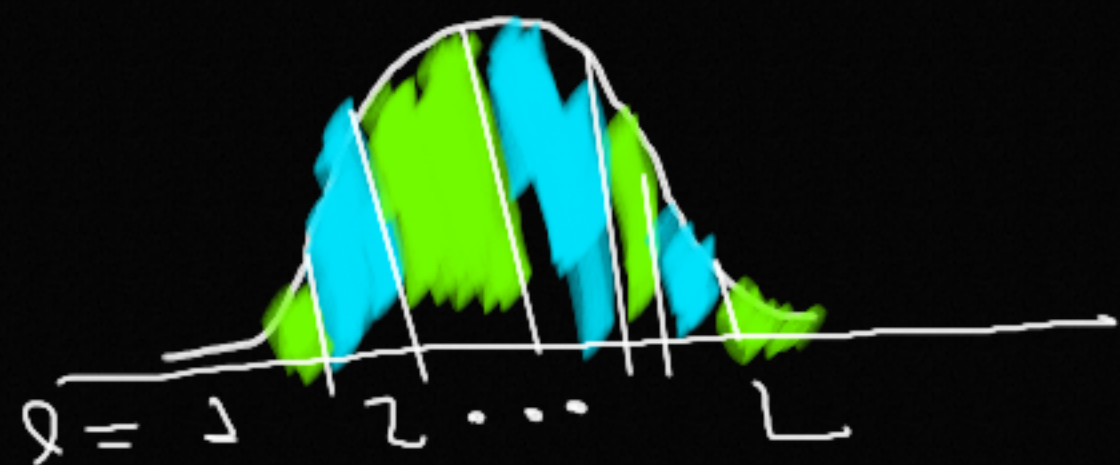


Población



$L \cup 2 \cup 2 \cup$

$$P_A = \frac{1}{N} \sum_{i=1}^N z_i$$

Proporcion Poblacional

$$z_i = \begin{cases} 1 & \text{si } \text{votó } A \\ 0 & \text{si } \text{no} \end{cases}$$

$$N = G_1 \cup G_2 \cup \dots \cup G_L$$

$$P_A = \frac{1}{N} \left(\sum_{\substack{i=1 \\ i \in G_1}}^{m_1} z_i + \dots + \sum_{\substack{i=1 \\ i \in G_L}}^{m_L} z_i \right)$$

$$P_A = \frac{1}{N} \left(m_1 \cdot P_1 + \dots + m_L \cdot P_L \right)$$

$$P_A = \theta_1 P_1 + \dots + \theta_L P_L$$

θ_i = ponderadores Poblacionales

$$\underline{E \sim \text{unseen } \mathcal{Z}^0}, \quad \hat{M} = \hat{M}_1 + \dots + \hat{M}_L$$

$$v(i) \rightarrow 1, \dots, L$$

$$\hat{P}_A = \sum_{l=1}^L \hat{P}_l \cdot \Theta_l; \quad \hat{P}_l = \frac{1}{3} \sum_{i \in \mathcal{P}_l} z_i$$

$$\hat{P}_A = \sum_{l=1}^L \left[\frac{1}{\hat{M}_l} \sum_{i \in \mathcal{P}_l} z_i \cdot \Theta_l \right]$$

$$\hat{P}_A = \frac{\left[\sum_{i=1}^3 z_i \frac{\Theta_{v(i)}}{\hat{M}_{v(i)}} \right] \hat{M}}{\hat{M}}$$

$$\frac{\Theta_{v(i)}}{\hat{M}_{v(i)}}$$

Weights!

$$\hat{P}_A = \frac{\left[\sum_{i=1}^3 z_i \cdot \Theta_{v(i)} \cdot \frac{1}{\hat{M}_{v(i)}} \right] \hat{M}}{\hat{M}}$$

$$\Theta_{v(i)} = \frac{\hat{M}}{\hat{M}_{v(i)}}$$