3.4. Number of Jurors to Convict

Federal courts and most states in the US require that all 12 jurors agree on guilt before a defendant can be convicted. But in Oregon (and Louisiana until 2018), only 10 of the 12 jurors are needed to convict for noncapital cases.[1] At this writing the Oregon legislature will reconsider this policy in 2019.{Wilson, 2018 #1610}. Meanwhile, the material in Chapter 3 may help clarify some of the issues.[1]

Simplify this problem by ignoring mistrials and considering only two possible verdicts: guilty and not guilty. In this analogy, a truly guilty defendant is like a patient with the disease, and an innocent defendant is like a patient without the disease, and a conviction by the jury is like a positive test.

a. If you continue with the diagnostic test analogy, what would you call the *proportion* of *innocent* defendants who are *acquitted*?

   Specificity.

b. If your only goal were to maximize "sensitivity," would you tend to favor the Oregon approach? Why or why not?

You would favor the Oregon (and former Louisiana) approach because presumably there are some guilty defendants that 10 or 11 but not 12 jurors would vote to convict. (In Louisiana over a 6-year period, 402/993 = 40% of convictions were not unanimous. [1] Presumably at least some of those defendants were actually guilty.) However, if your ROC curve is completely horizontal (slope = 0) between 12 and 10 as in the "Oppose" ROC curve in part c below, you would still not favor allowing nonunanimous convictions.

c. A key question for this debate is: what is the trade-off between "true positives" and "false positives"? That is, how much do you increase your chance of convicting someone who is innocent in order to convict more people who are guilty? This trade-off can be visualized with ROC curves. Draw two hypothetical ROC curves[2] for this problem**. Each curve should have the points labeled "10" and "12" on it for the number of jurors needed to convict**. Make the first ROC curve one that would lead you unequivocally to support convictions with only 10 jurors voting guilty, and the other ROC curve one that would lead you unequivocally to oppose such split convictions**.** (Label the curves "Support" and "Oppose.") Explain your answer.

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[1]We must admit that material in Chapter 3 won't help with the fact that the intention of the Louisiana law was overtly racist, which would be a reason to change the law even if one were agnostic about the shape of the ROC curves to be drawn later in the problem.
[2]Hint: ROC "curves" need not be curved! In this case the ROC curves should be made up of straight line segments.

Both ROC curves should plot sensitivity (y-axis) vs 1-specificity (x-axis) and have the 12-juror point closer to the origin than the 10-juror point.

The "Support" curve should rise *vertically* between the 12 and 10 points -- i.e., sensitivity increases with no decrease in specificity. This means that more guilty criminals would be convicted with *no* increase in conviction of innocent defendants.

The "Oppose" curve should be horizontal between 12 and 10. This would mean that requiring only 10 jurors to convict would lead to more innocent people being convicted, but no more guilty people.

d) One reason why rational people might disagree on whether to support nonunanimous convictions is that their estimates of the slope of the ROC curve between the 10 and 12 juror points differ. Suppose two people agree completely on that. What are at least two additional reasons why they might still disagree on whether to change the law?

1) One obvious reason is that they have different <u>values</u> -- i.e., that they have different answers to the question, "How many guilty defendants are you willing to acquit to avoid convicting one innocent one?" They may disagree with Sir William Blackstone, who wrote in his Commentaries on the Laws of England, 9th ed., book 4, chapter 27, p. 358 (1783, reprinted 1978) "… it is better that ten guilty persons escape, than that one innocent suffer."

2) A more subtle reason is that they might differ on their estimates of the prevalence/prior probability of guilt among persons brought to trial. Remember that the frequency of false positive and false negative errors depends on prior probability. For example, if your prior probability is very high, most positive results will be true positives and most negative results will be false negatives. If the prior probability is low (as was the case in the mammography example in Chapter 2), most of the positive results will be false positives and most negative results will be true negatives. Thus, even with the same moral values, someone who thought that the overwhelming majority of people put on trial are guilty would be more likely to support the nonunanimous convictions than someone who thought a lot of innocent people are tried.

3.) We said you could neglect mistrials (which might be less frequent if only 10 jurors are required to convict), but even without mistrials, the jury deliberation time (which might be associated with some expense) might differ depending on the number of jurors required to convict.

4 & 5) Finally even if people agreed on the shape of the ROC curve, the relative cost of false-positives and false negatives, the prevalence of guilt, and the effect on the cost of the "test," they might disagree on the likelihood (reason #4) or

importance (reason #5) of the possibility that those falsely convicted might (for example) be disproportionately nonwhite. An excerpt from the Official Journal of the Proceedings of the Constitutional Convention of the State of Louisiana from the 1898 constitutional convention that adopted the split jury law reads, "Our mission was, in the first place, to establish the supremacy of the white race in this State to the extent to which it could be legally and constitutionally done." [1] So we believe this is an additional legitimate concern, and one that, unlike the others, could be studied empirically. For example, one could look at the proportion of nonwhite defendants convicted by 10, 11 or 12 jurors. If that proportion declined from 10 to 12 we would have evidence that requiring only 10 jurors disproportionately affects non-whites.

References

1. Swenson D. Understanding Louisiana's nonunanimous jury law findings: Interactive, animated slideshow. The New Orleans Advocate [Internet]. April 1, 2018. Available from: https://www.theadvocate.com/new_orleans/news/courts/article_159e7f5a-3459-11e8-b935-e7a91fc85713.html. Accessed October 5, 2018.