

Strategic Abstention, Missing Data, and Ideal Point Estimation

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Overview

Researchers doing MCMC estimation of ideal points based on roll call votes assume that missing data are missing at random (MAR), e.g., CJR (2004).¹ **We show that, under absolute voting rules, the MAR assumption is unwarranted and misleading.**

- Under absolute voting rules, a certain portion of *the entire legislature*, not of those present and voting, must vote yes to pass a law; in terms of outcomes, abstention is therefore mathematically equivalent to voting no.

Using roll call data from the California state Assembly from 1999 to 2014, we show that abstentions and no votes follow similar patterns.

- Legislators both vote no and abstain more frequently on bills authored by members of the opposite party than on bills authored by copartisans.
- For any given bill, the ideal points of abstainers and no voters are closer in expectation than the ideal points of abstainers and yes voters.

Other researchers have criticized MAR on theoretical grounds (RSH 2015),² but we seem to be **the first to show empirically that MAR is not justified.**

We **reestimate ideal points** by drawing missing votes from the truncated normal distribution for no votes instead of the untruncated combined density, and produce a **changed ranking** of California legislators' policy preferences.

We've shown that, under absolute voting rules, abstentions and nos are substitute goods (alternative means for opposing a bill). Which of the two will a legislator who opposes a bill choose?

- $\Pr(\text{abstain}|\text{oppose})$ is lower for controversial bills.
- $\Pr(\text{abstain}|\text{oppose})$ is higher for Republican legislators than for Democrats.
- $\Pr(\text{abstain}|\text{oppose})$ is higher for Republican-authored bills than for Democratic-authored bills, but this effect is driven by Republican legislators' votes.

Abstentions as No Votes

Table 1: Nos as a Proportion of All Votes, 1999-2014

	D author	R author
D leg	0.013	0.013
R leg	0.362	0.014

Table 2: Abstentions as a Proportion of All Votes, 1999-2014

	D author	R author
D leg	0.072	0.088
R leg	0.083	0.062

Note: all cells are statistically significantly different from 0 and from each other, excluding D leg/D author and D leg/R author for no votes.

In most sessions and over the entire period, no voters and abstainers are **ideologically more similar** than yes voters and abstainers.

Table 3: Total Ideological Distance Between No Voters, Yes Voters, and Abstainers

	No-Abstain	Yes-Abstain	No-Yes
1999	4,033	4,213	6,436
2001	3,866	3,678	5,309
2003	3,768	4,435	5,696
2005	3,682	3,946	5,785
2007	3,978	2,876	5,363
2009	2,070	2,526	3,722
2011	2,281	4,714	5,153
2013	3,592	2,175	4,351
Sums	27,270	28,562	41,816

Reestimating Ideal Points

Drawing abstentions from the truncated normal density for no votes meaningfully changes the ordering and distribution of estimated ideal points. For example, in 2009-10, our correction makes the chamber look less polarized; in 2013-14, it shifts the chamber to the right.

Figure 1: Estimated Ideal Points, 2009-10 Assembly

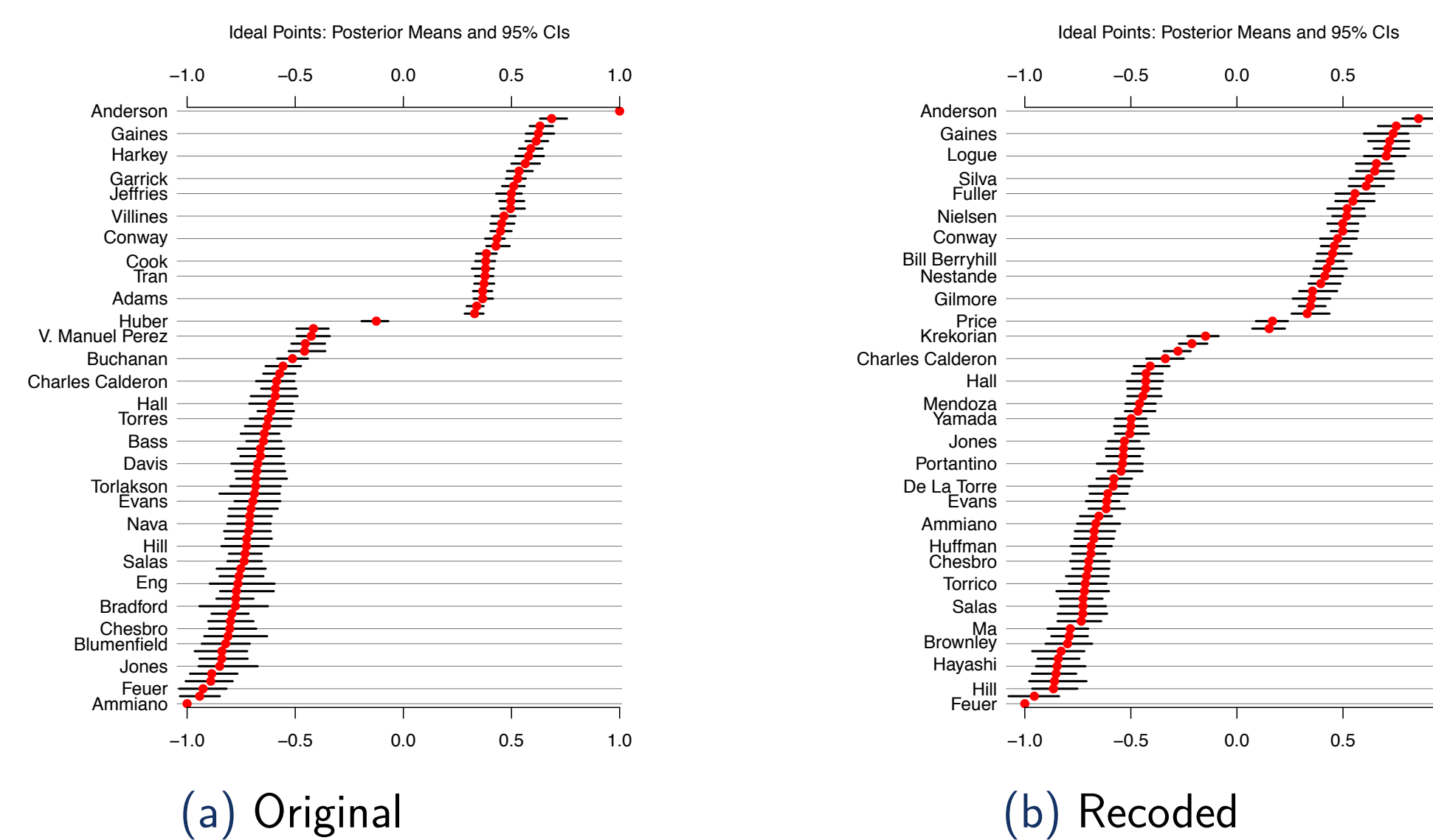
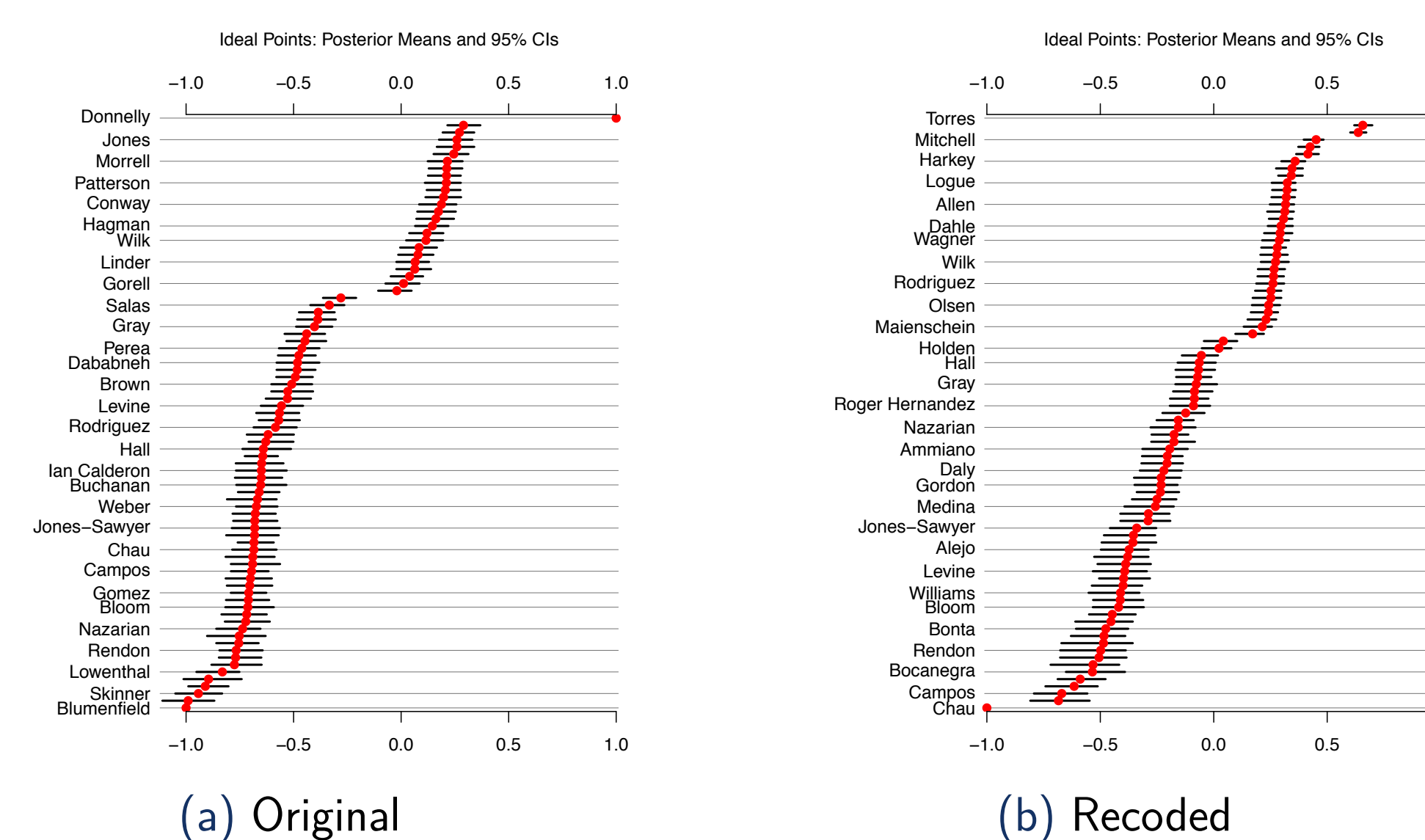


Figure 2: Estimated Ideal Points, 2013-14 Assembly



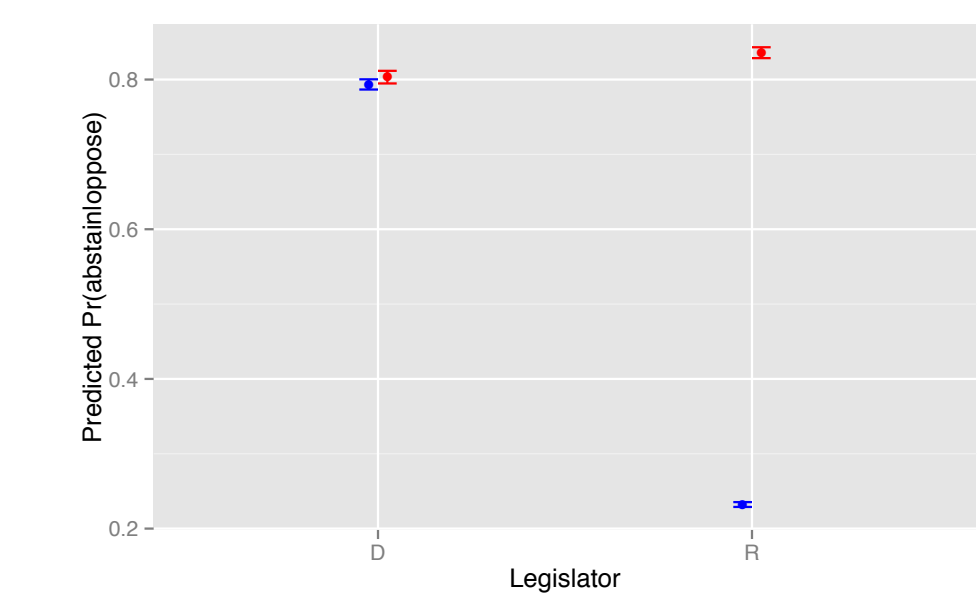
Choosing When to Abstain

Table 4: Marginal Effects of Bill and Legislator Characteristics on Probability of Abstaining, Conditional on Opposing a Bill (Logistic Regression)

	(1)	(2)	(3)
Republican-authored bills	0.396*** (0.003)	0.396*** (0.003)	0.015*** (0.006)
Controversial bills	-0.201*** (0.003)	-0.204*** (0.003)	-0.207*** (0.003)
Third-term legislator	0.054*** (0.003)	0.042*** (0.003)	0.035*** (0.003)
Republican legislator	-0.624*** (0.001)	-0.509*** (0.005)	-0.559*** (0.005)
Ideological distance from median		-0.082*** (0.003)	-0.080*** (0.003)
Rep author * Rep legislator			0.518*** (0.003)
Observations	336,655	336,655	336,655
R ²	0.379	0.381	0.408

Note: *p<0.1; **p<0.05; ***p<0.01

Figure 3: Predicted Probabilities of Abstention Given Opposition



Next Steps

- Derive the proper distribution from which to draw missing votes. We have shown that MAR is unjustified, and that the patterns for abstentions and nos are similar, but it does not necessarily follow that all missing votes must be drawn from the no density. We will investigate how to draw from the yes and no densities, giving more weight to the no side.
- Compare the patterns of abstention and voting in legislatures with absolute versus simple voting rules. Explore the implications for democratic representation.

References

- Clinton, Joshua, Simon Jackman and Douglas Rivers. 2004. "The Statistical Analysis of Roll Call Data." *American Political Science Review*, 98:355-370.
- Rosas, Guillermo, Yael Shomer, and Stephen R. Haptonstahl. 2015. "No News Is News: Nonignorable Nonresponse in Roll-Call Data Analysis." *American Journal of Political Science*, 59:511-528.