

The Preference for Reciprocity in Congress

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Abstract: *Most researchers assume legislators repay past favors to secure future rewards and avoid future punishments, but a growing literature shows that human beings are intrinsically motivated to reciprocate past favors. However, there is no systematic evidence as to whether legislators bring this preference for reciprocity to Congress. An original survey experiment, an observational study of end-of-career behavior, and a matching-based analysis of responses to committee assignments provide consistent evidence that legislators have a preference for reciprocity.*

Replication Material: The data and materials required to verify the computational reproducibility of the results, procedures, and analyses in this article are available on the *American Journal of Political Science* Dataverse within the Harvard Dataverse Network, at <https://doi.org/10.7910/DVN/TBMFDA>.

Why do legislators repay past favors? The sociological tradition of congressional studies contends that norms and folkways govern behavior in the institution (Alexander 2021; Manley 1965; Matthews 1960; Polsby 1968). Matthews (1960) and Alexander (2021) identify the norm of reciprocity—the obligation to help those who have helped you—as one of the most important of these norms. By this account, legislators reciprocate past favors because they feel they have an obligation to do so. The rational choice tradition has largely abandoned norms as explanations of congressional behavior, but it has not abandoned reciprocity (Dion 1997; Krehbiel 1986; Shepsle 1986; Sinclair 1983). This work agrees that a great deal of congressional behavior conforms to a pattern of reciprocity—a pattern in which legislators help those who have helped them—but offers an entirely different explanation for this pattern. By this more popular account, legislators do not reciprocate past favors because they have internalized a norm of reciprocity, but because of the shadow of the future. They anticipate that reciprocating past favors makes others more likely to help them and less likely to punish them.

Developments in economics and psychology have resuscitated the possibility that legislators reciprocate

past favors because they have an intrinsic preference for doing so, above and beyond any influence on future rewards and punishments. Behavioral economists have found cooperation in settings where there is no expectation of future reward, such as in one-shot anonymous games (De Quervain et al. 2004; Fehr and Gächter 2000). Results from neuroscience rationalize these anomalous findings by showing that human beings seem to derive intrinsic pleasure from reciprocating past actions (McCabe et al. 2001; Sanfey et al. 2003). Emotions both motivate reciprocal actions and credibly communicate intentions to others (Frank 1988; Reed and DeScioli 2017; Reed, DeScioli, and Pinker 2014; Trivers 1971). Succinctly, most people enjoy helping those who have helped them (and harming those who have harmed them) for its own sake, even when their behavior has no influence on future payoffs.

However, even if most human beings have an intrinsic preference for reciprocity, members of Congress might not. Perhaps only the most ruthless and self-centered people can win election to Congress, or perhaps the norms of the institution excuse legislators from having to reciprocate. Because there has not been any reliable quantitative research, whether legislators have a preference for reciprocity or merely reciprocate past favors due

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to the shadow of the future remains an open question.¹ This gap is regrettable because a great deal of research on Congress, and indeed much research about political institutions in general, can be described as an effort to characterize the conditions under which politicians can sustain cooperation, including studies of party discipline, interest group lobbying, deference to procedures, the acquisition of expertise, and bipartisanship.

If legislators have a preference for reciprocity, they will design the institution with the expectation that legislators will use the resources at their disposal to put others in their debt, that legislators will retaliate against those who have harmed them even if it is costly, and that legislators will help those who have helped them, even when it is in their interest (and perhaps the institution's interest) to do something else. Some studies already use the preference for reciprocity as an assumption in their theories of legislative action (Fong 2019, 2022; Groseclose 1996; Powell 2018). Clear evidence that legislators have an intrinsic preference for reciprocity would show that this useful assumption is empirically defensible.

It would also justify a powerful design to study patterns of conflict and cooperation in Congress. The shadow of the future emphasizes the role of the legislator's resources. These can be approximated by whether the legislator has a leadership position, but there are few leadership positions and turnover for leadership positions is fairly low. The preference for reciprocity, by contrast, emphasizes past favors given and received, and these vary a great deal between dyads of legislators. This allows for within-legislator studies that exploit variation in the reciprocal obligations owed by or owed to their many peers within the chamber.

However, it is difficult to show that legislators act in accordance with a preference for reciprocity because it is hard to tell whether an instance of reciprocation was motivated by the desire to repay past favors or the desire to secure future rewards. Fortunately, the two accounts of cooperation produce irreconcilable predictions in one special case: when a legislator is about to leave office. If cooperation is sustained exclusively by the expectation of future rewards, then she will not take costly actions to help others when she is about to leave because she will

not be around to reap future rewards.² If, on the other hand, a preference for reciprocity plays an important role in sustaining cooperation, then she will perform costly favors even shortly before she leaves office, so long as those actions are on behalf of someone who has helped her in the past. Online Appendix A (pp. 3–6) formalizes this argument.

Given the shadow of the future's theoretical elegance and entrenched position in positive theories of political institutions, many will be appropriately skeptical of the claim that cooperation is motivated, at least in part, by an intrinsic preference for reciprocity. I therefore offer three complementary studies to support this claim, each of which has strengths that offset the others' limitations. A vignette experiment of state legislators shows that legislators are more likely to take a costly action to help a colleague if that colleague has recently helped them, even when they are about to leave the chamber. The results of this survey experiment are corroborated by an observational study of roll-call voting in Congress, which shows that legislators who were defeated in their bids for reelection and do not subsequently take revolving-door jobs support their party's position at a higher rate if their party leader's super PAC spent a lot of money to support their most recent campaigns. The third study exploits a different wedge between reciprocity and the shadow of the future: Reciprocal obligations are owed to whoever performed the favor. Consistent with the preference for reciprocity, I find legislators respond to prestigious committee assignments by increasing their support for the party program, but this effect diminishes after the party leader who made the assignment leaves office.

Theory

To clarify what an intrinsic preference for reciprocity is, consider a legislator deciding whether to vote for an amendment. The legislator must consider whether she likes the policy, whether voters and interest groups would be more likely to support her campaign for reelection, whether the leader would be more likely to advance her legislation and give her good committee assignments, and whether her peers would be more likely to donate money to her campaign or support a future bid for a leadership position. She may even consider how it would affect her peers' bids for reelection because she believes she will be better off as a member of the majority party than as a member of the minority party.

²I will later address the possibility that they may hope to continue accruing payoffs as lobbyists after they leave office.

¹None of my evidence speaks to whether legislators arrive in Congress with a preference for reciprocity or internalize the norm of reciprocity as part of their socialization into the legislature, although the prevalence of a preference for reciprocity in ordinary people suggests the former. Throughout, when I say that legislators have a preference for reciprocity, I mean that they behave as if reciprocating past favors is intrinsically rewarding.

If she has an intrinsic preference for reciprocity, there is another factor she would consider. Suppose somebody has helped her in the past. Then she has a reciprocal obligation to help that person. If that person wants the amendment to pass (perhaps because that person is the sponsor or a party leader who views it as an important part of the party's agenda), then the reciprocal obligation makes the legislator more inclined to support the amendment. If the reciprocal obligation is large enough, she may be willing to support it even if she does not like the policy and voting for it would hurt her chances of getting reelected.³ Of course, this preference for reciprocity does not imply that she always comes to the aid of anyone who has helped her, no matter the cost. Rather, it competes with the many other considerations that go into her decision.

Social scientists have found robust evidence for just such a preference in ordinary human beings. The foundational study by Berg, Dickhaut, and McCabe (1995) has experimental subjects play a trust game, in which Player 1 decides how much money to give to Player 2, whatever money Player 1 gave triples, and Player 2 then decides how much of this tripled money to return to Player 1. The two players interact only once, they are kept in separate rooms, and they have no opportunity to learn one another's identities. In one version of the game, their identities are even hidden from the experimenters. Even so, many Player 2s return a substantial amount of money, even though they have no material incentive to return any money at all. Subsequent research in neuroeconomics has established that this kind of reciprocation is associated with activity in reward-processing regions of the brain, and it has also shown that setting an opportunity to reciprocate against a material payoff activates regions of the brain responsible for resolving competing preferences (Fehr and Camerer 2007; Van den Bos et al. 2009).⁴

My modest goal is to replicate the key result from Berg, Dickhaut, and McCabe (1995)—legislators, like or-

dinary human beings, reciprocate past favors even when their choices have no bearings on future rewards. Since testing this proposition outside of the laboratory inevitably entails stronger assumptions, I provide additional evidence for the reciprocity mechanism by testing an additional implication of the theory underlying reciprocity: reciprocal obligations accrue to the specific person who performed the favor (Gintis 2000).

The public record offers some suggestive evidence that legislators have a preference for reciprocity. For example, Senator Lamar Alexander, a moderate Republican, announced in December 2018 that he would not stand for reelection in 2020. This led to speculation that Alexander would defect from the Republican position on crucial votes, particularly because he had already shown a willingness to criticize President Donald Trump. Nevertheless, Alexander provided the pivotal vote against allowing witnesses in Trump's impeachment trial. To explain this decision, news stories emphasized Alexander's relationship with his longtime friend and patron, Senate Majority Leader Mitch McConnell (Bolton 2020). In November 2020, Alexander announced that although he opposed the nomination of Judy Shelton to the Federal Reserve Board, he would be out of town during the vote (Carney 2020). This absence would have been pivotal and allowed McConnell to confirm Shelton by a bare majority, except that Chuck Grassley and Rick Scott both contracted COVID-19 and had to quarantine (Guida 2020).

Indeed, reciprocity pervades the very language used by close observers of the legislative process. Sam Rayburn's victory over the House Rules Committee in 1961 was possible because "through many years, House Democrats had incurred IOUs to him" (Hardeman and Bacon 1987, 456), and he was influential over the House Committee on Ways and Means because members "felt they owed Rayburn for their seats" (Frisch and Kelly 2006, 194). Carl Albert appealed to reciprocity to explain why he declined to run against the unpopular John McCormack for Speaker: "John McCormack was my friend. He and Mr. Rayburn had put me in the leadership. To oppose him for the post that was his due would be an act of an ingrate" (Albert and Goble 1990, 253–54). Barbara Sinclair's account of party leadership emphasizes the importance of goodwill and "calling in chits" (Sinclair 1983). The quantitative studies below show that legislators behave as if they have a preference for reciprocity, but they cannot speak directly to the subjective experiences that give rise to that behavior. These qualitative accounts offer some assurance that legislators indeed feel (or at least say they feel) that they have a preference for reciprocity.

³Online Appendix A (pp. 3–6) provides an example of how such a preference could be modeled.

⁴There is still a great deal social scientists do not know, and some of the mechanics of reciprocity are not well understood. Once a favor has been reciprocated, does the reciprocal obligation disappear? Do reciprocal obligations weaken or strengthen if it has been a long time since the performance of the original favor, and what factors cause them to degrade faster or slower? Is it possible to feel a reciprocal obligation toward a group rather than an individual? None of the studies we examine directly address these questions, but demonstrating that the preference for reciprocity affects important decisions in a highly professionalized political institution underscores the importance of studying these questions in future work.

Related Literature

My study builds on existing work that documents the role past favors play in explaining legislative behavior. Cantor and Herrnson (1997), Damore and Hansford (1999), Cann (2008), Heberlig and Larson (2012), and Powell (2018) all find that legislators who get funds from their peers (either the party as a whole or specific legislators) help those who gave the funds. Powell even offers the norm of reciprocity as an explanation for her findings. Many papers on networks in legislatures use cosponsorship as a measure of the strength of ties between legislators and find that occupying key positions in the network is associated with outsized influence over the legislative process (Fowler 2006; Kirkland and Williams 2014). Since cosponsoring is a favor (Koger 2003), these network ties reflect patterns of giving and reciprocating favors. In a study of the Texas state legislature, Kirkland and Williams (2014) explicitly note that legislators tend to reciprocate cosponsorships. However, all the patterns identified in these studies are also consistent with cooperation relying solely on the shadow of the future.

The key distinction between my study and most of those preceding it is that I am interested in the mechanism by which performing favors increases cooperation. Is it merely because legislators expect that if they reciprocate the favor, they will accrue future rewards and avoid future punishment? Or do legislators reciprocate because they have an intrinsic preference for doing so, perhaps because they would feel guilty or ashamed if they mistreated peers who were kind to them?

Overby and Bell (2004) offer a noteworthy exception to this generalization. Krehbiel (1986) argues that senators refrain from objecting to unanimous consent agreements because they anticipate that if they do, others will be more likely to object to their unanimous consent requests in the future. Overby and Bell (2004) show that senators are no more likely to filibuster in the term before their retirement than they are earlier in their careers, which contradicts this account. They conclude that restraint in filibustering relies on norms of cooperation and reciprocity, although they do not test whether senators who were targeted by filibusters are more likely to start filibusters, as a reciprocity-based explanation would imply.

More generally, my work complements research that emphasizes how legislators are, in many ways, psychologically normal human beings. One strand shows how cognitive constraints and biases that are common in human beings in general, such as drawing biased inferences from unrepresentative samples and discounting information

that conflicts with their prior beliefs, lead legislators to have distorted views about what their constituents want (Broockman and Skovron 2018; Butler and Dynes 2016; Miler 2007). Curry and Roberts (2021) show that legislators who travel together are more likely to cosponsor one another's legislation, and Butler and Kousser (2015) find that legislators exhibit pro-social tendencies when playing behavioral games. Although none of this literature speaks to whether legislators have a preference for reciprocity, it collectively makes it more plausible that a phenomenon that has been well documented in ordinary human beings will find expression among legislators as well.

Survey Experiment on State Legislators

The first study is a survey experiment on state legislators and staffers that CivicPulse administered between August and September 2018.⁵ State legislators are an intrinsically interesting population, but they are also a useful population to study even if our sole interest is in understanding Congress. State legislators must perform tasks similar to those of members of Congress, and many members of Congress were state legislators before they entered the chamber. Unlike Congress, the pool of all state legislators is large enough to conduct an adequately powered survey experiment. By inviting 7,259 state legislators and 5,416 staffers of state legislators to participate in the experiment, CivicPulse was able to get 134 state legislators and 134 staffers to respond.⁶

The survey experiment seeks to understand how past behavior influences voting decisions when considerations of future rewards and punishments are removed. Respondents consider a hypothetical vote in which an imaginary Senator Armstrong is deciding whether to support an appropriation for Senator Baker's district. Based on their experiences with their colleagues, respondents report the likelihood Senator Armstrong would support the amendment. The survey provides three details about the context in which the decision will be made (Figure 1).

First, it specifies that Senator Armstrong will soon leave the legislature. This rules out the possibility that he

⁵CivicPulse has no influence over any of the language used here and bears no responsibility for the analysis of its data.

⁶Online Appendix B (pp. 6–7) finds that respondents were roughly representative of the population with respect to their parties, but they tended to come from less professional state legislatures.

FIGURE 1 Vignette for Survey Experiment

Now we are going to describe a hypothetical situation that a member of a legislature might face. Using your experiences interacting with *other* elected officials, please answer how you think the official in this situation would probably behave.

Senator Armstrong is about to vote on an amendment that appropriates funds for a museum in the district of another colleague, Senator Baker. Armstrong and Baker's state is experiencing {a budget surplus/a budget deficit}.

Recently, a bill Armstrong sponsored was up for a vote, {and Baker voted for the bill even though it was unpopular in his district/but Baker did not vote for the bill because it was unpopular in his district}. It is the last week of the term and this is Armstrong's last term in the legislature.

How likely do you think it is that Senator Armstrong will vote yes on the amendment to appropriate funds for Baker's district?

(Very likely, Likely, Somewhat likely, Neither likely nor unlikely, Somewhat unlikely, Unlikely, Very Unlikely)

Notes: The two treatment arms are inside the braces. The two treatment arms were randomized independently. Responses are on a 7-point scale, as reported in parentheses at the bottom.

will be worried about whether his peers will reward or punish him based on how he votes.

Second, it relates whether the state is experiencing a budget surplus or a budget deficit. This first treatment arm varies the merit of the policy; presumably, most legislators find pork-barrel spending more objectionable when the state has a budget deficit.

Finally, it states that one of Senator Armstrong's bills was recently up for a vote and whether Senator Baker voted for that bill. This second treatment arm varies whether Senator Armstrong has a reciprocal obligation to help Senator Baker. Survey respondents report how likely they think Senator Armstrong is to vote for the amendment on a 7-point scale, with 7 meaning he is very likely to vote for the amendment and 1 meaning he is very unlikely to vote for the amendment.

A legislator's treatment condition can be characterized as a 2×2 matrix, as shown in Figure 2. Rows correspond to whether Senator Armstrong has a reciprocal obligation to Senator Baker and columns correspond to whether there is a budget deficit or a budget surplus. If legislators have a preference for reciprocity, then the presence of a reciprocal obligation should increase the likelihood of voting yes and the top row should be larger than the bottom row. This is exactly what Figure 2 shows.⁷ If

Senator Armstrong does not have a reciprocal obligation toward Senator Baker, then he is either somewhat unlikely or neither likely nor unlikely to vote for the amendment, depending on whether there is a deficit. If he does have a reciprocal obligation, he is somewhat likely to vote for the amendment. Moreover, the effect of a reciprocal obligation dwarfs the effect of a deficit.

One more feature bears special mention. The question specifically asks respondents to speculate as to how *other* legislators would behave in this situation. This limits the influence of social desirability bias. But, more importantly, it implies that legislators anticipate that their peers have a preference for reciprocity, which means they account for it when they strategize. This supports the use of reciprocity as an assumption in formal theories of legislative behavior and organization.

By controlling the information available to respondents, this survey experiment isolates the force of reciprocity from other plausible confounders. However, there may be differences between how legislators report their peers would behave in a survey experiment and how they actually vote. Moreover, legislators who responded to the survey may be more pro-social than legislators who did not, which could bias the estimates upward. To

statistically significant, and the effect of a reciprocal obligation is about twice as large as the effect of a deficit. It also finds no evidence that staffers answered the question differently than elected officials did, although the small sample size makes those particular estimates imprecise.

⁷Online Appendix B (p. 8) presents this same analysis as a linear regression, showing that the effect of a reciprocal obligation is positive and statistically significant, the effect of a deficit is negative and

FIGURE 2 Likelihood of Voting Yes by Treatment Condition

	Deficit	No Deficit
Reciprocal Obligation	5.47 (0.19)	5.70 (0.15)
No Reciprocal Obligation	3.69 (0.19)	4.31 (0.19)

Notes: Responses are on a 7-point scale, where 7 meaning the respondent reports that the legislator is very likely to vote for the amendment. Standard errors are reported in parentheses. There are 268 responses.

address these limitations, the next study turns to observational data from Congress.

Reciprocity in the Lame Duck Session

In Congress, there is a two-month lame duck session between when new members of Congress are elected and when they replace the old members of Congress in office. Political scientists and economists have exploited the lame duck session to understand how legislators behave when certain constraints, such as the desire to secure reelection, are removed (Jenkins and Nokken 2008; Lawrence 2007; Lott 1987; Nokken 2013; Parker 2005; Parker and Dabros 2012; Rothenberg and Sanders 2000). For my purposes, the lame duck session offers a valuable window into how legislators behave outside the shadow of the future because, for many legislators, defeat marks the end of their political careers.

Consequently, my second study examines the roll-call votes of legislators who were defeated in either primary or general elections between 2012 and 2018. To minimize the possibility that legislators are planning to run again or leverage their colleagues' goodwill for their next career, I remove all legislators who later ran for Congress or were otherwise identified by OpenSecrets as belonging in the Revolving Door database. This includes registered lobbyists as well as those who took positions where their connections with their former colleagues might be relevant, including roles in political action committees, think tanks, the federal government, or private-sector organizations that have political action committees.⁸ Legislators who are not in the Revolving Door database effectively exit politics after their departure.

⁸Full details are available at <https://www.opensecrets.org/revolving/methodology.php>.

Because the legislators were defeated and go on to leave the political scene, their behavior during the lame duck session has minimal bearing on future rewards and punishments. I test for how legislators respond to a particular past favor: independent expenditures by the party leader's super PAC—the Congressional Leadership Fund for House Republicans, the House Majority PAC for House Democrats, the Senate Leadership Fund for Senate Republicans, and the Senate Majority PAC for Senate Democrats, as reported by OpenSecrets.⁹ Some defeated incumbents receive millions of dollars of assistance. Others receive little or nothing.

Party leaders want members to support the party's position, both because this makes it easier to pass bills and thereby improve the party's collective reputation (Cox and McCubbins 2007) and because a more unified party sends a clearer message to the voters (Lee 2016). Both of these improve the party's prospects of retaining majority status and therefore maximize the chance the leader will stand at the head of a majority, which is more desirable than leading a minority. Therefore, if legislators have a preference for reciprocity, then, during the lame duck session, defeated legislators will reciprocate the leader's generous funding by supporting the party's position at higher rates than they would have if they had received less funding.¹⁰ If legislators do not have a preference for reciprocity, then the amount of funding they received from their leader's super PAC should not affect their behavior because they will not need the leader's goodwill after they leave the chamber.

The central challenge to testing this hypothesis is characterizing how defeated legislators would have voted if they had received less funding. I adopt a differences-in-differences design. Conceptually, I first characterize how losing reelection affects legislators' behavior by comparing each defeated legislator's behavior during the lame duck session to their own behavior during the first year of the congress. Then I compare the effect of losing reelection on legislators who received a great deal

⁹See <https://www.opensecrets.org/political-action-committees-pacs/2022>. Strictly speaking, the funding decisions are made by the super PACs rather than the leaders themselves. However, news accounts routinely describe these super PACs as being tied to or closely aligned with the relevant party leader, so the analysis assumes that the party members feel a reciprocal obligation toward the leader. They may also feel a reciprocal obligation toward staff members of the super PAC, but such obligations cannot plausibly explain the findings of this analysis.

¹⁰I assume that the leader wants to maximize the number of party members who support the party's position. This is more reliable than using the rate of agreement with the party leader because leaders often vote strategically so they can make a motion to reconsider.

of funding to those who received very little. If losing reelection has a negative effect on support for the party (and we will see that it does), then this negative effect will be smaller for legislators who got more funding if legislators have a preference for reciprocity.

I implement this design by fitting a linear model. For defeated legislator i on vote v ,

$$\text{Support Score}_{i,v} = \beta \begin{pmatrix} \text{Lame Duck Session}_v \\ \text{Lame Duck Session}_v \times \\ \text{Leader's Standardized Spending}_i \\ \text{Average Copartisan Support Score}_v \\ \text{Legislator}_i \end{pmatrix} + \epsilon_{i,v}.$$

Support Score $_{i,v}$ is 1 if legislator i voted with the majority of her party on roll-call vote v , 0 if she abstained or was absent, and -1 if she voted against the majority of her party.

Lame Duck Session $_v$ is a binary indicator for whether vote v took place during the lame duck session. The sample is restricted to votes that took place during either the lame duck session or the first year of the congress, so Lame Duck Session $_v = 0$ implies that the vote took place during the first year of the congress, before the super PACs made independent expenditures. This ensures that the pre-lame-duck votes are not contaminated by gratitude for the funding, which would attenuate the estimate of the treatment effect. Insofar as cooperation is at least partially motivated by the shadow of the future, the coefficient for this term will be negative.

The leader's standardized spending is calculated by taking the total independent expenditures the relevant super PAC made on the legislator's behalf, subtracting the mean of that super PAC's spending taken across all races in the cycle (including those where the incumbent was reelected), and dividing by the standard deviation. This measure of standardized spending captures how generous the leader's funding is for the legislator relative to the legislator's peers. The leader's standardized spending alone (one of the constituent terms of the interaction) is excluded from the model because it is constant within a legislator and therefore absorbed by the legislator fixed effect. If legislators have a preference for reciprocity, then the coefficient associated with Lame Duck $_v \times$ Leader's Standardized Spending $_i$ will be positive. This is the key hypothesis that this research design tests.

Average Copartisan Support Score $_v$ controls for the possibility that the agenda for the lame duck session is systematically different from the agenda during the first year of the congress. If the party happened to sched-

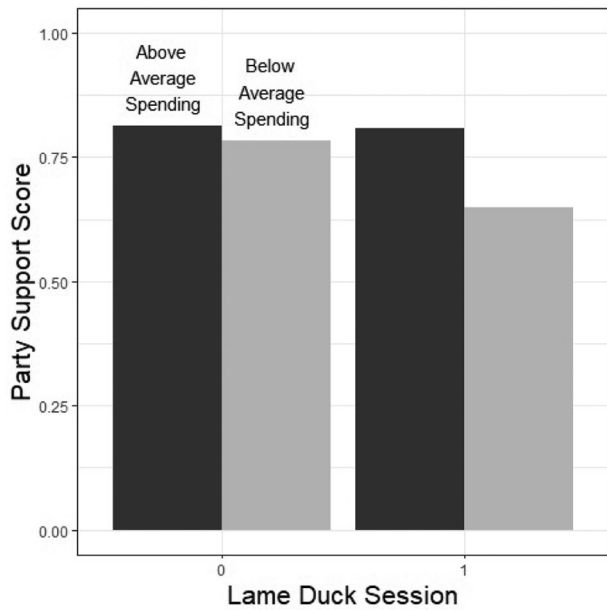
ule votes that were more divisive within the party during the lame duck session, party support scores could decline even if electoral defeat and super PAC spending had no effect on legislators' behavior. Average Copartisan Support Score $_v$ measures party support for vote v among legislators who won their campaign for reelection (and whose voting behavior therefore never appears on the left-hand side of the regression equation). Controlling for this variable parametrically adjusts for possible differences in the agenda. As a robustness test, I also fit a version of this model in which I interact this control with the indicator for the lame duck session, so that the relationship between continuing legislators' behavior and defeated legislators' behavior can vary between the first year of the congress and the lame duck session.

Finally, the legislator fixed effects control for the possibility that members who support their party at higher rates before the lame duck session get more funding from their parties. It plays a key role in this differences-in-differences design by adjusting for different levels of baseline support among legislators, which ensures the identifying variation comes from within-legislator differences between their behavior during the first year of the congress and their behavior during the lame duck session. As Figure 3 shows and Online Appendix C (p. 9) tests more rigorously, the differences between highly funded and poorly funded legislators during the lame duck session dwarfs the differences between those legislators during the first year of the congress, but these legislator fixed effects nevertheless increase confidence that the small differences that do exist do not explain away the results.

Since each observation is a roll-call vote but the treatment is applied at the legislator level, I cluster standard errors by legislator. This makes the effective sample much smaller than it initially appears. My data set includes 49,699 rollcall votes, but these come from just 59 incumbent legislators who lost a primary or general election and did not take a revolving-door job.

This design avoids many threats to inference by eschewing comparisons between defeated legislators and those who will remain in the chamber, but, as with all differences-in-differences designs, it requires the parallel trends assumption. In this context, that means that the onset of the lame duck session would have changed support for the party by the same amount for all legislators in the sample, if only they had all received the same amount of funding. The lack of a relationship between pretreatment levels of support for the party and the amount of funding legislators eventually got, as demonstrated by Figure 3, rules out many possibilities, such as the possibility that one treatment group falls further simply

FIGURE 3 Party Support Score before and during Lame Duck Session



Notes: Dark bars correspond to legislators whose standardized spending was positive (above the mean for the relevant leader’s super PAC in that cycle), and light bars correspond to those with negative standardized spending. The gap in party support scores between those who got different levels of funding is much larger during the lame duck session than during the first year of the session, which suggests differences in lame duck behavior are not attributable to preexisting differences between those who got ample financial support from the party leader and those who did not.

because it has further to fall. The more substantive violations of the parallel trends assumption seem implausible. For example, if the legislature structured the agenda during the lame duck session (but not before) to be more appealing to defeated legislators who received funding than those who did not, that would violate parallel trends. However, it is difficult to imagine how or why this would happen unless the behavior of defeated legislators depended on their getting funds, which is the proposition I am attempting to test.

Table 1 reports the results for this model. The primary analysis is in the left column. The right column is a robustness check that allows the effect of the average support score among copartisans to vary between the first year of the congress and the lame duck session. The robustness check complicates the interpretation of the lame duck coefficient but is still useful because it shows that the key result is robust to alternative modeling assumptions. Online Appendix C (pp. 10–12) presents additional robustness checks by dichotomizing the leader’s standardized spending, removing the legislators who lost in the primaries, and restricting the sample to votes in

which the majority of one party votes against the majority of the other.

In the primary analysis, the indicator for whether the vote was taken during a lame duck session is negative and statistically significant, which shows the removal of the shadow of the future indeed weakens support for the party’s position. It bears reemphasizing that I at no point mean to suggest that considerations of future rewards are unimportant. Clearly, they are, and the lame duck coefficient in the left column shows as much. However, in both models, the interaction for whether a legislator received funds and whether the vote was taken during the lame duck session has a positive and statistically significant coefficient, which shows how reciprocal obligations influence behavior even absent considerations about future rewards.

So far, the tests have focused on behavior at the end of the game. This lame duck study complements the survey experiment by using real behavior and purging revolving-door legislators from the sample. Although there is no evidence of selection bias in the lame duck study, there may still be concerns that the legislators selected for generous super PAC funding are somehow different from those who were not. The third study addresses this selection concern by exploiting variation in

TABLE 1 Effect of Receiving Party Campaign Funds on Lame Duck Voting Behavior

	Party Support Score	
Lame duck session	−0.180** (0.040)	0.001 (0.095)
Lame duck session × Leader’s standardized spending	0.053* (0.015)	0.053* (0.015)
Average support score among copartisans	1.031** (0.040)	1.039** (0.041)
Average support score among copartisans × Lame duck		−0.208† (0.105)
Observations	45,699	45,699

Notes: The outcome is 1 if the legislator voted with the majority of their party, 0 if the legislator abstained or did not vote, and −1 if the legislator voted against the majority of their party. Votes where the majority of the party did not vote either Yea or Nay are omitted from the data set. Results reported are for a linear model for ease of interpretation. Coefficients for legislator fixed effects are omitted for brevity. There is no coefficient for the Leader’s standardized spending because the model has legislator-level fixed effects and spending does not vary within legislator. Errors are clustered by legislator. Columns differ only in the inclusion of the interaction term.

† $p < .1$; * $p < .05$; ** $p < .01$.

whether a reciprocal obligation is owed given that a legislator has received a favor.

Reciprocation of Committee Assignments

Legislators with better committee assignments support the party at a higher rate than those with less attractive assignments (Coker and Crain 1994; Crook and Hibbing 1985; Pearson and Schickler 2009), but are these patterns better explained by committee assignments causing increased loyalty for the party or by the party giving choice assignments to those already predisposed to support its program?¹¹ If legislators have a preference for reciprocity, then assignments ought to increase support for the party's program. From the perspective of a typical rank-and-file member, committee assignments are the most valuable resource at a party leader's disposal. An assignment to a prestigious committee carries abundant opportunities for position taking and credit claiming, outsized influence over the most important areas of public policy, and a major advantage in advancing through the party leadership ladder. There are more legislators who covet these assignments and have a legitimate claim to them than there are open seats, so prestigious committee assignments are favors to rank-and-file legislators (Frisch and Kelly 2006).

More precisely, these are favors performed by party leaders for rank-and-file members. Throughout the period under study (the 93rd to 116th Congress), House committee assignments were determined by groups, but the party leaders exerted substantial influence over committee assignments. The Speaker and House minority leader (combined with their appointees) control a substantial share of the votes on their respective committees on committees, and, in some circumstances, they have the right to make nominations that the party must accept or reject. Research on the attribution of responsibility in collective choice settings shows that voting weight and positive agenda power play a major role in who is held responsible for collective decisions (Duch, Przepiorka, and Stevenson 2015), so the Speaker and House minority leader are likely to get credit for their party's committee assignments.¹²

¹¹Anderson et al. (2016) offer a contrary perspective. They find no relationship between the party leader's control over committee assignments and the weight legislators put on the preferences of party leaders in their policy preferences.

¹²This study excludes the Senate because Senate leaders play a smaller role in assignments. As in the previous study, it is possible

Therefore, if legislators have a preference for reciprocity, they should respond to prestigious committee assignments by increasing their level of support for the party. Moreover, this reciprocal obligation is owed to the specific leader responsible for the prestigious assignment, so the effect ought to wither once the leader who made the assignment leaves office.

The shadow of the future is, by comparison, less clear on this point. It is consistent with legislators increasing their level of support for the party, but it could equally well explain legislators decreasing their level of support for the party. Party leaders are more constrained in removing members from committees (Frisch and Kelly 2006; Grimmer and Powell 2013), so the leader might lose a considerable source of leverage once she actually makes it. It is consistent with legislators only needing to reciprocate to the leader who made the assignment, but it is also consistent with legislators needing to reciprocate to the leader's successors as well. Thus, unlike the last two studies, where the shadow of the future and the preference for reciprocity made irreconcilable predictions, this study focuses on a case where the preference for reciprocity makes clear predictions and the shadow of the future does not.

There are three major challenges to testing the effect of a prestigious committee assignment on the recipient's support for the party. First, the effect of being assigned to a prestigious committee is confounded by the passage of time. As time passes, the agenda changes—drastically, if there is a change in majority status. Members become more experienced and identify reliable colleagues from whom to take cues (Fong 2020). Second, members who have a history of supporting the party are much more likely to get prestigious committee assignments than members who have shown themselves to be unreliable. Third, the effect of being assigned to a committee is confounded by the effect of actually being a member on the committee. Observed effects may be attributable to socialization into the committee rather than gratitude for the assignment.

I address the first two challenges with a between-legislator design in which treated legislators (those who received assignments to the classic power committees of Appropriations, Rules, and Ways and Means) are matched to similar control members. To be eligible to be a matched control legislator, the legislator (1) must have been in office for the entirety of the congress before

that a prestigious assignment also creates reciprocal obligations toward other members of the steering committee, or perhaps even to the party as a whole, but the negative interaction between a prestigious assignment and the leader leaving office in Table 2 suggests that such obligations are small, if they exist at all.

the treated member got the prestigious assignment, (2) must not have been a member of a prestigious committee during the previous congress or the congress of the appointment, (3) must be a member of the same party as the treated legislator, and (4) must have been a member of the House for the same number of terms as the treated legislator. Each treated legislator is matched to the eligible control legislator whose average party support score (1 for voting with the majority of the party, 0 for not voting or abstaining, and -1 for voting against the majority of the party) in the previous congress is closest to the treated legislator's.

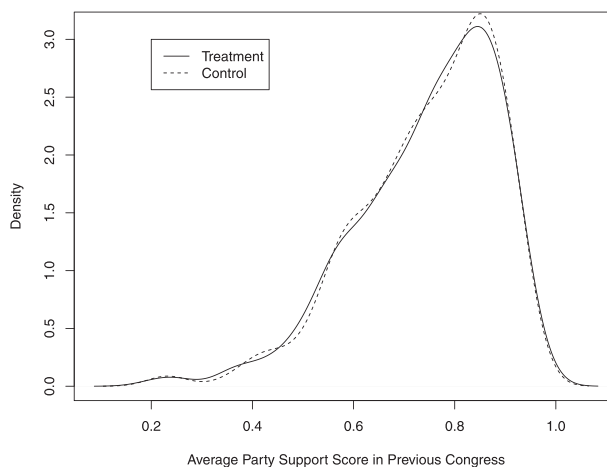
The sample is constructed as follows: Define prestigious committees as the House Committees on Appropriations, Ways and Means, and, prior to the 108th Congress, Rules.¹³ Then identify all legislators who were assigned to a prestigious committee who (1) were not already on one of the three prestigious committees and (2) served in the House during the congress before their assignment (to ensure they can be matched to a similar control legislator). For each of these treated legislators, identify all roll-call votes that took place during the congress of the assignment but on days after the assignment was actually made. For each of these roll-call votes, add two observations to the data set: one for the treated legislator's vote and another for the matched control legislator's vote. Applying this procedure from the 93rd Congress to the 116th Congress (1973–2020) yields 324 treated legislators, 271 matched control legislators (some control legislators get matched to multiple treated legislators), and 710,829 voting decisions.¹⁴

Figure 4 shows that this matching strategy leads the distribution of support for the party in the treatment group to be similar to the distribution in the control group. The average party support score for the congress before the assignment is 0.742 for treated legislators and 0.743 for control legislators. The matching strategy also guarantees that the distributions of seniority and party identity are both identical across the treatment and control groups. Thus, any differences between the behavior of the treated and control legislators cannot be explained by differences in their pretreatment predisposition to vote with their parties or to being in different parts of their life cycles as lawmakers.

¹³Online Appendix D (p. 16) shows that the results are robust to other plausible definitions of prestigious committees, such as including Rules for the entirety of the sample and including Energy and Commerce.

¹⁴Control legislators who are matched to multiple treated legislators receive correspondingly larger weights in the regressions to ensure a balanced sample.

FIGURE 4 Balance of Pretreatment Party Support between Treatment and Control Groups



Notes: Matching leads to similar distributions of pretreatment support for the party between the treatment and control groups. Seniority and party identification are perfectly balanced by the matching, so they are not reported here.

However, even if the matched controls perfectly proxy for how treated legislators would behave if they were not assigned to a prestigious committee, there is still an important confounder: actually joining the committee. Suppose committee assignments were made by lottery such that they did not create reciprocal obligations. There could still be a positive effect of committee assignment on support for the party if committee socialization, the acquisition of expertise, or new and better opportunities for vote trading caused support for the party. I must therefore find a way to attribute the effect of the committee assignment to getting the assignment rather than being on the committee.

Fortunately, reciprocal obligations are owed to somebody. In the case of House committee assignments, that somebody is the party leader. If the party leader leaves office, a request for support from his or her successor would not carry as much weight. Accordingly, we should expect to see an attenuated effect of assignments on support for the party after the leader who made the assignment leaves office. Such attenuation could not be explained by committee socialization, expertise, or vote trading.

To test this expectation, I add a variable that tracks whether the vote was taken after the leader who made the assignment left office (Leader Change). Three leaders in the sample period, Gerald Ford (R-MI), Jim Wright (D-TX), and John Boehner (R-OH), left office mid-session. For assignments they made at the beginning of their

TABLE 2 Effect of Receiving Prestigious Committee Assignment on Party Support

	Party Support Score
Prestigious assignment	0.015** (0.005)
Leader change	-0.016 (0.020)
Prestigious assignment × Leader change	-0.033** (0.014)
Average support (previous 2 years)	0.865*** (0.039)
Seniority	0.003 (0.002)
Observations	710,829

Notes: Each observation is a roll-call vote. The outcome is 1 if the legislator voted with the majority of their party, 0 if the legislator abstained or did not vote, and -1 if the legislator voted against the majority of their party. Votes where the majority of the party did not vote either Yea or Nay are omitted from the data set. Results reported are for a linear model for ease of interpretation. Coefficients for roll-call fixed effects are omitted for brevity. Errors are clustered by legislator.

[†] $p < .1$; * $p < .05$; ** $p < .01$.

respective final congresses, Leader Change is equal to 1 for the votes taken after their departures (2.7% of all observations).

Table 2 regresses party support scores on receipt of a prestigious committee assignment, whether the leader who made the assignment has since left office, and the interaction of these two variables. It parametrically controls for the legislators' average party support scores over the previous two years, seniority, and roll-call fixed effects, which ensures that identification of the treatment effect comes from within roll-call variation. The analysis clusters standard errors at the legislator level, so although the number of observations is very large, the effective sample size is only in the hundreds. Despite this small effective sample size, the analysis finds strong support that being assigned to a prestigious committee increases support for the party.

Moreover, the interaction effect of the treatment and the Leader Change variable has a negative effect that roughly offsets the treatment effect, which shows that the main effect of a prestigious committee assignment comes from repaying the favor of the leader who made the assignment, not committee socialization or some other

consequence of joining the committee. This negative interaction cannot be attributed to the new leader changing the agenda to make it less attractive to treated legislators. If it were, we would expect the effect would not hold among legislators in the minority party because the House minority leader holds relatively little influence over the agenda. Online Appendix D (p. 14) shows that a prestigious assignment continues to have a positive effect and that a leader change continues to diminish that effect even among minority party legislators.

Compared to the lame duck study, this committee assignments study offers even stronger evidence that the apparent preference for reciprocity cannot be attributed to selection bias. The interaction of the Leader Change variable and the Prestigious Assignment variable varies whether a reciprocal obligation is owed while holding whether the legislator received a favor constant. Within the set of legislators who were selected to join prestigious committees, the effect diminishes when the reciprocal obligation does.

Conclusion

The evidence from all three studies supports the hypothesis that legislators, like most human beings, have a preference for reciprocity. The survey experiment shows that state legislators anticipate their peers will reciprocate past favors, even if those peers are about to leave the chamber. The lame duck study shows that members of Congress continue to repay their party leaders' favors even when they are about to leave politics. The committee assignments study shows that representatives respond to prestigious committee assignments by voting with the party more, but the effect diminishes once the leader who made the assignment leaves office. Each of these studies adopts a different research design that requires different assumptions, but, even so, they all provide consistent support for the preference for reciprocity.

The shadow of the future surely plays an important role in sustaining cooperation in Congress, and none of the evidence should be taken to suggest otherwise. But reciprocity explains many regularities in legislative behavior and has wide-ranging implications for legislative organization, especially for party organization. For example, it explains why party leaders focus on performing favors rather than threatening retaliation (Evans 2018; Hastert 2004; Sinclair 1983) and how savvy leaders like Tip O'Neill, Howard Baker, and Harry Reid could announce their retirement years in advance yet still lead effectively through the end of their terms. It accounts for the difficulty parties sometimes face in their attempts to

remove underperforming leaders, as in the failed coup against Newt Gingrich in 1997 (Fong 2019). It also justifies Newt Gingrich's and Kevin McCarthy's exertions on behalf of challengers; they not only improve the party's chances of winning a majority, but also ensure the most junior (and often most volatile) legislators arrive with a reciprocal obligation to support their benefactor.

Moreover, reciprocity could serve as the foundation of a new theory of how legislative leaders build and use power. Reciprocal obligations are owed to a particular person. At any given time, the people who owe a legislator favors may be different from the people whose assistance the legislator needs. The possibility of such a mismatch may dampen the incentive to perform favors in the first place. This implies a favor economy, in which the velocity of favors affects legislative output just as the velocity of money affects economic output. Leaders can play an important role in this favor economy by acting as brokers. Performing favors for these brokers would be a good investment; even if they could not help you in a particular instance, there is probably somebody who owes them a favor who could. This favor economy provides a new perspective on legislative productivity, legislative networks, and the causes and consequences of centralization.

It also entails new questions about legislative effectiveness (Volden and Wiseman 2014). Reciprocity suggests that legislators can become more effective by performing favors. However, performing favors is, by definition, costly. Consequently, legislators face a portfolio optimization problem. For whom should they perform favors and what form should those favors take? Perhaps senior legislators benefit most from smart investments in promising legislators early in their careers, whereas junior legislators must focus on cultivating the goodwill of the current power brokers. Perhaps performing favors for members of your own party is good in the short run when your party is in the majority, but performing some favors for members of the other party provides a form of long-term insurance. Patterns of cooperation and conflict may have less to do with what outcomes legislators prefer in the short run and more to do with what relationships they believe they will need to succeed in the long run.

Finally, I have focused on reciprocation of past favors, but research in behavioral economics and evolutionary psychology suggests that we should also expect legislators to repay treachery in kind. This negative reciprocity offers an alternative narrative for the collapse of comity and rise of partisan animosity in Congress. Perhaps Speaker Jim Wright's tendency to sideline House Republicans inaugurated a downward spiral of partisan

animosity in which Republicans retaliated against Wright by backing Newt Gingrich, whose aggressive tactics in turn outraged Democrats.

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Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Appendix A: Formalization of Reciprocity

Appendix B: Robustness of Survey Experiments

Appendix C: Robustness of Lame Duck Analysis

Appendix D: Robustness of Committee Assignment Analysis