(36)18	.(36)21	.(46)51	.(46)58

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 7

Proportion of Test Group in Population

Number Of Test Group Members On Jury Panel		.01		.02		.03		.04		.05	
		specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative
	34	.(24)56	1.0000	.(15)64	1.0000	.(10)41	1.0000	.(7)46	1.0000	.(5)56	1.0000
	35	.(25)43	1.0000	.(15)10	1.0000	.(11)96	1.0000	.(7)15	1.0000	.(5)22	1.0000
	36	.(26)32	1.0000	.(16)15	1.0000	.(11)22	1.0000	.(8)45	1.0000	.(6)87	1.0000
	37	.(27)23	1.0000	.(17)22	1.0000	.(12)48	1.0000	.(8)13	1.0000	.(6)33	1.0000
	38	.(28)16	1.0000	.(18)31	1.0000	.(12)10	1.0000	.(9)38	1.0000	.(6)12	1.0000
	39	.(29)11	1.0000	.(19)42	1.0000	.(13)21	1.0000	.(9)11	1.0000	.(7)42	1.0000
	40	.(31)72	1.0000	.(20)56	1.0000	.(14)43	1.0000	.(10)29	1.0000	.(7)14	1.0000
	41	.(32)46	1.0000	.(21)73	1.0000	.(15)85	1.0000	.(11)77	1.0000	.(8)48	1.0000
	42	.(33)29	1.0000	.(22)92	1.0000	.(15)16	1.0000	.(11)20	1.0000	.(8)16	1.0000
	43	.(34)17	1.0000	.(22)11	1.0000	.(16)30	1.0000	.(12)49	1.0000	.(9)49	1.0000
	44	.(35)10	1.0000	.(23)13	1.0000	.(17)54	1.0000	.(12)12	1.0000	.(9)15	1.0000
	45	.(37)59	1.0000	.(24)16	1.0000	.(18)96	1.0000	.(13)28	1.0000	.(10)45	1.0000
	46	.(38)33	1.0000	.(25)18	1.0000	.(18)16	1.0000	.(14)66	1.0000	.(10)13	1.0000
	47	.(39)18	1.0000	.(26)19	1.0000	.(19)27	1.0000	.(14)15	1.0000	.(11)38	1.0000
	48	.(41)96	1.0000	.(27)21	1.0000	.(20)45	1.0000	.(15)33	1.0000	.(11)10	1.0000
	49	.(42)50	1.0000	.(28)22	1.0000	.(21)71	1.0000	.(16)70	1.0000	.(12)28	1.0000
	50	.(43)25	1.0000	.(29)22	1.0000	.(21)11	1.0000	.(16)15	1.0000	.(13)75	1.0000
	51	.(44)12	1.0000	.(30)22	1.0000	.(22)17	1.0000	.(17)30	1.0000	.(13)19	1.0000
	52	.(46)60	1.0000	.(31)22	1.0000	.(23)25	1.0000	.(18)59	1.0000	.(14)48	1.0000
	53	.(47)29	1.0000	.(32)21	1.0000	.(24)36	1.0000	.(18)12	1.0000	.(14)12	1.0000
	54	.(48)13	1.0000	.(33)20	1.0000	.(25)51	1.0000	.(19)22	1.0000	.(15)29	1.0000
	55	.(50)60	1.0000	.(34)18	1.0000	.(26)70	1.0000	.(20)41	1.0000	.(16)68	1.0000
	56	.(51)26	1.0000	.(35)16	1.0000	.(27)95	1.0000	.(21)75	1.0000	.(16)16	1.0000
	57	.(52)11	1.0000	.(36)14	1.0000	.(27)13	1.0000	.(21)13	1.0000	.(17)35	1.0000
	58	.(54)48	1.0000	.(37)12	1.0000	.(28)16	1.0000	.(22)23	1.0000	.(18)77	1.0000
	59	.(55)20	1.0000	.(38)10	1.0000	.(29)21	1.0000	.(23)40	1.0000	.(18)17	1.0000
	60	.(57)81	1.0000	.(40)82	1.0000	.(30)26	1.0000	.(24)67	1.0000	.(19)35	1.0000
	61	.(58)32	1.0000	.(41)66	1.0000	.(31)31	1.0000	.(24)11	1.0000	.(20)73	1.0000
	62	.(59)13	1.0000	.(42)52	1.0000	.(32)37	1.0000	.(25)18	1.0000	.(20)15	1.0000
	63	.(61)48	1.0000	.(43)40	1.0000	.(33)43	1.0000	.(26)28	1.0000	.(21)30	1.0000
	64	.(62)18	1.0000	.(44)30	1.0000	.(34)50	1.0000	.(27)43	1.0000	.(22)58	1.0000
	65	.(64)66	1.0000	.(45)22	1.0000	.(35)56	1.0000	.(28)65	1.0000	.(22)11	1.0000
	66	.(65)24	1.0000	.(46)16	1.0000	.(36)62	1.0000	.(29)96	1.0000	.(23)21	1.0000
	67	.(67)83	1.0000	.(47)12	1.0000	.(37)66	1.0000	.(29)14	1.0000	.(24)38	1.0000

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 8

Number Of Test Group Members On Jury Panel		Proportion of Test Group in Population									
		.06		.07		.08		.09		.10	
		specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative
	34	.(3)16	.9999	.0018	.9978	.0096	.9837	.0286	.9309	.0545	.8086
	35	.(4)80	.9999	.0010	.9988	.0063	.9900	.0215	.9525	.0460	.8547
	36	.(4)38	1.0000	.(3)57	.9994	.0040	.9940	.0157	.9681	.0376	.8923
	37	.(4)17	1.0000	.(3)31	.9997	.0025	.9965	.0111	.9792	.0298	.9221
	38	.(5)76	1.0000	.(3)16	.9998	.0015	.9980	.0076	.9868	.0229	.9451
	39	.(5)32	1.0000	.(4)81	.9999	.(3)88	.9989	.0050	.9918	.0171	.9622
	40	.(5)14	1.0000	.(4)40	1.0000	.(3)50	.9994	.0032	.9950	.0124	.9746
	41	.(6)55	1.0000	.(4)19	1.0000	.(3)28	.9997	.0020	.9971	.0087	.9834
	42	.(6)22	1.0000	.(5)88	1.0000	.(3)15	.9998	.0012	.9983	.0060	.9894
	43	.(7)82	1.0000	.(5)40	1.0000	.(4)77	.9999	.(3)74	.9991	.0040	.9934
	44	.(7)31	1.0000	.(5)18	1.0000	.(4)39	1.0000	.(3)43	.9995	.0026	.9959
	45	.(7)11	1.0000	.(6)75	1.0000	.(4)19	1.0000	.(3)24	.9997	.0016	.9976
	46	.(8)39	1.0000	.(6)31	1.0000	.(5)94	1.0000	.(3)13	.9999	.0010	.9986
	47	.(8)14	1.0000	.(6)13	1.0000	.(5)44	1.0000	.(4)70	.9999	.(3)61	.9992
	48	.(9)46	1.0000	.(7)51	1.0000	.(5)20	1.0000	.(4)37	1.0000	.(3)36	.9996
	49	.(9)15	1.0000	.(7)20	1.0000	.(6)90	1.0000	.(4)19	1.0000	.(3)20	.9998
	50	.(10)48	1.0000	.(8)74	1.0000	.(6)39	1.0000	.(5)92	1.0000	.(3)11	.9999
	51	.(10)15	1.0000	.(8)27	1.0000	.(6)17	1.0000	.(5)45	1.0000	.(4)62	.9999
	52	.(11)46	1.0000	.(9)98	1.0000	.(7)70	1.0000	.(5)21	1.0000	.(4)33	1.0000
	53	.(11)14	1.0000	.(9)35	1.0000	.(7)28	1.0000	.(6)98	1.0000	.(4)17	1.0000
	54	.(12)40	1.0000	.(9)12	1.0000	.(7)11	1.0000	.(6)44	1.0000	.(5)87	1.0000
	55	.(12)11	1.0000	.(10)40	1.0000	.(8)44	1.0000	.(6)20	1.0000	.(5)43	1.0000
	56	.(13)32	1.0000	.(10)13	1.0000	.(8)17	1.0000	.(7)85	1.0000	.(5)21	1.0000
	57	.(14)87	1.0000	.(11)43	1.0000	.(9)62	1.0000	.(7)36	1.0000	.(5)10	1.0000
	58	.(14)23	1.0000	.(11)13	1.0000	.(9)23	1.0000	.(7)15	1.0000	.(6)46	1.0000
	59	.(15)61	1.0000	.(12)41	1.0000	.(10)81	1.0000	.(8)60	1.0000	.(6)21	1.0000
	60	.(15)16	1.0000	.(12)13	1.0000	.(10)28	1.0000	.(8)24	1.0000	.(7)94	1.0000
	61	.(16)39	1.0000	.(13)37	1.0000	.(11)97	1.0000	.(9)94	1.0000	.(7)41	1.0000
	62	.(17)97	1.0000	.(13)11	1.0000	.(11)32	1.0000	.(9)36	1.0000	.(7)18	1.0000
	63	.(17)23	1.0000	.(14)31	1.0000	.(11)11	1.0000	.(9)13	1.0000	.(8)74	1.0000
	64	.(18)55	1.0000	.(15)85	1.0000	.(12)34	1.0000	.(10)49	1.0000	.(8)30	1.0000
	65	.(18)13	1.0000	.(15)23	1.0000	.(12)11	1.0000	.(10)18	1.0000	.(8)12	1.0000
	66	.(19)29	1.0000	.(16)63	1.0000	.(13)33	1.0000	.(11)62	1.0000	.(9)49	1.0000
	67	.(20)65	1.0000	.(16)16	1.0000	.(13)10	1.0000	.(11)21	1.0000	.(9)19	1.0000

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 9

Number Of Test Group Members On Jury Panel	Proportion of Test Group in Population									
	.11		.12		.13		.14		.15	
	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative
34	.0713	.6175	.0680	.4031	.0494	.2224	.0284	.1037	.0132	.0411
35	.0669	.6844	.0705	.4735	.0561	.2786	.0351	.1388	.0177	.0588
36	.0609	.7453	.0707	.5443	.0617	.3403	.0421	.1808	.0230	.0817
37	.0537	.7990	.0688	.6131	.0658	.4061	.0488	.2297	.0289	.1107
38	.0459	.8450	.0649	.6780	.0681	.4742	.0550	.2847	.0354	.1460
39	.0382	.8831	.0595	.7375	.0683	.5426	.0602	.3449	.0419	.1879
40	.0308	.9139	.0529	.7904	.0666	.6092	.0639	.4088	.0483	.2362
41	.0241	.9380	.0458	.8362	.0631	.6723	.0660	.4748	.0540	.2902
42	.0184	.9564	.0385	.8747	.0582	.7305	.0663	.5410	.0588	.3489
43	.0136	.9700	.0315	.9062	.0522	.7827	.0647	.6057	.0622	.4112
44	.0098	.9798	.0251	.9312	.0455	.8282	.0615	.6673	.0641	.4753
45	.0069	.9867	.0195	.9507	.0387	.8669	.0570	.7242	.0644	.5397
46	.0047	.9915	.0147	.9654	.0321	.8989	.0514	.7757	.0630	.6026
47	.0032	.9947	.0108	.9762	.0259	.9248	.0452	.8209	.0601	.6627
48	.0021	.9967	.0078	.9840	.0204	.9452	.0388	.8597	.0559	.7186
49	.0614	.5999	.0593	.4151	.0466	.9609	.0325	.8922	.0507	.7693
50	.(3)81	.9988	.0037	.9932	.0118	.9726	.0266	.9188	.0449	.8142
51	.(3)49	.9993	.0025	.9957	.0086	.9812	.0212	.9399	.0389	.8531
52	.(3)29	.9996	.0016	.9974	.0062	.9874	.0165	.9565	.0328	.8859
53	.(3)17	.9998	.0010	.9984	.0043	.9917	.0126	.9690	.0271	.9130
54	.(4)95	.9999	.(3)65	.9991	.0029	.9946	.0094	.9784	.0219	.9349
55	.(4)53	.9999	.(3)40	.9995	.0020	.9966	.0068	.9852	.0173	.9522
56	.(4)29	1.0000	.(3)24	.9997	.0013	.9979	.0049	.9901	.0133	.9655
57	.(4)15	1.0000	.(3)14	.9998	.(3)82	.9987	.0034	.9935	.0101	.9756
58	.(5)78	1.0000	.(4)79	.9999	.(3)52	.9992	.0023	.9958	.0074	.9830
59	.(5)40	1.0000	.(4)44	.9999	.(3)32	.9996	.0015	.9973	.0054	.9884
60	.(5)20	1.0000	.(4)24	1.0000	.(3)19	.9997	.0010	.9983	.0038	.9923
61	.(6)96	1.0000	.(4)13	1.0000	.(3)11	.9999	.(3)65	.9990	.0027	.9949
62	.(6)46	1.0000	.(5)68	1.0000	.(4)64	.9999	.(3)41	.9994	.0018	.9967
63	.(6)21	1.0000	.(5)35	1.0000	.(4)36	1.0000	.(3)25	.9996	.0012	.9979
64	.(7)97	1.0000	.(5)18	1.0000	.(4)20	1.0000	.(3)15	.9998	.(3)79	.9987
65	.(7)44	1.0000	.(6)88	1.0000	.(4)11	1.0000	.(4)89	.9999	.(3)50	.9992
66	.(7)19	1.0000	.(6)43	1.0000	.(5)58	1.0000	.(4)51	.9999	.(3)32	.9995
67	.(8)83	1.0000	.(6)20	1.0000	.(5)30	1.0000	.(4)29	1.0000	.(3)19	.9997

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 10

		Proportion of Test Group in Population									
		.16		.17		.18		.19		.20	
		specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative
Number	34	.0051	.0139	.0017	.0041	.(3)46	.0010	.(3)11	.(3)23	.(4)23	.(4)46
	35	.0074	.0213	.0026	.0066	.(3)77	.0018	.(3)20	.(3)43	.(4)44	.(4)90
Of	36	.0103	.0316	.0039	.0105	.0012	.0030	.(3)34	.(3)77	.(4)31	.(3)17
	37	.0140	.0456	.0057	.0162	.0019	.0050	.(3)57	.0013	.(3)14	.(3)32
Test	38	.0185	.0641	.0080	.0242	.0029	.0079	.(3)92	.0023	.(3)25	.(3)57
	39	.0237	.0878	.0111	.0353	.0043	.0123	.0015	.0037	.(3)42	.(3)98
Group	40	.0294	.1172	.0148	.0500	.0062	.0185	.0022	.0059	.(3)68	.0017
	41	.0355	.1527	.0192	.0692	.0087	.0271	.0033	.0092	.0011	.0028
Members	42	.0417	.1944	.0242	.0934	.0117	.0388	.0048	.0140	.0017	.0044
	43	.0477	.2421	.0298	.1232	.0154	.0543	.0067	.0208	.0025	.0069
On	44	.0530	.2951	.0356	.1588	.0198	.0740	.0092	.0300	.0037	.0106
	45	.0575	.3526	.0415	.2003	.0247	.0987	.0123	.0423	.0052	.0158
Jury	46	.0607	.4132	.0471	.2474	.0301	.1288	.0160	.0583	.0072	.0230
	47	.0625	.4757	.0521	.2995	.0357	.1644	.0203	.0786	.0098	.0328
Panel	48	.0627	.5384	.0563	.3558	.0413	.2057	.0251	.1037	.0129	.0457
	49	.0614	.5999	.0593	.4151	.0466	.2522	.0303	.1340	.0165	.0622
	50	.0587	.6586	.0610	.4761	.0513	.3036	.0357	.1696	.0208	.0830
	51	.0549	.7135	.0612	.5373	.0552	.3588	.0410	.2106	.0254	.1084
	52	.0500	.7635	.0600	.5973	.0580	.4168	.0460	.2567	.0305	.1388
	53	.0446	.8081	.0575	.6549	.0596	.4764	.0505	.3072	.0356	.1745
	54	.0389	.8469	.0539	.7088	.0599	.5363	.0542	.3614	.0407	.2152
	55	.0331	.8800	.0494	.7582	.0588	.5951	.0569	.4183	.0456	.2607
	56	.0276	.9076	.0443	.8024	.0564	.6515	.0584	.4767	.0498	.3106
	57	.0225	.9301	.0388	.8412	.0530	.7045	.0586	.5353	.0533	.3639
	58	.0180	.9480	.0333	.8745	.0488	.7533	.0576	.5930	.0558	.4197
	59	.0140	.9621	.0280	.9025	.0439	.7972	.0554	.6484	.0573	.4770
	60	.0107	.9728	.0230	.9255	.0387	.8359	.0522	.7006	.0575	.5345
	61	.0080	.9808	.0185	.9440	.0334	.8694	.0482	.7488	.0566	.5910
	62	.0059	.9867	.0146	.9587	.0283	.8977	.0436	.7924	.0545	.6455
	63	.0042	.9910	.0113	.9700	.0235	.9211	.0386	.8310	.0515	.6970
	64	.0030	.9940	.0086	.9786	.0191	.9402	.0336	.8646	.0477	.7447
	65	.0021	.9960	.0064	.9850	.0152	.9554	.0286	.8931	.0433	.7879
	66	.0014	.9974	.0047	.9897	.0119	.9673	.0239	.9170	.0385	.8264
	67	.(3)93	.9984	.0033	.9930	.0091	.9764	.0196	.9365	.0336	.8600

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 11

Proportion of Test Group in Population

Number Of Test Group Members On Jury Panel	.25		.30		.35	
	specific	cumulative	specific	cumulative	specific	cumulative
34	.(8)16	.(8)26	.(14)84	.(13)12	.(20)44	.(20)57
35	.(8)41	.(8)66	.(13)27	.(13)39	.(19)18	.(19)24
36	.(8)99	.(7)17	.(13)87	.(12)13	.(19)71	.(19)95
37	.(7)24	.(7)40	.(12)27	.(12)39	.(18)27	.(18)37
38	.(7)55	.(7)95	.(12)79	.(11)12	.(17)10	.(17)14
39	.(6)12	.(6)22	.(11)23	.(11)34	.(17)37	.(17)51
40	.(6)27	.(6)48	.(11)63	.(11)98	.(16)13	.(16)18
41	.(6)56	.(5)10	.(10)17	.(10)27	.(16)44	.(16)62
42	.(5)12	.(5)22	.(10)45	.(10)72	.(15)15	.(15)21
43	.(5)23	.(5)45	.(9)12	.(9)19	.(15)47	.(15)68
44	.(5)45	.(5)90	.(9)29	.(9)48	.(14)15	.(14)22
45	.(5)85	.(4)18	.(9)71	.(8)12	.(14)46	.(14)67
46	.(4)16	.(4)33	.(8)17	.(8)29	.(13)14	.(13)20
47	.(4)28	.(4)62	.(8)39	.(8)68	.(13)40	.(13)60
48	.(4)50	.(3)11	.(8)89	.(7)16	.(12)11	.(12)17
49	.(4)85	.(3)20	.(7)20	.(7)35	.(12)31	.(12)48
50	.(3)14	.(3)34	.(7)42	.(7)77	.(12)84	.(11)13
51	.(3)23	.(3)57	.(7)88	.(6)17	.(11)22	.(11)35
52	.(3)37	.(3)95	.(6)18	.(6)35	.(11)57	.(11)93
53	.(3)58	.0015	.(6)36	.(6)71	.(10)14	.(10)24
54	.(3)89	.0024	.(6)71	.(5)14	.(10)36	.(10)59
55	.0013	.0037	.(5)14	.(5)28	.(10)86	.(9)14
56	.0019	.0057	.(5)26	.(5)54	.(9)20	.(9)35
57	.0028	.0084	.(5)47	.(4)10	.(9)46	.(9)81
58	.0038	.0123	.(5)84	.(4)18	.(8)10	.(8)19
59	.0053	.0175	.(4)15	.(4)33	.(8)23	.(8)42
60	.0070	.0246	.(4)26	.(4)59	.(8)50	.(8)92
61	.0092	.0338	.(4)43	.(3)10	.(7)11	.(7)20
62	.0119	.0456	.(4)71	.(3)17	.(7)22	.(7)42
63	.0149	.0606	.(3)12	.(3)29	.(7)45	.(7)87
64	.0184	.0790	.(3)18	.(3)47	.(7)89	.(6)18
65	.0223	.1013	.(3)28	.(3)76	.(6)17	.(6)35
66	.0265	.1278	.(3)43	.0012	.(6)33	.(6)69
67	.0308	.1586	.(3)65	.0018	.(6)63	.(5)13

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 12

Number Of Test Group Members On Jury Panel	Proportion of Test Group in Population					
	.40		.45		.50	
	specific	cumulative	specific	cumulative	specific	cumulative
34	.(27)23	.(27)29	.(35)11	.(35)13	.(45)40	.(45)45
35	.(26)12	.(26)15	.(35)70	.(35)84	.(44)30	.(44)35
36	.(26)58	.(26)72	.(34)42	.(34)51	.(43)22	.(43)26
37	.(25)27	.(25)35	.(33)25	.(33)30	.(42)16	.(42)18
38	.(24)13	.(24)16	.(32)14	.(32)17	.(41)11	.(41)13
39	.(24)57	.(24)73	.(32)77	.(32)94	.(41)74	.(41)86
40	.(23)25	.(23)32	.(31)41	.(31)50	.(40)48	.(40)57
41	.(22)10	.(22)14	.(30)21	.(30)26	.(39)30	.(39)36
42	.(22)43	.(22)57	.(29)11	.(29)13	.(38)19	.(38)22
43	.(21)17	.(21)23	.(29)53	.(29)66	.(37)11	.(37)14
44	.(21)67	.(21)90	.(28)25	.(28)32	.(37)66	.(37)79
45	.(20)25	.(20)34	.(27)12	.(27)15	.(36)37	.(36)45
46	.(20)94	.(19)13	.(27)53	.(27)68	.(35)21	.(35)25
47	.(19)34	.(19)47	.(26)24	.(26)30	.(34)11	.(34)14
48	.(18)12	.(18)17	.(25)10	.(25)13	.(34)59	.(34)73
49	.(18)41	.(18)57	.(25)43	.(25)56	.(33)30	.(33)38
50	.(17)14	.(17)19	.(24)18	.(24)23	.(32)15	.(32)19
51	.(17)44	.(17)64	.(24)70	.(24)94	.(32)75	.(32)94
52	.(16)14	.(16)21	.(23)28	.(23)37	.(31)36	.(31)45
53	.(16)44	.(16)65	.(22)11	.(22)14	.(30)17	.(30)21
54	.(15)14	.(15)20	.(22)40	.(22)58	.(30)77	.(30)98
55	.(15)40	.(15)60	.(21)14	.(21)20	.(29)34	.(29)44
56	.(14)12	.(14)18	.(21)52	.(21)72	.(28)15	.(28)19
57	.(14)34	.(14)51	.(20)18	.(20)25	.(28)64	.(28)84
58	.(14)94	.(13)15	.(20)62	.(20)87	.(27)27	.(27)35
59	.(13)26	.(13)40	.(19)21	.(19)30	.(26)11	.(26)15
60	.(13)69	.(12)11	.(19)69	.(19)98	.(26)44	.(26)59
61	.(12)18	.(12)29	.(18)22	.(18)32	.(25)17	.(25)23
62	.(12)46	.(12)75	.(18)70	.(17)10	.(25)67	.(25)91
63	.(11)12	.(11)19	.(17)22	.(17)32	.(24)25	.(24)35
64	.(11)29	.(11)48	.(17)65	.(17)97	.(24)94	.(23)13
65	.(11)70	.(10)12	.(16)19	.(16)29	.(23)34	.(23)47
66	.(10)17	.(10)28	.(16)56	.(16)85	.(22)12	.(22)17
67	.(10)38	.(10)67	.(15)16	.(15)25	.(22)43	.(22)59

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 13

Number Of Test Group Members On Jury Panel	Proportion of Test Group in Population									
	.01		.02		.03		.04		.05	
	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative
68	.(68)29	1.0000	.(49)81	1.0000	.(38)70	1.0000	.(30)20	1.0000	.(25)68	1.0000
69	.(70)98	1.0000	.(50)55	1.0000	.(39)73	1.0000	.(31)28	1.0000	.(25)12	1.0000
70	.(71)33	1.0000	.(51)37	1.0000	.(40)75	1.0000	.(32)38	1.0000	.(26)21	1.0000
71	.(72)11	1.0000	.(52)25	1.0000	.(41)75	1.0000	.(33)52	1.0000	.(27)36	1.0000
72	.(74)34	1.0000	.(53)16	1.0000	.(42)74	1.0000	.(34)69	1.0000	.(28)60	1.0000
73	.(75)11	1.0000	.(54)10	1.0000	.(43)71	1.0000	.(35)89	1.0000	.(29)98	1.0000
74	.(77)34	1.0000	.(56)64	1.0000	.(44)68	1.0000	.(35)11	1.0000	.(29)16	1.0000
75	.(78)10	1.0000	.(57)39	1.0000	.(45)63	1.0000	.(36)14	1.0000	.(30)25	1.0000
76	.(80)31	1.0000	.(58)24	1.0000	.(46)58	1.0000	.(37)18	1.0000	.(31)39	1.0000
77	.(82)90	1.0000	.(59)14	1.0000	.(47)52	1.0000	.(38)21	1.0000	.(32)60	1.0000
78	.(83)26	1.0000	.(61)82	1.0000	.(48)46	1.0000	.(39)26	1.0000	.(33)91	1.0000
79	.(85)74	1.0000	.(62)47	1.0000	.(49)40	1.0000	.(40)30	1.0000	.(33)13	1.0000
80	.(86)21	1.0000	.(63)27	1.0000	.(50)34	1.0000	.(41)34	1.0000	.(34)19	1.0000
81	.(88)56	1.0000	.(64)15	1.0000	.(51)29	1.0000	.(42)39	1.0000	.(35)28	1.0000
82	.(89)15	1.0000	.(66)80	1.0000	.(52)24	1.0000	.(43)43	1.0000	.(36)39	1.0000
83	.(91)40	1.0000	.(67)43	1.0000	.(53)19	1.0000	.(44)47	1.0000	.(37)54	1.0000
84	.(92)11	1.0000	.(68)23	1.0000	.(54)15	1.0000	.(45)51	1.0000	.(38)74	1.0000
85	.(94)27	1.0000	.(69)12	1.0000	.(55)12	1.0000	.(46)54	1.0000	.(39)98	1.0000
86	.(96)68	1.0000	.(71)60	1.0000	.(57)93	1.0000	.(47)56	1.0000	.(39)13	1.0000
87	.(97)17	1.0000	.(72)30	1.0000	.(58)71	1.0000	.(48)58	1.0000	.(40)17	1.0000
88	.(99)41	1.0000	.(73)15	1.0000	.(59)53	1.0000	.(49)58	1.0000	.(41)21	1.0000
89	.(100)10	1.0000	.(75)72	1.0000	.(60)39	1.0000	.(50)58	1.0000	.(42)27	1.0000
90	.(102)24	1.0000	.(76)35	1.0000	.(61)28	1.0000	.(51)56	1.0000	.(43)33	1.0000
91	.(104)55	1.0000	.(77)16	1.0000	.(62)20	1.0000	.(52)54	1.0000	.(44)40	1.0000
92	.(105)13	1.0000	.(79)76	1.0000	.(63)14	1.0000	.(53)51	1.0000	.(45)48	1.0000
93	.(107)29	1.0000	.(80)35	1.0000	.(65)98	1.0000	.(54)48	1.0000	.(47)65	1.0000
94	.(109)63	1.0000	.(81)16	1.0000	.(66)67	1.0000	.(55)44	1.0000	.(48)75	1.0000
95	.(110)14	1.0000	.(83)69	1.0000	.(67)45	1.0000	.(56)40	1.0000	.(49)34	1.0000
96	.(112)30	1.0000	.(84)30	1.0000	.(68)30	1.0000	.(57)	1.0000	.(49)84	1.0000
97	.(114)64	1.0000	.(85)13	1.0000	.(69)19	1.0000	.(58)31	1.0000	.(50)93	1.0000
98	.(115)13	1.0000	.(87)54	1.0000	.(70)12	1.0000	.(59)27	1.0000	.(50)10	1.0000
99	.(117)27	1.0000	.(88)23	1.0000	.(72)78	1.0000	.(60)23	1.0000	.(51)11	1.0000
100	.(119)56	1.0000	.(90)93	1.0000	.(73)48	1.0000	.(61)19	1.0000	.(52)12	1.0000

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 14

Number Of Test Group Members On Jury Panel	Proportion of Test Group in Population									
	.06		.07		.08		.09		.10	
	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative
68	.(20)14	1.0000	.(17)42	1.0000	.(14)30	1.0000	.(12)72	1.0000	.(10)72	1.0000
69	.(21)30	1.0000	.(17)11	1.0000	.(15)89	1.0000	.(12)24	1.0000	.(10)27	1.0000
70	.(22)64	1.0000	.(18)27	1.0000	.(15)25	1.0000	.(13)78	1.0000	.(11)98	1.0000
71	.(22)13	1.0000	.(19)65	1.0000	.(16)72	1.0000	.(13)25	1.0000	.(11)35	1.0000
72	.(23)27	1.0000	.(19)16	1.0000	.(16)20	1.0000	.(14)79	1.0000	.(11)13	1.0000
73	.(24)54	1.0000	.(20)37	1.0000	.(17)54	1.0000	.(14)24	1.0000	.(12)43	1.0000
74	.(24)11	1.0000	.(21)84	1.0000	.(17)14	1.0000	.(15)74	1.0000	.(12)15	1.0000
75	.(25)20	1.0000	.(21)19	1.0000	.(18)38	1.0000	.(15)22	1.0000	.(13)50	1.0000
76	.(26)38	1.0000	.(22)43	1.0000	.(19)97	1.0000	.(16)65	1.0000	.(13)16	1.0000
77	.(27)71	1.0000	.(23)93	1.0000	.(19)24	1.0000	.(16)19	1.0000	.(14)53	1.0000
78	.(27)13	1.0000	.(23)20	1.0000	.(20)61	1.0000	.(17)53	1.0000	.(14)17	1.0000
79	.(28)23	1.0000	.(24)43	1.0000	.(20)15	1.0000	.(17)15	1.0000	.(15)52	1.0000
80	.(29)41	1.0000	.(25)88	1.0000	.(21)36	1.0000	.(18)40	1.0000	.(15)16	1.0000
81	.(30)71	1.0000	.(25)18	1.0000	.(22)84	1.0000	.(18)11	1.0000	.(16)48	1.0000
82	.(30)12	1.0000	.(26)36	1.0000	.(22)20	1.0000	.(19)28	1.0000	.(16)14	1.0000
83	.(31)20	1.0000	.(27)72	1.0000	.(23)45	1.0000	.(20)74	1.0000	.(17)42	1.0000
84	.(32)33	1.0000	.(27)14	1.0000	.(23)10	1.0000	.(20)19	1.0000	.(17)12	1.0000
85	.(33)54	1.0000	.(28)27	1.0000	.(24)22	1.0000	.(21)47	1.0000	.(18)34	1.0000
86	.(34)87	1.0000	.(29)50	1.0000	.(25)48	1.0000	.(21)12	1.0000	.(19)94	1.0000
87	.(34)14	1.0000	.(30)93	1.0000	.(25)10	1.0000	.(22)28	1.0000	.(19)26	1.0000
88	.(35)21	1.0000	.(30)17	1.0000	.(26)22	1.0000	.(23)68	1.0000	.(20)69	1.0000
89	.(36)32	1.0000	.(31)30	1.0000	.(27)45	1.0000	.(23)16	1.0000	.(20)18	1.0000
90	.(37)48	1.0000	.(32)54	1.0000	.(28)92	1.0000	.(24)37	1.0000	.(21)48	1.0000
91	.(38)70	1.0000	.(33)93	1.0000	.(28)18	1.0000	.(25)85	1.0000	.(21)12	1.0000
92	.(38)10	1.0000	.(33)16	1.0000	.(29)36	1.0000	.(25)19	1.0000	.(22)31	1.0000
93	.(39)15	1.0000	.(34)27	1.0000	.(30)71	1.0000	.(26)42	1.0000	.(23)77	1.0000
94	.(40)21	1.0000	.(35)44	1.0000	.(30)14	1.0000	.(27)92	1.0000	.(23)19	1.0000
95	.(41)28	1.0000	.(36)73	1.0000	.(31)26	1.0000	.(27)20	1.0000	.(24)45	1.0000
96	.(42)39	1.0000	.(36)12	1.0000	.(32)47	1.0000	.(28)42	1.0000	.(24)11	1.0000
97	.(43)52	1.0000	.(37)18	1.0000	.(33)87	1.0000	.(29)86	1.0000	.(25)25	1.0000
98	.(44)69	1.0000	.(38)29	1.0000	.(33)16	1.0000	.(29)18	1.0000	.(26)58	1.0000
99	.(45)89	1.0000	.(39)44	1.0000	.(34)28	1.0000	.(30)36	1.0000	.(26)13	1.0000
100	.(45)11	1.0000	.(40)67	1.0000	.(35)48	1.0000	.(31)71	1.0000	.(27)29	1.0000

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 15

Number Of Test Group Members On Jury Panel	Proportion of Test Group in Population									
	.11		.12		.13		.14		.15	
	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative
68	.(8)35	1.0000	.(7)95	1.0000	.(5)15	1.0000	.(4)16	1.0000	.(3)12	.9998
69	.(8)15	1.0000	.(7)43	1.0000	.(6)78	1.0000	.(5)89	1.0000	.(4)70	.9999
70	.(9)60	1.0000	.(7)20	1.0000	.(6)38	1.0000	.(5)48	1.0000	.(4)41	.9999
71	.(9)24	1.0000	.(8)86	1.0000	.(6)19	1.0000	.(5)25	1.0000	.(4)23	1.0000
72	.(10)94	1.0000	.(8)37	1.0000	.(7)88	1.0000	.(5)13	1.0000	.(4)13	1.0000
73	.(10)36	1.0000	.(8)16	1.0000	.(7)41	1.0000	.(6)67	1.0000	.(5)72	1.0000
74	.(10)14	1.0000	.(9)67	1.0000	.(7)19	1.0000	.(6)33	1.0000	.(5)39	1.0000
75	.(11)51	1.0000	.(9)27	1.0000	.(8)85	1.0000	.(6)16	1.0000	.(5)21	1.0000
76	.(11)19	1.0000	.(9)11	1.0000	.(8)38	1.0000	.(7)79	1.0000	.(5)11	1.0000
77	.(12)67	1.0000	.(10)44	1.0000	.(8)16	1.0000	.(7)37	1.0000	.(6)56	1.0000
78	.(12)24	1.0000	.(10)17	1.0000	.(9)70	1.0000	.(7)17	1.0000	.(6)28	1.0000
79	.(13)82	1.0000	.(11)66	1.0000	.(9)29	1.0000	.(8)79	1.0000	.(6)14	1.0000
80	.(13)28	1.0000	.(11)25	1.0000	.(9)12	1.0000	.(8)36	1.0000	.(7)68	1.0000
81	.(14)95	1.0000	.(12)92	1.0000	.(10)49	1.0000	.(8)16	1.0000	.(7)33	1.0000
82	.(14)31	1.0000	.(12)33	1.0000	.(10)20	1.0000	.(9)69	1.0000	.(7)15	1.0000
83	.(14)10	1.0000	.(12)12	1.0000	.(11)77	1.0000	.(9)29	1.0000	.(8)71	1.0000
84	.(15)32	1.0000	.(13)42	1.0000	.(11)30	1.0000	.(9)12	1.0000	.(8)32	1.0000
85	.(15)10	1.0000	.(13)15	1.0000	.(11)11	1.0000	.(10)51	1.0000	.(8)15	1.0000
86	.(16)31	1.0000	.(14)50	1.0000	.(12)42	1.0000	.(10)21	1.0000	.(9)64	1.0000
87	.(17)95	1.0000	.(14)17	1.0000	.(12)15	1.0000	.(11)83	1.0000	.(9)28	1.0000
88	.(17)29	1.0000	.(15)55	1.0000	.(13)56	1.0000	.(11)33	1.0000	.(9)12	1.0000
89	.(18)84	1.0000	.(15)18	1.0000	.(13)20	1.0000	.(11)13	1.0000	.(10)50	1.0000
90	.(18)24	1.0000	.(16)57	1.0000	.(14)70	1.0000	.(12)48	1.0000	.(10)21	1.0000
91	.(19)69	1.0000	.(16)18	1.0000	.(14)24	1.0000	.(12)18	1.0000	.(11)84	1.0000
92	.(19)20	1.0000	.(17)56	1.0000	.(15)82	1.0000	.(13)67	1.0000	.(11)34	1.0000
93	.(20)54	1.0000	.(17)17	1.0000	.(15)27	1.0000	.(13)25	1.0000	.(11)13	1.0000
94	.(20)15	1.0000	.(18)51	1.0000	.(16)90	1.0000	.(14)88	1.0000	.(12)52	1.0000
95	.(21)39	1.0000	.(18)15	1.0000	.(16)29	1.0000	.(14)31	1.0000	.(12)20	1.0000
96	.(21)10	1.0000	.(19)44	1.0000	.(17)93	1.0000	.(14)11	1.0000	.(13)75	1.0000
97	.(22)27	1.0000	.(19)13	1.0000	.(17)29	1.0000	.(15)37	1.0000	.(13)28	1.0000
98	.(23)69	1.0000	.(20)36	1.0000	.(18)90	1.0000	.(15)12	1.0000	.(13)10	1.0000
99	.(23)17	1.0000	.(21)99	1.0000	.(18)28	1.0000	.(16)41	1.0000	.(14)36	1.0000
100	.(24)43	1.0000	.(21)27	1.0000	.(19)83	1.0000	.(16)14	1.0000	.(14)13	1.0000

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 16

Number Of Test Group Members On Jury Panel	Proportion of Test Group in Population									
	.16		.17		.18		.19		.20	
	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative	specific	cumulative
68	.(3)61	.9990	.0023	.9953	.0069	.9833	.0157	.9523	.0288	.8888
69	.(3)39	.9994	.0016	.9969	.0051	.9883	.0124	.9646	.0242	.9131
70	.(3)25	.9996	.0011	.9980	.0037	.9920	.0096	.9742	.0200	.9330
71	.(3)15	.9998	.(3)72	.9988	.0026	.9946	.0073	.9815	.0162	.9492
72	.(4)92	.9999	.(3)47	.9992	.0018	.9964	.0054	.9870	.0129	.9621
73	.(4)55	.9999	.(3)30	.9995	.0012	.9976	.0040	.9909	.0100	.9721
74	.(4)32	1.0000	.(3)19	.9997	.(3)84	.9985	.0029	.9938	.0077	.9798
75	.(4)18	1.0000	.(3)12	.9998	.(3)56	.9990	.0020	.9958	.0058	.9856
76	.(4)10	1.0000	.(4)71	.9999	.(3)36	.9994	.0014	.9972	.0043	.9899
77	.(5)57	1.0000	.(4)42	.9999	.(3)23	.9996	.(3)96	.9982	.0031	.9930
78	.(5)31	1.0000	.(4)25	1.0000	.(3)14	.9998	.(3)64	.9988	.0022	.9953
79	.(5)17	1.0000	.(4)14	1.0000	.(4)89	.9999	.(3)42	.9993	.0016	.9968
80	.(6)88	1.0000	.(5)80	1.0000	.(4)54	.9999	.(3)28	.9995	.0011	.9979
81	.(6)45	1.0000	.(5)45	1.0000	.(4)32	1.0000	.(3)18	.9997	.(3)74	.9986
82	.(6)23	1.0000	.(5)24	1.0000	.(4)19	1.0000	.(3)11	.9998	.(3)49	.9991
83	.(6)12	1.0000	.(5)13	1.0000	.(4)11	1.0000	.(4)68	.9999	.(3)32	.9995
84	.(7)57	1.0000	.(6)70	1.0000	.(5)62	1.0000	.(4)41	.9999	.(3)21	.9997
85	.(7)28	1.0000	.(6)36	1.0000	.(5)34	1.0000	.(4)24	1.0000	.(3)13	.9998
86	.(7)13	1.0000	.(6)19	1.0000	.(5)19	1.0000	.(4)14	1.0000	.(4)83	.9999
87	.(8)61	1.0000	.(7)94	1.0000	.(5)10	1.0000	.(5)83	1.0000	.(4)51	.9999
88	.(8)28	1.0000	.(7)46	1.0000	.(6)54	1.0000	.(5)47	1.0000	.(4)31	1.0000
89	.(8)13	1.0000	.(7)23	1.0000	.(6)28	1.0000	.(5)26	1.0000	.(4)18	1.0000
90	.(9)57	1.0000	.(7)11	1.0000	.(6)15	1.0000	.(5)14	1.0000	.(4)11	1.0000
91	.(9)25	1.0000	.(8)51	1.0000	.(7)74	1.0000	.(6)78	1.0000	.(5)62	1.0000
92	.(9)11	1.0000	.(8)24	1.0000	.(7)37	1.0000	.(6)42	1.0000	.(5)35	1.0000
93	.(10)46	1.0000	.(8)11	1.0000	.(7)18	1.0000	.(6)22	1.0000	.(5)20	1.0000
94	.(10)20	1.0000	.(9)49	1.0000	.(8)88	1.0000	.(6)11	1.0000	.(5)11	1.0000
95	.(11)81	1.0000	.(9)22	1.0000	.(8)42	1.0000	.(7)57	1.0000	.(6)59	1.0000
96	.(11)33	1.0000	.(10)96	1.0000	.(8)20	1.0000	.(7)29	1.0000	.(6)31	1.0000
97	.(11)13	1.0000	.(10)41	1.0000	.(9)90	1.0000	.(7)14	1.0000	.(6)16	1.0000
98	.(12)52	1.0000	.(10)18	1.0000	.(9)41	1.0000	.(8)69	1.0000	.(7)85	1.0000
99	.(12)20	1.0000	.(11)73	1.0000	.(9)18	1.0000	.(8)33	1.0000	.(7)44	1.0000
100	.(13)77	1.0000	.(11)30	1.0000	.(10)81	1.0000	.(8)16	1.0000	.(7)22	1.0000

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 17

		Proportion of Test Group in Population					
		.25		.30		.35	
		specific	cumulative	specific	cumulative	specific	cumulative
Number	68	.0352	.1938	.(3)95	.0028	.(5)12	.(5)25
	69	.0395	.2333	.0014	.0042	.(5)21	.(5)46
Of	70	.0434	.2767	.0019	.0061	.(5)37	.(5)83
	71	.0469	.3235	.0027	.0088	.(5)65	.(4)15
Test	72	.0497	.3732	.0037	.0125	.(4)11	.(4)26
	73	.0517	.4250	.0049	.0174	.(4)19	.(4)45
Group	74	.0529	.4778	.0065	.0239	.(4)31	.(4)76
	75	.0531	.5310	.0084	.0322	.(4)50	.(3)13
Members	76	.0524	.5834	.0106	.0429	.(4)80	.(3)21
	77	.0508	.6342	.0132	.0561	.(3)13	.(3)33
On	78	.0485	.6827	.0162	.0723	.(3)19	.(3)53
	79	.0454	.7281	.0195	.0918	.(3)29	.(3)82
Jury	80	.0418	.7699	.0231	.1149	.(3)44	.0013
	81	.0378	.8077	.0269	.1418	.(3)64	.0019
Panel	82	.0337	.8414	.0398	.1726	.(3)92	.0028
	83	.0295	.8709	.0347	.2072	.0013	.0041
	84	.0254	.8963	.0384	.2456	.0018	.0059
	85	.0215	.9178	.0418	.2874	.0025	.0084
	86	.0179	.9357	.0448	.3321	.0033	.0117
	87	.0147	.9504	.0472	.3793	.0044	.0161
	88	.0119	.9623	.0490	.4283	.0057	.0218
	89	.0094	.9717	.0500	.4782	.0073	.0292
	90	.0074	.9790	.0502	.5284	.0093	.0384
	91	.0057	.9847	.0497	.5781	.0115	.0500
	92	.0043	.9890	.0484	.6264	.0141	.0640
	93	.0032	.9922	.0463	.6728	.0170	.0810
	94	.0023	.9945	.0437	.7165	.0201	.1011
	95	.0017	.9962	.0406	.7572	.0235	.1246
	96	.0012	.9974	.0372	.7944	.0270	.1517
	97	.(3)85	.9983	.0335	.8279	.0306	.1823
	98	.(3)584	.9989	.0298	.8577	.0341	.2164
	99	.(3)40	.9993	.0260	.8837	.0375	.2539
	100	.(3)27	.9995	.0224	.9061	.0406	.2945

Table 6. Probabilities for Different Compositions of Grand Jury Panels of 300 Members: Part 18

Number Of Test Group Members On Jury Panel	Proportion of Test Group in Population					
	.40		.45		.50	
	specific	cumulative	specific	cumulative	specific	cumulative
68	.(10)88	.(9)15	.(15)45	.(15)70	.(21)15	.(21)21
69	.(9)20	.(9)35	.(14)12	.(14)19	.(21)49	.(21)70
70	.(9)43	.(9)78	.(14)34	.(14)53	.(20)16	.(20)23
71	.(9)94	.(8)17	.(14)89	.(13)14	.(20)52	.(20)75
72	.(8)20	.(8)37	.(13)23	.(13)37	.(19)17	.(19)24
73	.(8)41	.(8)78	.(13)59	.(13)97	.(19)52	.(19)76
74	.(8)84	.(7)16	.(12)15	.(12)25	.(18)16	.(18)24
75	.(7)17	.(7)33	.(12)37	.(12)61	.(18)48	.(18)72
76	.(7)33	.(7)67	.(12)89	.(11)15	.(17)14	.(17)21
77	.(7)65	.(6)13	.(11)21	.(11)36	.(17)41	.(17)63
78	.(6)12	.(6)26	.(11)49	.(11)85	.(16)12	.(16)18
79	.(6)23	.(6)49	.(10)11	.(10)20	.(16)33	.(16)51
80	.(6)43	.(6)91	.(10)26	.(10)46	.(16)92	.(15)14
81	.(6)77	.(5)17	.(10)57	.(9)10	.(15)25	.(15)39
82	.(5)14	.(5)31	.(9)12	.(9)23	.(15)67	.(14)11
83	.(5)24	.(5)55	.(9)27	.(9)49	.(14)18	.(14)28
84	.(5)42	.(5)96	.(9)57	.(8)11	.(14)45	.(14)73
85	.(5)70	.(4)17	.(8)12	.(8)22	.(13)12	.(13)19
86	.(4)12	.(4)28	.(8)24	.(8)46	.(13)29	.(13)48
87	.(4)19	.(4)48	.(8)48	.(8)95	.(13)71	.(12)12
88	.(4)31	.(4)79	.(8)96	.(7)19	.(12)17	.(12)29
89	.(4)49	.(3)13	.(7)19	.(7)38	.(12)41	.(12)70
90	.(4)77	.(3)20	.(7)36	.(7)74	.(12)96	.(11)17
91	.(3)12	.(3)32	.(7)68	.(6)14	.(11)22	.(11)39
92	.(3)18	.(3)50	.(6)13	.(6)27	.(11)50	.(11)89
93	.(3)27	.(3)77	.(6)23	.(6)50	.(10)11	.(10)20
94	.(3)39	.0012	.(6)41	.(6)91	.(10)25	.(10)45
95	.(3)57	.0017	.(6)74	.(5)16	.(10)54	.(10)98
96	.(3)81	.0025	.(5)13	.(5)29	.(9)11	.(9)21
97	.0011	.0037	.(5)22	.(5)51	.(9)24	.(9)45
98	.0016	.0052	.(5)38	.(5)89	.(9)50	.(9)95
99	.0021	.0074	.(5)63	.(4)15	.(8)10	.(8)20
100	.0029	.0102	.(4)10	.(4)25	.(8)20	.(8)40