

## Chapter 2

# Data Mining and Privacy Protection

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### ABSTRACT

*Modern data mining tools search databases for hidden patterns, finding predictive information that is otherwise not evident. There exist four models for privacy protection, which depending on their application, can be complementary or contradictory. This chapter deals with the comparison of EU comprehensive laws model and US sectoral laws model that arise from different cultural and historical background. The main objectives are to compare the current state of consumer's privacy protection in EU and USA, discuss legal frameworks, propose some best practice implications, and summarize perceived future trends. We must not forget that consumers have the right to communicate and interact, and also to keep the control over their personal data, even after they disclosed it to others.*

### INTRODUCTION

The speed of information and communication technologies development creates improvements in consumer's life. Personal data of consumers spreading around are available and offer data basis for proliferation of data transactions. Besides the benefits, risks for consumers' privacy are becoming more and more real. Solove (2008) provided a comprehensive overview of privacy, as one of the most important concepts of our time, yet also one of

the most elusive. As rapidly changing technology makes information increasingly available, scholars, activists, and policymakers have struggled to define privacy, with many conceding that the task is virtually impossible. There are several difficulties involved in discussions of privacy and ultimately provides a provocative resolution. He argues that no single definition can be workable, but rather that there are multiple forms of privacy, related to one another by family resemblances. His theory bridges cultural differences and addresses historical changes in views on privacy.

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The Charter of Fundamental Rights of the European Union (EC, 2000b) recognizes in Article 8 the right to the protection of personal data. This fundamental right is set forth in a European Union legal framework on the protection of personal data consisting in particular of the Data Protection Directive 95/46/EC (EC, 1995) and the ePrivacy Directive 2002/58/EC (EC, 2002) as well as the Data Protection Regulation 45/2001 (EC, 2001) relating to processing by Community institution and bodies. This legislation presents several substantive provisions imposing obligations on data controllers and recognizing rights of data subjects. It also prescribes sanctions and appropriate remedies in cases of breach and establishes enforcement mechanisms to make them effective.

It is quite possible that this system could prove insufficient when personal data is disseminated globally through information and communication technologies networks and the processing of data crosses several jurisdictions, often outside the European Union. In such situations the current rules may be considered to apply and to provide a clear legal response. However, considerable practical obstacles may exist as a result of difficulties with the technology used involving data processing by different actors in different locations.

Data mining is been used to track consumer activities and use that information for future marketing purposes. When entering a web site, it is often needed a personal identification, revealing some data about yourself. Not every consumer is aware of the possible use of his/her information. The history of transactions and individual preferences is collected, stored, analyzed to evaluate buying behaviors. It is done for improving the marketing of new products and promotions directly to the customer's personal e-mail address. Collecting personal data to evaluate consumer needs and improve consumer service makes great business sense, but in the internet the threat of a security breach is very high. The transfer of personal data across the internet without adequate protection

causes concern for many officials and citizens (Tran & Atkinson, 2002).

Modern data mining tools search databases for hidden patterns, finding predictive information that is otherwise not evident. They predict future trends and behaviours, allowing organizations to make decisions based on prospective analyses. In response to the obvious privacy concerns with this practice, computer scientists in recent years have work on "privacy preserving" methods of data mining – methods that would preserve individual privacy while still providing researchers with the information they want.

Despite the fact that democratic societies value and institutionalize privacy, governments have also to provide for the disclosure of information necessary to the rational and responsible conduct of public affairs and to support fair dealing in business affairs. Officials must engage in surveillance of properly identified anti-social activity to control illegal or violent acts (Westin, 2003). Personal level data based systems (e.g. security, anti-terror systems) need to recover personal data and early warning systems have to be managed in a way that does not enter in conflict with general human rights. Managing this tension among privacy, disclosure, and surveillance in a way that preserves civility and democracy, and copes successfully with changing social values, technologies, and economic conditions, is the central challenge of contemporary privacy definition and protection (Westin, 1967).

Bygrave (2002) explained why data protection laws deserve extensive study. First reason is data protection laws practical significance (both actual and potential); they can affect the heart of organizational activity. The second reason is their normative importance because such laws emphasize that account be taken of values, needs and interests, different from increased organizational effectiveness or maximization of financial profit, when processing personal data. Partially, the normative and practical importance of the laws is mirrored in the burgeoning focus on rights to

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