Take $\boldsymbol{p} = (p_1, \ldots, p_n)$ to be the vector of competences of n voters.

Note, first, that if we improve the competence of one voter, then the probability of a correct majority decision increases.

Formally, suppose we replace some p_i in $\boldsymbol{p}$ with $p_i' > p_i$, while keeping all other competences the same. We say the resulting vector $\boldsymbol{p}'$ is *improvement* of $\boldsymbol{p}$.

If S_n' is the sum of the votes determined by $\boldsymbol{p}'$, we have that:

$$\Pr\left[S_n' > {}^n\!/_2\right] > \Pr\left[S_n > {}^n\!/_2\right]$$

Note, now, that we can get from $\boldsymbol{p}^* = \left({}^1\!/_2 + \varepsilon, \ldots, {}^1\!/_2 + \varepsilon\right)$ to any $\boldsymbol{p} = \left(p_1, \ldots, p_n\right)$ by a series of improvements.

But we already know, from the Condorcet Jury Theorem, that the group accuracy of $\boldsymbol{p}^*$ approaches 1 asymptotically.

So the accuracy of $\boldsymbol{p}$ does the same.