THE TEACHER

The Case of the Pilfered Paper: Implications of Online Writing Assistance and Web-Based Plagiarism Detection Services

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While there is nothing new about academic dishonesty, how it is committed, prevented, and detected has been dramatically transformed by the advent of online technologies. This article briefly describes the concurrent emergence of online writing assistance services and Web-based plagiarism detection tools and examines the implications of both for student-faculty relations, faculty workload, and student learning. Finally, we provide three alternative strategies for deterring, detecting, and documenting all forms of plagiarism.

oday, there is widespread concern about a perceived increase in the prevalence of plagiarism on college campuses (Rimer 2003). While the scope of the problem remains elusive (Dubner and Leavitt 2010), preliminary survey reports demonstrate that when students do plagiarize, the Internet plays a central role in their efforts (Oklahoma State University, Center for Academic Integrity 2009). Most of what we know about contemporary plagiarism pertains to either the stealing or borrowing of content through the unauthorized cutting and pasting of online written material or the borrowing of previously submitted student papers from student-organized paper mills. Particularly troubling to faculty, though, is student submission of papers purchased from forprofit online writing assistance services (Bauman 2009).

The Internet has played an equally defining role in transforming the ways in which instructors deal with plagiarism. Before the Internet, the detection and documentation of plagiarism was a laborious task involving the cataloguing of previously submitted student work, physically searching library archives, and querying colleagues. Over the past 10 years, an industry of plagiarism detec-

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tion services has catered to the needs of time-starved faculty by developing Internet-based applications for deterring unauthorized use, estimating the probability of authorship, and documenting matches to previously published or submitted work.

While the promise of plagiarism detection tools has been appealing, their adoption has not yet resolved the dilemmas posed by the writing assistance service industry and has introduced new challenges for faculty to consider. The following sections pursue two goals. First, they seek to raise awareness about dilemmas and challenges posed by the emergence of these twin industries. Second, they offer a synthesis of practical solutions from the literature for faculty to consider.

ONLINE WRITING ASSISTANCE SERVICES

Most basically, an online writing assistance service (or OWAS) is a Web site through which customers place orders for originally written texts on academic subjects for a prescribed fee. The Academic Writing Services Web site (http://www.academic writinghelp.net/) is a typical example, in that it features customized papers starting at a low price, a rush delivery service, unlimited revisions, 24/7 customer support service, online credit card processing, automated ordering, discounts for referrals, and a moneyback guarantee for originality. OWAS sites are often referred to as "paper mills," but they are not. Paper mills are repositories of previously submitted student papers, while OWAS papers are original texts written by ghostwriters for profit. For this reason, OWAS

papers are in their own individual class of plagiarism and are particularly despised by faculty, because, while they are easily recognizable, their purchase is exceptionally difficult to prevent or verify (Bauman 2009).

We began this project with the belief that the OWAS industry was an emergent social problem. But as we dug deeper, we discovered that this phenomenon is not the first time that organized plagiarism has been a serious problem. In fact, preliminary evidence suggests a relationship between organized plagiarism and enrollment surges. From 1944 to 1956, the Servicemen's Readjustment Act flooded universities, colleges, and technical institutes with 7.8 million World War II veterans, the vast majority of whom were young men aged 20 to 25 years of age (United States Department of Veterans Affairs 2009). It was during this time that concern about paper mills first became acute. In 1959, a New York City College instructor noted an alarming increase in the number

hand, targets graduate students by offering a variety of theses and dissertation writing services. Custom-Writing.com's menu has the widest variety of writing formats, and Thesis Quest has the most extensive array of research assistance options. Although at first glance, these Web sites appear to offer coaching or tutoring in academic writing, the optional pull-down menus make plain that what is being sold is not assistance with academic work, but the academic work itself.

While the Web sites may differ in terms of the populations they target and the types of writing in which they specialize, all offer easy-to-read selection menus, automated ordering, 24/7 customer service, and rush-order service. The most notable promise, however, is the commonly advertised money-back-guarantee for originality. Most OWAS sites maintain customer distribution lists and deploy them on a regular basis to distribute coupons and announce discounts and upcoming specials. For example, several

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of pilfered English compositions and conceptualized the problem as "fast becoming the collegiate counterpart of juvenile delinquency" (Hamalian 1959).

Twenty years later, as the baby boom generation challenged the capacities of colleges and universities, a crisis of compositional plagiarism reemerged, but this time, the problem went beyond organized paper sharing between roommates and fraternity members. With advances in telecommunications, duplication, and package delivery technologies, the business of ghostwriting college papers became profitable. Under a system that operated much like today's FTD florist network, according to one report, students would place their orders for original compositions by long-distance telephone, and their orders would be routed to a shop where the order would be filled and delivered within a guaranteed time frame (Stavisky 1973).

Just as telecommunications technology made plagiarism profitable, the World Wide Web has increased both the profile and accessibility of the plagiarism-for-profit marketplace. The actual breadth and depth of the OWAS industry is unknown. Coastal Carolina University's library catalogues 250 online plagiarism sites, but most are paper mills, not OWASs (Coastal Carolina University 2010). A Web search of terms like "writing assistance," "writing services," or even "plagiarism," however, generates an extensive list of OWAS Web sites. In fact, the OWAS market is so extensive and diversified that *Slate* magazine publishes an annual termpaper buying guide (Stevenson 2001).

While *Slate's* guide includes sources for the recycling of "A" papers via e-mail, most sites advertise customized papers that serve specific types of customers and their common needs. Ivey Research Services, for example, caters to undergraduates by specializing in essay and term paper writing assistance. Ivey Thesis, on the other

times a year, we now receive friendly reminders ("Spring break is just around the corner, are you ready?") and discount coupons from an OWAS we contacted while researching this article. Receiving these e-mails has been a painful reminder of the temptations to which our students are exposed throughout the academic year.

PLAGIARISM DETECTION SERVICES

Alongside the plagiarism-for-profit industry has grown an equally substantial plagiarism detection services (PDS) industry. The Edu-Tie online resource portal, the slogan for which is "What you need when you need it," makes plain the symbiosis between these two Internet-based industries by linking through its "Popular Categories" to both online assistance writing services and plagiarism detection services. Thus, as students shop for made-to-order papers, their teachers can troll the same Web site for assistance in detecting their purchases. While the tools used to detect plagiarism vary, a commitment to minimizing faculty time and labor lies at the core of the PDS industry. One prominent PDS Web site (http://www.canexus.com), for example, features this testimonial: "EVE [PDS software] aced the test, finding everything I had plagiarized in fifteen minutes."

The forerunners of the PDS industry, the Essay Verification Engine (otherwise known as EVE) and the Glatt Plagiarism Detection System are both computer-based software programs marketed primarily to individual faculty. More recently, though, Web-crawling search engines have usurped the market, and the current PDS state-of-the-art application is a program called Turnitin. As of this writing, about half a million educators use Turnitin and more than 100 million student papers have been checked by it. Unlike its computer-based forerunners, Turnitin searches 12 billion Web sites and 100 million student papers, highlights

textual matches between submitted works and its database, and then produces a report of the results. From an instructor's perspective, a particularly helpful aspect of the site is that students can submit their work for automated checking. With large classes, this feature makes it easy for faculty to offload the time-consuming task of submission and turn their attention to other essential tasks such as course preparation and assignment grading.

Because Turnitin is designed to plug into an online course management system such as Blackboard or Moodle, an instructor's access is limited by his or her standing as a faculty member of any of the 8,500 institutions currently licensed to use it. When we began this project, for example, our university held a Turnitin license. But in 2009, our institution unplugged Turnitin as a cost-saving measure, leaving the instructors who had integrated the program's requirements into their course requirements to either return to pre-Internet practices or laboriously spot-check suspicious papers with engines like Google and Yahoo.

The more ubiquitous PDSs have become, the more faculty feel obligated to use them. As a result, some faculty have complained that by making submission to Turnitin a requirement, they are spending more time than ever policing their students' writing and less time teaching them how to write well (Diver 2006). Similarly,

lots of professors who read a paper, know something is wrong, and decide not to take it up. Sometimes people think of it as a 'teachable moment.' But for most it's a lot of work [to make an accusation of plagiarism] and you don't always find sources to prove it happened" (Dehnart 1999).

Even more problematic than the lack of follow through in the face of a PDS report of plagiarism are the dilemmas caused by the false positive results that these reports commonly generate. Investigative reporter Andy Dehnart, for example, submitted his 30-page senior thesis to Plagiarism.org and was told that he might be guilty of cheating because the company found that the submission matched a legitimate, authorized posting of the same thesis on the Web. Reports generated by programs such as Turnitin list all matches, regardless of the cause. Matches often include commonly used phrasing and public domain material and are more often the result of sloppy paraphrasing or incomplete referencing. Analysis of reports can take time, and, if not done with care, false positives can produce accusations that may call the instructor's, not the student's, credibility into question.

Beyond the erosion of trust between students and teachers and the dangers of false positives, the most significant shortcoming of PDS technology is the simple fact that customized works

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some students have complained that faculty's overreliance on PDS tools requires them to spend an inordinate amount of effort proving their honesty. In 2008, for example, four Virginia high school students sued iParadigm, Turnitin's distributor, claiming that the program violated their intellectual property rights and rights to privacy as guaranteed by the Federal Education Rights and Privacy Act (FERPA). On the dontturnitin.com Web site, students complained that the requirement to turn in all work for a plagiarism check before any evidence of cheating existed undermined the student-teacher relationship. Even though the court ruled against the students, iParadigm updated their use agreement to allow students the option to not have their papers searched and to keep the identifications of students whose works are searched confidential (A.V. et al. v. iParadigms 2009).

While these changes may have improved the trust of some students, they greatly undermined the promise of efficiency for faculty in two important ways. First, faculty must be prepared to negotiate alternative accommodations for students who choose not to submit their work for detection. And second, in cases in which a submitted text matches a stored text, it becomes the faculty member's responsibility to contact the original owner and obtain a copy of the stored paper. Many decide that the extra labor is not worthwhile. At Yale, for example, where an estimated 35 cases of academic dishonesty are investigated each year, an assistant dean claims the problem is actually larger: "There are

purchased from an OWAS are guaranteed to be undetectable. If a purchased paper is found to include recycled material, the customer can demand his or her money back, and the ill will created by the sale of an unoriginal paper would be bad for business. OWAS sites, then, take extra care to ensure that their products can pass the PDS test.

THREE STRATEGIES TO CONSIDER

To this point, our overviews of OWASs and PDSs have high-lighted a number of important challenges for faculty. While PDS tools do save faculty time in detecting and deterring plagiarism, reliance on these services has, at times, added tension to the teacher-student relationship and has not reduced the tediousness of the verification process. Most important, while PDS tools like Turnitin are useful for the detection of stolen or borrowed content, they do little if anything to thwart the OWAS industry's success.

The shortcoming of complete reliance on PDS tools is the fact that they focus exclusively on the *outcome* of intellectual dishonesty—the submission of a stolen, borrowed, or purchased text. Ironically, even though the Internet plays a key role in the detection process, this approach is congruent with a pre-Internet "free range" module of teaching research and writing that makes plagiarism too easy an option for students to choose. An alternative module to the "free range" approach would focus as much

on process as outcome, and would integrate plagiarism detection at an earlier point in the process of writing and research.

For example, one physics professor employs a "studio model" of teaching in which students complete their assignments during supervised class time (Young 2010). We have successfully adopted a similar approach to our social science classes. Whenever possible, we require our students to write during class time. Thanks to electronic messaging, social networking technologies, and podcasts, listening to lectures and asking questions about them can become homework, freeing up class time for supervised (and perhaps off-the-Internet) note-taking, outlining, and drafting.

In addition to the studio approach, professors like Amy Cavender are reducing the temptation to plagiarize by holding students accountable for their honesty in earlier stages of research and writing projects (Cavender 2010). Cavender requires her students to record their citations and notes in Zotero, an online, networked information management system. However, there are other more low-tech strategies that can achieve similar goals. For example, we require our students to document their research process by submitting original handwritten notes, outlines, printouts of source abstracts, photocopies, or other materials used in the development of the paper along with the paper. The requirement of a personal essay describing the student's experience of completing a major writing project is particularly useful. The instructions may require the student to identify challenges they encountered, the part of the paper that makes them the most proud, and what they learned about themselves or their world by completing it. In a Chronicle of Higher Education interview, Pritchard noted that students who outsource their writing learn very little by doing so (Young 2010). The prospect of completing the personal reflection essay may be enough to deter students from purchasing a paper. If not, this exercise can serve as a useful tool for confronting suspected plagiarism.

Finally, the "free range" approach gives professional plagiarists too much maneuvering room. Thus, the more customized the assignment instructions and the more exclusive the resources for completing them, the more difficult it will be for someone not enrolled in the course to successfully complete it. Barberio (2009), for example, advocates limiting students' resources to a set of instructor-prepared links to specific Web sites. We go further and require students to integrate unpublished class lecture materials, assigned textbook material, and original field or interview data into their papers. While prescribing resources has not always thwarted the submission of purchased papers, it has at least made it nearly impossible for purchased papers to earn passing grades.

CONCLUSION

Whether stolen, borrowed, or purchased, plagiarized papers were common on college campuses well before the Internet. As long as there have been college campuses, professors have been responsible for the prevention and detection of plagiarism. The traditional "free range" module of research paper writing transforms the diligent professor into a "full time blood hound watch dog" (Hamalian 1959). While plagiarism detection technology initially

offered college professors some respite from the grind of policing, it has brought its own set of challenges. In writing this article, we did not seek to advocate for or against the adoption of plagiarism detection services; rather, we sought to highlight the challenges of this approach. Chief among them has been these services' inability to either detect or deter the submission of purchased customized papers. We presented three strategies that have helped us and others maintain diligence without becoming bloodhounds or police officers. While these three strategies are not an exhaustive list of what is possible, they are, we hope, enough to encourage more deliberate thought about the role that the Internet plays in our students' commitment to honesty and the ways in which we choose to support them.

NOTES

- For example, the Essay Verification Engine available at http://www.canexus.com.
- The Glatt Plagiarism Screening Program calculates the probability that the author is the paper's owner. For more information, see http://www. plagiarism.com/index.htm.
- The industry standard is a course management system plug-in called "Turnitin," http://www.turnitin.com.

REFERENCES

A.V. et al. v. iParadigms. 2009. 562 F.3d 630 (4th Circuit).

Barberio, Richard. 2009. "The One-Armed Bandit Syndrome: Overuse of the Internet in Student Research Projects." PS: Political Science and Politics 37 (2): 307–11.

Bauman, M. Garrett. 2009. "CSI: Plagiarism." Chronicle for Higher Education, October 9. B20.

Cavender, Amy. 2010. "Preventing Plagiarism." *Chronicle of Higher Education*, June 11. http://chronicle.com/blogPost/Preventing-Plagiarism/24695/.

Coastal Carolina University. 2010. "Cheating 101: Internet Paper Mills." http://www.coastal.edu/library/presentations/mills2.html.

Dehnart, Andy. 1999. "The Web's Plagiarism Police." Salon, June 14. http://www.salon.com/tech/feature/1999/06/14/plagiarism.

Diver, David. 2006. "'Turnitin' Plagiarism Software Available to All Mason Faculty." *Mason Gazette*, September 13. http://gazette.gmu.edu/articles/8963.

Dubner, Stephen J., and Steven D. Leavitt. 2010. "The Truth about College Plagiarism." Freakonomics [blog], *New York Times*, February 3. http://freakonomics.blogs.nytimes.com/2010/02/03/the-truth-about-college-plagiarism/

Hamalian, Leo. 1959. "Plagiarism: Suggestions for Its Cure and Prevention." College Composition and Communication 10: 50–53.

Oklahoma State University, Center for Academic Integrity. 2009. "Selected Undergraduate Student Results: 2009 Survey of Academic Integrity." http://academicintegrity.okstate.edu/doc/aisurvey.pdf.

Rimer, Sara. 2003. "A Campus Fad that's Being Copied: Internet Plagiarism." New York Times, September 3. http://www.nytimes.com/2003/09/03/education/03CHEA.html.

Stavisky, Leonard Price. 1973. "Term Paper 'Mills': Academic Plagiarism and State Regulation." *Political Science Quarterly* 88: 445–61.

Stevenson, Seth. 2001. "Adventures in Cheating: A Guide to Buying Term Papers Online." Slate, December 11. http://www.slate.com/?id=2059540.

United States Department of Veterans Affairs. 2009. "Born of Controversy: The GI Bill of Rights." http://www.gibill.va.gov/gi_bill_info/history.htm.

Young, Jeffrey R. 2010. "High-Tech Cheating Abounds, and Professors Bear Some Blame." *Chronicle of Higher Education*, March 28. http://chronicle.com/article/High-Tech-Cheating-On-Homework/64857/.