• The impact of automated consumer profiling on the formulation and implementation of privacy policies.

Consumer and societal satisfaction with profiling-

related privacy policies.

• The required (prescriptive) and actual (descriptive) content of profiling-related privacy policies and procedures.

• How privacy policies contribute to or detract from the use of profiling to achieve business

objectives.

• The degree to which the implementation and operation of profiling procedures coincide with formal, written policies.

Implications of procedural outcomes. Areas of investigation would include:

• The perceptions of consumers regarding the cost of privacy forfeiture through profiling.

• The decision-making processes used by consumers to assess the costs of privacy forfeiture.

• The extent to which the consumer can place a monetary value on the cost of privacy forfeiture.

• The types and levels of compensation considered appropriate (or not) in return for various types and levels of privacy forfeitures.

• The reactions of consumers to offers of compensation, of various forms, from advertisers

and media providers.

Implications of profiling accuracy. Areas of investigation would include:

• The comparative threat to privacy of behavior monitoring (higher certainty) versus consumer

profiling (lower certainty).

• The extent to which the level of accuracy impacts an individual's reaction to the privacy infringement. Is a more accurate profile considered more threatening than a less accurate one, or is the simple attempt to build a profile considered sufficiently threatening?

• The extent to which the response to behavior monitoring and profiling varies with the individ-

ual consumer.

• The factors that impact the consumer's response to behavior monitoring and profiling.

 The economic and competitive implications of pursuing higher levels of accuracy.

## CONCLUSION

A detailed exploration of the ways in which data mining technologies can be used to collect, analyze,

and redistribute data is important not only because of the opportunities to enhance marketing efforts, but also because it sheds light on how consumers and society will react to the technologies—either positively or negatively. From a purely practical perspective, a negative reaction could cause consumers to turn away from the technology, the product, and the company, thus counteracting any marketing improvements delivered by the technology. In that regard, knowledge of consumer and societal perceptions of privacy infringements is as important as knowledge of individual consumer demographics and buying habits. With that knowledge, companies can take measures to anticipate and prevent violations, and to compensate consumers in an appropriate manner when a violation of privacy is considered "the cost of doing business."

## REFERENCES

1. Abreu, E. Is TiVo snooping on couch potatoes? PC World, 2001.

2. Bass, A. You are what you watch. CIO Magazine, 2004.

- 3. Charney, B. TiVo watchers uneasy after post-Super Bowl reports. CNET News, 2004.
- 4. Chesak, J. and Dippold, J. Frequent Doesn't Mean Loyal: Using Segmentation Marketing to Build Shopper Loyalty. AC Nielsen, 2004.
- 5. Cohen, D. Addressable TV: Myths and realities. ClickZ Marketing, 2004.
- 6. Nielsen Media Research. TiVo and Nielsen Media Research agree to market DVR usage information. Press release, 2004.
- 7. Overby, C. Forrester: Consumers want value. RFID Journal, 2004.
- 8. Ryker, R., Lafleur, E., Cox, C., and McManis, B. Online privacy policies: An assessment of the fortune e-50. *J. Computer Information Systems* 42, 4 (2002), 15–20.
- 9. Spangler, W.E., Gal-Or, M., and May, J.H. Using data mining to profile television viewers in the digital TV era. *Comm ACM 46*, 4 (Apr. 2003), 66–72.
- 10. Stafford, T.F. and Urbaczewski, A., Spyware: The ghost in the machine. Commun AIS 14 (2004), 291–306.
- 11. TiVo. TiVo Privacy Policy, 2004.
- 12. Zaslow, J. If TiVo thinks you are gay, here's how to set it straight. WSJ, (Nov. 26, 2002).

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