

The Law and Economics of Online Cheating

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ABSTRACT

With the growth of online higher education and, in turn, the use of online exams, cheating at colleges and universities has surged. Yet, students report that they are rarely caught, and are even more rarely punished, that punishments are usually mild, and that faculty and administrators do not seem to care much about cheating.

This Article offers the first law and economic analysis of online cheating. For many years, the courts have analyzed cheating based on contractual or due process principles, which rest on the assumption that the student and the university have reciprocal obligations, the violation of which imposes individual harm. A law and economics analysis shows, however, that cheating causes substantial social harms, which are neither factored into the current judicial treatment of cheating nor into the actions taken by faculty or administrators to prevent it.

Because cheating causes substantial social harm, a criminal law model better describes the current prevalence of cheating than does contract or due process and helps solve the puzzle of how cheating became so pervasive and why faculty and administrators do so little about it. Criminal law also points the way to more effective legal interventions to help reduce the current high rate of cheating.

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INTRODUCTION

Cheating on online academic exams in higher education is widespread and widely tolerated.¹ In a 2009 survey of college students at a midsize public university, 32.7% admitted to cheating in an online class.² In three surveys of the author's undergraduate classes at a large public university in 2020 and 2021, students estimated that 18%–35% of their peers cheated on online exams even when using proctoring software. When online exams were administered without proctoring software, students estimated that 49%–76% of their peers cheated.³ These figures are in the same range as reported in other surveys of student cheating at U.S. universities.⁴

Most faculty and students believe that cheating is more common in online classes,⁵ and a recent study by an online proctoring company

1. See discussion *infra* Sections II.C.i and II.C.ii. A useful definition of cheating is that it involves “unauthorized use of information, materials, devices, sources or practices in completing academic activities.” *Academic Dishonesty Definition and Types, Academic Integrity Tutorials*, N. ILL. UNIV., <https://www.niu.edu/academic-integrity/faculty/types/index.shtml> (last visited Feb. 15, 2023); see also Gary Pavela, *Model Code of Academic Integrity*, 24 J.C. & U.L. 97, 104–05 (1997) (focusing on knowing and intentional cheating on online exams and defines cheating as “[i]ntentionally using or attempting to use unauthorized materials, information or study aids in any academic exercise.”).

2. George Watson & James Sottile, *Cheating in the Digital Age: Do Students Cheat More in Online Courses*, 8 ONLINE JOURNAL OF DISTANCE LEARNING ADMIN. (Jan. 1, 2010), <https://core.ac.uk/download/pdf/232714568.pdf>.

3. The survey questions asked each class were: “Comparing the amount of cheating on an online exam that is monitored using proctoring software and not monitored: On average, what percentage of students cheat on an unmonitored online exam? And “On average, what percentage of students cheat on a proctored online exam?” Polls taken April 2021, October 2021, and April 2022.

4. For example, in a 2004 survey, 24% of business students said that they had cheated on an electronic exam and 42 percent said that they would cheat if given the opportunity. Kenneth J. Chapman et al., *Academic Integrity in the Business School Environment: I’ll Get By with a Little Help from My Friends*, 26 J. MKTG. EDUC. 236, 243 (2004). Apart from studies that rely on survey information, there have been very few academic studies of the prevalence of cheating. Stephen D. Levitt & Ming-Jen Lin, *Catching Cheating Students 1* (Nat’l Bureau of Econ. Rsch., Working Paper No. 21628, 2015).

5. In a May 2020 survey of instructors, 93% said that students were more likely to cheat online than in person. *Academic Integrity in the Age of Online Learning*, WILEY (2020), <https://www.wiley.com/en-us/network/education/instructors/teaching-strategies/academic-integrity-in-the-age-of-online-learning-3>; see also Mohammed Juned Hussein et al., *An Evaluation of Proctoring Tools*, 12 OPEN PRAXIS 509, 511 (2020); Joanna Golden & Mark Kohlbeck, *Addressing Cheating When Using Test Bank Questions in Online Classes*, 52 J. ACCT EDUC. 1 (2020).

found that the rate of online cheating has soared during the pandemic.⁶ The basic reasoning is that “students will take advantage of easy opportunities to cheat [and] . . . it seems such opportunities have never before been so great.”⁷ Why is the higher rate of cheating on online exams important? Online exams are an integral component of most online courses in higher education, and even before the pandemic, the percentage of undergraduates taking at least one online course increased from 16% in 2004 to 43% in 2016.⁸

No matter where cheating occurs, it carries serious costs. Economists view the social benefits of higher education in terms of:

6. See Sneha Dey, *Reports of Cheating Soar During the Pandemic*, NPR (Aug. 27, 2021, 6:00 AM), <https://www.npr.org/2021/08/27/1031255390/reports-of-cheating-at-colleges-soar-during-the-pandemic>; see also *Meazure Learning's Online Exam Proctoring Service, ProctorU, Releases the 2021 Exam Integrity Report*, MEASURE LEARNING (Apr. 26, 2022), <https://www.measurelearning.com/resources/meazure-learning-online-exam-proctoring-service-proctoru-releases-the-2021-exam-integrity-report> (reporting that “the confirmed breach rate was . . . more than 13x the pre-pandemic levels”).

7. Tarah Hodgkinson et al., *Student Academic Dishonesty: The Potential for Situational Prevention*, J. CRIM. JUST. EDUC. 1, 2 (2015) (removing the human proctor from exams in online courses affords test takers with additional privacy which they can use to surreptitiously research answers or communicate with other test takers. Typical cheating methods include searching answers using Google and using group chats. So far, the best proctoring software does not have the same cheating detection capabilities as a faculty member or teaching assistant who conscientiously proctors an in-person exam); see also Hussein, *supra* note 5; Eren Bilen & Alexander Matros, *Online Cheating and COVID-19*, 182 J. ECON. BEHAV. ORGAN. 196, 199 (2021) (observing that the use of online proctoring software, including video recording, is imperfect and that “cheating can never be fully detected online”).

8. THOMAS D. SNYDER ET AL., DIGEST OF EDUCATION STATISTICS 2018, 270 tbl.311-22 (54th ed. 2019), <https://nces.ed.gov/pubs2020/2020009.pdf> (last visited Feb. 15, 2023).

- Human capital acquisition—students acquire knowledge and skills that make them more productive workers and better citizens;⁹ and
- Signaling effects—students demonstrate through their academic performance that they are conscientious and high-productivity workers.¹⁰

Cheating is costly for society because it diminishes the effectiveness of education in both areas: students who cheat acquire less human capital, and widespread cheating reduces the fidelity, or signal-to-noise ratio, of grade-based and diploma-based information.¹¹ As Richard McKenzie and Gordon Tullock observe, “from the standpoint of society as a whole, cheating reduces the information content of grades. If there is a great deal of cheating, then the grading system does not give very much information as to the quality of students.”¹²

Employers who cannot rely on academic grades as a useful indicator of ability must waste resources developing their own tests, as they are increasingly doing.¹³ In classes with curved grades, cheating causes direct harm to non-cheaters. And cheating behavior in school is likely to carry over into the workplace and other professional and civic settings,¹⁴ reducing the overall level of social capital.

9. Bryan Caplan, *THE CASE AGAINST EDUCATION: WHY THE EDUCATION SYSTEM IS A WASTE OF TIME AND MONEY* 14–17 (2019); see also GARY S. BECKER, *HUMAN CAPITAL: A THEORETICAL AND EMPIRICAL ANALYSIS, WITH SPECIAL REFERENCE IN EDUCATION* (1964); Yoram Ben-Porath, *The Production of Human Capital and the Life Cycle of Earnings*, 75 J. POLIT. ECON. 352 (1967).

10. See Michael Spence, *Job Market Signaling*, 87 Q.J. ECON. 355 (1973).

11. See, e.g., Mark G. Simkin & Alexander McLeod, *Why Do College Students Cheat?*, 94 J. BUS. ETHICS 441, 442 (2009) (“Most of our colleagues [at Duke University Fuqua College of Business] feel that widespread cheating at a university tarnishes the reputation of the institution, demeans the value of the degrees granted at them, and disappoints those employers who find that student graduates cannot adequately perform the work suggested by their major.”)

12. Richard B. McKenzie & Gordon Tullock, *THE NEW WORLD OF ECONOMICS* 157 (6th ed. 2012).

13. Tomas Chamorro-Premuzic, *Ace the Assessment*, HARV. BUS. REV. (2015), <https://hbr.org/2015/07/ace-the-assessment>.

14. See Sarath Nonis & Cathy Owens Swift, *An Examination of the Relationship between Academic Dishonesty and Workplace Dishonesty: A Multicampus Investigation*, 77 J. EDUC. FOR BUS. 69 (2001); James Ogilvie & Anna Stewart, *The Integration of Rational Choice and Self-Efficacy Theories: A Situational Analysis of Student Misconduct*, 43 AUSTL. N.Z. J. CRIMINOLOGY 130, 131 (2010).

Despite the frequency and negative consequences of cheating, there has been very little legal or economic research on the subject.¹⁵ Surprisingly, there has been almost no research on how cheating levels vary based on the detection rate, the probability of punishment, or the severity of punishment. The substantial volume of prior work outside the legal field discusses a variety of psychological and social factors that may influence cheating¹⁶ but does not focus on how changing the academic integrity rules themselves would affect the amount of cheating.¹⁷ Most colleges and universities, in fact, do not systematically collect even the most basic information about the number of students caught cheating and the punishments they receive, in part because faculty do not report many cheating incidents.¹⁸ In short, the law and economics of academic dishonesty remains unexplored.

This Article fills the gap by providing a descriptive and normative account of online cheating. Using a law and economics approach, this Article shows why the current legal framework fails to control online cheating and what should be done about it.

Courts have generally concluded that the university–student legal relationship rests on contract law principles, supplemented by due process requirements at public universities and “basic fairness”

15. See Bruce MacFarlane et al., *Academic Integrity: A Review of The Literature*, 39 *STUD. HIGHER EDUC.* 339 (2014); Donald L. McCabe & Linda Klebe Trevino, *Individual and Contextual Influences on Academic Dishonesty: A Multicampus Investigation*, 38 *RSCH. HIGHER EDUC.* 379 (1997). Although a number of papers on academic dishonesty mention Gary Becker’s original economic model of crime and punishment, most then veer off in other directions. For references to articles mentioning Becker’s economics of crime, see Joe Kerkvliet & Charles L. Sigmund, *Can We Control Cheating in the Classroom?*, 30 *J. ECON. EDUC.* 331, 332 (1999).

16. These factors include psychological, demographic, and contextual factors that influence cheating, such as self-control, self-efficacy, conscientiousness, agreeableness, individual and peer attitudes toward academic dishonesty, age, academic capability, commitment to studies, gender, number of extracurricular activities, fraternity membership, and participation in extracurricular activities. See, e.g., Mei Wah M. Williams & Matthew Neil Williams, *Academic Dishonesty, Self-Control, and General Criminality: A Prospective and Retrospective Study of Academic Dishonesty in a New Zealand University*, 22 *ETHICS & BEHAV.* 89, 90 (2012).

17. For example, Levitt & Lin point out that “[i]n spite of . . . apparent widespread cheating, there has been little academic attention devoted to the detection of cheating,” a requirement for effective deterrence, which underlies the law and economics perspective. Levitt & Lin, *supra* note 4, at 1; see generally Fakhroddin Noorbehhahani et al., *A Systematic Review of Research on Cheating in Online Exams from 2010 to 2021*, 27 *EDUC. & INFO. TECH.* 8413 (2022).

18. Few schools publicly report cheating statistics, and many faculty do not report cheating incidents even when required to do so. See discussion *infra* Sections II.C.i and IV.D.

requirements at private universities.¹⁹ Implicit in this approach is the assumption that cheating primarily causes individual harms, as opposed to broad social harms.

That assumption is wrong. Despite the widespread application of contract principles to cheating cases, contract law is not the best model to analyze cheating. Contract law provides a useful model where one party's violation of an agreement causes damage exclusively or primarily to the counterparty. However, a contract model does not capture the broad and substantial social harms that cheating causes. Cheaters currently bear far less than the full social cost of their actions and, therefore, produce more than the socially optimal amount of cheating.

After examining standard models of contract, torts, and crime used in law and economics, this Article concludes that the most useful way to view online exam cheating is through the lens of criminal law and that Gary Becker's economic model of crime provides insight into the current high level of cheating and important lessons for its reduction. This is not to say that cheating should be made a crime. Indeed, in most cases, online cheating is not even a violation of the law.²⁰ But when intentional and wrongful actions cause broad social harm, criminal law is the most useful model.

A criminal law model not only explains the high rate of cheating but also the puzzle of why students report that they are rarely punished, that punishments are usually mild and not publicized, and that faculty and administrators do not seem to care very much about cheating. The problem is that faculty and institutions face mixed incentives in catching and punishing cheaters. Faculty members incur significant costs in being vigilant against cheating and derive little or no benefit from doing so. Colleges and universities that aggressively target cheating can generate bad publicity for the school.²¹

Applying a criminal law model to cheating also yields insights about how to improve the contract and due process-based status quo. As one example, increasing the salience of punishments has been shown to

19. See Curtis J. Berger & Vivian Berger, *Academic Discipline: A Guide to Fair Process for the University Student*, 99 COLUM. L. REV. 289, 291 (1999).

20. See *infra* notes 128–129.

21. See discussion *infra* Section IV.D.

increase deterrence.²² There is a strong argument that, at a minimum, schools should be required to publish basic information highlighting the prevalence of student cheating and the punishments imposed.

This Article proceeds as follows. Part I shows that courts have adopted contract and due process analogies to address cheating. Applying law and economics principles, Part II shows that courts' analogies overlook important aspects of cheating, including the social harm inflicted. Part III argues that, in contrast to the contract law analogy, a criminal law model provides the most useful analogue. Part IV uses the criminal law model to explain why cheating is overproduced and why faculties and colleges fail to act. Part V identifies possible legal interventions to reduce online cheating.

I. UNIVERSITY ACADEMIC DISCIPLINARY ACTIONS: THE EXISTING LEGAL LANDSCAPE

Academic disciplinary law is complicated because cheating plausibly implicates many different bodies of law—contracts, university rules and policies, due process, and criminal law—and because private and public universities are subject to different legal regimes. Courts have suggested that the student–university relationship is unique and does not fit neatly into a single area of law.²³ Still, most cases involve either a contract-based claim, generally alleging that the university did not follow its own rules,²⁴ or a due process claim alleging that the disciplinary process did not provide for a hearing or was otherwise unfair.²⁵

The case law is limited because few academic disciplinary cases have been litigated, and even fewer involve cheating.²⁶ However, a

22. See discussion *infra* Section III.C.ii.

23. *Slaughter v. Brigham Young Univ.*, 514 F.2d 622, 626 (10th Cir. 1975).

24. See, e.g., *Corso v. Creighton Univ.*, 731 F.2d 529, 531 (8th Cir. 1984) (“The relationship between a university and a student is contractual in nature.”); *Mangla v. Brown Univ.*, 135 F.3d 80, 83 (1st Cir. 1998) (“The student-college relationship is essentially contractual in nature.”); *Mass. Inst. of Tech. v. Guzman*, 90 Mass. App. Ct. 1102 (2016).

25. See, e.g., *Harris v. Blake*, 798 F.2d 419, 424 (10th Cir. 1986); *Gaspar v. Bruton*, 513 F.2d 843, 850 (10th Cir. 1975).

26. See generally *Berger & Berger*, *supra* note 19; Scott R. Sinson, *Judicial Intervention of Private University Expulsions: Traditional Remedies and a Solution Sounding in Tort*, 46 *DRAKE L. REV.* 195 (1997); see also Elizabeth L. Grossi & Terry D. Edwards, *Student Misconduct: Historical Trends in Legislative and Judicial Decision-Making in American*

review of cases involving the general category of academic dishonesty from 1974 to 2009 found that “breach of contract issues” were the central focus in cases involving private universities and “due process rights” were the central focus in cases involving public universities.²⁷ The review concluded, however, that “the court system is now intermingling the obligations of public and private universities when it comes to due process rights and breach of contract rights.”²⁸ Further blurring the distinction between contract and due process is the fact that most public and private universities publish detailed rules regarding academic discipline that meet or exceed due process requirements and are considered enforceable parts of the student–university “contract.”²⁹

Several illustrative cases are discussed below. All these cases focus on individual harm associated with cheating, whether by applying due process or contract law. As important as what these cases address is what they overlook. In none of these cases, nor in any others the author has found, did the court acknowledge that the alleged cheater’s actions caused broader social harm. This observation is consistent with the conclusion that the courts generally view cheating cases as involving individual harm only.

A. Contract-Based Theories

In *Dinu v. President of Harvard College*, two students sued to have the court order the college to award them their degrees.³⁰ At the time of their suit, Harvard had suspended them for stealing money from

Universities, 23 J.C. & U.L. 829 (1997); see also HARVEY A. SILVERGLATE & JOSH GEWOLB, FIRE’S GUIDE TO DUE PROCESS AND CAMPUS JUSTICE (William Creeley ed., Found. for Individual Rts. Educ. 2014); Thomas J. Bender Jr., *Due Process in Academic Dismissals from Post Secondary Schools*, 26 CATH. U. L. REV. 111 (1977).

27. Judith T. Jackson, Academic dishonesty: The link between academics and the law (2010) (Ed.D. dissertation, University of Alabama) (on file with author).

28. *Id.*

29. See Berger & Berger, *supra* note 19, at 297–98; see also *Tedeschi v. Wagner College*, 404 N.E.2d 1302, 1306 (N.Y. 1980) (“Whether by analogy to the law of associations, on the basis of a supposed contract between university and student, or simply as a matter of essential fairness in the somewhat one-side relationship . . . we hold that when a university has adopted a rule or guideline establishing the procedure to be followed in relation to suspension or expulsion that procedure must be substantially observed.”).

30. *Dinu v. President of Harvard College*, 56 F. Supp. 2d 129 (D. Mass. 1999).

Harvard Student Agencies.³¹ Their argument, based on contract, was that nowhere in the Handbook for Students “is it explicitly said that a student must be in good standing to graduate.”³² The court observed:

That the relationship between a university and its students has a strong, albeit flexible, contractual flavor is an idea pretty well accepted in modern case law. So too, is the proposition that a student handbook, like the occasional employee handbook, can be a source of the terms defining the reciprocal rights and obligations of a school and its students.³³

The court was not persuaded by the students’ contractual interpretation and upheld the university’s decision to withhold their degrees.³⁴ In reaching this conclusion, the court did not consider, nor was it asked to consider, the social costs of the students’ actions.

In *Slaughter v. Brigham Young University*, the university appealed a jury award of money damages to a graduate student it expelled prior to being awarded a Ph.D.³⁵ The university had found that the student violated the Student Code of Conduct by listing a faculty member as a co-author on two articles submitted to a journal for publication without the consent of the faculty member.³⁶ The court concluded that there was substantial evidence to support the university’s findings that the faculty member did not give permission and that the student’s actions were dishonest within the meaning of the Student Code.³⁷ The court struggled to identify the area of law most applicable, concluding:

It is apparent that some elements of the law of contracts are used and should be used in the analysis of the relationship between plaintiff and the University to provide some framework into which to put the problem of expulsion for disciplinary reasons. This does not mean that “contract law” must be rigidly applied in all its

31. *Id.* at 130.

32. *Id.* at 132.

33. *Id.* at 129 (citations omitted).

34. *Id.*

35. *Slaughter v. Brigham Young Univ.*, 514 F.2d 622, 626 (10th Cir. 1975).

36. *Id.* at 625.

37. *Id.*

aspects, nor is it so applied even when the contract analogy is extensively adopted

. . . .

There are . . . many cases which refer to a contractual relationship existing between the student and the university, especially private schools. But . . . these cases do not adopt all commercial contract law by their use of certain elements.

The student–university relationship is unique, and it should not be and cannot be stuffed into one doctrine category. It may also be different at different schools.³⁸

Although the court rejected “the complete adoption of commercial contract doctrine,” it nevertheless found the expulsion justified because the student’s dishonest conduct violated the terms of the Student Code—a finding that appears to be based on contract principles. Again, the court did not consider the social harm caused by the student’s conduct.

B. Due Process-Based Theories

Public universities, as institutions of state government, are subject to the additional Fourteenth Amendment requirement that they may not deprive students of liberty or property without due process.³⁹ In this context, courts have found that students have a property interest in continuing their education towards the goal of obtaining a degree and have a liberty interest in not having their reputation for integrity tarnished by being labeled as cheats.⁴⁰

38. *Id.* at 626.

39. For an overview of the relevant case law, see Tonya Robinson, *Property Interests and Due Process in Public University and Community College Student Disciplinary Proceedings*, SCH. L. BULL. 10 (1999).

40. *See* *Plumb v. Univ. of Utah*, No. 2:20-cv-00574, 2020 WL 7249733, at *6–7 (D. Utah Dec. 9, 2020) (“Students have a protected property interest in their continued enrollment in a program of public education.”); *Goss v. Lopez*, 419 U.S. 565, 574 (1975) (Similarly, students

The Supreme Court case *Goss v. Lopez* is frequently cited as setting out the due process requirements for academic disciplinary actions at public universities (although *Goss* involves high school students, not university students, and the students were suspended for disruptive or disobedient behavior, not for cheating).⁴¹ In *Goss*, the Supreme Court determined that “at the very minimum,” students are entitled to have (1) notice of the charges against them, (2) an explanation of the evidence against them, and (3) an opportunity to tell their side of the story.⁴² The Court said that additional elements of procedural due process may be required depending on the severity of the charges against the student.⁴³

Apart from contractual and constitutional law, the courts have at times applied other areas of law to describe the student–university relationship, including associations law (under which courts have granted relief in expulsion cases where the association did not follow its own rules⁴⁴), quasi-contract (where a contractual relationship is deemed to be “created by law, for reasons of justice without regard to expressions of assent by either words or acts”⁴⁵), and fiduciary principles (under which the institution stands in the role of a fiduciary vis-à-vis the student⁴⁶).⁴⁷ However, most courts rely on contract law in combination with due process or basic fairness principles to analyze the student–university relationship in the context of cheating.

have a protected liberty interest against government actors arbitrarily depriving them of their “good name, reputation, honor, or integrity” because it may “interfere with later opportunities for higher education and employment.”).

41. *Goss*, 419 U.S. at 565.

42. *Id.* at 574.

43. *Id.* at 584 (“Longer suspensions or expulsions for the remainder of the school term, or permanently, may require more formal procedures. Nor do we put aside the possibility that, in unusual situations, although involving only a short suspension, something more than the rudimentary procedures will be required.”). See SILVERGLATE & GEWOLB., *supra* note 26, at 29 (noting that in addition to procedural due process rights, students at public universities have substantive due process rights which protect them from unreasonable or excessive punishment); see also *Soglin v. Kauffman*, 295 F. Supp. 978 (W.D. Wis. 1968), *aff’d*, 418 F.2d 163 (7th Cir. 1969) (finding that a university rule did not comply with the Due Process requirements of the Fourteenth Amendment because it was too vague to be enforced).

44. *Clayton v. Trustees of Princeton Univ.*, 519 F. Supp. 802, 804 (D.N.J. 1981) (citing *Higgins v. Am. Soc’y of Clinical Pathologists*, 51 N.J. 191 (1968)).

45. See, e.g., *Beukas v. Bd. of Trustees of Fairleigh Dickinson Univ.*, 605 A.2d 776, 783–84 (N.J. Super. Ct. Law Div. 1991), *aff’d*, 605 A.2d 708 (N.J. Super. Ct. App. Div. 1992).

46. See D.C. Holland, *The Student and the Law: Freedom and Responsibility*, 22 CURRENT LEGAL PROBS. 61, 71 (1969).

47. See *supra* note 26.

C. Nascent Social Harms Theories

As noted, the author's research regarding cheating has uncovered no judicial opinions discussing the broader implications of academic cheating for society. Two recently filed cases, however, provide examples of plaintiffs who claim injury as a result of the spillover effects of academic cheating.

In *Berkovitz v. Does 1-5*, filed March 2022, David Berkovitz, an assistant professor at Chapman University, filed a copyright infringement lawsuit accusing unnamed students of uploading copyrighted exam questions to the website Course Hero.⁴⁸ The complaint alleged that only students in the professor's spring 2021 class had access to the copyrighted exam questions and, therefore, that one or more of those students must have uploaded the questions to Course Hero.⁴⁹ The uploaded questions and answers subsequently posted online were used by students the following semester for exams in Berkovitz's class, which included these same questions.⁵⁰

As part of the discovery process, Berkovitz subpoenaed Course Hero to obtain the identity of the students who uploaded his exam questions.⁵¹ Berkovitz then submitted the names of those students to Chapman's honor board for further action, after which he withdrew his lawsuit.⁵² According to his lawyer, Marc Hankin, the lawsuit was not motivated by financial gain but by the following:

Professor Berkovitz is worried that students who cheated may have unfairly caused their classmates who played by the rules to receive grades lower down on the curve. [The grades in Berkovitz's class are curved.] "The moral and ethical failing notwithstanding, the real concern is these students are hurting their fellow classmates" . . .

48. Verified Complaint for Copyright Infringement, *Berkovitz v. Does 1-5*, No. 2:22-CV-01628 (C.D. Cal. filed Mar. 11, 2022).

49. *Id.*

50. *Id.*

51. *Id.*

52. Katie Reul, *Course Hero Hands Over Student Identities to Chapman Professor Following Lawsuit*, PANTHER (Apr. 8, 2022), <https://www.thepanthernewspaper.org/news/19fzv42ezxaxhse0u95lu0ylvge9z1>.

Students whose scholarships are tied to a minimum grade point average could lose those scholarships through no fault of their own and could even have to leave the school, he said. “That’s the real harm he’s trying to prevent”⁵³

Berkovitz’s lawsuit recognizes that cheating is not simply the breach of a bilateral contract but imposes social harm—in this case, for other students in the same class.

Several class action lawsuits⁵⁴ based on the idea that cheating imposes costs on innocent third parties followed the highly publicized “Varsity Blues” criminal cases, in which parents of college applicants conspired with consultant William Singer to bribe college athletic coaches and administrators.⁵⁵ In one of these class actions filed on behalf of unsuccessful applicants to eight highly selective schools, the complaint alleged that the Varsity Blues scheme resulted in the admission of unqualified students at the expense of more deserving applicants.⁵⁶ The complaint also alleged that the scheme devalued students’ degrees from the universities involved “because prospective employers may now question whether [the student] was admitted to the university on her own merits, versus having parents who were willing to bribe school officials.”⁵⁷ The complaint sought the refund of admissions fees and unspecified punitive damages to deter future conduct.⁵⁸

The district court dismissed the lawsuit and another class action with which it was consolidated after finding that plaintiffs could not show

53. Michael Levenson, *Hoping to Identify Cheaters, a Professor Sues His Own Students*, N.Y. TIMES (Mar. 17, 2022), <https://www.thepanthernewspaper.org/news/19fzv42ezxaxhse0u95lu0ylvge9z1>.

54. For a discussion of recent cases, see Joshua Lens, *Operation Varsity Blues and the NCAA’s Special Admission Exception*, 31 J. LEGAL ASPECTS OF SPORT 147, 175–79 (2021).

55. John Woolfolk, *College Admission Scandal: Here’s the Tally After Final Parent Pleads Guilty*, MERCURY NEWS (Dec. 17, 2021, 1:57 PM), <https://www.mercurynews.com/2021/12/16/college-admissions-scandal-heres-the-tally-after-final-parent-pleads-guilty/>; Sophie Kasakove, *The College Admissions Scandal: Where Some of the Defendants Are Now*, N.Y. TIMES (Oct. 9, 2021), <https://www.nytimes.com/2021/10/09/us/varsity-blues-scandal-verdict.html>.

56. Class Action Complaint, *Olsen v. Singer*, No. 3:19-cv-01351, 2019 WL 1204896 (N.D. Cal. filed Mar. 13, 2019).

57. *Id.* ¶ 107.

58. *Id.* ¶ 138.

that “they were particularly affected by the scheme.”⁵⁹ The court’s reasoning was as follows:

[S]inger’s scheme focused on athletic admissions spots But, no Plaintiff alleges that they applied for, were being considered for, or were denied an athletic spot. Hence, even if the college admissions scheme occurred as plaintiffs claim, no plaintiff was particularly affected by the scheme.⁶⁰

The implication here is that the result might have been different if the lawsuit had been filed by top athletes who were denied admission. In this case, as in others, the court limited its inquiry to whether specific individuals have been *particularly affected* and did not consider the broader social harm caused by cheating.⁶¹

In sum, the courts have applied contractual and due process frameworks to academic integrity issues, which assume that the harms arising from cheating are individual harms, not social harms. So far, the courts have not modified this approach, even as some plaintiffs explore theories that account for social harm. The next Part turns from the laws applicable to cheating to the economic analysis of these laws.

II. BENEFITS AND COSTS OF CHEATING FOR THE INDIVIDUAL, THE INSTITUTION, AND SOCIETY

As explained, the contract-focused judicial approach to cheating is premised on the assumption that cheating causes individual harm only. A review of law and economic principles reveals, however, that social harm is paramount, and, therefore, that the premise underlying the judicial approach is wrong—or at least incomplete. This Part begins by analyzing the benefits and costs of cheating for the individual, the institution, and society.

59. Order Dismissing & Plaintiff’s Amended Complaint at 6, *Tamboura v. Singer*, No. 5:19-cv-03411-EJD & No. 5:19-cv-01405-EJD 05-29-2020 (N.D. Cal. May 29, 2020).

60. *Id.* at 6.

61. *Id.* at 11.

A. The Decision to Cheat

A rational cheater will cheat if the expected benefits exceed the costs. Of course, not all cheaters are rational, but so long as many cheaters are rational, a change in their benefit-cost calculus will change the amount of cheating.⁶² The expected benefits of cheating are simple—better grades with less effort—and those benefits accrue to the cheater alone. For the individual cheater, the expected costs consist of (1) expected punishment costs and (2) other costs incurred in preparing for and carrying out the cheating. In turn, expected punishment costs are based on (a) the probability of being caught and convicted (referred to as “detection”) and (b) the cost if convicted, i.e., the punishment.⁶³ Beyond these costs for the individual, cheating imposes substantial additional costs on society. These elements are discussed below.

B. The Expected Benefits of Cheating

Students point to cheating as a study aid that helps improve their performance in an environment where there is high pressure to get good grades.⁶⁴ The cheater benefits in two ways: lower cost in the form of reduced study time and effort and higher grades. One study found that students scored on average seventeen points higher on unproctored online tests versus tests that used proctoring software.⁶⁵

For weaker students who place a low value on learning and whose primary goal is to graduate, cheating may offer a high return on investment.⁶⁶ For stronger students who would receive high grades without cheating, the benefits of cheating may be lower, or the costs of

62. See, e.g., RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 258 (9th ed. 2014).

63. Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 170, 177 (1968) (“[T]here is a function relating the number of offenses by any person to his probability of conviction, to his punishment if convicted, and to other variables, such as the income available to him in legal and other illegal activities, the frequency of nuisance arrests, and his willingness to commit an illegal act.”).

64. BERNARD E. WHITLEY, JR. & PATRICIA KEITH-SPIEGEL, *ACADEMIC DISHONESTY, AN EDUCATOR’S GUIDE* 22–24 (2002).

65. Helaine M. Alessio et al., *Examining the Effect of Proctoring on Online Test Scores*, 21 *ONLINE LEARNING* 1, 12 (2017).

66. See, e.g., DONALD L. McCABE ET AL., *CHEATING IN COLLEGE: WHY STUDENTS DO IT AND WHAT EDUCATORS CAN DO ABOUT IT* 83–84 (2012).

being caught and punished may be higher.⁶⁷ Accordingly, the research shows that stronger students are less likely to cheat.⁶⁸

Still, even strong students benefit from the reduction in study costs made possible by cheating. And strong students who study and cheat may get even better grades than strong students who do not cheat. The motivations for strong students versus weak students have been described as “cheating to thrive” versus “cheating to survive.”⁶⁹

Regardless of their academic strength, individual cheaters receive the greatest academic benefit from cheating in situations where there are few or no other cheaters, at least in the many classes where grades are curved. As more students cheat, the benefits of cheating decline. It is easy to envision this as a prisoners’ dilemma, and many students see their cheating decision in exactly these terms. Because non-cheaters are at a disadvantage, many students make the rational decision to cheat.

Culture is an additional factor that affects the benefits of cheating. Donald McCabe, author of a widely read book on cheating in college, concludes that a school’s culture is a strong determinant of cheating.⁷⁰ The expected benefit of cheating is much lower in a culture that strongly disapproves of cheating because it may be accompanied by “feelings of guilt, embarrassment, and shame.”⁷¹ However, the prevalence of cheating suggests that few schools have a strong anti-cheating culture.

C. The Costs of Cheating for the Individual Cheater

For the individual, the costs of online cheating include both expected punishment costs and other costs. Expected punishment costs are determined by: (1) the probability of being caught and convicted and (2) the cost if convicted, i.e., the punishment.

i. The Probability of Being Caught and Punished

67. See, e.g., Douglas N. Bunn et al., *Crime in the Classroom: An Economic Analysis of Undergraduate Student Cheating Behavior*, 23 J. ECON. ED. 197, 202–03 (1992).

68. *Id.* at 83 (Psychologically-based studies on this subject tend to focus on academic self-efficacy, which refers to an “individual’s judgments of their abilities to adequately perform prescribed academic tasks to a specified level.” Stronger students tend to have higher self-efficacy.).

69. *Id.* at 84.

70. *Id.* at 113–20, 167–69.

71. Ogilvie & Stewart, *supra* note 14, at 133.

The probability of being caught and punished for online exam cheating in colleges and universities is very low. In one survey of college and university students, 97% of students who had cheated said they had never been caught.⁷² In another survey of college and university students, 32.7% reported cheating on an assignment, a quiz, or a test in an online course, and only 2.1% said they had been caught cheating.⁷³ In a third survey of 191 Yale undergraduates who said they had cheated, “8 percent said they had been caught cheating, 82 percent said they had not been caught and 10 percent did not answer the question.”⁷⁴ Information on the probability of being caught comes mostly from occasional student surveys.

Most colleges and universities do not publish any systematic information about the number of students caught cheating. A few colleges and universities publish information about the number of students who are officially charged with honor code or academic integrity violations, including Harvard College, which reported that its Honor Council reviewed sixty-four cases during the 2018–2019 academic year, finding the student responsible for an honor code violation in 81% of those cases.⁷⁵ With about 10,000 undergraduates at Harvard, this is a rate of 0.5 honor code violations per 100 students.⁷⁶ U.C. San Diego reported 150–200 cases of exam cheating each year from 2011–2018 (out of an average of 723 total academic integrity violations per year).⁷⁷ With about 40,000 students, this is a rate of 0.375

72. *Survey Shows Cheating and Academic Dishonesty Prevalent in Colleges and Universities*, PR NEWSWIRE (Feb. 6, 2017), <https://www.prnewswire.com/news-releases/survey-shows-cheating-and-academic-dishonesty-prevalent-in-colleges-and-universities-300402014.html>.

73. George R. Watson & James Sottile, *Cheating in The Digital Age: Do Students Cheat More in Online Courses?*, 13 ONLINE J. DISTANCE LEARNING ADMIN. 1, 6 (2010).

74. Asha Prihar & Carly Wanna, *Cheating at Yale: Students Get Honest About Academic Dishonesty*, YALE DAILY NEWS (Feb. 7, 2019), <https://yaledailynews.com/blog/2019/02/07/cheating-at-yale-students-get-honest-about-academic-dishonesty/>.

75. HARV. COLL. HONOR COUNCIL, 2018-2019 HONOR COUNCIL ANNUAL REPORT 2, https://honorcouncil.fas.harvard.edu/files/honorcouncil/files/_annual_report_18-19_final_12.4.19.pdf (last visited Feb. 15, 2023).

76. *Harvard Student Population*, UNIVSTATS, <https://www.univstats.com/colleges/harvard-university/student-population/> (last visited Feb. 15, 2023).

77. *Latest Report: 2019-2020*, UC SAN DIEGO ACAD. INTEGRITY, <https://academicintegrity.ucsd.edu/about/reports-statistics.html#Violation-Types-Reported-2011-2> (last visited Feb. 15, 2023).

to 0.5 cheating violations per 100 students.⁷⁸ And the University of Illinois Urbana-Champaign reported 301 cheating violations in fiscal year 2020 (out of 806 total academic integrity violations).⁷⁹ With about 52,000 students, this is a rate of less than 0.6 cheating violations per 100 students.⁸⁰ These rates are consistent with a statement made by UCLA's Dean of Students in 1999 that the school of 35,000 students handled 200–300 academic dishonesty cases a year, or less than one case per 100 students.⁸¹

These rates understate the percentage of cheaters who are caught and punished because they do not include many instances of cheating that are dealt with informally by faculty members. And they are annual rates, not the probability that a student will be caught and punished over the full term of their enrollment. Still, comparing student reports on the frequency of cheating to university reports on the number of violations, it appears that colleges and universities catch and punish a very small percentage of cheaters, probably no higher than the low-to-mid single digits. The number of students who are suspended or expelled because of cheating is most likely tiny, which is one reason why there is so little case law on point.

ii. *The Cost to the Cheater If Convicted, i.e., the Punishment*

The relatively few students who are caught cheating are subject to a wide range of possible penalties.⁸² The following language is typical:

78. UCSD Student Population, UNIVSTATS, <https://www.univstats.com/colleges/university-of-california-san-diego/student-population/> (last visited Feb. 15, 2023).

79. Senate Committee on Student Discipline Report on Academic Integrity Violations (FY20), UNIV. ILL. URBANA-CHAMPAGNE, <http://www.conflictresolution.illinois.edu/resources/annual-reports/> (last visited Feb. 15, 2023).

80. *Id.*; News Bureau, *Illinois enrollment remains above 50,000*, ILL. NEWS BUREAU (Sept. 9, 2020), <https://news.illinois.edu/view/6367/1644918909>.

81. Alison Schneider, *Why Professors Don't Do More to Stop Students Who Cheat*, CHRON. HIGH. EDUC. (Jan. 22, 1999), <https://www.chronicle.com/article/why-professors-dont-do-more-to-stop-students-who-cheat-25673/>.

82. A proposal to impose fines for cheating at Arizona State University was considered and quickly rejected—maybe too quickly. Stephen K. Happel & Marianne M. Jennings, *An Economic Analysis of Academic Dishonesty and Its Deterrence in Higher Education*, 25 J. LEG. STUD. EDUC. 208 (2008). The proposal was that students caught cheating would pay fines based

[T]he school's academic integrity officer or committee may impose sanctions, including but not limited to the following:

- Issue a formal written reprimand.
- Impose educational sanctions, such as completing a workshop on plagiarism or academic ethics.
- Recommend to the instructor that the student fail the assignment. (A grade is ultimately the prerogative of the instructor.)
- Recommend to the instructor that the student fail the course.
- Recommend to the instructor that the student receive a course grade penalty less severe than failure of the course.
- Place the student on disciplinary probation for a specified period of time or until defined conditions are met
- In cases serious enough to warrant suspension or expulsion from the university, refer the matter to the university judicial board for consideration.

Additional educational sanctions may be imposed. This list is not intended to be exhaustive.⁸³

on the severity of the infraction, and the fines would be used to pay to educate students on cheating. *Id.* The student representatives:

went into septic mental shock, noting the tight budget constraints students face and whether the enforcement and fines would be administered fairly. In the end, the [Faculty Senate's Student-Faculty Policy Committee] rejected fines, given all the enforcement and court costs, because of the cost and resulting in a police-state mentality.

Id.

83. *Undergraduate Student Academic Integrity Policy*, WASH. UNIV. ST. LOUIS, <https://wustl.edu/about/compliance-policies/academic-policies/undergraduate-student-academic-integrity-policy/> (last visited Feb. 15, 2023); *see also Academic Integrity Policy*, RUTGERS UNIV., <https://policies.rutgers.edu/file/1104/download?token=LuihSt7Z> (last visited Feb. 15, 2023); *see generally Chapter 11. Student Discipline and Conduct*, UNIV. TEXAS

At most schools, the full range of sanctions, except for suspension or expulsion, is available for any academic integrity violation based solely on the judgment of the faculty member, administrator, or tribunal. The typical penalty language itself provides no guidance as to the sanction most likely to be applied to each type of cheating. Most schools provide little or no information on the distribution of the types of punishments that have been imposed.⁸⁴

With the range of possible punishments so wide, and so little information made available about punishments, how do rational potential cheaters know what punishment to expect? The answer is that despite the wide range of possible punishments, students expect the actual punishment to be slight. Word gets around—students are adept at using social media and other communication tools. With or without formal reporting, they know that the punishment for cheating is usually slight.

iii. Costs of Online Cheating Other than the Expected Punishment

Expected punishment costs are not the only costs to be considered by the student in deciding whether to cheat. It takes time to plan and execute an effective cheating strategy—time that could otherwise be used to study for exams. And cheating may involve psychic costs—the guilt or psychological discomfort felt by the cheater.⁸⁵ The magnitude of psychic costs varies widely by student and is affected by the cheating or anti-cheating culture of the institution.⁸⁶ Most studies conclude that the psychic costs of cheating on online exams have diminished over time

<https://catalog.utexas.edu/general-information/appendices/appendix-c/student-conduct-and-academic-integrity/> (last visited Feb. 15, 2023).

84. The University of Illinois is an exception. In its Annual Integrity Report, the university provides unusually detailed information about the sanctions imposed, which in fiscal year 2020 consisted mostly of a failing grade on the assignment (44%), a reduced grade on the assignment (22%), or a reduced grade for the course (20%). Other sanctions included a written warning (5%), educational sanction (5%), negotiated sanction (3%), and failing grade for the course (2%). No information is available on the number of additional cheating violations at the university that were resolved informally between the faculty member and student.

85. Cf. Kathleen Delaney Thomas, *The Psychic Cost of Tax Evasion*, 56 B.C. L.R. 619 (2015).

86. MCCABE ET AL., *supra* note 66, at 114–16; WHITLEY & KEITH-SPIEGEL, *supra* note 64, at 147.

as students have become less likely to view cheating as involving a serious moral failing.⁸⁷

D. The Social Costs of Online Cheating

The social costs of online cheating are substantial and include the negative effects of cheating on the level of knowledge acquisition by students, the reduction in the credibility of academic credentials obtained through online courses, the imposition of negative externalities on non-cheating students, and the cost of resources devoted to cheating reduction. Investments in both cheating and cheating-reduction technologies are socially wasteful.⁸⁸ Finally, and perhaps most importantly, studies find that widespread cheating at colleges may carry over to greater acceptance of dishonesty in the workplace or other areas of life.⁸⁹ A fuller description of these social costs is below.

In terms of knowledge acquisition, cheating may reduce the level of human capital acquired by cheaters because they are likely to divert effort to the planning and execution of successful cheating strategies that would otherwise be devoted to learning the course material. Ubiquitous internet access has made it easier to cheat—“the web environment allows students to cheat much more easily, quickly and

87. See, e.g., Jennifer Peterson, *An Analysis of Academic Dishonesty in Online Classes*, 31 MID-W. EDUC. RESEARCHER 24, 27 (2019) (“Many feel that the current culture and/or student subculture have normalized cheating and therefore changed the moral and ethical thoughts surrounding cheating.”); William M. Chace, *A Question of Honor*, AM. SCHOLAR (Feb. 26, 2023), <https://theamericanscholar.org/a-question-of-honor/> (“[H]ow does cheating become tolerated, assimilated, and ultimately absorbed into our understanding of normality?”).

88. See, by analogy to trade secret protection, Michael Risch, *Why Do We Have Trade Secrets?*, 11 MARQ. INTELL. PROP. L. REV. 1, 14–15 (2007) (“the primary benefit of trade secret law is the decrease in both the amount spent on protecting secrets and the amount spent by those who seek to learn them.”); see also, by analogy to crime, Eduardo Ferraz & Rodrigo R. Soares, *Socially Optimal Crime and Punishment*, IZA ISNT. LABOR ECON. 13 (2022) (Crime “imposes costs on victims and criminals without creating value. . . . The government can reduce the incidence of crime through the public security technology at its disposal. But public security expenditures also do not create net value, and can in principle be used for other purposes, so in reality they are part of the aggregate inefficiencies associated with the existence of crime. For this reason, the goal of public security policy should not be to minimize crime, but rather to minimize the aggregate welfare loss from crime.”)

89. See Nonis & Owens Swift, *supra* note 14, at 69–77; Ogilvie & Stewart, *supra* note 14, at 131.

efficiently”⁹⁰—so this reduction in human capital acquisition may be “achieved” at a lower cost to the student than in the past.

Cheating students impose a negative externality on non-cheating students by reducing their relative performance. As noted, non-cheating students report that they feel forced to play a game of prisoners’ dilemma.⁹¹ Non-cheaters’ preferred outcome is that no one cheats, but if they do not cheat when others do, their relative academic performance suffers. Widespread cheating may also cause non-cheating students to question the integrity and value of the system of higher education.⁹² Cheating has been described as “destructive of the University community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility.”⁹³

In addition, cheating prevention measures impose costs on all students. These include the imposition of more rigid test conditions and the inconvenience of using proctoring software, which also imposes privacy costs.⁹⁴ In an unpublished poll of the author’s business students, 41% indicated that proctoring software offended their sense of privacy.⁹⁵

90. Sven Trenholm, *A Review of Cheating in Fully Asynchronous Online Courses: A Math or Fact-Based Course Perspective*, 35 J. EDUC. TECH. SYS. 281, 287 (2007) (citing Lawrence M. Hinman, *Academic Integrity and the World Wide Web*, 10th Annual Meeting, Center for Academic Integrity (2000)).

91. See, e.g., Philip Roth, *The prisoner’s dilemma: To cheat or not to cheat in online classes*, BREEZE (Aug. 26, 2020), https://www.breezejmu.org/business/the-prisoner-s-dilemma-to-cheat-or-not-in-online-classes/article_cda39afe-e550-11ea-aff6-3ff09ec588b0.html.

92. Chace, *supra* note 87 (“[I]f the institutions themselves exhibit questionable ethical standards—leaving a trail of shoddy compromise, corner cutting, and breaches of trust—those students come to understand that honor is only a word and not a practice.”).

93. *Academic Integrity*, FLA. ATL. UNIV., <https://www.fau.edu/ctl/AcademicIntegrity.php> (last visited Feb. 15, 2023).

94. Drew Harwell, *Cheating-Detection Companies Made Millions During the Pandemic. Now Students Are Fighting Back*, WASH. POST (Nov. 12, 2020), <https://www.washingtonpost.com/technology/2020/11/12/test-monitoring-student-revolt/>.

95. Fall 2020 survey of 175 undergraduates enrolled in managerial economics course: “Regarding the use of Proctorio or other proctoring software for online or remote exams, which of the following best describes your reaction?” 26% - Does little to reduce cheating and offends my sense of privacy; 15% - Does little to reduce cheating but does not offend my sense of privacy; 33% - Substantially reduces cheating and does not offend my sense of privacy; 26% - Substantially reduces cheating but offends my sense of privacy.

Proctoring software has also been alleged to rely on algorithms that reflect racial and gender bias.⁹⁶

Cheating reduction measures also impose substantial costs on faculty and schools, including the cost of acquiring and using proctoring software; faculty time spent detecting cheating, identifying cheaters, collecting evidence, and testifying; and the staffing and other costs of the academic integrity systems used to determine guilt or innocence and the appropriate penalty.⁹⁷

More faculty time devoted to minimizing cheating means less faculty time devoted to academic research and other productive pursuits. And cheating reduces the appeal of teaching as a profession because faculty report that dealing with student cheating is “one of the most onerous parts of the job.”⁹⁸ In sum, cheating imposes substantial social costs, which are widely distributed.

III. CATEGORIZING ONLINE CHEATING: CONTRACT BREACH, INTENTIONAL TORT, OR CRIME

Drawing on the economic principles introduced above, this Part analyzes which economic model most usefully describes cheating—contract breach, intentional tort, or crime. Despite its widespread adoption by courts, the contract analogy is fundamentally flawed for several reasons, including that it fails to account for broader social harms. The intentional tort model has superficial appeal because it treats cheating as a non-criminal intentional wrong, but it too fails to account for broader harms. By contrast, criminal law provides a model that integrates social harm and best explains the current high-level of cheating and provides insight into how to reduce it.

A. Breach of Contract

96. Shea Swauger, *Software That Monitors Students During Tests Perpetuates Inequality and Violates Their Privacy*, MIT TECH. REV. (Aug. 7, 2020), <https://www.technologyreview.com/2020/08/07/1006132/software-algorithms-proctoring-online-tests-ai-ethics/>.

97. See discussion *infra* Section IV.D.

98. Terry Coalter et al., *Factors that Influence Faculty Actions: A Study on Faculty Responses to Academic Dishonesty*, 1 INT. J. SCHOL. TEACH. LEARN. ART. 12 (2007); WHITLEY & KEITH-SPIEGEL, *supra* note 64, at 11.

As discussed above, the courts have interpreted the student–university relationship as based largely on contract. The bargain theory of contracts, which underlies modern contract law, requires that there be an exchange of value for a contract to be enforceable.⁹⁹ In the case of higher education, at least two sets of exchanges are involved. First, students make tuition payments in exchange for instruction. Second, students take exams, submit problem sets, write papers, etc. in exchange for grades that indicate whether they have met the course requirements and achieved a certain level of mastery of the subject.¹⁰⁰

Under this approach, cheating is a breach of contract by the student and is subject to contractual remedies spelled out by the university. One implication of a contracts approach is that students make a contractual commitment not to cheat, but they are entitled to cheat so long as they accept that they will be charged “contract damages” for their breach if caught. Justice Oliver Wendell Holmes observed that “[t]he duty to keep a contract at common law means a prediction that you must pay damages if you do not keep it—and nothing else.”¹⁰¹

This statement has been used to support the conclusion that the purpose of contract law is not to compel adherence to contracts but only to require each party to choose between performing in accordance with the contract or compensating the other party for any injury resulting from the failure to perform.¹⁰² Moreover, law and economics students learn the concept of efficient breach—the idea that it is economically efficient to breach a contract if doing so and paying damages would be less costly than fulfilling your contractual obligations.¹⁰³

When asked whether online exam cheating resembles a breach of contract, intentional tort, or crime, students may prefer the breach of

99. ROBERT COOTER & THOMAS ULEN, *LAW & ECONOMICS* 277–79 (6th ed. 2012).

100. *See, e.g.*, Lynne Eagle & Ross Brennan, *Are Students Customers? TQM and Marketing Perspectives*, 15 *QUALITY ASSURANCE EDUC.* 44, 51–52 (2007). In rare cases, students and faculty sign actual “learning contracts” that list the actions students promise to take to achieve academic success in a course, along with a more limited set of actions the instructor promises to take in return. Timothy Frank & Lauren Scharff, *Learning Contracts in Undergraduate Courses: Impacts on Student Behaviors and Academic Performance*, 13 *J. SCHOLARSHIP TEACHING LEARN.* 36 (2013).

101. Oliver Wendell Holmes, *The Path of the Law*, 10 *HARV. L. REV.* 457, 462 (1897).

102. *See, e.g.*, COOTER & ULEN, *supra* note 99, at 325; THOMAS J. MICELI, *THE ECONOMIC APPROACH TO LAW* 112–13 (3rd ed. 2017); POSNER, *supra* note 62, at 128–31.

103. *Id.*

contract analogy because it avoids the moral issues involved in cheating and the comparison with *mens rea*, the criminal intent element inherent in criminal law.¹⁰⁴ In fact, in a poll taken in the author's undergraduate law and economics class, sixteen of twenty-one respondents said cheating most resembled a breach of contract.¹⁰⁵

Although courts have embraced contract law as governing the student–university relationship, there are four problems with applying contract law principles to online cheating.

First, the contract analogy assumes that “the traditional measure of damages provides true full compensation for all of the harm suffered by the victim.”¹⁰⁶ With online cheating, however, there is not a single victim but many victims because of the wide scope of negative externalities associated with cheating.

Second, while the concept of efficient breach involves no moral failing, this is not true for online cheating. Colleges and universities universally make clear that cheating is a serious breach of ethics.¹⁰⁷ A typical example of university academic integrity language states that “[s]tudents . . . are expected to maintain the highest ethical standards. Dishonesty is considered a serious breach of these ethical standards.”¹⁰⁸ Berger and Berger, who argue that the student–university relationship should be governed by contract and due process principles, nevertheless compare academic disciplinary procedures with criminal procedure

104. MICELI, *supra* note 102, at 239 (“[A] criminal must have *mens rea*, or a ‘guilty mind.’”).

105. The remaining five said cheating was most similar to a tort; none said cheating was most similar to a crime.

106. Linda Curtis, *Damage Measurements for Bad Faith Breach of Contract: An Economic Analysis*, 39 STAN. L.R. 161, 165 (1986).

107. See, e.g., *Academic Integrity Policy*, CASE W. RESV. UNIV., <https://case.edu/ugstudies/academic-policies/academic-integrity> (last visited Feb. 15, 2023) (“A sound education is built on intellectual honesty. Students at Case Western Reserve University are required to uphold the highest ethical standards of academic conduct.”); *Academic Integrity Policies*, JOHNS HOPKINS UNIV., <https://provost.jhu.edu/education/graduate-and-professional-education-resources/academic-integrity-policies/> (last visited Feb. 15, 2023) (“Students at The Johns Hopkins University are expected to meet the highest standards of academic excellence and ethical conduct.”); *Code of Academic Integrity*, UNIV. ARIZ., <https://deanofstudents.arizona.edu/policies/code-academic-integrity> (last visited Feb. 15, 2023) (“Integrity and ethical behavior are expected of every student in all academic work. This Academic Integrity principle stands for honesty in all class work, and ethical conduct in all labs and clinical assignments.”).

108. *Academic Integrity*, *supra* note 93.

because, they concede, the subject is “*after all . . . academic ‘crimes’ which could result in serious consequences for the accused.*”¹⁰⁹

The third problem with the contracts approach is that the standard measure of damages for contract breach assumes that any breach will be detected, and the victim will sue “and thus that the probability of the defendant’s being held liable for the damages flowing from his breach is one.”¹¹⁰ With online cheating, however, the probability of detection and punishment of the cheater is very low, and therefore the traditional measure of contract damages is inadequate as a deterrent.¹¹¹ The concept of efficient breach is not intended to cover a cheater who successfully cheats 19 out of 20 times and then is required to pay standard breach of contract damages once.

The fourth problem is that a well-specified contract clearly states the rights and obligations of both parties as well as the consequences of nonperformance. In academia, the obligations of students are defined in

109. Berger & Berger, *supra* note 19, at 296 (emphasis added).

110. Curtis, *supra* note 106, at 166.

111. See discussion *infra* Section II.C.i.

the syllabus¹¹² and academic integrity statements.¹¹³ In the paradigmatic case of online exam cheating in this Article, the student's obligations are clear, and the student intentionally violates them. However, the contract damages to be awarded in the case of breach are unclear. The standard measure of damages for breach of contract is monetary damages sufficient to "place the injured party where he would have been if the contract had been performed."¹¹⁴ It is not easy to translate this concept into the damages envisioned for breaches of academic integrity rules, and therefore good contract practice would be to set forth the specific measure of damages contemplated. But this almost never occurs. Instead, typical university academic integrity language describing "damages" for online cheating lists a wide range of possible penalties, leaving the parties uncertain of the consequences of breach and, in fact, unable to determine whether the breach would be "efficient."¹¹⁵

112. The standard language in the author's syllabi, which he copies and pastes without much attention, states:

Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, to disciplinary sanctions ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the course instructor or the Office of Academic Integrity.

Students are expected to adhere to this honor pledge on all graded work whether or not they are explicitly asked in advance to do so: "I strive to uphold the University values of respect, responsibility, discovery, and excellence. On my honor, I pledge that I have neither given nor received unauthorized assistance on this work."

Syllabus Information, UNIV. MO. OFF. PROVOST, <https://provost.missouri.edu/faculty-affairs/syllabus-information/> (last visited Feb. 15, 2023).

113. The academic integrity policies "apply to all courses regardless of what statements are in course syllabi . . ." *Id.*

114. Robert D. Cooter & Daniel L. Rubinfeld, *Economic Analysis of Legal Disputes and Their Resolution*, 27 J. ECON. LIT. 1067 (1989); Robert Cooter & Melvin Aron Eisenberg, *Damages for Breach of Contract*, 73 CAL. L.R. 1432 (1985).

115. See discussion *infra* Section II.C.ii.

In sum, although the courts have classified the student–university relationship as primarily contractual, a broader law and economics perspective suggests that contracts are not the best analogy.

B. Intentional Torts

For the same reasons that the contract analogy fails, intentional tort analogies do as well. On the surface, intentional torts have two similarities with the current contract-based approach to online cheating—the sanctions for violations are civil, not criminal, and the party initiating the action is private, not a government prosecutor.¹¹⁶ In addition, there are strong parallels between intentional torts and crimes. As with cheating, both involve intentional wrongful acts, which can be deterred when the wrongdoer perceives that the expected costs exceed the expected benefits.¹¹⁷ In fact, the same activity, for example, fraud, may constitute both a crime and an intentional tort.¹¹⁸ However, overall, the criminal law analogy is stronger than the intentional tort analogy because cheating causes a public or social harm more typically associated with crime and because the disciplinary action against a cheater is taken on behalf of the entire university and not an individual victim or group of victims. For these reasons, using intentional torts, instead of criminal law, as a model for online exam cheating adds little to our understanding of cheating, except for one important insight discussed below involving trade secret misappropriation.

i. Trade Secrets

The relationship between trade secret misappropriation and online cheating may seem tenuous—usually, neither the exam nor the answers are a trade secret—but one important principle of trade secret law is

116. One reason for having a separate system of intentional torts is to “relieve the pressures on an overloaded system of criminal justice by providing a civil alternative to criminal prosecution of minor crimes.” *Mathias v. Accor Economy Lodging*, 347 F.3d 672, 676 (7th Cir. 2003).

117. A. Mitchell Polinsky & Steven Shavell, *Punitive Damages: An Economic Analysis*, 111 HARV. L. REV. 870, 896–900 (1998).

118. See COOTER & ULEN, *supra* note 99, at 188; Cass R. Sunstein et al., *Assessing Punitive Damages (with Notes on Cognition and Valuation in Law)*, 107 YALE L. J. 2071 (1998).

relevant to online cheating: A trade secret receives legal protection only if the holder has made a reasonable effort to keep it secret. This principle relates to an argument students frequently make to justify online cheating, “If they really care about cheating, why don’t they do more to prevent it?” In other words, if the institution and individual faculty members have not made reasonable efforts to prevent online cheating, then, the argument goes, the test material should be considered “fair game” for sharing.

Trade secrets receive legal protection if: (1) the information is “sufficiently valuable and secret to afford an actual or potential economic advantage over others;”¹¹⁹ and (2) the owner or holder of the secret has undertaken “efforts that are reasonable under the circumstances to maintain its secrecy.”¹²⁰ The amount of protection considered sufficient to justify trade secret protection depends on the value of the trade secret.¹²¹ High-value trade secrets require the holder to make a greater effort to protect them to qualify for trade secret protection. This concept is put into practice for exams such as the LSAT and Multistate Bar Examination where the exams have higher stakes and stronger associated anti-cheating measures.

As with criminal law, trade secret law is intended to reduce socially wasteful activities. “[B]oth the amount spent on protecting secrets and the amount spent by those who seek to learn them” are socially wasteful.¹²² This same conclusion applies to cheating—both the amount spent on preventing cheating and the amount spent on cheating are socially wasteful.

Richard Posner argues that an important reason to require the trade secret holder to take a reasonable level of precaution as a condition to receiving trade secret protection is to avoid overburdening the courts.¹²³ Otherwise, trade secret holders could invest little or nothing in protecting trade secrets and force the judicial system to expend

119. RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 39 (AM. LAW INST. 1995).

120. UNIF. TRADE SECRETS ACT § 1(4)(ii) (AM. BAR ASS’N, amended 1985); see generally Robert G. Bone, *Trade Secrecy, Innovation, and the Requirement of Reasonable Secrecy Precautions*, in *THE LAW AND THEORY OF TRADE SECRECY: A HANDBOOK OF CONTEMPORARY RESEARCH* 46 (Rochelle C. Dreyfuss & Katherine J. Strandburg, eds., 2010) (providing a brief history and overview of the reasonable precautions requirement in trade secrecy law).

121. See WILLIAM POUNDSTONE, *BIG SECRETS* 30–34 (1983).

122. Risch, *supra* note 88.

123. Richard A. Posner, *Trade Secret Misappropriation: A Cost-Benefit Response to the Fourth Amendment Analogy*, 106 HARV. L. REV. 461, 475 (1992).

resources.¹²⁴ He concludes that trade secret holders should be required “to invest in such [precautionary] measures until the judicial remedy, with all of its concomitant social costs, becomes the cheaper means of protection.”¹²⁵

This principle does not neatly transfer to online cheating, where the roles of faculty member and academic integrity staff are only roughly analogous to those of the trade secret holder and the judicial system. However, the basic idea of providing protection only to those who take a reasonable level of precaution underlies tort negligence principles going back to the Learned Hand formula set out in *United States v. Carroll Towing*.¹²⁶ This approach incentivizes spending on precautionary measures at an efficient level, which is presumably the desired outcome for online cheating as well. Faculty and institutions should not make it so easy to cheat that students are strongly tempted to do so.

C. Crime

The most promising economic model is not based on contracts or torts but crime. Under the traditional definition of crime, cheating on an online academic exam is not a crime because it is not subject to a criminal sanction.¹²⁷ Nor, in most cases, is online cheating even a violation of law.¹²⁸ However, online cheating undoubtedly does involve

124. *Id.*

125. *Id.* at 474.

126. *United States v. Carroll Towing*, 159 F.2d 169, 173 (2nd Cir. 1947).

127. See *Crime*, CORNELL L. SCH., <https://www.law.cornell.edu/wex/crime> (last visited Feb. 15, 2023). But see CAL. INS. CODE § 1681.5(b) (2005), https://www.lawserver.com/law/state/california/codes/california_insurance_code_1681-5 (establishing that cheating on any license exam given by the California Department of Insurance a crime “punishable by a fine not to exceed \$10,000 or imprisonment in a county jail not to exceed one year”); see also U.S. Attorney’s Off., E. Dist. of Pa., *Former Temple Business School Dean Indicted for Fraud*, DEP’T JUST. (Apr. 16, 2021), <https://www.justice.gov/usao-edpa/pr/former-temple-business-school-dean-indicted-fraud> (Former dean “indicted on charges that he conspired and schemed to deceive the school’s applicants, students, and donors into believing that the school offered top-ranked business degree programs, so they would pay tuition and make donations to Temple.”).

128. Federal law applicable to academic honesty in online courses states that institutions that offer distance education must have processes in place to establish that the registered student “is the same student academically engage[d] in the course or program.” 34 C.F.R. § 602.17(g). This is a serious issue, but not the primary focus of this Article.

a social or public harm, a feature that distinguishes crime from property, contracts, and torts.¹²⁹ And, whereas many civil wrongs are accidental, the online cheater intends to do wrong.¹³⁰ Finally, the sanctions associated with online cheating have strong moral and ethical implications, another feature of criminal law.¹³¹ For these reasons, the law and economics of crime is especially relevant to understanding and deterring online exam cheating.

Gary Becker's economic model of criminal behavior assumes that the decision to commit a crime is the result of a cost-benefit analysis, along the lines discussed previously.¹³² The criminal compares the expected benefit of the crime in the form of better grades with the expected costs, which include the probability of being caught and punished, the expected punishment if caught, and the costs of preparing for and carrying out the cheating and avoiding detection.¹³³

Becker's approach applies not only to a wide range of crimes, including "white-collar crimes, and traffic and other violations,"¹³⁴ but also to the enforcement of all laws. Although college students may bristle at the idea that online cheating can be thought of as a form of crime, the general principles Becker developed in analyzing crime are useful in analyzing rule-breaking in other contexts, and therefore provide principles for analyzing online cheating.

Under the current academic integrity regime at most colleges and universities, each element of Becker's crime model points towards a high rate of cheating on online exams. Students who cheat on online exams receive markedly higher scores, they are rarely caught and even more rarely punished, and punishments are usually mild. For many

129. COOTER & ULEN, *supra* note 99, at 458 (citing William Blackstone, "the private wrong is swallowed up in the public.").

130. *Id.* at 456–57.

131. SILVERGLATE & GEWOLB, *supra* note 26, at 14 ("Suspensions and other punishments that disrupt a student's education are serious penalties that impact a student's educational, professional, and social prospects for years.").

132. Becker, *supra* note 63, at 176–77.

133. See POSNER, *supra* note 62, at 258 (Richard Posner, in his treatise on law and economics, summarizes: "Many criminals have . . . problems . . . that make it difficult for them to . . . make a competent assessment of the relative benefits and costs (including expected punishment costs) of criminal activity. Nevertheless, the empirical literature on crime finds that criminals respond to changes in opportunity costs of criminals' time, in the probability of apprehension (and so in the number of police), in the length of prison terms, and in other relevant variables . . ."); see generally Talia Fisher, *Economic Analysis of Criminal Law*, in THE OXFORD HANDBOOK OF CRIMINAL LAW (Markus D. Dubber & Tatjana Hörnle eds., 2014).

134. Becker, *supra* note 63, at 170.

students, the expected benefits of cheating on online exams far outweigh the expected costs.

Two additional factors illustrate why the online cheating rate is so high: (1) the effects of student risk preferences, and (2) the subjective perceptions of the risk of being caught and the severity of punishment.

i. Risk Preference and the Expected Cost of Punishment

In Becker's simple benefit–cost model, the expected cost of the punishment for a risk neutral criminal is simply the probability of detection times the punishment if convicted.¹³⁵ Under this reasoning, doubling the expected punishment would have the same deterrent effect on crime as doubling the probability of conviction. Using a simple example where the punishment is a fine, a risk neutral criminal would be indifferent between facing: (a) a 10% chance of being caught and paying a \$10,000 fine versus (b) a 50% chance of being caught and paying a \$2,000 fine. In both cases, the cheater's expected, or average, fine is \$1,000. Indifference between the two is predicated on the assumption that the criminal has sufficient wealth to pay the fine, and the criminal subjectively perceives a \$10,000 fine to be five times as costly as a \$2,000 fine.

Under these circumstances, society can cost effectively reduce crime by coupling high punishments with a low detection rate because the low detection rate requires fewer resources, such as police, prosecutors, and judges to detect crimes while yielding the same total fines. As applied to cheating, this same rationale would lead to a high punishment, low detection rate approach.

There is, however, no reason to believe that criminals—or cheaters on online exams—are risk neutral. If criminals prefer a severe punishment meted out rarely to a mild one meted out regularly,¹³⁶ this implies that they are risk preferring. Presumably, effective deterrence means doing the opposite of what criminals prefer, which means increasing the probability of detection and imposing a mild punishment. This is generally what the empirical studies find—increasing the

135. Becker, *supra* note 63, at 176–77; COOTER & ULEN, *supra* note 99, at 477; A. MITCHELL POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 81–83 (3rd ed. 2003).

136. Becker, *supra* note 63, at 178.

probability of detection has a greater deterrent effect than increasing the severity of punishment.¹³⁷ This means that effective deterrence of cheating is likely to require catching and punishing a high percentage of cheaters.

Another reason for adopting a high-probability-of-detection, low-punishment approach is that otherwise, courts and juries—or faculty and administrators—must impose severe penalties. As a practical matter, adjudicators are unlikely to adopt severe penalties for minor offenses because many would see this as unfair.¹³⁸ And finally, George Stigler argues that it is important to reserve more severe penalties for more serious crimes because “marginal costs are necessary for marginal deterrence.”¹³⁹ “If the offender will be executed for a minor assault and for a murder, there is no marginal deterrence for murder.”¹⁴⁰

ii. *Perceptions of Risk and Severity*

Another important factor in predicting the amount of cheating is the cheater’s subjective perception of risk and punishment severity. In criminal cases, subjective perceptions or beliefs about the probability of detection and the severity of punishment are more important than the actual probability and severity.¹⁴¹ Also, consistent with the importance of a high rate of detection, research “indicates that *perceptions of the certainty of punishment* are consistently the strongest determinants of deterrence . . . when compared to both perceptions of severity and celerity.”¹⁴² This is consistent with the general finding that certainty of punishment is more important than severity of punishment.

As applied to cheating, this suggests that schools should make cheating punishments salient to students by publicizing information

137. See Daniel S. Nagin, *Deterrent Effects of the Certainty and Severity of Punishment*, in 23 ADVANCES IN CRIMINOLOGICAL THEORY, DETERRENCE, CHOICE, AND CRIME (Daniel S. Nagin et al. eds., 2018); see also Jeffrey Grogger, *Certainty vs. Severity of Punishment*, 29 ECON. INQUIRY 297 (Apr. 1991).

138. Cass R. Sunstein et al., *Do People Want Optimal Deterrence?*, 29 J. LEG. STUD. 237, 250 (2000).

139. George J. Stigler, *The Optimum Enforcement of Laws*, 78 J. POL. ECON. 526, 527–28 (1970).

140. *Id.* at 527.

141. Ogilvie & Stewart, *supra* note 14, at 140; Aaron Chalfin & Justin McCrary, *Criminal Deterrence: A Review of the Literature*, 55 J. ECON. LIT. 5, 10–11 (2017).

142. Ogilvie & Stewart, *supra* note 14, at 133 (explaining that celerity refers to the imminence of punishment) (emphasis added).

about the number of students caught and the punishments imposed. Currently, they do not.¹⁴³ The underlying behavioral principle—the salience effect—is that something that is easier to recall seems more numerous than something that is less easy to recall.¹⁴⁴ If students observe other students being punished, they are more likely to believe they will be caught and punished if they cheat, and therefore they will be less likely to cheat.

iii. *Uncertainty of the Punishment*

The final factor to be added to Becker’s model concerns the consistency of the expected punishment. One laboratory study of crime found that uncertain penalties (often referred to as ambiguous penalties)¹⁴⁵ are perceived to be more severe than consistent penalties of the same average amount.¹⁴⁶ In other words, a high probability of detection coupled with a penalty that is low on average but perceived as uncertain or ambiguous may be a more effective deterrent than a simple high-probability-of-detection, low-punishment approach.

Because faculty views on cheating vary, the punishment expected by a potential cheater under the current system is uncertain, although the uncertainty is centered around a very low average level of punishment.¹⁴⁷ Caution is required, however, before concluding that, to increase deterrence, *both* the probability of detection and the level of uncertainty regarding the penalty should be increased. Regarding uncertainty, whatever is gained in additional deterrence by having an uncertain or ambiguous level of penalty may be lost in the increased perception of unfairness by students, who already justify their decision

143. See discussion *supra* Section II.C.i.

144. See, e.g., Robert Dur & Ben Vollaard, *Salience of Law Enforcement: A Field Experiment*, 93 J. ENV. ECON. & MGMT. 208–09 (2019).

145. Ogilvie & Stewart, *supra* note 14, at 140. The literature differentiates risky punishments, just described, where each possible punishment has a known probability, from ambiguous punishments, where the average punishment is known but not the probability of receiving each of the possible levels of punishment.

146. Tom Baker et al., *The Virtues of Uncertainty in Law: An Experimental Approach*, 89 IOWA L.R. 443, 479 (2004).

147. Levitt & Lin, *supra* note 4, at 10; see discussion *infra* Section IV.D (discussing faculty reluctance to report cheating).

to cheat in part on the ground that faculty responses are inconsistent.¹⁴⁸ As Daniel Kahneman et al. observe in their recent book, *Noise: A Flaw in Human Judgment*, “Even judges who believe in the value of individualized sentencing and who disagree on a robber’s sentence will agree that a level of disagreement that turns a judgment into a lottery is problematic.”¹⁴⁹

* * *

The foregoing discussion illustrates that when intentional and wrongful actions cause broad social harm, criminal law is the most useful model. Under the current academic integrity regime at most colleges and universities, each element of Becker’s crime model points towards a high rate of cheating on online exams. Based on Becker’s model, one way to deter students from cheating is to increase the rate of detection while applying a relatively low (but still higher than the present) level of punishment, one that is applied with enough consistency to be perceived as fair.¹⁵⁰ Currently, students report the opposite—a very low rate of detection combined with very low severity of punishment, one that is applied randomly. In addition, an effective deterrence strategy would increase the salience of cheating punishments. Yet most schools do not publicize the fact that cheaters are being caught and punished.

Another way to deter cheating, consistent with Becker’s model, is to increase other costs of cheating. For example, teachers can make it more difficult to cheat by using exams where every student is presented with different questions, by using essay questions instead of multiple-choice, by using in-person proctoring or at least in-person online exam monitoring, etc. In each of these cases, however, increasing the costs of cheating for students is likely to also increase the cost for faculty, who must spend additional time in grading or exam development, or for the institution, which must increase spending on proctoring and other measures designed to make it more difficult to cheat. Deterrence also can be increased by increasing the psychic costs of cheating, which may

148. Based on the author’s interviews. See also Jennifer Garrett, *Academic Integrity: Examining Two Common Approaches*, FAC. FOCUS (Sept. 22, 2011) <https://www.facultyfocus.com/uncategorized/academic-integrity-examining-two-common-approaches/> (“The more decentralized a school’s response to cheating is, the more haphazard and, most likely, the more unfair, opaque, and inconsistent it is.”).

149. DANIEL KAHNEMAN ET AL., *NOISE: A FLAW IN HUMAN JUDGMENT* 53 (2021).

150. *Id.*

involve increasing awareness of the moral dimensions of cheating and the impact of cheating on other students. This too is costly.

To summarize this review of contracts, criminal law, and intentional torts, the area of law that is most applicable to online cheating is criminal law. This is because criminal law, unlike contracts and torts, considers social harm. Applying Becker's model of crime to online cheating shows why the current online cheating rate is so high. The separate insight from trade secret law is that faculty and institutions should be obligated to make a reasonable level of investment in measures to reduce cheating.

IV. WHY CHEATING IS OVERPRODUCED AND WHY FACULTIES AND COLLEGES FAIL TO ACT

Applying the criminal law model helps resolve the puzzle that motivated this Article: why is there so much cheating on online exams? That question assumes, of course, that there is too much cheating. But is there an optimal amount of cheating on online academic exams? Economists would say there is, and it is greater than zero—and less than the current level. So long as cheaters bear the full social cost of their actions, they will cheat only if doing so provides them with a benefit that is greater than the cost to society.¹⁵¹ In this situation, the socially optimal amount of cheating will be produced. As explained in this Part, cheaters currently bear far less than the full social cost of their actions and therefore produce more than the socially optimal amount of cheating.

The conclusion that there is too much cheating— an inefficiently high level of cheating—is based on the following:

1. Because students are rarely caught, and when caught, the punishments are light, students have the incentive to cheat more than is socially optimum.
2. Cheating on online exams imposes substantial costs on society that are not internalized (taken into account) by either faculty members or individual colleges and universities in their actions

151. Becker, *supra* note 63, at 207 (“‘Optimal’ decisions are interpreted to mean decisions that minimize the social loss in income from offenses.”).

to reduce cheating. As a result, they take insufficient action to deter cheating.¹⁵²

3. Faculty members and administrators face mixed incentives to deter cheating, with many reluctant to take strong action to deter and punish cheaters.

These factors are discussed further below.

A. The Punishment Students Expect to Receive is Less Than the Costs They Impose

When the probability of being caught is less than one, effective deterrence requires that, when the cheater is caught, the punishment must be increased to compensate. In an influential article on the economics of punitive damages in intentional torts—which applies equally to punishments for crimes or cheating—Polinsky and Shavell argue that the basic principle of deterrence is that “injurers should be made to pay for the harm their conduct generates, not less, not more.”¹⁵³ This implies that if injurers “sometimes escape liability for harms for which they are responsible . . . the level of liability imposed on them when they *are* found liable needs to exceed compensatory damages so that, on average, they will pay for the harm that they cause. This excess liability can be labeled ‘punitive damages’ [or simply as punishment], and failure to impose it would result in inadequate deterrence.”¹⁵⁴

Under this principle, for example, if the damage caused by a student who cheats on one online exam is \$1,000 and only five percent of online cheaters are caught and punished, then efficient deterrence requires that the damages paid by the cheater who is caught must be twenty times the actual damages caused, or \$20,000. This would consist of \$1,000 in compensatory damages and \$19,000 in punitive damages. Because on average, the cheater expects to pay damages only once every twenty times they cheat, the damages they expect to pay are just the actual total damages they cause. Polinsky and Shavell argue that this method of

152. Cheating on exams goes back centuries, despite harsh penalties, so cheating can be argued to be efficient if only in the Stigler sense that enduring institutions must be regarded as efficient. See George Stigler, *Law or Economics?*, 35 J.L. ECON. 455, 459 (1992).

153. Polinsky & Shavell, *supra* note 135, at 873.

154. *Id.* at 873–74.

assessing punitive damages punishes culpable or blameworthy individuals and deters intentional torts.¹⁵⁵

As applied to online cheating, the core deterrence concept is that the damages assessed for cheating that are detected with a probability of less than one must be increased so that the cheater bears the full cost of their actions to society. In this situation, the amount of cheating will be optimized. So long as the injurer bears the full cost of their actions, the rational person will cheat only when the benefits of doing so exceed the costs to society. It is clear that this core deterrence principle is not currently applied to online exams in academia because not only is the detection rate low but also schools do not increase the severity of punishment to reflect the low detection rate.

As discussed below, another reason why cheating is over-produced is that it has substantial negative externalities that are not captured.

B. Cheating on Online Exams Imposes Substantial Costs on Society that Are Not Taken into Account by Universities

Many of the costs of online cheating identified in Section II.D are widely dispersed. As such, even if the cheater is always caught and punished at a level that reflects the damages the cheater causes to the class or even to the school where they are enrolled, the cheater will not consider other important social costs in deciding whether and how much to cheat.¹⁵⁶ This is the problem of negative externalities described in every introductory microeconomics text: Goods and services whose prices do not reflect their full costs, including both the direct costs to the producer and the spillover costs to society, are underpriced and therefore will be overproduced.¹⁵⁷ This same concept applies to cheating. Because the cheater does not bear the full costs of cheating, cheating is overproduced.

In making decisions to invest in cheating reduction, schools consider their own benefits and costs, but are unlikely to consider those of the larger society. With one important difference, this is also the case for

155. *Id.* at 875.

156. N. GREGORY MANKIW, *PRINCIPLES OF MICROECONOMICS* 188 (9th ed. 2021); AUSTAN GOOLSBEE ET AL., 596–98 (3rd ed. 2020); TYLER COWEN & ALEX TABARROK, *MODERN PRINCIPLES OF ECONOMICS* 184–86 (4th ed. 2018).

157. *Id.*

testing organizations, such as those administering the ACT, SAT, GMAT, GRE, LSAT, Multistate Bar Examination, and other important online exams. The difference is that for these testing organizations, the direct costs of cheating to the organization are very high in relation to the total social costs of cheating—a testing organization that fails to control cheating will probably go out of business. As a result, testing organizations heavily invest in cheating reduction. ETS, for example, reports that it “spends over \$50 million annually on security for at home testing, test center operations, test-taker identification and monitoring, internet security, proctor and supervisor training, final score reporting, and post-testing analytics.”¹⁵⁸ Such investment is more likely to approach the socially optimal amount of cheating. This is in sharp contrast to colleges and universities where the direct costs of cheating are likely to be small in relation to the total social costs of cheating.

In the case of the online GMAT, the Graduate Management Admissions Council applies seven security measures specific to the online exam, including:

Live monitoring by human proctors throughout the exam is done via webcam and microphone. Any movement, noise or suspicious behavior is immediately flagged by the proctor, and they may pause the exam and intervene to ensure the integrity of the workspace and ensure the exam is not compromised.

Post-exam forensic analysis is conducted to identify and act against test takers who have cheated on the exam.¹⁵⁹

Similarly, for the at-home GRE, the Educational Testing Service (ETS) uses a combination of live proctors, who intervene if they see problematic conduct, and AI technology.¹⁶⁰ The exam draws from a large question bank that is continuously updated and “utilizes a

158. *How ETS Protects Integrity of the GRE Tests*, EDUC. TESTING SERV., <https://www.ets.org/gre/score-users/about/test-security.html#accordion-item-737d03d3c1> (last visited Feb. 15, 2023).

159. *Test Security*, <https://www.mba.com/exams/gmat-exam/about/test-security> (last visited Feb. 15, 2023).

160. *How ETS Protects Integrity of the GRE Tests*, *supra* note 158.

sophisticated proprietary content rotation and delivery design.”¹⁶¹ And, ETS uses statistical analysis to identify possible fraud and is known to investigate and take action in response to irregularities. To the author’s knowledge, universities rarely apply any of these techniques, including statistical analysis to online exam results even though this would significantly aid detection.¹⁶²

For most colleges and universities, the economic benefits of cheating reduction are relatively low in comparison to the uncaptured negative externalities imposed on the rest of society. Schools routinely fail to control cheating without going out of business—the greatest damage caused by cheating on online exams is likely to be to society at large. As a result, colleges and universities underinvest in cheating reduction and therefore the amount of cheating is more than the social optimum.

C. Taking a Marginal Approach

How should investments in cheating reduction be evaluated? “Marginalism” underlies most of modern microeconomics—benefits and costs are assessed at the margin.¹⁶³ Applying this principle to online exam cheating, society should continue to invest in catching and punishing cheaters so long as the marginal benefits of doing so are greater than the marginal social costs.¹⁶⁴ The optimum amount of cheating is not zero because, even if it were possible to achieve a level of zero cheating, the marginal benefits of getting all the way to zero

161. *Id.*

162. *Id.*

163. MANKIW, *supra* note 156, at 4; COWEN & TABARROK, *supra* note 156, at 5; BETSEY STEVENSON & JUSTIN WOLFERS, *PRINCIPLES OF MICROECONOMICS* 3 (1st ed. 2020).

164. In our previous discussion of the tradeoff between greater probability of detection and greater severity of punishment, we did not consider the marginal costs of changes in detection and punishment. However, in estimating the social optimum amount of cheating, we need to do so. For example, if a 10% increase in the detection rate has twice the deterrent effect on cheating as a 10% increase in the severity of punishment, but costs four times as much to accomplish, then the optimum will not be reached simply by increasing the detection rate. A body of research addresses these tradeoffs as part of the economics of crime. *See* Polinsky & Shavell, *supra* note 135; A. MITCHELL POLINSKY, *AN INTRODUCTION TO LAW AND ECONOMICS, SIXTH APPLICATION—LAW ENFORCEMENT USING FINES & SEVENTH APPLICATION—LAW ENFORCEMENT USING IMPRISONMENT* 79–102 (3d ed. 2003).

would be much less than the marginal costs of doing so.¹⁶⁵ There will always be some number of determined and resourceful cheaters who cannot be successfully deterred without imposing extremely onerous conditions on all test takers at great cost.

The skeptical reader may wonder how this concept can be applied in the real world to cheating. How can the marginal benefits and costs of investing in cheating reduction be estimated? Unlike the extensive research on the economics of crime, colleges and universities have collected little relevant information on the economics of cheating.¹⁶⁶ We know of no estimates of detection or punishment costs for academic cheating. Similarly, we know of no estimates of how responsive cheating is to increases in spending on anti-cheating technology, which would enable a determination of whether more, or less, should be spent on this technology. And we know of no estimates of the total cost that cheating imposes on society.

A natural reaction may be that academic cheating is primarily an ethical issue, not an economic one. But if so, the same could be said of crime which has been subject to extensive economic analysis for more than 50 years.¹⁶⁷ Estimating social costs, detection costs, and punishment costs is difficult, and the results are debated, but policy initiatives regarding crime reduction are heavily influenced by economic studies.¹⁶⁸ Without similarly approaching cheating reduction efforts from an economic perspective, how can the success of cheating reduction investments be evaluated? At present, the prevalent approaches to cheating reduction in higher education appear to have no

165. See Risch, *supra* note 88; see also Ferraz & Soares, *supra* note 88.

166. See U.S. GOV'T ACCOUNTABILITY OFF., GAO-17-732, COSTS OF CRIME, EXPERTS REPORT CHALLENGES ESTIMATING COSTS AND SUGGEST IMPROVEMENTS TO BETTER INFORM POLICY DECISIONS (2017); see also David A. Anderson, *The Aggregate Burden of Crime*, 42 J.L. & ECON. 611, 611–42 (1999).

167. See, e.g., many empirical studies cited in POSNER, *supra* note 62, Chapter 7, *Criminal Law* 253–95; HENRY N. BUTLER ET AL., ECONOMIC ANALYSIS FOR LAWYERS, THE ECONOMICS OF CRIME AND PUNISHMENT 383–420 (3d ed. 2014); HAROLD WINTER, THE ECONOMICS OF CRIME: AN INTRODUCTION TO RATIONAL CRIME ANALYSIS (2008); Isaac Ehrlich, *Crime, Punishment, and the Market for Offenses*, 10 J.E.P. 43, 43–67 (1996); *Economics of Crime*, NAT'L BUREAU ECON. RSCH., <https://www.nber.org/programs-projects/programs-working-groups%23Groups/economics-crime?page=1&perPage=50> (last visited Feb 15, 2023).

168. See, e.g., EXEC. OFF. PRESIDENT, ECONOMIC PERSPECTIVES ON INCARCERATION AND THE CRIMINAL JUSTICE SYSTEM (2016), <https://obamawhitehouse.archives.gov/sites/whitehouse.gov/files/documents/CEA+Criminal+Justice+Report.pdf>.

clear goals other than the general idea that less cheating is better than more, and none is best.

A simple example of the application of marginal economic analysis to cheating can be constructed as follows. A 2017 article estimated that, at the time, the cost of automated proctoring software was \$7 to \$15 per student per exam (the cost of proctoring software has probably dropped since then), and this compares with \$10 to \$25 for an exam proctored in real time in person.¹⁶⁹ Using a back-of-the-envelope approach, assume that in-person proctoring costs \$10 more per student per exam than proctoring software and that each class requires three exams.¹⁷⁰ Assume further that when in-person proctoring is used instead of proctoring software, the cheating rate decreases from 15% to 5%. Under these assumptions, it would cost \$30 per student to achieve a 10-point decline in cheating per class. The question then becomes—is it worth it?

Armed with these facts, the institution could decide whether the cheating reduction achieved is worth the additional cost. The answer might depend on the particular class—cheating in large introductory classes might be less important to the institution's goals and reputation than cheating in more advanced classes. Reducing cheating rates in a senior level accounting class might be worth more to students seeking accounting jobs and prospective accounting employers than the same amount of cheating reduction in an organizational behavior class. And, reducing the cheating rate to nearly zero at West Point or the U.S. Naval Academy might be worth much more to these institutions and to society at large than doing so at a large public university.¹⁷¹ The tools of economic analysis are versatile enough to help analyze these questions.

169. Jean Dimeo, *Online Exam Proctoring Catches Cheaters, Raises Concerns*, INSIDE HIGHER ED. (May 10, 2017), <https://www.insidehighered.com/digital-learning/article/2017/05/10/online-exam-proctoring-catches-cheaters-raises-concerns>.

170. In reality, this substantially understates the costs of in-person proctoring for most students in an online course because of the time and travel costs imposed on online students who must take their exam at a specific physical location.

171. Ed Shanahan, *West Point Scraps Second-Chance Program After Major Cheating Scandal*, N.Y. TIMES (Apr. 16, 2021), <https://www.nytimes.com/2021/04/16/nyregion/west-point-cheating-scandal.html>; Tawnell D. Hobbs, *West Point to End Policy of Leniency for Cadets After Covid-19 Pandemic Cheating Scandal*, WALL ST. J. (Apr. 16, 2021), <https://www.wsj.com/articles/west-point-to-end-policy-of-leniency-for-cadets-after-covid-19-pandemic-cheating-scandal-11618581602>; Lauren Lumpkin & Danielle Douglas-Gabriel, *Eighteen Midshipmen Expelled or Resign After Cheating Investigation at Naval Academy*,

As noted, organizations that administer exams of high importance usually devote significant resources to exam integrity. For these organizations, the costs of cheating are very high. They recognize the high marginal benefits of cheating reduction and, therefore, that incurring high marginal costs to achieve these reductions is worthwhile.

D. Faculty and Administrators Face Mixed Incentives to Deter Cheating

If the standard solutions suggested by the Becker model are effective, then why are they not implemented? Why are so few cheaters caught and punished? The answer is that just as students fail to consider the social costs of cheating, so too do faculty and administrators. Not only are faculty and administrators likely to ignore broader costs, but they face mixed incentives in deterring cheating.

Although a growing number of schools are using increasingly sophisticated automated proctoring software,¹⁷² faculty complain that most suspicious activity flagged by the software is ambiguous, and that a great deal of faculty time must be spent reviewing exam videos to make judgments of whether the student cheated. Is it possible that faculty and administrators are doing all that they can reasonably do to detect cheating given the state of technology and their budget limitations?

This appears unlikely given the distaste most faculty have for dealing with cheating, the burden that dealing with cheating places on them, and the lack of support faculty receive from administrators.¹⁷³ Studies confirm that faculty routinely ignore at least some cheating,

WASH. POST (Aug. 20, 2021, 6:19 PM), <https://www.washingtonpost.com/education/2021/08/20/naval-academy-cheating-scandal-expelled/>.

172. Royce Kimmons & George Veletsianos, *Proctoring Software in Higher Ed: Prevalence and Patterns*, EDUCAUSE REV. (Feb. 23, 2021), <https://er.educause.edu/articles/2021/2/proctoring-software-in-higher-ed-prevalence-and-patterns>. The software typically makes a video recording of students while they take the exam, blocks access to internet browsers on the computers being used, and flags suspicion student eye and hand movements. *What Is Video Proctoring? Everything You Need to Know*, PROCTORED.U, <https://proctored.com/blog/tpost/ho203tpal1-what-is-video-proctoring-everything-you> (last visited Feb. 15, 2023).

173. WHITLEY & KEITH-SPIEGEL, *supra* note 64, at 11. In one survey, 77% of academics agreed with the statement that “dealing with a cheating student is one of the most onerous aspects of the job.” *Id.*

with the estimated percentages varying widely.¹⁷⁴ One survey found that 40% of professors never reported cheating and 54% seldom reported cheating, while only 6% of professors said they always reported cheating.¹⁷⁵ Apart from faculty who deliberately do not take action when they observe cheating, some faculty members simply deny that any cheating occurs in their class despite its widespread occurrence elsewhere.¹⁷⁶ McCabe concludes that “the number [of faculty] who do nothing is very small, but the number who do very little is very large.”¹⁷⁷

The mixed incentives faculty and institutions confront in detecting and punishing cheating make it unlikely that they will aggressively do so. Assigning detection and enforcement responsibilities to faculty puts them in the roles of witnesses, investigators, and judges. These are not roles which most faculty members aspire to or train for.¹⁷⁸ And the costs to faculty who take on these roles are substantial.¹⁷⁹

Tricia Bertram Gallant observes that “efforts to police misconduct, follow institutional policies, and prove academic misconduct in evidentiary hearings place additional burdens on faculty that are not only unacknowledged and unrewarded but also emotionally

174. For example, part-time faculty are significantly less likely to report cheating or impose punishments than full-time faculty. Suzanne S. Hudd et al., *Creating a Campus Culture of Integrity: Comparing the Perspectives of Full- and Part-Time Faculty*, 80 J. HIGHER ED. 160–61, 146–77 (2009).

175. Schneider, *supra* note 81. Another survey found that while 79% of faculty observed cheating, only 9% penalized the cheater. Melody A. Graham et al., *Cheating at Small Colleges: An Examination of Student and Faculty Attitudes and Behaviors*, 35 J. COLL. STUDENT DEV. 255, 258 (1994). Still other surveys show much lower percentages of faculty members—between 3% and 21%—reporting having ignored at least one reasonably clear instance of cheating. WHITLEY & KEITH-SPIEGEL, *supra* note 64, at 8.

176. WHITLEY & KEITH-SPIEGEL, *supra* note 64, at 8–9.

177. Schneider, *supra* note 81.

178. Chace, *supra* note 87 (“Professors like the elevation of teaching but not the grubby business of prosecuting.”); Yooneun Lee, et al., *Student and Faculty Perspectives on Undergraduate Cheating Frequency and Severity*, AMER. SOC. ENGR. EDUC. (2022) (“Professors may not report suspicious cheating cases mainly because they think the process is time consuming and worry about having not enough evidence. Also, they feel stress in dealing with students and are unsure about the university’s cheating process.”). Also, the idea that all three functions should be performed by a single individual is inconsistent with our concept of criminal justice even though students typically have appeal rights if they do not accept the punishment imposed by the faculty member.

179. In one survey, 83 percent of faculty reported that it was “difficult to compile evidence or proof of misconduct,” reflecting the high evidentiary standard required to prove cheating at many schools. PATRICIA BERTRAM GALLANT, *ACADEMIC INTEGRITY IN THE TWENTY-FIRST CENTURY: A TEACHING AND LEARNING IMPERATIVE* 7 (2008).

draining.”¹⁸⁰ Whitley and Keith-Spiegel point out that faculty members often refrain from taking strong action against cheating because of “reluctance to undergo an emotional confrontation, and fear of retaliation by the student, of losing students, of being accused of harassment or discrimination, and even of being sued for these offenses and/or defamation of character.”¹⁸¹ The fact that university guidelines on punishments are so vague only makes things more difficult for faculty.

Faculty report that administrators do not support them, or worse, that “faculty become the defendant instead of a dishonest student.”¹⁸² As a result, faculty “predominantly prefer[] not to report incidents of dishonesty to the appropriate authorities.”¹⁸³ Instead, faculty members who take action to punish cheating prefer to “handle dishonesty directly with the student offender and bypass university policy.”¹⁸⁴ This finding is consistent with the student surveys that report a lack of uniformity in faculty and administration responses to student cheating.¹⁸⁵

Faculty who devote substantial efforts to deterring cheating generally do so because they feel it is the “right thing to do.” This insistence on ethical conduct from students, despite the costs to the faculty member, may reflect important values that attract some faculty to academic jobs.¹⁸⁶ However, vigilance against cheating does nothing to improve a faculty member’s chances of receiving tenure yet takes time that could otherwise be devoted to research or other career

180. *Id.* at 72.

181. WHITLEY & KEITH-SPIEGEL, *supra* note 64, at 11.

182. Coalter et al., *supra* note 98, at 2; *see also* Donald L. McCabe, *Faculty Responses to Academic Dishonesty: The Influence of Student Honor Codes*, 34 RSCH. HIGHER EDUC. 647 (1993).

183. Coalter et al., *supra* note 98, at 2; *see also* Paul Douglas MacLeod & Sarah Elaine Eaton, *The Paradox of Faculty Attitudes toward Student Violations of Academic Integrity*, 18 J. ACAD. ETHICS 347, 355 (2020).

184. Coalter et al., *supra* note 98, at 2.

185. *See, e.g.*, Matt Serra, ACADEMIC INTEGRITY STUDY: FACULTY SURVEY 2001 ASSESSMENT REPORT 5, (Mar. 7, 2001) <https://integrity.duke.edu/reports/Fac3701.pdf> (“Only 5% of the respondents ‘agreed’ in any way with the idea that faculty have a uniform approach when dealing with cheating.”).

186. *See, e.g.*, *Statement on Professional Ethics*, AM. ASSOC. UNIV. PROFESSORS, <https://www.aaup.org/report/statement-professional-ethics> (last visited Feb. 15, 2023) (“As teachers, professors encourage the free pursuit of learning in their students. They hold before them the best scholarly and ethical standards of their discipline. Professors demonstrate respect for students as individuals and adhere to their proper roles as intellectual guides and counselors. Professors make every reasonable effort to foster honest academic conduct and to ensure that their evaluations of students reflect each student’s true merit.”).

enhancing activities—another reason why many faculty refrain from pursuing cheating cases. In surveys conducted by McCabe et al., some faculty members said they did “[l]ittle or nothing in the face of suspected student cheating because of the perceived [negative] impact such reports might have on the faculty member’s chances for promotion and tenure, or perhaps even retention in the case of adjunct faculty.”¹⁸⁷

Transferring all responsibility for catching and punishing cheaters from faculty to university administrators would not solve these problems. First, faculty involvement is required to identify potential cheating, and this will inevitably require subsequent faculty involvement in the adjudication process in which the student will have due process or basic fairness rights.¹⁸⁸ Second, faculty members who are dissatisfied with the university adjudication process are likely to bypass it as they do now by imposing their own, often-light punishment.

Finally, and most importantly, colleges and universities themselves face mixed incentives to deter cheating. If an individual school is lax in allowing cheating, it faces the possibility of developing a reputation as a hotbed of cheating, which may hurt its reputation. The school may experience a decline in applications, alumni engagement and donations, recruiting by employers, and overall reputation.¹⁸⁹ On the other hand, if

187. MCCABE ET AL., *supra* note 66, at 139.

188. See, e.g., *Faculty Instructions for Handling Cases of Academic Dishonesty*, PENN STATE COLL. HEALTH & HUM. DEV., <https://hhd.psu.edu/undergraduate/advising/academic-integrity/faculty-instructions-handling-cases-academic-dishonesty> (last visited Feb. 15, 2023); Chace, *supra* note 87 (explaining faculty reluctance to take action against cheating) (“It takes time, and time is expensive; bringing a student before a campus judicial council is also labor intensive, and the outcome is unpredictable; students or their parents can retain attorneys to fight the charges and endlessly complicate the procedure. . .”).

189. See, e.g., Michael Luca et al., *The Impact of Campus Scandals on College Applications* (4 Harv. Bus. Sch. Working Paper, Paper No. 16-137) (“Scandals [including cheating scandals] with more than five mentions in The New York Times lead to a 9 percent drop in applications at the college the following year. Colleges with scandals covered by long-form magazine articles receive 10 percent fewer applications the following year. To put this into context, a long-form article decreases a college’s number of applications roughly as much as falling 10 places in the U.S. News and World Report college rankings.”). It has been suggested that widespread cheating, if left unchecked, could threaten a school’s accreditation, although there are no known cases of this occurring.

a school is too aggressive in deterring cheating, too many cheaters may be caught and punished, which also may result in negative publicity.¹⁹⁰

Two professors at Arizona State University (ASU) wrote an editorial in the school newspaper in 2003 expressing outrage at the extensive cheating they uncovered among their graduate business students. In response, “rather than acknowledging the issue and addressing cheating, the ASU administration, including the president and provost, sent pointed e-mails questioning whether any major problems with academic dishonesty existed on campus. Their survey of deans found a group echoing the classic sentiments of denial, ‘There is not a serious cheating problem at ASU.’”¹⁹¹

In one of the few cheating studies to rely on analysis of actual test results at a top university, Steven Levitt and Ming-Jen Lin found that more than 10% of the students “appeared to have cheated in a manner blatant enough to be detected by our approaches.”¹⁹² They concluded that it was “not surprising that students cheat – they have strong incentives to do so, and the likelihood of getting caught is low. What is perhaps more surprising, is that so little effort is devoted to catching cheating students.”¹⁹³ However, the authors subsequently posited that “[p]erhaps a powerful explanation of why so little effort is invested in detecting cheaters[], comes from what happened after we carried out our analysis.”¹⁹⁴ Despite admissions of cheating from multiple students, the Dean’s office cancelled the investigation into their actions due to pressure from parents.¹⁹⁵

The safest course for colleges and universities may be to seek only to match the actions of other schools—install proctoring software and roughly align the frequency and severity of punishments with other schools. This way, the institution can devote its limited resources to subjects that, unlike cracking down on cheating, may enhance its reputation. McCabe observes:

190. Cf. Chace, *supra* note 87 (“Although no school welcomes negative publicity about academic dishonesty, administrators can always point the finger downward at those who break the rules.”).

191. Happel, *supra* note 82, at 189.

192. Levitt & Lin, *supra* note 4, at 10.

193. *Id.*

194. *Id.* at 10–11.

195. *Id.* at 10.

We hear a continuing chorus of ‘ain’t it awful’ . . . but we see very few action programs at the school level (with only a modest number of exceptions) that are substantive enough to have a measurable impact, versus many programs that seem to be more cosmetic and designed to please one or more of a school’s major stakeholders.¹⁹⁶

V. POSSIBLE LEGAL INTERVENTIONS TO REDUCE ONLINE CHEATING

Existing contract- and due process-based approaches by courts do not create incentives for schools to reduce cheating. If anything, an increased focus on due process protections for students makes faculty and administrators even more reluctant to take serious action when they uncover cheating. However, the Becker model, in addition to shedding light on the status quo, helps identify legal interventions that could combat cheating. These include the following:

1. Regulatory requirements: Federal law already requires institutions that offer distance education to have processes in place to establish that the registered student is the student who takes the course.¹⁹⁷ This is certainly a low bar, as the law says nothing about the type of cheating discussed in this Article. However, as a major funding source for higher education, the government could impose other requirements regarding cheating.

New government regulations prescribing anti-cheating measures would impose new burdens and might produce unintended consequences, but the government could at least mandate that schools receiving government funding publicize their statistics on the number of students caught cheating and the punishments imposed. This would increase the salience of cheating punishments and enable benchmarking of cheating metrics. Of course, this requirement itself would create incentives for schools to game the system—most likely to minimize reported cheating. Still, if the published statistics are reasonably credible, this increased salience

196. MCCABE ET AL., *supra* note 66, at 142.

197. *See supra* note 91 and accompanying text.

would be a significant first step in changing behavior. And it would enable additional studies to determine how students react to changes in the amount of reported cheating and punishments imposed.

2. Judicial recognition of broader cheating costs: Are the courts doing enough to recognize the broad harm that cheating causes? Judicial reliance on a contract approach to cheating suggests that they are not doing enough, and the author's review of judicial opinions on cheating uncovered no explicit judicial recognition of these broader harms. In reviewing academic disciplinary punishments, courts should take notice of the fact that the cheater has not just violated the school's rules but has caused significant harm to others.
3. Rethinking the level of harm required for standing: Courts should be more receptive to class actions and other suits brought against universities that do not enforce their own anti-cheating rules. In the cases filed after the Varsity Blues scandal, the courts found that cheating did not cause large groups of other students (non-cheaters) to suffer *particular harm*, but there is no doubt that cheating does in fact harm non-cheaters.¹⁹⁸ This was demonstrated in the Chapman professor's copyright violation case where he pointed out that cheaters may harm the grades of *non*-cheaters in a curved class and may even cause non-cheaters to lose their grade-dependent scholarships. It may be time for courts to re-examine their analysis of standing in these cases as it relates to the harm caused by cheating.

The vast majority of cheating at universities is dealt with internally, resulting in mild punishments or none. Very little cheating ever reaches the courts, although implementing the ideas above could somewhat increase the number of legal interventions. Apart from regulatory changes and changes in judicial treatment of cheating, what other factors might change the current equilibrium? Some hope may come from market responses to widespread academic cheating. For example:

1. Pressure and competition from firms: As colleges and universities rely less on rigorous high-integrity testing, employers are doing the opposite and increasingly relying on their own testing to guide hiring decisions—a sign that grades are becoming less useful in

198. See *supra* note 60 and accompanying text.

differentiating student performance. Survey results published in 2015 found that 76% of firms with more than 100 employees used assessment tools for external hiring, and that figure was expected to increase to 88% in the following few years.¹⁹⁹ Companies use these assessments “[t]o identify people with the traits and skills required for particular jobs, and new hires who have misrepresented themselves are quickly found out.”²⁰⁰

Management consulting firms have long used problem-solving “case” interviews to supplement behavioral interviews. Now, technology firms routinely require coding tests for relevant positions, and financial firms routinely require “quant” tests. At some point, these firms may directly challenge the credibility of academic credentials. Perhaps some firms will favor schools that take a more disciplined approach to cheating minimization or reduce or even halt recruiting at schools that do not. Or perhaps some firms will require that individual courses be labeled to indicate whether they incorporate standard anti-cheating “best practices.” Major firms, such as Google, are already developing their own online courses which they say they will treat as the equivalent of a college degree in a related field.²⁰¹ This nascent source of competition may pressure schools to do more to prepare students for future roles, which may entail reducing the amount of cheating.

2. Organizations that rate schools: Would you send your child to a college that has a poor academic integrity rating? At some point, the expanding rating and review industry may decide there is a market for academic integrity ratings. The widely-read U.S. News and World Report ranking of colleges and universities currently bases its rankings on “17 key measures of quality,” including “undergraduate academic reputation” and “math and evidence-based reading and writing portions of the SAT and the composite

199. Chamorro-Premuzic, *supra* note 13.

200. *Id.* at 119.

201. Robin Ryan, *Google Offers New Short-Term Training Certifications Leading To High Paying Jobs*, FORBES (Feb 23, 2021, 8:00 AM), <https://www.forbes.com/sites/robinryan/2021/02/23/google-offers-new-short-term-training-certifications-leading-to-high-paying-jobs/>.

ACT scores.”²⁰² Perhaps U.S. News and World Report or other firms that rate schools and programs will incorporate an academic integrity measure that would lower a school’s rating if cheating appears to be widespread.

There is already an organization devoted to academic integrity—The International Center for Academic Integrity (ICAI)—whose goals include “helping schools, colleges, universities, and individuals, and governments build a culture of academic integrity.”²⁰³ With cooperation from colleges and universities, ICAI or another similar organization could collect and publish information that would enable benchmarking and analysis of cheating at different colleges and universities. Although schools may be reluctant to participate in such an effort, pressure from employers, rating organizations, or the press might persuade them to do so.

In the absence of outside forces, the status quo is likely to persist. Advances in anti-cheating technology may increase cheating detection rates in online exams, but the technology is not capable of reliably and definitively identifying cheating. So long as this technology relies in part on video cameras built into student laptops, it will be difficult to distinguish between a student’s instinctive glance down or to the side that is part of their thought process and a deliberate one to obtain information from a hidden device. Moreover, improved cheating detection will not solve the issues of faculty and institutional reluctance to punish cheaters.

VI. CONCLUSION

After struggling to categorize the university-student legal relationship, courts have generally concluded that it rests on some combination of contract and constitutional law. In addition, while students at public universities have due process rights that students at private universities lack, the courts have found ways to imply basic

202. Robert Morse & Eric Brooks, *A More Detailed Look at the Ranking Factors*, U.S. NEWS (Sept. 11, 2022, 9:00 PM), <https://www.usnews.com/education/best-colleges/articles/ranking-criteria-and-weights>.

203. INT’L CTR. FOR ACAD. INTEGRITY, <https://academicintegrity.org/> (last visited Feb. 15, 2023).

fairness rights to private university students that have largely evened the field.

Does the approach taken by the courts mean that student cheating should best be considered as a special breach of contract, one with added due process or fairness rights? This Article argues that the current approach is at best, too limited, and at worst, counterproductive. A more useful way to view online exam cheating is through the lens of criminal law, and Becker's economic model of crime provides both insight into the current high level of cheating and important lessons for its reduction.

The most obvious of these lessons is that students are less likely to cheat when they expect to be caught and punished. Currently, students do not expect to be caught and, if caught, they expect to receive little or no punishment. Schools face mixed incentives in their efforts to reduce cheating and therefore pursue these efforts half-heartedly. Faculty who are vigilant against cheating incur a significant cost, and the schools themselves have little incentive to aggressively enforce anti-cheating measures. This status quo is unlikely to change in the absence of legal changes or private sector pressure.

The lessons from the economics of crime need to be tested in the context of online cheating. Future research should collect information that goes beyond the staple of student surveys, and should include field studies of the incidence of cheating and the detection rate, and estimates of the costs and effectiveness of different cheating reduction techniques. Also overdue are estimates of the costs cheating imposes on students, institutions, and society. This information would help inform reasonable policy determinations that go beyond the current hand-wringing about the prevalence of online cheating in colleges and universities.