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WHEN IS EMPLOYEE RETALIATION ACCEPTABLE AT WORK? EVIDENCE FROM QUASI-EXPERIMENTS

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WHEN IS RETALIATION ACCEPTABLE AT WORK?

EVIDENCE FROM QUASI-EXPERIMENTS

Abstract:

When is employee retaliation acceptable in the workplace? We use a quasi-experimental design to study the acceptability of several forms of retaliatory behavior at work, gathering data in this untested area. Consistent with hypotheses from theories of fairness, we find that employee retaliation in the workplace is perceived to be more acceptable if it is an act of omission instead of an act of commission. We do not find that a more damaging retaliatory act is significantly less acceptable than a less damaging one, suggesting a qualitative rather than a quantitative relationship. We also found individual differences: Respondents who are older, female, politically conservative, and managers typically show less tolerance for retaliation, while union members are a bit more accepting than average.

An enormous literature describes employees' discretionary behavior at work that helps the organization ("organizational citizenship behavior," Organ 1988) or helps colleagues ("pro-social behavior"). Until recently, little organizational literature has examined the complement: discretionary behavior that harms the organization or its members. This lack of research is surprising because perhaps as many as a fourth of employees engage in some form of theft or other types of sabotage (Hollinger and Clark 1983).

While there are many forms and motives of employee misconduct, we study a subset that is motivated by a desire for retaliation. The retaliation we study reduces organizational effectiveness in the short run and is inconsistent with the common-law obligation of employees to do a good job. At the same time, the retaliation is in response to managerial misbehavior. Thus, if the retaliation disciplines a misbehaving supervisor, it can also improve long-term organizational effectiveness.

Although "retaliation" sometimes has negative connotations, here we are not judging the ethical desirability or undesirability of employee actions; we are simply studying when it is perceived to be more or less acceptable for employees to harm others at work.

Because retaliation at work usually breaks rules, it is difficult to study in the field. Some of the most insightful accounts come from newspaper reports and collections of anecdotes (e.g., Dubois 1976). Sprouse (1992) documents dozens of examples of people from all walks of life "getting back" at employers in hotels, food processing, newspapers, offices, retail stores, the computer industry, the military, and the government. Some of the acts are temporarily disruptive (jamming machinery to create a few minutes of downtime), while others are more destructive (a waitress serving spoiled food to ruin her employer's business).

We are not aware of any previous studies of the acceptability of retaliation at work by neutral observers. We analyze quasi-experimental data in which we systematically vary scenarios and compare responses toward different potential acts of retaliation, building on the seminal work of Kahneman, Knetsch, and Thaler (1986).

Empirical research is not sufficiently advanced in this area to merit modeling preferences regarding when workplace retaliation is acceptable. Instead, we develop a series of vignettes that offer insight into how different circumstances affect attitudes toward retaliation at work. We can thus start to delineate the factors that influence whether and to what degree particular acts are approved by society. Although we do not consider crimes more generally, our data may also be useful for developing a general theory that includes related behavior outside the workplace.

One primary focus of our study is to identify some of the factors that make an act of retaliation at work acceptable. We consider:

- (1) Whether retaliation is an act of omission or commission. We expect a negative act of commission to be considered less acceptable than achieving the same outcome with a passive act of omission (Baron 1994).
- (2) The level of damage inflicted by the act: in other words, does the punishment fit the crime? Our intuition is that more damaging acts are perceived as less acceptable. At the same time, some ethical theories emphasize ethical “bright lines” and pay less attention to quantitative consequences; these theories may posit that rule-breaking acts of retaliation are never acceptable.

A second focus of our study concerns how the perceptions of the fairness of a punitive response vary according to one’s role and degree of identification with an organization. One

important issue is the extent to which management and employees share a vision of the implicit contract and the fairness of corresponding policies. Perceptions of justice may vary according to one's own position or internal reference point (the "self-serving bias," e.g., Babcock et al. 1995).

Perceptions of the fairness of employee retaliation in the workplace may also differ on other demographic dimensions, such as race, gender, and age.

Because males are consistently found to be more directly aggressive than females (Fry 1998), we expect males to have a higher tolerance for retaliation. There is mixed evidence on whether women are more aggressive in less direct ways (ibid.). Thus, male's higher approval of active retaliation may not show up when we examine passive means of retaliating.

In addition, we expect younger respondents to be more accepting of retaliation at work because younger people are more likely to have committed crimes (FBI 1997). In addition, Putnam has argued that the perceived social contract among younger cohorts may be weaker than among older cohorts (2000).

BACKGROUND AND LITERATURE

Historically organizational scholars have examined employee motivation and various benevolent behaviors and contrasted them with shirking, sabotage, and other deviant behaviors. In recent years an increasing number of scholars (e.g., Bies & Tripp 2004, Folger and Skarlicki 2004; Spector and Fox 2004) have emphasized a more balanced view, realizing that rule-breaking at work can sometimes be justified as ethical (according to some ethical theories) and can even be beneficial to an organization (if it discourages inefficient behaviors by managers)

We consider that a worker's retaliatory response could range from an active act of sabotage, such as hiding an important file to a simple refusal to be a good organizational citizen, such as not responding to a managers' request for a recommendation about a business decision.

Our theory of whether such retaliation is more or less acceptable starts with the long tradition of studying fairness and the implicit employment contract. A person who feels moral or personal outrage in response to perceived unfair treatment may go out of his or her way to hurt the malefactor, or may simply refrain from helpful behavior that would normally be routine (see Akerlof and Yellen 1990). Motives for such punishment may include revenge, sending a message to the employer, and providing incentives for the employer to perform better in the future.

Hundreds of experimental studies have demonstrated that people will sometimes sacrifice money to lower the payoff to another person by an even greater amount. Typically this retaliation follows an action that is readily interpretable as being selfish. Brandts and Charness (2003), for example, find that management lying about whether they will pay for performance justifies retaliation, while an honest statement to the same effect provokes a more muted response. The large literature on prosocial behavior in organizations emphasizes the converse result: Employees are more likely go out of their way to help organizations that treat them within the parameters of an employment contract employees perceive as fair (e.g., Organ 1988).

Greenberg (1990) uses a natural quasi-experiment to examine the prevalence of employee theft in relation to payment inequity. In one workplace the theft rate doubled when a temporary 15% pay reduction was instituted. In a second workplace management provided a convincing explanation for the pay cut and there was no increase in theft. In this framework, acts of theft can be seen as a manifestation of feelings of mistreatment. However, it is also possible to interpret these thefts as attempts to correct the unfair underpayment.

More recently, Fox, Spector, and Miles (2001) surveyed employed respondents about distributive justice at work (that is, fair compensation for inputs), procedural justice at work

(examining both the fairness of formal procedures and whether people are treated with respect), and counterproductive work behaviors. Counterproductive work behaviors were differentiated into those that harmed the organization (e.g., “Put in to be paid for more hours than you worked,” and “Told people outside the job what a lousy place you work for”) and those that harmed their co-workers (e.g., “Made fun of someone’s personal life” and “Refused to help a coworker”). Respondents who reported low distributive justice and low procedural justice reported higher levels of counterproductive work behaviors that harmed the organization (see also Skarlicki and Folger, 1997, who find distributive justice motivates retaliation largely when procedural justice is low). The results were not obviously due to common measure bias, as the workers who reported their employers were unjust were not particularly more likely to report counterproductive work behaviors that harmed their co-workers.

When is Retaliation Fair at Work?

Kahneman, Knetsch, and Thaler (1986) use a quasi-experimental survey to study how neutral observers perceive the fairness of various actions by firms and how perceived fairness is moderated. We adapt this methodology to investigate the characteristics of the employee action and the respondent, which together determine when respondents feel that employee retaliation is more or less acceptable.

The quasi-experimental method contrasts scenarios that are otherwise similar to highlight the importance of changing a single feature of the scenario. This differencing is important because people may try to accord with social norms by expressing disapproval of illegal or destructive acts. As long as this effect is constant in both versions of the scenario, the comparison between matched scenarios is unlikely to be affected by such “demand effects.”

Characteristics of employees' action

We examine two dimensions of employees' actions: whether they are acts of omission or commission and the magnitude of the damage.

1. Acts of omission versus acts of commission

It may be perceived as fair to refuse to help a nasty person or firm; is it also fair to deliberately inflict damage? St. Thomas Aquinas is the classic reference for the view that acts of commission are worse than those of omission (Delaney 1911). However, others disagree. Most obviously, omission and commission can be difficult to define. In the extreme, some analysts claim that any ethical value given to the distinction reflects a failure to understand the consequences of decisions (Baron 1994).

To illustrate, we provide classic scenarios from ethics (though not the ones we study) in which we assume the people are equally blameless and equally deserving of life. (These scenarios draw on the contributions to Steinbock and Norcross 1994.)

A) A trolley is about to take the right turn at a "Y" intersection. The driver sees that he will hit two people if he goes to the right and only one if he goes left. Should the driver do nothing and continue to the right, causing two people to die, or switch the car to the left and save one life?

Related problems identify the boundaries of each respondent's concern for consequences versus responsibility. Consider these related scenarios:

B1) Can a doctor withhold 2 doses of life-saving medicine from a patient who arrived 10 minutes ago if his action saves two later-arriving patients who would otherwise die?

B2) Can a doctor unplug the respirator from a comatose patient who might otherwise recover, causing him to die, in order to make his organs available to 2 other patients who would die without them?

The consequences of both scenario pairs are either one death or two; consequentialist reasoning suggests choosing the path of a single death. Importantly, almost all theories used by economists for positive purposes (predicting people's actions) and for normative purposes (prescribing good policies) are consequentialist, as are psychological theories of distributive justice such as equity theory and relative deprivation.¹ In the trolley car case (A) the focus on consequences appears unproblematic; many philosophers (and we suspect most common citizens) would defend the action of turning to the left to reduce harm. In contrast, most people are more comfortable with scenarios that cause harm by omission as in scenario B1 than with the more active harm in B2. To take the extreme case, murdering a patient to harvest his organs for others (a rephrasing of B2) is illegal and we suspect would grossly offend the morality of most people.

Spranca, Minsk, and Baron (1991) elicited third-party attitudes toward harmful acts of omission and commission, holding constant intentions, motives, and consequences. Participants often rated harmful omissions as less egregious than harmful commissions; this pattern is associated with the (naïve) view that omissions do not cause outcomes. However, their study used a within-subject design that can lead to a “demand effect,” where subjects figure out what the experimenter wants and provide the pattern in question. In addition, their procedure examined the views of students in psychology classes rather than the overall population. (Baron [1994] reviews the evidence on the importance of omission versus commission.)

2. Severity of retaliatory action

Our intuition was that retaliation with fairly minor consequences—for example, wasting a couple of hours of a seriously misbehaving manager’s time—would be seen as more acceptable than actions with more severe consequences—such as wasting a couple of weeks of a manager’s time.

Other ethical theories need not lead to this result. If stealing, for example, is wrong, then stealing a little bit may be judged as just as unacceptable as stealing a lot.

Individual differences

People differ in their respect for property and the laws concerning it. They also differ on the importance of retaliating after an injustice (where retaliation may both create retributive justice and create incentives for better future behavior). This dichotomy appears strongly in thinking about attitudes toward civil disobedience; for example: Was it justifiable for enraged taxpayers to throw tea into the Boston Harbor? Thus, in examining attitudes toward rule-breaking at work, we are also examining who respects employees’ ability to stand up for and defend themselves.

We first examine whether managers and employees have different views of employee rule-breaking. We are unaware of any previous studies that directly compare fairness perceptions across employment roles. It is problematic to compare results across studies, as the methodology employed often varies. For example, Gorman and Kerr (1992) used a within-subject design of top managers (where responders read comparison questions in sequence) and contrasted results with Kahneman, Knetsch, and Thaler’s between-subject design (1986).

¹ In contrast, theories of procedural justice leave more room for the distinction of responsibility (Lind and Tyler 1988; see also Rabin 1993 for an economic model in which responsibility and intentions matter).

There are a number of plausible reasons why managers might see managerial actions in a more favorable light than employees do. Because they are managers, they may be more prone to believe that the market system or organizations in general are fair. Second, managers may envision themselves as engaging in, rather than being the victims of, abuses of power. Third, managers may see employee retaliation as costly to their career prospects; in the short run, managers may receive profit-sharing or stock option benefits, and their long-term promotion opportunities (either inside or outside the organization) may be tied to the workplace. We ask about some of these attitudes to decompose any changes by occupational role we uncover.

Another dimension of labor roles concerns union membership. We expect union members to consider management actions more unfair than similar non-union members for several related reasons. First, union members' familiarity with a high level of collectively bargained protection will make them less agreeable to management discretion than most Americans. Second, union socialization of members to be suspicious of management will reinforce the familiarity effect. In addition, prospective employees know the policies of unions. Thus, when possible, people who value due process will disproportionately self-select into union jobs.² Finally, unions are based on employees' rights to collectively fight for their rights; as such, they may also select for and/or inculcate respect for individual worker's ability to fight for their rights.

Other responder circumstances that could influence attitudes include one's gender, political views, feelings about personnel decisions, and age. As mentioned above, we might expect females to be less tolerant of active forms of retaliation (although we are less sure for retaliation through omission). Similarly, because political conservatives typically respect the rule

² Of course, the workers with the strongest anti-organization views might also be unwilling to join a union, slightly diminishing any such effect.

of law (as opposed to more situational views of right and wrong) and do not favor redistribution, perhaps they will be less accepting of retaliation at work.

If the social contract is on the wane, or if it just seems less important to younger folks, we might also expect the tendency to view retaliation as acceptable to decline with age. Consistent with either age or cohort effects, non-laboratory experimental studies such as Holm & Nystedt (2002) and Güth, Schmidt & Sutter (2003) find that fairness seems to be more important to older people.

METHOD

We conducted surveys in the San Francisco Bay Area in the summer and Fall of 2002. These surveys were distributed in person primarily (80%) on BART trains, with the remainder distributed on the UC Berkeley campus and to various social and work groups. We had five survey forms, each with questions involving four different situations: 1) a manager who has sexually harassed your friend asks for your help in finding a missing file; 2) a manager who has unfairly passed you over for promotion asks for your help in choosing a marketing plan; 3) an employee takes prize-winning game cards instead of distributing them; and 4) a plumber who was underpaid for his work retaliates against a deadbeat client. In this paper, we focus on the workplace questions involving managers (questions 1 and 2); Charness and Levine (2005) discuss the additional results.

We varied the circumstances surrounding each act of workplace retaliation with different scenarios involving a particular action or inaction. In addition to demographic questions, each survey had a set of seven questions about these four situations, with two different questions each on hiding a file, underpaying a plumber, and taking prize-winning game cards. Because different respondents received different versions of the 5 scenarios, we have a between-subjects

comparison of how altering the version altered respondents' choices. Because different people were presented with almost-identical scenarios, our method is an experimental test of the effect of any changes we made to the scenarios. Importantly, this method factors out any biases (such as the desire to appear properly disdainful of retaliation) that affects both forms of the question similarly. We also have within-subject comparisons available, as each person answered three questions about retaliation at work.

A sample survey form (form 3) is in Appendix 1; this is representative of what an individual respondent received. Our survey design is summarized in Figure 1. The five survey forms are the rows, while each column refers to a scenario. For one of the scenarios (hiding a file from a sexually harassing boss) we presented two versions of each scenario. Thus, each person responded to three questions about two scenarios. The precise text of each scenario is included in the results section, below.

-- Figure 1 about here --

On most questions people used a seven-point scale ranging from completely acceptable to completely unacceptable to describe the action (or inaction) at issue. All results cluster standard errors to account for repeated observations by respondents. Because our data are ordinal, ordered logit is formally correct. In fact, results were substantively and statistically significantly the same with OLS and ordered logit. (Both corrected for clustering.) For ease of reading we present OLS results.

RESULTS

We find evidence that the perceived fairness of harmful acts by workers is indeed mediated by factors surrounding the circumstance of the act and the characteristics of the

respondent. We present our results first in relation to the characteristics of the action and then in relation to individual differences. We close the section with a discussion of within-subject behavior.

Characteristics of the Action

Our first two scenarios largely examine the effects of acts of omission versus commission. The first question also addresses issues of the scale of the retaliation.

Hiding a file versus letting it remain lost

All scenarios began:

A male manager in your company told Ann that if she did not sleep with him, he would fire her. Ann quit the next day and has been both unemployed and depressed ever since. Now this manager needs some information from a file that he has misplaced. Bob, a good friend of Ann's, knows where this file is.

Each survey continued with one of five versions of the scenario, such as this one:

When the manager starts looking for the file, Bob hides the file. It will take the manager a couple of weeks of his own overtime to re-create the information in the file.

While this version had an act of commission, another version has a harmful act of omission: choosing not to tell management. In some of both the omission and commission scenarios, it would only take management a couple of hours to replace the file (instead of a couple of weeks).

In each case, we asked people for their views on whether the employee action in question was completely acceptable to completely unacceptable (a 1 to 7 scale). We expected that not telling would be seen as most fair, followed by denying knowledge, and then hiding the file. We also expected acceptability to be lower when damage was higher.

We present a regression analysis in Table 1. Complete results are in the Appendix, table A1 and A2.

-- Table 1 about here --

Hiding the file is considered substantially worse (0.96 on a 7-point scale) than refraining from telling management where the file is. In addition, actively denying knowledge is considered significantly (by 0.29 points) worse than simply choosing not to tell. These results are consistent with the hypothesis that “sins of omission” are less objectionable than “sins of commission.”

In contrast, the degree of damage (whether replacing the file takes hours or weeks) has only a modest and statistically insignificant effect on the acceptability of the employee’s action (0.13, n.s.).

Choosing a marketing plan

The second base question on omission and commission involves receiving an unfairly small bonus:

Assume that you have the highest performance of anyone in your work group. Nevertheless, your boss has just chosen to allocate more of his bonus budget to his best friend among the group and less to you. Now your boss must pick one of two marketing plans to sell the output you produced. Although both will be equally effective, the first plan will end up making another division look good while the second plan will make your boss look good. Your boss is extremely unlikely to ever figure out this feature of the two plans (and probably never will) and asks your advice on which plan to implement.

We then vary the options available and the default action that would be taken by the boss. In the base case (a):

Your boss is under extreme time pressure and sends you an e-mail asking you which plan you recommend. He notes that if he does not hear from you he will probably choose the first plan. Check the box for the action you would take.

- i) Recommend the first plan (where another division looks good)
- ii) Recommend the second plan (where your boss looks good)

In other conditions the participant could do one of: (b) ignore the e-mail, leading the boss to choose the plan where the other division looks good; (c) ignore the e-mail, leading the boss choose the plan that makes him look good; (d) ignore the e-mail and have no specified default; or (e) specify that the boss is leaning toward the option that makes him look good. In cases (c) and (with some probability) (d), employee inaction leads the boss to take an action that harms him.

We expected that people would be less likely to recommend the second plan (where the boss looks good) when given the option to ignore the e-mail, under the principle that direct action of recommending a plan that harms the boss is less acceptable than doing nothing and letting the boss choose that plan.³

-- Table 2 about here --

When people have no choice but to reply (Table 2, cases a, d and e), half of respondents help their manager by recommending the marketing plan to make his department look good while almost half punish the manager by recommending the plan to make the other department look good (51% help and 49% harm).

When people are able punish the manager merely by ignoring the request, 25% take that choice and the total share with either active or passive punishment rises from 49% to 59%. This

³ The action of harming one's misbehaving boss is not precisely within our definition of retaliation that emphasizes lowering profits, not career success. The theories relevant to retaliating against a boss overlap those of retaliating against an employer.

increase is statistically significant ($p < .01$, comparing the two summary rows at the bottom of Table 2).

People are neither more nor less likely to avoid replying when the manager is surely going to make the wrong decision than when it is unclear if the manager will make a mistake (row b 27% versus row c 24%, difference n.s.).

Apparently about 10% of the population (and over a fifth of all those who would otherwise have helped their boss) prefer to commit acts of omission that retaliates against an unfair boss, even if they are unwilling to take an explicitly harmful action.⁴

Individual Differences

We consider three sets of individual differences: demographics (age, sex, and race/ethnicity), occupational status (union member, supervisor/manager, and neither), and attitudes toward markets and politics. To analyze individual differences we run regressions predicting fairness of employee sabotage as a function of these characteristics (Table 3). Results were almost identical with the ordered logit regressions that account for the ordinal nature of the responses; thus, we present the OLS results, which are much easier to read. We present results with both the demographics and several attitude measures. Results on demographics were almost identical if we did not condition on the attitude measures.

-- Table 3 about here --

⁴ While we didn't ask people their views if the boss hadn't acted unfairly, we suspect that many more people would have chosen to help the boss, because organizational citizenship behavior (Organ, 1988) is so prevalent. In addition, here helping the boss perhaps also slightly benefits the worker, as it also makes one's division look better.

Demographics

For the questions about hiding or misplacing a file, older workers are significantly and substantially less accepting of worker sabotage ($p < .05$ for each effect). Moving the respondent age from 20 to 55, for example, reduces acceptance of hiding or misplacing a file by about 1 point on a seven-point scale. Results were near zero for recommending a bad marketing plan (Table 3, column 2).

We do not observe any significant gender effects in either column of Table 3, but this apparent non-effect masks subtle differences between passive and active aggression. In the case of recommending a marketing plan to an unfair boss, females have *higher* acceptance of retaliation when respondents have passive means to harm others – consistent with the research cited above on gender and aggression (Fry 1998). More men than women will harm the boss if the choices are to recommend a plan that makes the boss look good or to that makes others look good (51% versus 39%, difference significant $p < .05$). In contrast, 68% of women choose either active or passive means to harm the boss when given both choices – a total rate of aggression above the male rate that remains at 51%. The double difference is statistically significant ($p < .01$).

Women's higher rates of passive punishment are not due to other observable factors. We estimated a multinomial logit predicting active punishment, passive punishment (that is, no reply), and helpful behavior for the scenarios with all three options (results available on request). The relative risk ratio for the passive punishment compared to helping was 2.58 ($p < .01$) on female alone, and an almost identical 2.55 ($p < .01$, difference with previous coefficient not significant, and similar stability of the relative risk of active harm versus helping) controlling for age, union and supervisory status, and the several race categories.

We are not fully confident that women are more accepting of passive retaliation than men, as there is no consistent relationship between female acceptance of harming the boss by omission (not telling) versus hiding a file in the case of hiding a file (again, results available on request).

There were no consistent differences among whites, Hispanics, and blacks. Asians were slightly more accepting of sabotage on both scenarios, although only statistically significantly so on Misplaces or Doesn't Tell Location of File (-0.41, $p < .01$).

Occupational status

Managers and supervisors were much less accepting of worker retaliation in the case of hiding or misplacing a file, with statistically significant effects of about 0.3 points. However, there is no substantial or significant difference regarding the perceived unfairness of not helping or hurting a boss who has passed one over for promotion.

Union members, in contrast, were more accepting of worker sabotage in the case of hiding or misplacing a file, with a large effect of nearly 0.5 points; due to the small number of union members in our sample, this difference was not statistically significant on a two-sided test, although it is on a justifiable one-tailed test. As with manager comparisons, we again see no difference for union members regarding the perceived unfairness of not helping or hurting a boss who has passed one over for promotion.

Attitudes

Most of the economic and political attitude questions did not have a strong relationship to predicting acceptance of worker sabotage. Respondents scoring 1 point higher on a 7-point scale of "I wish our society would take more care of its weaker and more vulnerable members" were

about a tenth of a point more accepting of sabotage that retaliated against a sexual harassing boss (column 1), but almost the same with the marketing plan. In contrast, respondents who agreed that “Most organizations make human resource decisions fairly” were significantly less accepting of retaliation in the case of the marketing plan, but there was little difference in the file scenario.

The most consistent relation is being a conservative (not a liberal). A 3-unit increase in Conservative self-identification on the 7-point scale (equal to two standard deviations) increased the unacceptability of being unhelpful with the file by 0.4 units (on a 7-point scale) – a relatively large effect. We also see a significant effect of political views on the choice of marketing plans to tell the boss, where a 3-unit increase in conservative self-identification reduced the probability of harming the boss by 9 percentage points.

We expected much of the effect of occupational differences would be mediated by attitudinal differences. Although managers and union members differed in the expected direction on the attitude questions (results not shown), the main effects of being a supervisor/manager and of being a union member were unaffected by whether we did or did not control for attitudes (results not shown).

Attitudes toward retaliation to toward all rule-breaking behavior?

It is possible that our results in individual differences are due to a general pattern that some groups are more accepting of rule-breaking behavior at work, not just retaliation. We had an additional scenario in the survey that asked about rule-breaking behavior that was not in retaliation. The baseline version asked:

James has been hired to distribute 1,000 game cards at a mall, 30 of which are “winners.” James knows which cards are the winners. The company is a major music company and the game cards are for a free CD worth \$10. James keeps 3 winners and gives them as gifts for Christmas.

Appendix 3 discusses the several variations and presents results for this question.

As with our other scenarios (see Table 2), females, older employees, and managers are less approving of stealing the winning game cards than their complements. At the same time, this indicator of overall low acceptance of workplace misbehavior does not mediate the relationship between demographics and acceptance of workplace retaliation. When we condition on the attitude toward taking the cards, the coefficient is highly statistically significant; at the same time, the demographic effects remain essentially unchanged (results available on request).

SUMMARY, CAVEATS, AND DISCUSSION

We investigate attitudes toward acts of employee retaliation as a function of the characteristics of the act and the characteristics of the responder. This is exploratory work, as we are unaware of any previous work on this issue. We employ a quasi-experimental approach, in which we develop scenarios and ask respondents for their views in relation to these scenarios. Using different base questions, we explore issues in relation to whether the act in question is one of omission or commission and the severity of the retaliation. In addition, we consider the demographics and attitudes of the respondents and how these seem to shape the underlying attitudes. We hope that our data help lead to a comprehensive theory concerning the determinants of what makes retaliation acceptable.

Our hypotheses about the difference between acts of omission and of commission are strongly supported. Respondents are more accepting of retaliating against an unfair act by

inaction (not telling where a file is, ignoring a manager's request for advice) than by action (hiding a file, lying about knowing a file's location, or providing a manager poor advice).

Our hypothesis that less severe retaliation would more acceptable received little support. In that scenario the harm done by the manager was very large (sexual harassment with devastating consequences). Apparently respondents who thought retaliation was acceptable did not object to wasting two weeks of the offending manager's time, while those who found any retaliation problematic were equally troubled by wasting a couple of hours or a couple of weeks.

We also note that individual differences matter. Older respondents, women, supervisors and managers, and conservatives tended to be less accepting of retaliation while union members were a bit more accepting.

Caveats

The primary concern about studies such as this one is that we measure attitudes, not behaviors. Thus, social desirability biases, where respondents may give answers they perceive as desired by the experimenter or society more widely, are an important concern. Nevertheless, there are two reasons to believe social desirability biases do not drive most of our results.

First, in Tables 1 and 2 we compare responses across scenarios. Thus, a fixed level of social desirability bias can only bias down our quasi-experimental results. For example, if many respondents would never admit they sometimes find it acceptable to perform less than 100% at work, then we will have a harder time detecting true differences in attitudes toward employee misconduct.

Second, even when respondents self-report their own misconduct at work, these self-reports have fairly high validity (see the meta-analysis of Ones, Viswesvaran, & Schmidt, 1993).

As we are asking not for an admission of guilt, but merely for a judgment of others' actions, we expect weaker social desirability biases in our setting.

Our regressions are also immune to social desirability biases that affect all respondents. At the same time, our results can be biased if some groups have unusually strong social desirability biases. In their meta-analysis, Ones and Viswesvaran conclude that social desirability biases are similar for men and for women, although these biases may be slightly stronger for older respondents (1998: 254-255). Thus, we cannot rule out that the lower reported acceptance of misconduct by older respondents we find may be due in part to stronger social desirability biases among older respondents.

A respondent's attitudes toward retaliation at work are important even if they do not strongly predict that respondent's own behavior because co-workers' approval and disapproval will affect how workers respond when colleagues retaliate. Workplace behaviors are frequently observed by co-workers, and retaliation will presumably be more common when co-workers approve of it (and provide social rewards) than when they disapprove (and may turn in the rule-breaker).

A further concern is the generalizability of our sample of Northern Californians. Election results suggest northern California is more social and politically liberal than the national average. Nevertheless, because we examine how attitudes change across scenarios, a constant shift in the acceptance of employee sabotage should not affect our results.⁵

⁵ Similarly, social scientists routinely conduct laboratory experiments with similarly localized populations and such results are virtually never questioned on this basis.

Discussion

Most of the characteristics that predict acceptance of retaliation at work also correlate with arrest rates: young men, for example, are the bulk of those arrested (FBI 1997) and are more accepting of worker retaliation. While we have no data, we suspect those arrested are also rarely supervisors or managers.

One important exception is that blacks have much higher arrest rates than other races but do not report higher acceptance of retaliation at work. We have no evidence that that fact is due to blacks under-reporting their acceptance of retaliation, blacks having above-average arrest rates given their rate of criminal offenses, having a non-random selection of blacks in our sample, or a true difference in attitudes toward retaliation conditional on attitudes and behaviors concerning crime.

Implications for organizational theory

Fairness theories already had a good track record in predicting retaliation (Charness and Rabin 2002) and theft (Greenberg 1990). Consistent with those theories, our results support the idea that people are reasonably accepting of retaliation against vicious managerial acts such as sexual harassment.

Behavioral science theories have not emphasized the distinction between acts of omission and commission, although the distinction looms large in both philosophy and in our results. It is important to identify other domains where this distinction may explain both human behavior and observers' evaluation of others' behavior.

Implications for managers

In general, respondents did not look favorably on retaliation at work. At the same time, a devastating instance of sexual harassment greatly increased approval for employee retaliation against the perpetrating supervisor. The management implication is to design management systems that strongly discourage abusive management actions.

A more controversial implication for managers is to hire ‘Margaret Thatcher’: A conservative, female, older, and long-time (former) manager sounds like a good bet to frown on retaliation at work. In fact, most of our demographic effects are not large. At the same time, they largely go in the expected direction. Our summary of the managerial implications, again, is to minimize actions employees feel are unfair.

Next steps

Future studies might examine more dimensions of employee misconduct at work: One could study the role of the employee (for example: Is it less acceptable when trusted employees misbehave?); the demographics of the employee (Is it perceived as less acceptable when women misbehave than men?); the effect of the retaliatory action on the employer (for example: breaking workplace rules to punish a supervisor in ways that help the employer versus harm the employer; the motive for an action (for example: breaking workplace rules to punish a misbehaving supervisor versus to help customers versus for one’s own enrichment); and many others.

In the long term it is important to validate these attitude surveys. While some research can be done in the lab, ultimately scholars face the challenge of moving research on workplace misconduct into field settings.

REFERENCES

- Akerlof, G., and J. Yellen (1990). "The Fair Wage-Effort Hypothesis and Unemployment." *Quarterly Journal of Economics* 105: 255–283.
- Babcock, L., G. Loewenstein, S. Issacharoff, and C. Camerer (1995). "Biased Judgments of Fairness in Bargaining." *American Economic Review* 85: 1337–1342.
- Baron, Jonathan. (1994). "Nonconsequentialist Decisions." *Behavioral and Brain Sciences* 17(1): 1–10.
- Bies, R.J. & Tripp, T.M. (2004). The Study of Revenge in the Workplace: Conceptual, Ideological, and Empirical Issues. In S. Fox & P.E. Spector, (Eds.), *Counterproductive Work Behavior: Investigations of Actors and Targets*. Washington DC: APA Press.
- Brandts, J., and G. Charness (2003). "Truth or Consequences: An Experiment." *Management Science* 49, 116–130.
- Charness, G., and M. Rabin. (2002). "Understanding Social Preferences with Simple Tests." *Quarterly Journal of Economics*, 117: 817–869.
- Delaney, Joseph F. (1911). "Omission." *The Catholic Encyclopedia*, Volume XI, Robert Appleton. <http://www.newadvent.org/cathen/11251b.htm>
- Dubois, P. (1976). *Sabotage in Industry*. New York: Penguin.
- FBI. (1997). *Uniform Crime Reports for the United States, 1996*, Washington, D.C. [http://www.fbi.gov/ucr/Cius_97/96CRIME/96crime4.pdf] accessed March 2, 2005.
- Folger, R. & Skarlicki, D.P. (2004). Beyond Counterproductive Work Behavior: Moral Emotions and Deontic Retaliation vs. Reconciliation. In S. Fox & P.E. Spector, (Eds.), *Counterproductive Work Behavior: Investigations of Actors and Targets*. Washington DC: APA Press.
- Fox, Suzy, Paul E. Spector and Don Miles, Counterproductive Work Behavior (CWB) in Response to Job Stressors and Organizational Justice: Some Mediator and Moderator Tests for Autonomy and Emotions, *Journal of Vocational Behavior* 59, 291–309 (2001)
- Fry, Douglas P. (1998). "Anthropological perspectives on aggression: Sex differences and cultural variation." *Aggressive Behavior* 24(2): 81–95.
- Gorman, R., and J. Kerr. (1992). "Fairness as a Constraint on Profit-Seeking: Comment." *American Economic Review* 82: 355–358.
- Greenberg, J. (1990). "Employee Theft as a Reaction to Underpayment Inequity: The Hidden Cost of Pay Cuts." *Journal of Applied Psychology* 75: 561–568.
- Güth, W., C. Schmidt, and M. Sutter. (2003). "Fairness in the Mail and Opportunism in the Internet: A Newspaper Experiment in Ultimatum Bargaining." *German Economic Review* 4: 243–265.
- Hollinger, Richard C., and John P. Clark. (1983). *Theft by Employees*. Lexington, MA: Lexington Books.
- Holm, H., and P. Nystedt. (2002). "Intra-Generational Trust: A Semi-Experimental Study of Trust Among Different Generations." mimeo.
- Kahneman, D., J. Knetsch, and R. Thaler. (1986). "Fairness as a Constraint on Profit-Seeking: Entitlements in the Market." *American Economic Review* 76: 728–741.
- Lind, E. A., and T. R. Tyler. (1988). *The Social Psychology of Procedural Justice*. New York: Plenum Press.

- Organ, D. (1988). *Organizational Citizenship Behavior: The Good Soldier Syndrome*, Lexington, MA: D.C. Heath.
- Putnam, R. (2000). *Bowling Alone*. New York: Simon and Schuster.
- Rabin, M. (1993). "Incorporating Fairness into Game Theory and Economics." *American Economic Review* 83: 1281–1302.
- Skarlicki, D. P. and Folger, R. (1997). Retaliation in the workplace: The roles of distributive, procedural, and interactional justice. *Journal of Applied Psychology*, **82**, 434–443.
- Spector, P.E. & Fox, S. (2002). An Emotion-Centered Model of Voluntary Work Behavior: Some Parallels Between Counterproductive Work Behavior (CWB) and Organizational Citizenship Behavior (OCB). *Human Resource Management Review*, 12(2), 269-292.
- Spranca, M., E. Minsk, and J. Baron. (1991). "Omission and Commission in Judgment and Choice." *Journal of Experimental Social Psychology* 27: 76–105.
- Sprouse M., ed. (1992), *Sabotage in the American Workplace: Anecdotes of Dissatisfaction, Mischief and Revenge*, San Francisco: Pressure Drop Press.
- Steinbock, B., and A. Norcross, eds. (1994). *Killing and Letting Die*. New York: Fordham University Press

Figure 1: Survey design

Each respondent received one survey form with two versions of the scenario about hiding a file from a sexually harassing boss and one scenario concerning recommending a marketing plan.

Retaliatory action or mediating circumstances

	I) Hiding a file from a sexually harassing boss		II) Recommending a marketing plan after boss shows favoritism. Boss emails you to request a recommendation
Survey form	Between-subjects scenario	Follow-up scenario	Default option for boss & <i>Is there an option to ignore the e-mail?</i>
1	Denies knowing where file is, takes hours to replace	Doesn't tell	No default & <i>you can ignore the e-mail</i>
2	Doesn't tell, takes hours to replace	Hides	No default
3	Hides file, takes hours to replace	Weeks to replace	Default is Plan 1, where other division looks good
4	Doesn't tell where file is, takes weeks to replace	Hides	Default is Plan 2, where boss looks good
5	Hides, takes weeks to replace	Denies knowing	Default is Plan 1, where other division looks good & <i>you can ignore the e-mail</i>

Notes: The second column of the File questions shows the within-subjects comparison on that scenario. For example, in Survey form 1 respondents were first told that the employee denies knowing where the file is. They were then given a within-subjects test and asked their views if instead the employee was not asked where the file was and did not tell.

Table 1: Regression Summarizing Treatments for Hiding a File

Dependent variable: 1 = Completely acceptable, 7 = Completely unacceptable

OLS regression results	
Baseline scenario: The employee chooses not to tell the manager the file's location, with two hours of manager overtime required to recreate the information.	3.52 ** [0.105]
Bob hides the file [<i>versus baseline scenario with file implicitly just hard to find</i>]	0.964 [0.088]**
Bob denies knowing where the file [<i>versus Bob chooses not to tell the manager the file's location</i>]	0.289 [0.119]*
The manager will have to put in a couple of weeks [<i>versus couple of hours</i>] of his own overtime to recreate the information in the file.	0.126 [0.121]
R ²	.039
N	1793

Notes: Standard errors [brackets] and level of statistical significance (< .05, ** < .01). Standard errors are clustered to account for two observations per respondent. In results not shown, the interaction of intentionally misplacing the file _ weeks (not hours) to replace is not statistically significant.*

Table 2: Marketing Plan Results

Percentage Choosing Each Action

Default option for boss	Option to ignore the e-mail	Recommend Plan 1 (harming the boss)	Recommend Plan 2 (helping the boss)	Ignore	N
a. No default	No	46%	54%	-	173
b. Plan 1, where other division looks good	Yes	34%	39%	27%	169
c. No default	Yes	34%	42%	24%	209
d. Plan 2, where boss looks good	No	47%	53%	-	174
e. Plan 1, where other division looks good	No	55%	45%	-	152
Summary of cases with no choice to ignore (rows a, d and e)	Yes	49%	51%	-	499
Summary of cases with choice to ignore (rows b and c)	No	34%	41%	25%	378
Total		43%	47%	11%	877

Table 3: Do Personal Characteristics Affect Acceptability of Retaliation?

	1 OLS Misplaces or Doesn't Tell Location of File, 1 = Completely acceptable, 7 = Completely unacceptable	2 Probit Recommend a Marketing Plan 1 = harm boss by omission or commission, 0 otherwise
Female	0.116 [0.134]	0.051 [0.036]
Age	0.028 [0.006]**	0 [0.002]
Black	0.139 [0.247]	-0.045 [0.063]
Hispanic	0.884 [0.255]**	0.058 [0.072]
Asian	-0.408 [0.149]**	-0.065 [0.041]
Other race	-0.392 [0.311]	-0.012 [0.084]
Supervise others	0.315 [0.141]*	-0.015 [0.037]
Union	-0.465 [0.251]	0.054 [0.062]
For the next 3 questions: 1 = strongly disagree, 7 = strongly agree		
Most organizations make human resource decisions fairly.	-0.012 [0.041]	0.029 [0.011]**
I feel comfortable living in a competitive market economy in which individuals are free to sell their goods and services at whatever price the market will bear.	0.05 [0.037]	0.004 [0.010]
I wish our society would take more care of its weaker and more vulnerable members.	0.107 [0.046]*	0.012 [0.012]
Extremely Liberal (1) to Extremely Conservative (7)	0.141 [0.050]**	-0.03 [0.013]*
Dummy variables representing the 5 versions of the scenario	Yes	Yes
N	1716	858
R ²	0.12	

Notes: * significant at 5%; ** significant at 1%. Omitted race/ethnicity is white. Probit coefficients are dP/dX , showing the change in predicted probability when the dependent variable moves one point. Standard errors in column 1 are clustered to account for two observations per respondents. In column 2, "harming the boss" is defined as recommending the plan where the other department looks good or refraining from making a recommendation when the boss is likely or sure to pick the plan where the other department looks good.

Appendix 1: Sample Survey

Note: This is survey Version 3, one of the five versions described in Figure 1.

1. James has been hired to distribute 1,000 game cards at a mall, 30 of which are “winners.” James knows which cards are the winners.

The company is a major music company and the game cards are for a free CD worth \$10. James keeps 3 winners and gives them as gifts for Christmas.

A) Please rate James’ action (check one box):

Completely acceptable	Somewhat acceptable	Slightly acceptable	Neutral	Slightly unacceptable	Somewhat unacceptable	Completely unacceptable
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B) Now consider the case where the winning cards are instead worth \$10 in cash. Please rate James’ action:

Completely acceptable	Somewhat acceptable	Slightly acceptable	Neutral	Slightly unacceptable	Somewhat unacceptable	Completely unacceptable
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2. A male manager in your company told Ann that if she did not sleep with him, he would fire her. Ann quit the next day and has been both unemployed and depressed ever since.

Now this manager needs some information from a file that he has misplaced. Bob, a good friend of Ann’s, knows where the file is. When the manager starts looking for the file, Bob hides the file. The manager will have to put in a couple of hours of overtime to recreate the information in the file.

A) Please rate Bob’s action:

Completely acceptable	Somewhat acceptable	Slightly acceptable	Neutral	Slightly unacceptable	Somewhat unacceptable	Completely unacceptable
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B) Now consider the case where the manager will instead have to put in a couple of weeks of his own overtime to recreate the information in the file. Now please rate Bob’s action:

Completely acceptable	Somewhat acceptable	Slightly acceptable	Neutral	Slightly unacceptable	Somewhat unacceptable	Completely unacceptable
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3. Student ID # _____ [for the student survey, linked to a separate survey with demographic information]

4. A plumber has just finished his work on a pipe when the homeowner he is working for walks in. The homeowner says that he will not be paying the plumber his full payment because: “You don't deserve that kind of money for this job.” In fact, the plumber charges standard market rates and has done a good job. The homeowner leaves the room.

A) The plumber then finds a ring in the pipe worth about \$100 (half the unpaid money). He takes the ring home and gives it to his wife. Please rate the plumber's action:

Completely Acceptable	Somewhat acceptable	Slightly acceptable	Neutral	Slightly unacceptable	Somewhat unacceptable	Completely unacceptable
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B) Now consider the case where the plumber instead finds a \$100 bill that evidently fell behind a drawer and appears to have been lost a long time. He takes the money home. Please rate the plumber's action:

Completely acceptable	Somewhat acceptable	Slightly acceptable	Neutral	Slightly unacceptable	Somewhat unacceptable	Completely unacceptable
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5. Assume you have the highest performance of anyone in your work group. Nevertheless, your boss has just chosen to allocate more of his bonus budget to his best friend among the group and less to you.

Now your boss must pick one of two marketing plans to sell the output you produced. Although both will be equally effective, the first plan will end up making another division look good while the second plan will make your boss look good. Your boss is extremely unlikely to ever figure out this feature of the two plans (and probably never will), and asks your advice on which plan to implement.

Your boss is under time pressure and sends you an e-mail asking you which plan you recommend. He notes if he does not hear from you he will probably choose the first plan. Check the box for the action you would take:

- i) Recommend the first plan (where another division looks good).
- ii) Recommend the second plan (where your boss looks good).

6. Do you agree with this statement? “Most organizations make human resource decisions fairly.”

Completely agree Somewhat agree Slightly Agree Neutral Slightly disagree Somewhat disagree Completely disagree

7. The following scale of political views that people might hold is arranged from extremely liberal to extremely conservative. Where would you place yourself on this scale?

Extremely Liberal Liberal Slightly Liberal Moderate Slightly Conservative Conservative Extremely Conservative

8. Do you agree with this statement? “Companies that lay off employees typically succeed in improving their financial health.”

Completely agree Somewhat agree Slightly agree Neutral Slightly disagree Somewhat disagree Completely disagree

9. John has worked for the large multinational KlineCo for 17 years, a company with a well-established reputation for having a purely business attitude toward employees. In the past, it has not hesitated to lay people off or cut pay when that seemed the right thing to do to maximize profits, and it has just as quickly re-hired people and raised pay when that has seemed the right thing to do to maximize profits. The company does not pretend to have a sentimental attachment to employees, and the employees don’t pretend to have one for the company. John and his co-workers know all of this and they choose to work at a company where the company is free to let them go or re-set wages, and they feel free to leave the company whenever they see better jobs or opportunities elsewhere.

Now the founder’s son is taking over as CEO. The new CEO realizes that he can cut production costs significantly (and raise his own bonus) by moving a number of tasks to a lower-wage nation overseas. Thus, KlineCo is laying off John and a number of other employees. Employees receive 2 weeks’ notice.

Please rate the decision to lay off John:

Completely Acceptable Somewhat acceptable Slightly acceptable Neutral Slightly unacceptable Somewhat unacceptable Completely unacceptable

10. I feel comfortable living in a competitive market economy in which individuals are free to sell their goods and services at whatever price the market will bear.

Completely agree Somewhat agree Slightly agree Neutral Slightly disagree Somewhat disagree Completely disagree

11. I wish our society would take more care of its weaker and more vulnerable members.

Completely agree Somewhat agree Slightly agree Neutral Slightly disagree Somewhat disagree Completely disagree

Appendix 2: Supplementary Tables

Table A1: Complete Tabulations for Scenarios of Hiding a File

Employee act, time to replace	# who say act is:							Total	Mean response
	1 (More fair)	2	3	4	5	6	7 (Less fair)		
Hides file, takes weeks to replace	47	45	49	36	38	47	94	356	4.38
Hides file, takes hours to replace	43	29	31	26	45	54	103	331	4.75
Doesn't tell where file is, takes weeks to replace	73	52	32	35	29	40	71	332	3.90
Doesn't tell, takes hours to replace	115	61	36	67	30	34	45	388	3.30
Denies knowing where file is, takes weeks to replace	32	32	23	15	14	26	35	177	3.93
Denies knowing where file is, takes hours to replace	45	31	25	26	19	25	39	210	3.83
Total	355	250	196	205	175	226	387	1794	4.02

Table A2: Marketing Plan Results

Default option for boss & <i>Is there an option to ignore the e-mail?</i>	Number Choosing Each Action			Total	% Recommending Plan 2 (boss looks good)
	Harm boss: Recommend Plan 1	Help boss: Recommend Plan 2	Ignore		
a. No default	80	93	-	173	53.8%
b. Plan 1, where other division looks good & <i>you can ignore the e-mail</i>	58	66	45	169	39.1%
c. No default & <i>you can ignore the e-mail</i>	71	88	50	209	42.1%
d. Plan 2, where boss looks good	81	93	-	174	53.4%
e. Plan 1, where other division looks good	84	68	-	152	44.7%
Total	374	408	95	877	46.5%

Take Prize-winning Cards

The baseline cards scenario asks about the acceptability of this scenario:

James has been hired to distribute 1,000 game cards at a mall, 30 of which are “winners.” James knows which cards are the winners.

The company is a major music company and the game cards are for a free CD worth \$10. James keeps 3 winners and gives them as gifts for Christmas.

Variations on this theme included the employer being a small independent music company instead of a major company; removing 3 winners when 300 of the 1,000 cards are winners instead of 30; winners being worth \$10 cash (not a CD worth \$10); and James being told by the other card distributors that they each kept about 3 cards from a batch of 1000. As expected respondents found it less unacceptable to take winning cards when the employer was a major

music company, when there were 300 winners, or when James was told everyone else did it (only result not statistically significant), but worse when the winners were worth cash. For the purposes of this study, acceptability of taking cards (conditional on the version of the scenario) is a measure of general tolerance of rule-breaking. Results for this question are in table A3.

Table A3: When is Taking Prize-Winning Cards Unacceptable?

OLS, where 1 = completely acceptable, 7 = completely unacceptable

A small independent music company instead of a major company	0.226 [0.077]**
Removing 3 winners when 300 of the 1,000 cards are winners instead of 30	-0.217 [0.088]*
Winners are worth \$10 cash (not a CD worth \$10)	0.259 [0.121]*
Other card distributors said they each kept about 3 winning cards from a batch of 1000 cards	0.061 [0.148]
Female	0.267 [0.118]*
Age	0.017 [0.005]**
Black	-0.192 [0.223]
Hispanic	0.319 [0.203]
Asian	-0.238 [0.132]
Other race	0.26 [0.251]
Supervise others	0.393 [0.119]**
Union	-0.178 [0.220]
Organizations are fair. (For this and the next 2 questions: 1 = strongly disagree, 7 = strongly agree)	0.267 [0.118]*
Comfortable with a competitive market economy	0.017 [0.005]**
Society should take more care of its weaker members	-0.192 [0.223]
Extremely Liberal (1) to Extremely Conservative (7)	0.319 [0.203]
N	1733
R ²	0.05

Notes: * significant at 5%; ** significant at 1%. Omitted race/ethnicity is white. Standard errors are clustered to account for two observations per respondents.