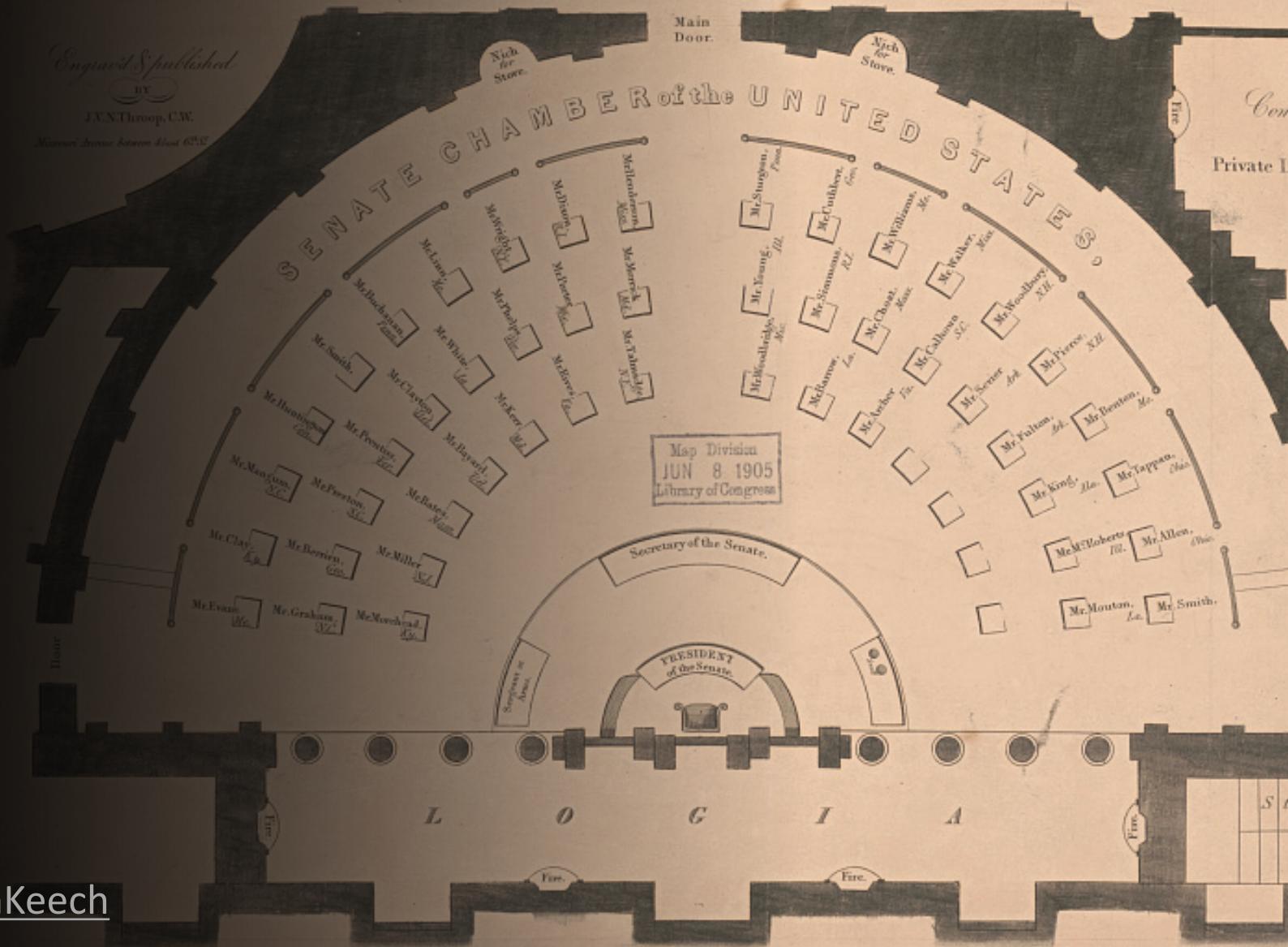


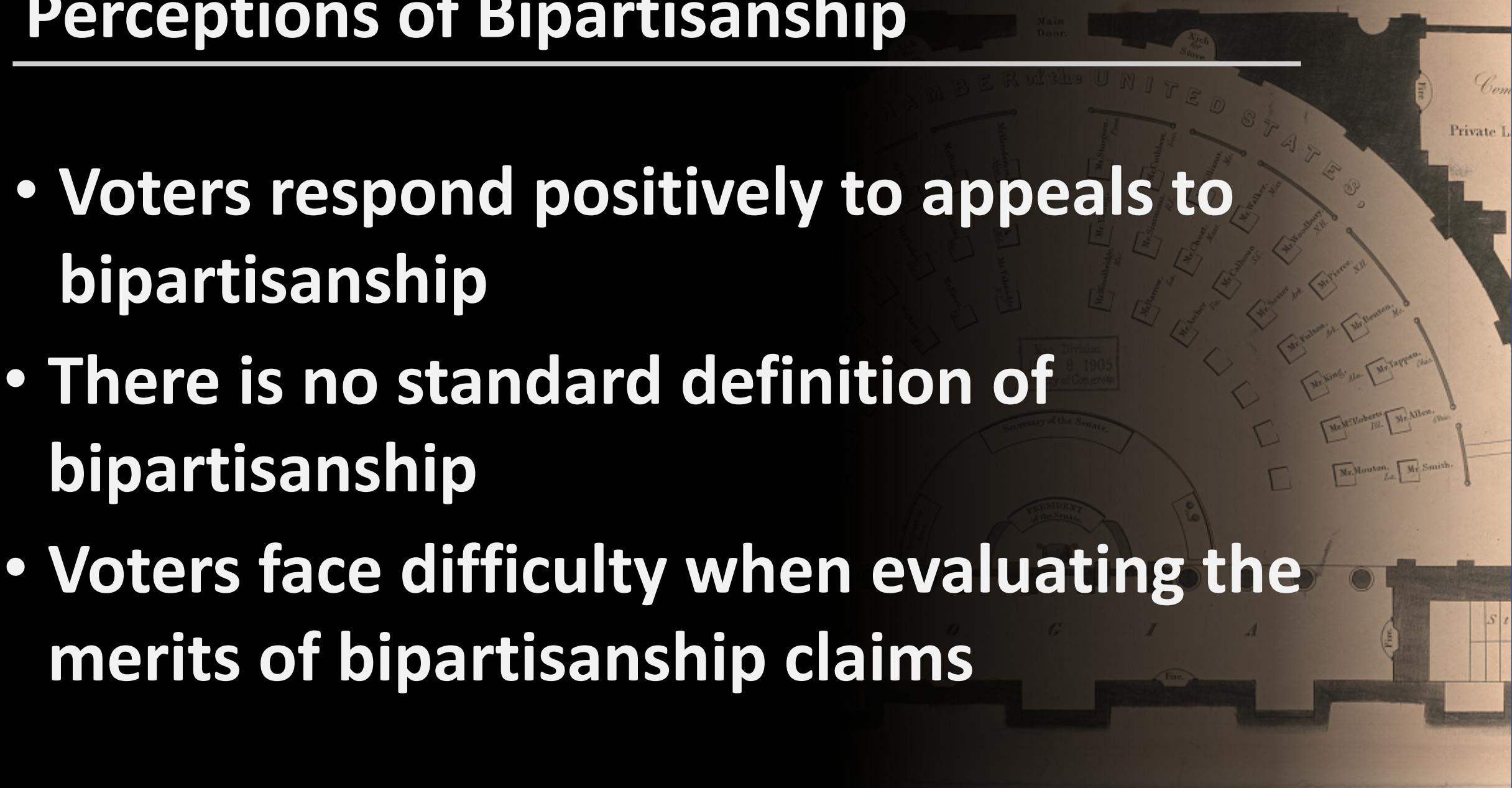
Crossing the Aisle:

An EDA on Congressional Bipartisanship



Perceptions of Bipartisanship

- Voters respond positively to appeals to bipartisanship
- There is no standard definition of bipartisanship
- Voters face difficulty when evaluating the merits of bipartisanship claims



Bipartisanship Ratio (BPR)

Arriving at a functional metric

Roll-Call Vote (yea / nay)

51 / 49

40 / 60

60 / 40

Successful Vote

51 yea

60 nay

60 yea

Party Ratio

1 / 50

0 / 60

30 / 30

Bipartisanship Ratio (BPR)

0.02

0

1

Hypothesis Testing: Four Administrations

Years	President & Party	Congress	House (D)	House (R)	House (other)	Senate (D)	Senate (R)	Senate (other)	Government is:
1947-48	Truman	D 80th	188	246	1	45	51	0	divided
1949-50	Truman	D 81st	263	171	1	54	42	0	unified
1953-54	Eisenhower	R 83rd	213	221	1	47	48	1	unified
1955-56	Eisenhower	R 84th	232	203	0	48	47	1	divided
1993-94	Clinton	D 103rd	258	176	1	57	43	0	unified
1995-96	Clinton	D 104th	202	232	1	46	54	0	divided
2005-06	Bush, GW	R 109th	200	234	1	45	55	0	unified
2007-08	Bush, GW	R 110th	231	204	0	51	49	0	divided

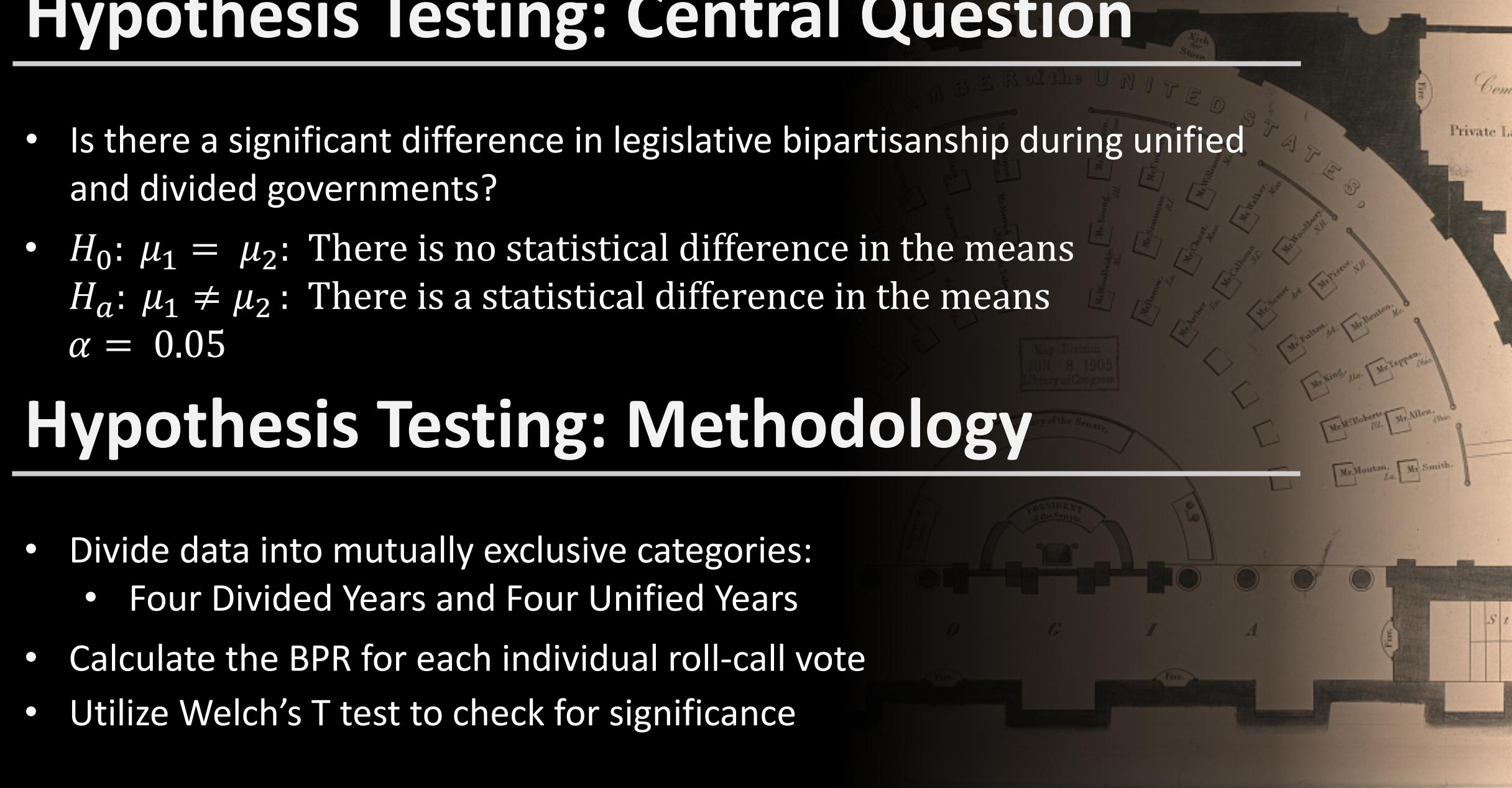
- Two Republican and Two Democratic Administrations
- Two Mutually-Exclusive Scenarios:
 - Unified
 - Divided

Hypothesis Testing: Central Question

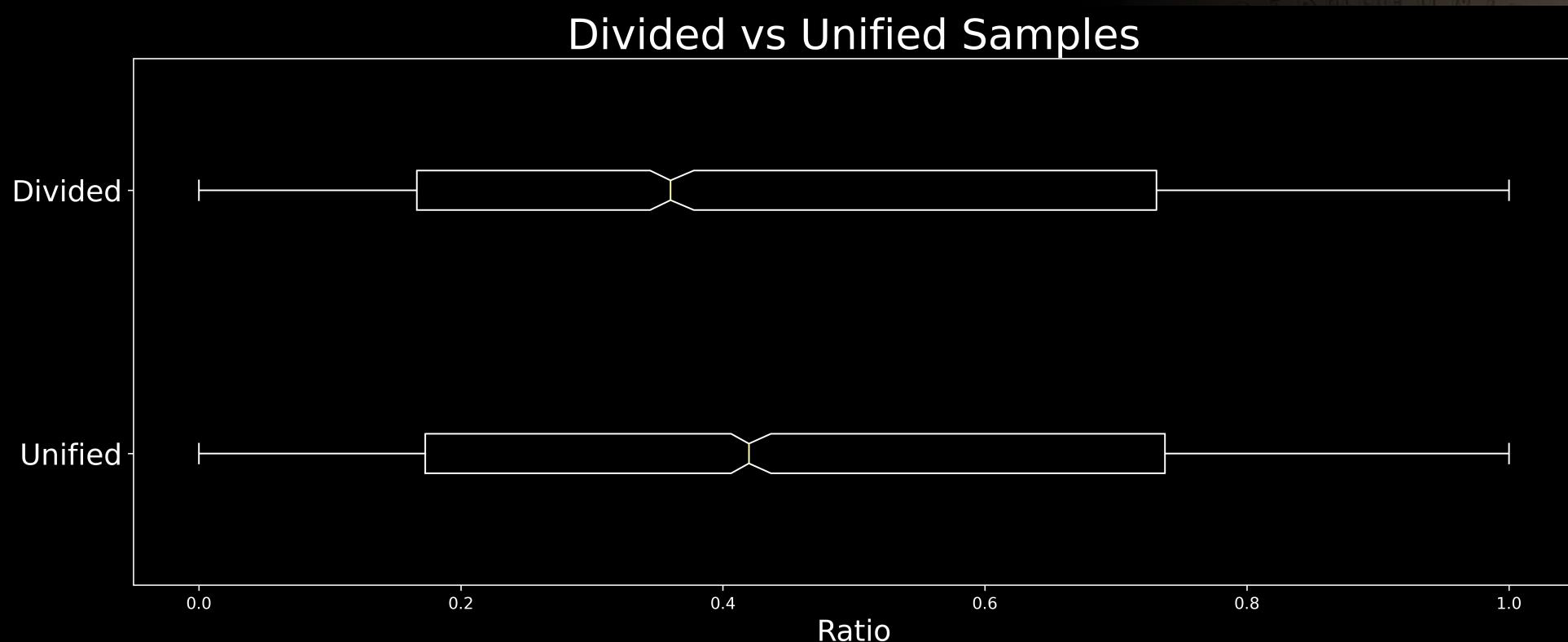
- Is there a significant difference in legislative bipartisanship during unified and divided governments?
- $H_0: \mu_1 = \mu_2$: There is no statistical difference in the means
 $H_a: \mu_1 \neq \mu_2$: There is a statistical difference in the means
 $\alpha = 0.05$

Hypothesis Testing: Methodology

- Divide data into mutually exclusive categories:
 - Four Divided Years and Four Unified Years
- Calculate the BPR for each individual roll-call vote
- Utilize Welch's T test to check for significance

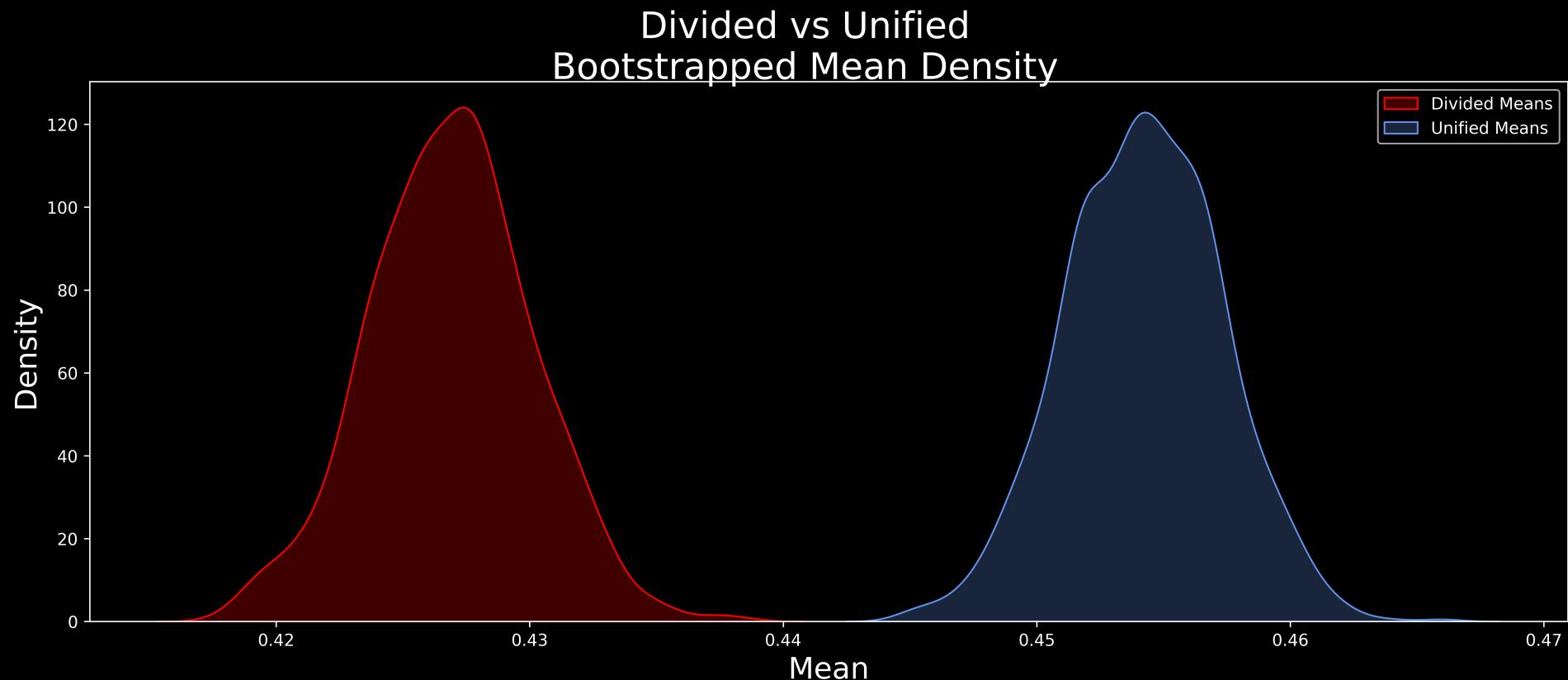


Hypothesis Testing:



- Welch's T Test Results: Welch's T test returned a p value of 7.04×10^{-6} , well within our $\alpha=0.05$.
- Bootstrapping would help confirm the results

Hypothesis Testing: Confirmation & Conclusion



- Reject the null hypothesis, as the results are statistically significant
- Divided margin of error: 0.0064 Unified margin of error: 0.0062

Sources & References

- Primary Data Source:
 - Lewis, Jeffrey B., Keith Poole, Howard Rosenthal, Adam Boche, Aaron Rudkin, and Luke Sonnet (2020). Voteview: Congressional Roll-Call Votes Database. <https://voteview.com/>
- Senate Chamber Diagram:
 - <https://www.loc.gov/resource/pga.12973/>
- Party Control of Presidency and Congress
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