

Discovering Privacy—or the Lack Thereof

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Abstract

Many IS courses address the issues of ethical decision making and privacy through full course or section of a larger course. In this paper, the author discusses the development of a series of activities in an IS2010.07 course. The primary purpose of these activities is to raise awareness by the students of issues dealing with the collection, analysis, use, and leveraging of consumer data, including their own.

Keywords: Privacy Issues, Ethics, Data Brokers, Pedagogy

1. INTRODUCTION

In the current data-intensive era, one of the primary ethical issues facing consumers and, in turn, enterprises, is the privacy of individual data. Privacy, as stated by Solove (2013), suffers from definitional ambiguity. Privacy depends highly on context and the individual's life experiences. In this paper, privacy is defined using the definition provided at Dictionary.com:

"freedom from damaging publicity, public scrutiny, secret surveillance, or unauthorized disclosure of one's personal data or information, as by a government, corporation, or individual" (Dictionary.com, n.d.)

Mason (1986) was the first to recognize that privacy is a major ethical issue. Mason named the four key ethical issues of the information age as: Privacy, Accuracy, Property, and Accessibility (PAPA). In a follow-up study Peslak (2006) reaffirmed privacy as the most essential of the four factors to individuals.

Surprisingly, few people (including students) are aware of privacy abuses that occur almost daily. This despite, admonishments by important people in IT; in 1989 Scott McNealy, co-founder and long serving CEO at Sun Microsystems stated, "You have zero privacy anyway. Get over it" (Maines, 2000).

The essence of the course activities, outlined in this paper, was to make students (primarily seniors) aware of the overt and discrete violations of their own privacy that happens regularly. Making students aware of the two edge sword of technology will hopefully make them better consumers and users of technology.

2. CALLS TO STUDY PRIVACY/ETHICS /SOCIAL RESPONSIBILITY IN IT COURSES

Challenges from a number of different fronts have been leveled recently against business schools (and the same argument can be made for IS/IT programs as well), that we are doing our students a disservice by not exposing them to "wicked problems" (McMillian & Overall, 2016). Colby et al. (2011) have called upon business schools to incorporate liberal education concepts such as critical thinking and "ethical sensitivity".

In 2011, a special issue of the Journal of Information Systems Education (JISE) covered Ethics and Social Responsibility topics relevant to IS education. Harris, Lang, Yates, & Kruck (2011) stated that the articles in the special issue "describe how inclusion of ethics and social responsibility [including the topic of privacy] in the IS curriculum enhances IS education" (Harris, et al., 2011, p. 183).

One article, within this special issue of JISE, is particularly germane to this work. Fleischmann, Robbins, and Wallace (2011) discuss a framework for ethical decision making and then apply this framework to the development of a course outline

to teach IT ethics from both a Western, non-Western, and feminist perspective. Armed with the Quinn (2016) text, and other outside readings, the authors discuss the development of both an undergraduate and graduate course concerning IT ethics.

Many IS courses, similar in nature to the above discussion, incorporate ethics, and privacy, into the content through text supported materials. Most Intro to IS textbooks (Rainer, Prince, & Cegielski, 2013; Haag & Cumming, 2012; Sousa & Oz, 2014; Laudon & Laudon, 2015; Marakas & O'Brien, 2013) and some specialized textbooks on IT ethics such as Quinn (Quinn, 2016) and Reynolds (Reynolds, 2014) have coverage of these issues in various lengths and depth.

The objectives of this work also fits the call by Ives, Valacich, Watson, Zmud, Alavi, et al. (2002) to ensure that students have this knowledge especially in four of the eight key concept areas:

- How do information systems influence organizational competitiveness?
- Why have databases become so important to modern organizations?
- What is the role of the Internet and networking technology in modern organizations?
- How do information systems enable organizational processes?

Certainly, it can be seen that the collection (namely utilizing the Internet), analysis, use, and leveraging (CAUL) of customer data allows companies, primarily through new marketing processes to utilize databases of customer information to gain a competitive advantage. The CAUL of data without concern for ethical considerations is an additional point of knowledge in being an informed consumer and user of the data.

3. COURSE LEARNING OBJECTIVES

At the author's institution, this course is part of the business foundation taught to all business majors within the AACSB-accredited program. The course is modeled on the IS2010.07 guidelines for a course in IS Strategy, Management, and Acquisition (Topi, H.; Valacich, J.S.; Wright, R.T.; Kaiser, K.; Nunamaker, J.F.; Sipior, J. C.; and de Vreede, G.J., 2010). Like in the model curriculum this course is taught as part of a two course capstone sequence for all business majors.

In particular, the objectives of the course, as taken directly from the course syllabus, state that the course

"provides a conceptual framework for introducing, integrating, using, and leveraging enterprise-level **information systems** in today's enterprises. The key elements of successful information system development will be defined during the early part of the course and these will be used extensively throughout discussions and analyses of case studies. Taking a middle/upper-management point of view, the course focuses on the changes and impacts within organizations that need to be accounted for in strategic planning and organizational decision-making. The course prepares students to participate in enterprise information systems development discussions as a member of a team." (Course Syllabus)

While neither the course objectives nor the description of the IS2010.07 course specifically mentions the inclusion of privacy, the model curriculum (Topi, et al. 2010) does list privacy as a knowledge area important to all IS majors (Topi, et al., 2010, p. 422).

Mason (1986) stated that two forces that inhibit privacy: the growth of information technology and the increased value of information. In this particular course students are exposed to four particular perspectives with regard to the CAUL of personal data: (1) the collection of data from multiple sources without the explicit knowledge or permission of consumers, (2) the use of techniques, such as analytics, to leverage consumer data to create consumer profiles, (3) the buying and selling of consumer data by companies to/from data brokers, and (4) the loss/exposure of consumer data through data breaches.

The collection of data stems from the use of information technologies that act as sources of data. Traditional technologies such as RFID and webpages and even everyday appliances such as televisions and toys. With the growth of the Internet of Things (IoT) technologies this collection will only continue to grow.

Analytics, while a highly useful technique to any enterprise, has a dark side as well; Davenport et al. (2007). The ability to find patterns of consumer behavior in multiple, otherwise heterogeneous data sets has become easier and more prevalent. Combine this with the use of personally identifiable information collected from web browsing and enterprises have a powerful new marketing tool to help attract and keep customers; without regard to their customer's privacy.

"Data brokers are companies that collect and aggregate consumer information from a wide range of sources to create detailed profiles of individuals" (Privacy Rights Clearinghouse, Fact Sheet 41: Data Brokers and Your Privacy, n.d.) Nearly 4,000 companies make up this \$200B industry. Many of these firms work "under the radar" without government regulation buying, aggregating, and reselling this data (Federal Trade Commission, 2014).

Data breaches seem to be an everyday occurrence. To date for 2016 (as of 6/28/2016), a total of 500 "reported" breaches have exposed over 12 million customer records; many more data breaches go unreported. About 33% of these breaches involve healthcare or medical records (Identity Theft Resource Center, 2016).

These topics relate to course objectives dealing with the use/misuse of information technology and on the ethics of the CAUL of personal data.

2. COURSE ACTIVITIES

The course activities were similar in each offering (Fall 2015 and Spring 2016) of the course; minor refinements were made in the Spring 2016 course.

The students were introduced to the topic of privacy in three prominent ways. An initial lecture was presented that discussed the issue of privacy and the laws (and lack thereof) regarding data privacy. This lecture included some historical context on the development of the issue of privacy in US law as well as some examples of what information is considered private and what is not private. For example, in all states—except FL, ME, CT, MA, and Washington, DC—the books you check out of a library are considered private data.

Next, a series of readings, primarily from the Privacy Rights Clearinghouse and the viewing of a 60 Minutes story dealing with the data brokerage industry were assigned.

The Privacy Rights Clearinghouse is non-profit organization that provides "information and tools" to consumers to empower them to take action to protect their own privacy (Privacy Rights Clearinghouse, n.d.). The web site contains information and access to documents on data breaches and data brokers. The students in particular read the Federal Trade Commission (FTC) report on data brokers (Federal Trade Commission, 2014).

The readings and the 60 Minutes video (The Data Brokers, 2014) highlight the primary functions of the data brokerage industry and the types of data bought, aggregated, and sold by these firms. After these readings and videos were discussed in class a short assignment was given to assess the level of understanding gained by the students from this section of the course.

The next exercise that the students engaged in during the semester was to collect data stories that addressed issues of data privacy. These data stories extended the idea presented by Pomykalski (Pomykalski, 2015) to attempt to create a contemporary issues journal (Barkley, 2009).

The students were required to find at least two "current event" articles. These stories (see (Pomykalski, 2015)) were analyzed using a fairly standard ethics assessment rubric where the students were required to examine the article as an ethical dilemma (see Appendix 1 for more details).

Finally, as part of a team project, examining the use of analytics by various industry groups, the students examined issues of ethics (largely privacy) by these industries (see Appendix 2).

3. FUTURE PLANNED EXTENSIONS

In this first attempt at the introduction of privacy issues into this IS2010.07 course, the readings and activities met expectations, however, additional readings and assignments are planned for the future; specific focus areas currently under consideration are healthcare and social media.

Given the great number of data breaches in the healthcare field, the privacy of patient data is at risk. By allowing students to investigate the impacts of having healthcare information compromised it is hoped that they come to a better understanding of the need to safeguard all consumer data.

Through the submission of the numerous data stories, students found that many of privacy violations dealt with data extracted from social media. Facebook, for example, has been guilty of violating the privacy of users' data by conducting "studies" without the consent or knowledge of users (Arthur, 2014). Additionally, Facebook is collaborating "with health industry experts and entrepreneurs" to create health apps and discussion groups. These apps will cluster users based on their particular health conditions. Some social

media watchers are concerned about privacy issues with regard to this data (Miliard, 2014). Social media is prevalent in the lives of most of these students, therefore understanding the risks, both personally and professionally, of having personal information compromised might lead many of them to have more control over what they post.

New readings are being reviewed and the development of new assignments are underway. The fuller realization of the contemporary issues journal (Barkley, 2009; Bean, 2011) is also planned for the next time this course is taught.

4. CONCLUSIONS/SUMMARY

The primary motivation for the introduction of the concept of privacy in this particular course is to enlighten students as to the multiple ways data is collected, analyzed, used, and leveraged to gain important insights into consumer behavior. More importantly though, the goal is to make students aware that they need to be good stewards of their own data and, in turn, conscious stewards for other consumer's data in their professional experiences. The recognition and understanding of ethical situations is an important component of acting with integrity (EPS Cloud Fabric, 2012).

Comments, by the students as part of a reflective exercise on the final exam, showed that a number of students were both enlightened and intrigued by the lack of privacy in the handling of consumer data. Many of the students admitted that before this course that had not heard of the data brokerage industry. Some students were made more "self-aware" of how their data is used by marketers and social media companies. One student even commented on the value of the ethical dilemma assessments stating that they add value by being to apply their knowledge to current events.

Through the readings and exercises presented in this course, many students developed an awareness and appreciation of a topic that was not significant in their lives due to their own "privacy conception" (Steijn & Vedder, 2015). It is the author's hope that this awareness and appreciation carries forth in their professional lives.

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the objectives, context, and assignments used to address the topic of privacy described in this course due to their efforts and consideration.

6. REFERENCES

- Arthur, C. (2014, June 30). Facebook emotion study breached ethical guidelines, researchers say. *The Guardian*. Retrieved September 11, 2016, from <https://www.theguardian.com/technology/2014/jun/30/facebook-emotion-study-breached-ethical-guidelines-researchers-say>
- Barkley, E. F. (2009). *Student Engagement Techniques: A Handbook for College Faculty*. Jossey-Bass .
- Bean, J. C. (2011). *Engaging Ideas*. San Francisco, CA: Jossey-Bass.
- Colby, A., Ehrlich, T., Sullivan, W., & Doole, J. (2011). *Rethinking Undergraduate Business Education: Liberal Learning for the Profession*. San Francisco, CA: Jossey-Bass.
- Davenport, T., Harris, J., Jones, G. L., Lemon, K. N., Norton, D., & McCallister, M. B. (2007). The Dark Side of Customer Analytics. *Harvard Business Review*, 85(5), 37.
- Dictionary.com. (n.d.). Privacy. *Dictionary.com Unabridged*. Retrieved May 27, 2016, from <http://www.dictionary.com/browse/privacy>
- EPS Cloud Fabric. (2012, August 24). The Importance of Integrity in Business. Retrieved June 27, 2016, from <https://www.nimbo.com/blog/the-importance-of-integrity-in-business/>
- Federal Trade Commission. (2014). *Data Brokers: A Call for Transparency and Accountability*. Washington, DC. Retrieved from <https://www.ftc.gov/system/files/documents/reports/data-brokers-call-transparency-accountability-report-federal-trade-commission-may-2014/140527databrokerreport.pdf>
- Fleischmann, K., Robbins, R., & Wallace, W. (2011). Information Ethics Education for a Multicultural World. *Journal of Information Systems Educaton*, 22(3), 191-201.
- Haag, S., & Cumming, M. (2012). *Management Information Systems for the Information Age*

- (Ninth ed.). New York, NY: McGraw-Hill Education.
- Harris, A., Lang, M., Yates, D., & Kruck, S. (2011). Incorporating Ethics and Social Responsibility in IS Education. *Journal of Information Systems Education*, 22(3), 183-189.
- Identity Theft Resource Center. (2016). *Data Breach Reports*. Identity Theft Resource Center (ITRC). Retrieved June 28, 2016, from <http://www.idtheftcenter.org/2016databreaches.html>
- Ives, B., Valacich, J., Watson, R., Zmud, R., Alavi, M., Baskerville, R., . . . Galliers, R. (2002). What Every Business Student Needs to Know About Information Systems. *Communications of the Association for Information Systems*, 9, 467-477.
- Laudon, K., & Laudon, J. (2015). *Management Information Systems: Managing the Digital Firm* (14th ed.). Essex, England: Pearson.
- Maines, S. (2000, April 18). Private Lives? Not Ours! *PC World*, p. 312.
- Marakas, G., & O'Brien, J. (2013). *Introduction to Information Systems* (16th ed.). New York, NY: McGraw-Hill Education.
- Mason, R. (1986). The Four Ethical Issues of the Informaiton Age. *The Journal of Computer Information Systems*, 10(1), 5-12.
- McMillian, C., & Overall, J. (2016). Management Relevance in te Business School Setting: A Research Note on an Empirical Investigation. *The International Journal of Management Education*, 14, 187-197.
- Miliard, M. (2014, October 6). Facebook would like your health data. *Healthcare IT News*. Retrieved September 11, 2016, from <http://www.healthcareitnews.com/news/facebook-would-your-health-data>
- Peslak, A. (2006). PAPA Revisted: A Current Emprical Study of the Mason Framework. *The Journal of Computer Information Systems*, 46(3), 117-123.
- Pomykalski, J. (2015). Using Current Events to Enhance. *2015 Prceedings of the EDSIG Conference*. Wilimington: ISCAP. Retrieved from <http://proc.iscap.info/2015/pdf/3472.pdf>
- Privacy Rights Clearinghouse. (n.d.). Retrieved from <http://www.privacyrights.org>
- Privacy Rights Clearinghouse. (n.d.). *Fact Sheet 41: Data Brokers and Your Privacy*. Retrieved June 27, 2016, from PrivacyRights.org: <https://www.privacyrights.org/content/data-brokers-and-your-privacy>
- Quinn, M. (2016). *Ethics for the Information Age* (Seventh ed.). Pearson.
- Rainer, K., Prince, B., & Cegielski, C. (2013). *Introduction to Information Systems: Supporting and Transforming Business* (Fifth ed.). New York, NY: John Wiley & Sons, Inc.
- Reynolds, G. (2014). *Ethics in Information Technology* (Fifth ed.). Boston, MA: Course Technology.
- Solove, D. (2013). *Nothing to Hide: The False Tradeoff between Privacy and Security*. New Haven, CT: Yale University Press.
- Sousa, K., & Oz, E. (2014). *Management Information Systems* (Seventh ed.). Stamford, CT: Course Technology.
- Steijn, W., & Vedder, A. (2015, July). Privacy under Construction: A Developmental Perspective on Privacy Perception. *Science, Technology, and Human Values*, pp. 615-637.
- (2014). The Data Brokers. (S. Kroft, Interviewer) CBS News. Retrieved June 27, 2016, from https://www.youtube.com/watch?v=_Cty7ctycsI
- Topi, H., Valacich, J. S., Wright, R. T., Kaiser, K., Nunamaker Jr, J. F., Sipior, J. C., & de Vreede, G. J. (2010). IS 2010: Curriculum guidelines for undergraduate degree programs in information systems. *Communications of the Association for Information Systems*, 26(1), 359-428. Retrieved September 11, 2016, from <http://aisel.aisnet.org/cais/vol26/iss1/18>

APPENDIX 1: Data Stories Submission Template

INFS 472: Management Support Systems
Spring 2015 – Dr. Pomykalski

Name: _____

Story #: _____/6

Presentation (in class) Date: _____ Submission (written) Date: _____

Article Title:

Article Source:

Article Date:

Summary:

Relationship to Data+Enterprise Systems-Strategies:

For each of the three stories you will identify and state the facts as best you can in the form of an ethical dilemma with respect to (at least) one of the major stakeholders. You will then generate alternative courses of action and assess the ethics of each of your courses of action. You will conclude the paper with a justified choice of action based on your ethical analysis. A recommended outline is given below.

1. Introduction
2. Ethical Issues
3. Stakeholders
4. Alternative Courses of Action
 - a. Alternative 1
 - b. Alternative 2 ...
 - c. Alternative *n*
5. Ethical Assessment of Each Alternative
 - a. Alternative 1
 - b. Alternative 2 ...
 - c. Alternative *n*
6. Conclusion (your choice with support)
7. Bibliography/Works Cited/References

APPENDIX 2: Analytic Use in Industry Assignment

Team Project

Industry Use of DDDM/Analytics Techniques

Goal: Gain an in-depth understanding of the applicability of data-driven decision-making (DDDM)/“analytics” within a particular industry.

Overview: The focus of this team-based investigation is to understand how DDDM/analytics is used within a particular industry in the “real-world”. In an oral and then written presentation, each group will report on their findings of how “analytics” and data-driven decision-making is being performed within a particular industry. The deliverables for this investigation, and their due dates, are listed below.

Group Members (4 Max)/Topic Selection:	E Mail deliverable:	Friday, October 30 th
Industry Selections:	E Mail deliverable:	Friday, November 6 th
Oral Presentation:		December 2, 4, and 7 th
Written Report:		Next class day after presentation
Team/Peer Evaluation (Individual):	Individual Report:	Friday, December 11 th

Please note that a large portion of the final project grade (80%) will be a jointly assigned group grade and the final 20% will be assigned individually; this individual grade will be on a personal contribution and group interaction statement. Based on the consistency of the statement across the group, your instructor reserves the right to reduce the assigned group grade for any one individual in the group. In other words, if you do not put in the effort then you will not be able to share fully in the assigned group grade.

A description of the deliverables is given below; see the table above for due dates.

Group Member Selection (2.5%): This simple deliverable is the selection of a team (of your choice) of no more than four individuals from your section of the course. Once the team is chosen, one team member will be responsible for sending me an EMail with the names of the individual members of the team.

Industry Selection (5%): Each team will be responsible for creating a ranked list of at least three industries that wish to investigate for the use of DDDM/analytics. Your team may choose any industry. Examples of particular industries include (but are not limited to): Automotive, Banking, Consumer Products, Education, Electronics, Energy and Utilities, Financial markets, Government, Healthcare, Insurance, Law Enforcement, Metals and Mining, Media, Oil & Gas, Retail, Telecommunications, Travel and Transportation or you may make your selection from any Professional Sports area such as the MLB, NFL, NBA, Professional Soccer, etc. For introductory information on industries see: <http://www.ibm.com/analytics/us/en/industry/>.

Oral Presentation (40%): Each team will make a 20 to 25 minute oral presentation (on one of the dates listed above) that describes the use of DDDM/analytics within their industry. All team members will be expected to be present and make a contribution to the presentation. The presentation will include (at a minimum) the following:

1. A brief overview of the industry that describes the need for DDDM/analytics within that industry,
2. A review of the major issues in that industry that shows the factors driving that industry toward the use of DDDM/analytics,
3. An in-depth analysis of at least one enterprise in the industry as to how DDDM/analytics is applied,
4. A discussion of the major impediments left to overcome for more wide-spread use of DDDM/analytics in the industry,
5. A discussion of the ethics related issues respect to DDDM/analytics usage,
6. A final summary of the salient points of the presentation.

Written Report (32.5%): The written report part of the work will be completed as a set of extended notes to be included with the PowerPoint slides. Each of the slides in the presentation will include a one page (approximately two to three paragraphs) discussion of more detail on the material included in the slide. This will include outside sources (in proper APA format), where appropriate, as well. Please note that the entire presentation (and notes) should have (at a minimum) five “new” sources that were used to create the presentation by the team. Grading on the presentation and the notes will be based on completeness, accuracy, and writing criteria. The writing criteria will be similar to the previous deliverables submitted in class.

Team/Peer Evaluation (20%): The final deliverable, which is to be developed individually by each group member, will discuss—in 600-900 words— (1) the overall working relationship and discussion of roles within the group, (2) your individual contribution to the project, (3) a discussion on the division of labor that existed within the group, (4) the individual performance of each of the other members of the team; see the list below for suggested evaluation criteria, and (5) at least one individual lesson learned through the interactions within the group; this is not about content of the project. The criteria you should choose to use to judge your peers are:

1. On an individual basis, did they make substantial contributions to preparation of the team deliverables? In other words, was the team member adequately prepared for team activities?
2. On an individual basis, did they make productive contributions in team meetings? In other words, did this member contribute productively to group discussion, work and leadership during your team meetings?
3. On an individual basis, did the team member facilitate the contributions of other team members? In other words, did the team member encourage others to contribute their ideas?
4. On an individual basis, did the team member foster a constructive team climate? In other words, did the team member help to build a constructive team by fostering mutual respect?

5. On an individual basis, how did the team member respond to conflict or differences within the team? In other words, did the team member engage conflicts in a manner that strengthened the overall team cohesiveness and future effectiveness?