

# Note sur la proportion des condamnations prononcées par les jurys\*

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pp. 355-357, & 459-468†

"In the preamble of my work on the *Probabilité des Jugements en matière criminelle et en matière civile*, I have cited the continual increase in the number of the accused arraigned annually before juries, which have taken place in England from 1805 to 1832. According to the authentic documents, if one divides this interval into 28 years, into four successive periods of seven years each, the number of the accused, for England and the country of France only, has been, mean term, nearly 5000 in each year of the first period, 6000 in each year of the second, 9000 in each year of the third, 13000 in each year of the fourth; and during the sole year 1832, the last of this last period, it is elevated to nearly 21000.<sup>1</sup> The annual number of condemnations has increased at the same time, but more rapidly than the one of the accused; the mean ratio of the first number to the second has been successively a little below  $\frac{60}{100}$ , a little above  $\frac{63}{100}$ , a little less than  $\frac{68}{100}$ , and very nearly  $\frac{70}{100}$ , for the four periods. I do not know, in citing these results, if the increase of the number of the accused had continued into the years posterior to 1832; but anew official publications show that this number seemed to be becoming nearly stationary: its magnitude in 1833 is not known to me; in 1834, it is elevated to 22451; in 1835, to 20942; and in 1836, to 20713. Now, the proportion of the convictions has also remained sensibly constant: for these three years and for 1832, the ratio of the number of the convicted to the one of the accused has had for values, at least to the nearest thousandth, the four fractions

$$0.712, \quad 0.703, \quad 0.711, \quad 0.718,$$

which differ not by a hundredth, from the mean 0.711; this which furnishes a new example of the law of large numbers, in the things of the moral order.

"In France, and for each of the years 1832, 1833, 1834, where the legislation has not changed, this ratio has varied no more than a hundredth; but its approximate value is elevated only to 0.59, so that it has been less than in England, by a little more than a tenth. However, if one subtracted from the totality of the convicted, those of which

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†Read Monday 4 September 1837.

<sup>1</sup>Page 23 of my work, line 15, in strengthening in the place of 1817, *read* 1811.

the punishment has been a simple imprisonment, that is to say nearly two-thirds of the total number for England, and only half for France, one finds that the proportion of the number of the condemned to a superior punishment, to differ little in the two countries, and that this last number is around the fourth of the one of the accused.

“The ratio of which there is concern has varied in France, as it must be, with legislation: before 1831, its approximate value is elevated to  $\frac{61}{100}$ ; and, in the number of the accused, very nearly  $\frac{7}{100}$  were convicted by the minimal majority of seven votes against five. By subtracting this second fraction from the preceding, one concludes from it  $\frac{54}{100}$  for the proportion of the number of convicted to the majority of at least eight votes against four; a consequence which is found plainly confirmed by the experience in the year 1831, where the law has required this majority for conviction, and where the ratio of the number of the convicted to the one of the accused has been, in fact, sensibly equal to 0.54. In Belgium, the minimal majority is that of seven against five, as in France before 1831, and the proportion of the convicted is also 60 or 61 hundredths.

“The judgments in civil matters present equally some ratios constant and conformed to the law of large numbers. In France entire, the number of judgments of first instance, submitted to the royal courts, is annually around 8000; now, in this number, the proportion of judgments that they have confirmed has been, to the nearest thousandth,

$$0.688, \quad 0.676, \quad 0.697,$$

for the years 1832, 1833, 1834; and these fractions differ hardly by a hundredth, from their mean 0.687. It is out of the number of times that the events of each kind have taken place, when the sequence of trials has been rather long in order to render the ratios of these numbers sensibly invariable, that the diverse applications of the calculus of probabilities are based, and not at all on the physical or moral nature of the events, on which this calculation depends in no manner.

*Addition à la note sur la proportion des condamnations prononcées par les jurys*  
*Compte Rendu des Séances de l'Académie des Sciences*<sup>2</sup>

“In this note, I have cited the annual reports of the number of the convicted to the one of the accused, which have taken place in England, during the five years contained from 1832 to 1836, except the year 1833, for which this ratio was not known to me. I have succeeded to procure it; and here is now, in the following table, the results relative

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<sup>2</sup>Read Monday 25 September 1837, pp. 459-463

to these five years, extracted from official documents.<sup>3</sup>

YEARS	NUMBERS of the accused arraigned before the juries.	NUMBERS of the convicted.	RATIOS of the second numbers to the first.	EXCESS of these ratios over their mean.
1832	20829	14947	0.7176	+0.0048
1833	20072	14446	0.7197	+0.0069
1834	22451	15995	0.7124	-0.0004
1835	20731	14729	0.7105	-0.0023
1836	20984	14771	0.7039	-0.0089

“This table shows that during these five consecutive years, the ratios of which there is concern are not themselves separated by a hundredth, by more or by less, on one side and the other of their mean, which is elevated to 0.7128.

“Here are the analogous results for France entire, and for the six years elapsed from 1825 to 1830, during which these annual ratios are not separated by a sixtieth, by more or by less, from their mean, inferior by a little more than a tenth to that which is reported in England, and only equal to 0.6093.

YEARS	NUMBERS of the accused arraigned to the court of assizes.	NUMBERS of the convicted.	RATIOS of the second numbers to the first.	EXCESS of these ratios over their mean.
1825	6652	4037	0.6068	-0.0025
1826	6988	4348	0.6222	+0.0129
1827	6929	4236	0.6113	+0.0020
1828	7396	4551	0.6153	+0.0060
1829	7373	4475	0.6069	-0.0024
1830	6962	4136	0.5932	-0.0161

“So that one is able to compare to these ratios, which belong to criminal justice, to other results relative to civil justice, I will cite, in the following table, the annual reports of the numbers of judgments of first instance, confirmed by the royal courts of France entire, to those of those judgments which have been submitted to them during three consecutive years, for which these ratios are themselves hardly separated by a

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<sup>3</sup>*Tables of the revenue, population, etc., of the United Kingdom, compiled from officinal returns; by R. Porter.*

hundredth, from their mean equal to 0.6867.

YEARS	NUMBERS of judgments of the first in- stance submitted to the royal courts.	NUMBERS of these judgments that they have confirmed.	RATIOS of the second numbers to the first.	EXCESS of these ratios over their mean.
1832	7706	5301	0.6879	+0.0012
1833	8087	5470	0.6764	-0.0103
1834	8237	5731	0.6958	+0.0091

“These three kinds of ratios, very different among them, but nearly invariable in each specie, are so many arresting examples of the *universal law of large numbers*, to which all is submitted in the moral order and in the physical order, which I have explained and demonstrated in my *Recherches sur la probabilité des jugements*, and which is, with the special data of each question furnished by experience, the base of all the applications of the calculus of probabilities. These ratios have varied with general causes on which they depend; this which is also conformed to the law which we just cited. Thus, in England, during the years which one preceded 1832, the annual number of individuals arraigned before the juries, was continually increased, so that it had become quadruple in the interval of 28 years; this increase of the number of accused is a circumstance which has been able to render the jurors more severe; and, in fact, the proportion of the convicted is raised, in this same interval, a little less than  $\frac{60}{100}$  to a little more than  $\frac{70}{100}$ . But as soon as the annual number of the accused has become nearly stationary, this proportion is also become sensibly constant and equal to  $\frac{70}{100}$ , as one sees it by the first of the preceding tables. In our country, the legislation on the jury has many times changed in these last times, and the annual ratio of the number of the convicted to the one of the accused has changed equally. In 1831, the law has required the majority of at least eight votes against four for a conviction, instead of that of seven votes against five which sufficed before; during this year, the numbers of the accused and of the convicted have been 7606 and 4098; the ratio of the second number to the first is therefore lowered to 0.5388. Now, in the interval of the six preceding years, the ratio of the number of the convicted by the *minimal* majority of seven votes against five, to the total number of the affairs submitted to the juries, have been 0.0711; by subtracting this fraction from the mean ratio 0.6093, cited above; and which corresponds to all the majorities superior or equal to that, there remains 0.5382, for the proportion of the convictions by the majority of at least eight votes against four; and, this which is very worthy of remark, this proportion does not differ by a thousandth, from that which has taken place effectively in 1831. In the three following years, one has maintained the majority required in 1831; but one has introduced, moreover, the question of the *extenuating circumstances*; this which had to render convictions more easy, and by increasing the number. But, in what ratio? it is this which experience alone would be able to teach us; and it has shown, as one will see it in the following table, that the mean of the annual ratios of the number of the convicted to the one of the accused, is raised to 0.5924 for these three years, and has surpassed by 0.0536 the ratio 0.5388,

relative to the year 1831. The legislation having not changed during these same three years, the annual ratios had to be also nearly invariable: in fact, as one will see it by this table, they have not varied by a hundredth on both sides of their mean value.

YEARS	NUMBERS of the accused arraigned to the court of assizes.	NUMBERS of the convicted.	RATIOS of the second numbers to the first.	EXCESS of these ratios over their mean.
1832	7555	4448	0.5887	-0.0037
1833	6954	4105	0.5895	-0.0029
1834	6952	4164	0.5990	+0.0066

One law of September 1835, in maintaining the question of the extenuating circumstances, has restored the majority of seven votes against five, sufficient for conviction. If the proportion of the convictions in this *minimal* majority, under the influence of this question, were yet equal to 0.0711, as before 1831 where this question did not exist, their actual proportion was the fraction 0.5924 increased by 0.0711, or 0.6635; but it is this which one is not able to assure in advance; and, besides, the actual law imposes the secret in the vote of the jurors, this which did not take place before, and will be able also to influence this proportion, which will be well known only by experience, for the years posterior to 1834.

“I take advantage on this occasion to rectify a fault of calculation and its consequences that Mr. Chevalier, professor at the college of Louis-le-Grand, has made note to me in the *Recherches sur la probabilité des jugements*. Page 395, lines 10, 11, and 12, these are the quantities  $1 - P_4$  and  $1 - \Pi_4$ , instead of  $D_4$  and  $\Delta_4$ , which it would be necessary to multiply by the numbers 743 and 1303 of the convicted and the acquitted, this which would have given the numbers 14 and 366, instead of 5 and 233 that one has found. A similar inadvertence is repeated at the base of this same page and at the top of the following. From these diverse corrections, there results that the numbers cited at page 24 of the preamble, must be changed into some others that the reader will imagine easily.”