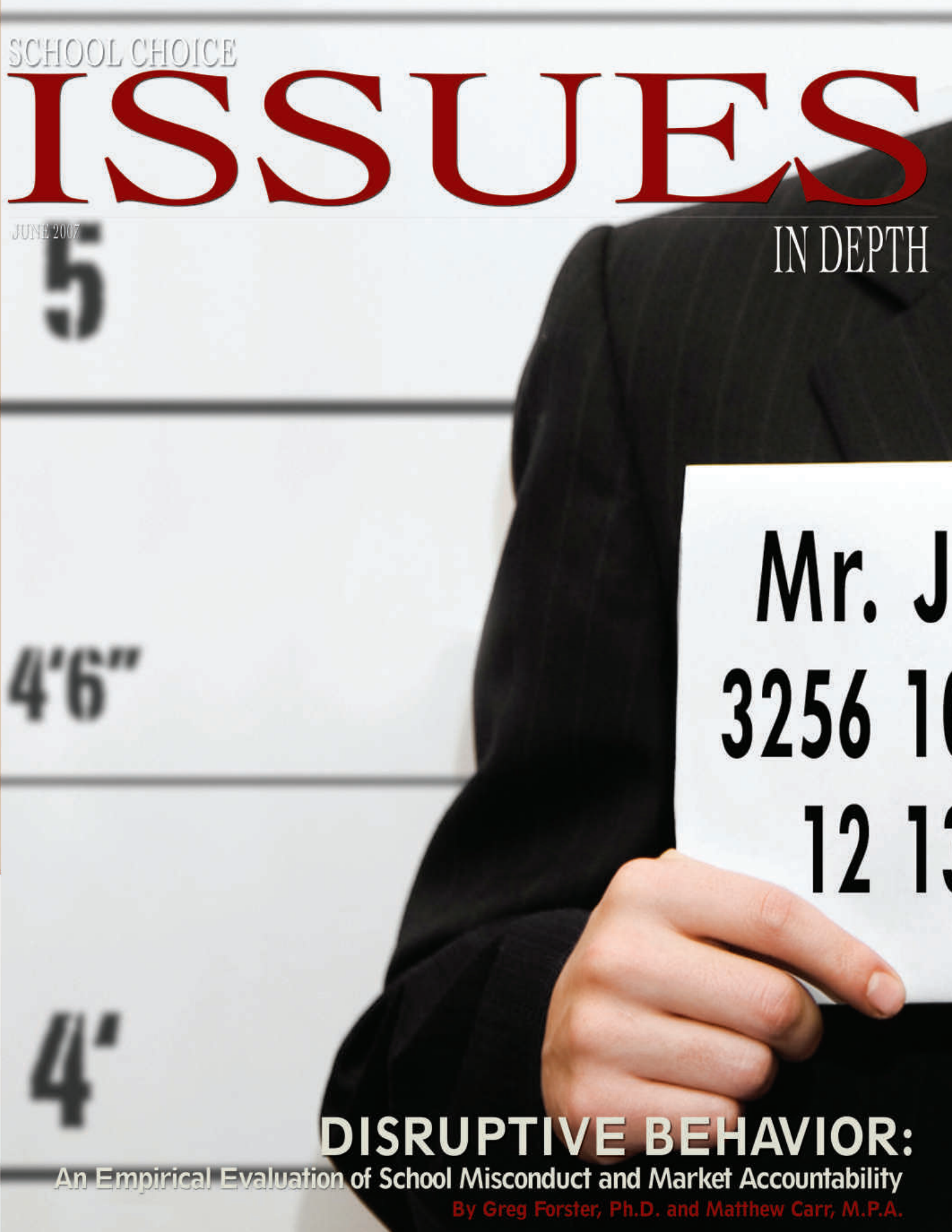
SCHOOL CHOICE
ISSUES
JUNE 2007
IN DEPTH



DISRUPTIVE BEHAVIOR:

An Empirical Evaluation of School Misconduct and Market Accountability

By Greg Forster, Ph.D. and Matthew Carr, M.P.A.

OUR CHALLENGE TO YOU

Our research adheres to the highest standards of scientific rigor. We know that one reason the school choice movement has achieved such great success is because the empirical evidence really does show that school choice works. More and more people are dropping their opposition to school choice as they become familiar with the large body of high-quality scientific studies that supports it. Having racked up a steady record of success through good science, why would we sabotage our credibility with junk science?

This is our answer to those who say we can't produce credible research because we aren't neutral about school choice. Some people think that good science can only be produced by researchers who have no opinions about the things they study. Like robots, these neutral researchers are supposed to carry out their analyses without actually thinking or caring about the subjects they study.

But what's the point of doing science in the first place if we're never allowed to come to any conclusions? Why would we want to stay neutral when some policies are solidly proven to work, and others are proven to fail?

That's why it's foolish to dismiss all the studies showing that school choice works on grounds that they were conducted by researchers who think that school choice works. If we take that approach, we would have to dismiss all the studies showing that smoking causes cancer, because all of them were conducted by researchers who think that smoking causes cancer. We would end up rejecting all science across the board.

The sensible approach is to accept studies that follow sound scientific methods, and reject those that don't. Science produces reliable empirical information, not because scientists are devoid of opinions and motives, but because the rigorous procedural rules of science prevent the researchers' opinions and motives from determining their results. If research adheres to scientific standards, its results can be relied upon no matter who conducted it. If not, then the biases of the researcher do become relevant, because lack of scientific rigor opens the door for those biases to affect the results.

So if you're skeptical about our research on school choice, this is our challenge to you: prove us wrong. Judge our work by scientific standards and see how it measures up. If you can find anything in our work that doesn't follow sound empirical methods, by all means say so. We welcome any and all scientific critique of our work. But if you can't find anything scientifically wrong with it, don't complain that our findings can't be true just because we're not neutral. That may make a good sound bite, but what lurks behind it is a flat rejection of science.

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Choice

EXECUTIVE SUMMARY

Opponents of school choice argue that private schools are not "accountable" because they are not subject to detailed oversight by a regulatory bureaucracy. They claim private-school employees can be expected to engage in abusive and criminal behavior more frequently. School choice supporters respond that parents hold private schools accountable through market choices – when parents can choose their children's schools, they can avoid sending their children to schools that don't have adequate safeguards against employee misconduct and can punish the occurrence of misconduct by withdrawing their children from schools where it occurs. These factors create powerful market incentives for private schools to maintain strong safeguards against employee misconduct.

Teachers and staff commit misconduct in both public and private schools. The important question for school choice policy is wether "market accountability" is as effective as "regulatory accountability" in preventing school misconduct. However, despite the urgency of the question, no previous empirical studies have systematically compared misconduct levels in public and private schools.

This study uses the Nexis database to measure the frequency of employee misconduct at public and private schools in states that have school choice programs. It finds that cases of school misconduct occur disproportionately in public schools rather than in private schools. The study then applies a statistical test to these data, finding that they provide grounds for confidence that private schools subject to market accountability really are less likely to engage in misconduct than public schools subject to regulatory accountability.

Key findings include:

- In the five-year period from November 2000 through October 2005, a total of 814 cases of misconduct were reported in public schools and 69 cases were reported in private schools in the 12 states with school choice policies (including the District of Columbia).

- This means 92 percent of all cases of school misconduct in these states occurred in public schools, and about 8 percent occurred in private schools.

- During the same period, about 89 percent of all students in these states attended public schools and about 11 percent attended private schools.

- This means school misconduct in these states occurred disproportionately in public schools rather than in private schools.

- A statistical test shows that we can be confident these results are caused by a real difference in misconduct rates at public and private schools, rather than by random chance.

- In Pennsylvania, school misconduct cases occurred disproportionately in public schools. In all other school choice states, there was no statistically significant difference between total misconduct levels in public and private schools.

ABOUT THE AUTHORS

Greg Forster, Ph.D., is a senior fellow and the director of research at the Milton and Rose D. Friedman Foundation, where he conducts research and writes about school choice policy. He has conducted empirical studies on the impact of school choice programs in Milwaukee, Cleveland, Florida and Texas, as well as national empirical studies of participation in school choice programs and the impact of charter schools. He also has conducted empirical studies of other education topics, including accountability testing, graduation rates, student demographics and special education.

His research has appeared in the peer-reviewed publications *Teachers College Record* and *Education Working Paper Archive*, and his articles on education policy have appeared in the *Washington Post*, the *Los Angeles Times*, the *Philadelphia Inquirer*, *Education Next*, the *Chronicle of Higher Education* and numerous other publications. He is co-author of the book *Education Myths: What Special-Interest Groups Want You to Believe about Our Schools – and Why It Isn't So*, from Rowman & Littlefield.

He received a Ph.D. with Distinction in political science from Yale University in 2002 and a B.A. *summa cum laude* from the University of Virginia in 1995. His book *John Locke's Politics of Moral Consensus* was published by Cambridge University Press in 2005.

Matthew Carr is the Education Policy Director at the Buckeye Institute for Public Policy Solutions. He is a former staff researcher on education policy issues for the Manhattan Institute and recently completed his masters in public administration at Kent State University. Currently, he is working on a Ph.D. at the University of Arkansas as a Distinguished Doctoral Fellow.

ABOUT THE FRIEDMAN FOUNDATION

MILTON & ROSE D. FRIEDMAN FOUNDATION
Educational Choice

The Milton and Rose D. Friedman Foundation, dubbed "the nation's leading voucher advocates" by the *Wall Street Journal*, is a non-profit organization established in 1996. The origins of the foundation lie in the Friedmans' long-standing concern about the serious deficiencies in America's elementary and secondary public schools. The best way to improve the quality of education, they believe, is to give all parents the freedom to choose the schools that their children attend. The Friedman Foundation builds upon this vision, clarifies its meaning to the public and amplifies the national call for true education reform through school choice.

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One of the most common arguments against school choice programs is that private schools are not "accountable." While accountability in education is usually discussed in terms of test-based accountability for academic results, when school choice is on the table the subject often changes to accountability for misconduct. Supporters and critics of school choice can say different things about whether private schools are accountable for misconduct. This is because they have two different ideas of what "accountability" is.

Regulatory Accountability and Market Accountability

Critics of school choice often allege that private schools are more likely to engage in misconduct than public schools. For example, during a recent school board election in Milwaukee, home of the nation's largest voucher program, opponents of a school choice supporter on the board distributed campaign literature that included the following slogans: "Rampant corruption. No accountability. Dangerous criminals in taxpayer-supported schools." "Milwaukee's dangerous, corrupt private school voucher system. . . does not require schools to be accountable to the taxpayers who support them." While the Milwaukee school board race reached an unusual level of stridency, similar depictions of school choice are commonplace among the policy's critics.

The issue is not whether misconduct occurs in private schools. Obviously it does; school choice critics typically highlight such cases. In the Milwaukee school board race, critics pointed to a private school principal who had used school money to buy two Mercedes automobiles.[1]

But misconduct occurs in public schools as well. In 2005, one Milwaukee public school official pleaded guilty to stealing money from his school, and another was arrested for a similar crime.[2] In 2006, among other incidents, a Milwaukee public school teacher who had been caught viewing pornography at school was reinstated to his job. The public school disciplinary process justified this decision by saying that the district had only reprimanded another teacher who used his school computer to check stock quotes, and it was unfair to impose a heavier penalty on this teacher for using a school computer inappropriately.[3] In a notorious 2005 Ohio case, after a disabled teenage girl was beaten and videotaped while being forced to perform sex acts in front of dozens of students, a principal and three assistant principals tried to pressure the girl's father not to call the police. "After school officials found the victim dazed, bleeding from the mouth and with a swollen face . . . their main concern appeared to be keeping the news media from finding out what had happened," reported the *Columbus Dispatch*.[4]

The question is not whether misconduct occurs, but whether schools are held accountable for misconduct. When school choice critics say private schools are not "accountable," they mean that private schools are not subject to command and control by a government bureaucracy with the power to regulate them. They imply that this model of accountability – we will call it "regulatory accountability" – is the only one that can effectively deter and punish school misconduct.

On the other hand, supporters of school choice contend that parents hold private schools accountable through the mechanism of market choice. Parents are strongly motivated not to place their children in schools where there is a higher chance that misconduct will occur. This applies not only to misconduct committed directly against students, but also to misconduct that hurts the school as a whole (e.g. stealing money), since students get a worse education when the school suffers harm.

For parents who don't have the option of choosing their child's school, this parental motivation to protect their children makes no difference. The *chi*ldren must attend their assigned public school no matter how unsafe they are there. But with school choice, parents' motivation to protect their *chi*ldren will cause them to be sensitive to whether private schools have adequate safeguards against misconduct, and to choose the schools that do. It also will allow them to withdraw their students from schools where misconduct occurs, thus punishing schools for failing to prevent the misconduct. These factors create a very powerful incentive for private schools to adopt and maintain strong safeguards against employee misconduct.

So the real issue for school choice policy is: does market accountability hold schools accountable for preventing misconduct as effectively as regulatory accountability?

Strengths and Weaknesses of Regulatory Accountability

There are advantages and disadvantages to both systems that might make one more effective than the other. Command structures provide important advantages for regulatory accountability. Regulators have the authority to simply impose safeguards against misconduct on public schools; there need not be any process of convincing schools to adopt this or that safeguard or procedure. If regulators suspect non-compliance, they can order an investigation or audit. In addition to the legal punishments for misconduct itself, failure to maintain the safeguards against misconduct that are imposed by regulators is itself a punishable form of misconduct. The ability of regulators to command, investigate and punish schools and their employees gives regulatory accountability powerful strengths.

On the other hand, the very nature of command structures introduces several significant drawbacks for regulatory accountability. The successful functioning of any process is largely dependent on the motivation of those who carry it out. Regulations are imposed not by highly motivated parents but by bureaucrats with no special personal motive to ensure that the system functions. Obviously public school regulators deplore misconduct and want to see it prevented and punished, but there can be little doubt that a parent's motivation to protect her own child is much stronger than the abstract desire of an ordinary person, even a good person, to protect children generally. Think of it this way: if misconduct occurs, who will work harder to get the offender punished – a civil servant or the parent of the child who was harmed?

Even more important, regulatory accountability by its nature must follow formal procedures that are the result of political and legal decision-making. The rules that govern regulatory accountability are matters of politics and law, so they reflect other factors besides simply the desire to protect *chi*ldren. They are in large part determined by the relative strength of various political actors, by the outcomes of elections and court cases, and by compromises in negotiations with self-interested economic groups.

For example, the process for disciplining a teacher who has committed misconduct is not written

by regulators. It is drawn up as part of contractual negotiations between school districts and teachers' unions, in the same negotiations that determine teachers' salaries and work rules. How easy or difficult it is to hold teachers accountable for misconduct depends largely on what concessions school districts are willing to make on salaries, working conditions and countless other factors. A district that can't afford to give teachers a raise may instead offer them greater insulation from regulatory accountability systems.

The collective bargaining power of teachers' unions helps them install procedural obstacles to regulatory accountability. Public school teachers accused of misconduct are entitled to a cumbersome, quasi-judicial adversarial process, including representation by union advocates and lengthy appeals. Firing a school employee, even one who is guilty of a heinous offense, takes years of costly, labor-intensive procedures. While one purpose of these requirements is to protect teachers from false accusations, the process is not designed solely or even primarily with that purpose in mind. Teachers' unions are self-interested economic actors who seek to make disciplining a teacher as difficult as possible simply because that is what is in their members' economic interests.

"Public school teachers accused of misconduct are entitled to a cumbersome, quasi-judicial adversarial process, including representation by union advocates and lengthy appeals. Firing a school employee, even one who is guilty of a heinous offense, takes years of costly, labor-intensive procedures."

In the furor that followed the Ohio incident in which the public sexual abuse of a disabled girl was hushed up by school officials, local district employees told the *Columbus Dispatch* that public school teachers and administrators are almost never fired for misconduct, even when an investigation concludes that misconduct deserving termination did occur. The reason, they said, is that the process of firing a school employee is too difficult and time-consuming. And in cases so egregious that administrators clearly should go through the whole process of firing an employee, they almost always decide to save time and expense by simply allowing the employee to resign. In such cases, the employee can keep retirement benefits and apply for jobs at other schools with no formal record of misconduct. Recent offenses by local Ohio public school teachers that allegedly had not resulted in firing included making sexual advances to a middle-school girl, duct-taping a kindergartner to a chair and hitting a 7-year-old. One teacher who was accused of sexual abuse three times in five years was allowed to retire; another teacher accused of molesting nine children, who had been warned twice about inappropriately touching students and was still allowed to continue teaching, was put on paid administrative leave.[5]

After a dispute in Illinois over how much it costs to fire a teacher, the Small Newspaper Group filed a request under the Freedom of Information Act to see all legal bills the state's school system had paid in tenured teacher dismissal cases from 2001 through 2005. The original dispute had been prompted by the newspapers' estimate that it cost at least $100,000 to fire a tenured teacher; the Illinois teachers' union countered that it actually cost less than $50,000. The state's actual legal bills amounted to an average cost of about $220,000 per teacher fired – and even that estimate is too low, because 44 percent of the cases were still on appeal and actively racking up additional costs.[6]

The cumbersome process for disciplining public school teachers not only builds up an enormous

burden of time and money, creating large disincentives to use it; it also introduces a significant degree of uncertainty. Consider the case of the Milwaukee disciplinary system, which ruled that public schools are not allowed to punish a teacher who views pornography at school more seriously than a teacher who checks stock quotes at school. Every additional layer of procedure is an additional opportunity for a bad decision by someone in the system to hinder effective accountability for misconduct.

Strengths and Weakness of Market Accountability

The strengths of market accountability are largely a mirror image of the weaknesses of regulatory accountability. Market accountability is carried out by parents who will be far more strongly motivated than even the most well-meaning regulator. They will be much more likely to dig a little deeper, apply a little more skepticism and err on the side of protecting their children when confronted with ambiguous cases.

> "If a teacher is molesting students, parents armed with school choice do not need to issue warnings, negotiate with labor unions, sit idly by during years of adversarial judicial processes or wait for the teacher to molest a large enough number of children for the case to receive expedited treatment. They can just withdraw their children from that school and put them in another one that has better safeguards against misconduct."

Moreover, their decision-making processes are solely their own and solely concerned with the well-being of their children. If a teacher is molesting students, parents armed with school choice do not need to issue warnings, negotiate with labor unions, sit idly by during years of adversarial judicial processes or wait for the teacher to molest a large enough number of children for the case to receive expedited treatment. They can just withdraw their children from that school and put them in another one that has better safeguards against misconduct.

Similarly, the weaknesses of market accountability mirror the strengths of regulatory accountability. Private schools typically conduct internal audits and adopt procedural safeguards against misconduct, such as those recommended by national associations of private schools. However, these practices are not under the direct control of parents. Parents cannot tell private schools what safeguards to adopt; they can only choose among the available schools based on the procedures that exist at those schools. Parents must rely on private schools for transparency; while schools will no doubt discuss their safeguards with parents who ask, parents cannot conduct investigations or audits to independently confirm whether schools follow their own procedures effectively. And while private school employees who commit misconduct are subject to legal and administrative punishment, parents have limited options for punishing schools for inadequately following procedures to safeguard against misconduct – except, of course, by withdrawing their children where they discover such inadequacies.

Given that both models of accountability have significant strengths and weaknesses, there is an urgent need for an empirical evaluation of whether market accountability is as effective as regulatory accountability. However, despite the need, no previous empirical studies of this question have been performed. While there have been many instances of researchers and advocates collecting anecdotal information on misconduct in public and private schools, and some broad statistics have been compiled on the occurrence of misconduct in public schools, there has never been a valid empirical comparison of public and private schools.

METHOD

METHOD

The purpose of this study is to determine whether private schools, which are subject to market accountability, are more likely to engage in misconduct than public schools, which are subject to regulatory accountability. Because we are interested in this question for the purpose of evaluating school choice policy, we conducted this evaluation in the District of Columbia and the 11 states that have some form of school choice policy: Arizona, Florida, Illinois, Iowa, Maine, Minnesota, Ohio, Pennsylvania, Utah, Vermont and Wisconsin. The only state with a school choice policy that we did not include was Rhode Island. This state had not yet adopted a school choice policy at the time we conducted our analysis.

> "All of the means by which journalists discover school misconduct are equally available for public and private schools. Schools have a motive to prevent journalists from discovering that misconduct has occurred, but this motive is equally present in public and private schools."

Using Newspaper Stories to Measure Misconduct

To evaluate the relative success of the two accountability models, we sought data on the number of instances of misconduct at public and private schools. Unfortunately, such data are not centrally collected and published in the same way that data on enrollments and test scores are. There is, however, a publicly available source of information that is adequate to provide data on the occurrence of misconduct at public and private schools: the Nexis media database service. When school employees are caught committing misconduct, local papers generally are eager to cover the news story. The number of school misconduct cases identified in news reports is an adequate, although imperfect, proxy measurement for the number of school employees committing misconduct.

Proxy measurements are common in social science; there are many questions we couldn't study if we didn't use them. They are particularly common in the study of behavior that is likely to be concealed by those who engage in it, such as crime, drug use or sexual behavior. Where researchers cannot directly measure a behavior, they find proxy measurements such as arrest rates, survey data or the occurrence of associated phenomena (such as studying patterns of gang-related graffiti to find out which neighborhoods have more gang activity). In each case, social scientists study discovered behavior as a proxy for undiscovered behavior. Even a survey directly asking whether respondents engage in a particular behavior is not measuring the behavior itself, but rather the rate at which the survey discovers the behavior.

It is important to be aware of the limitations a proxy measurement entails. The use of newspa-

per stories as a proxy measurement for school misconduct implies two methodological limits. First, we assume that journalists are equally likely to discover misconduct by public and private school employees. This is a reasonable assumption. All of the means by which journalists discover school misconduct are equally available for public and private schools. Schools have a motive to prevent journalists from discovering that misconduct has occurred, but this motive is equally present in public and private schools. This fact is painfully obvious in the Ohio case, where public school administrators sought to avoid embarrassment by hushing up a horrific crime; the *Columbus Dispatch* reported that keeping the crime out of the media was the school officials' "main concern." There is no persuasive reason to believe that journalists would be less likely to discover misconduct at one or the other type of school. But if this assumption does not hold, then to the extent that journalists are more likely to discover misconduct in one or the other type of school, that would introduce a degree of bias in our analysis.

Second, we assume that journalists are equally interested in covering misconduct by public and private school employees. This is also a reasonable assumption. Newspapers have readers who are private school parents as well as those who are public school parents, and private schools serve the local community with which a newspaper is concerned. Since journalists generally see it as their job to expose misconduct in institutions that serve the community and their readers, they would be no less interested in covering misconduct by private school employees than by public school employees. Also, newspapers particularly like to cover scandals and stories of malfeasance, since these are more newsworthy and sell more papers than stories about zoning boards and Boy Scout meetings. It is not plausible that journalists would be less interested in a story about a teacher who stole money or molested students at a private school than a similar story at a public school. But if this assumption does not hold, then to the extent that newspapers are more likely to cover misconduct in one or the other type of school, that would introduce a degree of bias in our analysis.

> "It is not plausible that journalists would be less interested in a story about a teacher who stole money or molested students at a private school than a similar story at a public school."

If it is true that journalists are equally able to discover misconduct in public and private schools, and that they are equally interested in covering its occurrence in both types of schools, then reports of misconduct in the Nexis database are a scientifically adequate proxy measurement for the actual occurrence of misconduct in public and private schools.

Finding and Coding Newspaper Stories on Misconduct

To conduct our Nexis data search, we first needed to identify what newspapers to search. For each state we obtained a list of all the daily newspapers in that state from the website of the American Journalism Review (www.ajr.org). We determined which of these newspapers were available in the Nexis database and searched those newspapers. We made an exception for the District of Columbia, which hosts a large number of daily publications that do not cover local news; in the District we searched only the two major newspapers that cover local news. The papers we identified are listed in Table 1.

Next we developed search language that would

identify stories about misconduct by school employees. We considered an act to be "misconduct" if it is punishable by legal or administrative sanctions; conduct that is merely controversial, embarrassing or unusual is not misconduct. We searched for four kinds of misconduct: sexual misconduct with students, financial misconduct, academic misconduct (i.e. cheating) and a catchall category to include all conduct subject to legal or administrative sanctions that did not fall into the first three categories. Examples of misconduct falling into this catchall category include inappropriate treatment of students, misuse of school facilities, and criminal behavior not falling into the first three misconduct categories. Two of the most common types of misconduct in this category were violence against students and making intimate advances on students (where these advances did not lead to sexual activity, we did not classify them as sexual misconduct).

Through trial and error we developed search language for each of these categories that would be as comprehensive as possible. While it is possible that our search language did not turn up every single story on school misconduct, our language is comprehensive enough to find almost all such stories.[7]

Once we had our search language, we ran four searches (one for each category) in each state, looking for stories that had run in the previous five years. Specifically, our search covered the five-year period from Nov. 1, 2000, to Oct. 31, 2005.

We went through the news stories generated by our search language, looking for stories that reported cases of misconduct. In general, we counted each such news story as one case of misconduct. When there were multiple news stories about the same case of misconduct, whether the stories appeared at the same time in different papers or in later follow-up stories, we counted that as only one case of misconduct (disregarding the additional news stories). On the other hand, if a single news story reported misconduct occurring at multiple schools, we counted each school where misconduct was reported as a separate case of misconduct. If a person accused of misconduct was subsequently exonerated, we did not count that as a case of misconduct. If a person was accused of misconduct but the case had not yet been resolved, we counted that as a case of misconduct. Because we wanted our study to include only current cases of misconduct, not stories about events that happened a long time ago, we imposed a "statute of limitations" – the misconduct had to have occurred within one year of the first newspaper story our search turned up.

In a small number of cases, we found misconduct by school district employees or employees of staff unions. We included cases of district employee misconduct, because these cases will have a direct impact on public schools, and public school districts are subject to the same system of regulatory accountability as public schools. We did not include cases of staff union misconduct, since the direct impact of these cases on public schools is likely to be minimal, and these unions are subject to separate accountability systems. Also, in a few cases we were unable to identify the type of school at which the misconduct had occurred; we excluded these cases.

Applying a Statistical Test

Once we had collected these data, we applied a statistical test to determine whether there was a statistically significant relationship between school type (public or private) and the number of misconduct cases. If a relationship between two variables in our data set is statistically significant, this means we can have a high level of confidence that it reflects a real relationship and is not just a fluke.

The statistical test we used is known as the "*chi*-squared" test. This test is used to determine whether the occurrences of a phenomenon (in

Table 1

Newspapers Searched

STATE	NEWSPAPER
Arizona	*Arizona Republic, Tucson Citizen*
District of Columbia	*Washington Post, Washington Times*
Florida	*Miami Herald, Florida Times-Union, Florida Today* (Melbourne), *South Florida Sun-Sentinel* (Fort Lauderdale), *Fort Pierce Tribune, Orlando Sentinel, Palm Beach Post, Pensacola News Journal, Sarasota Herald Tribune, St. Petersburg Times, Stuart News, Tallahassee Democrat, Tampa Tribune*
Illinois	*Belleville News-Democrat, Chicago Daily Herald, Chicago Sun Times, Chicago Tribune, Rockford Register Star*
Iowa	*Des Moines Register, Iowa City Press-Citizen, Telegraph Herald* (Dubuque)
Maine	*Bangor Daily News, Portland Press Herald/Maine Sunday Telegram*
Minnesota	*Minneapolis-St. Paul Pioneer Press, Minneapolis-St. Paul Star Tribune, St. Cloud Times*
Ohio	*Akron Beacon Journal, Cincinnati Enquirer, Cleveland Plain Dealer, Columbus Dispatch, Coshocton Tribune, Dayton Daily News, Lancaster Eagle-Gazette, Toledo Blade, Zanesville Time Recorder*
Pennsylvania	*Allentown Morning Call, Centre Daily Times* (State College), *Hanover Evening Sun, Lebanon Daily News, Philadelphia Daily News, Philadelphia Inquirer, Pittsburgh Post-Gazette, Pittsburgh Tribune-Review, Wilkes-Barre Times Leader, York Dispatch*
Utah	*Deseret Morning News* (Salt Lake City), *Salt Lake Tribune*
Vermont	*Burlington Free Press*
Wisconsin	*Appleton Post-Crescent, Fond Du Lac Reporter, Green Bay Press-Gazette, Madison Capital Times/Wisconsin State Journal, Manitowoc-Two Rivers Herald Times Reporter, Marshfield News-Herald, Milwaukee Journal Sentinel, Oshkosh Northwestern, Sheboygan Press, Wausau Herald*

Note: All newspapers listed by the American Journalism Review and carried by the Nexis database were included in our search.

this case, school misconduct) are distributed across a given set of categories (school type) in a pattern that we would normally expect if the phenomenon and the categories were unrelated. If not, we can be confident that there is a relationship between the phenomenon and the categories. (This test acquires its strange-sounding name because statisticians customarily use the Greek letter *chi* to represent one of the values involved in the computation, and one of the steps in the test is to square that value.)

To perform the *chi*-squared test, we first needed to calculate the distribution of misconduct cases across school types that we would expect to have if there were no relationship between school type and misconduct. To do this, we obtained data on the number of students in each state enrolled in public and private schools.[8] For each school type, we divided the total enrollment in that type of school by the total enrollment in both types of school to determine the proportion of all students attending each type of school. Then we simply

added up the total number of misconduct cases and multiplied it by the proportion of all students who attend each type of school to determine the expected number of cases for each type of school. We performed this test separately for each of our four misconduct categories, as well as for all misconduct cases put together; we also performed the test separately for each state as well as for all 11 states and the District of Columbia put together.

For example, in Pennsylvania there were 1,821,146 public school students and 330,494 private school students, for a total of 2,151,640 students. Thus about 84.6 percent of all students attend public schools (1,821,146 divided by 2,151,640) and about 15.4 percent attend private schools (330,494 divided by 2,151,640). There were a total of 155 cases of school misconduct in both types of schools in Pennsylvania, so if there were no relationship between school type and misconduct we would expect to see 131.1 cases in public schools (0.846 times 155) and 23.8 cases in private schools (0.154 times 155). (In this example, and throughout this study, numbers sometimes do not sum due to rounding.)

We then compared the expected number of misconduct cases for each type of school to the actual number of cases reported for each type of school. We subtracted the expected number of cases from the actual number of cases, squared this difference and divided that value by the expected number of cases. This gave us a measurement of how different the expected and actual number of cases for each type of school were from one another. We added together the difference measurements for the two types of schools, which gave us an overall measurement of the total difference between the expected and actual values across both types of school.

Continuing the example of Pennsylvania, there were actually 144 cases of misconduct in public schools and 11 in private schools. We had expected those values to be 131.1 and 23.8 respectively if there were no relationship between school type and misconduct. For public schools, our measurement of the difference between the expected and actual occurrence of misconduct for public schools was 1.25 (144 - 131.1 = 12.8; $(12.8)^2$ = 164; 164 / 131.1 = 1.25). For private schools, it was 6.89 (11 - 23.8 = -12.8, $(-12.8)^2$ = 164; 164 / 23.8 = 6.89). Our overall measurement for the total difference between expected and actual values across both school types was 8.14 (1.25 + 6.89).

The final step in performing the *chi*-squared test was to evaluate the magnitude of the overall measurement. Where it is higher than a set threshold, we can have statistical confidence that there is a relationship between school type and misconduct. The threshold by which we evaluate the total difference measurement is determined by the strength of confidence we wish to have that the data are not the result of a statistical fluke. The conventional value used most often in social science is 95 percent certainty – that is, we can be confident we are seeing a real relationship between two variables if we see results that would be produced by chance rather than by a real relationship in only five percent of cases. When using the *chi*-squared test, a total difference measurement higher than 5.99 would be produced by random chance only in 5 percent of cases, so whenever our total difference measurement is greater than 5.99 we can be 95 percent confident that the relationship in the data was produced by a real relationship in the phenomena being observed rather than by random chance.

In the case of Pennsylvania, our total difference measurement (8.14) is higher than the applicable value for 95 percent certainty of a real relationship (5.99). Misconduct occurred more frequently at public schools than at private schools, relative to their shares of the student population, and the difference was large enough to be statistically significant. Thus, on the basis of these data we can have confidence that misconduct is more likely to occur in public schools than in

private schools in Pennsylvania.

Why the *Chi*-Squared Test Favors Public Schools

The nature of the *chi*-squared test imposes a limit on our analysis. The *chi*-squared test assumes that, where there is no relationship between misconduct and school type, there is an equal likelihood that the actual number of misconduct cases in each category will fall somewhat above or somewhat below the expected number of cases. However, the actual number of cases in a given category cannot fall below zero. Therefore, the *chi*-squared test has limited application where the expected number of cases is close to zero in one of the categories being examined. Specifically, when a category's expected value approaches zero, the *chi*-squared test may incorrectly indicate the presence of a real relationship if the number of misconduct cases falling into that category is unusually high due to a statistical fluke. Conversely, if there is a real relationship that raises the actual number of cases in the other category (the one whose expected value does not approach zero), the *chi*-squared test may fail to detect that relationship.

In our study, this limitation will always work against private schools and in favor of public schools, because the expected number of cases will approach zero only for private schools. In other words, if this limitation affects our analysis at all, it will either create a false impression that there is more misconduct in private schools or else obscure the existence of a higher rate of misconduct in public schools.

The extent to which this limitation affects our study will depend on our results. Whenever we find that private schools have significantly less misconduct than expected and public schools have more, we can always be confident that this reflects a real relationship between misconduct and school type – private schools really do have disproportionately less misconduct than public schools. However, if we find that private schools have significantly more misconduct than expected, it is possible that the limitations of the *chi*-squared test may be causing us to detect a relationship where no real relationship exists. And whenever we do not find a statistically significant relationship between school type and misconduct, we can be confident that private schools do not have disproportionately more misconduct than public schools, but because of the limitations of the *chi*-squared test it is still possible that public schools could have disproportionately more misconduct than private schools and we might not be detecting it.

Because the limitations of the *chi*-squared test will always work against private schools and for public schools, these limitations do not prevent us from examining the question of whether market accountability is as effective as regulatory accountability. If our analyses produce positive findings for private schools even though the limitations of the *chi*-squared test work against private schools, we can be confident that our results really do support private schools. To be more precise, if an analysis finds no statistically significant relationship between school type and misconduct, this lends support to the conclusion that private schools are at least as good as public schools. If an analysis does find a statistically significant relationship, and private schools have fewer cases of misconduct than expected while public schools have more, this lends support to the conclusion that private schools are better in this regard than public schools. Only if we find that private schools have significantly more cases of misconduct while public schools have fewer do the limitations of the *chi*-squared test cause problems for interpreting the results.

RESULTS

RESULTS

The results of our analysis across all 11 states and the District of Columbia are reported in Table 2. There were a total of 12,446,567 students in public schools and 1,609,288 students in private schools, for a total of 14,055,855 students. This means that about 89 percent of all students were in public schools and about 11 percent of students were in private schools.

There were 883 cases of misconduct in these states, so if there were no relationship between misconduct and school type we would expect to see about 782 cases of misconduct in public schools and about 101 cases in private schools.

In fact, there were 814 cases of misconduct in public schools (more than the 782 we would statistically expect) and 69 cases in private schools (fewer than the 101 we would statistically expect). This indicates that misconduct occurred disproportionately more in public schools than in private schools – about 92 percent of misconduct cases occurred in public schools, and 8 percent in private schools.

Applying our statistical test, we find that the total measurement of the difference between the actual and expected distribution of misconduct cases is about 11.5. Since this is much greater than our test value of 5.99, we can be confident that the relationship between misconduct and school type in our data is not a result of a statistical fluke – misconduct really was more likely to occur in public schools than in private schools in states with school choice.

Breaking down the results by our four types of misconduct, we find that a statistically significant relationship is observable in the "other misconduct" category. Misconduct in this category is more likely to occur in public schools than in private schools. For the other types of misconduct, no significant relationship between misconduct and school type was observed.

The results of our analyses for each of the 11 states and the District of Columbia are reported in Tables 3-14. For the most part, few significant relationships were observed at this lower level of analysis. Given the lower number of cases, this is not surprising. The main exception was in the state of Pennsylvania, where misconduct was significantly more likely to occur in public schools, both overall and in the "other misconduct" category.

Table 2

Misconduct Occurs Disproportionately in Public Schools

		Actual Distribution of Misconduct Cases	Expected Distribution of Misconduct Cases	*Chi* Squared Value	Conclusion
Sexual	Public	243	245		No significant relationship between
	Private	34	32	0.1860	school type and misconduct is evident.
Financial	Public	80	83		No significant relationship between
	Private	14	11	1.1000	school type and misconduct is evident.
Academic	Public	43	38		No significant relationship between
	Private	0	5	5.5597	school type and misconduct is evident.
Other	Public	448	415		Misconduct occurs disproportionately in
	Private	21	54	22.4839	public schools.
All Categories	Public	814	782		Misconduct occurs disproportionately in
	Private	69	101	11.5078	public schools.
Enrollment	Public	12,446,567			
	Private	1,609,288			

Note: Results include school misconduct cases identified in the 11 states and the District of Columbia with school choice programs.

Table 3

School Misconduct Cases in Arizona

		Actual Distribution of Misconduct Cases	Expected Distribution of Misconduct Cases	*Chi* Squared Value	Conclusion
Sexual	Public	12	11		No significant relationship between
	Private	0	1	0.6389	school type and misconduct is evident.
Financial	Public	3	3		No significant relationship between
	Private	0	0	0.1597	school type and misconduct is evident.
Academic	Public	1	1		No significant relationship between
	Private	0	0	0.0532	school type and misconduct is evident.
Other	Public	39	37		No significant relationship between
	Private	0	2	2.0765	school type and misconduct is evident.
All Categories	Public	55	52		No significant relationship between
	Private	0	3	2.9284	school type and misconduct is evident.
Enrollment	Public	1,012,068			
	Private	53,887			

Table 4

School Misconduct Cases in the District of Columbia

		Actual Distribution of Misconduct Cases	Expected Distribution of Misconduct Cases	*Chi* Squared Value	Conclusion
Sexual	Public	6	6		No significant relationship between
	Private	1	1	0.0190	school type and misconduct is evident.
Financial	Public	10	8		No significant relationship between
	Private	0	2	1.9341	school type and misconduct is evident.
Academic	Public	0	0		
	Private	0	0	N/A	N/A
Other	Public	17	14		No significant relationship between
	Private	0	3	3.2880	school type and misconduct is evident.
All Categories	Public	33	28		No significant relationship between
	Private	1	6	4.4057	school type and misconduct is evident.
Enrollment	Public	78,057			
	Private	15,097			

Table 5

School Misconduct Cases in Florida

		Actual Distribution of Misconduct Cases	Expected Distribution of Misconduct Cases	*Chi* Squared Value	Conclusion
Sexual	Public	82	83		No significant relationship between
	Private	12	11	0.1274	school type and misconduct is evident.
Financial	Public	27	27		No significant relationship between
	Private	4	4	0.0524	school type and misconduct is evident.
Academic	Public	17	15		No significant relationship between
	Private	0	2	2.2281	school type and misconduct is evident.
Other	Public	134	127		No significant relationship between
	Private	10	17	3.0302	school type and misconduct is evident.
All Categories	Public	260	253		No significant relationship between
	Private	26	33	1.7401	school type and misconduct is evident.
Enrollment	Public	2,587,628			
	Private	339,140			

Table 6

School Misconduct Cases in Illinois

		Actual Distribution of Misconduct Cases	Expected Distribution of Misconduct Cases	*Chi* Squared Value	Conclusion
Sexual	Public	36	38		No significant relationship between
	Private	7	5	0.6296	school type and misconduct is evident.
Financial	Public	6	8		No significant relationship between
	Private	3	1	3.6884	school type and misconduct is evident.
Academic	Public	14	12		No significant relationship between
	Private	0	2	1.9643	school type and misconduct is evident.
Other	Public	32	28		No significant relationship between
	Private	0	4	4.4898	school type and misconduct is evident.
All Categories	Public	88	86		No significant relationship between
	Private	10	12	0.4006	school type and misconduct is evident.
Enrollment	Public	2,100,961			
	Private	294,781			

Table 7

School Misconduct Cases in Iowa

		Actual Distribution of Misconduct Cases	Expected Distribution of Misconduct Cases	*Chi* Squared Value	Conclusion
Sexual	Public	5	5		No significant relationship between
	Private	1	1	0.4611	school type and misconduct is evident.
Financial	Public	2	2		No significant relationship between
	Private	0	0	0.1932	school type and misconduct is evident.
Academic	Public	1	1		No significant relationship between
	Private	0	0	0.0966	school type and misconduct is evident.
Other	Public	15	15		No significant relationship between
	Private	1	1	0.1304	school type and misconduct is evident.
All Categories	Public	23	23		No significant relationship between
	Private	2	2	0.0204	school type and misconduct is evident.
Enrollment	Public	481,226			
	Private	46,487			

Table 8

School Misconduct Cases in Maine

		Actual Distribution of Misconduct Cases	Expected Distribution of Misconduct Cases	*Chi* Squared Value	Conclusion
Sexual	Public	3	5		Misconduct occurs disproportionately
	Private	2	0	6.2374	in private schools.
Financial	Public	2	2		No significant relationship between
	Private	0	0	0.1890	school type and misconduct is evident.
Academic	Public	0	0		
	Private	0	0	N/A	N/A
Other	Public	4	4		No significant relationship between
	Private	0	0	0.3779	school type and misconduct is evident.
All Categories	Public	9	10		No significant relationship between
	Private	2	1	1.2718	school type and misconduct is evident.
Enrollment	Public	202,084			
	Private	19,093			

Table 9

School Misconduct Cases in Minnesota

		Actual Distribution of Misconduct Cases	Expected Distribution of Misconduct Cases	*Chi* Squared Value	Conclusion
Sexual	Public	12	12		No significant relationship between
	Private	1	1	0.0894	school type and misconduct is evident.
Financial	Public	5	5		No significant relationship between
	Private	1	1	0.2737	school type and misconduct is evident.
Academic	Public	2	2		No significant relationship between
	Private	0	0	0.2272	school type and misconduct is evident.
Other	Public	12	11		No significant relationship between
	Private	0	1	1.3633	school type and misconduct is evident.
All Categories	Public	31	30		No significant relationship between
	Private	2	3	0.6177	school type and misconduct is evident.
Enrollment	Public	842,854			
	Private	95,754			

Table 10

School Misconduct Cases in Ohio

		Actual Distribution of Misconduct Cases	Expected Distribution of Misconduct Cases	*Chi* Squared Value	Conclusion
Sexual	Public	20	20		No significant relationship between
	Private	3	3	0.0357	school type and misconduct is evident.
Financial	Public	11	10		No significant relationship between
	Private	0	1	1.4679	school type and misconduct is evident.
Academic	Public	1	1		No significant relationship between
	Private	0	0	0.1334	school type and misconduct is evident.
Other	Public	51	48		No significant relationship between
	Private	3	6	2.0098	school type and misconduct is evident.
All Categories	Public	83	79		No significant relationship between
	Private	6	10	2.1693	school type and misconduct is evident.
Enrollment	Public	1,845,428			
	Private	246,260			

Table 11

School Misconduct Cases in Pennsylvania

		Actual Distribution of Misconduct Cases	Expected Distribution of Misconduct Cases	*Chi* Squared Value	Conclusion
Sexual	Public	37	36		No significant relationship between
	Private	5	6	0.3857	school type and misconduct is evident.
Financial	Public	7	8		No significant relationship between
	Private	3	2	1.6486	school type and misconduct is evident.
Academic	Public	5	4		No significant relationship between
	Private	0	1	0.9074	school type and misconduct is evident.
Other	Public	95	83		Misconduct occurs disproportionately in
	Private	3	15	11.4022	public schools.
All Categories	Public	144	131		Misconduct occurs disproportionately in
	Private	11	24	8.1409	public schools.
Enrollment	Public	1,821,146			
	Private	330,494			

Table 12

School Misconduct Cases in Utah

		Actual Distribution of Misconduct Cases	Expected Distribution of Misconduct Cases	*Chi* Squared Value	Conclusion
Sexual	Public	7	8		No significant relationship between
	Private	1	0	1.7853	school type and misconduct is evident.
Financial	Public	3	3		No significant relationship between
	Private	0	0	0.1135	school type and misconduct is evident.
Academic	Public	1	1		No significant relationship between
	Private	0	0	0.0378	school type and misconduct is evident.
Other	Public	11	11		No significant relationship between
	Private	0	0	0.4162	school type and misconduct is evident.
All Categories	Public	22	22		No significant relationship between
	Private	1	1	0.0323	school type and misconduct is evident.
Enrollment	Public	495,981			
	Private	18,767			

Table 13

School Misconduct Cases in Vermont

		Actual Distribution of Misconduct Cases	Expected Distribution of Misconduct Cases	*Chi* Squared Value	Conclusion
Sexual	Public	5	5		No significant relationship between
	Private	1	1	0.2220	school type and misconduct is evident.
Financial	Public	0	0		
	Private	0	0	N/A	N/A
Academic	Public	0	0		
	Private	0	0	N/A	N/A
Other	Public	9	8		No significant relationship between
	Private	0	1	1.0802	school type and misconduct is evident.
All Categories	Public	14	13		No significant relationship between
	Private	1	2	0.2571	school type and misconduct is evident.
Enrollment	Public	99,103			
	Private	11,895			

Table 14

School Misconduct Cases in Wisconsin

		Actual Distribution of Misconduct Cases	Expected Distribution of Misconduct Cases	*Chi* Squared Value	Conclusion
Sexual	Public	18	16		No significant relationship between
	Private	0	2	2.8151	school type and misconduct is evident.
Financial	Public	4	6		No significant relationship between
	Private	3	1	5.1498	school type and misconduct is evident.
Academic	Public	1	1		No significant relationship between
	Private	0	0	0.1564	school type and misconduct is evident.
Other	Public	29	29		No significant relationship between
	Private	4	4	0.0556	school type and misconduct is evident.
All Categories	Public	52	51		No significant relationship between
	Private	7	8	0.1390	school type and misconduct is evident.
Enrollment	Public	880,031			
	Private	137,633			

CONCLUSION

CONCLUSION

The results of our analysis give us confidence that in the 11 states and the District of Columbia with school choice programs, misconduct is somewhat more likely to occur in public schools subject to regulatory accountability than in private schools subject to market accountability. The difference between public and private schools is not enormous, amounting in our data set to 32 out of 814 cases, or 4 percent of the total. But our statistical test gives us confidence that this difference is the result of a real relationship. The claims of school choice opponents that only a command-and-control regulatory system can hold schools accountable for misconduct do not square with the facts. The evidence supports school choice proponents in their claim that parents are just as good at protecting their children as a government bureaucracy.

ENDNOTES

[1] Sarah Carr, "Choice Funds Used to Buy 2 Mercedes," *Milwaukee Journal Sentinel*, Feb. 17, 2004.

[2] Derrick Nunnally, "Ex-Mandella Official Wants to Withdraw Guilty Plea," *Milwaukee Journal Sentinel*, April 27, 2005; Alan Borsuk, "Official Says Harambee Stable," *Milwaukee Journal Sentinel*, Jan. 13, 2005.

[3] Tom Kertscher, "Porn Watching Teacher Reinstated," *Milwaukee Journal Sentinel*, Sept. 15, 2006.

[4] Bill Bush, "Students Allegedly Watched Assault," *Columbus Dispatch*, April 12, 2005.

[5] Jennifer Richards, "Teachers Suspected of Breeches Rarely Fired," *Columbus Dispatch*, May 15, 2005.

[6] "Almost $220,000 to Fire a Tenured Teacher in Illinois," *EIA Communiqué*, June 26, 2006.

[7] Our search language for sexual misconduct with students is: (sex! OR molest!) w/s student!) AND (accus! OR sentenc! OR admit! OR confess! OR convict! OR charg! OR indict!) AND (teacher! OR administrator! OR employee! OR instructor! OR aide!); our search language for financial misconduct is: ((teacher! OR administrator! OR (employee! w/s school)) w/s (embezz! OR steal! OR stole! OR theft! OR (financ! w/s (misconduct! OR scandal! OR wrongdoing!))) AND (school!); our search language for academic misconduct is: (cheat! OR dishonest! OR manipulat!) w/s (teacher! OR administrator! OR (school w/s employee!))) AND (test! OR evaluat! OR academ! OR score!); our search language for other misconduct is: ((teacher! OR administrator! OR (school w/s employee!)) w/p (indict! OR convict! OR confess! OR guilt! OR accus!)) AND (scandal! OR crim! OR misconduct!) AND (school! OR academ!) AND NOT ((sex! OR molest!) w/s student!) AND NOT (embezz!!).

[8] We obtained public school enrollment figures from the *Digest of Education Statistics* and private school enrollment figures from the Private School Universe Survey data set, both published by the U.S. Department of Education's National Center for Education Statistics. Since the most recent available private school enrollment figures are for fall 2003, we used public school figures from fall 2003 to ensure compatibility.

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