

Bio-Privacy

Privacy Regulations and the Challenge
of Biometrics

Nancy Yue Liu



a GlassHouse Book

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Preface

This book is closely based on a thesis for which I was awarded the degree of Ph.D. at the University of Oslo in September 2010.

The research for this book has been a very pleasant and exciting adventure in my life. This is not only because the research topic is novel and challenging, it is also due to the compassionate people I encountered along the way and the fruitful research experience at the Norwegian Research Centre for Computers and Law (NRCCL), Faculty of law, University of Oslo. I feel especially thankful for all the help I have received during the past four years.

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through his writing on data protection issues in Australia and for his kind response to my e-mails. Professor Graeme Laurie facilitated my research visit to the Intellectual Property and Technology Law Centre, Edinburgh University, UK, and provided inspiring comments on my research plans and arguments. Professor Charles D. Raab, also of Edinburgh University, deserves special mention for his helpful comments on part of my work and for his assistance in making contacts. I also want to thank Professor Ian Walden of Queen Mary, University of London for his thoughtful comments.

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It has been said that the professional life of a research fellow consists of a complex legal problem and lots of deep water. However my pleasant working environment has made the efforts to stay afloat so much easier. Special thanks go to Eva Modvar, our Head of Administrative Service of the Department of Private Law, University of Oslo, and to the NRCCL Librarian Anne Gunn Bekken whose constant help and efficiency made my work much easier. Honourable mention goes to Professor Dag Wiese Schartum, Director of the NRCCL, for his valuable comments on my research plans and providing me inspiring resources for my research and to Dr. Peter Chukwuma Obutte and Dr. Jens Petter Berg, former doctoral research fellows at the NRCCL, who have given me a lot of mental support and encouragement both at early and later stages of my project. I also thank Professor Olav Torvund and all my other research colleagues at the NRCCL. Sincere thanks also go to Darren Read and Tim Challman who have helped with proof reading the final drafts of my book.

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Nancy Yue Liu
12 December 2010

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Part I

1 Introduction

1.1 Background

1.1.1 *Development of biometrics*

Heightened security concerns arising from the growth of various forms of crime, including identity theft and terrorism, have led to increased interest in the development and application of ‘technologies of surveillance’ (Lyon, 2001). These are technologies that – following the definition of ‘surveillance’ given by Lyon, a definition which is adopted for the purposes of this book – facilitate the ‘collection and processing of personal data, whether identifiable or not, for the purposes of influencing or managing those whose data have been collected’ (Lyon, 2001: 2). Technologies often have an inherent logic or bias which may strongly influence the way in which they are being used. The bias of technologies of surveillance is essential to augment surveillance capabilities. Thus, to some extent, the development of surveillance is also driven by new forms of technology (Bygrave, 2002). A prominent form of such technology is the rapidly expanding use of biometrics, that is, identification and authentication technologies based on unique characteristics of individual human bodies. Biometrics, though, is not exclusively a surveillance technology; beyond surveillance biometrics is also being developed and applied in a range of other contexts including personal computing, entrance security, and automated banking. Nonetheless, it is mainly in relation to their surveillance and control potential that biometric applications are attracting controversy. They are seen by some as part of an array of surveillance technologies that have advanced to the point where they now collectively possess the capability to threaten the most basic democratic notions of individual autonomy and privacy (Nuger and Wayman, 2004a).

The surveillance of cross-border traffic, especially through the use of biometric technology, has become more popular in the wake of the ‘9/11’ terrorist attacks and the ensuing war on terrorism. As part of efforts to enhance security, governments around the world are investing large sums of money and human resources in biometric technology, which also act to accelerate the use of biometrics among private-sector entities. Technologies that previously had difficulty in surviving even their pilot stages (Australian Government, 2004; European Commission’s