SLIDE 1

Hello and welcome to the lecture for the second week of LIS 598 Information Policy. This week we will be examining the concept of the information society, sometimes called the information age or information revolution.

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We will begin by contextualizing the so called information revolution against other, historical great transformations, focusing on the industrial revolution in particular. In the second part we will look at the concept of the information society as a discursive frame. In the third section will look at some of the major scholarly analyzes of the idea of an information society. In the final part I’ll propose an alternative framework for looking at some of the changes over the last 30-40 years.

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To begin to understand the information age, it is necessary to go back, not just to the industrial revolution, but even further the first great historical transformation – the Neolithic revolution. In general terms the Neolithic revolution describes the transformation from nomadic hunter gather societies to agrarian societies that lived in more fixed locations. It is important to note that this massive change is highly uneven –different parts of society experience the transition at different times, and as noted at the bottom there are still some places where the Neolithic revolution is fully realized.

In terms of what the first great transformation brings, we can see all kinds of changes. Some of the major changes include increasing division of labour. With agricultural society you free up a greater share of people to do other things, even though farming is still the dominant form of employment. Other major social systems also tend to emerge with the shift away from nomadic society. Property and writing are two of these. The scope of change is quite dramatic – even things seemingly unrelated are affected. For example once people begin living in sedentary areas, there are even changes in the patters of disease brought about by greater exposure to stagnant water and domestication of animals.

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Against the backdrop of the Neolithic Revolution, we can look at the industrial revolution as the second great revolution. Like the Neolithic Revolution, this is uneven and comes in waves – waves that tend to be associated with different forms of power (steam, coal and oil and electricity). There are numerous other elements in this change – one of the first and foremost is the rise of urban living. This is not to suggest that cities emerged with the industrial revolution, but that they become more common as places to live and work. Another element is the rise in industrial labour, which we will explore in some depth over the next few slides. There are also important political and economic changes, particularly in the European and American context. Industrialization is tied with the emergence of capitalism and early democracies – the two great political revolutions of the late 1700s – French and American – are part of the political backdrop of emerging industrial societies.

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Like the Neolithic Revolution, the Industrial Revolution is highly uneven. The idea of an industrial society and specifically a society dominated by industrial work is quite interesting and to a degree suspect. While historical labour statistics do come with their own caveats – usually inconsistencies in terms of how work was classified – there isn’t a clear period over the past 2 to 300 years where industrial labour has been, without question, the dominant area of employment. One the slide I note the comparison from Pilat and all, looking at the UK, Netherlands and US – arguably the three countries at the heart of industrialization – and the snapshots from various time periods show at no point was industrial employment a majority of employment, though it did hold a plurality in the UK just before the 20th century.

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This graph shows the share of employment in Great Britain (in the first half of the graph) and then England and Wales in the second half divided amongst five sectors: agriculture and fishing, energy and water, construction, manufacturing and services. There are also two missing data points – 1941 during the war, and 1971, the latter of which is a result of inconsistent data. What is clear is that as early as the 1870s, the service sector has started to outstrip industry in terms of share of employment, and over the past few decades, it has shifted from a simple majority to an absolute one – with over 80% of people in the service related industries. As we will see in the Canadian data in a few slides, the current picture here is quite similar

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Here we have some older Canadian data from Statistics Canada, and it is not without its own strange categories – operatives in particular. What is telling is not so much the industry vs service element, but the decline in agricultural work, falling from a near majority before the 20th century to 10% by the 1960s.

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Finally, the current Canadian snapshot from 2016. This table shows absolute numbers and share based on NAICS classification. NAICS is the North American Industry Classification System, and is useful and consistent means of classifying occupations. Occupations are split into two major categories – goods producing and services, with the latter dominating. Agriculture is now just a fraction of Canadian employment. Manufacturing, or what we might think of as the core of industrial employment, is just shy of 10%. The breakdown of the services side is also quite revealing. Of the delineated categories, healthcare is the largest, with retail trade close behind.

Turning to the idea of an information society, information related professions are captured within the two digit NAICS code 51 (for reference NAICS codes can be broken down to 6 digits. 51 is Information generally, 519 is Other information, and down at the five digit level, 51912 is libraries and archives). Even at the broadest level, 51, and combined with culture and recreation, these two sectors are just 4.33% of the Canadian employment. If we include some of the related sectors – professional, scientific and technical services, and even education, the total is still just shy of 20%.

While share of employment is not the only means of assessing what kind of society we live in, it historically has given rise to ideas of an information society as we will see in the third section of the lecture.

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Reflecting on the issue of a third great transformation a number of questions are raised, and identified here in the slides. At this point, I’m not going to dwell on these questions, as they will be used as discussion questions for the week, and I’m interested in your responses.

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In terms of looking at the idea of the information society, many sources credit Bell, and in particular his 1973 work *The Coming a Post Industrial Society: A Venture in Social Forecasting* as the key work for initiating the debate; however, Bell’s book is preceded by other analyzes. Machlup’s *The* *Production and Distribution of Knowledge in the United States* is a key work in this regard, and he is commonly seen as the first to point out the growing rise in information related employment. Touraine and Ellul also predate Bell. Touraine’s work is particularly notable in that he not only used the term post industrial society (or more accurately societe post industrielle), but his work was also far more critical. Bell’s outlook was decidedly optimistic, though this tone is not shared by Touraine. One more important note, Bell did not use the term Information Age or Information Society in his 1973 book; however, by 1980 Bell adopts the “information society” term specifically.

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While the term “information society” and to a lesser extent “information age” has come to be the most common terms, there are no shortage of synonyms. In their review of the literature Carlaw an all note many terms, some of which are far more common than others. One key difference is in the second term, and specifically around society vs. economy. While some of these terms, such as Goldilocks economy, which comes from Gordon’s 1998 work describing an economy characterized by low inflation and low unemployment , have not caught on, others, primarily knowledge economy, knowledge society and network society have been quite common.

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One key element of the idea of an information society is its discursive nature. Extensive work has been done on discourse, discourse analysis and the relationship to policy making. I want to start by highlighting one overarching point from Fairclough that discourse is co-constitutive with social practices, or in other words both influence each other reciprocally. As well discourse, particularly through framing can be used to include and exclude and obfuscate agency.

With regard to some general points on the information society the term is inherently appealing, particularly when contrasted with Industrial society, and negative associations of industrial labour (dirty, long, repetitive, etc…). Information society discourse is often linked to several related terms: flexibility, innovation entrepreneurship and competitiveness. For example the rise of flexible labour and production. We’ll return to the subject of innovation discourse in the third module when we look at innovation policy.

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With regard to evidence of information society discourse, there are numerous examples from around the world and here in Canada. For example the 1993 National Information Infrastructure states, “Every component of the information infrastructure must be developed and integrated if America is to capture the promise of the Information Age.” The EU used its information society portal as a point of web presence for policy for 10 years, and it had a specific Information Society Directive, though this name obscures that this directive dealt largely with ratcheting up levels of copyright protection. The International Telecommunications Union, part of the UN, had two major conferences (one in 2003 and one in 2005) under the title of the “World Summit on the Information Society.” In some ways the use of the term is almost passé, being less frequent, to a degree in more modern policy pronouncements. Still it should be noted that the phrase can now often be used without it being questioned.

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Looking at the Canadian landscape, information society discourse has long captured Canadian policy makers attention, though with slight shifts in the terminology over time. The early, 1981, report from the Department of Communication was titled “The Information Revolution and Its Implications for Canada.” Looking at this report, which is now nearing 40 years old, the authors did recognize many of the emerging policy issues that would arise. For example there is significant discussion around privacy. In 1995 the Government of Canada released its response to the report of the Information Highway Advisory Council (or IHAC). That response was Building the Information Society which outlined many new policies from funding broadband in libraries (Community Access Program) to efforts to increase availability of government services online. More recent documents from 2010, 2014 and 2015 have moved away from information society language, and use instead “digital economy” as term for framing the modern era.

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In terms of information society discourse and its impacts on policy, a fair bit of work has been done around intellectual property rights in particular. May, first writing in 2001, and again in 2010 has noted how rhetoric on an information society has been used to expand copyright and patent protection. Drawing on May, I’ve looked specifically at some Canadian policy documents that reveal how specific discursive techniques are used to justify calls by the government for greater copyright protection.

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Turning then from information society discourse to information society theory, a key starting point is to note that we should speak of theories plural. In this regard, Webster’s work is an excellent review of the many different theoretical approaches to the information society. Looking at some of the major approaches you have proponents first: Bell, Castells and Toffler, who in general terms, view the information society as a fundamental break with previous industrial society. These authors’ views stand in contrast to the critics and skeptics of the information society. While there are many who suggest the information society is not a novel break with the past and instead an intensification of many elements of industrial society, I want to highlight Harvey who we will return to later this week and next. Then there are the theorists who suggest other forms of transformation occurring, but transformations not related to an industrial/informational dichotomy. Giddens suggest rather than the rise of an information society, the key change is the shift from traditional to post traditional societies, which brings about its own set of implications, and the postmodernists, who emphasize the decline of meta-narratives can be represented by a number of theorists including Lyotard.

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Looking more closely at Webster, he highlights several different approaches that have been taken for arguing for the emergence of an information society. Technological theories which emphasize the rise of ICTs; economic theories which tend to centre on the increased importance of information, particularly vis a vis capital and labour as the key factor of production; occupational theories, which served as an early starting point for work by Machlup and Bell, and we examined in some greater depth in the first part of the lecture. Spatial theories which emphasize the changing nature of space (and time as well), most specifically the compression or collapse of distance facilitated by instantaneous communication, and finally cultural theories which underscore the rise and circulation of signs. Ultimately Webster suggests each of these theories has its own shortcomings, and ultimately sides with the critics.

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Looking first at Bell, at the outset I want to make two important remarks. Bell’s work was relatively early in the discussion, and perhaps he gets a bit more credit than her deserves in this regard, but his work, more than any other, seems to have set the stage for the whole discussion and for that he should be credited. Secondly, given the age of Bell’s work, it has also been thoroughly critiqued, and while I will present many elements of that critique here, he still deserves credit for really helping to shape the debate.

Looking then at title of Bell’s 1973 work there are two important points. I’ve already noted that he uses the phrase post-industrial society rather than information society, and the sub title is “a venture in social forecasting.” This is an important element. What Bell is doing, and he is quite clear on this, is simply extrapolating existing trend lines.

Out of this social forecast, Bell notes the rise of the information sector, but more important he suggests theoretical knowledge (rather than information) will displace capital and labour as the source of value in the economy. This is an important point as it breaks the formula of more traditional forms of political economy which often contrasted capital and labour, and to a lesser extent rent as the central elements in the economy. As an outcome of this, he suggests that knowledge workers will become the new leaders of industry. In turn this has made Bell’s work quite appealing to a range of scientific, technical and information related professions.

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Looking then at Bell’s conception, he outlines five key elements: services displacing manufacturing, which was already happening in the early 1970s, and has become much more pronounced since; a dominance of professional and technical classes. Here Bell’s prognostic is less accurate. While some professional and technical classes have excelled in the information age, others have not – for example teachers and librarians are both knowledge workers, but their professional status has risen much, if at all, over the past few decades. With regards to both the axial principle and decision making points, Bell was clearly suggesting the emergence of a technocratic society with rational policy making. We’ll look more at the discussion around evidence based policy making next week, but I think it is safe to suggest that Bell’s forecast has not been entirely realized. Finally with regard to the future orientation and the control of technology, one can suggest technology has been of rising importance; however, I would suggest that if one looks critically, this also marked the industrial revolution as well, if not all periods. What has simply happened is that we now no longer consider many much older technologies as ‘technologies.

Two of Bell’s claims that I particularly want to note are his suggestion that capitalist social structures will weaken and property will be less central. I think the former clearly hasn’t happened, and the latter in particular underestimates new modes of propertization/commodification, specifically intellectual property rights. In fact Bell’s 1973 work is effectively silent on intellectual property rights in the information age, though these are noted in the short essay on the information society he wrote in 1980, and this is also when he started using the term information society instead of post industrial society.

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Bell’s 1980 Essay, the Social Framework of the Information Society, while not as thorough as his 1973 book, does further clarify some of Bell’s thinking. I’ve pulled some of these points on this slide from a table in the essay comparing preindustrial, industrial and post industrial society, which I believe helps illuminate his argument. The final part of the essay highlights a number of information policy issues from privacy and government library policy to the need for the government to promote information access and diffusion and the “mundane” problem of intellectual property.

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As I noted earlier, Bell’s work has attracted a lot of critique. The quote from Webster deals with Bell quite directly. Rather than the extrapolation of trend lines (Bell’s social forecasting) indicating a new society; what he has done is simply identify trends that are extensions of the present. What is also notable is the relationship between Bell and Castells. Castell’s work definitely shares a degree of similarity with Bell’s. Both are critical of each other, with Castell’s repeating a common critique of Bell, that his work is technologically determinist.

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Turning then to Castells, he has written extensively, though the most significant piece of work is the three part information age trilogy from the turn of the century. His work is massive spanning nearly 1500 pages dealing with everything from the decline of paternalism to the relationship between a network society and terrorist groups like Aum Shinrikyo. Much in the same way Bell deserves some credit for pioneering the information society debate, Castells should be similarly credited for the scope of his work.

Castell’s work has a Schumpterian influence, and we’ll read Schumpter during the week on innovation. Like Bell, he sees capital being displaced as the central force of productivity in the economy, with innovation taking its place.

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In addition to innovation the other key thrust of Castell’s work is the rise of networks. A key element in his thesis is the way networks reshape power relations and organizations. As noted in the slides networked organizations whether multinational companies or terrorist groups are supplanting traditionally hierarchical organizations. Cities, particularly global cosmopolitan ones are becoming increasing centres of powers with implications for nation states.

Casterlls still gives capitalism a central role, though he suggests that the key transition is from industrial to informational capitalism. As noted in the slide he is critical of the term information society; however, his entire trilogy is titled “The Information Age” so he does not remove himself from information age/society dicsource.

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Bell and Castells are linked by their emphasis on a distinct break with the past, with this break centering on the shift from industrial to an informational society. Other theorists have approached the topic differently. One of the key thinkers in this regard is Giddens. For those not familiar with Giddens he has been a major sociological theorist over the past three plus decades, authoring more than 30 books. A report on citations in the Social Science Citation Index from 2014, notes that from 2000 to 2014 he totalled 14,000 plus citations – more than anyone else, and nearly twice as much as Castells. Neither a post-modernist, nor an information society theorist, Giddens offers an alternative way of theorizing contemporary society, specifically that we have moved to post traditional society where we are dealing with the consequences of modernity.

This brings about numerous changes, far more than can be touched on here, but I raise this in order to have an different perspective on explanatory theorization of modern changes. With specific regard to policy Giddens had a marked impact on the Blair government in the UK where he was an advisor. Of course many of these points are raised the chapter from Giddens’ Consequences of Modernity which is a reading for this week.

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While several scholars see the changes over the past generation as marking a new type of society, or a fundamental change with traditional society, there are a large number of critics of this approach who, in general, suggest that the major trend is an intensification of trends in industrial capitalism, not a radical break with them. Many of these scholars point to a variety of sources of evidence from growing inequality, increasingly powerful corporations (and to some extent a decline in state power), and the increased reliance of the market and market oriented thinking to order society.

In terms of who some key thinkers are in this regard – from the LIS community Herbert, Anita and Dan Schiller (that is husband, wife and son for reference). On the Canadian side, Vincent Mosco has been among the leading critics, and I also want to highlight Harvey who we will be reading next week. In the interest of full disclosure, I tend to agree with the critics, though do like several elements of Giddens work on structuration.

It is important to note that the critics do see significant change – beginning in the 1970s – the same time as information society discourse and theory begins to emerge. However, they are very clear that these changes are not a great transformation like the industrial revolution, but changes in capitalism (and by extension capital’s relation with nation states). In the final section of the lecture, I want to trace some this counter argument.

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To begin to understand why the 1970s is so important, one needs to go back, and a key starting point is 1914, specifically Jan 5 1914 when Ford introduces the $5 a day wage. This represented more than a doubling of wages for Ford workers, and did two things. First it ended the massive turnover problem at Ford. Second it created a wage that helped expand demand – demand for more cars (as workers had a greater salary), but for more goods in general. This was the beginning of what is called the Fordist paradigm, Fordist social contract or simply Fordism. Of course two World Wars and a Great Depression intervene in the Fordist paradigm, though out of the great depression we get the Keynesian consensus, based on the economic theory of Keynes that government spending should rise when the economy lags to stimulate demand, and then in periods of greater economic prosperity government spending recedes. Towards the end of World War II we have the Bretton Woods conference, which establishes a gold standard for monetary policy and leads to the creation of the IMF, World Band and the ITO, the International Trade Organization, which failed, though the main international trade agreement, GATT – General Agreement on Tariffs and Trade did survive. Thus as Western societies enter the post World War II period there is an international financial and monetary order, and a golden period of the Fordism. Through the1950’s and 60’s private companies are profitable and expanding, labour opportunities and wages also expand, and governments have expanding tax bases which they can use to fund social programs. By the 1970s this system breaks down under a number of factors. Nixon abandons the gold standard and lets the US dollar float against other currencies, there are a series of oil crises and the emergence of stagflation – high unemployment and high inflation, which should be counter-cyclical. As a policy response to the challenges of the 1970s we see a new type of conservative policy response first in the UK, but also in the US and Canada. The election of first Thatcher, then Reagan and Mulroney marks the emergence of political neoliberalism, which emerges from academic neoliberal thought.

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Also happening at this time is growing globalization. Capital and labour mobility are greatly enhanced by ICTs, which allow transnational coordination and greatly significantly facilitate the emergence of multinational corporations. Trade becomes more liberalized with the 1994 Marakesh Agreement. While the Bretton Woods conference had created a system for global trade in goods, the 1994 Marakesh Agreement, which established the World Trade Organization (WTO) also saw two new agreements on trade – GATS, the General Agreement on Trade in Services, and TRIPS, the Agreement on Trade Related Aspects of Intellectual Property. As we will explore next week when we discuss influences information policy these changes, underpinned by neoliberal ideology which emphasized the state’s role in creating the conditions for private capital accumulation, have had significant effects on range of policies .

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Next week we will examine neoliberalism further, as well as other trends in information policy. In preparation for next week please ready Copy and Harvey, both writing on neoliberalism and Howlett on policy capacity.