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ORIGINAL PAPER

Returning students' right to access, choice and notice: a proposed code of ethics for instructors using Turnitin

Bastiaan Vanacker

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Abstract This paper identifies the ethical issues associated with college instructors' use of plagiarism detection software (PDS), specifically the Turnitin program. It addresses the pros and cons of using such software in higher education, arguing that its use is justified on the basis that it increases institutional trust, and demonstrating that two common criticisms of such software are not universally valid. An analysis of the legal issues surrounding Turnitin, however, indicates that the way it is designed and operates raises some ethical issues because it denies students notice, access and choice about the treatment of their personal information. The paper concludes with a set of guidelines for instructors using Turnitin in the classroom.

Keywords Plagiarism detection software · Turnitin · Plagiarism · FERPA · Copyright · Information ethics · Data privacy · Fair information practices

Introduction

Turnitin is a Web-based plagiarism software program used in 126 countries by over 875,000 educators and millions of students (Turnitin: Quick Facts). iParadigms, Turnitin's parent company, creates "fingerprints" from the documents that are submitted to the service by students, facilitating a comparison against a massive database consisting of other students' submitted papers, content collected from the Internet and a variety of other databases (Turnitin: Company Questions and Answers). Turnitin strongly recommends that teachers have students submit papers themselves, as this will save time and allow them to use other services offered by Turnitin (Turnitin: Instructor User Manual, p. 23). After papers are submitted and analyzed, an "Originality report" is compiled and sent to the instructor (or, if the instructor allows it, to the instructor and the student). This report indicates if and to what extent (in percentage) the text in the student's paper matches any of the sources in the database. The report also allows the reader to view the sources of these matches (Turnitin: Quick Facts). However, if the match is with another student's paper previously submitted to Turnitin, the instructor will not be given direct access to the paper but instead will receive the email address of the instructor in whose class the paper was submitted (Turnitin: Instructor User Manual, p. 48).

The Originality report is neither a guilty nor a not-guilty verdict. Properly cited sections might come up as matched text or coincidental similarities might show up on the report. It is up to the instructor to interpret this information and determine whether the student followed proper citation standards. (Instructors Manual, 48; Key Questions Students Ask About Turnitin).

Turnitin's database contains 135 million previously submitted student papers (Turnitin: Quick Facts), but how did they get there? Unless an instructor changes the settings, all papers submitted to Turnitin are collected in its standard repository by default (Turnitin: Help Center, Repository Options for Assignments). When setting up the assignment, an instructor can change this option if she so desires. Depending on the institution's agreement with Turnitin, a teacher may have two additional options: submitting the paper to the institution's paper repository (but not the standard repository) or allowing students the choice between the standard repository or the institution's

B. Vanacker (✉)
School of Communication, Loyola University Chicago, Chicago, IL, USA
e-mail: bvanacker@luc.edu

repository (but not "no repository") (Instructor User Manual, p. 19).

There are three ethically relevant aspects about this set up. 1. The teacher, not the students, makes the decision about what happens to the students' papers after they have been analyzed. 2. This decision can only be made at the class level, not for individual students. 3. Unless a teacher changes the default option in the advanced settings tab, students' papers will be added to the standard repository.

The inclusion of students' papers without their ability to object has become one of the most controversial aspects of this service. Turnitin uses the comprehensiveness of its database and the presence of student-submitted papers as a selling point. This database of student papers reduces the likelihood that students will recycle papers from their other classes, buy pre-written papers from "paper mills" or use a friend's paper. There is little doubt that such a database is a powerful weapon in the fight against plagiarism. However, instructors should be aware that this database—which includes the personal information and papers of hundreds of thousands of students—is compiled in a way that raises ethical issues.

Before addressing these ethical issues in greater detail, we will turn our attention to a more general question: whether or not educators should use plagiarism detection software in the first place.

Should teachers use plagiarism detection software?

The harm of plagiarism

This paper operates on the premise that plagiarism constitutes a considerable harm in most educational contexts. The arguments supporting this premise have been well-documented (see e.g., Sadler 2007, pp. 284–289; Reilly et al. 2007, pp. 273–279), and will not be further addressed here. Academic institutions therefore have a compelling interest in detecting instances of plagiarism. Naturally, there are different degrees of plagiarism, ranging from an honest mistake to more intentional forms of deception. Plagiarism can be the result of a lack of knowledge or of a lack of character, or a combination of both. It is beyond the scope of this article to give an overview of every type of plagiarism that can be perpetuated by students (or professors). For the purpose of this paper, these distinctions are not crucial, as they have little bearing on the need for detecting plagiarism. PDS cannot detect whether a student plagiarizes out of ignorance or naiveté, or with an intention to deceive. This assessment is the responsibility of the professor or of those responsible for addressing plagiarism at a school or university. But whether the goal is to catch a cheater or a misguided student, in both instances the need for detection is equally important, even if the sanction might be different.

This paper also operates on the premise that the Internet has made plagiarism more prevalent and easier to engage in. The digital age has enabled students to cut and paste text, share papers via email and buy papers from "paper mills." Research has indicated that this had led to more instances of plagiarism (see Martin 2005, p. 149; Keuskamp and Sliuzas 2007, p. A92; Horovitz 2008, pp. 233–234). Although some argue that the Internet has merely made plagiarism more visible than in the pre-Internet era (see Horovitz 2008, footnote 15), there is little doubt that plagiarism is happening on a wide scale on campuses around the world. If the Internet has indeed caused instances of plagiarism to spike, then the task of the instructor has become more difficult, as catching plagiarizers and finding the document that proves plagiarism is a time-intensive task.

Given the stigma attached to plagiarism, professors cannot sanction students without proof, which generally requires locating the uncited source document. Instructors who suspect plagiarism therefore end up typing text into various search engines and databases, a time consuming task that might be quickly abandoned when a stack of papers is waiting to be graded. Given this low probability of detection, students who might otherwise be deterred by the chance of getting caught might consider plagiarism a viable option under the right circumstances. The term "enforcement swapping" has been adopted to describe such circumstances, where "[t]he higher the prevalence of violation, the less risk of sanction for any given violator" (Kleinman and Kilmer 2009, p. 14230). One possible solution to this conundrum (from the educators' point of view) is to severely punish the violator and make an example out of him in the hope that this would serve as a deterrent.

A fairer way to deal with this is problem is to increase the perceived and actual chance of detection, which deters rule-violating behavior just as increasing punishment does. Research has shown that increased punishment capacity (which would be achieved by PDS) "can lead to lasting changes in violation rates" (p. 14234). There is little doubt that PDS help with detecting instances of plagiarism (and increase punishment capacity) (Chaudhuri 2008; Colvin 2007; McKeever 2006, p. 163). While PDS cannot detect every instance of plagiarism, as their databases are incomplete (see Kaner and Fiedler 2008; Fiedler and Kraner 2010)[1] and "paper mills" are adjusting their

[1] In their 2010 study, these authors submitted 24 papers from a variety of Education publications in their entirety to Turnitin (and one other PDS) and found that none of them were identified as 100% plagiarized. Unfortunately, the authors do not indicate whether or not the papers that came down with lower matches still contained enough information to lead the instructor to the original source. Regardless, these findings indicate that the databases against which Turnitin checks its material

practices to avoid detection (Regan 2008), educators agree that these services greatly increase their ability to detect and deter plagiarism.

If we accept the notion (a) that plagiarism is a significant harm in the academic context and (b) that plagiarism has likely become more widespread and prevalent in the age of the Internet and (c) that PDS greatly increases instructors' ability to detect plagiarism, then this would lead one to welcome PDS. Even if one only subscribes to the first and third notion, PDS still seems highly beneficial. This seems to have been the rationale of the thousands of colleges who are using it.[2]

However, despite these obvious advantages of PDS, some claim that its use should be discouraged. Before further analyzing the practices of one specific PDS, Turnitin, these general objections to PDS need to be addressed. Two of the most commonly cited objections to PDS are that it enacts a guilty-until-proven-innocent regime in the classroom and it is harmful to the trust relationship between instructor and student.

The harm of PDS

The guilty-until-proven-innocent argument

A common criticism of Turnitin is that it shifts the burden of proof from the instructor to the student. While this argument has been articulated by many, we will here focus on the argument as put forward by Clanton (2009), who addressed this issue in great depth. Clanton's argument can be paraphrased as follows: we cannot punish a whole class of students by having them submit their papers to PDS and saddle them with the burden of proof on the basis that some students in the class might be plagiarizing. Even if surveys are correct and it is likely that one or more students are plagiarizing, professors should not make this the problem of the whole class, as this overlooks the distinction between collective guilt and individual guilt (pp. 20–21). To further his point, Clanton compares this rationale (to use PDS because surveys state that many students plagiarize) to racial profiling:

> In this sense, if the surveys are what lead us to use PDSs, our use of PDSs is no more defensible than racial profiling. And racial profiling seems highly problematic: it seems strange to think that when the Los Angeles police department stops a particular African-American man for speeding they can *reasonably* suspect him of having drugs of a weapon simply because….statistical tables indicate…that 44% of all drug offense defendants and 54% of all weapons offense defendants in the 75 largest counties were black non-Hispanic. It seems strange to us precisely because what is true of a group is not necessarily true of a particular member of a group (p. 21).

However, while one has a constitutional right not to be subjected to random searches by government officials, students have no comparable right not to have instructors scrutinize their academic work. In fact, students have an interest in instructors doing just that, as it improves their education. But apart from the issue of incomparable harms, this analogy is flawed because instructors do not use profiling to determine who will have to upload their papers to PDS; they do not consider which ethnic or other subgroup of the student population is most likely to commit plagiarism. If, for example, we would only require student athletes or transfer students to submit their papers, this analogy would be correct. But there is no evidence or indication that PDS is used by anyone in this way. Racial profiling is a constitutionally suspect practice because it uses profiling techniques based on race, not because innocent individuals are subjected to a level of scrutiny that they would not otherwise be subjected to if it wasn't for the fact that others in the general population violate laws and norms.

In our daily lives, we frequently subject ourselves to increased levels of scrutiny because some of our fellow citizens do not follow rules and norms. When we enter a bar and appear to be under forty, we have to show a document containing personal information to a stranger in order to purchase an alcoholic beverage. We must do so merely because some people in our community are prone to lie about their age. When fishing on a lake, we are subject to inspectors by the Fish and Wildlife Department because some of our fellow fishermen overfish or fish without a license. These examples are not analogies to the PDS experience, but they do illustrate that the principle Clanton relies on to denounce the use of PDS—that innocent people should not be subjected to scrutiny because some people in the population group to which they belong might be violating a law or rule—is not as widely accepted as is necessary to make his argument valid.

We must also determine to what extent the use of PDS is harmful to the person who is subjected to it. If one sees the

Footnote 1 continued
may contain significant gaps. The author of this article did a similar non-scientific test in which he uploaded six articles from six different disciplines and databases to Turnitin with significantly better results. Turnitin correctly labeled three of the six papers as 100% plagiarized.

[2] Naturally, this does not mean that PDS alone can eliminate plagiarism and this certainly should not be interpreted as a rejection of methods designed to prevent rather than catch plagiarism. Prevention and education are crucial in the fight against plagiarism, but *their* effectiveness as well can only be assessed if there are methods available to detect plagiarism.

forced use of PDS as a punishment (because it saddles everyone with a burden of proof), then it is harmful. However, it is more accurate to consider PDS as simply increasing the scrutiny to which student papers are *already* subjected, by virtue of being assessed by the instructor. Showing your ID before ordering a drink, putting your shoes in a tray before bordering a plane, or undergoing a mandatory drug test at work are all scrutinizing measures that could very well raise some valid objections, but they are not punishments. Furthermore, these measures by themselves do not imply that any specific person is guilty of underage drinking, or being a shoe bomber or drug user; they are merely the means to determine this. The question in these cases, as in the case of PDS, is what level of scrutiny we can find acceptable in order to uphold a norm or to obtain a greater good; what means justify the end of reducing instances of plagiarism? Since the whole purpose of submitting a paper is to have it scrutinized by an instructor so a student can learn, and since plagiarism is a great harm to the academic community, using software to make this scrutiny more thorough does not fundamentally alter the utilitarian calculus.

For the same reasons, PDS does not enact a "guilty-until-proven-innocent" (GUPI) regime in the classroom. GUPI generally refers to a situation in which the default position is one of guilt one has to overcome in order to be cleared of wrongdoing, and the burden of proof resides with the accused. However, with PDS the burden of proof still resides with the instructor. Teachers who use PDS do not abdicate their duty to prove their case when they think a student has plagiarized, and the use of PDS does not imply that students need to present any exculpatory evidence. They must simply upload their papers. They do not need to deny charges, gather testimony from roommates or librarians, or present hard copy versions of articles they used. PDS merely helps instructors to make a better informed decision about guilt or innocence.

PDS destroys trust

Related to this GUPI objection is the argument that the use of PDS is detrimental to the trust relation that exists between student and professor, constituting the cornerstone of higher education: "I submit that trust, rather than suspicion, should be the default posture that teachers take towards students; unless we can reasonably suspect that particular students are cheating, we should trust them," Clanton argues (p. 23). If distrust is going to be our default posture, Clanton asks, then why stop at PDS and not require polygraph tests before students enroll (p. 23)? For Clanton, distrust is unacceptable. In his and other similar objections to PDS based on its effect on classroom trust, three assumptions are present.

1. Trust is important in the educational experience.
2. Policing destroys this trust relationship.
3. Through PDS, teachers police students.

For this objection to hold, all three premises need to be correct. The first premise is incorrect on the basis of semantics, as it relies on a conception of trust that is not the kind of trust present in the educational context. The second premise is therefore incorrect as well. The third premise is correct, but that in itself is not enough to make this argument a valid one.

Certain types of relationships are defined by a deep level of trust, without which the relationship is no longer possible. This is the kind of trust that exists between life partners or good friends, those relationships in which there is an expectation that both partners can rely on each other to look out for each others' best interest. Once this trust is no longer present, the quality of the relationship will falter and the relationship might be at risk, or even impossible. If one starts to check one's partner's collar for lipstick or begins to comb over every incoming and outgoing call on a partner's cell phone bill, the relationship has already sustained damage. Policing does harm this kind of trust.

There might be educational contexts (small seminars, advisor-advisee relationships) where this type of trust emerges between instructors and students. However, as anyone who has ever taught *Intro to Mass Communication* to 100+ freshmen can attest, it is certainly not the kind of trust that is present in every classroom. At many universities professors interact with student through email and Teaching Assistants an environment unlikely to foster the deep respect and mutual care necessary for the kind of trust relationship described here.

Naturally, trust *is* important in the educational context, but the kind of trust that governs our educational relationship with students is not harmed when norms are being policed. To the contrary, this kind of trust is *enhanced* by policing. The "PDS destroys trust" argument suffers from a poor definition of trust. Trust can best be described as a relationship in which party A expects party B to act in a certain way and has a stake in whether or not party B actually acts in this way (Vanacker and Belmas 2009, pp. 111–114). For example, if I trust my neighbor to return the can opener that I lent him, this means that I have an expectation that he will do so and that I have a stake in whether or not he does this. My interest will be harmed if he does not do so.

In the same vein, students trust professors. Based on our roles within the system to which we belong, students have certain expectations about how we will behave. In addition, students have a stake in whether or not we will behave as they expect. These expectations can vary from institution to institution: students at a small private college who pay

high tuition may have different expectations of their professors than students at a public institution; students in a small women's studies seminar might have different expectations about their relationship with their instructor than students in a large *Intro to Microeconomics* class. But in general, students trust that we, as professors, act professionally and fairly and in a way that has their educational interest at heart. They expect that we are knowledgeable in our field and assess their performances in a fair manner, upholding academic standards. This is not the type of trust required in interpersonal relations between friends and family members.

Why then, do students expect that we will behave in this manner? Where do these expectations and this trust come from? Grayson et al. (2008) make the distinction in this context between narrow-scope and broad-scope trust (pp. 242–243). Narrow-scope trust has to be built up from scratch every time we enter into a relationship. Broad-scope trust refers to trust based on the social context in which the relationship takes place. For example, one may like a particular journalist and trust his writing because one has been reading this journalist for a long time and has experienced his reporting to be reliable and good. Or one might trust a journalist because she writes for the *New York Times*, and even though one does not know that journalist and is unfamiliar with her writing; if she was not trustworthy, she would not be writing for the revered paper. This latter form of trust is *system trust*, because the trust in the system trickles down to the individual instead of having to be built from the ground up.

There certainly is an argument to be made that narrow-scope trust is important and emerges frequently in the educational context. All professors have to work to earn students' trust to a certain degree. Some of our best experiences as teachers and students might be from educational experiences in which a bond of trust was developed over time. However, more crucial to the success of the educational experience is the broad scope trust, i.e., that students believe that educators are to be trusted with instructing them, because of their credentials (academic or professional) and because they are faculty members of a particular institution. Students trust instructors because they trust the institutional environment to which they belong, and this institutional trust trickles down to the instructors. The moment a professor enters a classroom, there is a core level of trust based on the fact that she belongs to a trusted institution. It is the kind of trust that guarantees that even when students and professors do not connect on a personal level, the educational experience can still be successful.

This kind of trust then is less likely to be damaged if professors police students stringently for plagiarism. In fact, policing is beneficial to this kind of trust, as it will strengthen confidence in the system. One is more likely to trust a system if one sees that the system polices compliance with norms fundamental to its sustenance. If one were never asked to show one's passport upon entering the United States, citizens might enjoy the time they save when getting through border control, but their trust in the Department of Homeland Security would likely decrease. By the same token, in order to earn students' trust in academia as an institution, we must police and uphold norms that are crucial to the institution.

Moreover, this policing of norms at educational institutions did not begin with the introduction of PDS; it is and has been routine in our classrooms. Many professors indicate at the beginning of the semester and in their syllabi that students need to do the readings before coming to class. Not doing one's class readings pales in comparison to plagiarism, yet this norm is policed quite often; numerous professors administer quizzes whose only purpose it is to detect students who do not do their readings. On numerous occasions throughout their academic career, students are required to submit proof. A student must provide documentation, for example, that he has fulfilled the prerequisite for a class, that she is a graduating senior who should be allowed to enroll in a closed class, or that she should be permitted to retake a midterm because her appendix burst. If the notion that all these instances violate trust because we put the burden of proof with the students sounds implausible, then so should the notion that using PDS does.

However, this broad scope institutional trust could be harmed if students believe they are no longer being judged by their instructor, whom they entrusted with their education, but by a machine operated by a third party whose workings they do not understand. This would indeed be harmful to trust, as students put their trust in a professor to evaluate them, not in a third party or a machine. As explained above, this is not the case, as PDS still puts all the decision making power in the hands of the instructor. However, students cannot be faulted for misunderstanding the precise workings of PDS, and it behooves instructors to explain the function and use of these technologies to their students before using them. As Brinkman (2009) has argued, Turnitin can actually enhance trust in the classroom if its use is well explained and if students are involved in the decision making process.

Legal issues surrounding Turnitin

Having established that PDS does not present issues regarding trust and burden of proof in most educational settings, we will now turn our attention back to one specific PDS, Turnitin. Even though this article is mostly concerned

with ethics, the legal issues surrounding this software and its business model are germane to the ethical analysis.

Does Turnitin violate students' copyright?

Does Turnitin violate students' copyright by collecting their papers in its database? In April (2009), the United States Court of Appeal for the Fourth Circuit unanimously upheld a District Court's ruling rejecting claims of four high school students that the service infringed on their copyright (*A.V. v. iParadigms*). The Court ruled that Turnitin's use of students' papers falls under the "Fair Use" exemption. In determining fair use, the court agreed that the use Turnitin makes of students' papers is "transformative" and does not affect the market value of the students' works.

The use was deemed transformative because the students' papers, when stored in Turnitin's database, had a "different function and purpose than the original works" (p. 639). The Court also argued that the papers' market value was not affected, as Turnitin does not distribute or publish them. A student could still profit from publishing her paper for profit if there was a demand for it. The Court found that Turnitin does not offer "a market substitute for the original work," and that the potential negative market effects suggested by the plaintiff were "theoretical and speculative" (p. 644).

Ironically, Turnitin's most plausible potential market effect is that students will no longer be able to sell their papers to "paper mills." The plaintiffs however, testified that they did not intend to market their papers for that purpose (p. 644). The court was quick to point out that even if they had not so testified, Turnitin's use would still be considered Fair Use:

> [f]urthermore, to the extent that iParadigms' use would adversely affect plaintiffs' works in this particular market, we must consider the transformative nature of the use. Clearly no market substitute was created by iParadigms, whose archived student works do not supplant the plaintiffs' works in the 'paper mill' market so much as merely suppress demand for them, by keeping record of the fact that such works had been previously submitted. (p. 644)

Plagiarism versus copyright

The 4th Circuit Court of Appeals' decision seems to have settled the copyright issue. The way the court has interpreted the fair use exemption seems pretty straightforward and has drawn no significant criticism from the legal community. True as this may be, there seems to be an ethical duplicity in trying to teach students to respect authorship by asking them to give up their authorial autonomy and turning over their paper to Turnitin. What is a teacher to say to a student who asks: "You tell us not to plagiarize and respect authorship, yet we as authors of our student papers have no say in what happens to our paper. What about respect for our authorship"? While at the surface this seems like a logical argument, it is based on a confounding of the notion of authorial interest.

Plagiarism is different from copyright violations. Copyright is a legal concept aimed at stimulating creativity by ensuring that producers of creative works receive compensation for their efforts in the economic market place. Plagiarism does not have this legal dimension, and anti-plagiarism efforts are not done to protect the economic interests of authors. In fact, most instances plagiarism would not constitute a copyright infringement. For example, lifting a paragraph out of book and reproduce it in a student paper without citation clearly constitutes plagiarism, but probably would not amount to copyright infringement. A legal analysis of the copyright issue therefore has little bearing on the ethicality of requiring students to submit papers to a paper repository.

As discussed above, the reasons for banning plagiarism go well beyond protecting the interests of the author, but to the extent that the interests of the author are an ethical consideration to ban plagiarism, these interests are not of an economical nature. The ethical harm perpetuated to the original author in a case of plagiarism lies in the fact that she is not given credit for her ideas and expressions, which is not an economic harm. Granted, economic harm might be an indirect consequence of plagiarism—as being cited might elevate someone's profile and reputation and this can have economic benefits—protecting this economic interest is not what drives efforts to curb plagiarism. Plagiarism is an ethical wrong to the original author not because of the consequences it might have for him, but because it is an act that devalues original authorship.

The teleological, economy-driven interpretation of authorship that underpins a copyright analysis is different from the notion of authorship employed in plagiarism cases, where it is a value that is to be respected regardless of consequences for the stakeholders involved. These different interpretations of ownership emerge in different contexts, legal and ethical, and indicate a difference between these contexts rather than an inherent contradiction in the way we look at ownership. Just like a right to privacy might be construed different in an ethical or legal context, the notion of authorial rights might be interpreted differently depending on the context in which it is brought up, copyright or plagiarism.

Therefore this is not a duplicity indicative of a double standard that can serve as a basis for students to argue against having their papers collected and stored by PDS.

The notion of authorial interest as it is construed in a legal context would indeed be a very narrow and shallow one if applied to a plagiarism context. But it isn't. Justifications for banning plagiarism are not rooted in this economic concept of authorship and hence there is no double standard exposed in the way authorship is interpreted in the context of plagiarism. As will be discussed below, however, students can claim that their rights are violated by having their papers stored by Turnitin, but these rights are neither grounded in a conception of ownership inspired by a copyright or plagiarism analysis.

Do instructors using Turnitin violate FERPA?

While the copyright issue has generated a lot of attention attention, this specific legal issue seems to be decided for now. On the other hand, the question of whether Turnitin complies with the Family Educational Rights and Privacy Act (FERPA), which has not received the same level of attention, is less easily answered. FERPA, among other things, states that student records (such as student papers) may not be released to third parties. Does making student papers available to Turnitin constitute a FERPA violation? According to Turnitin, this is not the case (Turnitin: Answer to Common Ethical and Legal Questions about Turnitin). However, a more carefully crafted answer to this question seems to be: "no, unless the papers are submitted by an instructor *and* they contain personal information."

Turnitin refers to a Department of Education Family Policy Compliance Office ruling of November 2007. That office found that instructors can require students to submit their papers to Turnitin's anti-plagiarism software and obtain an originality report because "a student paper is not an 'education record' under FERPA before the student has submitted it to his or her instructor or other school official because the paper is not maintained by the institution or the party acting for the institution" (Letter to the Catholic University of America of 13 November 2007).

In other words, a student can be asked to submit a paper to Turnitin before having submitted it to the instructor because *at that moment* the instructor does not yet have the student's paper, so it is not part of the educational record, thus it is not covered by FERPA. But what if an instructor is in possession of a student's paper and decides to upload it to Turnitin without that student's consent? This seems to violate FERPA: "[n]ote that an educational agency or institution may not require students to waive their rights under FERPA and consent to the disclosure of their paper in personally identifiable form to a plagiarism prevention service once the instructor or other school official has collected the paper" (Letter to the Catholic University of America of 13 November 2007). A school may not require a student to consent to disclosure once it is in possession of her paper. This means that a professor who, while grading a student's paper, suspects a student of plagiarism cannot require that student to upload the paper to Turnitin, nor can he upload it himself unless personal information is removed.

Thus, before submitting a paper to Turnitin, an instructor has to ensure that the name of the student is deleted wherever it appears on the paper (e.g., in the running header, etc.) and verify that no identifiable information in contained elsewhere in the paper. Additionally, the teacher would also have to ensure that the document submitted contains no so-called "metainformation," information that is somehow embedded in the software (e.g., in the track changes, properties tab, etc.). There are a myriad of ways in which a document can contain personally identifiable information and thus a myriad of ways in which an instructor can violate FERPA by uploading documents. It this therefore surprising that in its manual for instructors, Turnitin does not address these legal issues. To the contrary, even though it does encourage instructors to have students submit their papers themselves (Turnitin: Instructor Manual, p. 23), Turnitin clearly explains to the instructors how to submit students' papers on their behalf, by clicking on the name of the student and attaching the paper (p. 29). This, however, would be FERPA violation, as the instructor is in possession of the paper at the time he submits it to Turnitin, under the student's name, making it an "educational record" for the purposes of FERPA.

Student records can be passed on to outside parties without presenting a FERPA issue if they provide certain institutional services and functions on behalf of the school. If Turnitin qualified as such a "school official," the FERPA issue would be moot. According to one document issued by Turnitin in November 2007, it does qualify as a school official: "[t]he FPCO notes that 'agencies and institutions subject to FERPA are not precluded from disclosing education records to parties to whom they have outside services [such as Turnitin] so long as they do so under the same conditions as applicable to school officials who are actually employed" (Statement by John Barrie of 20 November 2007). This however is a misleading statement, as the FPCO had been adamant that it was not addressing this issue: "Note also that we are not addressing at this time whether instructors and other school officials can disclose personally identifiable student papers to a plagiarism prevention service without consent as a 'school official' providing institutional services" (Letter to the Catholic University of America of 13 November 2007). For Turnitin to claim 1 week later that it would undoubtedly qualify as a school official, and that therefore teachers could safely upload papers, seems disingenuous, as Turnitin's reasons

why it qualifies as a school official seem questionable at best.[3]

It is not the goal of the paper to determine whether or not Turnitin can be considered a "school official." Given the fact that Turnitin's manuals make no reference to it being a school official, and absent a clear indication by the FPCO that it is, the reasonable course of action for schools and teachers is to assume that Turnitin is not a school official for the purpose of FERPA. Turnitin's standard answer to the criticism that schools' use of their service is illegal because it is "disclosing protected educational information to an outside party" is that the information is not protected under FERPA, and not that Turnitin is an exempted "school official."

So for our analysis, we will consider Turnitin an outside party, and as a result will consider a professor's uploading of a student's paper containing identifiable information to be a FERPA violation. While there is no significant difference between a student uploading his paper containing personal information and an instructor doing so, these two seemingly identical scenarios are very different from a FERPA compliance perspective. In both instances, the teacher ends up with an electronic copy of the paper and an originality report. Depending on the settings, the student may also receive an originality report and the paper may or may not be collected in the standard repository of Turnitin (in both scenarios, this depends on the settings selected by the instructor). However, in the case of the instructor uploading the paper, this constitutes a FERPA violation (provided personal information has not been removed), while it is not a FERPA violation when the student is asked (required) to do the uploading himself.

This rather complicated FERPA detour reveals a problematic aspect of Turnitin: it seems to be designed to get around FERPA. If one course of action leads to a situation that violates a student's rights under FERPA, then any course of action that leads to the same outcome should also be avoided. If scenario B constitutes a FERPA violation and scenario A does not, yet it leads to the exact same end result, neither scenario A or B should be followed by an instructor. Therefore, students should not be required to upload their paper to Turnitin if it contains personal information. If it is a FERPA violation for an instructor to submit a paper to Turnitin, the way around this should not be to force the student to do it himself, but to make sure that the paper is submitted without containing any personal information (which never is a FERPA violation).

As Turnitin is currently set up, the student is forced to upload her paper to Turnitin as a condition of having the paper graded. She has to approve a click wrap agreement with Turnitin, while the decision about what happens with her paper after it has been analyzed resides not with her, but with her teacher. If Turnitin and institutions using its service put the burden of turning in assignments on students in order to avoid pesky FERPA restrictions, then students should also be given control over the use that is made of their papers after they are turned in. The way things are now, students have the worst of both worlds. They are forced to submit information to Turnitin, yet divested of the decision of how this information is used after they submit it.

Treating student work in compliance with data protection principles

A deontological approach to online privacy

One could argue that by infusing this ethical analysis with an elaborate discussion about FERPA we are muddling ethics and law, because ultimately FERPA is a legal requirement. If teachers are following the procedures suggested by Turnitin and may arguably violate the spirit of FERPA but not the letter of the law, is that really ethically relevant, especially if no real harm seems to take place?

In other words, if plagiarism is a harm in the educational context that can be reduced without breaking the law of

[3] In order for an outside party to qualify as a school official, three conditions have to be met:

1. the outside party provides a service for the agency or institution that it would otherwise provide for itself using employees;
2. the outside party would have "legitimate educational interests" in the information disclosed if the service were performed by employees; and
3. the outside party is under the direct control of the educational agency or institution with respect to the use and maintenance of information from education records (FERPA (Sec. 99.31(a)(1)(i)(B)))

According to Turnitin, it meets all three conditions. While this may very well be the case, there are some reasons to doubt this. It is far from certain that Turnitin is under the "direct control" of the schools with which it has licensing agreements (criterion three). It is also unclear that if not for Turnitin, institutions would otherwise provide the service themselves. It seems unlikely that institutions would collect papers from students at different schools to compare their students' papers against. Turnitin reads this requirement as meaning that given "an inordinate amount of resources" it would be conceivable that a school would perform this service itself, but the Department of Education seems to require likelihood, not logical possibility, for this criterion to be met. Moreover, section 99.33 (a) (2) of FERPA states that "officers, employees, and agents of a party that receives information under paragraph (a)(1) of this section [the "school official" exemption] may use the information, but only for the purposes for which the disclosure was made." The educational purpose of the disclosure is to conduct an originality analysis of the paper submitted to Turnitin, and one could argue that to have the paper become part of a database falls outside the purpose of disclosure.

copyright or educational privacy and without violating trust or instilling a guilty-until-proven innocent regime in the classroom, then it seems the use of PDS such as Turnitin is justifiable, even if it wrestles away some control from students about what happens with their paper. A utilitarian argument would stipulate that the good that PDS bring about outweighs the harm incurred by students whose papers are being stored against their wills or without their knowledge. However, storing students papers without their consent or without informing them is not an incidental harm that is easily outweighed in a utilitarian calculus, it is a violation of well established fair information principles.

With the emergence of databases' and computers' increased the ability to process and store personal information came concerns how this could be don ethically. Thinking about these issues led to the development of generally established fair information practices principles. While the United States, unlike countries such as Canada and European Union countries, has not embraced these principles and enacted them into law, these principles are entrenched in many self-regulatory schemes. In 1998, for example, the Federal Trade Commission articulated fair information practice principles and urged private business to voluntarily adopt them in order to stave off regulation (Ciocchetti 2007, p. 65). These principles are less rigorous than those articulated by the Organization for Economic Cooperation and Development, or the ones developed by the Department of Health Education and Welfare in 1974 (Ciochetti, p. 65), but they should be considered to be the minimum standard when it comes to data protection. These principles reflect the belief that a right to privacy entails having the right to decide what happens with one's personal information. These principles should be considered a fundamental right, and should be approached in a deontological framework, i.e., they have to be respected in all circumstances and cannot be abandoned for the sake of banning plagiarism.

Some may argue that it is not teachers' responsibility to ensure that students' personal information is processed according to these principles. It is true that these principles are not embedded in the American legal system the way they are in other countries. This is not because these principles are rejected here, but because the approach to data protection in the United States has been to let the economic market place take care of it. The success of this approach remains a source of debate (see Ciochetti, pp. 68–71). Regardless of the wisdom and success of this approach, it relies on the notion that customers have the power to withdraw patronage from web sites whose privacy policies they reject. In a 1999 address, then FTC Commissioner Orson Swindle articulated this approach as follows:

> Consumers have to be accountable and bear some level of responsibility for their actions. If a consumer is uncomfortable with a Web site's privacy policy or if the site has no privacy policy for the consumer to review, then that individual has the freedom—and should have the good sense—to go elsewhere on the Web. The market, not the government, should determine whether companies are to be rewarded or punished for their privacy policies (or lack thereof) through a growth or lessening of electronic commercial transactions.

The idea behind this approach is that if people or customers do not like the way a web site treats their personal data, customers will no longer frequent those sites or they will protest. Facebook, for example, has been forced by its users to roll back some of its changes to its privacy policy (Story and Stone 2007). However, students have no such power. As explained above, students are not allowed this ability to no longer visit the site in cases when submitting a paper to Turnitin is a condition to get a grade. Protests would also be ineffective, as it are the schools and colleges who purchase licenses to Turnitin, not the students, so Turnitin has no economic incentive to keep the students whose papers it uses satisfied. In other words, the market pressures that could enable students to force Turnitin to comply with generally accepted fair information practice principles are eliminated.

Fair information practice principles

The FTC has articulated five principles: Notice/Awareness, Choice/Consent, Access/Participation, Integrity/Security, and Enforcement/Redress. This analysis will focus on the three first principles (the term "consumers" has been replaced by the term "students" in the quote below):

- *Notice*: Students should be given notice of an entity's information practices before any personal information is collected from them. Without notice, a student cannot make an informed decision as to whether and to what extent to disclose personal information.
- *Choice*: At its simplest, choice means giving students options as to how any personal information collected from them may be used. Specifically, choice relates to secondary uses of information—i.e., uses beyond those necessary to complete the contemplated transaction.
- Access is the third core principle. It refers to an individual's ability both to access data about him or herself—i.e., to view the data in an entity's files—and to contest that data's accuracy and completeness.

Turnitin does not uphold all of these principles. Although it does have a "privacy pledge" document on its website, it seems to apply only to information such as names and email addresses, not to the papers that are

submitted. One could argue that students are not notified about the uses that are being made of their papers. The Turnitin User Agreement that students must approve before they can begin uploading papers is vague: "[t]o the extent you are a student submitting a paper for review in connection with a class you are taking, then we may only use the content of your paper for the purpose of performing our services for your educational provider and for future use as part of our database." This future use, however, is not clearly described to students.

Moreover, this "future use" is a secondary use, i.e. "uses beyond those necessary to complete the contemplated transaction." In this case, Turnitin's primary use consists of analyzing a particular paper and producing an originality report. Anything beyond that, such as storing a paper in its database, constitutes a secondary use. As it is now, instructors decide whether to make secondary use of students' papers, while this decision should lie with students. Furthermore, contrary to the notice principle, students are not notified that there is a way to opt out of this secondary use and that their teachers control this option on a class-wide level. Students also have no way of knowing that once a student's paper is in the standard repository, another teacher may contact his teacher and request his paper if another submitted paper matches his. It also is not clear how long papers will be kept in Turnitin's database, and if and how they can be removed from that database. According the Director of Business Affairs of Turnitin, papers are not deleted as a matter of course once an institution's license expires, though an institution can request this. A student cannot request to have a paper removed because the license is with the institution, not the student (Angela Rhee, email).

In the first part of the paper it was argued that forcing students to upload their papers to PDS is ethically acceptable. We therefore do not argue that students should be given the choice to opt out of this requirement any more than they should be given the opportunity to opt out of other scrutinizing measures that are part of academic life. However, they should be given the choice to oppose the secondary use that Turnitin currently makes of their papers (storing them in its database). Students are forced to submit papers to Turnitin and as a consequence are forced to agree to the secondary use Turnitin makes of its papers (unless their teacher opts out of this secondary use). For all intents and purposes, students do not have a choice in this matter. This choice resides with the teacher, who can only decide for the class as a whole. The instructor may not even be aware that he *has* a choice, as opting out requires changing Turnitin's default settings. Including the maximum number of papers in the database might be beneficial to curbing plagiarism and the use of "paper mills," but the choice whether or not to assist this effort should reside with the authors of the papers.

The need to adhere to these principles has been presented here as an ethical imperative, based on a respect for students' privacy rights, more than out of concern that real harm could befall the students if their papers were uploaded. However, it should be noted that students lose significant control of their work when they are required to turn in papers in electronic format. If a paper is submitted in hard copy format, once the paper is graded and returned to the student, the school no longer possesses a copy and the student is the only one to retain his paper. While some students may not care about taking their papers out of circulation—as evidenced by the piles of unclaimed final papers that often accumulate in professors' offices—students should at least be given the option of reclaiming sole possession of their papers. The digital age has made it harder for students to take their papers out of rotation, so to speak. While this is an issue that transcends PDS, it is germane to this discussion.

We should be cognizant of the fact that what students write in papers for our classes is often of a highly personal nature; public disclosure of a former student's paper might harm her later in life, for example if she ran for public office. Without giving into technophobic doom scenarios, it is not a stretch to assume that iParadigms currently possesses the college papers of many of this country's future leaders. Naturally, instructors have a duty under FERPA to keep these papers confidential, as does Turnitin, as a condition of its license agreement with schools. Nevertheless, students cannot be faulted for objecting to their papers remaining in e-mail inboxes and on computer hard drives, laptops and memory sticks that might get lost, stolen or sold.

Decades from now, former students might want to know exactly which of their papers are still being maintained by Turnitin. Fair information practice principles could help alleviate these fears and address some of the more general concerns that exist in reference to the digitalization of student work. Perhaps getting students more actively involved in the management of their student work is appropriate in this context and might make them more aware of these issues. While the need to adhere to these principles has been presented here in a deontological framework, these principles could perhaps also be defended within the context of an outcome based ethic. Brinkman (2009) for example, has argued that worries about the wide distribution of their work can prevent students from honestly pursuing challenging and significant questions in an academic context.

Proposed code of ethics for the use of Turnitin in the classroom

PDS software such as Turnitin present a myriad of ethical issues. The goal of this article is not to argue that this kind

of software is inherently unethical. As illustrated in the first section, overall Turnitin provides some huge benefits to educators who wish to use it, as it seems to decrease instances of plagiarism. Depending on the context of the class and the assignment, teachers may or may not use PDS depending on a set of considerations that is too multiple and complex to cover in one article. Ultimately, teachers are the best judges of whether or not PDS will be beneficial to their ability to instruct and how Turnitin can best be incorporated in the classroom setting. The analysis presented here does not cover these educational and practical concerns, but merely addresses some of the more salient ethical issues raised by PDS.

In this sense, the argument presented here should not be seen a flat out endorsement or rejection of Turnitin. It is not a flat out rejection as the first chapter argued that some of the commonly-cited objections against PDS are not universally valid. It is not an endorsement because teachers may reject the use of PDS on different grounds and because certain uses of Turnitin do not comport with well-established fair information practice guidelines.

However, if a teacher were to deem that the use of Turnitin would enhance the educational experience she provides her students and that teacher believes that those handling personal information should abide by fair information practice principles, then the code of ethics proposed below might be of use. These guidelines ensure that students would maintain their right to access, choice, and notice while at the same time the instructor could benefit from the use of an effective PDS.

- Before using Turnitin, instructors should be familiar with all aspects of the service and read the instruction manual available to instructors.
- Teachers should explain to students how they use Turnitin and stress that the professor, not the software, decides whether or not a student committed plagiarism.
- Teachers should explain Turnitin's practice of store students' papers in its database and explain the drawbacks and advantages of this practice.
- Turnitin should not be used if the nature of the assignment makes it very difficult or impossible for a student to avoid divulging his personal information in the composition of his paper.
- If students are required to submit their papers to Turnitin through class management software, these papers should be given the same FERPA protections that would apply if they were submitted by the instructor. Therefore the following measures should be taken:

    1. Instructors should allow students to remove all identifying information from their paper and to register with Turnitin using a pseudonym.
    2. Instructors should inform students of the personal information that might be contained in word process documents and how to remove it.
    3. Students should be allowed to cut and paste their text directly into Turnitin, minimizing the risk that their submission contains meta-information.
    4. Instructors should ask students whether or not they will permit their papers to be stored in Turnitin's database. If at least one student does not consent, the instructor should opt out of including the class's papers in Turnitin's central repository.

- If students agree as a class to have their papers become part of the central repository, they should not be forwarded to other instructors when such a request comes in, unless a student's explicit consent can be obtained.
- Instructors who decide to upload the papers themselves to Turnitin should obtain their students' consent to do so and allow the same choices as stipulated above.
- Instructors who use Turnitin through course management software such as Blackboard should not keep electronic copies of students' papers in other locations.

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