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# "That's Against Your Contract?": Exploring the Complexity of Collective Bargaining Tensions

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Abstract

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Keywords: teachers' unions, teacher contract, collective bargaining, complexity theory

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# “That's Against Your Contract?”: Exploring the Complexity of Collective Bargaining Tensions

Teachers are the lifeblood of education and the most important school-based factor for student success (Ladson-Billings, 2006). Studies confirm that the quality of teacher working conditions factor prominently into their decisions to remain in the profession (e.g. Allensworth, 2009; Boyd et al, 2011; Horng, 2009; Johnson, Kraft & Papay, 2012; Ladd, 2011; Loeb, Darling-Hammond, & Luczak, 2016; Simon & Johnson, 2015). Not surprisingly, then, understanding the factors that lead to the successful recruitment and retention of effective teachers has received considerable attention by policymakers and researchers alike (Guha, Hyler, & Darling-Hammond, 2017).

In the last fifty years, the field has expanded to include inquiry on teachers’ unions and the collective bargaining agreements (CBAs) they introduce. Beginning in the 1960s, public school teachers won the right to negotiate teacher working conditions with school district administration. Now, teacher contracts are negotiated at the district level by third-party unions in 43 states. The influence of teachers’ unions on schooling cannot be overstated as recent studies find collective bargaining shapes levels of key educational resources and outcomes (e.g. Brunner, Hyman, and Ju, 2019; Cowen & Strunk, 2015; Marianno & Strunk, 2018). The utility of this research to improve schools, however, is uncertain as large-scale findings remain mixed. Gaps in this literature reflect the narrow range of methodologies and frameworks used to study unions in education. Reviews find a surplus of studies that employ theories of neoclassical economics and political science (Osborne-Lampkin, Cohen-Vogel, Feng, & Wilson, 2018).

To diversify the inquiry on teachers’ unions in education, the present qualitative case study employs an organizational perspective known as complexity theory (Honig, 2006; O'Day, 2002). Drawing on elite interviews (Kezar, 2003) conducted with principals and key informants,

we use complexity theory to describe the tensions and mutual understandings amid school personnel regarding the collective bargaining agreement. This research design shifts the conceptual focus of collective bargaining scholarship away from the measurement of union influence on inputs and outputs and toward the recognition of system-level forces that mediate unionization's impacts on schools. In preview, our data are consistent with prior research that suggests CBAs impose constraints on site-level agents. However, when analyzed through the lens of complexity theory, these tensions reveal otherwise hidden patterns of social interdependence that demonstrate gradual organizational change.

The paper divides into four sections. We first review the literature on unions and collective bargaining in education, highlighting the ways this body of work reflects the agent perspective of rational choice (Hechter & Kanazawa, 1997). We also introduce complexity theory as a complement to an agent perspective (Walby, 2007). We next explain the study's design, empirical sources, triangulation strategies, and methods. In the third section, we present descriptive themes that demonstrate the collaborative, restrictive, and coercive influence of collective bargaining on administrative authority and, by inference, schools. Our final section revisits these data using complexity theory as an interpretive framework. From this discussion, we theorize implications for policy, practice, and future research.

## Perspectives on Teachers' Unions and Collective Bargaining Research

Here we review two complementary, but distinct perspectives on education, highlighting the implications for research on teachers' unions. The first represents economic assumptions that focus on the rational choice behaviors of individuals. The second represents sociological assumptions that seek to understand the behaviors of individuals from an organizational perspective.

**An Agent Perspective**

The majority of research on teachers' unions and collective bargaining is informed by economic assumptions about supply and demand. These assumptions are embedded in research that seeks to maximize the efficiency of a business by streamlining the relationship between its inputs and outputs (Hoxby, 1996). From this perspective, teachers are viewed as inputs on outputs such as student achievement, graduation rates, and the like. Teachers' unions, as key representatives of teachers, then are suppliers of critical goods without which schools cannot perform their function to educate students. Collective bargaining agreements stipulate the terms by which districts retain access to teachers.

In controlling the supply of teachers, a union exercises bargaining power over what would otherwise be a district's autonomous business-related decisions. The literature corroborates union influence on district resource allocations including class sizes, retirement benefits, salary levels, and instructional days and hours. Unionized districts, for example, spend more on teacher salaries (Hall & Carroll, 1973; West & Mykerezi, 2011), have higher teacher salary levels (Duplantis, Chandler, Geske, 1995; Kleiner & Petree, 1988; Rose & Sonstelie, 2010; Zigarelli, 1996; Zwerling & Thomason, 1996), and lower class sizes (Hall & Carroll, 1973). They also spend more on instructional personnel, which indirectly supports teachers by reducing workload (Chambers, 1977; Cowen, 2009; Gallagher, 1979). Recent studies find that stronger teachers' unions leverage their influence to direct more funding to school districts from state school finance reforms (Brunner, Hyman, and Ju, 2019).

While we know that teachers' unions impact school budgets, their influence on outputs is still unclear (Moe, 2009; Strunk, 2011; Strunk & McEachin, 2011; Marianno & Strunk, 2018 and see Cowen and Strunk 2015 for a more complete review of this literature). State-level policy

studies tie student outcomes to the restrictiveness of CBAs. In California, for example, Marianno and Strunk (2018) found no effect on student achievement related to changes in CBAs. In Wisconsin, however, Roth (2017) found that student achievement improved following new laws regarding teacher retirements, while Baron (2018) found that high school student performance declined. In states without robust collective bargaining laws, Han and Keefe (2020) found that student performance is higher where unions are stronger. Brunner, Hyman, and Ju (2019) found that increases in expenditures associated with union influence translated into larger achievement gains. However, Marianno, Strunk, and Bruno (2021) showed that changes to union strength over time in California translated into greater educational expenditures, but did not necessarily lead to improvements in educational outcomes.

Research on teachers' unions also raises questions about the impacts of CBAs on other stakeholders. Hoxby (1996) found that unions maximize the best interests of teachers sometimes at the detriment of other groups like parents, administrators, and students. Concerns are upheld in work that finds bargaining provisions make it difficult to implement reforms such as firing bad teachers, rewarding effective teaching, and changing teacher work expectations and assignment procedures (Anzia & Moe, 2014; Ballou, 2000a, 2000b; Hess & Kelly, 2006; Lieberman, 1997; Moe, 2006; Moe, 2011; Paige, 2009). Supporting this central concern, qualitative empiricism highlights the toll of collective bargaining on principals' time and cognition. In a study by Jessup (1985), 20 school administrators suggested the coercive influence of CBA restrictions on their work. Johnson's (1989) study of 289 school principals found interpretive discrepancies amid the implementation of a CBA across sites. Ballou (2000b) showed that principal's used ingenuity to mitigate the restrictive influence of CBA protections related to hiring, assignment, and dismissal.

Koski and Horng (2007) described specifically how principals leveraged their hiring autonomy notwithstanding restrictive CBA transfer provisions.

Despite more than 50 years of research, the overall utility of the literature on teachers' unions is compromised by major gaps. Methodologically, for example, to our knowledge, the four studies described above are the only examples of peer reviewed qualitative research on the topic. Superseding concerns regarding statistical bias is the absence of theoretical diversity. Without exception, to our knowledge, the peer reviewed literature reflects an agent perspective that is driven by rational choice assumptions. Rooted in economics, rational choice theory (Hechter & Kanazawa, 1997) suggests that agents make decisions based on their personal employment function. In the research on teachers' unions, this means, for example, that principals generally make decisions to support the wellbeing of their campuses, while teachers generally make decisions to support the wellbeing of their classrooms. By extension, union leaders negotiate collective bargaining agreements that reflect the best interests of teachers, while district administrators negotiate the contracts on behalf of all stakeholders within the system.

In reviewing the theoretical foundations of the literature, we find that policy scholars have sporadically questioned the utility of rational choice assumptions to research on teachers' unions. More than 20 years ago, Conley and Gould (1997) theorized that collective bargaining is "only one component of the organizational structure in which unions and managers operate and interact" (p. 405). Osborne-Lampkin (2010), similarly found that rational choice explanations were not sufficient to explain behavior around the grievance and arbitration practices surrounding CBAs in Florida. Accordingly, they expanded their model to consider social influences on agent decision-making. In the past decade, although scholars often reference the

social ambiguities of CBA implementation, their research designs still fundamentally embody rational choice assumptions.

**An Organizational Perspective**

The present study shifts analytic attention away from the decision-making behaviors of agents and toward the "uncertainty and non-linearity" of social systems (Kemp, 2009). Imported from the physical and biological sciences, complexity theory is an organizational perspective that has found broad application across academic fields including sociology and education policy (Alexander, 2009; Honig, 2006; McLennan, 2003). It complements rational choice theory (Boudon, 2003; Hechter & Kanazawa, 1997) with concrete assumptions about how social influences are brought to bear on an agent everyday decision-making. These assumptions derive from the root conceptualization that systems such as education are complex (O'Day, 2002). In what follows, to establish the framework's sociological significance, we cite findings on complex systems from the biological sciences, using the metaphor of an ecosystem to explain social interactions (Youdell, 2017).

**Interdependence.** The defining characteristic of complex systems is the interdependence of their working parts (Cilliers, 2000; O'Day, 2002). This premise borrows from findings on the nature of living organisms as studied within the physical and biological sciences (Cowan, Pines, & Meltzer, 1994; Holland, 1995; Kauffman, 1993; Waldrop, 1993). To illustrate how contexts shape outcomes, theorists such as Morrison (2008) used the metaphor of a rainforest to describe how multilevel organizations such as school districts function. The rainforest metaphor frames districts not as hierarchies, but as ecosystems where inputs and outputs are comparatively unsystematic, but with discernible patterns. As shown in Figure 1, complexity theory recognizes interactive patterns amid internal and external forces that are otherwise obscured under

hierarchical assumptions about school functioning. In the context of a rainforest, annual precipitation affects plant growth and water levels that are animal food sources, contiguously affecting seasonal migration and so on. In the context of districts and schools, budgets affect resources that affect classroom conditions, contiguously affecting students and their academic outcomes. The premise of interdependence invites policy researchers to consider not just the agent behaviors that mediate policy implementation or the situated conditions that mediate agent behaviors, but the interactivity amid them. While the notion of interdependence within schools is not novel, complexity theory offers two assumptions that explain the implicit logic of outcomes that are otherwise uncertain and non-linear (Castellani & Hafferty, 2009).

**Proximity.** In the natural sciences, physical proximity fosters a direct kind of interdependence. As referenced above, a region's annual rainfall has a seasonal impact on that region's plant growth and water sources, affecting indigenous animals so that their food sources and migration patterns affect animals in contiguous regions that did not experience the same floods or droughts directly. For schools, the implication is a similar kind of everyday interdependence amid agents at a given site (McQuillan, 2008). Agents working in close physical proximity to one another have more frequent and direct interactions, which shape everyday inputs and outputs (Morrison, 2008). A principal, for example, can plan an agenda for a faculty meeting, but how the site teachers individually and collectively respond to the agenda affects how the meeting gets conducted which then determines what gets accomplished. From a complexity theory perspective, the important variable is not how individuals act, but how they interact (O'Day, 2002). Proximity strengthens the interdependence of agents who regularly interact.

**Infrastructure.** In addition to proximity, infrastructure mediates the quality of agent interactions. Borrowing again from the rainforest metaphor, if proximity describes the interdependence of elements including rainfall, plant growth, and animal behaviors, infrastructure represents abiding system conditions that are relatively impervious to transitory inputs such as rainfall (Cochran-Smith, Ell, Ludlow, Grudnoff, & Aitken, 2014). While rainfall affects the water in a river, the riverbed is a mediating influence that resists seasonal changes. Infrastructure represents hidden influences that mediate agent interactions in a manner that is self-correcting. Collective bargaining terms that are consistent with infrastructure require less adaptation and can be accommodated more readily than terms that are inconsistent with system infrastructure and require more adaptation (Mitleton-Kelly, 2003).

To recap, in contrast to the assumption that school agents exercise rational choice, complexity theory raises the possibility that system dynamics mediate agent behaviors. The distinction is subtle, but consequential when theorizing collective bargaining agreements and their implementation. Rather than analyzing the effects of unions based on conventional input and output variables, an organizational perspective considers patterns of decision-making that are beholden to localized school norms and infrastructure. Complexity theory therefore expands the conceptualization of production function research to consider context-based variables that are often overlooked. The widening of analytic scope reveals the mediating influence of everyday social interactions on teacher inputs with implications for school outputs.

## Methods

This paper uses case study methodology to explore the usefulness of complexity theory to answer questions about collective bargaining in K-12 schools. Yin (1994) defined a case study as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context"

(p. 284). Drawing on Yin's phrasing, in this study, we investigate the phenomenon of collective bargaining within an urban school district. The methodology is also attuned to the paper's theoretical agenda as case studies are frequently used to understand organizational behaviors based on the perspectives of individuals. Our research design reflects this tradition by pairing complexity theory with in-depth interview (Kvale, 2008) data of eight principals bounded within an urban district in California during the 2015-2016 school year. While the content of the data are principal perspectives, complexity theory allows us to consider the hidden influence of social conditions on an individual's understanding of their own environment.

**Site and Sample**

State, district, and site-level circumstances are consistent with an extreme case study design. Situated within one of the most diverse counties in the state of California, Bay City School District (BCSD) is a mid-size district, with approximately 25 schools that employ nearly 800 teachers and serve over 20,000 students. Over the last decade, California teachers' unions have been on the defending-end of relatively high-profile court cases not only by districts on protections that had formerly been precedent, but also by teachers on fair-share fees (Freeman & Han, 2012; Marianno, 2015; *Friedrichs vs. the California Teachers' Association*, 2016; *Vergara v. State of California*, 2016). This contentious legal backstory implies the possibility of heightened tensions between the union and school districts in the state. If contract length is rough indicator of the working conditions unions have secured in the contract and a proxy for contract restrictiveness (Strunk & Reardon, 2010), the district was expected to have elevated tensions with the union. As a measure of comparison for CBAs in the state of California, the length of the BCSD's teacher contract tallied at 184 pages, making it the 24$^{th}$ longest contract (95$^{th}$ percentile) in the state.

District sociodemographics were also polarized. The racial/ethnic diversity as well as incomes of district families vary from site to site. Over half of the student body qualifies for free and reduced-price lunch and nearly two-thirds are from a racial minority group (see Table 1B). Yet. Not all schools are Title I. The median household income varies between 14% and 92% that qualify for free-or reduced-price lunch while. While only 13% of students across BCSD are classified as English Language Learners (ELLs), the percentage of ELLS at a given school ranges from 44% to 1%. Achievement outcomes reflect these disproportions. Whereas 44% of students meet or exceed standards on the Smarter Balanced Common Core-aligned achievement tests (SBAC), individual schools range from 18% to 75% on this measure. In particular, achievement disparities across sites infer substantially variant working conditions amid teachers across the district.

To represent site-level heterogeneity across the district, the sample represents a balance of elementary, middle, and high school principals that evenly represent high and low-performing sites, as measured by site performance on California's most recent standardized exam (See Table 1A). This sample selection process maximized the heterogeneity of sites across the district, portending differences in interdependence, proximity, and infrastructure across school sites that might shape how bargaining influences school functioning.

**Data Collection**

Interviews were conducted with district stakeholders (n=11), eight of whom were principals (n=8) and three of whom were elite informants (n=3) who had direct experience with the CBA either as a union leader or as a district-level administrator. All interviews were audio recorded and transcribed for analysis. The sum of all interview data represents approximately 30 fieldwork hours.

**School principals.** The primary interview data derive from 16 separate in-depth interviews, representing two in-person audiences with each of the study's eight district principals. Each of the interviews lasted between 60 and 90 minutes so that, when merged, the interview data collected with each principal averaged approximately two hours. The first interviews were conducted using a structured protocol to learn how CBA policies converged with everyday school functioning. The second interviews were semi-structured to explore these issues in more depth; insights expressed in the first interviews were used to prompt further discussion in the second interviews.

**Elite informants.** To triangulate principal perspectives, semi-structured elite interviews (Kezar, 2003) with three informants in leadership positions were also conducted. The union informant was the union president. The district informants were two administrators with direct experience on union-related issues. The protocol sought alternative viewpoints on the issues identified in the principal interviews.

**Documents.** To triangulate the various sources of interview data and to capture opposing narratives on this history of contractual disputes in the district, formal and informal documents tracking back to the 2000 school year were collected. These documents included local print media on strikes and court deliberations as well as approximately 120 pages of memos from the teachers' union. Mailers distributed by the union to their members were also included as were district website information and newsletters published by the superintendent.

## Data Analysis

Two methods of qualitative analysis were used for this study. The first was thematic to describe shared viewpoints on the CBA and its implementation (Boyatzis, 1998). These findings are descriptive and foreground principal perspectives in their own words. The second was

theoretical to test the fit of complexity theory as an organizational interpretation of collective bargaining processes in education (Tierney, 1988). Both methods were served by an iterative process of inductive and deductive coding (Glaser & Strauss, 1965). Codes were applied line-by-line to the interview and document data. The constant comparative analysis method was used to analyze the data recursively, allowing new insights to evolve initial codes into categories and themes.

The processes of induction and deduction were operationalized in our codebooks (DeCuir-Gunby, Marshall, & McCulloch, 2011). Induction relied on in vivo and grounded techniques to understand collective bargaining from the perspectives of agents. Deductive codes also serviced descriptive and theoretical findings. For example, to contribute descriptive nuance to the findings from production function studies, deductive codes tracked infringements on principal autonomy. The results are descriptive findings that serve the study's as organizational frames. Concurrent with the development of descriptive themes, we coded to support an alternative explanation of the data using the assumptions of interdependence, proximity, and infrastructure. The code proximity, for example, was used to tag site-based tensions between a principal and teachers at a given school. We used the code infrastructure to track the recurrences of rules and regulations that—according to principals—hindered system efficiency.

## Collective Bargaining at School Sites

In this section, we present data that describe the CBA's collaborative, coercive, and restrictive influence on administrative decision-making. These themes contribute descriptive nuance to the prior research that finds CBAs undermine administrative autonomy. Note that to ensure a fulsome discussion of the study's theoretical contributions, we postpone data analysis according to complexity theory until the paper's final section.

## Collaborative

Principals identified with teachers and the goal to protect them. To this end, they appreciated the assurance of explicit instructions, even thought they were uncertain on outcomes.

**Solidarity: "Their livelihood is being looked after."** In describing their administrative stance on CBA provisions, participants expressed a shared sense of purpose with teachers by recalling their early careers. Solidarity was inferred by a principal who described CBA protections as "[having been] mine at one point." Another described an obligation to continue wearing her "teacher hat" as an administrator because "the work's tough, and people are human… [and] they need some kind of protection to know that their livelihood is being looked after.

**Assurance: "The bible to understand the rules."** Principals also appreciated the CBA document, noting its mutually constructive aims. An elementary principal described the CBA document as "the backbone and framework for what we do." Likewise, a high school principal referenced the contract as "the bible to understand the rules." A middle school principal appreciated that the CBA did not "recreate the wheel," but codified step-by-step guidelines to handle "just the everyday [stuff] for how we do business." Another appreciated the CBA "because [administrators] screw… up." He went on to clarify that the document ensures that "people do [not] do things and then go, 'Holy Schnikes. I didn't know I violated this.'"

**Uncertainty: "It just kind of takes you over."** While principals lauded the document's intentions, they voiced process-oriented caveats. Several principals, in hindsight, raised concerns about the union's practices. One principal observed that teachers "get caught up in the momentum of the whole movement. It just kind of takes you over." Recounting his own experience as a striking teacher, another stated, "When the results of the negotiations afterwards

came out, basically, we got what was originally offered. Only, it was just in different language." One principal vilified the union, describing teachers as "pawns in that political stuff." Another pointed out that, in contrast to the CBA document, "…the strike actually accomplished… ill will in the community and between administrators and teachers."

**Collaborative takeaways.** Principals viewed the teacher contract as a shared resource that not only protected teachers, but also supported administrative efficiency. Principals identified as former classroom teachers. Putting on a "teacher hat," for example, suggested direct identification, not just empathy, for their employees and the challenges of public schooling. Parenthetically, principals pointed out that, by cataloguing failsafe mechanisms that prevented administrative "screw… up[s]," the teacher contract actually improved their own working conditions. Yet while principals recognized the contract's potential for mutual benefit, tensions emerged in discussing the uncertain influence of unions on the broad educational interests of teachers. The viewpoint that the "the strike actually accomplished… ill will in the community and between administrators and teachers" suggests the unintended consequences of collective bargaining outcomes on school constituents.

**Restrictive**

On certain contractual elements, principals reported that conflict was common.

**Evaluations: "Get it done on time**." In particular, principals raised concerns about the intricacy of deadlines associated with teacher performance evaluations. Even the simplest of evaluation circumstances—those that pertained to already tenured faculty—presented challenges. Consider, for example, that principals were required to hold "initial conferences …within the first twenty-five workdays of the school year," then wait two weeks to begin a first observation, but "no less than four weeks" for a follow-up conference and "no less than another four weeks"

for a second observation with “no less than four weeks” for a final conference to be held “no later than 30 days” prior to the end of the school year, but not without a written evaluation received “no less than five workdays” prior to the conference. An elementary school principal described the problem:

> I have 17 people I'm evaluating. If you're at a site that has a lot of evaluations that year or if you have a lot of new staff members… which is a much more detailed process, you really have to be organized to meet your deadlines.

Tensions arose because the stringency sometimes prevented the use of evaluations as a measure of quality control. A middle school principal explained, “There are some teachers here that get tenure because you don't follow timelines. They fight it, and they get tenure and they shouldn't be in classrooms.” Another confirmed that teachers “grab on to that very quickly and have evaluations thrown out if they don't meet deadlines.” Even the district’s lead contract negotiator confided that “the older evaluation model [did not] align… with the way we're really teaching these days.” Acknowledging the need to revise the evaluation provisos, she explained, “We decided let's not bite that right now… because… other things… were a little bit higher priority.”

**Transfers: “I would have hired somebody who could, in my opinion, do a better job.”** While holding teacher vacancies open until the school year ended was designed to protect teachers who needed reassignments, principals explained “it's not just a small contractual thing. It creates large issues…” By delaying the hiring of new teachers, transfer protections compromised recruitment. As one high school principal rhetorically asked and answered: “Where are all the teachers going? To the places that are hiring.” He added, “Then we… scramble[e]… to find who's left to fill these positions that people didn't take or that opened up.”

Another explained: “People aren't going to sit around and wait. Why would you? If you got an offer somewhere, you're going to take it.” A third principal described the tradeoff’s consequences as dire: “It's killing us in hiring, just killing us. That I attribute directly to the union.” Others suggested transfers “really trickle… down to affecting kids in the long run.” One principal weighed the pros and cons of a transfer hire over a long-term sub, noting, “I don't have somebody changing every 30 days,” but mentioning if not for accommodating the transfer date, “I would have hired somebody who could, in my opinion, do a better job.” Although a clause in the CBA suggested that transfer timelines could be altered by “mutual agreement,” a middle school principal reported that he had recently petitioned for an exception on the hiring hold date and was told that “the union was not willing to move that.”

**Professional development: “That's against your contract?”** Professional development criteria were also described as problematic. The contract language stipulated professional development as “any training or instruction delivered to a unit member by any method in an individual or a group setting.” The union conservatively read this to mean that professional development was unilaterally prohibited during the workday, including at staff meetings. An elementary school principal was exasperated by what she saw as an interpretive stalemate: “I really struggle to see, in any way, shape or form, not only how that is beneficial to students but how contract language could be [understood] in that way.” A middle school principal posed the rhetorical question: “So I'm trying to make it so you guys have more tools in your toolbox, and that's against your contract?” Principals surmised the issue was money as mandating “professional development [to] occur outside of the workday” meant entitlement to monetary compensation. The financial encumbrance constrained principals from using other options to support professional development. One principal clarified, “[The union is] not okay with me

providing a sub so that [teachers] can become better at what [they] do." Another regarded the professional development controversy was the union "just kind of playing games. They're twisting the words." The intransigence of the union's stance was overtly expressed in a memo distributed to all teacher members that read:

> Have you been pulled away from your students recently to be professionally developed…? UNFORTUNATELY [emphasis in the original], [the district's] interpretation of [the professional development provisions] was that they could do pretty much whatever they pleased with professional development and would proceed to do so. This is why your Site Reps have been asked to grieve every violation…

**Lesson plans: "I'd like to make a suggestion."** The union's conservative stance on contract language recurred in the context of advice about lesson plans, which the contract defines as "designed by the classroom teacher." One principal recounted an incident at a staff meeting: "[On my] first day here, [I] was like, 'Hey you guys, I want to see lesson plans dealing with routines.'" To this, [a] teacher responded, 'You can't tell us what to do in a lesson plan.'" The principal reported that she revised her language: "[So I said,] 'Okay. I'd like to make a suggestion …' [And the teacher said,] 'If you continue any further with this, you may find yourself with a grievance.' The story concluded with the principal's submission, "[So] I was like, 'Okay, well I'm going to leave these on the table, you may choose to or may choose not to focus on routines.' Although he recognized interpretive controversies existed, a high school principal resolved "to go ahead and run my staff meetings the way I want," with the caveat that "I'm [not] going against the collective bargaining agreement. I'm doing it because I think that the interpretation… is wrong."

**Class size: "Keep in mind that there are students involved."** Instead of referencing class sizes, the CBA measured teachers' daily contacts with students. A dispute surfaced when a middle school principal sought to address dwindling math scores. She followed CBA protocol by petitioning the union for a waiver to extend the length of the school's math periods. Although the union approved the request, they later held that the additional minutes of math instruction, from a personnel perspective, represented an increase in contacts with students. Even though the math teachers were standing in front of the same students and even though the number of unique names on their daily roster stayed the same, the union counted students in the extended math periods twice. The principal protested her arraignment on a technicality, noting, "Those kinds of things… make it challenging… to meet student needs." Another middle school principal asked rhetorically, "If it's for their kids to be more engaged in class or to learn the standards better, whatever the case may be, [teachers should] agree to it—that's student-centered—that's what it should be." She also pointed out that "[none] of the collective-bargaining agreement talks about students." Another principal summarized persistent conflict:

> A union perspective is very much focused on the employee without as much regard for the overall context of the school environment. I think as an administrator my job is to sometimes juggle the rights of employees but within the best interests of how a school has to function.

**Restrictive takeaways.** Principals raised concerns about the nature of the contract's influence, reporting conflict on several key school issues. By consensus, evaluation deadlines constrained quality control over classroom inputs in select cases where a scheduling error afforded a teacher the opportunity to appeal an unsatisfactory evaluation: "They fight it, and they get tenure and they shouldn't be in classrooms." Friction extended to transfer deadlines: "I would

have hired somebody who could, in my opinion, do a better job." Principals also questioned the union's blanket opposition to informal professional development. As one principal stated: "So I'm trying to make it so you guys have more tools in your toolbox, and that's against your contract?" Conflict also surfaced in the middle school principal's portrayal of the daily contact hours policy as a CBA loophole that made "it challenging… to meet student needs." These data imply that, although principals supported the contract's collaborative ideal, in practice, some protections functionally undermined the best interests of students.

**Coercive**

Tensions multiplied over the protections designed to promote administrative compliance.

**On-site delegates: "I'm required to do that."** At every school, one or more teachers served as union delegates which meant they helped chaperone a multi-step grievance process. The process involved voicing concerns to the on-site principal about potential violations and filing formal grievances if and when disputes could not be resolved. Principals, however, believed the process amplified—as opposed to mediated—conflict. One principal described the process as hampered by "emotionalism… [which] makes people have knee-jerk reactions rather than thoughtful discussions." An elementary school principal described the dynamic with his on-site delegates as "this us against them situation. It shouldn't be. It should be a very collaborative agreement between both parties." Other principals echoed these concerns: "It becomes so self-centered that people lose their minds with each other." Another principal apologized for her role in violating the contract, "I'm a rule follower, I guess. It's in the contract, I need to do it right."

**Grievance filing: "I don't want to get my hand caught in the cookie jar."** Although grievances rarely escalated to formal arbitration, formal disputes were common. Notably, all principals in this study had received at least one formal grievance during the 2015-2016 school

year. One principal shrugged off negative inference, “To me it's just these are the rules, let’s follow the rules.” In contrast, an elementary school principal—who was new to the district—explained that the threat of more filings shaped her behavior: “I don’t want to get my hand caught in the cookie jar too many times in my first year.” Others viewed grievances as distractions: “We have more productive, important things to spend our time on.” Another explained that grievances were low priority “when you’re dealing with a fight in front of a school in the morning.” Another tactic was to prevent delegates from getting involved in the first place: If a teacher comes in and says, ‘Hey, I want to talk to you about a potential grievance.’ I say, ‘Hey why don't you come back in an hour. I'll put you on my schedule.’ Then… you're building their confidence in you, that as their leader, you know what you're talking about. To me, that's important.” Another principal sought administrative advice from her union delegates “because the teachers are the ones in the trenches, making decisions and presenting lessons and teaching standards and building relationships with kids…”

**Coercive takeaways.** Principals believed that grievance protections—and the union delegates empowered to chaperone the process—stoked tensions with teachers. Accordingly, principals used different tactics to keep the grievance process at bay. Keeping a “hand [out of]… the cookie jar” avoided conflict altogether. In choosing between “dealing with a [student] fight” versus dealing with a teacher grievance, the principal recognized conflicting priorities. As a preventative measure to deescalate grievance threats, principals notably shared executive power, a choice which nurtured teacher “confidence in [the principal]… as their leader.” These strategies demonstrate how grievances shaped principals’ everyday behaviors, inferring an overall coercive influence on administrative decision-making.

## Discussion

Data in the preceding section specified tensions associated with the implementation of different teacher protections. Consistent with prior qualitative findings, principals not only described the contract's various encroachments on administrative authority, but also highlighted its potential to syphon school resources away from students. Adding nuance to prior findings, the data depict these tensions on a spectrum of influence from fostering a collaborative to a unilateral dynamic. Although the contract symbolized solidarity with teachers, its protections were interlocking so that their cumulative influence on principals had the potential to be coercive.

### Collective Bargaining in a Complex System

Here we cross-examine these inferences based on the organizational assumptions of complexity theory. Complexity theory does not dispute that, within organizations, agents exercise decision-making power, but they do so within the context of system-level variables that have been perennially overlooked in the collective bargaining research. A congruent, yet different interpretation emerges when we consider the interdependence of system agents, the everyday proximity of their social interactions, and the infrastructure in which they are embedded.

**Interdependence.** While an agent perspective focuses on the decisions that principals make in a leadership capacity, complexity theory calls attention to the ways in which agents are interdependent. This interdependence subsumes the notion of free will. Recall the middle school principal who used the contract to mediate her decisions: "To me it's just these are the rules, let's follow the rules." The contract and its rules personify a dynamic of organizational pushback against rational choice. Although principals and teachers can independently interpret how to

follow (or disobey) the rules, from an organizational perspective, an individual's interpretations (or intentions) are empirically irrelevant. Of consequence are the interactions amid agents. Recall the interactive tactics of the principal who mitigated grievances with preemptive social measures: "Hey why don't you come back in an hour. I'll put you on my schedule." In treating a potential grievance as an opportunity for interaction, the principal recognized and deescalated the nascent tensions of implementing site-level compliance with the CBA.

**Proximity.** Given the premise that agents are interdependent, social proximity helps explain the source of tensions amid agents in this study. Consider the power struggle described by the elementary school principal who did not "want to get my hand caught in the cookie jar too many times in my first year." From an agent perspective, a principal wields executive powers to implement the contract. By virtue of the contract's grievance process, however, a teacher holds the power to challenge the principal's interpretation and implementation. From a complexity theory standpoint, tensions arise when the status-quo of interdependence is threatened or breached. The proximity of agents strengthens local interdependence, constraining the rational choice of a single agent whether that agent is a principal, or a teacher matters little. The interdependence of site-level agents categorically resists dissenting opinions, protecting the system itself from the decision-making power of one. Proximity helps explain the principal's experience of finding her "hand caught in the cookie jar" after broaching the topic of lesson planning at a faculty meeting. The principal described a confrontation that escalated to a threat: "If you continue any further with this, you may find yourself with a grievance." Yet complexity theory suggests that of foremost relevance is the principal's admission that it was her first week of school, implying that she had not yet been socialized to the cohesive outlook tendered by local proximity. The takeaway is that new hires—regardless of their employment function—need time

to adapt to the social norms of that site. Conversely, the circumstances were ripe for tension because teachers had not yet adapted to the new agent's leadership style within their midst.

Social proximity increases the quality and frequency of interactions, cultivating shared experience and trust. In contrast to the principal in her first year, the principal with site longevity had likely already earned the confidence of his staff "to… run my staff meetings the way I want." This interpretation challenges the inference that the principal was taking a rational stand against the overreach of union power on his campus. From a complexity theory standpoint, the statement that "I'm [not] going against the collective bargaining agreement" hints at site solidarity. The possessive pronoun the principal used to describe "my staff meetings" infers a rhetorical position that might as easily infer shared experience and trust with his teachers instead of opposition to their protections.

**Infrastructure.** Complexity theory also recognizes that system infrastructure mediates agent behaviors. Infrastructure shapes how agents not only do their jobs, but also how they understand their roles within the system. At play in these data are the nexus of two distinct infrastructures. The first is the hierarchical infrastructure of U.S. public education. The second is collective bargaining infrastructure transplanted from industry. With regard to public schooling, consider, for example, that the principals and teachers in this study are embedded in a system that has shifted from "religious aims to political ones to economic ones and, finally, to… individual opportunity" (Labaree, 2011, p. 381). As Labaree points out, a "consumerist vision of schooling has not only come to dominate in the rhetoric of school reform but also in shaping the structure of the school system" (p. 381). As the aims of public education have evolved, the system's underlying infrastructure, however, is expanded and adapted, but never entirely replaced. For better and for worse, today's principals and teachers are embedded in—and

therefore constrained by—yesterday's student-centric infrastructure, retained in the nested hierarchies of classrooms, campuses, districts, and states.

In contrast, the infrastructure of teacher unions replicates an advocacy model that enabled labor to challenge management decisions that were driven mostly by profit. In commerce, labor unions still largely function to democratize profits, either by increasing employee compensation or improving working conditions. In this way, collective bargaining infrastructure is predicated on the assumption of conflict between two stakeholder groups. Infrastructure calls attention to a central paradox that the teacher-centric focus of unions is at odds with the student-centered infrastructure of schools. Moreover, the conflict inherent in collective bargaining negotiations are inconsistent with the otherwise collaborative discourse amid school agents to serve students. Recall the lament of the principal who noted that "[none] of the collective-bargaining agreement talks about students. The omission held negative connotations because it conflicted with the social infrastructure's norm: "student-centered… [is] what it should be."

Complexity theory reframes the tensions amid principals and teachers in the data as evidence of social frictions based on inconsistent, though not necessarily incompatible infrastructure. Principals described their jobs as conciliators in an "us against them situation," circumstances which they resented because: "It shouldn't be." Recall the principal who summarized his role as "juggl[ing] the rights of employees, but within the best interests of how a school has to function." Teachers too regretted that the dynamic was contentious: "I think [the process] becomes so self-centered that people lose their minds with each other." Even the district negotiator questioned whether the contract "…aligns with the way we're really teaching these days." While tempting to impugn unions for imposing an adversarial dynamic on education

stakeholders, a system-level explanation disrupts the rational choice implication of blame for the behavior of an individual.

**Implications**

Complexity theory's assumptions have enabled us to demonstrate the ways in which the interdependence of school agents reflected the hidden influences of social proximity and system infrastructure on CBA implementation. Although we discussed social proximity and infrastructure separately, their influence works in tandem, begging questions of whether and how a collective bargaining agreement with teachers can accommodate the latent tensions of education where interactions amid labor and management are complicated by interdependence not just with students, but staff, parents, politicians, and taxpayers.

Our data offer several starting places with which to consider policy, practice, and research reforms. First and foremost, complexity theory suggests a conceptualization of unions as standalone organizations that apply external pressures to the complex system of the district. Understanding unions as an external influence on a complex system is important because it creates clear parameters for reform discussions. In the rainforest metaphor, unions function like climate, imposing drought or rainfall on the district' ecosystem, while the interdependence of system agents is a riverbed, resistant to seasonal water-level fluctuations. Social proximity and infrastructure will necessarily resist the precipitation of union negotiations represented by the CBA. Therefore, tensions are evidence of agent adaptation, not conflict.

From an agent perspective, tensions amid the principals and teachers reflected interpretive discrepancies which compromised the fidelity of CBA implementation within and across school sites. The principal who questioned the union's sincerity to reach a "mutual agreement" on transfer timelines reported that "the union was not willing to move," inferring a

breach of good faith. An organizational perspective widens the explanatory scope to reveal the complexity of attribution. For a riverbed to change its course, climate has an indirect effect, but rainfall or drought, for example, do not directly alter the earth's infrastructure. Rather, the domino effects of external conditions such as climate on the ecosystem's internal processes such as erosion play a crucial part. Adapting a student-centered infrastructure to accommodate teacher protections is an organizational process that like changing a riverbed takes place over time. From such a perspective, the volume of grievances confirms change is occurring, though the desired performance outcomes are delayed. Although the CBA text itself certainly shapes how individual agents interpret and implement teacher protections, the tensions amid agents can be conceptualized as evidence of the system adapting its student-centered infrastructure to fit teacher-centered concerns.

To expedite change, complexity theory suggests policies to leverage the system's interdependence by increasing the proximity is prudent. In comparison to the everyday proximity of principals and teachers, union leaders are socially estranged from the teachers they represent. Increasing the quality and frequency of interactions amid union leaders, district administrators, and school agents will incur more social cohesion, thereby increasing the system's bandwidth to adapt and decreasing the degree of counter pressure that incurs delay. Policies that incentivize principals to interact preemptively with site delegates on governance issues including the hiring of new teachers may be helpful. We also recommend future research to explore opportunities to better integrate union leaders and their constituents.

Another finding of interest is the interlocking aspects of the contract's protections. Our data raise concerns about the extent to which students' on-site needs were sublimated because the grievance process was too stringent. Yet rather than infer policymakers reconsider how

grievances are handled so that the process is not unduly weighted, complexity theory suggests expanding the collective bargaining agenda to protect the interdependence of education stakeholders. The infrastructure of collective bargaining procedures reflects the assumption that two or more parties—such as labor and management—have conflicting financial interests, but education is not cut and dried. To collectively bargain better working conditions for teachers, an approach that reflects agent interdependence might mean a more inclusive conceptualization of who is bargaining for what. This would upend the exclusivity of unions as teacher advocates, allowing unions to rethink their role as external sources of pressure. Research to understand if and how districts and unions might jointly reconceptualize the process to leverage agent interdependence on behalf of the system itself is needed. Studies might explore what teacher protections will be lost if unions and districts change their advocacy paradigm.

**Closing Remarks**

The data demonstrate how the functioning of the system writ large is brought to bear on an agenda to protect teachers. Ultimately, gaps in the research on teachers' unions are problematic in a political climate of school accountability. Without empirical consensus, scholars cannot reliably suggest reforms to achieve an ideal supply and demand equilibrium between teacher inputs and education outputs. Meanwhile, mainstream policy discourse increasingly questions the value of teachers' unions. Because the literature does not present a clear, monolithic picture of whether unions are "good" or "bad," the narrative that unions undermine school autonomy fuels the contentiousness of ongoing debate.

In returning to the question of whether unions are "good" or "bad" for education, the implications of our qualitative data are limited to the task of theory-building. If interdependence mediates the free will of agents, salient questions are posed to the research community. How

does a school district actually change? How do social patterns alter education reform trajectories? What assumptions about reform are unaccounted for in the prior research? Our data suggest that education reform is a complex process; tensions amid stakeholders are encouraging signals of systemwide change. To support authentic change, researchers should continue to explore the sources of organizational pushback theorized in this study. That the demands of one set of agents are inextricably tied to the demands of all is an alternative to the otherwise default assumption that agents exercise rational choice.

We acknowledge that findings from this study are consistent with a body of research that calls for "reform bargaining" (Johnson, 2004; Johnson & Kardos, 2000; Kerchner & Koppich, 1999; 2000; Kerchner, Koppich, & Weeres, 1997, 1998; Koppich, 2006). This body of work argues to set aside the industrial tenets of bargaining that make adversaries of teachers and administration. "Reform bargaining" theorists advocate for new ways of negotiating that recognize the potential to boost student learning via union-management collaboration. Our study does not dispute this recommendation. We expose additional mediating factors, particularly interdependence and proximity, that can inform the research-based modeling of "reform bargaining" policies and practices.

This paper has used data to argue that prior research has undertheorized the complex system in which teacher bargaining is set. Looking forward, we invite policy researchers to consider proximity and infrastructure in developing policy and practice recommendations. These hidden sources can be leveraged so that their counterpressure function is not a reform process obstacle, but an ally. The interdependence amid site-level agents creates checks and balances that ensure CBA protections are adapted to fit underlying organizational dynamics and infrastructure. While the frequency of social interactions on school campuses builds a common experience that

preserves democratic ideals, infrastructure ensures change that is both thoughtful and sustained across the system.

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## Figures

Figure 1: An Ecological Perspective on Systemwide Adaptation