

# In remembrance of Francisco Cantú

Eric Magar

28-3-2025

Univ. of Houston

# Outline

- 1 Pubs
- 2 Mi presentación

## Team player

- Susan Achury
- Leonardo Antenangeli
- Natalia Aruguete
- Ernesto Calvo
- Scott Clifford
- Scott Desposato (x2)
- Cengiz Erisen
- Jorge Fernandes
- Omar García Ponce
- Agustina Haime
- Victor Hernández Huerta
- Verónica Hoyo (x2)
- Paul Johnson

- Eric Magar
- Marco Morales
- Javier Márquez
- Margarita Ramírez
- Pedro Riera (x3)
- Sebastián Saiegh
- Carlos Scartascini
- Leslie Schwindt-Bayer
- Robert Stein et al. (x2)
- Michelle Torres
- Agustín Vallejo
- Tiago Ventura
- Dane Wendell

# Tres vetas

## Fraude, integridad electoral

- Identifying Electoral Irregularities in Mexican Local Elections /AJPS/ 2014
- The Fingerprints of Fraud: Evidence from Mexico's 1988 Presidential Election /APSR/ 2019
- Fraudulent Democracy? Analysis of Argentina's Infamous Decade w Superv. Machine Learning /PA/ 2011
- Public Distrust in Challenged Elections: Evidence from Latin America /BJPS/ 2022
- Partisan Losers' Effects: Perceptions of Electoral Integrity in Mexico /ES/ 2015
- Waiting to Vote in the 2016 Presidential Election: Evidence from a Multi-county Study /PRQ/ 2020
- Right On Time: An Electoral Audit for the Publication of Vote Results /SPR/ 2019
- Pedagogical Value of Polling Place Observation By Students /PS/ 2018
- Poll Worker Recruitment: Evidence from the Mexican Case /ELJ/ 2017

## Votos, compra-venta

- Groceries for Votes: The Electoral Returns of Vote-Buying /JoP/ 2019
- Electoral Systems and Ideological Voting /EPSR/ 2022
- The Effects of Election Polls in Mexico's 2018 Presidential Campaign /ES/ 2021
- Negative Partisanship in Latin America /LAPS/ 2022
- Partisan Cues and Perceived Risks /JoEPOP/ 2021
- Mexico: The Decline of Institutional Trust /RCP/ 2017
- The Utility of Unpacking Survey Bias in Multiparty Elections /IJPOR/ 2016
- The Nationalization of the Mexican Party System /PyG/ 2020
- Disgust Sensitivity and Support for Immigration Policy across Five Nations /PLS/ 2025
- El impacto electoral de Progres-Opportunidades ITAM 2006

## Estudios legislativos

- The Rise of Federal Politics in Mexico's Legislative Branch /JPLA/ 2012
- Selection Bias in Mexican Roll-Call Publications /PyG/ 2014
- Determinants of Legislative Committee Membership in Proportional Representation Systems /PP/ 2018
- The Politics of Committee Chairs Assignment in Ireland and Spain /PAff/ 2018
- Gender and Family Ties in Latin American Legislatures /P&G/ 2022

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# Aire fresco para una controversia añeja

- CFE reportó cómputos agregados de consejos distritales

$$V = \sum_{d=1}^{300} v_d = 9.6M \quad (50.3\%)$$

- 30 años sin evidencia sistemática  
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$$\sum_{casillas} v_c \stackrel{?}{=} V$$

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## El argumento de Salinas

- 1 la suma de votos en actas le dan la victoria
- 2 100% de las actas disponibles en Lecumberri

## Data original

- Fotos digitales de las actas de escrutinio ( $N \approx 53k$ )
- Análisis de (2) confirma que (1) es cierta  
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- Pero también evidencia un fraude de gran escala y cómo se instrumentó
- *Convolutional neural networks*

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
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# El procedimiento CNN

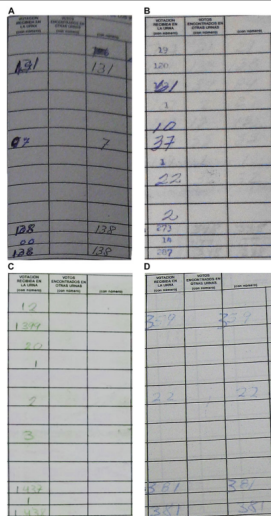
Analogía: el nervio óptico  
estímulo de cada región visual  
dispara una neurona específica (un  
pixel)

Entrenamiento para reconocer

- 1 número fidedigno 
- 2 alterados con malicia  
(rayaduras, superposición. . . )
- 3 tachones bienintencionados

Sigue *machine learning*

FIGURE 1. Examples of Vote Tallies with Alteration in Their Numbers. Mexico, 1988



# Operaron los gobernadores

**FIGURE 3. Rates of Tallies Classified as Altered by State**

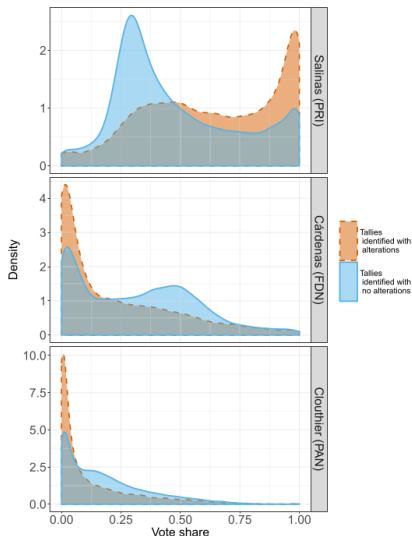


*Notes:* This figure shows the proportion of tallies in every state classified by the CNN as altered.

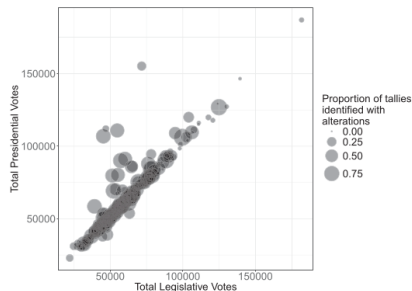
Tasa de error: falso positivo  $\approx 0.07$     falso negativo  $\approx 0.15$

# Casillas zapato

**FIGURE 4. Distribution of Vote Shares for Each of the Candidates. Mexico, 1988**



**FIGURE 5. Total Number of District Votes for Presidential and Legislative Elections. Mexico, 1988**



*Notes:* The plot shows the total number of votes for the 1988 presidential and legislative elections in every district reported by electoral authorities (Comisión Federal Electoral 1988). The size of each bubble is the rate of tallies identified with alterations by the CNN model.

# Correlates

**TABLE 2. Explaining the Characteristics of the Altered Vote Tallies. Mexico, 1988**

	<i>Dependent variable: Altered Vote Tally</i>		
	(1)	(2)	(3)
No opposition representative	0.236*** (0.026)	0.232*** (0.026)	0.231*** (0.026)
Governor's experience	0.866* (0.387)	0.815* (0.379)	0.690* (0.352)
<i>Camarilla</i>	1.116* (0.473)	0.966* (0.464)	0.881* (0.429)
Union membership		0.106 (0.127)	0.105 (0.126)
Reappointment		-0.016 (0.147)	0.002 (0.146)
Rural		0.525* (0.220)	0.491** (0.155)
PRI 1985		-0.081 (0.658)	
PRI's support from polls			3.045* (1.316)
Constant	-1.731*** (0.329)	-1.992*** (0.475)	-3.340*** (0.664)
$\sigma_{\text{district}}$	0.826	0.799	0.798
$\sigma_{\text{state}}$	0.924	0.875	0.725
Observations	53,288	53,288	53,288
Districts	300	300	300
States	32	32	32
Log likelihood	-24351.38	-24345.84	-24343.38
$\chi^2$	89.55	101.24	108.94

Notes: Entries are logistic regression coefficients and standard errors. The dependent variable is a binary indicator for a vote tally was classified as altered. \*\*\* is significant at the 0.1% level; \*\* is significant at the 1% level; and \* is significant at the 5% level.

# Balance: el estudio sistemático del fraude

## Análisis sistemático confirma

- *Caída del sistema* no instrumentó un fraude centralizado desde Bucareli
- sí permitió alterar  $\sim 30\%$  actas previo al cómputo distrital, inflando voto Salinas
- Operación de fuerza bruta por gobernadores "talentosos"
- ¿CSG se robó la elección o sólo amplió el margen?
- Obsesión con el **fraude**  
1997–2024 quizás matiza

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