Annotated Bibliography

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This annotated bibliography was produced as part of the eCommunications Outsourcing Project (http://ecommoutsourcing.ischool.utoronto.ca), a yearlong project undertaken by an interdisciplinary team of researchers at the University of Toronto. It is designed to accompany the findings of the project’s final report, “Seeing Through the Cloud: National Jurisdiction and Location of Data, Servers, and Networks Still Matter in a Digitally Interconnected World.”

The resources included in this annotated bibliography are intended to provide an overview of the literature available regarding cross-border data flows, privacy, and the rise of cloud computing. In compiling these resources, the primary focus has been on relevant scholarly literature (as opposed to reporting, blogs, and other forms of public information), drawing from a variety of disciplines, including law, computer science, engineering, information studies, and surveillance studies. The materials included below are designed to present a cross-section of the available literature; all of the references below should be comprehensible to a general audience interested in the privacy implications of eCommunications and cloud computing.

There is a wide range of peer-reviewed literature available regarding cloud computing, but very little of it deals directly with questions of privacy and outsourcing. Furthermore, the literature which does address questions of privacy often overlooks questions of multinational and cross-border data flows and storage. Given the rapid and significant technological changes in this area, this bibliography has focused primarily on more recent literature.

This literature was identified through the University of Toronto Libraries holdings and databases, working with reference library staff at the University of Toronto Faculty of Information Inforum.

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**History of Surveillance and Privacy**


Agur’s article provides historical background on the use of telephone surveillance in the United States, chronicling debates from the first telephone conversation in 1878 through the Federal Wiretap Law of 1968. This research provides vital context to the nature of governmental collection efforts and of conversations in the United States around telephone surveillance, long predating recent debates about the National Security Agency’s activities post-Snowden. Agur argues that this history offers key lessons for those working on telecommunications, surveillance, and the law, particularly the role of individuals from judges to lawmakers in shaping the conversation around surveillance and personal information.

Keywords: data collection, national security, surveillance, telephone surveillance, wiretapping

Bamford’s work was the first major text to discuss the activities of the National Security Agency, published in 1982. *The Puzzle Palace*, however, remains an excellent source for anyone interested in the roots of US surveillance activities and of the institutional history of the National Security Agency. As international conversations regarding surveillance continue to be driven by the NSA’s activities, Bamford’s analysis of the extra-legality of the NSA and the nature of its intelligence-gathering efforts is vital background reading as Bamford argued presciently that these roots would allow the NSA to continue gathering increased personal data as technologies evolved.

Keywords: history of surveillance, National Security Agency


Beginning with Herbert Haviland Field, the Concilium Bibliographicum, and the development of a basic indexing system, Burke uses personal history, biography, and family ties to tell an engaging story about the development of science information technologies in the 20th century United States. While more biographical than many of the other resources listed here, Burke’s detailed discussion of the links between Cold War espionage, the Field family, and science information informs our contemporary understanding of the intersection between information, surveillance, and espionage.

Keywords: biography, Herbert Haviland Field, history of information systems, internationalism, science information

Desai seeks to contextualize the 2006 debates over a US federal court ruling that the Terrorist Surveillance Program violated the protections of the Fourth Amendment. This article examines how contemporary debates relate back to early concerns about the abuse of power in the United States Post Office. In doing so, Desai argues that this context is vital to understand the modern perception of communications privacy, as these ideas stem from late eighteenth century regulations regarding the Post Office, not from the Bill of Rights or the US Constitution directly.

Keywords: communications, definitions of privacy, Fourth Amendment, history of privacy, protections


Lane’s work places contemporary debates about the National Security Agency, the Foreign Intelligence Surveillance Act (FISA), and personal privacy into a longer trajectory of United States history. Lane argues that, at its core, US history is inseparable from debates over the protection of personal privacy from the American Revolution on. It provides a concise, overarching history of how privacy concerns have been created, debated, and violated since the founding of the United States.

Keywords: definitions of privacy, history of privacy, National Security Agency, United States of America


Parenti’s argument is unlike many other texts regarding the history of surveillance activities. Rather than focusing on the policy-makers and events that have driven previous US surveillance activities, *The Soft Cage* addresses the broader societal, cultural, and ideological aspects of state surveillance. Parenti’s discussion of US surveillance from monitoring slaves to the present day focuses on the increase in federal power, arguing that state surveillance activities reflect a series of class-based priorities designed
to promote the power of the upper classes and preserve the status quo system.

Keywords: cultural implications of privacy and surveillance, definitions of surveillance


Rosen and Santesso examine the historical roots of privacy, considering the development of individual privacy in both the legal and literary spheres. Their analysis focuses primarily on the arguments advanced by Samuel Warren and Louis Brandeis in their 1890 Harvard Law Review article, “The Right to Privacy.” The article echoes early arguments that “The Right to Privacy” was responsible for the notion of privacy as a right that should be legally protected by the state. Rosen and Santesso demonstrate the continued complexity of privacy as a concept by drawing on the legal and cultural roots, arguing that our understanding of privacy as a “Western ethno-religious tradition” can not be explained without considering both the legal and societal underpinnings of the term.

Keywords: definitions of privacy, history of privacy

Privacy and the Cloud


This collection of articles provides useful background to understand cross-border data transfers and privacy, even beyond the European experience. Any individual interested in questions of privacy and online data should consult Ann Cavoukian’s chapter, “Privacy by Design: Leadership, Methods, and Results,” and “Seven Types of Privacy” contributed by Rachel L. Finn, David Wright, and Michael Friedewald. Finn, Wright, and Friedewald provide a solid background on the development of privacy as a concept, tracing it from the 1890s to the present. Cavoukian’s piece expands on the concept of “privacy by design” introduced in Modelling Cloud
Computing Architecture Without Compromising Privacy: A Privacy by Design Approach, arguing that privacy considerations must be an integral part of the development and design process from the outset, rather than concerns once a new technology has been developed.

Keywords: case studies, data protection, definitions of privacy, European Union, privacy


Hayes examines how legislation has regulated media and communications technologies, placing recent developments in Internet technology in a broader history of communications. This approach enables Hayes to show how key concepts, such as network neutrality, have roots in earlier technologies and remain relevant in today’s world. Hayes’ text is an excellent introduction to the legal theories and concepts that have and continue to shape mass media communications.

Keywords: history of communications, legal framework


This 1987 report, issued by the Standing Committee on Justice and the Solicitor General, comprehensively reviewed two key pieces of Canadian privacy legislation: the Access to Information Act and the Privacy Act. The report’s findings included over 100 recommendations for how to improve upon this legislation. Although the report is now over two decades old, many of its conclusions still remain unfulfilled and have reappeared in subsequent reports on how to improve the current privacy legislation in Canada. This initial review of the Access to Information Act and the Privacy Act provides vital background for anyone interested in Canadian legal protections. Furthermore, it provides a touchstone to understand how the conversation within the Canadian government has evolved in recent decades.
Keywords: right to privacy, protections, *Access to Information Act*, *Privacy Act*, Canadian privacy legislation

Note: This publication is also available in French under the title *Une Question a Deux Volets: comment ameliorer le droit d’acces a l’information tout en renforçant les measures de protection des renseignements personnels.*


*The Tower and the Cloud* is illustrative of the common approach to cloud computing as it relates to educational institutions, focusing primarily on its impact on education, teaching methods, and academic research. There is limited discussion of accountability and technological advances, let alone the privacy implications for students, faculty or other university staff. Brian L. Hawkins’ contribution touches on privacy briefly, but primarily considers the intersection between cloud computing and transparent reporting about universities.

Keywords: e-learning, higher education sector, research, scholarship


Mosco offers a detailed and critical view of the Cloud, its development, and its current role in society. *To the Cloud* explores the increasingly widespread use of cloud technologies in the public and private sectors worldwide, considering the implications of the adoption of these technologies. In doing so, Mosco also considers the marketing surrounding the cloud, particularly the prevailing view that cloud technologies are simply more convenient. Mosco argues that, despite the “light” connotations of the cloud terminology, there are real and deep consequences as a result of cloud technologies, warning against the commercialization of personal data and the elimination of numerous IT jobs.

Keywords: big data, the cloud, cloud technologies, marketing

As the title clearly indicates, this guide is designed to provide context to help understand and clarify the Canadian government’s federal legislation governing privacy of electronic records in the private sector, the *Personal Information Protection and Electronic Documents Act* (PIPEDA). The text highlights many of the key concerns expressed by privacy advocates about the legislation, such as the absence of a so-called “justification principle” which would require an organisation to disclose “why it is collecting, using, or disclosing personal information” (61).

Keywords: Canadian legislation, *Personal Information Protection and Electronic Documents Act*, privacy


This recent publication explores the implications of changing definitions of privacy, considering the rise of the Internet and the use of social media as one example of these shifting norms. The contributions to this edited volume focus on how existing legal structures can be adapted to meet these challenges and what role the law could play in protecting individual privacy. It is written in clear, accessible language, laying out the core legal issues in a manner that can be understood by anyone, not simply those with a legal background.

Keywords: definitions of privacy, legal protections


Schwartz’s work examines the development of cloud storage in computing and its implications for the protection of data. His article provides a brief overview of the changing nature of data transfers as a result of cloud

² Please note that Stephanie Perrin is a member of the eCommunications Outsourcing Project research team.
³ Please note that one of the eCommunications Outsourcing Project’s co-investigators, Lisa M. Austin, contributed to this edited volume.
computing, as well as the key privacy issues which have emerged as a result of these changes in everyday Internet usage. Focusing primarily on the differences between European and American privacy law, Schwartz’s text highlights many of the dominant issues surrounding privacy and personal data, such as the desire to protect personal data without creating a bureaucratic nightmare of restrictions and regulations. In doing so, Schwartz explores existing legal structures in the European Union regarding data and privacy, highlighting the difficulties with applying these regulations to the new technological realities of the cloud.

Keywords: cross-border data flows, data protection, European Union, personal information, privacy


Solove tackles public discourse about security and privacy, arguing that the existing debates between the two are framed incorrectly. Section Four of Solove’s text is most relevant, focusing on the role of new technologies upon privacy. His examples draw on the United States, considering, for example, the role of the Constitution, Bill of Rights, and the PATRIOT Act, but are nevertheless relevant to a Canadian audience whose data is often stored in the United States as a result of extra-national outsourcing decisions.

Keywords: privacy-security debate, United States of America


This column in the Institute of Electrical and Electronics Engineers’s (IEEE) publication Computer provides a concise overview of the technical advances and ongoing issues relating to data privacy. For a general audience, the tables outlining the core strengths and weaknesses of recent methods developed for data encryption and auditing are particularly valuable. It recognizes the ongoing public concerns about data privacy, calling for research regarding encryption and auditing processes to improve cloud computing.

Keywords: auditing, data security, encryption

This paper, published by the Information and Privacy Commissioner of Ontario, highlights the clear need to pursue research in computer engineering to ensure that data storage in the cloud continues to protect the data of individuals and corporations. The publication provides a basic overview of existing cloud computing structures — software as a service (SaaS), platform as a service (PaaS), and infrastructure as a service (IaaS) — as well as definitions of private, public, and hybrid delivery models. This overview serves as a foundation to discuss the current limitations of cloud computing with respect to data privacy, providing useful diagrams to explain possible structures to guarantee appropriate access. It argues for the inclusion of privacy concerns in the original design, rather than adapting platforms after the fact to ensure suitable protection of data — a theme regularly explored in much of Ann Cavoukian’s writings.

Keywords: data protection, positive-sum paradigm, privacy

**Crossing Borders: Transborder Data Flows**


Kuner’s work provides a detailed overview of transborder data flows and ongoing efforts to legislate and restrict these data transfers. He delves into the historical evolution of regulations surrounding transborder data flows, drawing upon examples from across the globe. Alongside this historical background, Kuner also explores the current state of regulations and future initiatives to protect data transfers across borders. For anyone seeking to understand the existing legal frameworks around online data and cross-border data flows, this text provides a key basis.

Keywords: cross-border data flows, legislation, privacy, security

This report, based on a study completed by the Computer Science and Law Research Group, is a key read for anyone interested in how concerns about transborder data transfers have been treated in the past. It provides a vital frame of reference for those interested in the evolution of this issue.

Keywords: Canadian legislation, privacy, transborder data flows

Note: This publication is also available in French, published under the title *Vie privée sans frontières*.


This article divides the question of internet privacy into two distinct aspects. First, it lays out the central issues to privacy which have developed with the rise of the Internet, as well as providing a brief overview of the technical details regarding the structure of the Internet. In the second portion, LeSieur considers the difficulties facing existing privacy laws and structures in regulating cross-border flows of data. LeSieur’s treatment of the issue is clear and straightforward, providing technical details where relevant, and introduces key questions regarding national sovereignty and differing international perceptions of privacy.

Keywords: cross-border data flows, legal protections, privacy

**Cloud Computing Information Security and Risk Assessment**


This guide is designed to provide a comprehensive, yet easily accessible overview to the issues and risks regarding cloud computing. It reviews the definitions of cloud computing and identifies key risk areas, including security and associated organisational risks. Notably, the text devotes a
chapter to the role of borders within cloud computing, considering the risks of cloud usage and data storage. Cartensen, Golden, and Morgenthal's work is an excellent starting point for anyone interested in questions of privacy, security, and cloud computing for individuals and organisations. The text itself is primarily targeted towards organisations, but the straightforward language and charts make it relevant for any individual seeking a clear overview of the issues raised by the growth of cloud computing.

Keywords: compliance, cross-border data flows, organisational cloud computing, risk assessment, security


Halpert's edited volume was designed to be a reference handbook for IT professionals, particularly those focused on auditing. Accordingly, the text has overview articles on all of the major aspects of cloud computing — audits, governance, infrastructure, delivery methods, privacy, organisational continuity, and global regulations. Chapters 6 and 9 are of particular relevance to anyone interested in questions of privacy, jurisdiction, and data flows; both provide a strong outline of the core issues. Halpert's text also includes a cloud computing audit checklist.

Keywords: auditing, organisational cloud computing, risk assessment


Rittinghouse and Ransome outline key aspects of cloud computing with the central objective of promoting the widespread adoption of cloud computing. When discussing security and privacy issues, the text considers the current state of the technology and best practices. Given the text’s motivation in promoting the use of cloud computing, Rittinghouse and Ransome provide useful context for how privacy and data storage issues were discussed prior to the increased discussion regarding surveillance, storage, and personal data privacy after Edward Snowden’s revelations in 2013.

Keywords: adoption of cloud computing, recommended practices
The Surveillance State and the Post-Snowden Context


This article explores the global conversation regarding data storage, privacy, and state surveillance post-Snowden. It outlines the relationship between state surveillance and individuals’ protected rights to privacy, as defined by the United Nations International Covenant on Civil and Political Rights (1966). Given the increasing public discussion and politicization of data, privacy, and e-communications following Edward Snowden, this article provides a detailed, yet comprehensible overview of the key issues that are currently framing international discussions of privacy, security, and data transfers. The authors argue, however, that public interest and concern in these issues remains limited, even in the wake of Snowden’s revelations, as these surveillance activities do not impact the average Internet user.

Keywords: Edward Snowden, international privacy requirements, National Security Agency, privacy, surveillance


*Transparent Lives* demonstrates how the rapid proliferation of electronic communications and technological advances has introduced new types of surveillance into everyday life in Canada. This text helps place concerns about e-communications privacy into a broader framework, including the increase in surveillance in physical spaces and the digital space alike. Furthermore, it argues that the drive for increased surveillance is directly linked to a desire for increased security; on the other hand, however, the text highlights how the lines between private and public have become increasingly blurred.

Keywords: Canada, security, surveillance

Additional information can be found on the project’s website at http://www.surveillanceincanada.org.

In response to the rise of telecommunications usage in modern society, Diffie and Landau seek to contextualize and explain key practices that the state uses to monitor these telecommunications. The text explores central concepts, such as cryptography and law enforcement techniques, asking the reader to consider how these concepts work and how they should work. In doing so, Diffie and Landau highlight the steady erosion of privacy within the United States, arguing that the US “government’s record of privacy violations means that any broadening of its snooping powers must be viewed with the gravest concern.” (320)

Keywords: cryptography, law enforcement, privacy, surveillance, telecommunications, wiretapping, United States of America


In this edited volume, Haggerty and Samatas have approached the intersection of surveillance democracy in three ways: theoretical frameworks of these concepts, the political uses of surveillance in democratic societies, and, finally, a series of case studies to explore the applications of surveillance in democracies. Taken together, these articles raise central questions about the evolution of democratic society and the role of surveillance in such political systems. In particular, the changing landscape post–9/11 is a central focus of the text. While it does not deal directly with questions of the Cloud, it provides relevant contextual information to anyone interested in broader conversations about privacy, security, surveillance, and speech in the internet age.

Keywords: democracy, privacy, security, surveillance


*The Electronic Eye* provides useful context to any individual interested in the evolution of contemporary debates regarding new technologies and surveillance activities. Lyon emphasizes the diversity of activities that can be considered surveillance, pointing out how the advances made possible
by computing technology continue to have clear benefits which should not be overlooked despite concerns about more harmful surveillance capabilities. Particularly useful for those interested in questions of technological advance, privacy protection, and personal information is Lyon’s argument that privacy is an insufficient concept to meet the challenges of new technology, given the term’s attachments to class and social standing (see Chapter 10).

Keywords: definitions of privacy, history of surveillance, surveillance, technological change


Marsden argues that the Snowden revelations of US and UK surveillance activities do not reflect a fundamentally new pattern of behaviour, but are instead demonstrative of a long-standing tradition of “hyper-power world domination.” Marsden discusses earlier surveillance methods of the British Empire, in particular their control of telegraph technologies, highlighting how these methods were a precursor for current surveillance techniques. In doing so, Marsden invokes the imagery of Orwell to describe both US and UK surveillance techniques.

Keywords: British Empire, case studies, history of surveillance, hyper-power, United States of America


This editorial explores the extent to which Snowden’s revelations resulted in a significant shift in conversations surrounding surveillance, privacy, and eCommunications, setting the tone for Surveillance & Society’s issue dedicated to the topic (contributions appear from David Lyon, Miguelángel Verde Garrido, Jason Keiber, Lonneke Van der Velden, and Matthias Schulze, with a brief overview of each in this Murakami Wood and Wright introductory editorial). Murakami Wood and Wright look to place Snowden
in a larger framework, discussing whistleblowers before Snowden and how Snowden himself — and his role as a contractor — illustrated the changes in the United States’ security apparatus which were confirmed in the post–9/11 era.

Keywords: Edward Snowden, surveillance, surveillance studies, whistleblowers


Wall’s article focuses on the potential use of internet technologies as a means of conducting surveillance. In the text, Wall introduces a range of surveillant activities which can be conducted with existing internet technologies, as well as the commodification and commercial use of online data. It provides detailed context for a broader discussion of the intersection between data flows, privacy, and surveillance. Wall argues that surveillance activities will prevent the long-term growth of an information economy, as public trust will continue to be eroded as a result of surveillance.

Keywords: commercial data use, privacy, surveillance


Although this text does not discuss eCommunications privacy directly, it does provide relevant context to the broader questions of information, privacy, and state borders. Based upon research conducted by the Globalization of Personal Data project at Queen’s University, much of the discussion is particularly relevant to Canadian institutions and individuals, as there is extensive discussion of Canadian legislation and experiences. Much of the work is comparative and considers policies from across the globe, including (but not limited to) Canada, the United States, Hungary, France, and China. Arthur J. Cockfield’s contribution demonstrates how a Canadian resident’s data is protected in other jurisdictions, highlighting the differences between Canadian regulations and those of the United States, Mexico, Brazil, and China.
Keywords: Canadian legislation, comparative case studies, globalization, personal information, privacy
Appendix A: British Columbia as a Case Study

Given the strength of British Columbia’s provincial privacy regulations, it provides a useful case study to consider the possible risks inherent in eCommunications, as well as potential frameworks to ensure the protection of personal data in these eCommunications. The resources below have been selected to provide an overview of British Columbia’s current regulations.

See in particular the influential Loukedelis report.

Legislation and Regulations

Document Disposal Act

Electronic Transactions Act

Freedom of Information and Privacy Protection Act

Freedom of Information and Privacy Protection Act Regulations

Personal Information Protection Act

Legislative Reviews


Legislative Assembly of British Columbia. “Special Committee to Review the Freedom of Information & Protection of Privacy Act Report.” May


Additional Resources


