

Bread and Butter or Bread and Roses?

Experimental Evidence on Why Public Sector Employees Support Unions *

Alexander Hertel-Fernandez[†]

Columbia University

Ethan Porter[‡]

George Washington University

Abstract

Despite their decline, unions, and especially public unions, remain important associations. Yet we do not have a good understanding of why workers voluntarily support unions. We report on a field experiment conducted during a 2017 Iowa teachers union recertification election. We randomly assigned union members to receive emails describing union benefits and measured effects on turnout effort ($N=10,461$). Members were more likely to try to vote when reminded of the unions' professional benefits and community—but not legal protections or political representation. A follow-up survey identified the specific aspects of professional identity and benefits that members most valued and why. In a context where union membership and support is voluntary, our findings emphasize the importance of selective professional benefits for fostering shared identities and encouraging support for public unions. Our results thus have broader implications for understanding the labor movement and civic participation.

*We thank ISEA for helping devise and administer the experiments, and Sarah Anzia, Sharon Block, David Broockman, Adam Dean, Ellora Deroncourt, Leslie Finger, Dan Galvin, Noam Gidron, Don Green, Jacob Hacker, Brian Hamel, Michael Hartney, Matt Lacombe, Melissa Lyon, Shom Mazumder, Terry Moe, Suresh Naidu, Kathy Thelen, and Mike Ting as well as participants in the 2018 East-Coast American Political Economy Workshop for very helpful comments and ideas. The experimental design and main analysis were pre-registered with EGAP under ID 20170926AB and received human subjects approval from both Columbia University and George Washington University. Hertel-Fernandez acknowledges financial support from the Russell Sage Foundation and the Washington Center for Equitable Growth. All errors are our own responsibility alone.

[†]Assistant Professor, School of International and Public Affairs; ah3467@columbia.edu

[‡]Assistant Professor, School of Media and Public Affairs; evporter@gwu.edu

Though never as extensive as their counterparts in Western Europe, American unions have long been an important force in the U.S. political economy. As economic institutions, unions bargain with employers for higher wages and benefits and better working conditions, compressing the distribution of wages within companies and across industries (e.g. Card 2001; Farber et al. 2018; Freeman and Medoff 1984; Western and Rosenfeld 2011). Unions also have significant political effects as well, encouraging their workers to participate in politics, equipping their members with civic skills, mobilizing support for political candidates, donating to civic campaigns, and lobbying on public policy (e.g. Ahlquist 2017; Ahlquist and Levi 2013; Dark 1999; Dean 2016; Greenstone 1969; Feigenbaum, Hertel-Fernandez, and Williamson 2018; Flavin and Hartney 2015; Kim and Margalit 2017; Leighley and Nagler 2007; Rosenfeld 2014). Since the New Deal, unions have also anchored an important part of the Democratic party coalition (Dark 1999; Schickler 2016; Schlozman 2015).

Why do individual workers support unions? Despite the importance of unions as economic, political, and civic organizations, we lack a clear answer to this question, especially in contexts where union support is completely voluntary on the part of workers. What little past research exists generally uses self-reported survey evidence and focuses on union membership in the private sector from an earlier era when many unions could still require workers to contribute dues even if those workers were not members (see e.g. Freeman and Rogers 2006; Heneman and Sandver 1983; Montgomery 1989 but see Moe 2011; Fowles and Cowen 2015; see also Riccucci 2011).¹ The fact that nearly half of U.S. employees now work in states where union dues are voluntary calls for a renewed focus on this question—especially with states increasingly curbing public sector collective bargaining

¹See also the work in Freeman and Ichniowski, 1988 for evidence of the importance of state-level bargaining laws for the growth of public sector union density (but see also Paglayan, 2019 for the importance of strike rights as well).

rights and with the Supreme Court having just applied right-to-work rules to all public-sector workers. Unions are thus entering a world where they must convince workers to voluntarily join and continue to support their organizations even as they can provide fewer benefits to members.

In this paper, we consider workers' motivations for supporting unions using a field experiment conducted during recertification elections for Iowa's teachers association. Unlike past work, our experimental approach allows us to make credible causal claims about workers' motivations for voluntarily turning out to vote for recertification, thus supporting their union. Moreover, for at least three reasons, the context for our field experiment is especially relevant in the contemporary political and economic landscape.

First, Iowa is a right-to-work state, which means that Iowan workers at unionized workplaces do not need to pay dues to a union to benefit from the union's collective bargaining and job protection benefits. A growing number of states—28 as of early 2017—are now right-to-work, and the Supreme Court has recently applied right-to-work rules to public-sector workers in all states in its recent *Janus v. AFSCME* decision.²

In addition, the Iowan recertification elections were held in the wake of major cutbacks to public employee union rights (Petroski and Pfannenstiel, 2017). Iowa's reforms are part of an increasingly common conservative agenda enacted in states under GOP control, providing insights into the future of unionism in "red" states (Hertel-Fernandez, 2018). Lastly, the main outcome that we use in our study—support for the union during a recertification election—offers a strong behavioral indication of members' overall support for the union. Rather than using an abstract measure of attitudes toward the union, as in an observational survey, we examine whether a union member took action to cast a ballot in an election that determined whether the union would continue as a recognized bargaining agent. While we do not observe how individual workers—union members or

²585 U. S. ____ (2018).

not—voted, as we discuss below, the election results and a follow-up survey indicate that nearly all union members who voted in the election voted to recertify their union. Iowa law explicitly prohibits state agencies from releasing lists of public employees voting in the election as in state or federal governmental elections.

Working in partnership with the Iowa State Education Association (ISEA), the state’s union representing public school educators, we designed a series of email messages for the union to distribute to its members voting in recertification elections held during October 2017. As a result of the public employee union reform law passed earlier that year, ISEA affiliates needed to win a majority of all workers’ support—not just a majority of workers casting ballots in the election—to remain the recognized bargaining agent across each local affiliate. (Technically, the recertification election was for each individual local union affiliate, not for the state-wide union, of which each affiliate is a member.)

In all, we successfully contacted 10,461 voting-eligible union members across 210 union locals. We block-randomized these ISEA members to receive one of ten email messages encouraging them to vote in the recertification elections, described in more detail below. Broadly, these messages emphasized one of three different reasons for supporting the union—professional benefits, like job training and teaching resources, as well as an identity as a professional educator; job protections and legal assistance; or collective voice in politics—as well as whether those benefits were described using the union leadership’s official language or through verbatim quotes given by union members themselves. Because workers could vote for recertification online, we embedded a link to the election website within each of our emails. Whether a worker clicked on this link forms our

outcome, which we interpret as turnout in support of the union.³

We found strong evidence that the description of ISEA’s professional benefits and the identities they fostered, as described by the union’s leadership, markedly increased the likelihood that members would vote in a recertification election. Members who received the professional benefits and identity message described by the unions’ leadership were two percentage points more likely than those in the generic condition to click to vote in the election ($p < 0.05$, two-tailed test), representing an increase of nearly 40% over the generic condition. Compared to the control condition, only the message emphasizing professional benefits and identity—not messages describing job protections and legal assistance nor union participation in politics—had an effect on whether members clicked the link to vote in the election. A follow-up survey of ISEA members fielded in May 2018 revealed the reasons why professional benefits may have been so motivating in encouraging support for the union. Well over half of union members reported using ISEA’s various professional benefits and rated them highly on feeling thermometer scales. In addition, workers indicated that they felt the benefits offered them a fair value for their dues, supported them as educators, and helped to foster a broader community of educational professionals across the state. Evidence from an independent 2018 national teachers survey provides further evidence of the external validity of our findings.

Our results underscore the importance of valuable selective benefits in attracting membership into voluntary organizations—and also in cultivating identities that civic organi-

³In the remainder of this paper, we describe this alternatively as supporting the union or turning out to support the union, which we believe is a plausible assumption given that it is unlikely that union members in a right-to-work state (workers who voluntarily signed up as members and pay dues to the union) would vote to decertify their union. This assumption receives strong support from the fact that 97% of the votes cast across all recertification elections were in support of unions.

zations can deploy (Olson 1965 but see Walker 1991; Moe 1988; Clark and Wilson 1961; Han 2014; “The Political Weaponization of Gun Owners: The NRA’s Cultivation, Dissemination, and Use of a Group Social Identity”). It was excludable professional benefits like training, classroom resources, and credentialing that were most likely to inspire support for ISEA among Iowan educators—not job protections or legal assistance, nor the solidaristic or purposive political benefits the union offered. Our findings thus suggest an interesting paradox about public-sector unions. Even more than private-sector unions, government employee labor associations—and especially teachers unions—are highly active in state and national Democratic politics and generally strongly supportive of liberal policies through broad lobbying efforts (e.g. Anzia 2013; Anzia and Moe 2016; DiSalvo 2015; Flavin and Hartney 2015; Hartney 2014; Moe 2011). Yet despite their heavy political involvement, it is the less explicitly political workplace benefits and professional identity these public-sector unions offer to members that appear to ultimately inspire support from rank-and-file members. Unions, and particularly the public-sector unions we study in this paper, may thus face a trade-off between “bread and butter” workplace issues and a broader solidaristic vision of “bread and roses”—unless unions are able to successfully use “bread and butter” benefits like professional benefits to expand the “communities of fate” that union members hold (Ahlquist and Levi 2013).

Explaining Workers’ Support for Unions

Why do workers support unions? Classical pluralist perspectives on interest group membership and participation stressed group membership as the natural consequence of human interactions and mutual interests (e.g., Truman 1951). Beginning with Mancur Olson, however, another powerful tradition emphasized the collective action problems inherent in group membership, including unions (Olson 1965). Olson pointed out that rational, personal welfare-maximizing individuals have few incentives to contribute to large groups

given the possibility of free-riding off of the efforts of others. This is an issue for unions, as Olson argued, because their primary economic benefits—higher wages and benefits, better working conditions, and stronger worker voice in workplace governance—accrue to all workers, regardless of union membership. In the United States, this is especially true because American unions are generally legally required to represent all workers equally in collective bargaining and grievance processes.

How then could unions attract and retain members? Olson speculated that smaller craft unions, organizing mostly skilled workers, were able to build on non-economic motivations for membership. In contrast, later and larger industrial unions organizing a mix of unskilled and semi-skilled workers relied first on social pressure and violence and then on legal compulsion in the form of union security agreements to build their memberships. Union security agreements stipulate that workers must either join a union as a condition of employment or else contribute dues and fees to the union equal to the costs of collective bargaining and job protections offered by the union. In Olson's view, excludable selective benefits, which some large groups can offer to attract members, would not be effective for unions given the extent to which the welfare state had begun providing benefits that unions had historically used to attract members—like unemployment insurance, health insurance, and pensions. Compulsion, through closed shop, union shop, or union security agreements, thus offered unions the best route to maximizing membership (see also Levi 1977 in the context of public-sector employees).

Written in mid-century (in 1965), Olson's account was compelling for an era in which unions largely retained the ability to implement mandatory membership or free-rider fees. But since then, American unions have been steadily losing their ability to compel membership and dues payment from workers at unionized businesses and organizations. The Taft-Hartley amendments to the National Labor Relations Act, passed in 1947, banned closed union shops altogether and recognized the ability of states to pass "right-to-work"

laws, which bar unions from negotiating union shop or union security agreements with employers. (Note that unions in non-right-to-work states are barred from charging non-members for any political activities; in these states, unions can only charge non-members the costs of collective bargaining and grievance protections.⁴) Those laws thus create a free-rider problem for unions, since unions are typically legally obligated to represent all workers in collective bargaining and grievance protections, regardless of workers' membership status.⁵ Initially, only a handful of states in the South and Southwest opted to pass right-to-work laws but by 2016, nearly half of all workers lived in a right-to-work state. Without the compulsion described by Olson, how can unions in these right-to-work states retain members?

Olson's theory is not the only potential explanation for union membership and support. Another argument comes from the work of Terry Moe, Peter Clark and James Wilson (e.g., Moe 1988; Clark and Wilson 1961). Those authors, while recognizing the importance of selective benefits for membership in some organizations, pointed out other motivations that might drive individuals to join and support groups. In particular, these authors stressed the role of non-material solidary and purposive incentives. Solidary benefits are intangible rewards derived from association and participating in an organization, while purposive incentives refer to the benefits an individual derives from meeting the stated ends of an association. The framework put forward by these authors suggests that unions in right-to-work states might overcome their free-rider problem not necessarily through selective benefits, but rather by fostering an environment in which workers derive strong social ben-

⁴This is the result of the 1977 *Abood v. Detroit Board of Education* decision in the case of public-sector unions.

⁵There are some exceptions to this requirement, including Florida and New York, which do not require public unions to represent non-members in the grievance process. Iowa is not such a state.

efits from participating in the union and can contribute to broader political and economic objectives, like shaping elections and public policies. Closely related, Lawrence Rothenberg (1992) has argued that conditional on joining a voluntary civic association, members will continue to support the group to the extent that the group maximizes the net benefits members receive—whether selective, solidaristic, or purposive.

More recent research, both on labor unions and other associations, also offers another potential solution: tapping into, and ultimately transforming, members' social identities. Hahrie Han (2014), for instance, has documented how politically effective civic associations do not merely make discrete requests of their members, but rather offer members an opportunity to develop new skills and ultimately, reshape members' social identities. Similarly, John Ahlquist and Margaret Levi (2013) have described how some unions are able to redefine the communities of fate held by their members to be more encompassing of broader social goals. And a case study of the National Rifle Association by Matthew Lacombe () underscores how that organization is able to elicit continued support from their membership by fostering a distinct social identity of gun ownership through publications and other selective benefits, like gun clubs and social events.

Past research, then, leaves open the question of how contemporary American unions in right-to-work states can elicit continued support from their members. Following Olson, unions might try to generate new and valuable excludable selective benefits that make membership appealing while ensuring that members' net contributions remain low. On the other hand, unions might also emphasize the solidaristic or purposive benefits of membership, following Clark, Moe, and Wilson (all the while minimizing the costs and maximizing the benefits of membership, as Rothenberg noted). And unions might try to foster, or at least tap into, the social identities held by members to align those identities with the union, following Ahlquist and Levi, Han, and Lacombe.

Which of these strategies is most likely to be effective and why? These are impor-

tant questions to answer given that past research has argued that the incentive structures adopted by unions can shape the effectiveness of those unions more generally (Ahlquist and Levi, 2013; Eidlin, 2018; Mosimann and Pontusson, 2017; Robinson, 1990). We explore the effectiveness of different appeals to union members in the context of teachers unions in Iowa. In the following section, we discuss why this empirical context is appealing on both substantive and theoretical grounds.

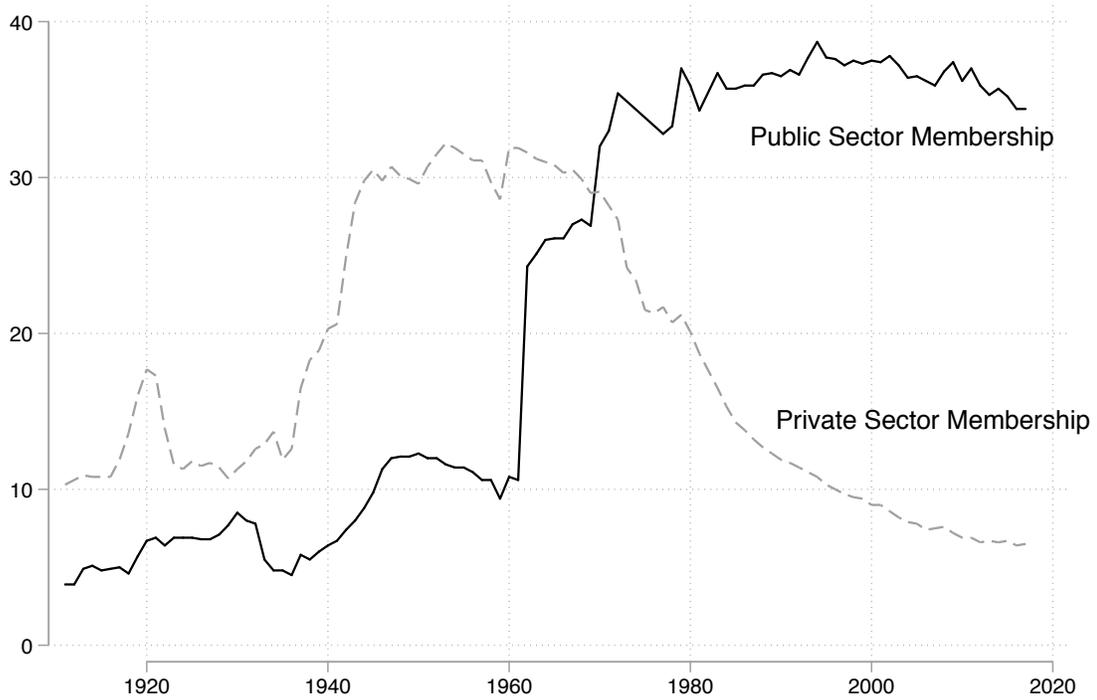
Why Study Iowa Teachers' Unions?

Since mid-century, the center of gravity within the labor movement has shifted to public-sector unions. Not only has membership in private-sector unions collapsed, but since the 1960s and 1970s, public-sector unions have gained significant clout since the federal government and the states began recognizing the rights of government employees to organize and collectively bargain (Anzia and Moe, 2016; Levi, 1977; Walker, 2014). Figure 1 summarizes the divergent trends in public and private sector union membership.⁶ By 2017, it was about as likely that a U.S. union member came from the public as the private sector. In addition, as previously highlighted, public-sector unions are often political powerhouses, especially in the states in which they still retain significant membership (see Figure 2 for a summary of public sector membership by state in 2017).

Aside from their political clout, there are good reasons to study membership in public employee unions as distinct from private-sector unions (see the calls for more research in Anzia and Moe 2015; Riccucci 2011). First, public employees participating in government unions tend to look quite different from their private-sector counterparts. Government union members are much more likely than private-sector members to be female, have higher levels of education, especially post-graduate education, and to earn higher wages

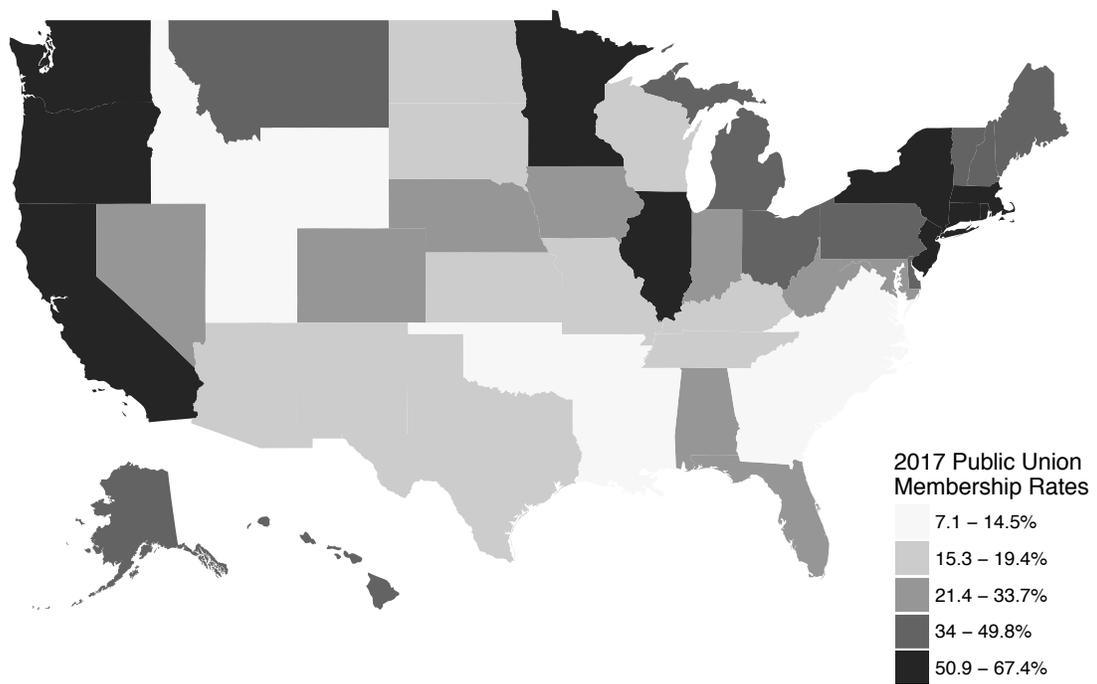
⁶Though see Farber et al., 2018 for issues with the Troy-Sheflin series.

Figure 1: Union Membership in the Public and Private Sectors



Union membership data before 1973 from Troy-Sheflin series, reported in Eidlin 2018;
after 1973 from Current Population Surveys, reported by UnionStats.

Figure 2: Public Union Membership by State, 2017



Union membership data from Current Population Surveys, reported by UnionStats.
States divided into quintiles of public union membership.

(Rosenfeld 2014, Table 2.5). These large demographic differences may well shape the motivations government workers have for joining unions, as well as the services public unions offer to their members.

Another reason public-sector unions merit their own analysis is that the laws governing public employee unionization are entirely separate from those in the private sector. While private-sector employees organize and bargain under the New Deal-era National Labor Relations Act (Walker 2014), public employees depend on state-level laws, which vary enormously across the fifty states. Past research has shown that union formation is more likely and union membership is higher in states with laws recognizing public sector collective bargaining (Ichniowski 1988; Saltzman 1988, see also Anzia and Moe 2016; Flavin and Hartney 2015; Paglayan 2019).

While states generally expanded bargaining rights for public employees through the 1960s and 1970s, more recent GOP-controlled states have moved in the opposite direction, passing legislation to cut back the rights of government employees to bargain, organize, and participate in politics (Hertel-Fernandez, 2018). Wisconsin's reforms in 2011 marked a turning point in this movement, when GOP Governor Scott Walker championed an ultimately successful bill to curb the bargaining rights of many public-sector workers. Iowa introduced similar reforms after state Republicans gained trifecta control of the government in 2017 (Petroski and Pfannenstiel, 2017). The final Iowa legislation curtailed bargaining rights for nearly all public workers, preventing unions from negotiating over health insurance, pensions, and teacher evaluation standards.⁷ Unions now can only negotiate over wages, and even then wage hikes are capped by the law. Importantly, the new law also requires public employee unions to hold recertification elections at the end of every contract. In these elections, unions must win a majority of all employee votes to continue

⁷Previously, the law governing Iowa's teachers specified an implicit duty to bargain over a range of issues, including worker compensation.

on as the labor representative of each workplace—not just a majority of votes among those employees turning out to vote.

Although the Wisconsin and Iowa laws represent the most extreme versions of public employee union cutbacks, they are consistent with a more general trend that will likely change the way public-sector unions recruit and retain members in the coming years (Ahlquist, 2012; Hertel-Fernandez, 2018). This legislative shift will only be reinforced by the recent *Janus* Supreme Court decision, in which the court effectively applied “right-to-work” laws across all public employees, even in otherwise non-right-to-work states.

Studying public unions in Iowa, then, provides an important window into the future of public sector unionism in the United States. Not only has the legislature already greatly restricted the scope of Iowan public sector bargaining, but the state has also been right-to-work for most of the twentieth century. In addition, Iowa’s overall public sector union density is about the same as state employee union membership across the rest of the country. As of 2016, 29% of Iowan public employees were in a union, nearly identical to the national rate of state employees (30%; data from the Bureau of Labor Statistics). And a cross-state assessment by the Fordham Institute ranked Iowan teachers union at about the median in terms of their involvement in politics and political clout as of 2012 (Winkler, Scull, and Zeehandelaar 2012, 33). While our experiment may not speak to public sector unions in every state, it does offer a picture of membership in a state that has until recently looked about average—and increasingly offers insight into the future landscape of U.S. public union law in the years to come.

Perhaps most crucially, the recertification elections, while cumbersome for the union itself, offers an opportunity to gain leverage on the unresolved theoretical question regarding the causes of union support among union members. What in particular prompts members to assent to having their local continue to represent them in bargaining efforts? Are workers most motivated by appeals to collective voice? Or do they become more sup-

portive when they are exposed to messages that emphasize the selective benefits that their unions provides and the identities those benefits foster? Our experiment was designed to help answer these questions.

Research Design

We partnered with the Iowa State Education Association, the state's main union representing public educators, to conduct the experiment.⁸ ISEA's membership is mainly elementary and secondary school teachers but also includes some school secretaries, paraprofessionals, custodians, and instructors at post-secondary institutions. The association represents around 30,000 members out of a potential membership pool of around 50,000 employees across 410 local affiliates. ISEA, like most state teachers associations, is a member of the National Education Association, the largest labor union in the United States. (The other major teachers union, the American Federation of Teachers, does not have affiliates in Iowa.)

Of their 410 locals, 220 were required to hold recertification elections in the fall of 2017 as a result of the recently-passed public employee reform legislation. (The timing of recertification depended on when locals' contracts had expired.⁹) The Public Employment Relations Board of Iowa was responsible for administering the election and working with public employee unions and employers to establish a roster of eligible voters. Eligible workers could cast ballots for recertification by calling a toll-free number and entering in unique identifiers, or by logging on to a website to do the same. Votes could be cast between 8 AM on October 10, 2017 and 1 PM on October 24, 2017.

⁸Like other teachers unions, ISEA refers to itself as an association, rather than a union. We use both union and association interchangeably throughout the rest of the paper.

⁹See <https://iowaperb.iowa.gov/> for more details on election timing.

We worked with ISEA to develop ten messages to distribute to their voting members encouraging those members to click on a link embedded in the message to vote in the recertification election. (ISEA only had contact information for their own members, not non-members who would also be eligible to vote in the recertification election.) Our overall objective was to test which messages were most likely to encourage ISEA members to vote in the election. We pre-registered a pre-analysis plan with E-GAP, the full text of which appears in the appendix.

Based on a pre-survey and a focus group of members, combined with the theoretical expectations from the literature on union membership we described above, we arrived at three broad categories of benefits to describe in the emailed messages.¹⁰ *Professional benefits* referred to things like trainings, classes, conferences, and workshops provided by ISEA to its members to help members become more effective educators. These correspond to the sort of classic excludable, selective benefits described in the interest group and union literature above. But following the social identity and civic association literature, we also discussed how these benefits fed into the identities of professional educators. *Collective voice in politics* referred to the ways that ISEA promotes the interests of its members in school and politics by keeping track of important issues, regularly communicating about those issues to members, and lobbying on members' behalf. We view these as corresponding to the non-material, solidaristic and purposive benefits in the union and interest group literature. Lastly, *job security and legal protection* benefits referred to the legal protections and assistance that ISEA offers to members, such as their attorney referral program that gives members access to affordable legal representation, as well as a civil liability insurance policy for job-related lawsuits. We added this third category based on our pre-survey and interviews, and while it corresponds to a material benefit, rather than solidaristic benefits, these job protections are less excludable than the professional benefits

¹⁰See appendix for the recruitment materials.

because Iowan unions are required to represent all teachers fairly in grievance claims and job disputes regardless of whether they are union members.¹¹

For each of the three categories of benefits, we further described those benefits in three different ways, producing nine possible message combinations. One approach was to use boilerplate language describing each benefit from official ISEA material (available on the ISEA website). This language was framed as coming directly from ISEA state leadership. For instance, for the professional benefits and identity message, this included the following text: “The ISEA Academy, for instance, has offered high quality courses for teaching license renewal and graduate credits for over a decade.”

A second approach was to use actual quotes from ISEA members (taken from the pre-survey we administered on members) to describe the benefits. For the professional benefits message, this included the following anonymized quote, among others: “I have found the union...helps me maintain my certification and helps me update my training.” In the third condition, we again included anonymized member quotes, but told recipients that the quotes were from members in their local union affiliate or one similar to their own. A final message was a control condition that did not mention specific benefits of the union but instead talked generally about the importance of voting for recertification. We made an effort to ensure that all messages were roughly the same length. (The appendix contains the full text of each message).

We designed our messages to test two main sets of hypotheses. Primarily, as described above, we tried to disentangle which of the three benefits, if any, would be most motivating in encouraging members to support the union. On the one hand, Olson’s canonical work on union membership emphasizes the importance of selective benefits in attracting and retaining members in voluntary organizations that are large enough where collective action problems hold (Olson 1965)—and those benefits can feed into mobilizable identi-

¹¹This is known as the “duty of fair representation”; see Iowa Code 20.17.1.

ties (e.g. Lacombe 2018). On the other hand, other work on labor union participation and membership has stressed the non-material, purposive and solidaristic benefits offered by unions, and we might think this is especially true for public employee unions given their much greater involvement in politics (Moe 1988). Lastly, many teachers participating in our focus groups and pre-survey brought up the importance of union job protections as a reason for their support of the ISEA, and so it may well be the case that these protections are valuable to members even though they are not entirely excludable to non-members as with professional benefits.

Second, we aimed to test whether workers were more likely to respond to benefits explained by ISEA leadership through official language or benefits explained through quotes from their fellow union members, independent of which specific benefits were being described. This test focuses on whether union members find information from their peers (especially peers within their own affiliate or a similar one) more credible as compared to information from the top of the organization. Here too there are conflicting theoretical expectations. There is research from social psychologists and political scientists that emphasizes how social endorsements from peers within one's own social network provide persuasive signals for acceptable behavior (e.g., Paluck, Shepherd, and Aranow 2016; Sinclair 2012). That research would suggest that union benefits would be more credible when backed up with quotes from rank-and-file ISEA members, especially quotes from members within one's own union local or one similar to it. Table 1 summarizes the ten conditions.

ISEA provided us with a list of all of their members eligible to vote in the October 2017 recertification election (12,451) who had a confirmed email address on file with the union. Using that list, we assigned each member to receive one of the ten messages, blocking on the union local to which a member belonged (there were 210 such locals among eligible members). Blocking on local both increased the probability of achieving balance on local-level covariates, like school size, local union membership, as well as school district

Condition	Benefit Described	Who Described Benefit
1	Professional benefits	ISEA leadership boilerplate
2	Collective voice in politics	ISEA leadership boilerplate
3	Job protection	ISEA leadership boilerplate
4	Professional benefits	Fellow union member quotes
5	Collective voice in politics	Fellow union member quotes
6	Job protection	Fellow union member quotes
7	Professional benefits	Fellow union member quotes—identified from local
8	Collective voice in politics	Fellow union member quotes—identified from local
9	Job protection	Fellow union member quotes—identified from local
10	Generic/control	Generic/control

Table 1: Summary of Messages Sent to ISEA Members

characteristics, and increased the precision of our estimates. On the morning of October 10th at 9 AM, ISEA leadership sent out the email messages to members, ultimately successfully reaching 10,461 educators. (Emails to the remaining workers bounced back or were otherwise not successfully delivered.)

Recertification Experiment Results

The randomization of ISEA members to email message conditions makes our analysis straightforward. About 21% of members opened our email, which is in line with other email correspondence distributed by ISEA leadership to its members. About 5.5% of all members across all conditions clicked the link embedded at the end of each message to vote in the recertification election, which we interpret as support for the union. One condition attracted significantly more support from members than all the rest: the email message describing professional benefits and identities using text from ISEA statewide leadership. 7.1% of members shown that professional benefit and identity condition clicked the link to vote in the election, compared to only 5.1% of members who saw the generic control message condition, about a two percentage point (or nearly 40%) increase from the generic message. The difference between the professional benefits and generic conditions was

significant at $p=0.045$ with conventional standard errors and $p=0.076$ clustering standard errors by local. No other condition approached statistical or substantive significance.

As specified in our pre-analysis plan, we present results without covariates in Table 2 and results with covariates in Table 3. We model our results with OLS and logit regressions, as well as with and without cluster-standard errors, clustering at the local level. We have access to the following individual member-level covariates: Age, self-reported party identification, salary, sex, and race. All covariates are based on data provided to us by ISEA. We construct *Age* based on subject's birth date as reported to ISEA, with the resulting variable reflecting subjects' age in years as measured in the month prior to administration of the study. ISEA also provided us data on subjects' party identification, with subjects self-identifying as either Democrats, Republicans or neither; this informs our *Democratic* and *Republican* binary variables. Since ISEA only had party information for about 21.43% of our sample, we also include a *No Party Information* dummy. *Base salary* is administrative data, again delivered to us by ISEA, which we present as-is. Race and sex are also self-reported and inform *White* and *Female* dummy variables.¹² (We were well-balanced on these covariates across conditions, as Table 4 in the appendix shows.)

The variables "Professional Benefits Only", "Collective Voice Only" and "Job Protection Only" display results for those messages that lack endorsements from either the recipient's local or state leadership. The variables "Professional Benefits/Quotes," Collective Voice/Quotes" and "Job Protection/Quotes" refer to messages that included quotes from generic ISEA members, while the variables "Professional Benefits/Similar Quotes,"

¹²In our pre-analysis plan, we indicated that we would match treatment assignment to official individual-level voting records, to the extent permissible under Iowa law. However, subsequent to data collection, we learned that, pursuant to Iowa Code section 22.7(69), individual-level participation records in the recertification elections are confidential and cannot be shared with researchers.

Collective Voice/Similar Quotes” and “Job Protection/Similar Quotes” refer to messages that include quotes by members identified as belonging to locals similar to the recipients.

Our results are substantively consistent across models: the message emphasizing professional benefits and identities—and *only* professional benefits and identities—prompted union members to try and turn out to vote. As the first model in Table 2 shows, receiving the message that only emphasized professional benefits increased subjects’ willingness to click on the link to vote for ISEA recertification by about 2.2 percentage points. This effect size is greater than the effect size that civic duty messages have been found to have on voter turnout, about equal to the effect size of messages which aim to activate a “Hawthorne effect,” and slightly more than a quarter as large as the effects of famed “social pressure” treatments (Gerber and Larimer, 2008). It is about half as large as effects generated by treatments in which recipients are encouraged to develop a plan in advance of election day (Nickerson and Rogers, 2010), but is much larger than the effects of social pressure messages on turnout when such messages are delivered on Facebook (Bond et al., 2012). Of course, those researchers studied how the mass public responded to messages designed to increase turnout in general elections—and we lack direct comparisons to the union recertification election context we study in this paper.

Tables 2 and 3 also indicate that we do not identify any consistent pattern between the messages with descriptions provided by ISEA leadership and those described by members themselves. There is almost no evidence to suggest that messages described by union leadership are more or less effective than messages described by fellow union members.

The Value of Professional Benefits to Iowan Teachers

Why did teachers voting in the recertification elections respond so strongly to the professional benefits condition? To explore the mechanisms behind the results in our field experiment, we fielded a follow-up online survey of all ISEA members in May 2018. All

Table 2: Results Without Covariates

	<i>Dependent variable:</i>			
	Clicked Link			
	<i>OLS</i>	<i>Logistic</i>	<i>OLS</i>	<i>Logistic</i>
	(1)	(2)	(3)	(4)
Professional Benefits Only	0.022** (0.010)	0.383** (0.190)	0.022* (0.012)	0.383** (0.190)
Collective Voice Only	-0.002 (0.010)	-0.041 (0.207)	-0.002 (0.010)	-0.041 (0.212)
Job Protections Only	0.005 (0.010)	0.090 (0.201)	0.005 (0.090)	0.090 (0.172)
Professional Benefits/Quotes	0.005 (0.010)	0.106 (0.200)	0.005 (0.010)	0.106 (0.190)
Collective Voice/Quotes	0.006 (0.010)	0.122 (0.199)	0.006 (0.010)	0.122 (0.184)
Job Protections/Quotes	0.007 (0.010)	0.138 (0.198)	0.007 (0.010)	0.138 (0.175)
Professional Benefits/Similar Quotes	0.004 (0.010)	0.075 (0.202)	0.004 (0.080)	0.075 (0.168)
Collective Voice/Similar Quotes	-0.005 (0.010)	-0.099 (0.208)	-0.005 (0.010)	-0.099 (0.204)
Job Protections/Similar Quotes	0.007 (0.010)	0.130 (0.200)	0.007 (0.010)	0.130 (0.181)
Constant	0.051*** (0.007)	-2.917*** (0.145)	0.051*** (0.007)	-2.917*** (0.137)
Observations	9,815	9,815	9,815	9,815
Cluster-Standard Errors?	No	No	Yes	Yes
R ²	0.001		0.001	
Adjusted R ²	-0.00003		-0.00003	
Log Likelihood		-2,120.724		-2,120.724
Akaike Inf. Crit.		4,261.448		4,261.448
Residual Std. Error (df = 9805)	0.230		0.230	
F Statistic (df = 9; 9805)	0.962		0.962	

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 3: Results With Covariates

	<i>Dependent variable:</i>			
	Clicked Link			
	<i>OLS</i>	<i>Logistic</i>	<i>OLS</i>	<i>Logistic</i>
	(1)	(2)	(3)	(4)
Professional Benefits Only	0.036** (0.018)	0.667* (0.347)	0.036 (0.023)	0.667* (0.378)
Collective Voice Only	-0.018 (0.019)	-0.518 (0.445)	-0.018 (0.014)	-0.518 (0.415)
Job Protections Only	0.019 (0.019)	0.371 (0.374)	0.019 (0.017)	0.371 (0.354)
Professional Benefits/Quotes	0.020 (0.018)	0.402 (0.365)	0.020 (0.017)	0.402 (0.342)
Collective Voice/Quotes	0.010 (0.019)	0.221 (0.376)	0.010 (0.018)	0.221 (0.365)
Job Protections/Quotes	0.032 (0.019)	0.574 (0.360)	0.032 (0.018)	0.574 (0.316)
Professional Benefits/Similar Quotes	0.023 (0.019)	0.430 (0.359)	0.023 (0.020)	0.430 (0.352)
Collective Voice/Similar Quotes	0.007 (0.018)	0.107 (0.371)	0.007 (0.017)	0.017 (0.357)
Job Protections/Similar Quotes	0.003 (0.019)	0.027 (0.398)	0.003 (0.017)	0.027 (0.385)
Constant	-0.031 (0.239)	-2.79** (1.39)	-0.031 (0.054)	-2.798*** (0.748)
Observations	3,244	2,423	3,244	2,423
Cluster-Standard Errors?	No	No	Yes	Yes
R ²	0.095		0.095	
Log Likelihood		-604.33		-604.33

Note:

*p<0.1; **p<0.05; ***p<0.01

ISEA members with valid emails ($N=26,134$) received an invitation to participate in the survey, distributed by ISEA's communications team. In addition to the initial email invitation, ISEA sent three additional follow-up reminder emails and one text message reminder to union members with cell phone numbers on file with the union. We used the promise of lotteried Amazon.com gift certificates to further incentivize ISEA members to take the survey. In all, 1,904 ISEA union members responded to our survey, for a response rate of 7.3%. In the appendix, using data from ISEA's internal records of their member demographics, as well as the Current Population Survey Monthly Outgoing Rotation Group pooled from 2011 to 2017, we show that our survey sample compares favorably to the overall population of unionized public school educators in Iowa. Compared to these benchmarks, our survey respondents are slightly older than the ISEA membership but well-balanced on race, ethnicity, and gender. Survey respondents also contributed to the ISEA political action committee at nearly identical rates as the overall union membership (77% versus 78%), indicating that our sample is not as strongly selected on political interest, engagement, or commitment to the union as one might fear.

We used the follow-up survey to probe the reasons why the professional benefits treatment had been so effective. First, we asked members whether they had personally taken advantage of any of the three specific benefits we mentioned in our email message during the election. (Specific text: "Of the following benefits that ISEA offers, how many have you personally taken advantage of? Check all that apply.") 32% of surveyed members said that they had taken advantage of "in-person or online classes through the ISEA Academy"; 34% said that they had participated in "conferences and workshops"; and 23% said that they had relied on ISEA for "support with the licensing and evaluation process". In all, 56.5% members said that they had used any of these three professional benefits offered by ISEA. Given that a majority of members reported taking advantage of these benefits, we think it should come as no surprise that they were so motivating for the average teacher

voting for recertification.

Second, we explored the value that surveyed members attached to these three specific benefits, asking survey respondents to rank on a 0-100 thermometer how warmly they felt toward each one. On average, respondents ranked in-person or online classes as 72.5, conferences and workshop as 70.5, and support with licensing and evaluation as 73.1. Most union members value each of these three benefits quite highly. Not only do a majority of members report using the professional benefits offered by the union, but they quite like those benefits too.

Third, we examined which aspects of professional benefits are most appealing to the union members. We asked respondents how strongly they agreed or disagreed with the following four statements, which each tap into a different motivation for why the professional benefits might be appealing. Respondents indicated their agreement with these statements on a five-point scale, ranging from “strongly agree” to “strongly disagree”. Below, we summarize the average rating for each item as well as the share indicating “strongly agree”.

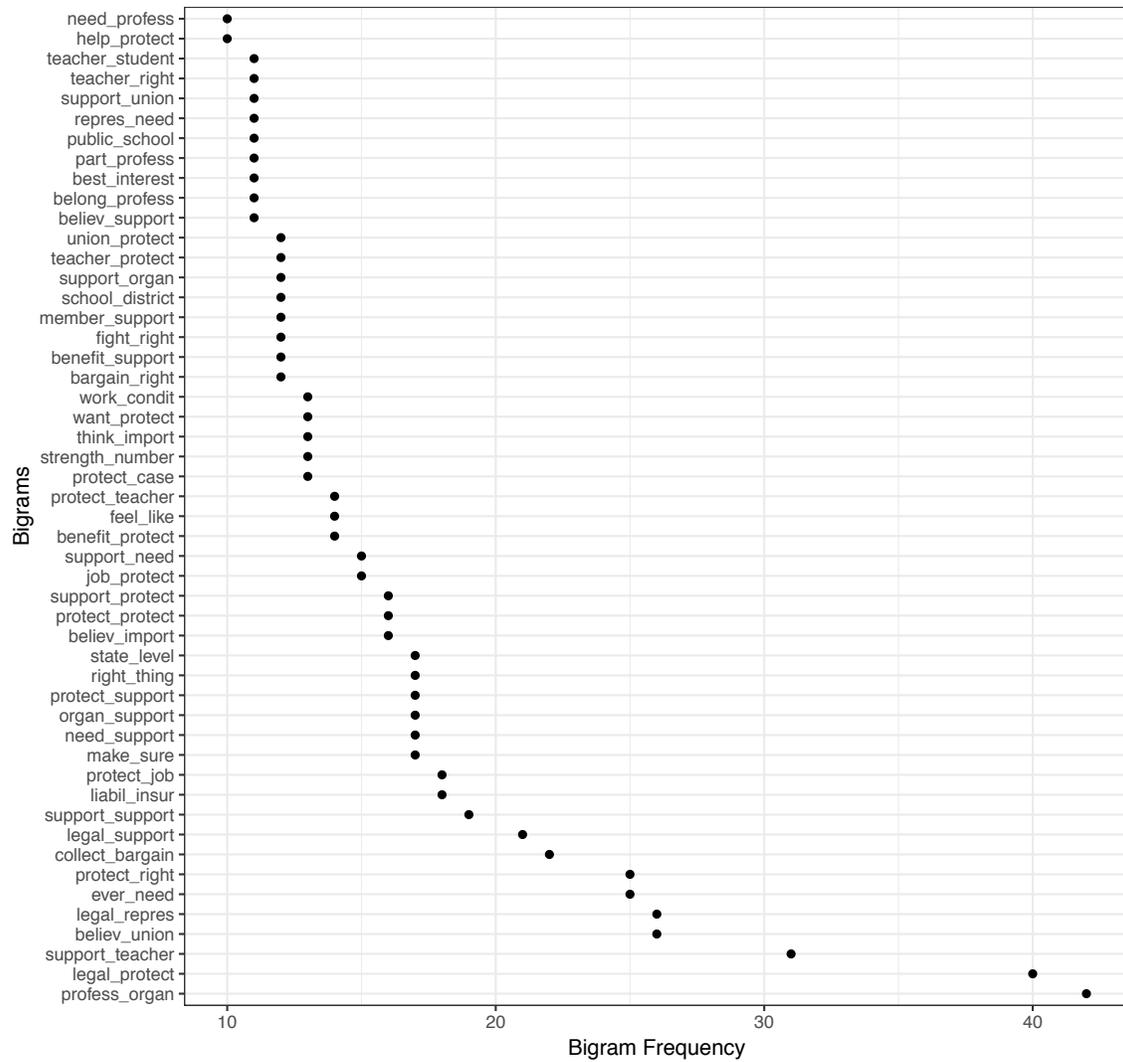
- “ISEA’s programs and services should be restricted to dues-paying members only.” This statement gauges the degree to which union members value the excludability of professional benefits to non-union members. **Mean: 3.66, SD: 1.16, Strongly agreeing: 28%.**
- “ISEA’s programs and services should improve ISEA members’ educational practices.” This statement gauges the degree to which union members value professional benefits because of the direct benefit to teachers’ work. **Mean: 4.38, SD: 0.88, Strongly agreeing: 57%.**
- “ISEA’s programs and services should provide fair value based on the dues that members pay.” This statement gauges the degree to which union members value professional benefits because they offset the dues members give to the union. **Mean: 4.36, SD: 0.91, Strongly agreeing: 57%.**
- “ISEA’s programs and services should promote a community of educators in the state.” This statement gauges the degree to which professional benefits reinforce the

community of educators within the state and the corresponding social identity as an educator. **Mean: 4.52, SD: 0.84, Strongly agreeing: 67%.**

Respondents agreed most strongly with the last explanation, relating to the idea that professional benefits should work to create a “community of educators” in Iowa. Two-thirds of respondents strongly agreed with that interpretation of professional developments. Identity and community was followed by a preference for fair-value and for improving teachers’ educational practices. While we observed the least appetite for excluding non-members from using benefits, 62% of respondents still said that non-members should be excluded from receiving professional benefits (including over a quarter of members who indicated that they strongly agreed with this justification).

Lastly, we explored responses to an open-ended survey item that asked respondents “In just a few words, why are you an ISEA member?” 1,426 survey respondents offered answers, which we pre-processed by stemming words, removing punctuation marks, and creating bi-grams. Figure 3 plots the top 20 most frequent bi-grams in these responses. By far the most common bi-gram offered by survey respondents involved describing ISEA as an organization of professionals like them. Legal protections were the second-most common item, followed by a more distant “supporting teachers” item, which we believe also taps into the resources the ISEA offers educators. In sum, even in their own words, ISEA members are invoking the concept of professional resources and identities as their main reasons for supporting the union.

Figure 3: Most Common Bi-grams Offered by Members Describing Reason for Membership



The External Validity of Professional Benefits and Identity

While our experimental results ultimately can only speak to educators in Iowa, we have additional suggestive evidence that our findings about the importance of professional benefits and identities holds more generally for educators across the United States. Between April 14 and May 6, 2018, Educators for Excellence, a non-profit advocacy group representing teachers' interests, fielded a nationally representative survey of 1,367 teachers in district or charter schools (see appendix for full methodology). The survey results show that teachers who think unions ought to provide professional development are more likely to be union members themselves and to view unions more favorably.

That survey asked respondents about their views about teachers unions, and included an item asking the degree to which educators thought that their union (if in a union) or teachers unions generally (if not in a union) “Provide[s] teachers with high-quality training and professional development.” Respondents could answer on a four-point scale, including excellent, good, only fair, or poor. We coded this item on a one through four scale, with four indicating “excellent.”

We then examined whether answers to this item—measuring perceptions of the degree to which unions offer valuable professional benefits and a broader identity of professional education—correlated with general attitudes towards unions and membership in unions in OLS regressions. Our measure of union attitudes comes from another item that asked respondents the following: “Do you think of teachers unions or associations as...? Absolutely essential, important but not essential, something you could do without.” We coded this item on a one through three scale, with three indicating “absolutely essential.”

To the extent that our findings from Iowa apply more generally, we would expect that teachers who feel that unions do more professional development would view unions more favorably and would be more likely to join unions. We identify precisely those relationships, which we document in full in an appendix. And indeed, educators who indicated

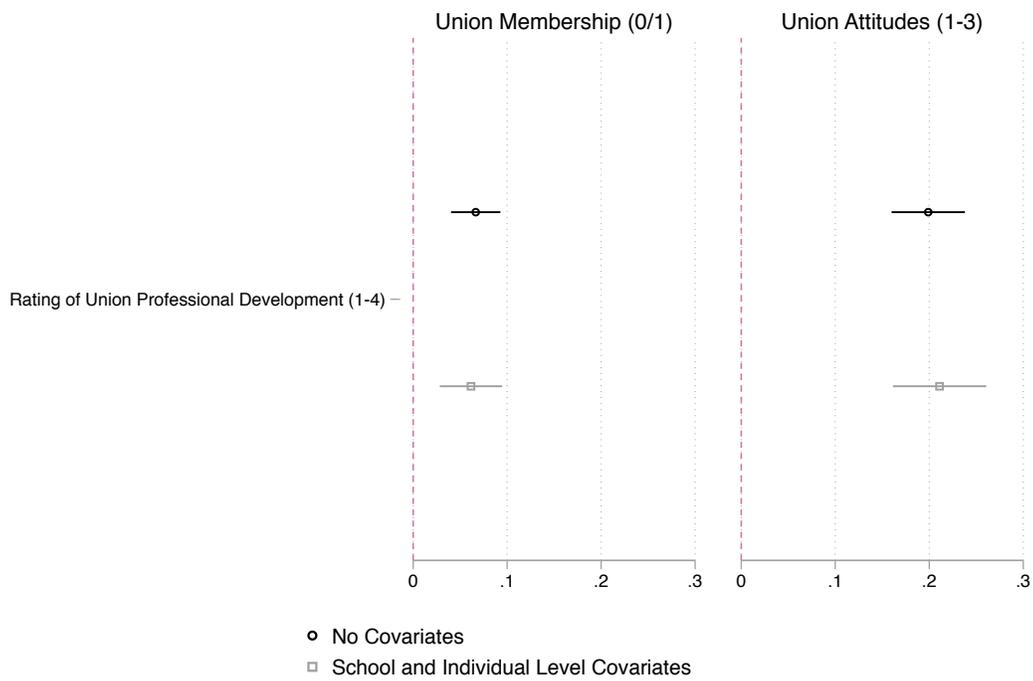
that unions do a better job of providing valuable professional development opportunities and training were more likely to rate unions as being “absolutely essential” and were also more likely to be active union members. This remained true regardless of whether we added a variety of individual- and school-level covariates that might plausibly explain both attitudes towards unions and perceptions of professional development opportunities. Figure 4 summarizes the results from four regressions for both outcomes, with and without covariates included. As the figure indicates, a one-unit increase in perceptions of professional development opportunities is predicted to increase the probability of being a union member by about six percentage points and a respondent’s attitudes towards unions by about 0.20 units on the 1-3 scale (both relationships significant at $p < 0.01$).

While we cannot draw causal inferences from these survey results, they do provide evidence that membership in, and attitudes about, teachers unions among educators are strongly related to the sort of professional development opportunities we described in our Iowan field experiment.

Conclusion

Not only do unions shape the pay, benefits, and working conditions of millions of American workers (Farber et al., 2018; Freeman and Medoff, 1984; Rosenfeld, 2014), but they are major forces in politics across all levels of government. Unions support political candidates, lobby elected officials, and serve as broader “schools of democracy” for their members (Ahlquist, 2017; Ahlquist and Levi, 2013; Dark, 1999; Greenstone, 1969; Feigenbaum, Hertel-Fernandez, and Williamson, 2018; Kim and Margalit, 2017; Leighley and Nagler, 2007; Verba, Schlozman, and Brady, 1995; Schlozman, Verba, and Brady, 2012). Mounting research also suggests that unions—and their decline over the past decades—play an important role in accounting for inequalities of political voice as one of the few remaining mass-membership organizations representing the interests of working and mid-

Figure 4: Correlation Between Perceptions of Union Professional Development Opportunities and Union Membership and Attitudes



The figure shows the correlation coefficient between perceptions of union professional development opportunities and union membership and attitudes from the 2018 national survey of American educators. OLS regression results with survey weights applied; 95% confidence intervals indicated. Full results in appendix.

dle class Americans (Hacker and Pierson, 2010; Schlozman, Verba, and Brady, 2012).

Yet for all their importance, we know little about why workers voluntarily lend their support to these associations. In this paper, we have explored the reasons why public employees might decide to support a union in a context where they can reap the collective bargaining benefits and grievance protections of the union without paying dues (that is, under a right-to-work regime) and where public unions are more limited in their ability to formally bargain with government (that is, a state with significant cutbacks in collective bargaining). Our field experiment results suggest that government employees like teachers are most likely to respond to reminders about professional benefits and the broader professional identity offered by the union through trainings, teaching resources, and certifications—and *not* solidaristic or purposive political voice, nor job protections. In our survey fielded subsequent to the field experiment, union members indicated that they value professional benefits for a variety of reasons, but especially because the benefits reinforce the professional community in which teachers belong. Given their identity as educators, such benefits also offer a fair value return for teachers' unions and directly improve the quality of teachers' work. Our findings thus engage directly with the long-standing literature on interest group participation and membership stretching back to Olson and Truman, underscoring the importance of selective benefits but also the identities they can foster for retaining member support.

Our experimental design has a number of strengths, including the ability to estimate credible causal effects of our messages on a substantively important behavioral outcome. At the same time, we acknowledge that our results may not generalize across different contexts and this merits future research. Would we find similar results had we conducted the experiment in a public union stronghold state under partial or full Democratic control? More broadly, the failure of solidaristic appeals to gain traction may be related to the long-term decline in the power of unions and other collective action-based organization

(Skocpol, 2004). Given that history, unions such as ISEA may not be able to make credible solidaristic appeals. At the same time, however, our experiment was conducted several months before unexpected, sizable teachers' strikes occurred across the United States, by and large in states with teachers' unions comparable in strength to Iowa's or with even less clout. The strikes suggest that some union members may still be attracted by the lure of solidarity—even if that not the case in Iowa in 2017 (though note the difference between dramatic collective action and normal membership decisions; e.g. Marwell and Oliver, 1993).

Our analysis of the 2018 national teacher survey partially addresses this question, and importantly the survey was fielded after many of the teacher walkouts. Moreover, the setting in which we conducted our experiment might be thought of as an especially easy case (or “most likely” case) to observe an effect of solidaristic or purposive political incentives. The 2017 recertification elections came just months after electoral losses and a big legislative blow to Iowan public sector unions. Under those circumstances, we might think that workers would be especially likely to be motivated to support the unions' political activities to retake the legislature and governorship and roll back the recent cuts to their bargaining and union rights. Having a clear political out-group opponent is often thought to be an especially motivating identity for collective and solidaristic political mobilization (see for instance “The Political Weaponization of Gun Owners: The NRA's Cultivation, Dissemination, and Use of a Group Social Identity” on gun-owners and the National Rifle Association). This is not what we observed—and it makes the null effect all the more striking. Regardless of this interpretation, however, it remains the case that given the recent *Janus* Supreme Court decision and the conservative backlash against public sector collective bargaining in many states, the context in Iowa looks increasingly like the norm, thus making our case study of this one state especially important.

In all, our research underscores the need for more scholarly attention to unions, es-

pecially public sector unions, in the contemporary American political economy (see also Frymer 2010; Levi 2003). Even in their weakened state, they remain incredibly important economic and political associations, and understanding why workers support, join, and remain in the labor movement amidst a changing legal landscape is a question that merits much more work.

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**Supplementary Information for “Bread and Butter or Bread and
Roses? Experimental Evidence on Why Public Sector Employees
Support Unions”**

Supplementary Information for “Bread and Butter or Bread and Roses? Experimental Evidence on Why Public Sector Employees Support Unions”

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Appendix: Full Message Text from Field Experiment

Message 1: Emphasizing professional benefits

Dear [First Name],

Starting this week through October 24th, you'll have the opportunity to vote to keep your education association as the exclusive bargaining representative for your district, also called a recertification election. The association needs a majority of all employees in the bargaining unit – not just members – to win.

Recertification will mean that ISEA can continue to offer the professional benefits that you value, like in-person and online classes, conferences, and workshops. The ISEA Academy, for instance, has offered high quality courses for teaching license renewal and graduate credits for over a decade. Those courses cover topics as varied as ethics in education, helping students overcome depression and anxiety, using technology effectively in the classroom, and supporting homeless students in school. Voting “yes” on recertifying your education association also means keeping your connection to the network of thousands of other professional educators in ISEA and across the country.

You have the opportunity to vote online for recertification, by clicking [here](#) and entering in your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

You can also vote by phone (toll-free) by dialing 1-855-976-9349 toll-free. Please be prepared to provide your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

Onward, Your ISEA Leadership Team

Message 2: Emphasizing collective voice

Dear [First Name],

Starting this week through October 24th, you'll have the opportunity to vote to keep your education association as the exclusive bargaining representative for your district, also called a recertification election. The association needs a majority of all employees in the bargaining unit – not just members – to win.

Recertification will mean that your association and ISEA can continue looking out for your interests and those of your fellow educators. Regardless of whether it is in your building, your school board, or the state legislature, ISEA amplifies your voice in the decisions that affect your job. We keep track of the issues that matter to our members, regularly communicating with them and then using our resources to ensure that those issues get a fair hearing all across the state. Voting “yes” on recertifying your local association means that we can keep providing you a collective voice when it comes to education.

You have the opportunity to vote online for recertification, by clicking [here](#) and entering in your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

You can also vote by phone (toll-free) by dialing 1-855-976-9349 toll-free. Please be prepared to provide your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

Onward, Your ISEA Leadership Team

Message 3: Emphasizing job protections and legal protections

Dear [First Name],

Starting this week through October 24th, you'll have the opportunity to vote to keep your education association as the exclusive bargaining representative for your district, also called a recertification election. The association needs a majority of all employees in the bargaining unit – not just members – to win.

Recertification will mean that your association and ISEA can continue to offer the security and support you need to do your job. ISEA gives you the peace of mind that your side will be heard in any disputes you might have with your school and that your rights will be protected. Through our attorney referral program, for instance, eligible members are entitled to two free consultations with a lawyer and reduced legal rates after that. Our membership also comes with a \$1 million insurance policy that protects you against civil proceedings brought against you in job-related matters. Voting “yes” on recertifying your local association means that we can keep providing you these important protections.

You have the opportunity to vote online for recertification, by clicking [here](#) and entering in your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

You can also vote by phone (toll-free) by dialing 1-855-976-9349 toll-free. Please be prepared to provide your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

Onward, Your ISEA Leadership Team

Message 4: Control, baseline message

Dear [First Name],

Starting this week through October 24th, you'll have the opportunity to vote to keep your education association as the exclusive bargaining representative for your district, also called a recertification election. The association needs a majority of all employees in the bargaining unit – not just members – to win.

Voting yes to recertify means you wish to maintain the current bargaining agent - the local association - as the representative for the Master Contract. This vote has nothing to do with joining the association/union. All employees of the bargaining unit should vote, including union members and non-members, because not voting is counted as a no vote. Vote YES to support your colleagues and recertify your union.

You have the opportunity to vote online for recertification, by clicking here and entering in your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

You can also vote by phone (toll-free) by dialing 1-855-976-9349 toll-free. Please be prepared to provide your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

Onward, Your ISEA Leadership Team

Message 5: Emphasizing professional benefits, with quote

Dear [First Name],

Starting this week through October 24th, you'll have the opportunity to vote to keep your education association as the exclusive bargaining representative for your district, also called a recertification election. The association needs a majority of all employees in the bargaining unit – not just members – to win.

Recertification will mean that ISEA can continue to offer the professional benefits that you value, like in-person and online classes, conferences, and workshops. Here's how some of your fellow ISEA members have described it in their own words:

“I have found the union...helps me maintain my certification and helps me update my training.”

“I believe in education and the benefits and information I receive from ISEA helps me make informed decisions.”

“I'm a member because I want to be informed and a part of the public education community.”

“I like belonging to a professional organization to support my fellow teachers....both locally and on a larger level”

Voting “yes” on recertifying your education association also means keeping your connection to the network of thousands of other professional educators in ISEA and across the country.

You have the opportunity to vote online for recertification, by clicking [here](#) and entering in your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

You can also vote by phone (toll-free) by dialing 1-855-976-9349 toll-free. Please be prepared to provide your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

Onward, Your ISEA Leadership Team

Message 6: Emphasizing professional benefits, with quotes from a similar local

Dear [First Name],

Starting this week through October 24th, you'll have the opportunity to vote to keep your education association as the exclusive bargaining representative for your district, also called a recertification election. The association needs a majority of all employees in the bargaining unit – not just members – to win.

Recertification will mean that ISEA can continue to offer the professional benefits that you value, like in-person and online classes, conferences, and workshops. Here's how some of your fellow ISEA members from a local similar to yours have described it in their own words:

“I have found the union...helps me maintain my certification and helps me update my training.”

“I believe in education and the benefits and information I receive from ISEA helps me make informed decisions.”

“I'm a member because I want to be informed and a part of the public education community.”

“I like belonging to a professional organization to support my fellow teachers....” both locally and on a larger level”

Voting “yes” on recertifying your education association also means keeping your connection to the network of thousands of other professional educators in ISEA and across the country.

You have the opportunity to vote online for recertification, by clicking [here](#) and entering in your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

You can also vote by phone (toll-free) by dialing 1-855-976-9349 toll-free. Please be prepared to provide your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

Onward, Your ISEA Leadership Team

Message 7: Emphasizing collective voice, with quotes

Dear [First Name],

Starting this week through October 24th, you'll have the opportunity to vote to keep your education association as the exclusive bargaining representative for your district, also called a recertification election. The association needs a majority of all employees in the bargaining unit – not just members – to win.

Recertification will mean that your association and ISEA can continue looking out for your interests and those of your fellow educators. Here's how some of your fellow ISEA members have described it in their own words:

“ISEA is my voice on a state and national level. They make heard the voices of educators from around the nation, from inner cities and rural communities alike.”

“[I'm a member because] I think it is important to have a collective voice.”

“ISEA keeps us apprised of all that is going on legislatively and looks out for our interests.”

“I believe that together, we have a louder voice to attempt to explain our beliefs and views about education and policy that affects educating our youth.”

Voting “yes” on recertifying your local association means that we can keep providing you a collective voice when it comes to education.

You have the opportunity to vote online for recertification, by clicking [here](#) and entering in your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

You can also vote by phone (toll-free) by dialing 1-855-976-9349 toll-free. Please be prepared to provide your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

Onward, Your ISEA Leadership Team

Message 8: Emphasizing collective voice, with quotes from a similar local

Dear [First Name],

Starting this week through October 24th, you'll have the opportunity to vote to keep your education association as the exclusive bargaining representative for your district, also called a recertification election. The association needs a majority of all employees in the bargaining unit – not just members – to win.

Recertification will mean that your association and ISEA can continue looking out for your interests and those of your fellow educators. Here's how some of your fellow ISEA members from a local similar to yours have described it in their own words:

“ISEA is my voice on a state and national level. They make heard the voices of educators from around the nation, from inner cities and rural communities alike.”

“[I'm a member because] I think it is important to have a collective voice.”

“ISEA keeps us apprised of all that is going on legislatively and looks out for our interests.”

“I believe that together, we have a louder voice to attempt to explain our beliefs and views about education and policy that affects educating our youth.”

Voting “yes” on recertifying your local association means that we can keep providing you a collective voice when it comes to education.

You have the opportunity to vote online for recertification, by clicking [here](#) and entering in your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

You can also vote by phone (toll-free) by dialing 1-855-976-9349 toll-free. Please be prepared to provide your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

Onward, Your ISEA Leadership Team

Message 9: Emphasizing job protections and legal protections, with quote

Dear [First Name],

Starting this week through October 24th, you'll have the opportunity to vote to keep your education association as the exclusive bargaining representative for your district, also called a recertification election. The association needs a majority of all employees in the bargaining unit – not just members – to win.

Recertification will mean that your association and ISEA can continue to offer the security and support you need to do your job. Here's how some of your fellow ISEA members have described it in their own words:

“[ISEA membership] is insurance for me in my job, just like homeowners, vehicle, or health insurance...I want someone in my corner to fight for what should be reasonable and to protect me [as a teacher].”

“ISEA provides the support and protection teachers need in order to remain successful and confident in our profession.”

“It provides security and support when district support and security may be lacking.”

“I may need their help in case I have a situation that I cannot handle on my own.”

Voting “yes” on recertifying your local association means that we can keep providing you these important protections.

You have the opportunity to vote online for recertification, by clicking [here](#) and entering in your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

You can also vote by phone (toll-free) by dialing 1-855-976-9349 toll-free. Please be prepared to provide your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

Onward, Your ISEA Leadership Team

Message 10: Emphasizing job protections and legal protections, with quotes from a similar local

Dear [First Name],

Starting this week through October 24th, you'll have the opportunity to vote to keep your education association as the exclusive bargaining representative for your district, also called a recertification election. The association needs a majority of all employees in the bargaining unit – not just members – to win.

Recertification will mean that your association and ISEA can continue to offer the security and support you need to do your job. Here's how some of your fellow ISEA members from a local similar to yours have described it in their own words:

"[ISEA membership] is insurance for me in my job, just like homeowners, vehicle, or health insurance...I want someone in my corner to fight for what should be reasonable and to protect me [as a teacher]."

"ISEA provides the support and protection teachers need in order to remain successful and confident in our profession."

"It provides security and support when district support and security may be lacking."

"I may need their help in case I have a situation that I cannot handle on my own."

Voting "yes" on recertifying your local association means that we can keep providing you these important protections.

You have the opportunity to vote online for recertification, by clicking [here](#) and entering in your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

You can also vote by phone (toll-free) by dialing 1-855-976-9349 toll-free. Please be prepared to provide your birthday (in MM/DD/YYYY format), along with the last four digits of your Social Security number.

Onward, Your ISEA Leadership Team

Figure 5: 2018 ISEA Member Survey Balance

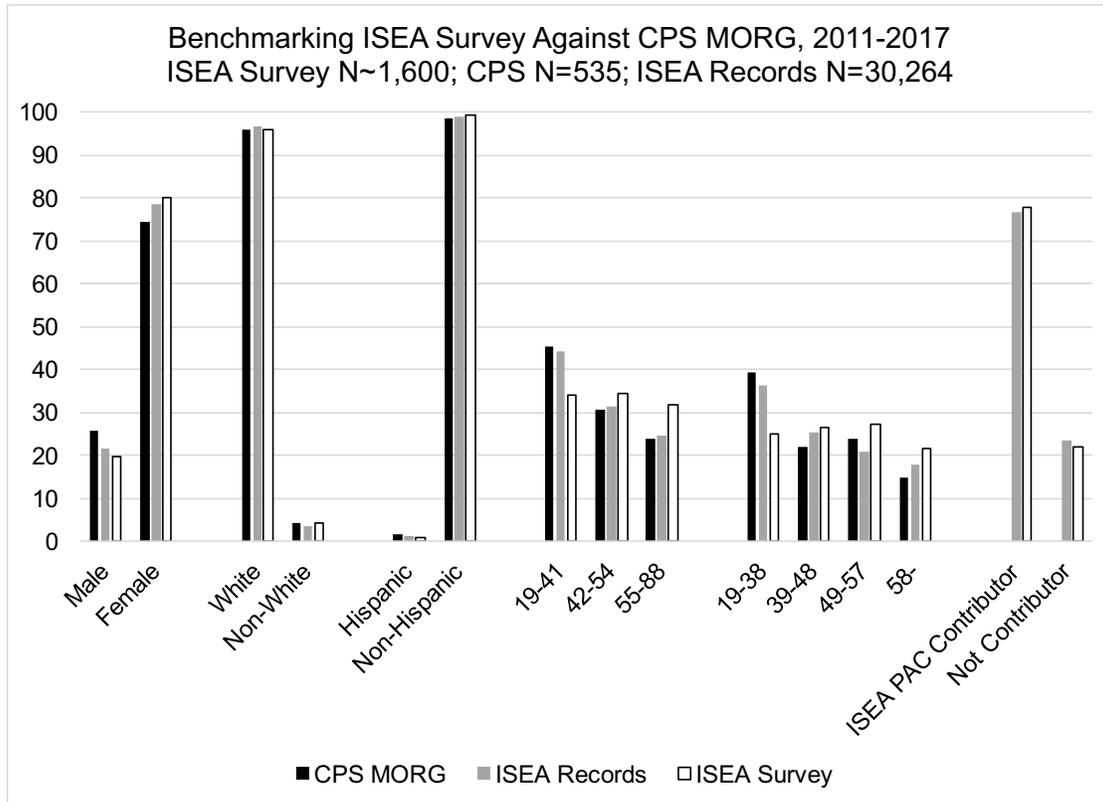


Figure compares survey sample with ISEA’s internal records and CPS MORG data on Iowan public school union members from 2007-2011.

Appendix: 2018 ISEA Member Survey Balance

In Figure 5, we show balance of our survey respondents compared to CPS MORG data on Iowa public school union members pooled from 2011 to 2017. More specifically, we used the NBER extracts of the CPS MORG data and included in our sample all respondents who indicated they worked in Iowa, were employed by state or local government, were union members at the time of the survey, and were employed in primary/secondary schools or universities and colleges (including junior colleges).

Appendix: Analysis of Educators for Excellence 2018 National Survey

This section provides more detail on the survey of educators we analyze from Educators for Excellence, as well as the regression results we present in Figure 4.

We used the following survey item to measure respondents' views about professional development opportunities in labor unions:

- “Now, please rate [UNION MEMBERS: your union / NON-UNION: teachers unions] on several characteristics. Would you say [UNION MEMBERS: your union does / NON-UNION: teachers unions do] an excellent job, good, only fair, or a poor job at each of the following?” Recoded 1-4, with 4 representing excellent. We excluded not sure responses from our analysis.

We used the following survey item to measure respondents' views about teachers unions more generally:

- “Do you think of teachers unions or associations as...? Absolutely essential, important but not essential, something you could do without.” Recoded 1-3, with 3 representing absolutely essential. We excluded not sure responses from our analysis.

We included the following individual-level covariates in some models: female (dummy variable), age (in quartiles), tenure as a teacher (in the following buckets: less than 1 year, 1-3 years, 4-6 years, 7-10 years, 11-15 years, 16-19 years, 20-24 years, 25-29 years, 30 years or more), educational attainment (in the following buckets: Associate's, Bachelor's, Some graduate credit, Master's, Credits beyond Master's, Ph.D. or Ed.D), race and ethnicity (in the following categories: White, Black, Hispanic, Asian, Native American, Mixed race, Other), and type of teaching certification (traditional or alternative, like Teach for America).

We also included the following school-level covariates in some models: type of school (in the following buckets: traditional school, charter school, district school, magnet school), school size in students (in the following buckets: less than 100, 100-299, 300-499, 500-699, 700-899, 900-999, 1,000-1,299, 1,300-1,499, 1,500-1,799, 1,800-1,999, 2000 or more, or not sure), the proportion of the school's students that come from low-income families (in the following buckets: 0-33%, 34-66%, 67% or more, or not sure), the proportion of the school's students that are minorities (in the following buckets: 0-33%, 34-66%, 67% or more, or not sure), the proportion of the school's students that are English as a second language learners (in the following buckets: 0-33%, 34-66%, 67% or more, or not sure), and the Census-defined region in which the educator lives (in the following buckets: Northeast, Midwest, South, West).

Below, we append the full OLS regression results for the four models we present in the text. Statistical significance levels indicated by *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$; survey weights applied. The **bolded** coefficient is our key variable of interest.

	Prof. Benefits Only	Voice Only	Protections Only	Generic	Prof. Benefits/Quotes	Benefits/Sim Quotes	Voice/Quotes	Voice/Sim Quotes	Protections/Quotes	Protections/Sim Quotes
Sex (Female)	704	746	761	740	772	753	776	756	755	756
Chi-squared 13.24										
Race (White)	901	897	913	904	922	930	934	934	920	911
Chi-squared 9.56										
Party ID (Democrat)	103	108	131	124	152	125	134	140	134	117
Chi-squared 17.64										
No Party ID	594	623	623	603	603	615	630	611	633	612
Chi-squared 5.83										
Party ID (Republican)	97	90	80	93	66	88	73	84	75	89
Chi-squared 15.33										
Salary (Mean)	56026.9	55741.77	56438.58	56188.36	56678.27	56356.44	56126.6	56430.08	56810.75	55925.11
Age (Mean)	42.05	42.23	42.32	42.49	42.51	42.1	42.17	42.62	43	42.26

Table 4: The composition of each treatment by available covariate. Chi-squared tests are reported for the sex, race and party ID variables. The sex, race and party ID rows report counts for each treatment group. The salary and age rows report means.

	Membership (0/1)	Membership (0/1)	Attitudes (1-3)	Attitudes (1-3)
Union Prof. Dev.	0.07*** (0.01)	0.06*** (0.02)	0.20*** (0.02)	0.21*** (0.03)
Female		-0.02 (0.03)		0.11** (0.05)
Second Age Quartile		-0.08 (0.05)		-0.13* (0.08)
Third Age Quartile		-0.10 (0.06)		-0.17* (0.09)
Fourth Age Quartile		-0.11* (0.07)		-0.12 (0.10)
1-3 Years Tenure		0.46*** (0.15)		0.44* (0.24)
4-6 Years Tenure		0.50*** (0.15)		0.44* (0.24)
7-10 Years Tenure		0.59*** (0.15)		0.42* (0.24)
11-15 Years Tenure		0.65*** (0.15)		0.59** (0.25)
16-19 Years Tenure		0.62*** (0.16)		0.68*** (0.25)
20-24 Years Tenure		0.64*** (0.16)		0.67*** (0.26)
25-29 Years Tenure		0.62*** (0.16)		0.68** (0.26)
30 Years + Tenure		0.56*** (0.16)		0.60** (0.26)
Bachelor's		0.08 (0.11)		0.13 (0.17)
Some graduate credit		0.17 (0.11)		0.22 (0.18)
Master's		0.12 (0.11)		0.09 (0.17)
Credits beyond Masters		0.15 (0.11)		0.17 (0.18)
Ph.D. or Ed.D.		0.06 (0.14)		0.27 (0.21)
Black		0.08 (0.06)		0.02 (0.10)
Hispanic		0.07 (0.05)		0.03 (0.08)
Asian		0.07		-0.08

	(0.09)	(0.13)
Native American	0.33	-0.63**
	(0.21)	(0.31)
Mixed Race	-0.05	-0.19
	(0.13)	(0.19)
Other	0.27	-0.64**
	(0.22)	(0.32)
Alternative Certification	-0.02	-0.09
	(0.04)	(0.06)
Charter school	-0.01	0.34**
	(0.12)	(0.17)
District school	-0.15**	-0.14
	(0.06)	(0.10)
Magnet school	-0.11	-0.01
	(0.09)	(0.13)
100 - 299 students	0.04	-0.12
	(0.11)	(0.18)
300 - 499 students	0.08	0.05
	(0.11)	(0.17)
500 - 699 students	0.06	0.00
	(0.11)	(0.17)
700 - 899 students	0.07	-0.11
	(0.11)	(0.17)
900 - 999 students	0.09	-0.07
	(0.12)	(0.18)
1,000 - 1,299 students	-0.14	-0.14
	(0.11)	(0.17)
1,300 - 1,499 students	0.15	-0.11
	(0.13)	(0.20)
1,500 - 1,799 students	-0.02	0.14
	(0.13)	(0.19)
1,800 - 1,999 students	0.01	-0.01
	(0.13)	(0.21)
2,000+ students	0.02	0.03
	(0.12)	(0.18)
Not sure	0.16	-0.01
	(0.15)	(0.24)
34-66% low income students	0.03	0.13**
	(0.04)	(0.06)
67% or more low income students	-0.07	0.03
	(0.05)	(0.07)
Not sure - low income students	-0.13	0.33*

		(0.12)		(0.18)
34-66% minority students		0.05		0.02
		(0.04)		(0.06)
67% or more minority students		0.04		0.11
		(0.05)		(0.07)
Not sure - minority students		-0.16		-0.02
		(0.12)		(0.21)
34-66% - ESL students		0.08*		-0.01
		(0.04)		(0.06)
67% or more - ESL students		0.04		0.06
		(0.06)		(0.09)
Not sure - ESL students		0.07		0.20
		(0.14)		(0.22)
Midwest		-0.11**		-0.11
		(0.05)		(0.07)
South		-0.31***		-0.18***
		(0.04)		(0.07)
West		-0.12***		-0.09
		(0.05)		(0.07)
R-Squared	0.02	0.16	0.08	0.17
N	1215	865	1179	833

Pre-Analysis Plan

C Registration Data

This section should normally be filled out prior to data collection and certainly prior to data analysis. It relates to design and analysis and provides a space for preposting of hypotheses.

C1 Background and explanation of rationale.

Brief description of goals of project

Earlier this year, Iowa became the latest in a string of states to enact sharp cutbacks to the collective bargaining rights of its public workers. Two of the most important provisions include limiting the scope of bargaining of most public workers to wages and requiring public unions to win a majority of bargaining unit member votes in regular recertification elections (typically at the end of contracts). Other states, like Wisconsin, which have introduced similar reforms have seen sharp drops in public union memberships, budgets, and political engagement. Through a partnership with the Iowa State Education Association (ISEA), the state's union representing public school teachers and staff, we will examine what kind of messages best persuade union members to turn out to vote in recertification elections.

Specifically, we will be investigating what effects framing the union as a provider of collective benefits, professional benefits or insurance/job protection benefits has on turnout in the recertification election. We will also be examining whether these frames are more or less effective when interacted with social proof conditions. While past work has examined union members' attitudes towards unions, that work has generally been in the context of private sector unions in past decades, when the labor movement was much larger and stronger. Our current study is significant in that it focuses on the public sector and does so in a context of unfavorable state public policy, an increasingly common occurrence. Our results will speak to the motivations that public sector workers have to continue supporting unions in the context of punitive labor law, as well as the broader processes of persuasion and mobilization in contemporary labor organizations.

What are the hypotheses to be tested?

Please list the hypotheses including hypotheses on heterogeneous effects.

On October 10th, 2017, the Iowa Educational Association (ISEA) will mail its approximately 10,542 voting members messages we have designed in partnership with them about the upcoming recertification election. At the end of every message will be a link to a website where members can vote for recertification electronically. We posit the following hypotheses:

Hypothesis 1: Members who receive a message emphasizing that the union provides them a collective voice in their school, school district, and the state legislature will be more likely to vote in a union recertification election, compared to control.

Hypothesis 2: Members who receive a message emphasizing that the union provides them professional benefits, like continuing education requirements and certification, will be more likely to vote in a union recertification election, compared to control.

Hypothesis 3: Members who receive a message emphasizing that the union provides them with insurance and legal protections against job-related litigation will be more likely to vote in a union recertification election, compared to control.

Hypothesis 4: Members who receive a message emphasizing either the collective voice, professional benefits, or insurance protections that the union provides, when the message also contains testimony from a fellow union member attesting to those benefits (amounting to social proof) will be more likely to vote in a union recertification election, compared to members who received those same messages without such testimony.

Hypothesis 5: Members who receive a message emphasizing either the collective voice, professional benefits or insurance that the union provides, when the message also contains testimony from a fellow union member attesting to those benefits (amounting to social proof) *and* when the testimony is described as coming from a similar local as their own, will be more likely to vote in a union recertification election, compared to members who received those messages without such testimony, and compared to members who received such testimony that was not identified as coming from a similar local as their own.

To test these hypotheses, we will randomly assign subjects to see one of the following ten messages:

1. A message that emphasizes professional benefits provided by ISEA
2. A message that emphasizes the collective voice provided by ISEA
3. A message that emphasizes the insurance and legal protections provided by ISEA
4. A message that emphasizes professional benefits provided by ISEA, combined with testimony from union members attesting to this benefit
5. A message that emphasizes the collective voice provided by ISEA, combined with testimony from union members attesting to this benefit
6. A message that emphasizes the insurance and legal protections provided by ISEA, combined with testimony from union members attesting to this benefit

7. A message that emphasizes professional benefits provided by ISEA, combined with testimony from union members attesting to this benefit, and identified as coming from member of a similar local as the subject
8. A message that emphasizes the collective voice provided by ISEA, combined with testimony from union members attesting to this benefit, and identified as coming from member of a similar local as the subject
9. A message that emphasizes the insurance and legal protections provided by ISEA, combined with testimony from union members attesting to this benefit, and identified as coming from member of a similar local as the subject
10. A control message consisting of standard ISEA messaging

All messages appear at the end of this document.

How will these hypotheses be tested? Describe formal tests

To evaluate our hypotheses, we will first regress voter turnout on indicator variables for all treatment conditions, excluding the control condition, with standard errors clustered at the local level. We will do this with and without any covariate data on members that ISEA provides us. Hypotheses 1-3 will be tested on this basis. To further test these hypotheses, we will create an indicator variable for messages 1, 4 and 7; another indicator variable for messages 2, 5 and 8; and another for messages 3, 6 and 9. We will then regress this against control, again with and without covariates, and again with standard errors clustered at the local level. To test Hypothesis 4, we will evaluate the difference between messages 1 and 4, messages 2 and 5, and messages 3 and 6. To further test Hypothesis 4, we will create an indicator variable for all those who saw messages 1-3 and one for those who saw messages 4-6, and evaluate the difference. To test Hypothesis 5, we will compare messages 4 and 7, 5 and 8, and 6 and 9. To further test Hypothesis 5, we will create an indicator variable for all those who saw messages 4-6 and one for those who saw messages 7-9, and evaluate the difference.

All tests will be two-tailed.

We will measure voter turnout in two ways. First, we will evaluate click-through data. If a recipient clicks on the link to vote, we will count them as having demonstrated a willingness to vote. Second, to the extent possible under Iowa state labor law, we will match the voting records of members with their treatment assignment.

Eligibility and exclusion criteria for participants:

All ISEA members with active email accounts will be assigned to treatment. Before analyzing results, we will remove subjects whose email addresses bounced.

Has this research received Institutional Review Board (IRB) or ethics committee approval? *

No

Yes

Other:

Was a power analysis conducted prior to data collection? *

No

Yes

Other:

Will the intervention be implemented by the researcher or a third party? If a third party, please provide the name.

Researchers

Other: The ISEA will deliver the messages and the data to the researchers.

Did any of the research team receive remuneration from the implementing agency for taking part in this research?

No

Yes

Other:

If relevant, is there an advance agreement with the implementation group that all results can be published?

No

Yes

Other: