

# Dynamics of Asymmetric Conflict

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## Occupy this: why some colleges had Occupy Wall Street protests

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### ABSTRACT

During autumn 2011, Occupy Wall Street protests began rapidly emerging at college and university campuses across the United States. Many of these student groups developed an agenda based on localized issues at their particular college. Still, nearly all Occupy student protests also followed the common goal of bringing change to a system plagued with an inequality gap between the “99 and 1 percent”, massive financial debt, rising tuition costs, and a poor labour market for students who spend thousands of dollars for their education. While these students are taking aim at large, powerful, “elitist” institutions, data indicate that these protestors belong to institutions similar to those they are opposing. Our data from 191 colleges and universities with an “Occupy” event indicate that protests are more likely to occur at four-year institutions that have a largely white population. Additionally, these protests emerge at institutions with the greatest amount of resources including larger staffs, higher faculty wages, and higher tuition fees.

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Protests; Occupy Wall Street; student movements; political mobilization; social movements

## Introduction

While social scientists across a variety of disciplines have devoted considerable attention to the causes and consequences of the Occupy Wall Street (OWS) movement (see Calhoun, 2013; Milkman, Luce, & Lewis, 2012; Tarrow, 2011), a key feature that has gone unnoticed is the participation of students and the emergence of OWS protests on college and university campuses. Indeed, student participation in OWS was an important part of the larger movement. For instance, McCarthy (2012, p. 51) notes:

The student aspect of OWS cannot be overlooked. For years, all I heard was that my generation was apathetic, that we were out of touch with reality, that there were no battles left for us to fight. The last two months have proved that wrong. Young people realize what is going on in the world. We know that we have been cheated out of the futures that we were promised.

Although the story of Occupy Wall Street swept the media, it was not fully embraced everywhere. Certain cities and college campuses had OWS movements and others did not. This article focuses on the involvement of students – a large component of the OWS movement

(McCarthy, 2012) – and specifically the involvement of students with OWS on US college campuses. While previous research focuses on the OWS movement more generally, we add to this literature by asking what factors made it more likely that a campus might have an Occupy event while others did not.

In the ongoing debate over what mobilizes people to act collectively, grievances and resources are often pitted against each other as competing explanations (see Collier & Hoeffler, 2004). However, we do not see these factors as necessarily competing in nature. Instead, we look to both grievances and resources to identify potentially useful variables and build a model of where OWS events were likely to occur. Specifically, we contend that while much of the youth population had reason to be aggrieved, some colleges are likely to be more aggrieved than others given the imbalance of resources and funding in higher education. However, the distribution of resources and funding, while likely to generate grievances, may also be an underlying source of protest and collective action. Thus, in this study we use this grievance–resource intersection to predict where OWS protests are likely to happen.

Our analysis of the OWS protests is important, though, not just within the American context or only in the context of nonviolent protests. Rarely can analysis be done that sheds light on one of the key arguments in contentious politics – how resources and grievances may impact on the decision to mobilize and engage with contentious politics as opposed to grievances. There is a great deal of literature on the impact of grievance on mobilization (Cederman et al., 2010; Gurr, 2000) but such research often fails to take into account the issue of resources in ways that reach beyond the section of the population that is aggrieved. While there is a large literature that argues for the importance of resources and capabilities as the key factor in contentious mobilization (Alimi, 2003; McCarthy & Zald, 1977) there is often very little data that can capture and analyse the impact of both grievances and resources together in order to understand how they jointly impact on the choice of contention. While our data are focused on a very specific time and place and only within the context of American politics, they do allow us to more thoroughly apply these arguments empirically, using factors that capture elements of grievances and resources to see what is enabling and encouraging groups to mobilize to protest. Accordingly, we believe the current study offers an opportunity to not only to understand the Occupy movement but to better understand contentious politics as a whole.

To assess the nature of the OWS movement on college campuses, we compile a unique dataset of 191 “Occupy” events occurring on American college and university campuses between September 2011 and May 2012. We use this new dataset to first examine factors associated with an Occupy event including indicators of both resources and grievances. We then explore the possibility of forecasting events occurring on college and university campuses and then evaluate how well our model predicts where these events are most likely to occur. Forecasting protests enables us to see the interplay of grievances and resources because grievances can also be present in affluent universities. Underlining the presence of such grievances even at wealthier campuses is the fact that students at these colleges are exposed to a system that takes large amounts of wealth and resources from the students in the form of high tuition and other fees and year-to-year tuition increases to bolster multi-million and even billion dollar endowments and higher salaries for faculty and administrators (Williams, 2006). Such actions most likely foster resentment in students, who are often subject to multiple tuition fee increases during their enrolment period. As one UC Berkeley

student stated at an Occupy event: “The regents and President Yudof should be understood as part of the 1 percent” (Krbechek, 2011).

In the following sections, we provide the background of the Occupy Wall Street Movement on college and university campuses and discuss why resources and grievances at these institutions may be important factors in understanding at which institutions students mobilized in protest. We then describe our strategy for data collection, our measures, and our analytic strategy. We conclude with a discussion of the implications of the model for future research on protests and predictions about where similar events may occur.

## OWS on campus

In autumn 2011, a storm of protest swept over the United States. In cities and on college campuses across the country, the Occupy Wall Street movement brought people onto the streets and kept them there for extended periods of time. For a generation that has been accused of being disconnected and unconcerned it seemed like a wakeup call. The question of where youth would organize to start OWS movements is an especially important topic to explore given the general perception of America’s youth. Indeed, the massive OWS movement on campus was surprising for a number of reasons. In addition to the general disengagement of youth noted above, participation in protest by young people had been in a long-term decline for years (Caren, Ghoshal, & Ribas, 2011; Fisher, 2012) and long-term trends have shown low political participation among younger generations (Levine & Lopez, 2002). Norris (2003, p. 2), for example, has argued that, “young people are believed to be particularly disillusioned about the major institutions of representative democracy, leaving them apathetic (at best) or alienated (at worst)”. Other scholars have demonstrated that the participation of the youth in politics in America is in serious decline (Macedo et al., 2005; Patterson, 2002; Stoker, 2006). Declining participation is particularly relevant as poor and middle class youth across the United States are facing a particularly tough environment that threatens their future in the work force, as well as growing social inequality (Duménil & Levy, 2004; Stiglitz, 2012), all of which might spur protest. With the great recession, jobs for college graduates declined significantly (Brown, 2011; Spreen, 2013), and at the same time many undergraduates also faced tuition hikes and campus budget cuts (McCarthy, 2012, p. 50). Yen (2012) points out that:

The college class of 2012 is in for a rude welcome to the world of work. A weak labor market already has left half of young college graduates either jobless or underemployed in positions that don’t fully use their skills and knowledge. Young adults with bachelor’s degrees are increasingly scraping by in lower-wage jobs – waiter or waitress, bartender, retail clerk or receptionist, for example – and that’s confounding their hopes a degree would pay off despite higher tuition and mounting student loans.

In light of the trend toward the general disengagement of youths, the spread of the OWS movement across campuses was a particularly unexpected event. To the surprise of many observers, in autumn 2011, on campuses across the United States, students were protesting, holding teach-in rallies, and staging campus occupations involving tents and sleeping bags (McCarthy, 2012). One incident that became a call to action for the movement was the protest on the University of California-Davis campus. In this event, protesting students sitting in a line on campus were pepper-sprayed by a university police officer (Lubin, 2012). This incident became a global meme of oppression (Dawkins, 2006; DeLuca, Lawson, & Sun, 2012) and more than 60 campuses protested in support of the Davis students (McCarthy, 2012). For a

brief moment it seemed that OWS members were seizing the public space on campus in a struggle with authority that one participant defined as:

At Occupy Cal and Occupy encampments everywhere, these two publics – one defined from above, the other on the ground, distinguished by its ethos of consensus and solidarity – clashed over the right to impose their own lexicon of order over a particular space. One sought to impose a system of curfews and public order, the other a language of community and justice. (Bintliff, 2012, p. 225)

Various progressive leaders saw this movement as a key shift in politics, with people finally standing up to “economic injustice” (Hardt & Negri, 2011) and “predatory banks” (Barber, 2012, p. 14; see also Stiglitz, 2012). As Dube and Kaplan (2012, p. 1) argued, “Inequality in the U.S. has risen dramatically over the past 40 years. So it is not too surprising to witness the rise of a social movement focused on redistribution.” Based on these accounts, we can suggest the climate for protest was ripe, but where should we see protests? Progressive arguments would contend that protests are most likely at the campuses that are poorest. However, as Stiglitz points out, “support came not just among the poor and the disaffected” (2012, p. xiv). Accordingly, we would expect factors that not only capture grievances, but also resources to protest, should enable us to forecast which campuses are most likely to see protests.

### **For richer or poorer?**

Despite the focus on inequality and unfairness as a driving force of collective action, and given the general level of challenges by students, it is plausible to expect protests to emerge at campuses that are wealthier as the resources are present to protest. To be sure, a focus on resources as a driving force of protests are not dismissing the role of grievances, as grievances were prevalent, but rather suggests that resources matter when explaining variation in a condition of generalized grievance. Krueger and Maleckova (2003), for example, argue that since they find that more educated and wealthier Palestinians participate in terrorism this undercuts general grievance arguments. However, we do not see the mobilization argument in this manner. Most Palestinians share a grievance, yet, it is resources that allow some to mobilize while others cannot.

In the OWS context, it is the aggrieved students who also have resources that will mobilize. As the early scholars of contentious politics like Gurr (1970) noted, mobilization around sources of frustration do not necessarily occur among the poorest, most deprived portions of society. Relative deprivation, or a subjective feeling that an individual or group is not receiving something that a similar individual or group is, seems unfair and can move people to action. While these students are not absolutely deprived, it may be that changes in their situation are leading them to be relatively worse off.

Thus, forecasting should be best with variables that capture both grievances and resources to mobilize. Note that grievance alone is not enough, and resources can empower those to protest that are less aggrieved. Many white people motivated by a sympathy for the aggrieved participated in the civil rights movement in the 1960s (Berger, 2006; Chappell, 1996). Research on participation in OWS protests in New York City found that most of the participants were white, financially stable, and had attended or were attending college – many at elite institutions (Milkman, Luce, & Lewis, 2012). Consequently, “greater inequality may reflect as well as exacerbate factors that make it relatively more difficult for lower-income individuals to mobilize on behalf of their interests” (Dube & Kaplan, 2012, p. 1).

Although grievances are common, mobilization is less so. Researchers of contentious politics have pointed out a great number of challenges to mobilization. Lichbach (1995), for example, argues that the key challenge facing rebels is recruitment, while others argue that the opportunity structure that is available will be a determining factor (Banaszak, 1996; Giugni, 1998; McAdam, 1982; Tarrow, 1989), as well as the resources available to potential mobilizers (Banaszak, 1996; Boyns & Ballard, 2004; Klandermans, 1984; Lichbach, 1998, McCarthy & Zald, 1977; Tilly, 1978, 1995). All of these challenges create a social dilemma and barriers to collective action (Lichbach, 1995). In this context, it is the better off or better funded who are most able to resolve this dilemma and answer in the affirmative when asked to take a week off work or skip a week of classes to protest or form encampments on the campus front lawn.

Because of this, we believe that Occupy events are more likely to appear at elite colleges, which have greater financial resources and are more likely to have students who come from higher socioeconomic backgrounds with more financial resources themselves, which provides them the opportunity to protest (Chetty et al., 2017; Giancola & Kahlenberg, 2016). Essentially, this means wealthier students at elite colleges are more likely to have a stable source of financial support and can take time to join in Occupy protests that last several hours or even days and weeks. Conversely, students at less affluent universities are less likely to have similar resources and therefore less opportunity to join a student movement.

## Data and methods

This study constructs a unique nationally representative dataset containing 191 Occupy events on college and university campuses occurring between September 2011 and May 2012 (Appendix Table A1). To date we know of no other dataset that provides information on events that have occurred on college campuses. While the data do have limitations and may omit events that were not available based on the methods used in the research design, such as Occupy events that were not reported in local outlets, we believe the data are the most comprehensive for the study at hand.

Data were collected and coded using Internet searches to identify OWS events occurring on any college or university campus in the United States. To locate colleges and universities with Occupy movements we began conducting searches using Google and Lexis/Nexis to find national, local, and student newspaper sources with articles covering Occupy protests on college campuses. Searches were conducted using terms such as, “Occupy AND college”, “Occupy AND university”, “Occupy AND students”. From scanning news articles generated by the search terms, we composed an initial list of colleges and universities that had “Occupy” movements. When a news article appeared indicating that a particular institution had an Occupy event, we conducted an additional search using Google, Lexis/Nexis, and the college’s student newspaper website (if one existed) to locate additional news articles to confirm the existence of the event and generate details about it.<sup>1</sup>

We created a dichotomous indicator of whether or not an institution experienced an Occupy event. OWS events were only included in the data if the details of the event specified the involvement of students. Certain cases were not included in which OWS protesters used college campuses for Occupy movements unaffiliated with the university, such as a city-affiliated Occupy movement composed of memberships from local residents only.

To gather information about the colleges, we collected data from the National Center for Education Statistics (NCES) using the Integrated Postsecondary Education Data System (IPEDS). Data from IPEDS provided detailed characteristics of colleges and universities in the United States. Variables of interest extracted from these data include information on college characteristics, such as financial aid information, demographic and socioeconomic characteristics of student populations, number of full-time faculty members and faculty salaries. Data on variables from IPEDS were collected from 2010 (unless noted otherwise). From the original IPEDS dataset we omitted all private for-profit colleges and excluded institutions from US foreign territories and US Military Service schools. Following these omissions we are left with data on characteristics of 2871 private non-profit and public US colleges and universities.

## Measures

### *Dependent variable*

*Occupy episode:* The dependent variable is the presence or absence of an Occupy episode at a given college or university. This is coded as a binary variable where 1 indicates that at least one Occupy event occurred at the institution and 0 indicates that the institution did not experience an Occupy event.<sup>2</sup>

### *Resource variables*

*Total staff:* This is a measure of total faculty and any full-time equivalent (FTE staff) at the university (2009–2010). According to IPEDS, “The full-time-equivalent (FTE) of staff is calculated by summing the total number of full-time staff from the Employees by Assigned Position (EAP) component and adding one-third of the total number of part-time staff.” We would expect that universities with larger staffs have more wealth and this to be connected with other measures of student resources.

*Faculty salary:* Collected from the National Center for Education Statistics, this is the average salary equated to a nine-month contrast of full-time instructional staff (2009–2010). Similar to the total staff measure, this variable potentially captures resources given that colleges with more FTE staff are likely to be richer and earn higher salaries.

*Students:* This indicator is the total number of students at the university by a 12-month unduplicated head count (2009–2010). These data were again collected by IPEDS and are defined as: “The sum of students enrolled for credit with each student counted only once during the reporting period, regardless of when the student enrolled.” The number of students is a resource for the movement. More students mean more people to mobilize. Like studies of civil conflict, population is often a strong predictor of mobilization and violence (Fearon & Laitin, 2003).

*Cost:* Cost is measured as student tuition fees in 2009–2010. This variable captures both grievance and resource potentially and in some ways is the hardest to disaggregate. On the one hand, students paying high tuition fees are likely to have a grievance associated with it. At the same time, students coming from families that are able to pay these fees are more likely to have the resources to not work and to spend effort and time organizing. Ultimately, we choose to characterize cost as a measure of resources.

## Grievance variables

*Percentage change cost:* The change in cost measures the percentage change in student tuition fees between academic years 2009/10 and 2010/11. Increased cost of attendance was a core issue in the student Occupy movement as many campuses organized to fight back against tuition hikes (McCarthy, 2012, p. 50). Accordingly, we expect an increased cost of attendance to be associated with higher levels of grievance among the student population. As we state above, this change in cost creates feelings of being relatively worse off, not necessarily absolutely so.

*Percentage Pell grant:* Pell grants are financial assistance for students who demonstrate a financial need to help meet education expenses. We consider the percentage of students receiving Pell grants a measure of grievance, as it is an indicator of the disjunction between cost of attendance and ability to meet the cost of education. However, the expected direction of the effect of Pell grants is less clear. A higher percentage of Pell grants may indicate a greater proportion of the student body that has financial need and therefore higher levels of financial grievance. However, Pell grants may also serve to alleviate some grievance by reducing the financial burden felt by students. A positive sign for this variable would suggest support for the notion that these types of grants are associated with grievance, and a negative sign would indicate these grants are associated with less financial burden felt by students.

*Percentage first time loan:* We measure the percentage of students using a loan for the first time to cover the cost of attendance. While the use of loans to cover the cost of attendance are common, we consider percentage first time loan a measure of grievance as it indicates a gap in the ability to cover the cost of education.

## Control variables

*Type of university:* We include a dummy variable coded 1 for public institutions and 0 for private non-profit institutions. The public–private divide captures elements of both grievances and resources. Public education can be considered a grievance since public institutions are likely (though not always) to have more students who struggle to pay for college and are not part of the financial elite. However, large public institutions often have greater numbers of students, which makes it easier to mobilize. Conversely, students at private institutions may be more likely to mobilize as the majority of the student body is more affluent and has more resources to protest. Given the unclear characterization of type of university we characterize it as a control variable.

*Four-year programme:* We control for a dichotomous measure of whether a college is primarily a four-year programme or not.

*Region:* To measure this concept, we divide up the geographic regions based on the National Center for Education Statistics groupings. The regions include: New England, the Mid-Atlantic, Great Lakes, Plains, Southeast, Southwest, Rocky Mountain, Far West. These different regions have variation in histories of mobilization and activism (Levi & Murphy, 2006) that may correlate with some of our key grievance and resource measures.

## Analytic approach

This study proceeds in two stages to assess the ability of our model to predict the occurrence of Occupy events on college and university campuses. In the first stage, we use a probit model to examine the association between resource and grievance measures on the probability of

an OWS event occurring. In the second stage, we examine how well our model predicts these events based on our data. We first examine the ability of our model to predict OWS events on college and university campuses using simulation methods created using Boehmke's *Plotfids* programme for Stata and Tomz, Wittenberg, and King's (2003) *Clarify* programme, which draws on simulations of model parameters from their sampling distributions and uses the given values of observed explanatory variables to convert these parameters into expected values (see King, Tomz, & Wittenberg, 2000). We apply this procedure to demonstrate how a change in each independent variable leads to a change in the probability of an Occupy event.

Next, we apply the Receiver-Operating Characteristics (ROC) curve as a means to evaluate the model fit.<sup>3</sup> The ROC curve provides a graphical display of how well the model predicts true positives (a protest event occurred and we predicted a protest event), or sensitivity, compared to false positives (a protest event did not occur but we predicted one), or 1-specificity. Since Occupy events are fairly rare, we could accurately predict these events by always predicting no event (0) as Occupy; however, using the ROC curve presents a better way of assessing predictive ability as it takes into account this trade-off between predicting false positives vs. true positives. Finally, as overfitting in model selection is a potential concern, we examine the robustness of these results by applying a K(4)-Fold Cross-Validation procedure (Ward et al., 2010).

## Results

### Sample characteristics

Table 1 presents the sample characteristics. Column 1 reports the full sample including all institutions with and without Occupy events. In total, we find that 191 colleges and

**Table 1.** Descriptive statistics.

Variable	Full sample (Column 1)		Occupy colleges (Column 2)		Non-Occupy colleges (Column 3)		<i>p</i> -value
	Mean	SD	Mean	SD	Mean	SD	
Occupy	0.067	0.249	1.000	–	–	–	–
Public institution	0.553	0.497	0.759	0.429	0.538	0.499	***
Four year	0.641	0.480	0.958	0.201	0.618	0.486	***
New England	0.074	0.262	0.136	0.344	0.069	0.254	**
Mid-Atlantic	0.168	0.374	0.194	0.396	0.166	0.372	
Great Lakes	0.154	0.361	0.152	0.360	0.154	0.361	
Great Plains	0.110	0.313	0.042	0.201	0.115	0.319	^
Southeastern	0.254	0.435	0.152	0.360	0.261	0.439	***
Southwestern	0.085	0.278	0.079	0.270	0.085	0.279	
Rocky Mountain	0.033	0.178	0.031	0.175	0.033	0.178	
Far West	0.124	0.329	0.215	0.412	0.117	0.322	***
Total staff (1000)	0.833	1.833	4.528	4.676	0.569	1.004	***
Faculty salary (\$1000)	59.907	17.656	83.857	17.175	58.200	16.408	***
Students (1000)	8.497	10.812	24.197	15.002	7.378	9.511	***
Cost (\$1000)	11.610	10.745	13.618	12.104	11.467	10.630	*
% change cost (2009/10–2010/11)	0.581	0.644	0.778	0.726	0.567	0.635	***
% Pell Grant	43.907	19.682	29.073	13.638	44.965	19.622	***
% first-time loan	48.127	29.278	47.382	18.830	48.181	29.885	
Total observations	2871		191		2680		

^*p* < 0.1 \**p* < 0.05; \*\**p* < 0.01; \*\*\**p* < 0.001.

The *p*-value represents results from *t*-test of difference in means between institutions with an Occupy event and institutions without an Occupy event.

universities, or about 6.7% of our sample, had an Occupy event that occurred between September 2011 and May 2012.

Columns 2 and 3 report differences across institutions with and without an OWS event. A comparison between these two groups shows a number of differences in covariates between those that experience an Occupy event and those that do not. Notably 76% of colleges with an Occupy event were public institutions. Institutions with Occupy events were also more likely to be four-year colleges compared to community colleges: nearly 96% of those with an Occupy event were four-year colleges. There is also a large degree of regional variation in Occupy movements. Occupy events were more likely to occur in the New England and Far West region relative to other areas in the United States and were far less concentrated in the Midwest and Southwestern regions.

Institutions with Occupy events were also higher among a number of the resource measures. Occupy institutions were found to have significantly higher numbers of staff, higher faculty salary, more students, and higher tuition fees on average. Regarding the grievance variables, the differences between the two groups diverge a bit. For instance, institutions with an Occupy event incur a larger percentage change in cost of attendance between academic years 2009/10 and 2010/11. However, Occupy colleges were found to have a lower percentage of students afforded Pell grants on average and no difference is found between the percentage of students with a first-time student loan.

Overall, the descriptive statistics from our sample detail an interesting pattern. While Occupy events were rather rare, key measures of resources and grievances differ quite a bit between those colleges with an Occupy event and those without. These findings demonstrate that those with an Occupy event have more resources on average, as well as more grievances in the form of greater increases cost of attendance relative to non-Occupy colleges.

### ***Main analysis***

Table 2 provides the results of our probit model reporting the marginal effects. All regression models are run with cluster standard errors on the state, as there may be correlations among colleges in nearby areas that promote Occupy events. The results can be interpreted as a unit change in the independent variable being associated with a percentage change in the likelihood of an Occupy event occurring. Model 1 reports the findings from our full model including all resource and grievance measures. The findings from our full model indicate that both public institutions and four-year institutions are among the strongest predictors of Occupy events. Many resource variables are also related to the occurrence of an Occupy event, though the relationship is rather weak. For instance, a \$1000 increase in average faculty salary or the cost of attendance both increase the probability of an Occupy event by approximately one-tenth of 1%. Grievance measures also have an overall weak relationship with the occurrence of an Occupy event. The measures for the percentages of students receiving a Pell grant and a first-time loan are unrelated to the occurrence of an Occupy event. However, there is a moderate relationship between increases in the cost of attendance, with a one percentage point increase in cost of attendance increasing the likelihood of an Occupy event by 1.4%.

Model 2 presents the results including only measures of resources. Compared to the full model we find similar overall results. Occupy events are significantly more likely to occur at

**Table 2.** Marginal effects of probit model regarding the probability of an Occupy event.

Variable	Full model (Model 1)		Resource model (Model 2)		Grievance model (Model 3)	
	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE
Public institution	0.087**	0.028	0.086**	0.029	0.143***	0.019
Four year	0.103***	0.016	0.107***	0.015	0.157***	0.018
New England	0.007	0.012	0.007	0.012	0.006	0.023
Mid-Atlantic	-0.023	0.019	-0.026	0.018	-0.015	0.028
Great Lakes	-0.023	0.015	-0.025	0.016	-0.016	0.025
Great Plains	-0.057***	0.020	-0.059**	0.020	-0.065*	0.028
Southeastern	-0.050*	0.020	-0.050**	0.019	-0.059*	0.030
Southwestern	-0.036^	0.019	-0.036*	0.018	-0.034	0.028
Rocky Mountain	-0.034	0.027	-0.033	0.028	-0.051	0.033
Total staff (1000)	0.007***	0.002	0.008***	0.002	-	-
Faculty salary (\$1000)	0.001*	0.000	0.001**	0.000	-	-
Students (1000)	0.002***	0.000	0.002**	0.000	-	-
Cost (\$1000)	0.001	0.001	0.002^	0.001	-	-
% change cost (2009/10–2010/11)	0.014^	0.008	-	-	0.045***	0.008
% Pell grant	-0.000	0.000	-	-	-0.002***	0.000
% first-time loan	0.000	0.000	-	-	-0.001***	0.000
Total observations	2871		2871		2871	

^  $p < 0.1$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ ; Coefficients reflect marginal effects.

Standard errors clustered on state.

Far West is reference category for region.

public institutions and four-year colleges. After removing the grievance variables, the effects of our direct measures of resources remain similar to that of the full model. Total staff, faculty salary, students, and cost of attendance all have a weak, yet statistically significant relationship to the occurrence of an Occupy event.

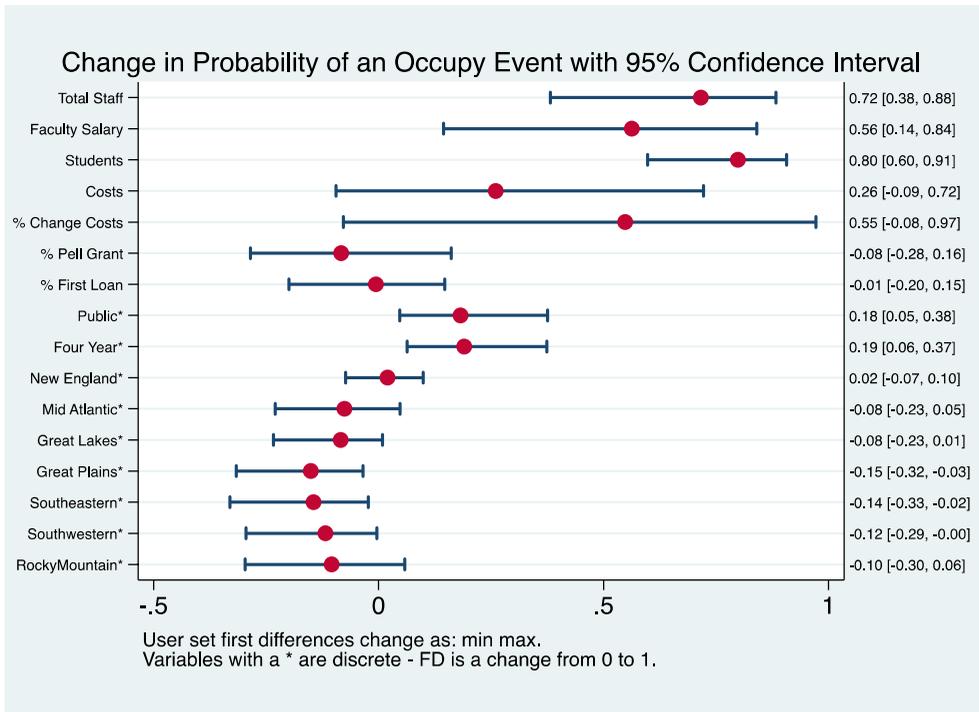
Model 3 reports the findings when only including grievance measures. In contrast to the full model, Model 3 shows increased magnitude of the grievance variables after removing measures of resources. For instance, the coefficient of change in cost of attendance increases in magnitude such that a one percentage point increase in the cost of attendance increases the probability of an Occupy event by 4.5%. This change in magnitude may in part result from any correlation between change in the cost of attendance and the cost of attendance, as well as other resource measures. Coefficients for percentage of students receiving a Pell grant and percentage receiving a first-time loan also change slightly in the grievance-only model; however, both still have only a weak negative association with the presence of an Occupy event.

One concern with the model is multicollinearity as several of the measures are most likely related. For example, public universities are likely to have larger faculty and private universities have, on average, fewer students. Bivariate correlations reveal these associations (see Table 3). Examining the correlations suggests moderate associations between a number of variables in the model. For instance, number of students, faculty salary, and total staff are all moderately correlated. However, we find that removing any of these variables from the model does not change the substance of the results, all variables have the same direction of result and their significance or magnitude does not qualitatively change.

Figure 1 reports the results from simulation methods created using Boehmke's Plotfids programme for Stata and Tomz, Wittenberg, and King's (2003) Clarify programme. As the figure shows, total staff, faculty salary, number of students, and cost have the largest positive impacts on the possibility of an Occupy episode occurring at a college. The figure provides

**Table 3.** Correlation matrix.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Occupy	1.000																	
2. Public	0.111	1.000																
3. Four year	0.173	-0.570	1.000															
4. New England	0.065	-0.091	0.061	1.000														
5. Mid-Atlantic	0.021	-0.129	0.112	-0.124	1.000													
6. Great Lakes	0.001	-0.037	0.031	-0.118	-0.187	1.000												
7. Great Plains	-0.056	-0.015	-0.016	-0.097	-0.154	-0.146	1.000											
8. Southeastern	-0.059	0.062	-0.024	-0.161	-0.255	-0.242	-0.200	1.000										
9. Southwestern	-0.004	0.108	-0.085	-0.084	-0.133	-0.127	-0.105	-0.173	1.000									
10. Rocky MT	-0.001	0.075	-0.043	-0.051	-0.081	-0.077	-0.063	-0.105	-0.055	1.000								
11. Far West	0.076	0.082	-0.094	-0.104	-0.165	-0.156	-0.129	-0.213	-0.112	-0.068	1.000							
12. Total staff	0.538	0.113	0.173	-0.002	0.017	0.014	-0.039	-0.008	0.015	0.008	0.013	1.000						
13. Faculty salary	0.359	0.120	0.137	0.126	0.174	0.017	-0.105	-0.216	-0.069	-0.052	0.236	0.501	1.000					
14. Students	0.388	0.424	-0.144	-0.077	-0.049	0.024	-0.081	-0.046	0.095	0.025	0.161	0.584	0.442	1.000				
15. Costs	0.054	-0.769	0.574	0.191	0.186	0.049	-0.008	-0.122	-0.128	-0.080	-0.053	0.110	0.304	-0.262	1.000			
16. % change cost	0.084	-0.534	0.436	0.164	0.076	0.017	-0.061	-0.024	-0.056	-0.082	-0.026	0.120	0.224	-0.175	0.680	1.000		
17. % Pell grant	-0.203	0.135	-0.290	-0.132	-0.105	-0.009	-0.029	0.157	0.067	-0.034	-0.108	-0.279	-0.496	-0.175	-0.428	-0.315	1.000	
18. % first loan	0.000	-0.470	0.541	0.110	0.086	0.129	0.132	-0.077	-0.085	-0.020	-0.192	-0.037	0.017	-0.248	0.517	0.369	-0.094	1.000



**Figure 1.** Simulated change in probability of an Occupy event given changes in independent variables (full model).

a point estimate as well as 95% confidence intervals around the estimate. For instance, we find changing the number of students from the minimum to the maximum can increase the probability on average of an Occupy event by 80%. Changing faculty salaries from the minimum to the maximum can, on average, increase the probability of an Occupy event by 56%.<sup>4</sup>

Next, Figure 2 shows the ROC curve for our full model. The Y-axis is the sensitivity, or the true positive rate, and the X-axis is the 1-specificity, or the false positive rate. The 45-degree line represents the 50/50 probability of a dichotomous outcome. As the ROC curve moves beyond this 45-degree line, we are better able to predict true and false positives. As mentioned above, the area under the ROC curve and above the 45-degree line gives a better measure of model fit. In Figure 2, this area under the ROC curve is 0.9416. In other words, this model accurately predicts about 94% of the 1s and 0s given varying thresholds for what is considered a positive prediction. Even though this number does not have an exact standard, 80–89% is generally considered a good model and above 90% is an excellent model for predicting the outcome of interest. In our case, the model is quite accurate when estimating within the sample.

Figure 3 presents the ROC curve from the resources-only model. When omitting the grievance variables we find that the model is still strongly predictive and remains approximately the same as the full model, with the area under the ROC curve being 0.941. Finally, Figure 4 reports the findings from the grievance-only model. We find when focusing only on grievances that the predictive quality of the model diminishes to 0.8950. While the prediction

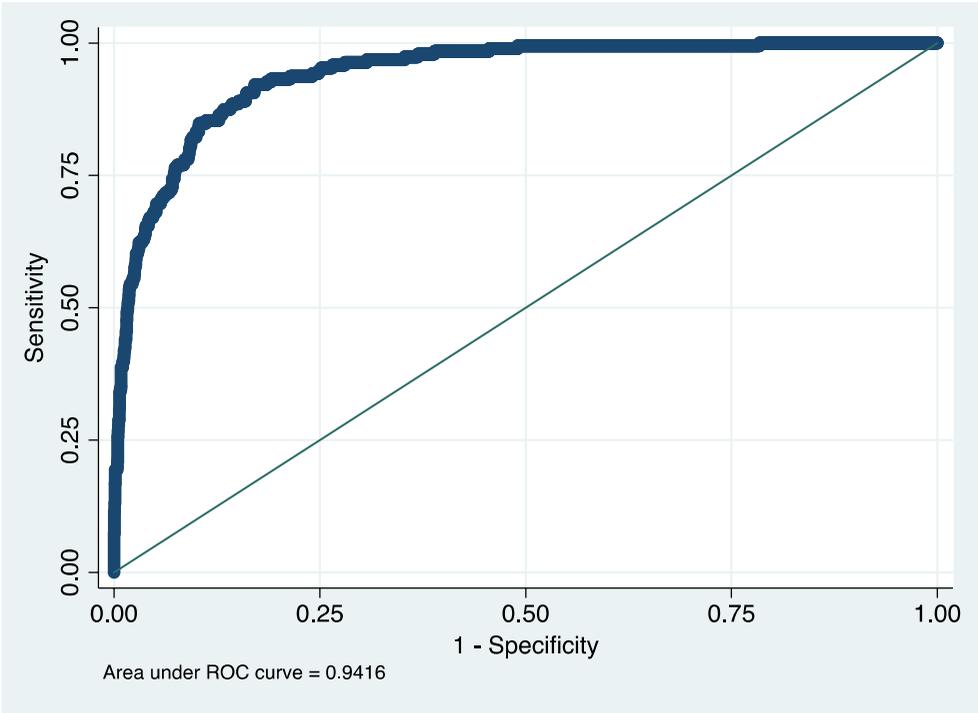


Figure 2. ROC curve full model.

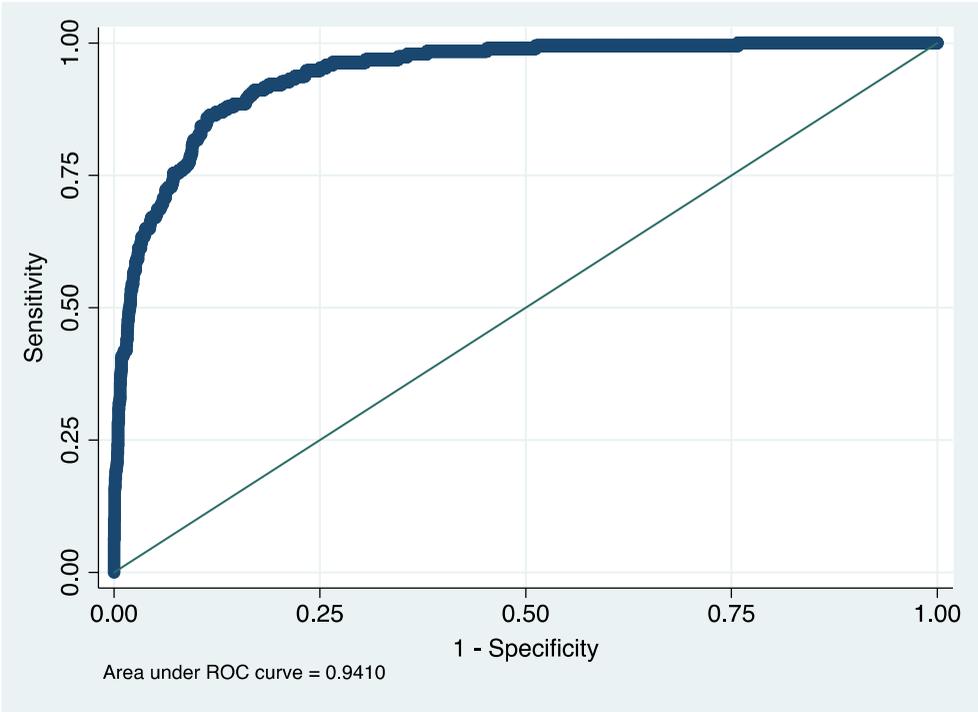
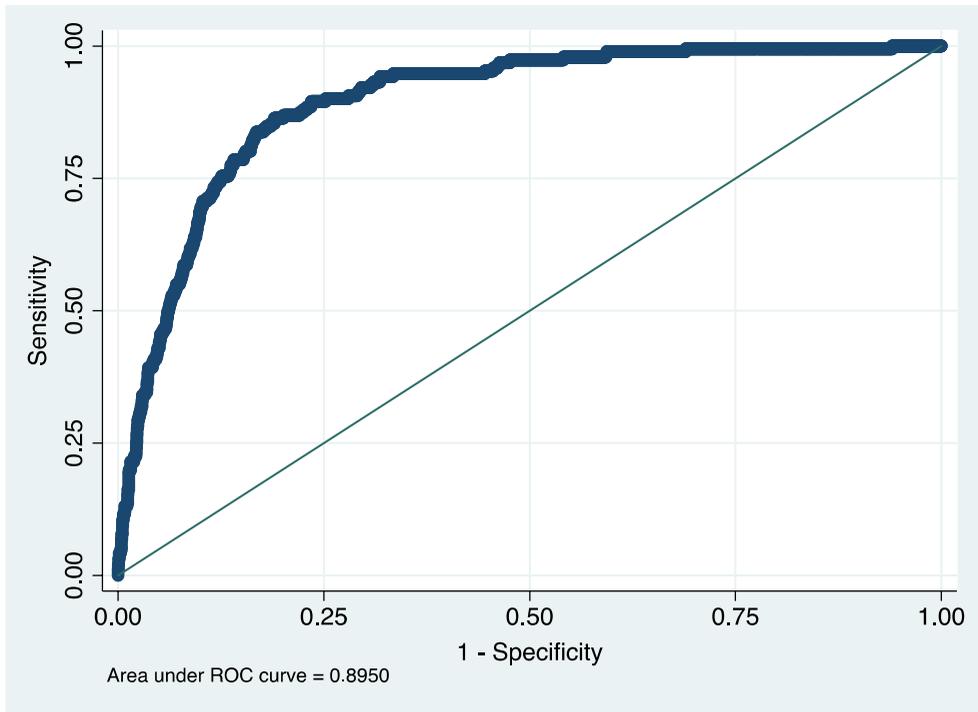


Figure 3. ROC curve resource model.



**Figure 4.** ROC curve grievance model.

quality is still considered fairly strong, it remains weakened when omitting key resource variables, again providing support for the conclusion that resources matter in projecting the occurrence of Occupy events.

Of course, there is concern that this is due to overfitting. That is, when we use the same data to generate and test a model, our results could be specific to these data. What we do not know is how well the model performs on data not used to estimate the model, or out-of-sample forecasts. In an ideal setting, we would gather new data on protests, and test the model on these data. In many situations, including our own, this strategy is not feasible.<sup>5</sup> To approximate this task, we use a procedure called K(4)-Fold Cross-Validation (Ward et al., 2010).

First, we divided the data into four groups. We then divided the groups into two sets: a *training* set and a *test* set. Three of the groups are placed in the training set and one group is in the test set. The training set *trains* the model. These data are used to establish estimates for the model. The results are then *tested* on the test set. In sum, the test set is not used in the training of the model and thus the predictions of the test set are *out of sample*. As discussed above, it is similar to estimating models on data one already has and then collecting new data and testing the model on these newly acquired data.

Second, this process is repeated by varying which of the groups go into the test or training set. With four groups, each has a turn to be the test set. This way, the results should not be sensitive to how the data are divided. Third, the results are then averaged. This again should average out any unusual outcomes caused by an arbitrary division of the data.

After having each group serve as the test group, we then predicted an ROC curve for the groups not used to train the model. This process was repeated 10 times with different samples of the data. Finally, we averaged the results of the ROC curves for each dataset to attain a final out-of-sample ROC curve estimate of 0.934 for the full model. Using this procedure we find final out-of-sample ROC curve estimates of 0.895 and 0.934 for the grievance-only and resource-only models respectively. This test suggests that overfitting is not a serious concern for any of our models.

## Discussion

Following the onset of the Occupy Wall Street movement in 2011 scholars began to untangle various aspects of the event, from the root causes of the Occupy movement to the tactics involved in spreading the message and the demographics of those involved (Calhoun, 2013; Conover et al., 2013; Milkman, Luce, & Lewis, 2012). However, in this article we contend that a critical aspect that has been overlooked is a focus on the spread of the OWS movement on college and university campuses across the United States. We seek to fill this gap by generating a nationally representative dataset of OWS events on college campuses and using indicators of resources and grievances at these institutions to explore what factors are associated with this movement. In doing so, the current study is the first to examine predictors of where OWS events appeared on college and university campuses across the country. Moreover, this research aimed to inform research on social movements and contentious politics more broadly by drawing on indicators of both resources and grievances to build a model that captures these two key elements of mobilization.

Using a comprehensive original dataset on Occupy events on US college campuses, we show that resources can largely explain where OWS protests are most likely to occur. Colleges with higher paid faculty, more students, higher costs, and more staff are the most likely to be involved in the Occupy movement. Regional differences were also evident, but their effects were less substantive than factors that increased resources for protest. Our model, informed by these factors, can accurately predict where these events were likely to occur both in and out of the sample. However, while resources are found to be important factors, grievances matter as well in the equation. In particular, we found the percentage change in the cost of attendance in the year leading up to the Occupy movement to be a significant factor associated with the occurrence of an Occupy event.

Subsequent analysis implementing ROC curves and cross-validation procedure suggests that our model is highly predictive of OWS events. While the best predictions come from our model that include both resources and grievances, our results indicate that much of the predictive power is generated from our measure of resources, though grievances cannot be fully discounted.

As our model suggests where these events are likely to occur, this information can be useful in understanding where we might witness similar protests developing in the future. For scholars, this could be helpful as sites for future qualitative and quantitative analysis. For policymakers, this could be useful in preparation for episodes of this form of activism. The WTO protests in Seattle in 1999 are instructive. As a final report by Seattle City Council issued in September 2000 argued, a poorly planned city and at times harsh police response can lead to disorder and violence during these kinds of mobilizations (Compton, Drago, & Licata,

2000). Anticipating and planning for such events can allow these mobilizations to occur in a safe way for police, citizens, and protestors.

Another finding that should be noted is the regional variation in Occupy events. Specifically, our model found that OWS events were most common at colleges in the Far West and New England regions and less common in the Midwest and Southwestern regions. These findings mirror regional differences in the larger Occupy movement, which had higher participation in the West Coast and Northeast relative to Midwest and South (Silver, 2011). While our data cannot fully explain these regional variations there are some possible explanations that we propose. For one thing, it is possible that political climates may have an influence. Specifically, as the Northeast and Far West are more liberal political climates it is expected that the OWS – which is viewed as a liberal political movement (Crawford & Xhambazi, 2015) – would be more likely to occur in liberal regions of the country and less likely in more conservative regions. Alternatively, other factors could also play a role in this. For instance, given that technology played a major role in organizing OWS events (Caren & Gaby, 2011; Conover et al., 2013) it could be that more tech-savvy areas (i.e. West Coast) had greater online organization that led to the spread of more OWS events across colleges (Silver, 2011). Still, future research that further assesses this regional variation and aims to explain why colleges in certain parts of the country were more likely to have OWS events would be useful.

The current study also speaks to ongoing social movements on college and university campuses. For instance, a recent Brookings Institute analysis found that colleges that draw larger portions of their student body from high socioeconomic backgrounds were more likely to have controversial speakers removed (Reeves & Halikias, 2017). Accordingly, this research, along with the current study, suggests that more resource-rich universities are more likely to coalesce large portions of the student body and generate social movements in the pursuit of a common goal. Future research should continue to build on this line of research and generate a deeper understanding of the mechanisms that foster student mobilization at these institutions.

A few limitations of the current study should be noted. For one thing, there may be missing occupy events that were not published in news outlets that came up using the data collection strategy employed by the current study. While we took measures to conduct an encompassing search including using multiple search engines and to analyse national, local, and student news outlets, it is possible that some events went unreported or were not captured by our search strategy. Additionally, the current study examined mobilization from a macro-level perspective and therefore could not examine individual-level factors such as perceived costs and risks or social networks. Indeed, these factors have been found in previous work to impact on the likelihood of mobilization (McAdam, 1982). Future work should explore the demographics and motivations of the individuals participating in these protests at academic institutions. Understanding their individual motivations could help validate or refute some of the results found here. Finally, there are some relevant variables that were not available for this analysis. For instance, participation in student organizations could be a relevant factor to consider in order to better understand student mobilization. However, nationally representative data on student organization participation are not currently available. Still, future research that gathers such information and assesses how participation in these organizations is related to mobilization of students on campus would be useful.

## Conclusion

In sum, the results of the current study provide support for the general claim we offer above: resources matter for mobilization. More expensive colleges with larger, higher-paid faculty and more students are at the most likely to have Occupy protests. Protest requires resources, and colleges with this profile provide the most resources for such a movement. However, our findings also indicate that grievances, particularly a rise in the cost of attendance, matter as well. Moreover, we find that our model of grievances and resources is highly predictive of OWS events. Overall, this study is the first to empirically assess the emergence of Occupy events on US college and university campuses and contributes to extant literature on the Occupy movement by presenting a useful approach for collecting data on large protest events and empirically assessing the ability of quantitative models to forecast such events. Beyond Occupy and in the current politically contentious context in the US and abroad, we might expect future mobilization and potential violence on the campuses with large student populations of wealthy potentially aggrieved students. As we discuss above, addressing these grievances and reasonable policing strategies can make sure these non-violent mobilizations remain so.

## Notes

1. Following the initial search the data were supplemented from websites devoted to Occupy movements on college and university campuses. One site that is no longer active, lists participating colleges on what is termed "3/1". This list comprises 69 different colleges that had Occupy protests on 1 March 2012, as well as links to Facebook pages. Additionally, we generated events from the site <https://sites.google.com/site/weallockupy/college-campuses>, which contains a list of several college and universities with Occupy movements, as well as links to their Facebook and Twitter pages. We then cross-checked university names that appeared as participating in an Occupy event on these websites by searching for the event on Google, Lexis/Nexis, and student newspaper websites using the methods previously detailed.
2. While questions related to the size of the movement, its duration or intensity are worth examination, we were unable to collect *reliable* indicators of these concepts. Many reports of Occupy protests are contradictory with regard to the number of participants, offer a broad range of participants, or simply do not mention this information. A similar problem exists with identifying the onset and termination of each protest. Most reports will mention the Occupy movement, give broad ranges of its activities, but it is rare to find consistent reporting of times and dates of individual protests. These dates would be necessary to study the duration of the activities, a question worth investigation. With that said, our data are both valid and reliable when it comes to the issue of why some colleges generated Occupy protests while others did not. Our searches and protocols can be reliably replicated to identify the places where movements developed and where they did not.
3. Evaluating model fit in binary dependent variable models is different than standard regression techniques. A variety of pseudo  $R^2$  measures have been generated to approximate the statistic that reports explained variation. However, each of these pseudo measures can generate substantially different values, thus limiting their ability in assessing model fit (Long & Freese, 2006).
4. See Appendix Figures A1 and A2 for the simulated change of the resource and grievance models.
5. If there were a new round of Occupy protests, this might be a viable future strategy.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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## Appendix

**Table A1.** List of institutions with an Occupy event.

University	Location	Private or public
American University	Washington, DC	Private non-profit
Amherst College	Amherst, MA	Private non-profit
Arizona State University	Tempe, AZ	Public
Auburn University	Auburn, AL	Public
Austin Peay State University	Clarksville, TN	Public
Ball State University	Muncie, IN	Public
Boston College	Chestnut Hill, MA	Private non-profit
Boston University	Boston, MA	Private non-profit
Bowling Green State University	Bowling Green, OH	Public
Bridgewater State University	Bridgewater, MA	Public
Brooklyn College (CUNY)	New York, NY	Public
Brown University	Providence, RI	Private non-profit
Butler University	Indianapolis, IN	Private non-profit
Cal State Long Beach	Long Beach, CA	Public
California Polytechnic State College	San Luis Obispo	Public
California State University – Bakersfield	Bakersfield, CA	Public
California State University – Chico	Chico, CA	Public
California State University – Dominguez Hills	Carson, CA	Public
California State University – East Bay	East Bay, CA	Public
California State University – Fullerton	Fullerton, CA	Public
California State University – Monterey Bay	Seaside, CA	Public
California State University – Northridge	Northridge, CA	Public
California State University – Sacramento	Sacramento, CA	Public
Central Connecticut State University	New Britain, CT	Public
Chapman University	Orange, CA	Private non-profit
City College	San Francisco, CA	Private non-profit
Clark University	Worcester, MA	Private non-profit
Coastal Carolina University	Myrtle Beach, SC	Public
Colorado College	Colorado Springs, CO	Private non-profit
Colorado University – Boulder	Boulder, CO	Public
Columbia College – Chicago	Chicago, IL	Private non-profit
Columbia University	New York, NY	Private non-profit
Cornell University	Ithaca, NY	Private non-profit
Dartmouth College	Hanover, NH	Private non-profit
Dayton University	Dayton, OH	Private non-profit
Daytona State College	Daytona, FL	Public
DePaul University	Chicago, IL	Private non-profit
Duke University	Durham, NC	Private non-profit
Dutchess Community College	Poughkeepsie, NY	Public
East Los Angeles City College	Monterey Park, CA	Public
East Tennessee State University	Johnson City, TN	Public
Eastern Illinois University	Charleston, IL	Public
Edinboro University	Edinboro, PA	Public
El Camino College	Torrance, CA	Public
Florida Atlantic University	Boca Raton, FL	Public
Florida International University	Miami, FL	Public
Fresno State University	Fresno, CA	Public
George Mason University	Fairfax, VA	Public
Georgia Southern University	Statesboro, GA	Public
Georgia State University	Atlanta, GA	Public
Glendale Community College	Glendale, CA	Public
Hampshire College	Amherst, MA	Private non-profit
Hartford University	Hartford, CT	Private non-profit
Harvard University	Cambridge, MA	Private non-profit
Holyoke Community College	Holyoke, MA	Public
Howard University	Washington, DC	Private non-profit
Humboldt State University	Aracata, CA	Public
Idaho State University	Pocatello, ID	Public
Illinois State University	Normal, IL	Public
Indiana University	Bloomington, IN	Public
Iowa State University	Ames, IA	Public

(Continued)

**Table A1.** (Continued).

University	Location	Private or public
Ithaca College	Ithaca, NY	Private non-profit
James Madison University	Harrisonburg, VA	Public
John Jay College of Criminal Justice	New York, NY	Public
Kansas University	Lawrence, KA	Public
Kean University	Township, NJ	Public
Kent State University	East Liverpool, OH	Public
Long Island University	Brookville, NY	Private non-profit
Louisville University	Louisville, KY	Public
Marymount Manhattan College	Manhattan, NY	Private non-profit
Mesa College	San Diego, CA	Public
Miami University – Ohio	Oxford, OH	Public
Michigan State University	East Lansing, MI	Public
Montana State University	Bozeman, MN	Public
Montclair State University	Montclair, NJ	Public
New Mexico State University	Las Cruces, NM	Public
North Carolina State University	Raleigh, NC	Public
Northeastern University	Boston, MA	Private non-profit
Northern Illinois University	DeKalb, IL	Public
Northwestern University	Evanston, IL	Private non-profit
Oakland University	Rochester, MI	Public
Occidental College	Eagle Rock, CA	Private non-profit
Ohio State University	Columbus, OH	Public
Ohio University	Athens, OH	Public
Oklahoma State University	Stillwater, OK	Public
Oregon State University	Corvallis, OR	Public
Pennsylvania State University	State College, PA	Public
Portland State University	Portland, OR	Public
Princeton University	Princeton, NJ	Private non-profit
Providence College	Providence, RI	Private non-profit
Purdue University	West Lafayette, IN	Public
Richard Stockton College	Galloway, NJ	Public
Rutgers University	New Brunswick, NJ	Public
Rutgers University – Newark	Newark, NJ	Public
San Diego City College	San Diego, CA	Public
San Diego State University	San Diego, CA	Public
San Francisco State University	San Francisco, CA	Public
San Jose State University	San Jose, CA	Public
Santa Monica College	Santa Monica, CA	Public
Sarah Lawrence College	Bronxville, NY	Private non-profit
Seattle Central Community College	Seattle, WA	Public
Seattle University	Seattle, WA	Private non-profit
Seton Hall University	South Orange, NJ	Private non-profit
Sonoma State University	Rohnert Park, CA	Public
Southern Illinois University – Carbondale	Carbondale, IL	Public
Southern Illinois University –Edwardsville	Edwardsville, IL	Public
St. John's University	Jamaica, NY	Private non-profit
Stanford University	Palo Alto, CA	Private non-profit
Stetson University	DeLand, FL	Private non-profit
Stonehill College	Easton, MA	Private non-profit
SUNY Albany	Albany, NY	Public
SUNY Binghamton	Binghamton, NY	Public
SUNY Fredonia	Fredonia, NY	Public
SUNY Geneseo	Geneseo, NY	Public
SUNY New Paltz	New Paltz, NY	Public
SUNY Oswego	Oswego, NY	Public
SUNY Purchase	Purchase, NY	Public
SUNY Stony Brook	Stony Brook, NY	Public
Temple University	Philadelphia, PA	Public
Texas A&M	College Station, TX	Public
Texas Christian University	Fort Worth, TX	Private non-profit
Texas State University	San Marcos, TX	Public
The New School	Manhattan, NY	Private non-profit
Towson University	Towson, MD	Public

(Continued)

**Table A1.** (Continued).

University	Location	Private or public
Tufts University	Boston, MA	Private non-profit
UC Berkeley	Berkeley, CA	Public
UC Davis	Davis, CA	Public
UC Santa Cruz	Santa Cruz, CA	Public
UCLA	Los Angeles, CA	Public
University of Minnesota	Twin City, MN	Public
University of California – Irvine	Irvine, CA	Public
University of California – Merced	Merced, CA	Public
University of California – Riverside	Riverside, CA	Public
University of California – Santa Barbara	Santa Barbara, CA	Public
University of California San Diego	San Diego, CA	Public
University of Central Florida	Orlando, FL	Public
University of Cincinnati	Cincinnati, OH	Public
University of Connecticut	Storrs, CT	Public
University of Florida	Gainesville, Florida	Public
University of Georgia	Athens, GA	Public
University of Houston	Houston, TX	Public
University of Illinois – Chicago	Chicago, IL	Public
University of Illinois – Urbana-Champaign	Urbana, IL	Public
University of Iowa	Iowa City, IA	Public
University of Maine	Orono, MN	Public
University of Maryland	College Park, MD	Public
University of Massachusetts – Amherst	Amherst, MA	Public
University of Massachusetts – Boston	Boston, MA	Public
University of Massachusetts – Dartmouth	North Dartmouth, MA	Public
University of Michigan	Ann Arbor, MI	Public
University of Missouri – Columbia	Columbia, MO	Public
University of Missouri – Kansas City	Kansas City, MO	Public
University of Montana	Missoula	Public
University of Nebraska – Lincoln	Lincoln, NE	Public
University of Nevada – Reno	Reno, NV	Public
University of New Hampshire	Durham, NH	Public
University of New Mexico	Albuquerque, NM	Public
University of North Carolina – Chapel Hill	Chapel Hill, NC	Public
University of North Carolina – Charlotte	Charlotte, NC	Public
University of North Carolina – Wilmington	Wilmington, NC	Public
University of North Texas	Denton, TX	Public
University of Northern Colorado	Greeley, CO	Public
University of Oklahoma	Norman, OK	Public
University of Oregon	Eugene, OR	Public
University of Pennsylvania	Philadelphia, PA	Private non-profit
University of Pittsburgh	Pittsburgh, PA	Public
University of Rhode Island	Kingston, RI	Public
University of South Florida	Tampa, FL	Public
University of Southern California	Los Angeles, CA	Private non-profit
University of Southern Maine	Portland, Maine	Public
University of Tennessee – Knoxville	Knoxville, TN	Public
University of Texas – Arlington	Arlington, TX	Public
University of Texas – Austin	Austin, TX	Public
University of Texas – El Paso	El Paso, TX	Public
University of Texas – San Antonio	San Antonio, TX	Public
University of Vermont	Burlington, VT	Public
University of Washington	Seattle, WA	Public
University of Wisconsin – Eau Claire	Eau Claire, WI	Public
University of Wisconsin – Madison	Madison, WI	Public
University of Wisconsin – Whitewater	Whitewater, WI	Public
Vanderbilt University	Nashville, TN	Private non-profit
Vassar College	Poughkeepsie, NY	Private non-profit
Virginia Tech	Blacksburg, VA	Public
Wake Forest University	Wake Forest, NC	Private non-profit
Wayne State University	Detroit, MI	Public
Webster State University	Ugden, UT	Private non-profit
Western Kentucky University	Owensboro, KY	Public

(Continued)

Table A1. (Continued).

University	Location	Private or public
Winthrop University	Rock Hill, SC	Public
Wright State University	Dayton, OH	Public
Yale University	New Haven, CT	Private non-profit
York College (CUNY)	Jamaica, NY	Public

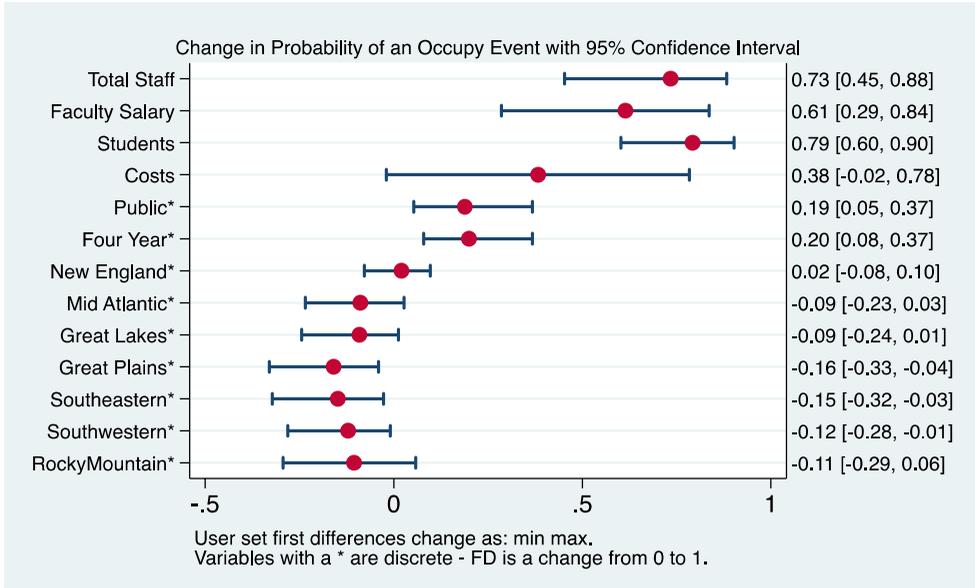


Figure A1. Simulated change in probability of an Occupy event given changes in independent variables (resource model).

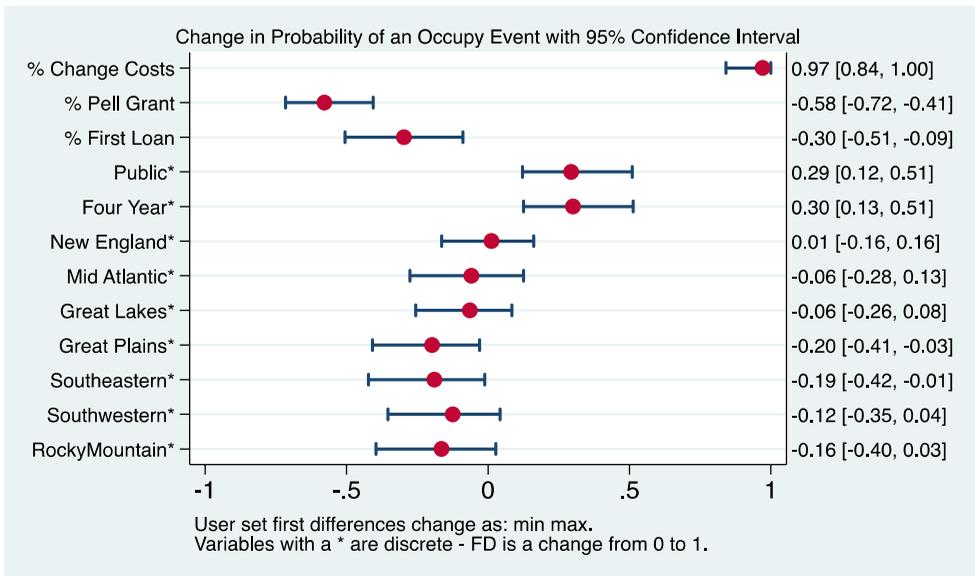


Figure A2. Simulated change in probability of an Occupy event given changes in independent variables (grievance model)