

- Cullen claims the effect disappears when subjects are explicitly asked to consider each case separately
- It has also been suggested that participants from different backgrounds might be interpreting the key concepts differently (Sosa, Jackson)

Can we reject the null?

- Classical hypothesis testing is **controversial**:
Problem of multiple testing: Testing many true independent null hypotheses will very likely lead to falsely rejecting at least one
- Indeed, recall the inference rule:
 - Let p-value = probability, given null hypothesis, of observing a value at least as extreme as the one observed
 - If p-value < some suitable threshold t , reject the null hypothesis
- Assume $t = 0.05$ and n independent true nulls. Then:
Probability of not rejecting a given hypothesis: 0.95
Probability of not rejecting any of the n hypotheses: 0.95^n
Probability of rejecting at least one hypothesis: $1 - 0.95^n$ ($\rightarrow 1$ very quickly: for $n = 45$, it is 0.9!)

Can we reject weak association?

- Recall the conclusion that Weinberg *et al* (2001) could draw from their data, assuming classical testing is OK:
One ought to reject the hypothesis that there is **no association whatsoever** between cultural background and Gettier intuitions
- That's insufficient: we could still have **very weak association**!
- How weak?
- Answer: given the sample size (88), the Odds Ratio (a measure of association) could be as low as 1.4 (1.5 counts as 'small')

Can we reject the null? (ctd)

- By considering enough variables unrelated to competence, we're near sure to conclude association of intuitions with at least one of these

Variable reliability and epistocracy

- CJT: for majority voting, under certain conditions, increasing group size increases group reliability (individual errors get "crowded out")
- This can be seen as one justification for **democracy**
- But this benefit of increasing group size can be lost when **identical reliability** fails (even when reliability remains better than random)
- Increasing group size can then sometimes **lower** group reliability (average reliability can decrease)
- Given majority voting, rule by the most competent few ("**epistocracy**") can sometimes be preferable to rule by the many

Philosophers and their intuitions

- Even if in the population *overall*, philosophical intuitions depend on irrelevant factors, this might not hold in *all subpopulations*
- Philosophers *might* buck the trend (Williamson 2007)
- Philosophical training does somewhat impact our epistemic intuitions (Nichols *et al* 2003):
 - 52% of students who've taken 3 or more philosophy courses claim subjects do not know they are not brains in vats
 - 19% of less experienced students claim they do
- Question: Is this impact a *positive* one?
- Philosophical training clearly improves some things (verbal reasoning, etc.), but is semantic competence one of them? (see Weinberg *et al* 2010)

Epistocracy, then?

- Assume that philosophers do have better intuitions
- Does it follow that we should only survey them?
- Recall we said:

Given **majority voting**, rule by the most competent few can **sometimes** be preferable to rule by the many
- Limitations:
 - (1) Doesn't hold if the many are numerous enough, relative to the few
 - (2) Doesn't hold for **weighted majority voting**

Epistocracy, then? (ctd.)

- Goodin & Spiekermann (2018) assess adding minimal but low reliability voters to a group of high reliability ones:

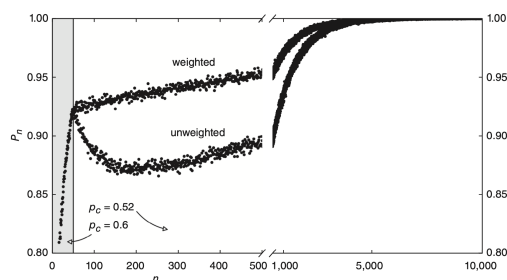


Figure 15.3 Group competence as a function of n , given that the first fifty voters have $p_i = 0.6$, while all others have $p_i = 0.52$, shown with unweighted (equal) votes and with Grofman and Shapley's weighted voting rule.

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