Modules Linking to Computing Cases

Collection Editor: William Frey

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CONNEXIONS

Rice University, Houston, Texas

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Chapter 1

Case Study Modules

1.1 Toysmart Case Exercises - Student Module¹

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Figure 1.1: This is an example of an embedded link. (Go to "Files" tab to delete this file and replace it with your own files.)

1.1.1 Introduction

In this module you will study a real world ethical problem, the Toysmart case, and employ frameworks based on the software development cycle to (1) specify ethical and technical problems, (2) generate solutions that integrate ethical value, (3) test these solutions, and (4) implement them over situation-based constraints. This module will provide you with an opportunity to practice integrating ethical considerations into real

¹This content is available online at <http://cnx.org/content/m14789/1.9/>.

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world decision-making and problem-solving in business and computing. This whole approach is based on an analogy between ethics and design (Whitbeck).

Large real world cases like Toysmart pivot around crucial decision points. You will take on the role of one of the participants in the Toysmart case and problem-solve in teams from one of three decision points. Problem-solving in the real world requires perseverance, moral creativity, moral imagination, and reasonableness; one appropriates these skills through practice in different contexts. Designing and implementing solutions requires identifying conflicting values and interests, balancing them in creative and dynamic solutions, overcoming technical limits, and responding creatively to real world constraints.

Each decision point requires that you take up the position of a participant in the case and work through decision-making frameworks from his or her perspective. You may be tempted to back out and adopt an evaluative posture from which to judge the participants. Resist this temptation. This module is specifically designed to give you practice in making real world decisions. These skills emerge when you role play from one of the standpoints within the case. You will learn that decision-making requires taking stock of one's situation from within a clearly defined standpoint and then accepting responsibility for what arises from within that standpoint.

Cases such as Toysmart are challenging because of the large amount of information gathering and sorting they require. Moral imagination responds to this challenge by providing different framings that help to filter out irrelevant data and structure what remains. Framing plays a central role in problem specification. For example, Toysmart could be framed as the need to develop more effective software to help negotiate the exchange of information online. In this case, a software programming expert would be brought in to improve P3P programs. Or it could be framed as a legal problem that requires ammending the Bankruptcy Code. What is important at this stage is that you and your group experiment with multiple framings of the case around your decision point. This makes it possible to open up avenues of solution that would not be possible under one framing.

Tackling large cases in small teams also helps develop the communication and collaboration skills that are required for group work. Take time to develop strategies for dividing the work load among your team members. The trick is to distribute equally but, at the same time, to assign tasks according the different abilities of your team members. Some individuals are better at research while others excell in interviewing or writing. Also, make sure to set aside time when you finish for integrating your work with that of your teammates. Start by quickly reviewing the information available on the case. This is called "scoping the case." Then formulate specific questions to focus further research on information relevant to your problem solving efforts. This includes information pertinent to constructing a socio-technical analysis, identifying key "embedded" ethical issues, and uncovering existing best and worst practices.

A case narrative, STS (socio-technical system) description, and two ethical reflections have been published at http://computingcases.org. This module also links to websites on bankruptcy and privacy law, the Model Business Corporation Act, consumer privacy information, and the TRUSTe website.

1.1.1.1 Toysmart Narrative

Toysmart was a Disney-supported company that sold educational toys online from December 1998 to May 2000. After disappointing Christmas sales in 1999, Disney withdrew its financial support. The greatly weakened dot-com company lasted less than a year after this. On May 22, 2000, Toysmart announced that it was closing down and brought in a consulting firm, The Recovery Group, to evaluate its assets, including a customer data base of 260,000 profiles, each worth up to \$500.

Fierce opposition emerged when Toysmart placed ads in the **Wall Street Journal** and the **Boston Globe** to sell this data base. Customer interest groups pointed out that Toysmart had promised not to share customer information with third parties. Toysmart also prominently displayed the TRUSTe seal which testified further to the company's obligations to respect customer privacy and security. Selling this data to third parties would break Toysmart promises, violate TRUSTe policies, and undermine consumer confidence in the security and privacy of online transactions. Toysmart's obligations to its customers came into direct conflict with its financial obligations to its investors and creditors. TRUSTe reported Toysmart's intention to sell its data base to the FTC (Federal Trade Commission) who on July 10, 2000 filed a complaint "seeking injunctive and declaratory relief to prevent the sale of confidential, personal customer information" (FTC article) Toysmart's promise never to share customer PII with third parties provided the legal foundation for this complaint. According to the FTC, Toysmart "violated Section 5 of the FTC Act by misrepresenting to customers that personal information would **never** be shared with third parties, then disclosing, selling, or offering that information for sale." Finally, because it collected data from children under 13 who entered various contests offered on its website, Toysmart was also cited for violating the Children's Online Privacy Protection Act or COPPA.

The FTC reached a settlement with Toysmart. The bankrupt dot-com must "file an order in the bankruptcy court prohibiting the sale of its customer data as a 'stand-alone asset'. In other words, the rights bundled in the liquidation and sale of Toysmart did not include the liberty of buyers to dispose of the asset in whatever way they saw fit. According to the negotiated settlement, buyers were bound by the commitments and promises of the original owners. Toysmart creditors "can sell electronic assets only if the purchasing company abided by the same privacy policy." In essence, the FTC asked Toysmart creditors to honor the spirit, if not the letter, of Toysmart's original promise to its customers not to sell their PII to third parties. Creditors now had to guarantee that (1) the buyer had the same basic values as Toysmart (for example, a commitment to selling quality, educational toys), (2) the buyer use the data in the same way that Toysmart had promised to use it when collecting it, and (3) the buyer would not transfer the information to third parties without customer consent. In this way, the settlement proposed to protect Toysmart customer privacy interests while allowing creditors to recover their losses through the sale of the bankrupt company's "crown jewel", its customer data base.

On August 17, 2000, the Federal Bankruptcy Court declined to accept the Toysmart-FTC settlement. Instead, they argued that Toysmart and the FTC should wait to see if any parties willing to buy the data base would come forward. The Bankruptcy Court felt that potential buyers would be scared off by the FTC suit and the pre-existing obligations created by Toysmart promises and TRUSTe standards. Should a buyer come forth, then they would evaluate the buyer's offer in terms of the FTC-Toysmart settlement designed to honor the privacy and security commitments made to Toysmart customers.

A final settlement was reached on January 10, 2001. When a buyer did not come forward, Buena Vista Toy Company, a Disney Internet subsidiary who was also a major Toysmart creditor, agreed to buy the data base for \$50,000 with the understanding that it would be immediately destroyed. The data base was then deleted and affidavits were provided to this effect.

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Time Line						
1997	David Lord, former college football player, come to work for Holt Education Outlet in Waltham, Mass.					
December 1998	Lord and Stan Fung (Zero Stage Capital) buy Holt Education Outlet and rename it "Toysmart." (Lorek) Toysmart focuses on providing customers with access to 75,000 toys through online catalogue. (Nashelsky).					
	continued on next page					

1.1.1.2 Toysmart Chronology

August 1999	Toysmart turns down a 25 million offer from an investment firm. Accepts Disney offer of 20 million in cash and 25 million in advertising,		
September 1999	Toysmart post privacy policy which promises not to release information collected on customers to third parties. At about this time, Toysmart receives per- mission from TRUSTe to display its seal certifying thatToysmart has adopted TRUSTe procedures for protecting privacy and maintaining information se- curity.		
Christmas 1999	After disappointing Christmas toy sales, Disney withdraws its support from Toysmart.		
April 2000	COPPA goes into effect. (Childhood Online Pri- vacy Protection Act) Prohibits soliciting informa- tion from children under 13 without parental con- sent.		
June 2000 (approximately)	Toysmart erases 1500 to 2000 customer profiles from data base to comply with COPPA (informa- tion collected after law went into effect)		
May 22, 2000	Toysmart announces that it is closing its operations and selling its assets. Its initial intention is to reor- ganize and start over.		
June 9, 2000	Toysmart creditors file an involuntary bankruptcy petition rejecting Toysmart proposal to reorganize. They petition the U.S. Trustee to form a Creditors Committee to oversee the liquidation of Toysmart assets.		
June 23, 2000	Toysmart consents to involuntary bankruptcy peti- tion. Files Chapter 11 bankruptcy. It rejects reor- ganization and works with lawyers and the Recov- ery Group to liquidate its assets.		
June 2000	Recovery Group analyzes Toysmart assets and iden- tifies its customer information data base as one of its most valuable assets (a "crown jewel")		
June 9, 2000	Disney subsidiary, acting as Toysmart creditor, places ads in Wall Street Journal and Boston Globe offer Toysmart customer data base for sale.		
continued on next page			

After June 9, 2000	TRUSTe discovers Toysmart ad. Informs FTC (Federal Trade Commission) that selling of cus- tomer data base to third parties violates TRUSTe guidelines and violates Toysmart's promises to cus- tomers(13,2)
July 10, 2000	FTC files complaint against Toysmart "seeking in- junctive and declaratory relief to prevent the sale of confidential, personal customer information." Dis- trict attorneys of 41 states also participate in com- plaint against Toysmart.
July 27, 2000	Hearing by U.S. Bankruptcy Court on Toysmart case. Includes Toysmart proposal to sell customer data base.
Late July 2000	FTC and Toysmart reach settlement. Toysmart can only sell customer information to a third part who shares Toysmart values and agrees to carry out same privacy policy as Toysmart.
Late July 2000	Federal bankruptcy court rejects FTC and Toys- mart settlement. Suggests waiting to see if a buyer comes forth.
January 10, 2001	Walt Disney Internet subsidiary (Buena Vista Toy Company?) pays Toysmart \$50,000 for its data base. Toysmart then destroys the data base and provides confirming affidavit. (18,2)

Insert paragraph text here.

1.1.1.3 Supporting Documents and Tables

Toysmart Creditors

Creditor	Description	Debt	Impact
Zero Stage Capital	Venture Capital Firm	4 million	
Citibank		4 million	
Arnold Communica- tions		2.5 million	
Children's Television Workshop		1.3 million	
continued on next page			

CHAPTER 1. CASE STUDY MODULES

Data Connections	Set up high speed ca- ble and fiber optics for Toysmart	85,000	Data Connections took out loan to keep solvent
Integrated Handling Concepts	Set up packaging and handling system for Toysmart	40,000	Requires dot-coms to pay up front after Toys- mart experience
Blackstone	Software business	45,000	"It puts us in jeopardy as well"
PAN Communica- tions	"Public relations agency specializing in e-business"	171,390	Turns down deals with dot-com companies and requires up-front pay- ments

Table 1.2: Source Lorek

Insert paragraph text here.

1.1.1.4 Intermediate Moral Concept: Informed Consent

Concept and Definition

- **Informed Consent**: The risk bearer consents to taking on the risk on the basis of a complete understanding of its nature and breadth.
- **Belmont Report**: "subjects, to the degree that they are capable, be given the opportunity to choose what shall or shall not happen to them."
- "This opportunity is provided when adequate standards for informed consent are satisfied."
- Quotes take from Belmont Report

Arguments for Free and Informed Consent as a Moral Right

- Free and informed consent is **essential** for the exercise of moral autonomy. Absence implies force, fraud, or manipulation all of which block the exercise of moral autonomy.
- The standard threat occurs when crucial risk information is not communicated to risk taker. This could be because the risk taker cannot appreciate the risk, because the mode of communication is inadequate, or because the information has been covered up. Given this standard threat, free and informed consent is vulnerable; it must be protected.
- Informed consent must be shaped around its feasibility, that is, the ability of the duty holder to recognize and respect this right in others. If private individuals exercise their right as a veto, then they can block socially beneficial projects. There are also serious problems concerning children, mentally challenged adults, and future generations. Finally, it may not be possible or feasible to know all risks in advance.

Conditions for Recognizing and Respecting Right

- From **Belmont Report**
- Information: research procedure, their purposes, risks and anticipated benefits, alternative procedures (where therapy is involved), and a statement offering the subject the opportunity to ask questions and to withdraw at any time from the research.
- **Comprehension**: manner and context in which information is conveyed is as important as the information itself.
- Voluntariness: an agreement to participate in research constitutes a valid consent only if voluntarily given. This element of informed consent requires conditions free of coercion and undue influence.

Other Legal and Moral Frameworks

- Institutional Research Boards or IRBs now require documentation of informed consent on research projects carried out under the university's auspicies. This is in response to requirements by granting agencies such as the National Institute for Health and the National Science Foundation.
- Consenting to the transfer of PII (personal identifying information) online:opt-in and optout.
- **Opt-in**: Information is transferred only upon obtaining express consent. Default is not transferring information.
- **Opt-in**: Information transfer is halted only when person to whom information applies does something positive, i.e., refuses to consent to transfer. Default is on transferring the information.
- Liability Rules and Property Rules: These also have to do with consent. Sagoff makes this distinction with reference to activities that have an impact on the environment. an injunction referring to liability rules stops the activity to protect the individual who proves impact. Property rules require only that the producer of the environmental impact compensate the one who suffers the impact.

Cases Employing Informed Consent

- **Therac-25**: Patients receiving radiation therapy should be made aware of the risks involved with treatment by the machine. Free and informed consent is involved when shutting down the machines to investigate accident reports or continuing operating the machines while investigating accident reports. In both cases, it is necessary, under this right, to let patients know what is going on and their risks.
- **Toysmart Case**: Toysmart creditors are about to violate Toysmart's promise not to transfer customer information profiles to third parties. This transfer can occur, morally, but only with the express consent of the customers who have provided the information. The devil is in the details. Do opt-in or opt-out procedures best recognize and respect free and informed consent in this case?
- **Hughes Case**: Hughes customers want their chips right away and are pressuring Saia and crowd to deliver them. Would they consent to renegotiating the conditions under which environmental tests can be skipped?

1.1.2 Privacy and Property Summaries

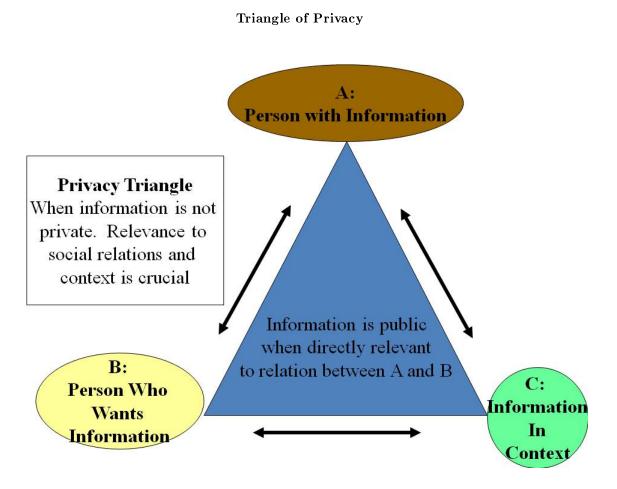


Figure 1.2: Seeing privacy in its STS Context.

Intellectual Property

- · I own that with which I mix my labor
- The US constitution attempts to balance two contradictory policies of property
 - Giving innovators and inventors control to encourage more innovation
 - Limiting this control to ensure dissemination of good ideas throughout society
- One way to do this: bundle different liberties under property
 - possess, control, use, benefit from, dispose of, and exclude others
- Another way to do this is to create and balance two things
 - Intellectual commons: shared repository of ideas
 - Legal devices to restrict dissemination and use of property: patents, copyright, trade secrets
 - Control/Adjustment: extending-contracting terms limits
- Intellectual property is different from physical property
 - Ideas are non-rivalrous (like one candle lighting another)
 - Ideas are non-excludable (like the air which cannot be contained in one restricted area)
 - These two characteristics make ideas "ideal" for forming an "intellectual commons"

Figure 1.3: Summary of issues on Intellectual Property

Bibliographical Note

The triangle of privacy is widely disseminated in the literature of business ethics. The author first became aware of it form George G Brenkert (1981) "Privacy, Polygraphs and Work," **Business and Professional Ethics** 1, Fall 1981" 19-34. Information on intellectual property comes from Lawrence Lessig (2006) **Code.2**, Basic Books: Chapter 10.

1.1.3 What you need to know ...

1.1.3.1 What you need to know about socio-technical systems

1. STS have seven broad components: hardware, software, physical surroundings, people/groups/roles, procedures, laws, and data/data structures.

2. Socio-technical systems embody values

• These include moral values like safety, privacy, property, free speech, equity and access, and security. Non-moral values can also be realized in and through Socio Technical Systems such as efficiency, cost-effectiveness, control, sustainability, reliability, and stability.

- Moral values present in Socio Technical Systems can conflict with other embedded moral values; for example, privacy often conflicts with free speech. Non-moral values can conflict with moral values; developing a safe system requires time and money. And, non-moral values can conflict; reliability undermines efficiency and cost effectiveness. This leads to three problems that come from different value conflicts within Socio Technical Systems and between these systems and the technologies that are being integrated into them.
- Mismatches often arise between the values embedded in technologies and the Socio Technical Systems into which they are being integrated. As UNIX was integrated into the University of California Academic Computing STS (see Machado case at Computing Cases), the values of openness and transparency designed into UNIX clashed with the needs of students in the Academic Computing STS at UCI for privacy.
- Technologies being integrated into Socio Technical Systems can magnify, exaggerate, or exacerbate existing value mismatches in the STS. The use of P2P software combined with the ease of digital copying has magnified existing conflicts concerning music and picture copyrights.
- Integrating technologies into STSs produces both immediate and remote consequences and impacts.

3. Socio-technical systems change

- These changes are bought about, in part, by the value mismatches described above. At other times, they result from competing needs and interests brought forth by different stakeholders. For example, bicycle designs, the configuration of typewriter keys, and the design and uses of cellular phones have changed as different users have adapted these technologies to their special requirements.
- These changes also exhibit what sociologists call a "trajectory", that is, a path of development. Trajectories themselves are subject to normative analysis. For example, some STSs and the technologies integrated into them display a line of development where the STS and the integrated technology are changed and redesigned to support certain social interests. The informating capacities of computing systems, for example, provide information which can be used to improve a manufacturing processes can or to monitor workers for enhancing management power. (See Shoshanna Zuboff, **The Age of the Smart Machine**
- Trajectories, thus, outline the development of STSs and technologies as these are influenced by internal and external social forces.

In this section, you will learn about this module's exercises. The required links above provide information on the frameworks used in each section. For example, the Socio-Technical System module provides background information on socio-technical analysis. The "Three Frameworks" module provides a further description of the ethics tests, their pitfalls, and the feasibility test. These exercises will provide step by step instructions on how to work through the decision points presented above.

For more information see Huff and Jawer below.

Decision Point One:

You are David Lord, a former employee of Holt Educational Outlet, a manufacturer of educational toys located in Waltham, Mass. Recently, you have joined with Stan Fung of Zero Stage Capital, a venture capital firm to buy out Holt Educational Outline. After changing its name to Toysmart, you and Fung plan to transform this brick and mortar manufacturer of educational toys into an online firm that will link customers to a vast catalogue of educational, high quality toys. Designing a website to draw in toy customers, linking to information on available toys, setting up a toy distribution and shipping system, and implementing features that allow for safe and secure online toy purchases will require considerable financing. But, riding the crest of the dot-com boom, you have two promising options. First, a venture capital firm has offered you \$20,000,000 for website development, publicity, and other services. Second, Disney has offered the same amount for financing, but has added to it an additional \$25,000,000 in advertising support. Disney has a formidable reputation in this market, a reputation which you can use to trampoline Toysmart into prominence in the growing market in educational toys. However, Disney also has a reputation of micro-managing its partners. Develop a plan for financing your new dot-com.

Things to consider in your decision-making:

- 1. What are Toysmart values? What are Disney values? Would Disney respect Toysmart's values?
- 2. What synergies could result from working with Disney? For example, could you share information on customers? You could feed your customer profiles to Disney in exchange for their customer profiles. What kind of data managing technology would be required for this? What ethical problems could arise from transferring customer identifying information to third parties?
- 3. What kind of commitment would you be willing to make to Disney in terms of product and sales? How should Disney reciprocate? For example, how long should they stick with you through sales that fall short of projections?

Decision Point Two:

You work for Blackstone, "an 18-person software business." You have been asked by Toysmart to provide software the following functions: (1) designing a webpage that would attract customers and communicate Toysmart Values, (2) advise Toysmart on its privacy and data security policy including whether to register with an online trust, security measures to protect customer data during online transactions, and measures to prevent unauthorized access to customer data while stored, and (3) a comprehensive online catalogue that would provide customers with access to educational toys from a variety of small busines manufacturers. An example of small toy manufacturers to which Toysmart should be linked is Brio Corporation which manufactures wooden toys such as blocks, trains, and trucks. Develop general recommendations for Toysmart around these three areas.

Information for this scenario comes from Laura Lorek, "When Toysmart Broke," http://www.zdnet.com/eweek/stories/general/0,1101,2612962,00.html. Accessed July 16, 2001.

Things to consider in your decision-making

- Toysmart is a fairly new dot-com. While it is supported by Disney, it is still a risky venture. Should you ask them for advance payment for whatever services you render? What kind of policies does your company have for identifying and assessing financial risk?
- What kind of privacy and data security policy should you recommend to Toysmart? What kind of values come into conflict when a company like Toysmart develops and implements privacy and data security measures? (Use your STS description to answer this question.)
- Should Toysmart become bankrupt, their data base would turn into a valuable asset. What recommendations should you make to help Toysmart plan around this possibility? What values come into conflict when planning to dispose of assets during bankruptcy proceedings? What kind of obligations does a company take on during its operation that continue even after it has become bankrupt?
- Using the link provided with this module, visit the TRUSTe website and find its white paper on developing a privacy policy. Evaluate this privacy policy for Toysmart. What benefits can a strong privacy policy bring to a dot-com? Should Toysmart work to qualify to display the TRUSTe seal on its website? Examine TRUSTe procedures for transferring confidential customer PII to third parties? What obligations will this create? Would this over-constrain Toysmart?

Decision Point Three:

You work for PAN Communications and have been providing advertising services for Toysmart. Now you find out that Toysmart has filed a Chapter 11 bankruptcy, and it has an outstanding debt to your company for \$171,390. As a part of this filing procedure, Toysmart has reported its assets at \$10,500,000 with debts of \$29,000,000. Toysmart creditors, including PAN Communications, have petitioned the Office of the United States Trustee for a "Creditors' Committee Solicitation Form." This will allow for the formation of a committee composed of Toysmart creditors who decide on how the assets of the bankrupt firm will be distributed. You, because of your knowledge of bankruptcy and accounting procedures, have been asked to represent your company on this committee. This bleak situation is somewhat remedied by the customer data base that Toysmart compiled during its operation. It contains profiles of the PII (personal identifying information) of 260,000 individuals. Because selling educational toys is profitable, there is a good chance that this data base could be sold for up to \$500 a profile to a third party. Should you recommend selling this data base? Should Toysmart customers be notified of the pending transfer of their PII and, if so, how should they be notified?

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