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Working Paper

Voice Gaps at Work, Options for Closing Them, and Challenges for Future Actions and Research

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Abstract

This article reports the results of a national survey of the state of worker voice in America and options available to workers for closing the gaps between the amount of say or influence they expect to have on their job and their actual level of influence. The authors draw on a nationally representative survey of workers that both updates previous surveys conducted in 1995 and 1977 and goes beyond the scope of these previous efforts to consider a wider array of workplace issues and a broader array of voice options. Results indicated that workers believe they ought to have a voice on the full set of workplace issues, but there are substantial gaps between their expected and actual voice. Nearly 50 percent of non-union workers want to join a union compared to approximately one third in the two prior national surveys. Additionally, there are significant variations in the rates of use and satisfaction with different voice options. The results suggest that there are sizable voice gaps in American workplaces today but there is no voice option that fits all workers or all issues.

An influential national survey conducted in 1995 by Richard Freeman and Joel Rogers (1999) found that many workers believed they should have a greater say or influence over workplace and employment relations issues than they actually had. Whether this finding still hold for today's workforce remains an open question, given changes in organizational practices, the continued decline in union coverage, and the countervailing rise in alternative options for exercising voice introduced by some employers and by independent labor advocacy groups in the U.S. since that study.

We address this question using a nationally representative survey of the U.S. workforce to assess the extent to which contemporary workers expect to have a voice on a broad array of workplace issues, the size of the voice gap experienced on these issues, differences across demographic groups and between those in standard and non-standard employment relationships. We also investigate experiences with the growing array of options that have been developed for providing a voice on these issues. In doing so we pay particular attention to changes in the level of interest in union representation between now and the 1990s (as assessed by Freeman and Rogers 1999) and the 1970s (as captured in an earlier Department of Labor survey, Quinn and Staines 1979; Kochan 1979). We examine evidence for a number of potential explanations of why the voice gap may have changed since these prior studies. The final section suggests directions for further actions and research needed to identify viable paths for filling the gaps in worker voice that continue to persist in American workplaces.

The Concept of Worker Voice: Historical and Contemporary Considerations

The term worker voice has been used in various ways historically and currently. Hirschman (1970) provides a generic definition of voice as an effort directed at a higher

authority to change behavior. Employment relation scholars use this generic definition but adapt it depending on their frame of reference for understanding the interests at stake in employment relationships (Fox 1966; Budd and Bhave 2008). As Barry and Wilkinson (2016) note, those using a unitary frame of reference assume that workers and employers' interests are congruent, and therefore the task of worker voice is to elicit "positive" actions or "organizational citizenship" behaviors to improve individual, group, or organizational outcomes that will potentially also enhance commitment, engagement, trust, and job satisfaction (Organ 1988; Marchington, Boxall, Purcell, and Wright 2007; Morrison 2011; Klaas, Olson-Buchanan, and Ward 2012; Bashshur and Oc 2015). Voice is used in the service of joint goals.

In contrast, those following a pluralist tradition of employment relations view conflicting, as well as shared interests, as inevitable between employers and workers. The concept of worker voice under this tradition is rooted in a democratic ethos articulated by the Webbs (1897). Pluralists argue that workers should have the right and ability to assert their interests individually or collectively to influence the conditions under which they work. Our use of the term "worker voice" is embedded in this pluralist tradition while also recognizing that workers also want to identify with and contribute to organizations that share their values and interests. Voice may therefore mix individual and collective efforts to improve organizational processes and performance with efforts to assert worker interests that are in conflict with employers' or other parties' interests at work. Collective voice is most commonly exercised through collective bargaining, in which trade unions negotiate the terms of employment with employers (Commons 1913; Fox 1975; Ackers 2007; Kochan 1980; Budd 2004). However, other channels for worker voice have

developed in U.S. workplaces, as well as in other contexts, and we consider these possibilities alongside unionization.

Whither the Voice Gap

Previous surveys reported evidence of two types of voice gaps. Both the 1977 and the 1995 surveys examined how many non-union workers would prefer to be represented by a union if given a choice. Results were quite stable across the time periods of the two surveys: approximately one third of the non-union, non- managerial workforce indicated they would vote to unionize if given the opportunity (Kochan 1979; Freeman and Rogers 1999). (Freeman and Rogers labeled this the "representation gap.") The Freeman and Rogers survey conducted in 1995 also provided data on the gap between the amount of say or influence workers felt they should have on a set of workplace issues and their actual level of say or influence and found a sizable gap. [1] We will use the term voice gap to include both the representation gap and this difference in say or influence.

It is somewhat surprising, given the central role voice and representation play in the field of employment relations, that there is little theory to draw on for anticipating whether these voice gaps have grown or declined in the years since these prior studies. We review possible explanations for why the gaps could have declined or grown in the last 20 years before turning to an empirical assessment of the current realities.

One body of research suggests that perhaps workers have adjusted their

[1] Unfortunately the 1977 survey did not ask how much say or influence workers actually experienced on their jobs so we cannot make voice gap comparisons with that time period.

expectations to fit with current economic and workplace realities that therefore workers no longer believe they ought to have a voice on workplace issues. U.S. workers have faced significant changes in employment relationships and working conditions over the last thirty years (Barley and Kunda 2006; Wartzman 2017). It is not clear whether those changes mean workers no longer expect to have a clear say in workplace decisions or whether they have been conditioned to take increased insecurity and instability as the new norms for work (Newman 1999, p. 69; see also Sharone 2013; Heckscher 1996; Meyer 1995; Kalleberg 2013). Some researchers suggest most workers accept these changes as being driven by "the market," as a disembodied force, rather than being chosen by their employers. If current working conditions reflect broader forces that employers cannot change, then workers may have internalized acceptance of limited voice as a form of "learned helplessness" (Peterson, Maier, and Seligman 1993). This would make efforts to exert voice less relevant and could lead to a decrease in what is seen as appropriate say as well. Workers may also have internalized meritocratic norms that assume "winners" will get what they need from employers (Smith 2002) or the idea that they are "free agents," even as employees. From this perspective, workers may not expect to have a say in their current workplaces but instead expect that they would need to move on to find more appealing work conditions if they are dissatisfied or their contributions are not recognized. Pugh (2015), for example, finds that workers expect little or nothing from their employers, but hold high expectations of themselves. This "one-way honor code" means workers demand hard work, dedication, and cheerful compliance of themselves but do not expect job security or voice in return, hoping only for a paycheck. These broad cultural or structural changes may mean that workers do not

generally believe that they should appropriately have a say in determining working conditions. Furthermore, younger workers, who have only been exposed to the current ideologies, may be less likely to expect or demand more say. The idea here is that the voice gap may have declined because expectations for what is appropriate have shifted. On the other hand, we may see an *increasing* voice gap if workers' interest in having a say has been stable but their ability to exercise that say has declined. With limited job security or stagnant wages, workers may want a say but not feel free to express their interests or push for greater input.

A second argument for why there may no longer be a sizable voice gap is that employers and workers may have reached a satisfactory set of arrangements; that is, with the development of new human resources policies and systems, there is no longer a gap between what workers believe is appropriate regarding their say at work and what they experience on their jobs (Foulkes 1980; Guest 1987; Fiorito 2001; Machin and Wood 2005). A variety of internal, firm-provided processes such as ombuds systems (Rowe 1987), non-union grievance procedures (Lewin, 1987), and affinity or identity groups linking individuals of the same race, gender, religion, or sexual orientation (Creed and Scully 2000; Portes and Sensenbrenner 1993) may provide effective channels that satisfy workers' interest in voice and due process. In some workplaces, formalized participation processes and worker-employer committees (Freeman and Rogers 1999) may help workers feel they can weigh in effectively. Supervisors may be chosen or trained to welcome and address worker concerns more than in the past (Detert and Burris 2007; Detert and Treviño 2008).

A third potential reason why the voice gap may have declined could be that workers no longer see unions and collective bargaining as relevant institutions or don't have opportunities to gain union representation. While union representation may have been viewed by workers as the central mechanism for exercising voice in the 20th century, the long term decline in union representation may signal a lack of interest in, need for, or awareness of options for union representation. Alternatively, that decline may reflect workers' recognition that unionization is no longer a viable option in the face of increasing employer power and opposition to unions (Bronfenbrenner 1998), the high hurdles involved in navigating through the stages of union election processes (Ferguson 2008), the constrained (or even "ossified") forms of representation allowed by labor law (Estlund 2010; Kochan 2011), and the low likelihood that workers will experience a union organizing drive at their place of work or in their occupational setting (Bureau of Labor Statistics 2017). In contrast, the decline in union representation may signal an increase in the unmet demand for unionization in the economy (Farber and Krueger 1992). Indeed, a number of smaller polls and surveys carried out over the years have reported some growth in interest in and support for unions (Lipset and Meltz 2004; Freeman 2007).

Finally, it may be that alternative independent forms of worker voice are now filling the void created by union decline. A variety of alternative worker advocacy initiatives have emerged in recent years that are attempting to provide voice options that are independent of employers yet do not seek to establish collective bargaining relationships. These new channels for worker advocacy include online petitions such as those offered by Coworker.org (Heckscher and McCarthy 2014; Arvins, Larcom, and

Weissbourd 2018), online ratings of employer practices such as Glassdoor or Turkopticon (Benson, Sojourner, and Umyarov 2015), protests such as the fight for $15 (Rolf 2016), and demographic-based associations such as immigrant worker centers (Fine 2006; Milkman 2011). To date, however, there is no systematic evidence of how aware workers are of these options or how much use they are making of them.

We use the national survey data reported here to examine these different arguments and to provide an initial assessment of how well the options available to workers today are meeting workers' interests in and need for a voice at work.

Data and Measures

Data

We commissioned the National Opinion Research Corporation (NORC) to conduct a survey of a representative sample of the American workforce that contains questions regarding workers' expectations of having a voice at work with respect to different issues, the amount of voice experienced on their jobs with respect to those issues, and their experiences with a range of options for exercising voice. The questions in our Worker Voice Survey were generated by our study team and refined and pre-tested by NORC.

A general population sample of U.S. adults age 18 and older was selected from NORC's AmeriSpeak Panel for this study. AmeriSpeak is a national sample of household members who agree to be contacted by NORC for the various surveys it conducts. For this survey, respondents were screened to include those who were 18 years or older, currently working for pay, and were not upper-level managers, owners of businesses that

employed others, or family members of owners[2]. Only one worker per household (randomly selected if more than one eligible AmeriSpeak participant resided in the household) was selected for participation. Panelists were invited to participate between April 19 and May 29, 2017. The survey was available in English and Spanish and could be completed on the web or by phone. Participants earned AmeriSpeak credit valued between $3 and $5 for completing the survey. In total, NORC collected 3,915 completed interviews. Ninety-four percent of those who passed the screening requirements for inclusion in the study completed the survey. NORC calculated sampling weights to ensure the final sample accurately reflected the characteristics[3] of the workforce as reported in the March 2016 Supplement of the Current Population Survey (CPS). Details on the sampling and weighting procedures are available on request.

Tables 1 reports the individual demographic characteristics of our sample as weighted by NORC on race, gender, age, education, and income with comparisons to the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) in 2016. Descriptive statistics for the remainder of this paper use these weighted data while all multivariate models do not.[4] Although most demographic characteristics are similar between our sample and CPS ASEC sample, two differences stand out. Since, by design, our sample excludes senior managers, owners, or family members of owners, it contains a higher percentage of low income workers than in the national population. For similar

[2] Our sampling strategy did not screen out managers below this high level. Our coding of reported occupations revealed that most of the managers in the sample are what would be called middle-managers, i.e. managers of departments.

[3] In combination with the AmeriSpeak base panel weight, NORC adjusted for nonresponse bias in the Worker Voice Survey by adjusting the weight via a raking ratio method to the employed adults age 18+ population totals along the following socio-demographic characteristics: age, sex, education, race/ethnicity, and Census Division.

4 Regressions using the weighted data produced no significant differences from the unweighted results.

reasons, 17.6 percent of the Worker Voice Survey report they are "represented by a union or professional association" in their job while 11.5% of the CPS Ongoing Rotation Group (ORG) employed sample reports being represented by a union or employee association (Bureau of Labor Statistics 2017). We suspect that some of the differential might also be explained by the difference in language if "professional association" used in our survey was interpreted to include a larger net of nonunion organizations than "employee association."

Another point of interest is that 8 percent of our sample self-identified themselves as temporary employees, contract employees, or independent contractors, compared to 15.8 percent in "alternative worker arrangements" reported by Katz and Krueger (2016) in their 2015 RAND survey. Part of this difference may be because 4 percent of our sample identified themselves as standard full time or part-time employees and indicated in the survey that they are also self-employed. We retain these workers in the standard full or part-time categories in the analysis to follow to be conservative about our understanding of those in alternative work arrangements.[5]

<Insert Table 1 about here>

Measures

We built on two prior national surveys that addressed some aspects of worker voice of interest, the 1977 Quality of Employment Survey (Quinn and Staines 1979;

[5] Note if we placed the 4 percent of the sample that identified themselves as both standard employees and independent contractors in the independent contractor category 12 percent of the sample would consist of contingent workers and more closely approximate the 16 percent in the Katz and Krueger sample. Thus the results we report across these different employment relationships should be viewed with caution both because of the small numbers of respondents in these non-standard categories and the difficulties in sorting some of the respondents into a single category.

Kochan 1979) and the 1995 Worker Representation and Participation Survey conducted under the direction of Richard Freeman and Joel Rogers (1999). Appendix Table 1 lists the specific questions and items used to measure these constructs in our survey.

Expected (Appropriate) Say. Freeman and Rogers (1999) measured how much voice (operationalized as how much say or influence) workers indicated they "ought to have" on a variety of workplace issues (which we label "expected say" or "appropriate say" below) and how much say or influence respondents actually had on their jobs and from these two questions derived a "voice gap" estimate.

We followed a similar procedure to measure workers' views on how much say they "ought to have" as Freeman and Rogers. However, we expanded the set of issues (see discussion below) to better reflect contemporary employment relations. Respondents in our survey were asked how much say or influence they believe they ought to have over an array of issues affecting their work. This measure captures workers' sense of what is sensible in terms of their input at work; we see it as revealing workers' views of the appropriate social contract, specifically the balance between management and workers say, at work. We chose issues that span three levels of the employment relationship prior research indicated are important to worker voice and welfare (Kochan, Katz, and McKersie 1986): (1) personal and workplace issues such as safety, respect, dealing with abuse or discrimination, control over how to do ones work, and scheduling of work hours; (2) personnel or collective bargaining issues such as compensation, benefits, job security, promotion, and training; (3) and higher level organizational issues or strategies

involving technology, quality of products or services provided, and employer values.[6] For each issue, respondents rated their expected level of voice at work on a five-point scale (5=unlimited say; 4=a lot of say; 3=some say; 2=little say; 1=no say).

Actual Say. Respondents in our survey were also asked how much say or influence they actually have over the same array of issues discussed above. For each issue, respondents rated their actual level of voice at work (5=unlimited say; 4=a lot of say; 3=some say; 2=little say; 1=no say).

Voice Gap. Voice gap is measured as the difference between workers' Expected Voice and their Actual Voice at work on each issue mentioned above. Our "voice gap" is parallel to what Freeman and Rogers (1999) termed a "representation gap." While we view the voice gap as important information, it remains to be seen to what extent workers are willing to accept certain costs or investment required to increase or activate their voice. In order to make our analyses tractable, we also construct three aggregated measures of voice gap, the mean of voice gap across workplace/personal issues, personnel/collective bargaining issues, and organizational strategy issues respectively.[7]

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[6] We created these groupings on conceptual grounds not on the basis of distinct clusters derived from a factor analysis. A factor analysis showed that all seventeen issues clustered on a single factor with an Eigen value of 7.69. No second distinct factor emerged. This suggests that workers tend to see these issues a components of a single interrelated system of workplace practices, employment conditions, and experiences.

[7] Workplace/personal issues include scheduling, time to do work, how to do job, how to improve work, resolve problems affecting ability to do job, discrimination protections, harassment protections, and respect towards employees. Personnel/bargaining issues include salary, benefits, training opportunities, promotion opportunities, job safety, and job security. Organizational strategy issues include how new technologies affect job, quality of employers' products or services, and the basic values the employer stands for. Alpha coefficients measuring the reliability of these indices are 0.861, 0.834, and 0.713, respectively.

Union Support. Both prior surveys asked how workers would vote if a union representation election was held on their job. We replicated that question in the survey to provide comparative data on this issue.

Use and Satisfaction with Voice Options. Freeman and Rogers (1999) also asked about voice or representation options in addition to unions. They focused on employee participation committees in response to the public policy debates over this issue that were underway at that time (Commission on the Future of Worker Management Relations 1994). We chose to expand the array of voice options again to better reflect those that are offered by some firms and some worker advocates today. We asked about respondents' use of a broad array of options that might be available within one's organization such as asking for assistance from supervisors, coworkers, or ombudsmen, filing a grievance or complaint, or participating in a joint worker-management committee. Note that the internal channels include both formalized procedures and informal interactions with supervisors or coworkers. We also asked about options that involve independent channels such as unions, occupational associations, protests, strikes, and several newer forms of worker voice that are emerging in some settings such as online forums, and petitions. *Use of voice options* is a group of dummy variables that equals one if the respondent has used the specific voice option, zero otherwise.

Those who have used each type of voice options evaluated their *Satisfaction with Voice Options* on a five-point scale (5=extremely satisfied; 4=very satisfied; 3=somewhat satisfied; 2=not very satisfied; 1=not satisfied at all).

Results

Explanation 1: There is no need: Workers do not expect to have a voice at work

To assess whether changes in the culture and/or structure of work have lowered workers expectations for having a voice at work respondents were asked to rate the amount of say they ought to have across a wide range of contemporary workplace issues. Two things stand out in the responses shown in Figure 1. First, a clear majority of contemporary workers expect to have a voice on how they work, their conditions of employment, the quality of the products or services they help produce or deliver, and the values their organization stands for. Across the full range of issues, only seven percent or less of respondents indicate they ought to have "no say" and 20 percent or less report that they should have "little" or "no say" on any of these matters. In addition, workers' views regarding how much of a voice they should have varies across issues. The distributions show that workers recognize the need to share influence with other parties, presumably their supervisors and managers, on compensation and benefits, promotions, hours and schedules and on strategic issues such as organizational values and use of technologies. However, they also believe they should have a greater say, perhaps even the dominant decision, on issues affecting their personal safety, freedom from abuse and discrimination, and respect on the job. Thus, there is no support for the argument that contemporary workers lack interests in or have diminished expectations for having a meaningful voice over workplace issues.

<Insert Figure 1 about here>

Explanation 2: Employers have provided adequate channels for their input

To address the question of whether there is a "voice gap," we first describe workers' actual say (as they report it) on a variety of issues and then compare expected and actual say. The results in Figure 2 show that actual voice varies across different workplace problems. Indeed, the magnitude of the differences in actual say varies more across these issues than do differences in the magnitudes of expected say. Workers have the least say on their benefits, compensation, and promotion opportunities. For example, 62 percent indicate that they have no or little say on their benefits and 59 percent indicate that they have little or no say on compensation. By comparison, only 18 percent of workers indicate they have no or little say on workplace safety issues.

<Insert Figure 2 about here>

The data reported in Table 2 indicates sizable voice gaps exist across the full set of workplace issues measured. Between 50 and 60 percent of the respondents report a voice gap on benefits, compensation, promotion, job security, technological change, and protections against harassment. Voice gaps for all the other issues vary between 35 (control over how they do their job) to 48 percent (access to training) of the respondents. The average distance between expected say and actual say regarding benefits is 1.07, meaning that the average difference is a full response category (e.g., expect a lot of say but have some say or expect some say but have little say).

<Insert Table 2 about here>

The 1995 and 2017 surveys allow for comparisons of similarities and differences in the voice gap on seven of the common issues included in the two surveys. Caution is in order, however, since the wording of the questions varied somewhat in the two

surveys. As shown in Table 3, similar size gaps were reported on five of the seven issues. For benefits and pay, there is a smaller voice gap in our recent sample than in the 1995 data. For benefits, in particular, this reflects a lower expectation for having a say in the current period, which might reflect the reality of the decline of pensions and changes in health insurance coverage. Workers also have lower expectations on training in the current period. It may due to the decline of internal labor market.

<Insert Table 3 about here>

We also used the 2017 data to investigate who experiences the greatest voice gap depending on their demographic background, employment status and union status. We grouped the issues into the three categories introduced earlier: (workplace/personal issues, personnel/collective bargaining issues, and organizational strategy issues). The resulting dependent variables are therefore continuous and normally distributed, making the OLS regression appropriate for the analysis.

We find that women reported a consistently larger gap compared to men across all issues, as evidenced by the positive and statistically significant coefficients in Table 4. In the case of personal issues, for instance, the 0.093 coefficient translates into a 0.11 standard deviation higher gap for women than men. Additional analyses show that women believe they *ought to* have more say, as compared to men, but were no more likely to *have* that say, creating gender difference in the voice gap. Few differences show up among difference racial and ethnic groups except for those in "Other", who experienced lower voice gaps across the board. Union members have a larger voice gap on both personal issues, such as respect, safety, and protection from harassment and discrimination, and organizational strategy issues (such as use of technology and

organizational values), compared to non-union workers. Further analysis of these data reveals that union members do not expect more say on personal issues than other workers – so the larger gap reflects union members' reporting less actual say than others do. Older workers have a significantly larger voice gap. Moderate earners, making $30,000-$50,000, report more of a voice gap than their lower-income counterparts. This gap seems to be driven by the fact that moderate earners are more likely to believe they ought to have a say in workplace issues than are the workers in the lowest income category, i.e. their expectations regarding voice are greater. The voice gap on collective bargaining and personnel issues is significantly lower for independent contractors, compared to regular full-time workers. Part-time workers also have smaller voice gap on both collective bargaining and personal issues compared to full-time workers. Taken together, the results reported from Table 2 to 4 indicate American workers continue to experience a sizable voice gap. These data do not support the hypothesis that workers are satisfied with their voice at work.

<Insert Table 4 about here>

Explanation 3: Workers are no longer interested in joining unions

As noted earlier, unions have declined precipitously to 11 percent of the workforce in 2017 (BLS 2018) from 28 percent when the 1977 Quality of Employment survey was conducted and 15 percent in 1995 when the Freeman and Rogers survey was conducted. This raises the question of whether or not the workforce still has an interest in being represented by a union. The answer from our survey is yes, and considerably more so today than reported in the two prior surveys.

To address this question we replicated a question from both the 1977 the 1995 surveys asking whether or not the non-union workers in the sample would join a union if a vote was held on their job. As shown in Figure 3, the 1977 and 1995 surveys produced nearly identical results on workers' union support: About 1/3 of the non-union non-managerial workforce said they would vote to unionize if given the opportunity to do so. In our 2017 survey, this increased such that almost half of the non-union workforce (48 percent) and 49 percent of the non-managerial, non-union respondents said they would vote for a union.[8] Moreover, a strong majority (83 percent) of currently unionized workers said they would vote for a union again. However, this number was slightly lower than the 90 percent of union members who reported they would do so in the 1995 Freeman and Rogers's survey. (This question was not asked of unionized workers in the 1977 survey.) Thus, despite the decline in union representation and the political and policy hurdles for organizing today, interest in joining a union has increased.

<Insert Figure 3 about here>

To explore potential reasons for this increase in interest in union representation we replicated as closely as possible the multivariate analyses of the demographic determinants of the union vote in the 1977 and 1995 studies and compared them to results from the current survey. Within the 2017 results, we display three specifications that include a base estimation, then add respondents' average voice gap in the next model, and finally add respondents' view of unions' effectiveness in the final model. Thus, these latter two models will show to what extent variation among other characteristics is

[8] All estimates in this section of union support also exclude self-employed workers.

explained by the perceived instrumentality of unions on the behalf of workers. As shown via the odds ratios reported in Table 5, the results across the three surveys are remarkably similar. Across the three time periods, minority workers are consistently and strongly more interested in joining a union than white workers. In 2017, for example, for two otherwise identical workers, the odds for minority workers to vote for unions would be 2.4 to 3.5 times greater than their white counterparts (see Farber and Saks, 1980 for similar estimates on race). We do see that, taking black workers as an example, union effectiveness appears to explain about one third of their support compared to white workers (comparing models 4 and 5). Across all three time periods, lower income workers are also more likely to vote to join a union than their higher income counterparts.

In contrast with the argument that younger workers may have accepted employer decisions as necessary reflections of broader "market" forces or have been exposed to cultural expectations that individual workers – not collectives – are responsible for their situation at work, in 2017 younger workers are slightly more likely to want to join a union than older workers. Indeed, most new membership gains are comprised mostly of younger workers (Schmitt 2018). Surprisingly, in 2017, once controlling for other characteristics, those with a four year college degree or higher are more interested in union representation than those with a high school or less degree, albeit statistically significant at only the 10 percent level in one specification (column 5). Since income and occupational variables are in this equation,[9] this coefficient may be capturing the effects for those with a college degree in low wage occupations, i.e., the more underemployed

[9] The full equations showing the occupational variables in this table and equations to follow are available from the authors on request.

segment of recent college graduates. In contrast to the findings for earlier years, those who report that it would be difficult to find an alternative, equivalent quality job appear more likely to vote for a union. In addition, although women are more likely to vote for a union in 1995, in 2017 the association between women and union support is statistically insignificant and slightly negative. However, women are more supportive of unions in the 2017 data *before* occupational controls are introduced—this suggests that women are clustered in occupations that are generally supportive of unions (e.g. healthcare practitioners, education, food service, etc.). In all three surveys, those who believe it would be hard to find an equivalent job in the external labor market are more interested in union representation than those with better external prospects. [10]

The model using 2017 data also found that those with larger voice gaps (averaged across all issues) are significantly more interested in union representation those with lower voice gaps.[11] Finally, those who see unions as more effective voice mechanisms for addressing their top priority concerns are more likely to want union representation than those who see unions as less effective in addressing their priority concerns. In a similar vein (but with somewhat different measures), the 1977 study found that workers who experienced higher job dissatisfaction and those viewing unions as instrumental for improving working conditions were more likely to vote for a union (Kochan 1979).

<Insert Table 5 about here>

[10] Difficulty of finding alternative jobs is an ordinal variable that equals one if a person reports being very likely to find alternative job, two if a person is fairly likely to find alternative job, three if the person is not likely to find a job with comparable benefits and salary.

[11] There was little variation in how the three groups of issues individually affected union support.

Taken together the similarity in the results across these time periods suggests that the increased percentage of workers interested in joining a union is caused by the increased number of non-union workers with characteristics and working conditions that have consistently predicted union interest. That is, workers have not changed their views on unions; the decline in unions results in a larger number of contemporary unorganized workers who are very similar to prior generations who supported union representation.

Thus, the decline in the number of workers joining unions cannot be attributed to lack of interest in union representation. To put these findings in perspective, if all of the nonunion workers who have a desire to join a union had the opportunity do so, union membership could increase by approximately 58 million workers, essentially quadrupling the number currently represented by a union, which would raise union density to 54%. Of course, that is not realistic given the demonstrated difficulty of organizing under the current law and the effectiveness of employer resistance in organizing efforts, a point we will return to in the final section of this paper.

Explanation 4: New Forms of Worker Voice are filling the Voice Gap

Are the options provided by employers and/or those emerging independently filling the void left by union decline and meeting the interests and needs of workers today? To answer this question we first conducted a factor analysis (reported in Appendix Table 2) of respondents' assessment of the effectiveness of the full array of options included in the survey. The voice options cluster into two groups. One group captures independent options such as unions, occupational associations, petitions, protests, and strikes. The other group clusters around internal options that are facilitated or at least implicitly supported by employers, such as talking with a supervisor,

conferring with people like themselves, and utilizing grievance and ombudsmen processes.

We assess these options by examining the use of and satisfaction with internal and independent options. As shown in Table 6, when faced with workplace issues, the vast majority turn first to their supervisors and coworkers for assistance. These two options are available and used by 60 to 70 percent of the respondents. The use of the other channels then falls dramatically to under 20 percent. For example, only 6 percent of the sample has participated in strikes to address issues at work.

<Insert Table 6 about here>

The first two columns in Table 7 show the logit equation predicting workers' use of *any* of the internal or independent voice mechanisms.[12] To assess how characteristics affected the *number* of each set of mechanisms used, we run an OLS model for internal mechanisms and a zero-inflated negative binomial (ZINB) counts model for independent mechanisms.[13] Women are approximately 1.5 times as likely to use an internal voice mechanisms than men while there is no statistically significant difference in their usage (both in terms of using any and by how many they use) of independent mechanisms. People who have attended colleges are more likely to use both internal and independent voice mechanisms (albeit, the estimates are imprecise for the number of mechanisms used). Black workers are significantly more likely than white workers to use independent

[12] Internal mechanisms include: conversation with supervisor, advice from people like you, advice from Ombudsman, file a grievance, and joint employee-manager committee. Independent mechanisms include: join a union, sign petition, rate employer on online community, join occupation association, join demographic association, join protest or rally, and go on strike with others.

[13] A counts model was not possible in the case of internal mechanisms because the technique failed to converge. For independent mechanisms, ZINB was chosen because of the significant number of zeros observed and the relative high dispersion of counts.

voice mechanisms, being 40 percent more likely to use any of them. Union members are more likely to use internal and independent voice mechanisms than are non-union workers. In addition, compared to full-time regular workers, regular part-time workers are less likely to use both internal as well as independent voice mechanisms.

Finally, and not surprisingly, those who view internal options as more effective are more likely to use them and those who view independent mechanisms as more effective are more likely to use them. Taken together these results indicate there is considerable variation across demographic groups, occupations and degree of experience with unions in the voice options workers turn to when faced with an issue in their workplace.

<Insert Table 7 about here>

Turning from use to satisfaction of the voice mechanisms, overall, none of the voice options receive high satisfaction ratings, even among the subsample that has used them. As shown in Table 8, supervisors, unions, and coworker options get the highest satisfaction rankings and ratings (3.07 to 3.05 meaning just above "somewhat satisfied") followed by occupational associations and strikes. The lowest satisfaction rating was given to grievance processes. Again, differences existed between groups of workers in how they rated their satisfaction of various mechanisms. Notably, union represented workers rated unions as their most satisfactory option (mean of 3.17) compared to it being the 7th highest in satisfaction among workers who are currently not represented by a union (mean of 2.84).

<Insert Table 8 about here>

Table 9 presents regressions predicting workers' satisfaction with their use of internal and independent voice mechanisms. We constructed the dependent variable by averaging the values of satisfaction across the internal and independent options.[14] The resulting dependent variables we analyze here are therefore continuous and normally distributed (with heavy tails), making the OLS regression appropriate for the analysis. Women are more satisfied with independent mechanisms compared to men; the coefficient 0.168 translates into a nearly one-fifth standard deviation above the mean value for men. Compared to white workers, Hispanic workers and workers of other races are significantly less satisfied with their use of both internal and independent voice mechanisms while black workers are much more satisfied with independent mechanisms compared to their white counterparts. Union represented workers are less satisfied with their use of internal voice mechanisms, but more satisfied with the use of independent voice mechanisms. In the case of the final column, being represented by a union was associated with more than a one-third standard deviation increase in satisfaction with independent mechanisms. Workers with higher incomes are more satisfied with internal voice mechanisms, but surprisingly, workers in larger firms are also less satisfied with internal voice channels. Compared to regular full-time employees, regular part-time workers are more satisfied with their use of internal voice mechanisms. Although the results suggest independent contractors are more satisfied with their use of internal and independent voice mechanisms, the results should be treated with caution given the absence of most types of internal voice mechanisms in most independent contractors'

[14] Alpha coefficients are 0.882 and 0.938 for internal and independent issues, respectively. Note that the question of satisfaction was only shown to respondents if they had indicated that they had used a given voice mechanism.

workplaces as well as the small sample size of independent workers in the survey. Once again, these results point to considerable heterogeneity in satisfaction with the different options. The implication is that there is "no one sized shoe" voice option that fits all workers or circumstances.

<Insert Table 9 about here>

Discussion

Today's workers expect to have a voice on the full spectrum of issues affecting how they work, how they are personally treated, their compensation and working conditions, and the values their organization stands for and the products or services they help produce or deliver. However, a gap is still evident between the amount of influence workers expect and what they experience. While there is a gap across all of the issues examined, it is largest on compensation (benefits and wages), promotions, and job security.

When confronted with a problem at work over 60 percent of workers have turned to their supervisors or coworkers. None of the other options have been used more than 20 percent of the time. This suggests that these other options are not widely available or perceived to be useful to most workers today. However, there is considerable variety in use and satisfaction with these options across different groups. For example, those currently represented by a union rate unions equal in satisfaction to supervisors and co-workers. Further analysis not shown here (available from the authors on request) found ratings of the effectiveness of different options also varied across issues.

A majority of American workers today still see unions as a desirable channel to exercise voice. A substantially larger fraction of the non-union workforce would join a union today (48 percent overall and 49 percent of the non-managerial workforce) than would have done so in the past (about one third in 1977 and in 1995). Over 80 percent of those currently represented by a union would vote to continue union representation. Moreover, the same general factors predict interest in joining a union as before; interest is greater among nonwhites, low-income workers, and those who have larger voice gaps and who worry they could not find equivalent jobs in the external labor market if they needed to do so.

Thus, there continues to be a large unmet demand for union representation among American workers. Yet given the legal requirement of obtaining majority support for union representation within a specified bargaining unit before any individual worker gains representation and the success of employer opposition to organizing through this process, it is unlikely that this unmet demand will be satisfied under current conditions. Either labor law changes will be needed or employer opposition will need to be overcome or unions will need to pursue different organizing strategies that overcome the constraints of both labor law and employer opposition. Worker advocacy groups and other non-union independent voice options have grown in recent years because they are not encumbered by the constraints of the organizing model and legal processes needed to achieve collective bargaining status. Yet to date, these alternatives have reached only a small fraction of the American labor force. This may change as advocates of these newer voice channels learn from early experiences and/or as existing unions experiment with new or similar strategies on their own or in coalition with other labor advocates. But at the

present, there remain a large number of workers who appear to have no independent option available for exercising their voices on the issues that they believe they ought to be able to influence.

Moreover, the data suggest that today no "one sized shoe fits all" workers or all issues in play in employment relationships. Some workers are more likely to use and be more satisfied with internal options provided by employers; others use and are more satisfied with independent options provided by unions or worker advocates independent of employers. Many workers see internal options as effective for some issues and independent options as important for other issues. This is a particularly important point since it suggests the value of developing and making available multi-option systems of voice and/or representation in contrast to both labor law and prevailing practice. That is, labor law limits those internal forms of worker voice that violate bans on employer-supported or dominated labor organizations. Many employers strongly resist and suppress efforts of workers to form unions or engage in other options for exercising an independent voice. Many unions in turn see internal options as efforts to undermine or avoid union representation. These data suggest many workers do not share these distinctions in law or practice and therefore many workers might respond favorably to systems that mix these options together in an effective fashion.

Comparing these contemporary results with prior surveys demonstrates that these voice gaps have persisted for a long time but, in the specific instance of the unmet demand for union representation, have grown considerably. While the range of innovative efforts to address this persistent problem is growing, our results make it clear

that there remains considerable work to be done to close the voice gaps present for many at work today.

Conclusions and Future Directions

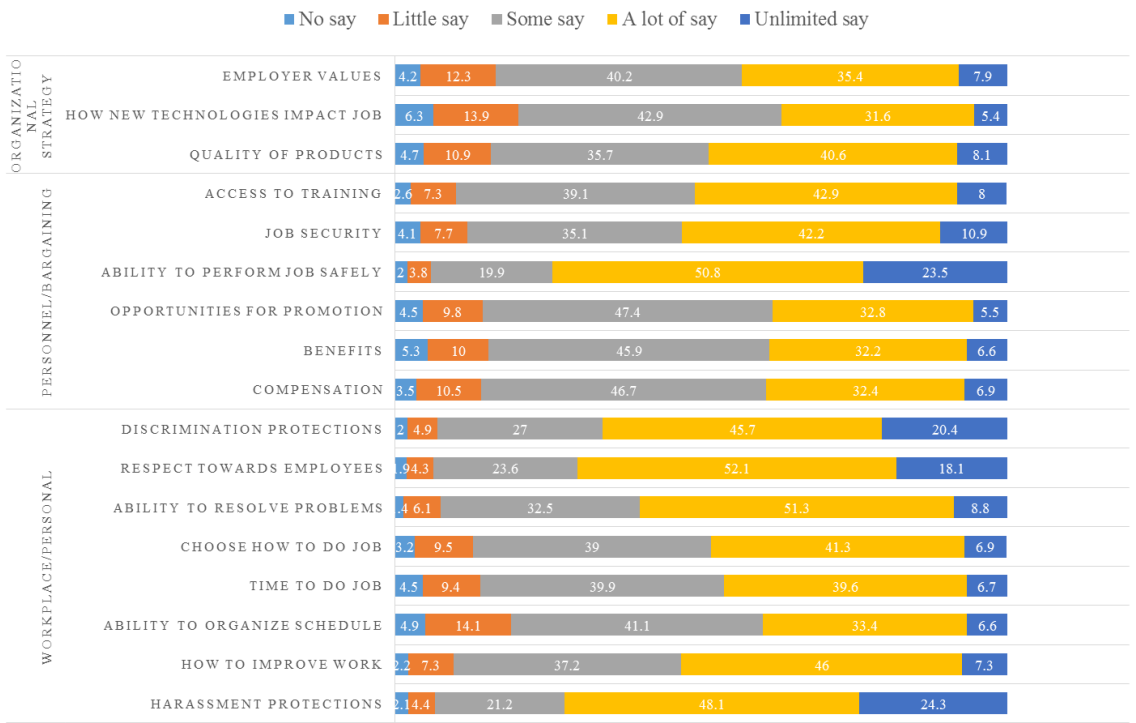
We see these survey data as providing only a broad overview of the current state of worker voice and options for closing the voice gaps identified. More intensive analyses of different options offered inside firms and those being pursued by different worker advocacy organizations and/or unions are clearly needed. For example, given the increased interest in union representation, it would be useful to develop a better understanding of ways to make unions more accessible, what forms of union representation would be most attractive to prospective members, or what workplace or labor market services workers would most value (i.e., be willing to pay for) from unions. To turn the interest in unions into an increase in union membership and representation may require shifting from an organizing model that does not require obtaining support of a majority in a specific work or occupational setting (Morris 2005) and one that does not lose members if or when they leave a union represented job or employer (Kochan 2011; Budd 2010). Given the evidence that workers tend to look to the most available of internal options, i.e., supervisors and coworkers, more efforts to improve the availability and/or the quality of other internal options such as joint committees, ombuds services, or grievance procedures appear to be warranted.

Given the findings that suggest "one sized shoe" doesn't fit all groups or issues, another priority for further research should be to seek a better understanding of how different options can be provided as complements in a system of voice and representation that gains and sustains workforce trust (Rowe 1987; Lipsky 2015). Is there some

complementary mix of internal and independent options that would serve the workforce better than the current situation in which most employers favor internal options and seek to avoid independent options while unions see internal channels as employer dominated efforts to substitute for or competitive with union representation?

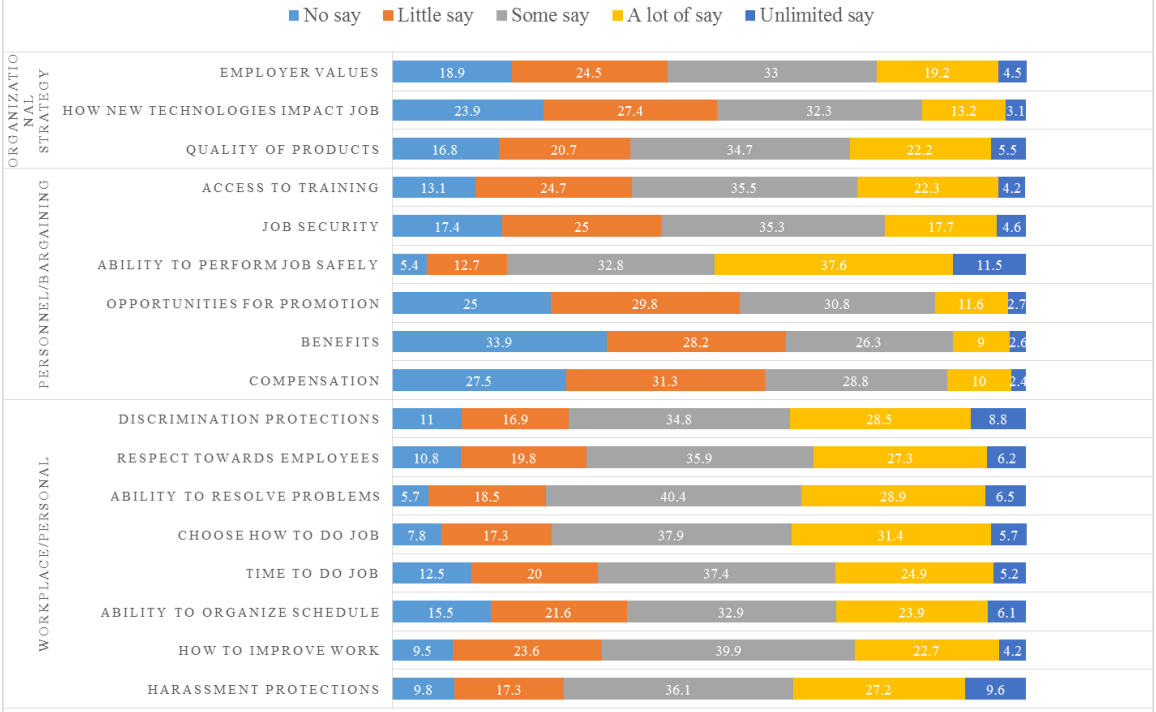
We hope the results reported here motivate others to address these and other questions they raise in search of ways to close the voice gaps American workers continue to experience today.

Figure 1. **Workers' Appropriate Say, by Workplace Issue (Percent)**



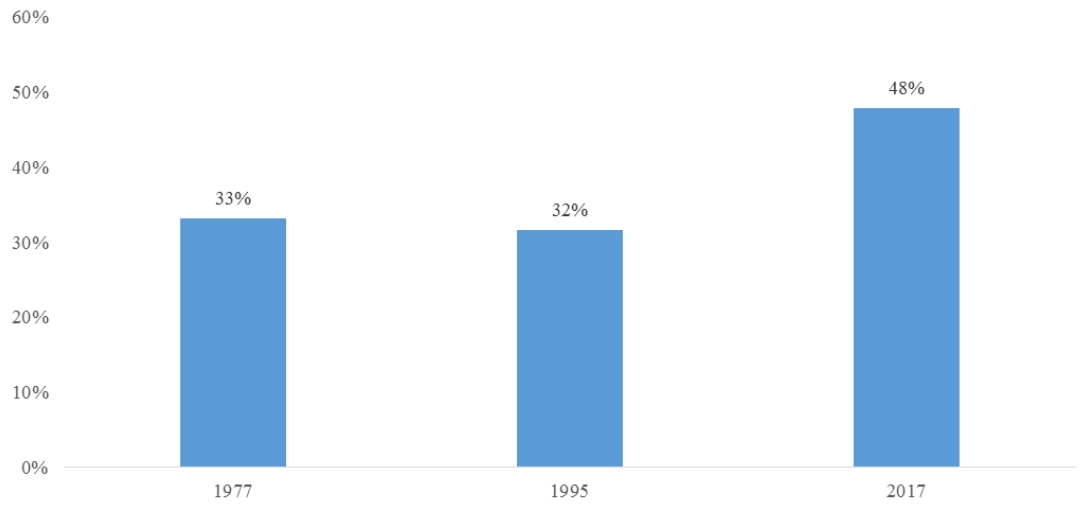
Notes: Based on Worker Voice Survey question 1, 'Thinking about your primary/current workplace, how much say do you feel you ought to have about [workplace issue]?'. We use a 5-point scale for this question (No say=1, Little say=2, Some say=3, A lot of say =4, and Unlimited say=5).

Figure 2. Workers' Actual Say, by Workplace Issue (Percent)



Notes: Based on Worker Voice Survey questions 2, 'Thinking about your primary/current workplace, how much say do you feel you currently have about [workplace issue]?'. We use a 5-point scale for this question (No say=1, Little say=2, Some say=3, A lot of say =4, and Unlimited say=5).

Figure 3. Percent of nonunion workers who would vote for a union



Notes: Each year's sample excludes self-employed. The 1995 sample also excludes all management occupations.
Sources: Authors' analysis of 1977 Quality of Employment Survey (Quinn and Staines 1992), Worker Representation and Participation Survey (Freeman and Rogers 1999) and 2017 Worker Voice Survey data. Data for 1995 were pulled from Freeman and Rogers (1999, 99).

Tables

Table 1. Demographic and financial characteristics of workers in CPS Annual Social and Economic Supplement (ASEC) versus Worker Voice Survey (WVS) sample

	CPS ASEC (2016)	WVS (2017)
Female	47%	48%
Married (1=yes)	56%	48%
Self-employed	6%	7%
Union representation[a]	11%	18%
Age		
18–34	34%	37%
35–49	32%	32%
50–64	28%	27%
65+	6%	5%
Race		
White	64%	63%
Black	11%	11%
Other	7%	5%

Hispanic	17%	17%
Two or more races	1%	3%
Education		
No high school diploma	7%	7%
High school graduate or equivalent	28%	28%
Some college	29%	32%
College degree	23%	20%
Advanced degree	14%	13%
Region		
Northeast	18%	18%
Midwest	22%	22%
West	24%	23%
South	37%	37%
Hours worked per week (all jobs)		
1–10	2%	2%
11–20	6%	6%
21–34	9%	12%
35–40	59%	48%
41–50	15%	21%
51+	9%	11%
Household income (dollars)		
<$30,000	15%	22%
$30,000–$49,999	15%	19%
$50,000–$74,999	19%	20%
$75,000–$124,999	27%	25%
$125,000+	24%	14%
Primary job earnings[b] (dollars)		
<$30,000	41%	41%
$30,000–$49,999	23%	26%
$50,000–$74,999	17%	18%
$75,000–$109,999	10%	10%
$110,000+	8%	6%

Source: Analysis of Worker Voice Survey data (based on NORC AmeriSpeak sample) and the Center for Economic and Policy Research's extracts of the 2016 CPS Annual Social and Economic Supplement (ASEC) and 2016 CPS Outgoing Rotation Group (ORG) data

Notes: For each data set, the sample is restricted to those workers age 18+who are employed and working for pay.

[a] Because the union question is only asked of a subset of CPS ASEC respondents, we instead used the 2016 CPS ORG sample to estimate the union membership rate. Note that self-employed members *are* included in this rate, as opposed to those in the union membership rates published by the Bureau of Labor Statistics.

[b] For the CPS ASEC, this reflects any wage or salary income and is not necessarily limited to one's primary job.

Table 2. Voice gap: Average appropriate say, average actual say, average voice gap, and share of workers experiencing a voice gap, by workplace issue

Workplace issue	Average appropriate say	Average actual say	Average voice gap	Percent experiencing voice gap
Compensation	3.29	2.28	1.01	60
Benefits	3.25	2.18	1.07	60
Opportunities for promotion	3.25	2.37	0.88	55
Respect towards employees	3.8	2.98	0.83	53
Job security	3.48	2.67	0.82	53
Harassment protections	3.88	3.1	0.79	51
How new technologies impact job	3.16	2.44	0.72	50
Access to training	3.46	2.8	0.67	48
Employer values	3.3	2.66	0.65	48
How to improve work	3.49	2.88	0.6	47
Discrimination protections	3.78	3.07	0.7	47
Quality of products	3.37	2.79	0.58	46
Ability to perform job safely	3.9	3.37	0.53	43
Ability to resolve problems	3.6	3.12	0.48	42
Time to do job	3.34	2.9	0.44	40
Ability to organize schedule	3.23	2.84	0.39	38
Choose how to do job	3.39	3.1	0.3	35

Notes: Average appropriate and actual say can take the value range [1,5]. Average voice gap can take the range of [-4,4].

Table 3: Comparing Freeman and Rogers' (F & R) representation gap to WVS voice gap, by workplace issues (percent)

	Appropriate Say		Actual Say		Average gap		Individual gap	
Workplace issue	Percentage of workers for whom it is very important to have a lot of influence		Percentage of workers who said they had a lot of direct influence and involvement		Difference between the columns "wanting influence" and "having influence"		Percentage of workers with less involvement than they want	
	F & R	WVS	F & R	WVS	F & R	WVS	F & R	WVS
1. Deciding what kind of **benefits** are offered to employees	60	40	6	14	54	27	83	63
2. Deciding how much of a **raise in pay** the person in your work group should get	41	40	6	13	35	27	76	62
3. Deciding what **training** is needed for people in your work group or department	62	52	29	28	33	23	53	51
4. Deciding how to work with **new equipment or software**, if that is ever been needed	52	38	28	18	24	20	46	53
5. **Setting goals** for your work group or department	55	54	32	28	23	26	43	49
6. Setting **safety standards** and practices	55	75	35	50	20	24	45	47
7. Deciding **how to do your job** and organize the work	76	61	57	36	19	24	31	37
8. Setting **work schedules**, including breaks, overtime and time off	42	49	30	38	12	11	47	42

Notes: The scale of Freeman and Rogers' 1995 survey (4-point scale) is different from our 2017 survey (5-point scale). For appropriate say, Freeman and Rogers' survey asks, "how important would it be to you to have influence in a certain issue (1=very important; 2=somewhat important; 3=not too important; 4=not important at all)?"For actual say, Freeman and Rogers' survey asks, "how much direct involvement and influence do you have in a certain issue (1=a lot of direct involvement and influence; 2=some direct involvement and influence; 3=only a little direct involvement and influence; 4=no direct involvement and influence)?" To make the two surveys comparable, we combined "unlimited say" and "a lot of say" categories of the appropriate say and actual say questions in our 2017 survey. Worker voice survey questions can be found in appendix.

Table 4. OLS regression: voice gap on workplace issues, by type of issues

	Workplace/ personal	Personnel/ bargaining	Organizational strategy
Age	-0.000	0.003***	0.002*
	(0.001)	(0.001)	(0.001)
Female	0.093***	0.094***	0.125***
	(0.030)	(0.033)	(0.035)
Education (ref: High school)			
No high school diploma	-0.026	0.056	0.047
	(0.097)	(0.106)	(0.113)
Some college	0.013	0.053	0.066
	(0.044)	(0.048)	(0.051)
BA or above	0.046	0.056	0.108*
	(0.048)	(0.052)	(0.055)
Race and ethnicity (ref: White)			
Black	0.038	0.036	0.017
	(0.040)	(0.044)	(0.047)
Hispanic	-0.031	-0.081*	-0.043
	(0.042)	(0.046)	(0.049)
Other	-0.146**	-0.229***	-0.178**
	(0.062)	(0.067)	(0.071)
Two or more races	0.213***	0.142*	0.133
	(0.074)	(0.080)	(0.086)
Represented by union	0.146***	0.011	0.099**
	(0.037)	(0.040)	(0.043)
Type of employment (ref: Regular full-time)			
Regular part-time	-0.093**	-0.161***	-0.059
	(0.044)	(0.048)	(0.051)
Temporary employee	-0.074	0.029	0.007
	(0.089)	(0.097)	(0.104)
Contract employee	0.172**	0.078	0.022
	(0.077)	(0.084)	(0.090)
Independent contractor	-0.126	-0.284***	-0.158
	(0.087)	(0.094)	(0.101)
Tenure at current employer (years)	0.002	0.003	0.001
	(0.002)	(0.002)	(0.002)
Primary job earnings (ref: <$30,000)			
$30,000-$50,000	0.137***	0.125***	0.165***
	(0.038)	(0.042)	(0.044)
$50,000-$75,000	0.038	-0.004	0.057
	(0.045)	(0.049)	(0.052)
$75,000-$110,000	-0.002	-0.067	0.064
	(0.055)	(0.060)	(0.063)
>$110,000	-0.073	-0.088	-0.021

	(0.067)	(0.073)	(0.078)
Observations	3,476	3,475	3,461

* p < 0.1, ** p <0.05, *** p <0.01. Standard errors in parentheses.

Notes: All models include region of residency, occupation, sector, and establishment size controls.

Dependent variables are the average voice gap across issues in each of the three categories. Personnel/bargaining issues include salary, benefits, training opportunities, promotion opportunities, job safety, and job security. Workplace/personal issues include scheduling, time to do work, how to do job, how to improve work, resolve problems affecting ability to do job, discrimination protections, harassment protections, and respect towards employees. Organizational strategy issues include how new technologies affect job, quality of employers' products or services, and the basic values the employer stands for.

Table 5. Logit regression: nonunion workers who would vote for a union in 1977, 1995, and 2017 (odds ratios)

	1977	1995	2017	2017 (+voice gap)	2017 (+voice gap, union effectiveness)
Age	0.998	0.990	0.988***	0.987***	0.996
	(0.00811)	(0.00651)	(0.003)	(0.004)	(0.004)
Female	0.972	1.611***	0.870	0.822**	0.871
	(0.217)	(0.249)	(0.083)	(0.080)	(0.093)
Education (ref. high school)					
No high school diploma	0.797	2.100***	1.491	1.482	1.381
	(0.215)	(0.582)	(0.467)	(0.474)	(0.478)
Some college	0.662*	0.949	1.079	1.054	1.079
	(0.162)	(0.154)	(0.147)	(0.147)	(0.164)
BA or above	1.136	0.626**	1.205	1.167	1.332*
	(0.347)	(0.125)	(0.177)	(0.175)	(0.219)
Race and ethnicity (ref. White)					
Black	4.598***	3.584***	3.418***	3.475***	2.333***
	(1.545)	(0.726)	(0.448)	(0.467)	(0.342)
Hispanic			2.303***	2.402***	2.030***
			(0.305)	(0.325)	(0.303)
Other race/ethnicity or two or more races			2.535***	2.687***	2.500***
			(0.382)	(0.416)	(0.428)
Asian		2.481***			
		(0.711)			
Other race/ethnicities	2.371				
	(1.515)				
Annual salary (ref. <$30,000)					
$30,000-$50,000	1.075	0.677*	0.913	0.848	0.813*
	(0.246)	(0.137)	(0.099)	(0.094)	(0.099)
$50,000-$75,000	0.494**	0.253***	0.708***	0.681***	0.655***
	(0.165)	(0.118)	(0.094)	(0.092)	(0.098)
>$75,000	0.331**	0.515	0.476***	0.462***	0.483***
	(0.155)	(0.218)	(0.073)	(0.073)	(0.083)
Tenure (ref. been at job less than a year)					
Been at job for 1-3 years	0.943	0.885	0.851	0.823	0.938
	(0.237)	(0.166)	(0.117)	(0.116)	(0.146)
Been at job for 3-5 years	1.159	0.801	0.807	0.767*	0.805
	(0.341)	(0.177)	(0.122)	(0.119)	(0.138)
Been at job for 5-10 years	0.924	0.662**	0.633***	0.615***	0.679**
	(0.271)	(0.137)	(0.094)	(0.093)	(0.113)
Been at job for 10+ years	0.460**	0.843	0.568***	0.548***	0.609***
	(0.155)	(0.194)	(0.084)	(0.082)	(0.101)

Likelihood of finding alternative job (ref. very likely)					
Fairly likely	1.051	1.032	1.118	1.078	0.942
	(0.217)	(0.163)	(0.131)	(0.130)	(0.125)
Not too likely	0.996	1.252	1.655***	1.441***	1.394**
	(0.240)	(0.214)	(0.207)	(0.186)	(0.199)
Establishment size (ref. <100 employees)					
100-499 employees	1.094	0.919	0.976	0.882	0.781**
	(0.272)	(0.174)	(0.102)	(0.095)	(0.094)
500-999 employees	1.210	0.904	0.998	0.865	0.661**
	(0.449)	(0.215)	(0.159)	(0.142)	(0.118)
1000+ employees	1.432	0.912	1.016	0.941	0.749
	(0.412)	(0.160)	(0.176)	(0.167)	(0.145)
Average voice gap				1.847***	2.104***
				(0.111)	(0.142)
Average rating of union effectiveness					2.113***
					(0.105)
Constant	0.315*	1.319	3.546***	2.903***	0.292***
	(0.189)	(0.804)	(1.384)	(1.159)	(0.135)
Observations	674	1,203	2743	2742	2527

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Notes: All models control for sector, occupation, and region. All models are weighted.
1995 Survey: (a) For hourly paid workers, annual salary = weekly salary × 52; (b) likelihood of finding alternative jobs is a categorical variable equals 1 if the respondent is very confident in finding alternative jobs, 2 if somewhat confident, 3 if not too confident, 4 if not confident at all. For the purpose of parallel analysis, we grouped 3 and 4.

Table 6. Percent of workers who used each voice channel

Voice channel	**Percent**
Supervisor	71%
People like you	64%
Joint committee	17%
Union	16%
Grievance	15%
Occupation association	15%
Ombudsman	13%
Petition	10%
Online rating	10%
Demographic association	10%
Protest/rally	7%
Strike	6%

Notes: Based on Worker Voice Survey question q4: "In order to deal with workplace issues at your primary/current workplace, have you ever decided to [use voice mechanism]?". Sample restricted to those with valid answers that included "Yes" or "No".

Table 7. Logit and ordered logit regressions: use of internal and independent mechanisms

	Logit		OLS	Zero-inflated negative binomial (counts model)
	Odds ratio	Odds ratio	Coef.	Odds ratio
	Internal mechanisms[a]	Independent mechanisms[b]	Internal mechanisms[a]	Independent mechanisms[b]
	(1)	(2)	(3)	(4)
Age	1.003	1.002	-0.001	0.997
	(0.004)	(0.004)	(0.002)	(0.003)
Female	1.506***	1.117	0.186***	1.097
	(0.178)	(0.111)	(0.046)	(0.066)
Education (ref: High school)				
No high school diploma	0.649	1.199	0.037	1.050
	(0.203)	(0.400)	(0.148)	(0.210)
Some college	1.523***	1.691***	0.223***	1.052
	(0.243)	(0.261)	(0.068)	(0.102)
BA or above	1.441**	1.438**	0.076	0.983
	(0.252)	(0.239)	(0.074)	(0.107)
Race and ethnicity (ref: White)				
Black	0.940	1.419***	0.109*	1.131*
	(0.152)	(0.187)	(0.063)	(0.084)
Hispanic	0.743*	0.954	-0.046	1.115
	(0.117)	(0.137)	(0.066)	(0.094)
Other	0.584**	0.912	0.082	1.242*
	(0.132)	(0.189)	(0.098)	(0.149)
Two or more races	0.951	0.936	-0.023	1.276
	(0.269)	(0.219)	(0.111)	(0.198)
Represented by union	1.340*	9.860***	0.454***	1.361***
	(0.213)	(1.239)	(0.057)	(0.087)
Tenure at current employer (years)	1.028***	1.012**	0.016***	1.014***
	(0.009)	(0.006)	(0.003)	(0.003)
Primary job earnings (ref: <$30,000)				
$30,000-$50,000	1.401**	1.163	0.120**	0.888
	(0.207)	(0.150)	(0.059)	(0.071)
$50,000-$75,000	1.327	1.538***	0.228***	0.996
	(0.237)	(0.227)	(0.069)	(0.084)
$75,000-$110,000	1.140	1.448**	0.199**	1.032
	(0.248)	(0.262)	(0.084)	(0.106)

>$110,000	1.325	2.368***	0.276***	0.968
	(0.368)	(0.506)	(0.103)	(0.137)
Likelihood of losing job				
Not too likely	1.043	1.166	0.081*	1.082
	(0.119)	(0.113)	(0.045)	(0.065)
Fairly likely	1.132	2.303***	0.222***	1.292**
	(0.231)	(0.387)	(0.084)	(0.129)
Very likely	2.091**	3.099***	0.417***	1.320**
	(0.645)	(0.696)	(0.111)	(0.169)
Difficulty of finding alternative job				
Fairly likely	0.741*	0.755**	-0.146**	0.838**
	(0.115)	(0.097)	(0.060)	(0.067)
Not too likely	0.798	0.948	-0.155**	0.811**
	(0.132)	(0.128)	(0.063)	(0.066)
Average effectiveness, by mechanism				
Internal mechanisms	1.476***		0.264***	
	(0.105)		(0.028)	
Independent mechanisms		1.751***		1.380***
		(0.101)		(0.047)
Observations	3,256	3,246	3,256	3,246

* p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors in parentheses.
All models include region of residency, occupation, sector, employment category, and establishment size controls.
[a] Internal mechanisms include: conversation with supervisor, advice from people like you, advice from Ombudsman, le a grievance, and join employee-manager committee.
[b] Independent mechanisms include: join a union, sign petition, rate employer on online community, join occupation association, join demographic association, j3o0in protest or rally, and go on strike with others.

Table 8. Mean satisfaction ratings across voice mechanisms, by union membership status

Voice channel	All workers	Nonunion	Union
Supervisor	3.08	3.12	2.92
People like you	3.05	3.07	3.00
Joint committee	2.75	2.75	2.75
Union	2.68	2.64	2.75
Grievance	2.88	2.92	2.78
Occupation association	3.07	2.84	3.17
Ombudsman	2.72	2.82	2.54
Petition	2.74	2.69	2.85
Online rating	2.97	2.85	3.12
Demographic association	2.92	2.86	3.04
Protest/rally	2.75	2.68	2.81
Strike	2.97	2.88	3.05

Note: Based on Worker Voice Survey question q5: "Thinking about when you decided to [use voice mechanism] in order to address a workplace issue, how satisfied were you with the result?". Sample restricted to those with valid answers on the Likert scale (Not satisfied at all=1, Not very satisfied=2, Somewhat satisfied=3, Very satisfied=4, and Extremely satsified=5).

Table 9. OLS regression: satisfaction with internal and independent mechanisms

	Average satisfaction with internal mechanisms[a]		Average satisfaction with independent mechanisms[b]	
	(1)	(2)	(3)	(4)
Age	-0.004***	-0.004***	-0.002	-0.002
	(0.001)	(0.001)	(0.002)	(0.002)
Female	0.041	0.070*	0.131***	0.168***
	(0.031)	(0.036)	(0.050)	(0.057)
Education (ref: High school)				
No high school diploma	-0.054	-0.107	-0.052	-0.157
	(0.110)	(0.126)	(0.178)	(0.208)
Some college	-0.023	0.016	-0.101	-0.074
	(0.050)	(0.055)	(0.086)	(0.096)
BA or above	0.058	0.067	-0.140*	-0.115
	(0.049)	(0.060)	(0.084)	(0.105)
Race and ethnicity (ref: White)				
Black	-0.056	-0.071	0.181***	0.154**
	(0.045)	(0.048)	(0.066)	(0.071)
Hispanic	-0.082*	-0.121**	-0.140*	-0.180**
	(0.049)	(0.052)	(0.079)	(0.084)
Other	-0.193***	-0.225***	-0.160	-0.147
	(0.072)	(0.076)	(0.109)	(0.118)
Two or more races	-0.200**	-0.235***	0.000	-0.071
	(0.084)	(0.088)	(0.138)	(0.149)
Represented by union	-0.126***	-0.069	0.278***	0.324***
	(0.039)	(0.044)	(0.050)	(0.059)
Establishment size (ref:<10 employees)				
11-499 employees		-0.142***		-0.040
		(0.043)		(0.078)
500-1,999 employees		-0.180***		-0.084
		(0.063)		(0.103)
2,000+ employees		-0.137**		-0.081
		(0.065)		(0.104)
Type of employment (ref: Regular full-time)				
Regular part-time		0.237***		0.152
		(0.054)		(0.095)
Temporary employee		0.159		-0.065
		(0.115)		(0.175)
Contract employee		0.021		-0.006
		(0.096)		(0.140)
Independent contractor		0.327***		0.416**
		(0.108)		(0.187)
Tenure at current employer (years)		-0.004*		-0.003

		(0.002)		(0.003)
Primary job earnings (ref: <$30,000)				
$30,000-$50,000		0.015		-0.162**
		(0.047)		(0.076)
$50,000-$75,000		0.075		-0.017
		(0.054)		(0.083)
$75,000-$110,000		0.093		0.046
		(0.066)		(0.102)
>$110,000		0.124		-0.117
		(0.080)		(0.124)
Constant	3.214***	3.218***	2.772***	2.902***
	(0.082)	(0.133)	(0.138)	(0.217)
Observations	3,242	2,925	1,357	1,217

* p < 0.1, ** p <0.05, *** p <$ 0.01. Standard errors in parentheses.

Notes: All models include region of residency, occupation, and sector controls.

[a] Internal mechanisms include: conversation with supervisor, advice from people like you, advice from Ombudsman, file a grievance, and join employee-manager committee.

[b] Independent mechanisms include: join a union, sign petition, rate employer on online community, join occupation association, join demographic association, join protest or rally, and go on strike with others.

Appendix Table 1: MIT Worker Voice Survey Key Questions

Category	Question
Appropriate Say	**Thinking about your primary/current workplace, how much say do you feel you ought to have about…(5 point scale: 1=no say; 5=unlimited say)**
	your salary and other compensation?
	your benefit package?
	your ability to organize your schedule, meaning the times you work?
	the time you consider necessary to do your job?
	your ability to choose how you do your job?
	your access to training opportunities?
	your opportunities for a promotion?
	how new technologies affect your job?
	ways to improve how you and your coworkers do your work?
	your ability to perform your job safely?
	your ability to resolve problems or conflicts affecting your job?
	how your employer protects you against discrimination?
	your job security?
	how your employer protects you from abuse or harassment?
	your employer provides its customers?
	the basic values your employer stands for?
	the level of respect shown to you and your coworkers?
Actual Say	**Thinking about your primary/current workplace, how much say do you feel you currently have about…(5 point scale: 1=no say; 5=unlimited say)**
	your salary and other compensation?
	your benefit package?
	your ability to organize your schedule, meaning the times you work?
	the time you consider necessary to do your job?
	your ability to choose how you do your job?
	your access to training opportunities?
	your opportunities for a promotion?
	how new technologies affect your job?
	ways to improve how you and your coworkers do your work?
	your ability to perform your job safely?
	your ability to resolve problems or conflicts affecting your job?
	how your employer protects you against discrimination?
	your job security?

	how your employer protects you from abuse or harassment?
	your employer provides its customers?
	the basic values your employer stands for?
	the level of respect shown to you and your coworkers?
Effectiveness of voice options	**If available, how effective would it be for you to ...if you experienced a reduction in issue 1[a]? (5 point scale: 1=not effective at all; 5=extremely effective)**
	have a conversation with your supervisor or manager?
	get advice from people like you?
	request advice from an Ombudsman and/or other confidential resources at work?
	file a complaint or grievance at the workplace?
	join a committee of employees and managers to advise top management on how to address the issue?
	join a union that negotiates a collective bargaining agreement with management?
	sign written or electronic petitions to request management to address the issue?
	use an online community to rate your employer on the issue?
	join an association of others in your occupation?
	join a group of others like you (e.g. same gender or race)?
	join a protest or rally with others?
	go on a strike with others experiencing the same issue?
Use of voice options	**In order to deal with workplace at your primary/current workplace, have you ever decided to… (1=yes; 0=no)**
	have a conversation with your supervisor or manager?
	get advice from people like you?
	request advice from an Ombudsman and/or other confidential resources at work?
	file a complaint or grievance at the workplace?
	join a committee of employees and managers to advise top management on how to address the issue?
	join a union that negotiates a collective bargaining agreement with management?
	sign written or electronic petitions to request management to address the issue?
	use an online community to rate your employer on the issue?
	join an association of others in your occupation?
	join a group of others like you (e.g. same gender or race)?
	join a protest or rally with others?
	go on a strike with others experiencing the same issue?
Satisfaction with voice options	**Thinking about when you decided to ...in order to address a workplace issue, how satisfied were you with**

	the result? (5 point scale: 1=not satisfied at all; 5=extremely satisfied)
	have a conversation with your supervisor or manager
	get advice from people like you
	request advice from an Ombudsman and/or other confidential resources at work
	file a complaint or grievance at the workplace
	Join a committee of employees and managers to advise top management on how to address the issue
	join a union that negotiates a collective bargaining agreement with management
	sign written or electronic petitions to request management to address the issue
	use an online community to rate your employer on the issue
	join an association of others in your occupation
	join a group of others like me (e.g. same gender or race)
	join a protest or rally with others
	go on a strike with others experiencing the same issue
Vote for union	**If an election were held today to decide whether employees like you should be represented by a union, would you vote for the union or against the union? (1=yes; 0=no)**
Union membership	**Are you currently represented by a union or professional association on your job? (1=yes; 0=no)**

Note: [a] Respondents were asked to rate the effectiveness of each voice mechanisms on two workplace issues which they previously rated as expecting a lot or unlimited say using a 5-point scale

Appendix Table 2. Factor loadings of the effectiveness of voice mechanisms, by issue[a]

Mechanism	Independent mechanisms	Internal mechanisms
Effectiveness on issue 1[a]		
Supervisor		0.7011
People like you		0.6694
Ombudsman		0.6367
Grievance		0.6539
Joint committee		0.6605
Union	0.6403	
Petition	0.5741	0.5433
Online rating	0.5607	
Occupation association	0.6541	
Demographic association	0.6401	
Protest/rally	0.9184	
Strike	0.9197	
Effectiveness on issue 2[a]		
Supervisor		0.7513
People like you		0.7195
Ombudsman	0.5417	0.573
Grievance		0.6467
Joint committee	0.5178	0.6174
Union	0.737	
Petition	0.7414	
Online rating	0.6997	
Occupation association	0.7363	
Demographic association	0.7235	
Protest/rally	0.8599	
Strike	0.8259	

Notes: Because the variables of interest are not continuous but ordinal-categorical, a polychoric correlational matrix was employed in the factor analysis and the rotational method was done using the varimax method with Kaiser Normalization. The Kaiser Criterion is a reliable test for significance if the averaged extracted communality (1-Uniqueness) is equal to or greater than 0.60 and the sample size is 250 observations or more (Yong and Pearce 2013), both of which are met with our data. Factor loadings <0.5 are suppressed. The Cronbach alpha reliability coefficients on internal and independent mechanisms (across both issue questions) are 0.90 and 0.94, respectively, which indicates a satisfactory internal consistency.

[a] Issue 1 and issue 2 are randomly selected from those issues to which respondents reported "Unlimited" or "A lot" of appropriate say. These factor analysis results are consistent with those performed on individual issues. The results are available upon request.

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