Surveillance, integrity and metadata in the information age

The legacy of Sweden's ICT commission, 1994–2003

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Abstract

In August 1994, the Prime Minister of Sweden, Carl Bildt, publicly announced the formation of The Information and Communication Technology Commission. This was an advisory commission, comprised of ministers in Bildt's government cabinet as well as invited experts and entrepreneurs. The formation of the ICT Commission has been understood as a pivotal moment in Swedish policymaking within the ICT area. However, an underappreciated part of the ICT Commission's history is that while it is generally acknowledged that the introduction of ICT in the 1990s was positively received by political elites and intellectuals, public scepticism toward ICT was a known problem and something the commission needed to address. Inspired by the concept of sociotechnical imaginaries (STIM), developed by STS scholars Jasanoff and Kim, the ICT Commission can be interpreted as a sort of state-financed "embedding activity" meant to overcome public scepticism of perceived risks, and to gather around a common vision of the future. Starting from a STIM perspective, the aim of this article is to deepen our understanding of this period in Swedish ICT policymaking, and its consequences. Studying the way the ICT Commission addressed topics of surveillance, personal integrity and metadata is important in that it provides a new and more complex perspective on the commission's work and its public role. The article also connects the commission's history to contemporary discussions about surveillance cultures and asks if the Commission – in a longer perspective – can be said to have fostered a positive attitude toward data sharing.

Keywords: information age, information society, Carl Bildt, surveillance, personal integrity, metadata, ITC Commision, computers

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Introduction

In August 1994, the Prime Minister of Sweden, Carl Bildt, publicly announced the formation of The Information and Communication Technology Commission (hereafter the ICT Commission). This was an advisory commission, comprised of ministers in Bildt's government cabinet as well as invited experts and entrepreneurs. According to Bildt, the ICT Commission would be an important tool to propel Sweden into a new information age driven by IT, reforming the faltering Swedish export industry in the process.[1] However, state initiatives to introduce new technologies are always controversial to some extent, and Bildt's initiative was no exception. While it is generally acknowledged that the introduction of ICT in the 1990s was positively received by political elites and intellectuals, public scepticism toward ICT was a known problem and something that the commission needed to address.[2] At the time, the government was well aware of scepticism toward ICT in the private sector, among ordinary citizens, and in the lower echelons of state governance, and the commission's directives were formulated accordingly.[3] The ICT Commission's objective was "to facilitate widespread use of information and communication technologies."[4]

The ICT Commission would encounter many problems during its lifespan, and in retrospect, it has been seen as a failure, both by its members and by scholars studying their work, for not being able to initiate effective policy changes.[5] However, an overlooked aspect of the ICT Commission's legacy is the way it worked to promote specific attitudes toward ICT. While the ICT Commission had difficulties in terms of political influence, the commission's activities and reports between 1994–2003 offer interesting insights into how the topic of personal integrity and surveillance was understood at the time. New concepts, such as metadata, were debated around the turn of the millennium and new ideals of the information age made inroads into politics. At a higher level, this also sheds light on the interplay between the emergence of *sociotechnical imaginaries* and *surveillance imaginaries* on the decades to come.

When the ICT Commission started working, the fall of the Berlin Wall and the collapse of the Soviet Union had occurred only a few years earlier, and memories of state surveillance in the name of national security were still fresh. State-ordered surveillance activities of citizens from the late Cold War period were brought into the open and criticised in news media in the early 1990s.[6] Moreover, the last time the state attempted to introduce major technological reforms, the so-called ADB reform during the late 1970s, criticism had been massive, with widespread fear of state surveillance and infringement of personal integrity.[7] In other words, if ICT was to be

embraced fully in the "new reality" of the 1990s that the Bildt government envisioned, people needed to be convinced that integrity and surveillance issues were nothing to worry about. This was a major task set out by the ICT Commission, if not *the* one.[8]

Inspired by STS scholars Jasanoff and Kim, the ICT Commission can be interpreted as a sort of state-financed "embedding activity" meant to clear the ground for a new *sociotechnical imaginary* (STIM). STIM can be defined as a coherent utopian industrial vision, supported by developments in science and technology combined a common set of values, which also usually come to affect social and cultural life.[9] Embedding activities are part of the introduction of a new STIM, and can be described as a form of lobbying and ideology-producing activity, which functions as a way of clearing the ground for the adoption of a particular STIM.[10] Arguably, Bildt's vision of the future can be described as a sociotechnical imaginary in which Sweden aimed to become a leading global actor – an IT nation – in high-tech industrial exports, and the ICT Commission was his primary tool for embedding this idea in the public sphere. According to Bildt, Sweden needed to confront the "new reality" of the 1990s and what the coming information age demanded: neoliberal economic policy transformations and adjustments to international standards through the internationalization of education, research, and business. In turn, this would be possible only by embracing new information technologies at all levels of society.[11]

A core element of sociotechnical imaginaries is that influential stake-holders are eager to address ideas of risk and find arguments and solutions to mitigate them, which was exactly what the ICT Commission was set to do.[12] Through the lens of sociotechnical imaginaries, this study thus investigates how the ICT Commission understood concepts related to the risks of ICT adoption during the commission's lifespan, 1994–2003. More specifically, the article analyses the way the ICT Commission addressed the topics of surveillance, personal integrity and metadata – and how they tried to reframe public concerns around these issues as something positive and in-line with the STIM they were set to launch.

For the commission, Internet security and integrity issues became prioritized topics and remained so until the end; however, how the Commission addressed these topics has not been studied.[13] In the concluding discussion, the commission's history will be connected to contemporary discussions on Internet security and the introduction of AI. As David Lyon has argued, today, we live in a *surveillance culture* in which the sharing of data and personal information has become normalized and is essential to the digital economy.[14] By examining the ICT Commission's discussions on integrity, surveillance issues, and metadata, I argue that the kind of

sociotechnical imaginary its members pursued laid the groundwork for a positive attitude toward surveillance culture decades later. It is also important to note that the focus on issues of integrity and surveillance, state politics, and governance, partly separates this work from earlier histories of computing, which have a long tradition of scholarship in Sweden and elsewhere.[15]

Material and approach

Altogether, the ICT Commission has produced more than 100 reports and memos, and these publications constitute the core empirical material for this article. The character and scope of these texts vary, from full-sized reports written by scholars and experts to loosely drafted protocols from hearings with invited guests, such as tech entrepreneurs, politicians, or journalists. This variation mirrors the visionary and networking ideals of the ICT Commission, as well as the broad scope it was given in the government directives.[16] Nevertheless, the material gives a disparate impression because it is unclear what the ICT Commission argued for as a whole. The political stance taken on specific issues is clear only occasionally. For the most part, the recommendations are in the shape of guidelines and abstract future goals.[17] Moreover, not all reports were written by the members of the commission. In some instances, they ordered reports from external consultants they found interesting or progressive, such as Kairos Futures, a consultant firm specialized in scenario analysis, or CEPRO, also a consultant management firm.[18] The topics of the reports were also quite disparate. Some were speculative and visionary, on a high abstraction level, whereas others were in-depth research reports on specific technical topics.[19]

Thus, the report library should not be understood as a coherent mass of ideas, rather an *agora* that provided a space to discuss ideas about the future of the ICT society.[20] Although the industrial future was clearly a somewhat coherent vision and built into the working principles of the Commission, the sum of the commission's ideas seems incoherent, out of focus, and highly the result of the interests of individual Commission members. Consequently, discussions within the commission took quite different forms during this period. After the millennium shift, the ICT Commission would argue that their earlier period was characterized by a focus on ICT-infrastructure – hardware – while the later part had a greater focus on information processing and digitisation, but this is also reflective of which members were left at that point, and their ideas (more on this below, in section "Metadata...").[21] One of the reasons for the heterogenic character of the Commissions publications was the Commission's vague directives and the fact that members varied over time. Some pursued

different agendas, or had their own pet projects within the Commission.[22] For this article, not all the Commission's documents and reports have been analysed. Approximately 25 (out of 100) have been selected based on whether they were meant to address a wider public, which can be considered an *embedding* activity, and whether they in some way addressed the three main risk topics of this study: surveillance, personal integrity, and metadata.[23] Four semi-structured interviews have also been conducted to gather some contextual information about the inner workings of the Commission.

The ICT Commission 1994–2003: Background and context

As other scholars have shown, the ICT Commission was a novel entity in Swedish politics because of its emphasis on networking activities and "visionary meetings" rather than focusing on in-depth reports and specific problems.[24] In that sense, it was a clear break from Sweden's political traditions in that it did not consist of a parliamentary committee tied to a specific minister or department. Usually, ahead of large reform programs, governments in Sweden instigate large governmental commissions to gain expert advice and gain consensus in parliament before presenting sharp proposals.[25] These governmental commissions are often tied to a specific department and are meant to address a particular field or topic that directs the investigative work of the commissions. This had been the case, for example when integrity issues and computers were discussed in the 1970s and 1980s.[26] Earlier attempts to form committees to develop the use of computers in research or governance had similarly been tied to specific departments.[27]

The ICT Commission's organisational structure was unique in Swedish computing history but also diverged from traditional political reform practices. Inspiration came from US economic thought, as well as recent political initiatives across the Atlantic, such as the "Gore Bill" of 1991 and President Clinton's instigation of an advisory council on information technology infrastructure in 1993 (often referred to as PITAC).[28] Similar to Clinton's advisory council, the ICT Commission was established at the central government level, with five participating ministers. Unlike earlier attempts to introduce computing into state governance, it had no clear objective beyond its inspirational and advisory role. Over time, political representation changed, and the directives became somewhat more focused in the second, third, and fourth versions of the Commission. Nevertheless, it remained solely an advisory board without clear ties to any particular department. In this sense, its organisational structure remained

consistent throughout the period, even as Bildt's right-wing government was replaced by a social-democratic administration.[29]

The ICT Commission's role was also unique in that it was not meant to come up with sharp proposals, such as investments in large-scale infrastructure or subsidies for construction, as had often been the case earlier.[30] There was never any clearly defined problem to solve for the commission in 1994, other than overcoming general reluctance and promoting the use of computers. This way of shaping the commission's role can be seen as reflective of the political-ideological undercurrents of the time.[31] The vagueness of the Commission's directives reflected a trend in the post-Cold War political environment that promoted neoliberal market economics and minimal state control. Social scientists Paula Blomqvist, Matilde Millares, and other scholars have shown how market oriented ideas about the effectiveness of decentralization and privatization, characterized many reforms during this period, and the ICT Commission mirrors that trend.[32] As the Commission's initial report stated, the ICT Commission was not formed to implement "commando politics" from above but rather to inform, educate, and inspire Swedes to adopt a digital lifestyle and thus let the market do the work.[33] Similarly, the ICT Commission's primary focus was on education, information, and on inspiring users to adopt technologies and companies to produce digital services, rather than to propose large-scale infrastructural projects.[34] There also seemed to be a general understanding of the subsequent social democratic governments that followed from 1994 to 2006 that the IT revolution should be driven mainly by market demands, and that the state had only a limited role in this.[35] Thus, the focus on market economics was not tied only to right-wing politics at this time, even though Bildt had used the opportunity to criticize Keynesian social-democratic economic policy in the past.

It is important to note that this did not mean that the state or government agencies had no role in the development of ICT, but rather that the state was not expected to lead, except symbolically. For example, Bildt's initial report put a lot of emphasis on creating effective welfare bureaucratic systems through ICT that would inspire the private sector to develop better services, so-called "lighthouse projects."[36] In this way, Bildt's proposals also mimicked earlier social democratic governments' attempts to modernize the welfare sector.[37] Nevertheless, it was important for them to point out that these projects had to be made in such a way that they would not form monopolies or disturb the market forces.[38]

Furthermore, the emphasis on privatization and market economics should be seen in the context of the economic situation of the 1990s. A major argument for the introduction of the ICT Commission was to

Fig. 1. The ICT Commission's first report had a cover which showed the image of Nike, the goddess of victory, against the back-drop of a computer.

strengthen Sweden's position in the global market for high-tech exports and, in the process, solve the problem of rising unemployment.[39] Faltering exports for Swedish industries, coupled with a severe banking crisis during the early 1990s had also strained the Swedish economy for years to come.[40] Bildt's political project, the sociotechnical imaginary that he pursued, and the subsequent social democratic government's involvement in the ICT Commissions that followed, was thus as much an attempt to regain economic-industrial momentum internationally through neoliberal economic reform, as it was techno-utopianism.[41] In this sense, the formation and character of the ICT Commission from 1994 to 2003 can be summarized as a result of a triad of trends: technological utopianism with new information and communication technologies at its core, neo-liberal economic thought, and domestic economic policymaking.

The ICT Commission's position in relation to the topics of this article reflects their struggle to maintain their focus. From the first report onward, security and integrity issues were high on the commission's agenda, but there were few examples of focused discussions on these topics.[42] An exception was a debate about personal integrity that surged in 1996–1997,

which was related to new propositions presented in the Swedish parliament. Certain members were engaged in these topics (see below). However, no report in the commission's own publication list was specifically devoted to issues of surveillance, personal integrity, or metadata, nor did any report provide an overview of these topics.

However, all reports had two things in common. First, the primary objective was, after all, to propel Sweden into the ICT age.[43] This core idea constituted the commission's most basic objective and it never changed. Second, entry into the ICT age was to be achieved in the most decentralized and user-focused manner possible, most notably through advisory and information-dissemination activities. The agora metaphor used above to describe the ICT Commission was, in this way, instructive in that it not only gave meaning to how the ICT Commission was formed but also described the character of its work. This was an open space for new ideas. People came and went, and, as long as members were loyal to the core idea (including being optimistic), they were free to express and pursue their ideas within the walls of the agora. The downside was, of course, that no one took full responsibility to form a coherent program, and it is very difficult to give a simple characterization of what the ICT Commission argued for. As we shall see, only toward the end of the commission's lifecycle was it possible for them to form and promote a somewhat coherent vision of how Sweden would reach the techno-industrial goals formulated by Bildt.

Surveillance of citizens as a thing of the past

Turning to how surveillance issues were discussed more concretely, one can say that interest in this topic was lukewarm and mainly of interest for the Commission during its first years. To understand this, it is important to consider the transformation of surveillance as a concept between the 1970s and the 1990s. Discussions on citizen surveillance have a long history in Sweden, and at various points in time, they have evoked public debate and controversy.[44] In the Cold War context of the 1970s and the early 1980s (the last time this had been discussed), public debates on surveillance often took the form of anti-establishment critiques.[45] This, in turn, was in line with the zeitgeist of the time and, more specifically, the radical ideals of the 1960s. For example, criticism of the government's *Automatic Data Processing*-reform [ADB reform] of the 1970s was an attempt to strengthen individual freedom in a political environment dominated by strong state and welfare politics.[46] In other words, the relationship between citizens and the state was at its core. The state was understood as powerful and the actor most interested in surveying its citizens.[47] The legislation

that emerged from the debates of the 1970s was intended to regulate this relationship and secure the balance between individual citizens and the state. [48] A very concrete example of how state surveillance sparked controversy came in 1973 when two journalists exposed an espionage section of the national Security Services that was devoted to registering attendees at political meetings of socialist groups, the so-called "IB-Affair."[49]

In the 1990s, however, when the emergence of new communication technologies could have ignited similar debates and criticism as in the 1970s, the political culture had changed quite dramatically. Surveillance was not as relevant during the 1990s as it had been. As historian Andreas Marklund has argued, the 1990s was a period when state surveillance was considered a relic of the Cold War, and something frowned upon.[50] In Western democracies, the strong state also declined in popularity — partly as a consequence of the cultural whirlwind caused by the fall of the Soviet Union — and efforts were aimed at privatization of welfare services and decentralization of government responsibilities.[51] As mentioned before, in Sweden, this belief in market solutions in both left- and right-wing political parties led to the privatization of healthcare, education, and communication services.[52] The responsibility for education and internal security was decentralized and placed on municipalities and independent government agencies. Symbolic industries, such as the Swedish telecom monopoly, were deregulated and privatized during this period.[53] Prime Minister Bildt later argued that Sweden went beyond any other country in the IT sector.[54] In terms of security, civil defense and military defense were also downsized and decentralized.[55]

In this context, the political focus regarding surveillance and security issues in general was very different from earlier periods. Discussions were aimed at the relationship between private business and citizens, rather than solely between citizens and the state. The negative connotations of surveillance, previously associated with state activities, only occasionally surfaced in this context. Therefore, the meaning of surveillance within the confines of the ICT Commission's intellectual agora, was quite different from what it had been a couple of decades before.

Consequently, discussions on security issues focused on market-related topics such as identification over the Internet and transactions between consumers and service providers. For example, how could companies verify the identity of individuals by placing orders on their websites? How could consumers verify the authenticity of the company behind a website? Could this new realm of digital communication be trusted? What if consumers spread false information about services or products on the internet?[56] Additionally, credit card fraud was a significant public concern in relation to Internet use.[57] From a market perspective, addressing these

issues was crucial to empowering entrepreneurs and facilitating market mechanisms at the grassroots level, requiring a robust regulatory framework for business and trade.

In line with Marklund's argument, when the topic of state surveillance arose, it was viewed as a concept destined to become obsolete in the future, given that an emerging Information Society would foster citizen participation, serving as a bulwark against undemocratic practices. One report argued that the Internet would bring politics closer to the people, creating "new public spaces" [offentliga rum] for political discourse and lowering barriers to political engagement.[58] State and politically motivated surveillance was occasionally mentioned as risks, but mainly as part of broader concerns related to countries lacking strong democratic traditions, such as China and Burma.[59] Furthermore, it was believed that democratic activists held an advantage in such scenarios because of the Internet's anonymity and global reach, consistently working in their favor.[60] The inherent market mechanisms of the information age, was seen as empowering this trend.[61] In the introduction of the report "How can a new infostructure drive e-Sweden?" [Hur blir en ny infostruktur motorn i e-Sverige?], the Internet was described as a "universal marketplace – open, efficient, transparent – and simultaneously a counterbalance to bureaucracy, protectionism, monopolization, and narrow-mindedness."[62] Here it is clear how the introduction of a certain technological regime (STIM) was associated with, and was perceived as a reinforcing certain positive cultural values, such as citizen participation and democracy and that the ICT Commission was eager to funnel this message in their reports.

Surveillance as service

This, however, did not mean that surveillance as a topic was not discussed by the ICT Commission at all, instead it took other forms. While state surveillance was perceived as a thing of the past, members of the ICT Commission could simultaneously promote a sort of positive surveillance state, one in which surveillance was part of the commercialisation of ICT products. Surveillance could be discussed as a service used by the welfare apparatus or by private consumers.[63]

As these things were discussed, it was believed that only the imagination would set limits to what could be done in the future. If the entry into the Information Age was successful, the potential positive effects of new digital services would be immense. With reference to the Social Democratic Worker's Party's welfare state program of the 1930s, one author noted that a "digital people's home" [digitalt folkhem] awaited ahead.[64] Part of the ICT Commission's rhetoric also drew on earlier infrastructural

IT-KOMMISSIONEN REKOMMENDERAR:
Fem megabit till alla i hela Sverige

FAKTA: I framtidens medieutbud kommer du att kunna välja fritt
om, när och hur du vill ta del av olika sändningar.

Fig. 3. According to this suggestive imagery provided by the ICT Commission, the media services of the future will allow you to consume whatever TV-shows you prefer, anytime. This was one of the few promises that actually became reality. www.itkommissionen.se [accessed 2024-10-23].

IT-KOMMISSIONEN REKOMMENDERAR:
Fem megabit till alla i hela Sverige

FAKTA: En rikstäckande digital infrastruktur öppnar helt nya
möjligheter att lokalisera företag, myndigheter och bostäder –
och till att erbjuda utbildning på distans.

Fig. 2. The future information age will allow you to live anywhere while working elsewhere. It would take until the Covid-19 pandemic of 2020 until this lifestyle was tested in full. www.itkommissionen.se [accessed 2024-10-23]

projects, such as the "Five megabit for everyone in all of Sweden" (figure 2–3), sounding similar to older social democratic welfare reforms.

An important change, however, was that the state was no longer the main service provider, as had been the case with railway networks and telephones in the past. Private companies would provide these services, and the ICT Commission argued that deregulation of the IT market was pivotal in making this possible.[65] The state would produce backbone in-

frastructure, the highways of the Internet, and the rest would be left to market forces. In this industrial IT-service dreamscape, there were no limits to what could be done, and optimistic visions allowed only opportunities. For example, in some reports from the ICT Commission, utopian industrial visions built on the idea of data transfer and surveillance in the shape of "smart shirts" that could send and process information about the surroundings, or other systems as part of the industrial apparatus, as well as new electronic devices (reminiscent of the smartphones of the 2010s).[66] Reports such as "The PC is dead – Long live the PC!: New possibilities for Sweden" and the report series "Our digital service society: Vision 2011+" contained visions of this kind, touching on all sectors of society.[67] Thus, the construction of a sociotechnical imaginary that could world of data surveillance activities, but in this context, the Commission saw them as commercial and entrepreneurial opportunities and *not risks*.

Personal integrity: The culture of the internet and the willingness to conform to the EU

Looking towards the debate on personal integrity on the Internet during the 1990s, many of the same trends that could be seen in the case of surveillance apply. Reports from the ICT Commission often commented on personal integrity, claiming it to be one of the key issues that the new IT age had to deal with, but rarely discussing it beyond that.[68] This was a future problem to handle, and it was certain that the rise of IT would inevitably put pressure on privacy issues. However, the mechanism by which such problems should be addressed remained unclear. Consequently, during the first years of the ICT Commission's work, discussions about personal integrity were thematically closer to consumer rights and economic crime than personal integrity in the form of data security and freedom of speech.

Toward the end of the 1990s, however, conversations about personal integrity changed dramatically. Within the ICT Commission, the general trend shifted toward a focus on information and data rather than material technology, placing soft issues on the agenda. The EU also played a significant role in this transformation. A watershed event was the introduction of a new EU-streamlined legislation, *Personal Data Protection legislation* [Personuppgiftslagen, PuL], SFS 1998:204. This legislation presented a critical problem for the ICT Commission to address: How could the freedom of speech on the Internet, and by extension the sociotechnical imaginary the Commission tried to embed, be reconciled with the demands of the EU?

The background was the EU Directive 95/46/EG of 1995. This directive aimed to streamline European countries' Data Protection legislation to produce less friction in the European IT market. As Sweden entered the EU that same year, it soon became clear that some aspects of the old legislation from the 1970s were incompatible with the new EU directive. This needed to be resolved immediately, prompting the government to set up a new commission of inquiry that in turn would suggest a law proposal aligned with the EU's directive. The commission, named *Data Protection Committee* [Dataskyddskommittén], published its report *Integrity, the public sphere, and information technology* [Integritet, offentlighet, informationsteknik] in 1997.[69] Their proposal for the new law caused some debate, but in the end, a majority in parliament accepted the proposal more or less as is. In 1998, a new jurisdiction was in place, and by the start of 1999, it was actuated.[70]

From the newspaper journalists' point of view, however, this new legislation was argued to be counterproductive and absurd in the most general sense, eventually causing the ICT Commission to join in and calm the waves.[71] Given the wording of the law, its implementation was too strict, causing outrage from journalists and pundits in the cultural and political spheres.[72] In particular, PuL's inability to provide a clear demarcation line between what was sensitive information and information already known by other means or of no sensitive character meant an infringement of the freedom of speech.[73] Authors and journalists claimed that if interpreted to the letter, the new law would make any attempt to produce anything of value on the Internet impossible. Theoretically, mention of a name would, for example, be prohibited without explicit consent from the person mentioned. It was argued that this would cause a variety of bizarre situations in which citizens were, for example, not allowed to mention a politician's name in a text on the Internet if they were not doing journalistic or artistic work. A statement like "Göran Persson is the Prime Minister of Sweden" written on a webpage, would not be allowed.[74]

Opposing politicians also picked up inconsistencies in the new law, resulting in a few memorable episodes. To make a point about the new law's absurdity, the former conservative Prime Minister (and instigator of the very first ICT Commission), Carl Bildt, now in political opposition (1998), reported himself after sending out a newsletter to his fellow party members in which several names were mentioned without explicit consent.[75] Publicly, PuL also resulted in a short but intense outcry from authors, entrepreneurs, public intellectuals, etc. Their main argument was that they wanted an Internet free of state meddling. The "Don't touch my Internet" campaign that came about during the PuL debate is a good example. Over two months, the organizers gathered 40,000 signatures and 30 private companies for support.[76]

Although not involved in the report that developed the new legislation, the PuL debate eventually involved the ICT Commission. The ICT Commission organized several hearings and ordered reports to make sense of the debate, and attempted to address how to solve these issues.[77] Judging from the recorded hearings, the ICT Commission's seminars tended to follow the same lines as the general public, but had a much deeper understanding of the political realities involved.[78] Professor and integrity researcher Peter Seipel, the chairman of the ICT Commission, was one of the leading figures in the debate. He also publicly presented his ideas in a much-cited newspaper article.[79] From the ICT Commission's perspective, public debates were caused by the bureaucratic lethargy of PuL, not because of the government's inability to understand what was at stake. The EU directive was developed during the commercial Internet's infancy in 1991. However, between 1991 and 1998, the nature of the Internet, its use, and the culture surrounding it changed profoundly, meaning that the new PuL (and the EU directive it was built on) was badly adapted to contemporary circumstances.[80]

Nevertheless, when writing recommendations to the government, the ICT Commission did not argue for the complete withdrawal of the law. Instead, they suggested that the PuL should be fine-tuned over time. This recommendation might seem counterproductive, but must be seen in the context of Sweden's diplomatic situation. Sweden became a member of the EU in 1995, and as a new member state, both Swedish politicians and the ICT Commission may have been eager to conform.[81] In this sense, the ICT Commission, and perhaps most importantly, director Peter Seipel, took on a negotiating expert role. They defended the government from public outrage while also promising that Sweden's future as an IT nation was not threatened and that a middle way could be achieved by making a liberal interpretation of the PuL legislation. As Seipel claimed: "How far freedom of speech goes before the regulations of PuL will gradually be clarified through application directives and case law."[82]

This can be contrasted with the debate in the 1970s. As mentioned earlier, the so-called "ADB" (Automatic Data Processing) debate of the 1970s focused on concerns about state control. By contrast, the public debate surrounding PuL in the late 1990s was not anti-modernist and was considerably less intense.[83] For the ICT Commission, the challenge was to ensure that the legislation remained usable while meeting the EU requirements. Only months later, the government initiated a revision of some of the wording in PuL to allow for greater freedom of speech on the Internet.[84] With these changes, the sociotechnical imaginary envisioned by the ICT Commission remained viable and legislation could be retained.

Metadata: Opening a new mining operation
by building "infostructures" after the 2000s

Finally, how were metadata discussed in the 1990s and the early 2000s? When introduced into the ICT Commission's vocabulary in 2000, it was greeted with great promise and seen as a crucial tool for the next phase of ICT policies. Until the turn of the millennium, focus had been on the build-up of Internet hardware in the material sense – creating backbone infrastructure. During the mid-1990s, initiatives such as FTTH (Fiber to the Home) technology were promoted (see the "five megabit…" project above).[85] The government also implemented PC reforms, providing tax subsidies to households for purchasing personal computers.[86] In this context, the classification of data, metadata, databases, and related issues of personal integrity posed few concerns.

After the millennium shift, it became evident that the mere presence of computers and Internet connections did not automatically generate economic growth. The dotcom bubble of 2001 was a pivotal event that underscored this, leading to a prolonged lack of confidence in the development of ICT businesses, recognised by the ICT Commission.[87] Globally, promises surrounding the Internet and its perceived impact, which had shaped much of the political discourse of the 1990s, became weaker.[88] Simultaneously, it is important to note that the private use of PCs and the Internet had significantly increased among the general public. Even if the stock market became volatile and uncertain, the actual use of the Internet grew substantially. This shifting landscape provided the ICT Commission with a markedly different context for their initiatives.[89]

In response to these developments, the ICT Commission endeavoured to establish a new set of guidelines for Sweden known as "Broad Services" [Breddtjänster].[90] This was the last such effort. By its fourth iteration, the ICT Commission had evolved into a smaller, more focused group of experts, a transformation likely pivotal to their ability to conceive and advocate for this, one of their most coherent programs. The central tenet of Broad Services was to advocate for "more I than T," emphasizing the structured exchange of various forms of information over the expansion of hardware.[91] The ICT Commission argued that the previous focus on the physical aspects of IT had created a problem: while computers and Internet infrastructure were widespread, there was a shortage of usable services for the public. The next challenge they posited was to build an information infrastructure analogous to the physical infrastructure developed in the 1990s. Drawing on communication research, the ICT Commission proposed the concept of "infostructure" a concept partly opposed to material infrastructure.[92] During this phase, the ICT

Commission began to delve more deeply into the understanding and necessity of metadata, which was the basis of the infostructure. In one of their earliest reports (2000) on this topic, they claimed that "Future services will require new information as well as metadata databases. [. . .] the 'soft infrastructure' [is] necessary to provide the dynamic service development that is important for future economic growth."[93]

Infostructure was envisioned as a catalyst for entrepreneurs to innovate various IT services that could drive increased Internet usage, and metadata was a central component. Authors within the ICT Commission contended that Sweden's longstanding tradition of record-keeping represented an untapped "goldmine" ripe for exploitation.[94] To make these registries accessible to entrepreneurs for commercialization, data must be structured, categorized, and standardized to facilitate seamless transfers between different sources. It was essential for databases to communicate with each other, with metadata emerging as a critical component in achieving this goal.[95]

Although metadata was viewed positively in this context, their utilization posed challenges. Opening registries and making substantial amounts of information available for commercial purposes raised sensitive issues regarding integrity, which had also been a focal point of debates in the 1970s and the 1980s. In the Broad Services report, the ICT Commission acknowledged these concerns to some extent. For example, it argued that personal integrity should be "protected" from a legal standpoint. However, such assurances often seemed tokenistic, as the authors simultaneously asserted that many of these legal issues were "a matter of interpretation" and that ultimately, "legislation had to adapt to the demands of the information society."[96] The choice was clear: embracing a more permissive stance on data sharing or rejecting the Information age altogether. This perspective may also have alluded to the recently concluded PuL debate, during which the ICT Commission contended that Sweden could become a leading industrial IT nation within existing regulations and that many issues could be addressed through practical implementation and interpretation.

The ICT Commission's final report, *Breddtjänster*, was published near the end of its nine-year tenures. Its impact on future policymaking remains uncertain. In the years following the turn of the millennium, subsequent politically commissioned inquiries shifted focus to "digitalisation".[97] This concept shared much with the ICT Commissions' focus on infostructures and metadata, emphasizing a transition toward software and databases rather than the physical infrastructure of previous years.[98]

Conclusion

The vision of becoming an IT nation, propagated by the ICT Commission in 1994, began as an optimistic, neoliberal, and market-oriented construct. It was driven by a sociotechnical imaginary that valued market mechanisms, conformity to international standards and EU norms, and the potential of emerging technologies. In terms of surveillance, the prospect of ICT commercialization offered the interpretation that surveillance was a part of that service. The Commission's members perceived state surveillance of ordinary citizens as either inconceivable or reconcilable. The ICT Commission also promoted a liberal mindset toward integrity legislation. Attempts by the state to regulate personal integrity in line with EU standards faced a backlash, yet leaders of the ICT Commission argued that existing legislation could be interpreted favourably in order to accommodate the emerging IT nation. As policymaking in the IT sector shifted toward "infostructures" around the millennium shift, the ICT Commission also introduced metadata as a pivotal concept, seen as crucial for furthering industrial development, as well as for sparking the next generation of policymaking in the shape of "digitalisation" in the 2000s.

When reflecting on their time in the Commission, former members often describe it as coloured by a sense of "euphoria."[99] One member noted, "We tended to look toward the horizon, paying very little attention to the road ahead."[100] Such wordings appear well-rehearsed and reflect the utopian literature and political shaping of the IT sector in the Western world during this period.[101] For this reason, this period is full of inconsistencies, tensions, and vague concepts lacking defined boundaries. The ICT Commission itself remained amorphous, making it difficult to attribute a singular voice to it, despite members retrospectively referring to a cohesive "we." What is evident, however, is that voices from the ICT Commission's agora reflected optimism, particularly regarding how market mechanisms could drive development. It also remained loyal to the overarching goal of propelling Sweden into the Information age, something that had been the basic rationale for its very existence in the first place.

In this regard, the ICT Commission served as an intermediary between the state, the business sector, and individual citizens in an interesting way. The visions articulated by the ICT Commission, forming their IT agora or intellectual marketplace, were aimed at bridging the gap between the political elite and the general public. The commission sought to persuade the broader public of the vast potential of the information age, while navigating concerns about surveillance and personal integrity. Therefore, the ICT Commission's reports and initiatives can be interpreted as

attempts to present a unified vision that could garner support from both the political elite and the public, despite differing levels of enthusiasm and apprehension about ICT advancements and their societal implications.

However, what is the connection to contemporary surveillance culture? Arguably, the ICT Commission's efforts to promote a positive perception of ICT usage by addressing risks related to state surveillance, breaches of personal integrity, and later on emphasizing the importance of metadata offer insights into how a positive discourse emerged in public during these foundational years. It connects the history of the Information age with surveillance debates and issues. Viewing the Commission's discussions holistically, I argue that the sociotechnical imaginary they promoted can be seen as a precursor to the social scientist David Lyon's concept of "surveillance culture", where voluntary sharing of personal data and liberal integrity laws are fundamental principles.[102] According to Lyon, surveillance cultures are sustained by a surveillance imaginary (used here akin to Jasanoff and Kim's STIM), which instils the belief that "users can safely entrust their data to large corporations".[103]

This was a core idea promoted by different members of the ICT Commission. The early documents and reports of the ICT Commission indeed reflect many elements of a surveillance imaginary, similar to what Lyon describes. The sociotechnical imaginary of the 1990s, I argue, played a significant role in establishing a foundation or public acceptance of liberal attitudes toward data sharing.[104] From the outset, the ICT Commission advocated for surveillance-as-service, promoted a liberal perspective on personal integrity, and later emphasized the utilization of data and metadata production as valuable resources for the private sector. Today, metadata is a crucial component underlying the revenue models of global tech companies and is a highly debated topic owing to privacy concerns. Metadata has also continued to stir debate as the world now considers what AI will mean for us.

Notes

1. See the sitting government's view on the geopolitical order in Europe and the economic outlook of Sweden, in Proposition 1993/94:177, 11–17.

2. Starting in 1969, surveillance and integrity issues had followed in the tracks of the state's endeavours to digitalize registries of citizens. See Lars Ilshammar, *Offentlighetens nya rum: Teknik och politik i Sverige 1969–1999* (Örebro: Univ.-bibl., 2002), 144–148; also in Arne Kaijser et al., *Maktens maskiner: Hur stora datorer moderniserade folkhemmet* (Lund: Arkiv förlag, 2024), 137–140; Åsa Söderlind, *Personlig integritet som informationspolitik: Debatt och diskussion i samband med tillkomsten av Datalag (1973:289)* (Borås: Högskolan i Borås och Göteborgs universitet, 2009).

3. During the late 1990s, the Swedish citizens' attitude towards internet and ICT

was somewhat mixed, with some expressing positive attitudes (often young males), while others were more sceptical, especially in terms of surveillance issues and personal integrity. In the year 2000, 51 percent of the Swedish citizens expressed worries about the potential for surveillance regarding ICT, and 63 percent of Internet users claimed that the Internet would facilitate further surveillance of citizens. A major worry was also fear of fraud. Olle Findahl, *Svenskarna och internet 2014* (Stockholm: .SE, 2014), 57.

4. ICT Commission*, Vingar åt människans förmåga,* SOU 1994:118, 47–48.

5. As the ICT Commission was decommissioned some nine years later, Peter Seipel, professor in law at Stockholm University, and the only remaining member of the original commission reflected on the period, arguing that the Commission was in essence a failure. Contrary to what Bildt had argued in 1994, there were no "magic spells and there were no wings that could carry on its own". ICT Commission, "Bruket av vingar", no. 29 (2003), 15. Analyses afterwards have also shown that the visionary forms of governance that the ICT Commission attempted to implement was not efficient, and eventually the Commission got stuck in the internal logic of state bureaucracy. See Patrik Hall och Karl Löfgren, "The Rise and Decline of a Visionary Policy: Swedish ICT-Policy in Retrospect", *Information Polity* 9, no. 3–4 (2004), 149–65; Patrik Hall, "Throwing discourses in the garbage can: The case of Swedish ICT policy", *Critical Policy Studies* 2, no. 1 (2008), 25–44.

6. Andreas Marklund, *Övervakningens historia: Från svarta kabinett till digital massövervakning* (Lund: Historiska media, 2020), 247–54.

7. Ilshammar, *Offentlighetens nya rum;* See also Kaijser et al., *Maktens maskiner.* More on this below.

8. See the title "Den nya verkligheten", in Proposition 1993/94:177, 11.

9. Sheila Jasanoff och Sang-Hyun Kim, "Sociotechnical Imaginaries and National Energy Policies", *Science as Culture* 22, no. 2 (2013), 189–96; Sheila Jasanoff och Sang-Hyun Kim, *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power* (Chicago: University of Chicago Press, 2015), 329.

10. Embedding is described as one of the four elements of sociotechnical imaginaries. See Jasanoff och Kim, *Dreamscapes of Modernity*, 329.

11. See the title "Den nya verkligheten", in Proposition 1993/94:177, 11.

12. Sheila Jasanoff och Sang-Hyun Kim, "Containing the Atom: Sociotechnical Imaginaries and Nuclear Power in the United States and South Korea", *Minerva* 47, no. 2 (2009), 119–46; Jasanoff och Kim, "Sociotechnical Imaginaries and National Energy Policies"; See also Marie Cronqvist, Rosanna Farbøl, och Casper Sylvest, eds., *Cold War Civil Defence in Western Europe: Sociotechnical Imaginaries of Survival and Preparedness* (Cham: Palgrave Macmillan Ltd., 2022).

13. *Vingar åt människans förmåga*, 31. See also ICT Commission, *IT-kommissionens arbetsprogram 1995–1996,* SOU 1995:68.

14. Coppélie Cocq m.fl., "Online Surveillance in a Swedish Context", *Nordicom Review* 41, no. 2 (2020): 179–93; David Lyon, "Surveillance Culture: Engagement, Exposure, and Ethics in Digital Modernity", *International Journal of* Communication (Online) (2017), 824–43.

15. Central work on this topic is Ilshammar *Offentlighetens nya rum* and Söderlind *Personlig integritet som informationspolitik.* For more on the history of computing in Sweden, see Kaijser et al., *Maktens maskiner;* Sten Henriksson, "When Computers Became of Interest in Politics" in *History of Nordic Computing*, eds. Janis Bubenko, John

Impagliazzo, and Arne Sølvberg (Boston: Springer, 2005), 413–23; Thomas Kaiserfeld, "Computerizing the Swedish Welfare State: The Middle Way of Technological Success and Failure", *Technology and Culture* 37, no. 2 (1996), 249–79; Per Lundin, "Documenting the Use of Computers", *Computers in Swedish Society: Documenting Early Use and Trends,* ed. Per Lundin (London: Springer, 2012), 31–57.

16. Hall and Löfgren, "The Rise and Decline of a Visionary Policy", 154. ; see also the government directives, Dir. 1995:1, Dir. 1996:48, Dir. 1998:38.

17. See, for example, Proposition 1999/2000:86, *Ett informationssamhälle för alla.*

18. ICT Commission, *IT och nationalstaten – Fyra framtidsscenarier*, SOU 1998:58; for another example, see the report "IT-Mått" produced by a management consulting company called Cepro AB (ICT Commission, "IT-Mått", no. 2 (1996).

19. Topics included abstract themes such as the future of the national state, the information age as a concept, mid-level reports such as regional IT-development or specific welfare policy-fields such as healthcare, down to more hands-on topics such as digital pedagogy, ethics on the web, women's engagement in IT, IT for the elderly, or technical matters such as safe digital transactions or internet ID. See www.itkommissionen.se for a complete list of publications [accessed 2024-01-26].

20. Tobias Olsson has called them a "think-tank" which is another relevant comparison. Tobias Olsson, "Appropriating Civic Information and Communication Technology", *New Media & Society*, no. 4 (2006), 612.

21. Compare for example the broadband campaign "5 megabit till alla" [5 megabits for everyone], focused on FTTH-technology, and the later project "Mjuk infrastruktur" from 2002 [Soft infrastructure], entirely focused on software infrastructure and data processing. See www.itkommissionen.se [accessed 2024-01-27].

22. E.g., Peter Seipel's "observatory" report series, started in 1995–1996. The Observatory-series was focused on questions of jurisdiction, which was a quite distinct topic separated from i.e. the discussions of forming an infrastructural backbone.

23. All of the ICT Commissions documents and reports are available at www.itkommissionen.se [accessed 2024-01-26].

24. Hall and Löfgren, "The Rise and Decline of a Visionary Policy"; see also Stefan Karlsson, *Nödvändighetens väg: Världsbildande gränsarbete i skildringar av informationssamhället* (Karlstad: Karlstads universitet, 2005).

25. See chapter 22, P. Hall, in Jon Pierre, *The Oxford Handbook of Swedish Politics* (Oxford: Oxford University Press, 2015); See also Jenny Eklöf, *Gene technology at stake : Swedish governmental commissions on the border of science and politics* (Umeå: Umeå University, 2007).

26. Kaijser et al., *Maktens maskiner,* 138–139.

27. Kaijser et al., *Maktens maskiner,* 50–51.

28. Jenny Andersson et al., *Marknadens tid: Mellan folkhemskapitalism och nyliberalism* (Lund: Nordic Academic Press, 2023), 62–64.; Al Gore's High Performance Computing and Communication Act of 1991 (often referred to as the Gore Bill). In Prop. 1993/1994:177, Prime Minister Carl Bildt's education and research proposition, there are references to the development of "Electronic Super Highways" in the US, which in turn is a reference to Al Gore's bill (13). Bill Clinton (with Al Gore as vice president) also instigated the "Advisory Council on the National Information Infrastructure" in 1993. See also Olsson, "Appropriating Civic Information and Communication Technology: A Critical Study of Swedish ICT Policy Visions", 612.

29. Already in 1995, when Ingvar Carlssons social democratic government renewed

the ICT Commissions mandate, the political representation was reduced to only one minister of the cabinet.

30. Hans Westlund, "State and Market Forces in Swedish Infrastructure History", *Scandinavian Journal of History* 23, no. 1–2 (1998), 65–88; Jonas Harvard och Peter Stadius, *Communicating the North : media structures and images in the making of the Nordic region* (Burlington: Ashgate, 2013), 53–55.

31. Matilde Millares, "Om offentligt och privat: I valet mellan välfärdsstat och välfärdssamhälle", *Statsvetenskaplig tidskrift* 114, no.4 (2012); Paula Blomqvist, "The Choice Revolution: Privatization of Swedish Welfare Services in the 1990s", *Social Policy & Administration* 38, no. 2 (2004), 139–55.

32. Blomqvist, "The Choice Revolution", 2004; Andersson m.fl., *Marknadens tid*, 11–15.

33. Bildt's new political program was to be achieved from below, by focusing on the meeting between "users" and "producers". *Vingar åt människans förmåga. 6–7.* Sweden had at this point a long history of state-led infrastructural investments such as hydro-electric plants, nuclear reactors, and telephone lines, often led by social democratic governments in tandem with large companies Jonas Anshelm, *Mellan frälsning och domedag: om kärnkraftens politiska idéhistoria i Sverige 1945–1999* (Eslöv: B. Östlings bokförlag, Symposion, 2000); Mats Fridlund, *Ett svenskt utvecklingspar i elkraft: Aseas och Vattenfalls FoU-samarbete, 1910–1980* (Sandvika: Handelshøyskolen BI, 1995); West-lund, "State and Market Forces in Swedish Infrastructure History"; Harvard and Stadius, *Communicating the North*, 53–55.

34. See government directives for the commission in Proposition 1993/94:177, 115–116; see also Informationsteknologikommissionen; *Vingar åt människans förmåga,* 5.

35. Dir. 1995:1, Dir. 1996:48, Dir. 1998:38; See also Clinton's Executive order 12864 from September 1993. https://en.wikisource.org/wiki/Executive_Order_12864 [accessed 2024-01-26].

36. *Vingar åt människans förmåga,* 46.

37. Kaijser et al., *Maktens maskiner,* see chapter "Datorer för att dra skatt och ge bidrag"; See also Leif Sundberg et al., "From Automatic Data Processing to Digitalization: What is Past is Prologue", *Electronic government,* conference report (Cham: Springer, 2019), 35–36.

38. See *Vingar åt människans förmåga,* 7: "Statens roll, liksom kommunernas och landstingens, är att stimulera och stödja, undanröja hinder, att vara föredöme. Drivkraften måste emellertid ligga i varje människas personliga behov och engagemang"; See also 45–46 "Statens roll".

39. "Regeringen tillkallade den 17 mars 1994 en kommission för att främja en bred användning av informationsteknologin i Sverige, som ett medel att höja livskvaliteten och öka vårt lands internationella konkurrenskraft". Ibid. s.5; See also proposition 1993/94:177, 11–17. ICT was described as one of the key tools to maintain a foothold in the new economic situation of the 2000s. A major issue was the falling quality of the export industry. High-tech exports were in demand and multinational corporations took the best offer regardless of where in the world the industries were placed.

40. *Vingar åt människans förmåga*, 6; See also proposition 1993/94:177, 11–17: See directives for the second (Dir. 1995:1) and third ICT Commission (Dir. 1996:46).

41. Olsson, "Appropriating Civic Information and Communication Technology".

42. This was underscored in the ICT Commission first report that Bildt presented, and as the IT-Commissions mandate was renewed in 1995, internet security and

integrity issues became one of the prioritized topics and remained so up until the end. See *Vingar åt människans förmåga*, 31; See also ICT Commission, *IT-kommissionens arbetsprogram 1995–1996,* SOU 1995:68.

43. Prop. 1993/94:177, 12

44. Söderlind *Personlig integritet som informationspolitik*; Ilshammar *Offentlighetens nya rum*, Kaijser et. al. *Maktens maskiner.*

45. Ilshammar, *Offentlighetens nya rum*, 156.

46. Ilshammar, *Offentlighetens nya rum*, 127.

47. See Ilshammar's list of recurrent arguments against the state's ADB-plans Ilshammar, *Offentlighetens nya rum*, 124. Se also page 156: "Datorn uppfattades som ett redskap för samhällets makthavare, i första hand staten men också de stora företagen, att ytterligare bygga ut sin ställning på vanliga medborgares bekostnad. Många tyckte sig se totalitära drag i datorutvecklingen [. . .]."

48. The government body Data Inspection Agency [Datainspektionen] was formed for this purpose alone in 1973.

49. Marklund, *Övervakningens historia*, 221–27.

50. Marklund, *Övervakningens historia,* 247–54.

51. Herbert Obinger, Carina Schmitt, and Stefan Traub, "The Emergence of Public Enterprises in Historical Perspective" in *The Political Economy of Privatization in Rich Democracies* (Oxford: Oxford University Press, 2016), 22–25.

52. Blomqvist, "The Choice Revolution: Privatization of Swedish Welfare Services in the 1990s"; Ilshammar, *Offentlighetens nya rum*, 290; Magnus Karlsson, *The Liberalisation of Telecommunications in Sweden: Technology and Regime Change from the 1960s to 1993* (Linköping Studies in Arts and Science, 1998).

53. Karlsson, *The Liberalisation of Telecommunications in Sweden.*

54. See interview with Carl Bildt conducted by internetstiftelsen "Carl Bildt – banade väg för nätboomen", Internetmuseum, 2016, https://internetmuseum.se/podd/internetmuseum/carl-bildt-banade-vag-for-natboomen/, [accessed 2022-05-02].

55. Katarina Engberg, *När totalförsvaret föll samman: Dokumentation och analys av tankegodset bakom nedmonteringen av det svenska totalförsvaret 1999–2005* (Stockholm: Kungliga krigsvetenskapsakademien, 2020).

56. The ICT Commission produced reports on topics such as infrastructure, consequences for democracy, ethics, and educational issues. Market orientation dominated the discussions.

57. Olle Findahl, *Svenskarna och Internet: År 2000* (World Internet Institute, 2000), 39. https://internetstiftelsen.se/docs/SOI2000.pdf.

58. ICT Commission, *IT och Nationalstaten*, 7–8.

59. T. Carlén, "Internets påverkan på demokratin i Kina", ICT Commission, no. 36 (2001).

60. Carlén, "Internets påverkan på demokratin i Kina", 57–58; 76–77.

61. Carlén, "Internets påverkan på demokratin i Kina", 77.

62. ICT Commission, *Hur blir en ny infostruktur motorn i e-Sverige? – Rapport. Hearing 7 juni 2000,* SOU 2000:123, 7.

63. This is very much reminiscent of the soft surveillance concept of today. See for example Ronald J. Deibert, *Black code: Surveillance, privacy, and the dark side of the internet* (Toronto: Signal, Mcclelland & Stewart Inc., 2013); Christian Fuchs, *Internet and surveillance: The challenges of Web 2.0 and social media* (New York: Routledge, 2012); Cocq m.fl., "Online Surveillance in a Swedish Context".

64. Ibid. See also the whole series of *Vision 2011+* reports: ICT Commission, *Vårt digitala tjänstesamhälle: Vision 2011+*. SOU 2002:25.

65. *Hur blir en ny infostruktur motorn i e-Sverige? – Rapport,* 15; In the infrastructural sector the ICT Commission argued that it was the state's role to make sure companies upheld some form of quality. See ICT Commission, *Framtidssäker IT-infrastruktur för Sverige* SOU 1999:134, 85, 88; ICT Commission, *PC:n är död – Länge leve PC:n: Nya möjligheter för Sverige,* SOU 1999:86, 9, 22; See also their first report *Vingar åt människans förmåga*, 5.

66. ICT Commission, *PC:n är död,* 22; Also in ICT Commission, *Kristallkulan – Tretton röster om framtiden*, SOU 1997:13, 27.

67. *PC:n är död; Vårt digitala tjänstesamhälle: Vision 2011+*.

68. While integrity as a term, and often in combination with "personal integrity" is frequent, in most cases it is mentioned as something to consider in the future. For an exception, see ICT Commission, *God etik på nätet*, SOU 1998:133.

69. *Integritet, offentlighet, informationsteknik*, SOU 1997:39.

70. Ilshammar, *Offentlighetens nya rum*, 156–96.

71. See for example "Larvig lag" [Editorial], *Svenska Dagbladet*, October 24, 1998.

72. In this sense, the controversy very much resembled the SOPA and PIPA controversies in the US in 2011. See Laura DeNardis, *The Global War for Internet Governance* (New Haven, CT: Yale University Press, 2014).

73. Ilshammar, *Offentlighetens nya rum*, 188.

74. L. Lundquist, "Lagar är till för att följas", *Svenska Dagbladet*, October 23, 1998; See also Ilshammar, *Offentlighetens nya rum*, 188.

75. See for example, "Självmordsuppdrag att skriva nya datalagen" [Editorial], *Nerikes Allehanda*, November 9, 1999; "Persson och Bildt behandlas olika" [Editorial], *Dagens IT*, October 28, 1998.

76. Ilshammar, *Offentlighetens nya rum*, 190.

77. In 1998 and 1999, the ICT Commission's jurisdictional subgroup ["ICT-jurisdictional Observatory"], organized three hearings. See three reports from the ICT Commission: P. Hammarstedt "En missbruksmodell: Ny reglering av skyddet för personuppgifter", no.8 (1998); D. Westman "Rättspolitik på IT-området" no. 9 (1998); M. Brinnen, "Teknikoberoende yttrandefrihetsreglering?", no. 10 (1999).

78. See Hammarstedt, *En missbruksmodell.*

79. Peter Seipel, "Personuppgiftslagen – Bättre än sitt rykte", *Svenska Dagbladet,* November 26, 1998.

80. ICT Commission, *Det IT-rättsliga observatoriets skrivelse om utformningen av en missbruksmodell för personuppgiftsskyddet;* See also Ilshammar, *Offentlighetens nya rum*, 192, 195.

81. Interviewees also suggested this. G. Johnssén, (Personal interview May 11, 2021); Lars Ilshammar (Personal interview April 23, 2021); Ilshammar, *Offentlighetens nya rum*, 192–193.

82. "Hur långt yttrandefriheten går före PUL:s hanteringsregler kommer efter hand att klarläggas genom tillämpningsföreskrifter och rättspraxis." Seipel, "Personuppgiftslagen".

83. Ilshammar, *Offentlighetens nya rum*, 194.

84. D. Olsson,"Lag om personuppgifter kan vara feltolkning", *TT,* October 23, 1998.

85. *Framtidssäker IT-infrastruktur för Sverige.*

86. Proposition 1996/97:173, 2.

87. In the ICT Commission's last report *Bruket av vingar,* members reflect on how the dotcom bubble caused major setbacks for the ICT field. Interview with Seipel, Ivarsen and Ilshammar, 15, 36, 46.

88. Johnny Ryan, *A History of the Internet and the Digital Future* (London: Reaktion Books, Limited, 2010), 126–130.

89. Glimstedt & Zander have described the state of Swedish internet usage around the millennium shift in, Henrik Glimstedt and Udo Zander, "Sweden's Wireless Wonders: The Diverse Roots and Selective Adaptations of the Swedish Internet Economy." In *The Global Internet Economy*, ed. Bruce Kogut (Cambrdge: MIT Press, 2003), 125-126.

90. ICT Commission *Breddtjänster – ett nytt skede i IT-politiken* SOU 2002:51*;* See also ICT Commission "Breddtjänster – några exempel*",* no. 51, (2002).

91. *Breddtjänster – ett nytt skede i IT-politiken*. 9.; See also *Bruket av vingar,* 7–8.

92. Infostructure was a common term within the communications research field in the 1990s. See for example Roy T. Fielding, "Maintaining Distributed Hypertext Infostructures: Welcome to MOMspider's Web", *Computer Networks and ISDN Systems*, Selected Papers of the First World-Wide Web Conference, 27, no. 2 (1994): 193–204. For the Swedish context, see the SOU *Hur blir en ny infrastruktur motorn i e-Sverige?.*

93. "Framtidens tjänster kräver ny information, men även metadatabaser. [. . .] den 'mjuka infrastrukturen' [är] nödvändig för att ge den dynamiska tjänsteutveckling som är viktig för den framtida ekonomiska tillväxten." *Hur blir en ny infrastruktur motorn i e-Sverige?,* 5.

94. *Breddtjänster – ett nytt skede i IT-politiken*, 28.

95. *Breddtjänster – ett nytt skede i IT-politiken*; See also introduction in *Bruket av vingar*, 7; Several reports were produced in which Metadata was discussed thoroughly: "Breddtjänster – några exempel"; "IT-samhällets mjuka infrastruktur – några exempel från Transport, Förvaltning och Hälsovård*",* no. 46 (2002).

96. *Hur blir en ny infrastruktur motorn i e-Sverige?,* 14; see also *Breddtjänster – ett nytt skede i IT-politiken,* 14-19; it was argued that unnecessary obstacles had to be "cleared", 29.

97. Sundberg, "From Automatic Data Processing", 38–39.

98. See for example *Digitaliseringskommissionen*, active 2012-2017 and its report *För digitalisering i tiden: slutbetänkande*, SOU 2016:89.

99. Lars Ilshammar, (Personal interview April 23, 2021).

100. G. Johnssén, (Personal interview May 11, 2021).

101. Philippe Breton och David Bade, *Culture of the Internet and the Internet as Cult: Social Fears and Religious Fantasies* (Duluth: Litwin Books, 2011); Fred Turner, *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (Chicago: University of Chicago Press, 2006); Barry Wellman, "The Three Ages of Internet Studies: Ten, Five and Zero Years Ago", *New Media & Society* 6, no. 1 (2004), 124–125.

102. According to the social scientist David Lyon it is possible to maintain surveillance cultures because of the existence of a surveillance imaginary (Imaginary is here used in a similar manner as Jasanoff and Kim's STIM) that imposes the belief on us that "that users can safely entrust their data to large corporations", Lyon, "Surveillance Culture", 828; see also David Lyon, *Surveillance society: Monitoring everyday life* (Buckingham: Open Univ. Press, 2001).

103. Lyon, "Surveillance Culture", 3.
104. Cocq m.fl., "Online Surveillance in a Swedish Context".

Acknowledgement