1. Introduction to the *Research Handbook on Information Policy*

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1.1 THE INFORMATION SOCIETY THESIS REVISITED

I should like to begin the Research Handbook on Information Policy by briefly revisiting what became known as the information society thesis. I shall argue that the thesis, which had begun to look a little antiquated, has recently received some unexpected and significant boosts. At risk of sounding opportunistic, given that coronavirus has been responsible for human woe on a biblical scale, I will argue that the global pandemic has finally brought the information society into being—has at last delivered, in several specific ways, the much-predicted ‘paradigm shift’. In subsequent sections, I will then focus on information policy directly, initially in general terms and then through a chapter-by-chapter introduction to the contents of this volume.

The relevance of the information society thesis to information policy should be reasonably clear. The emergent post-industrial information society is the empirical, more precisely the socioeconomic and socio-technical, context of information policy. This is not to imply that there is no information policy in pre-industrial or industrial societies; such a claim would be absurd, as chapters by historians in the present volume will prove. However, even though information policy is not confined to information societies, it is nevertheless especially important in information societies; information policy presumably comes into its own in societies where ‘what counts is not raw muscle power, or energy, but information’ (Bell 1973 [1976], p. 137).

In essence, the information society thesis holds that the old industrial order has given way to a post-industrial, information-centred society. Beyond that, it ramifies into a large number of interrelated propositions articulated in a range of versions, modes and registers by a multiplicity of thinkers, dead and alive (see Duff 2000, Lyon 1988, Raban et al. 2011, Webster 2014). I will concentrate here primarily on Daniel Bell’s, the original English-language formulation and still the backdrop of most information society debates. It was the late Bell (1919–2011) who, initially in two seminal papers under the pregnant title ‘Notes on Post-Industrial Society’ (Bell 1967a, Bell 1967b), and then definitively a few years later in *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (Bell 1973 [1976]), laid out the evidence for an ongoing historic change in America’s economy and social structure.

Bell built upon the received wisdom that an industrial revolution peaking in the nineteenth century turned pre-industrial society into industrial society. What he discerned now was the outworking of another major socioeconomic shift. Industrial society was characterized by the manufacture of goods, with factories its prime institutions. Its successor, post-industrial society, by contrast, is based on services. The services sector at the time Bell was writing already accounted for the majority of jobs and the lion’s share of gross national product. Bell’s main source was figures from the United States Bureau of Labor Statistics showing 35.9 per

cent employment in goods-producing industries (including agriculture) for 1968, with services accounting for 64.1 per cent; these would change to 31.7 per cent and 68.4 per cent, respectively, by 1980 (Bell 1973 [1976], p. 132). Ergo, ‘the United States is no longer an industrial society’ (Bell 1973 [1976], p. 133). The projections held up. In 2019, 1.34 per cent of the US workforce was employed in agriculture, 19.81 per cent in industry and 78.85 per cent—four out of every five workers—in services (Statista.com 2020).

However, it is the type of services that marks out post-industrial society as an advance—Bell undoubtedly casts the transition as a form of social as well as technological progress—on industrial society. It is not the service society popularized in period dramas such as *Upstairs Downstairs* and *Downton Abbey*, with a majority of wage-workers tiring themselves out in domestic service for a moneyed leisure class. Nor is it ‘McDonaldization’, service work as low-skill jobs in retail and the like. Bell’s preoccupation was rather with professional, knowledge-based services: scientists, technicians, medical and allied health professionals, educators, accountants, professional librarians, government bureaucrats, journalists, data analysts of myriad kinds, and many more. It was towards these ‘white collar’ office jobs that the bulk of employment was being relocated away from the ‘blue collar’ factory setting, just as the industrial revolution involved a mass migration away from the agricultural and extractive labour of pre-industrial society.

The growth of a broad professional and knowledge class is the bedrock of post-industrial society. But the real nucleus for Bell, a point that he never ceased to reiterate, was the scientific-technical elite which produced and deployed ‘theoretical knowledge’, i.e., what is more commonly known as ‘big science’. Here Bell drew a vivid contrast with industrial society, whose great innovations, he wrote, had been made by amateurs, ‘talented tinkerers’ such as Alexander Graham Bell and Thomas Edison (Bell 1973 [1976], p. 20). The industries of post-industrial society, such as plastics, pharmaceuticals and nuclear energy, on the other hand, are derived from large-scale research. Bell of course acknowledged the truism that all societies are based on knowledge: the issue is what kind of knowledge; and post-industrial society signified the establishment of scientific knowledge and its systematic application to technology.

Bell went as far as to postulate that scientific personnel constitute the vanguard of a new order. ‘If’, he suggested, ‘the dominant figures of the past hundred years have been the entrepreneur, the businessman, and the industrial executive, the “new men” [*sic*] are the scientists, the mathematicians, the economists, and the engineers of the new intellectual technology’ (Bell 1973 [1976], p. 344). By ‘intellectual technology’ he meant sophisticated problem-solving tools, such as models, simulations and forecasting, which extended the power of the human mind, just as the machine technology of the industrial era had augmented physical labour. ‘The entire complex of prestige and status’, Bell enthused, ‘will be rooted in the intellectual and scientific communities’ (Bell 1973 [1976], p. 345).

For the most part, of course, this resembles a fairly typical late 1960s/early 1970s fantasy, the sort of optimistic view of the world that flourished briefly in the seminar rooms of Ivy League colleges in that halcyon era. Professor Bell was indeed heavily criticized at the time (e.g., Miller 1975, Schroyer 1974, see also Ferkiss 1979). Moreover, subsequent decades were not particularly kind to this focal point of his thesis. Entrepreneurs—especially tech entrepreneurs, ironically—today enjoy stratospheric social as well as economic status; politicians of all stripes are still largely beholden to owners of capital; corporations have remained the central institutions of society and have arguably now even colonized the campus.

However, it is very interesting—I do not venture more—to note how science suddenly became highly authoritative and prestigious during the current (at time of writing) coronavirus crisis. For the duration, chief scientific officers have stood next to presidents and prime ministers dictating the latest variant of lockdown policy. This has occurred across the globe but was most visible in Sweden. ‘Sweden’s government is perhaps alone in the world’, according to German media outlet DW, ‘in delegating the country’s coronavirus response almost completely to its public health agency.’ The article proceeds to describe the *modus operandi* of ‘state epidemiologist’ Dr Anders Tegnell two months into lockdown:

And while state epidemiologist Anders Tegnell has become a polarizing figure internationally as he explains Sweden’s approach in interview after interview, at home he exudes calm and dependability. Every working day, for 60 days now, he or one of his deputies has held a press conference at 2 p.m. at the offices of the Public Health Agency. There they run through the same charts of new cases, deaths and hospital numbers, in front of the same background, in front of many of the same journalists. (Orange 2020)

Whether the Nordic nation’s liberal approach to lockdown was right or wrong is beside the point: what happened there, and to a lesser extent elsewhere, was nothing less than a *momentary manifestation of scientifico-political power*. It was not just politicians ‘following the science’; it was experts actually in the seats of power; Tegnell as the iconic ‘new man’. The world was treated to a glimpse of a potential future society, and in that respect the information society thesis has been illustrated for the first time. Of course, the status quo ante is being more or less restored, but coronavirus at least showed us what a knowledge-driven polity—specifically, iatocracy—could look like. Bell’s vision of public policy harnessed to scientific evidence remains an important and to some extent—switching to a clearly normative mode—attractive one (see also Cambridge Union 2020, Duff 2020, Pierre 2020, Stehr & Adolf 2018).

It can well be argued that the story thus far is about knowledge society rather than information society. Close inspection of *The Coming of Post-Industrial Society* does indeed suggest that Bell was not at that time interested in information in its imminent cybercultural form. Reflecting the industry’s limited ambitions at the beginning of the 1970s, his references to computer technology were confined to mainframes and their deployment by scientific and governmental elites (Bell 1973 [1976], pp. 42, 347). However, as the microcomputer revolution gathered pace in Silicon Valley, Bell’s tune also began to change. By the end of the 1970s, he had adopted the new descriptor ‘information society’ and was focusing on the impact of computerization on the United States and other technologically advanced countries. As he wrote in his eloquent and influential article, ‘The Social Framework of the Information Society’:

In the coming century, the emergence of a new social framework based on telecommunications may be decisive for the way in which economic and social exchanges are conducted, the way knowledge is created and retrieved, and the character of the occupations and work in which men [*sic*] engage. This revolution in the organizing and processing of information and knowledge, in which the computer plays a central role, has as its context the development of what I have called the postindustrial society. (Bell 1980, pp. 500–1)

Telecommunications was for Bell the vital infrastructure of post-industrial society, just as energy grids and railways had been the infrastructure of industrial society (and before that, caravans and silk roads the infrastructure of pre-industrial society). He by now saw with great

clarity that it was not the computer on its own, but computers in combination with telecommunication networks, which would—astride the post-industrial socioeconomic trends that he had spotted earlier—bring about the information society, in the sense of a technologically driven social transformation enveloping entire populations. Following his Harvard University colleague Anthony Oettinger, he chose to call the new technological system ‘communications’ (Bell 1980, p. 514). Information society was thus a synthesis of post-industrialism and communications.

This element in Bell’s thesis has of course been more strongly vindicated, especially after the arrival of the world wide web in 1994 and the subsequent mass diffusion of computers, telephones and other digital devices with internet connectivity. Bell authored further articles on the subject, but by the late 1990s a new commentator, more attuned both technologically and culturally to the zeitgeist, had arisen. Elijah’s mantle passed to Elisha, the younger prophet Manuel Castells (at least Bell, the classic Jewish genius in Gentile society, would have appreciated this trope!). As Peter Golding noted at the turn of the millennium, Castells’s ‘powerful and encyclopaedic survey of the “information age” represents the most important recent examination of the information society thesis’ (Golding 2000, p. 170).

Among many substantial innovations, Castells widened the scope of the thesis to the global information society while also putting it on a more critical footing, prioritizing socioeconomic issues glossed over by the master. What needs to be picked up here, though, is Castells’s signature phrase ‘the network society’ (Castells 1996). By promoting this new descriptor, Castells registered that electronically networked information and communication had become definitive of the particular phase and form of information society that has materialized.

This is the second dimension of the information society thesis which has been put to the test by coronavirus. The near-global lockdown presented a unique opportunity to see if the new technological system would indeed allow society to continue operating in the absence of physical contact. And it is now safe to say that digital devices equipped with cameras and microphones succeeded in delivering more or less seamless face-to-face, real-time, one-to-one and group connectivity. User-friendly branded applications such as Zoom and Webex came into play on top of the already phenomenal affordances of the likes of Amazon, Google and Facebook. All this ‘hi tech’ enabled billions of people to communicate, study, work, shop, consult, confer, debate, party and even mourn remotely. Virtual forms of life replaced offline ones—and due to the suddenness of the crisis, they did so almost overnight. The test, in short, was passed.

The traditional mass media of radio and television could never have produced such a result, because they were always aloof, top-down modes. It is computerization that has delivered genuine one-to-many and many-to-many telecommunication, horizontal and not just vertical interactivity, the long-awaited ‘global village’; and it is this multi-functionality that helped the human show to go on during the pandemic, averting isolation and the collapse of society despite long months of draconian measures. History has thus witnessed, alongside the momentary manifestation of scientific-political power, the *decisive consolidation of mass communications*. Of course, it is impossible to speak of complete success. There are inequalities and anomalies galore—many of them probed in chapters of the present volume—but by and large social life has managed to survive and even flourish, thanks to intellectual technology and the rise of the network society—just as the information society thesis predicted it would.

However, there is a third element of the information society thesis that has been brought out by the coronavirus crisis, and it is not possible to be positive, or even ambivalent, about

this one. Governments everywhere have significantly stepped up levels of routine surveillance. The escalation has had both offline and online aspects. Lockdowns (the confinement of citizens to their homes either entirely, as in some countries, or with concessions for exercise and other essentials, as in the United Kingdom) have been policed zealously not only by officer patrols and roadblocks but even with helicopters and drones. Moreover, the new rules have been enforced not only by emergency legislation but also through ad hoc government ‘guidelines’ nowhere enshrined in law. For example, the statutory instrument which applied in Scotland did not specify a single walk per day for exercise (Scottish Parliament 2020), but police nevertheless harassed anyone suspected of indulging in more than one sortie.

Thus, the rule of law, the fulcrum of civil liberty, was replaced by rule through ministerial diktat. *Lex rex* (the law is king) reverted to *rex lex* (the king is law), to adopt the terminology of Scottish reformer Samuel Rutherford (1644 [1843]). This, of course, is the stuff of totalitarianism.

In addition to offline, the arrival of the information age has presented the authorities with an unprecedented and ever-increasing arsenal of panoptic technologies. Video surveillance cameras, including facial recognition, have been exploited to the full, sometimes in flat contradiction to their agreed terms of use. For example, number-plate recognition was used to apprehend not terrorists carrying bombs but holidaying motorists (The Telegraph 2020). Such ‘function creep’ is a sign of technological determinism at its worst. Another potentially worrisome development was the rollout, in some countries by compulsion, of contact tracing apps, whereby carriers of the virus were made to advertise their whereabouts via mobile phones, or else to keep at home with their space-time coordinates remotely monitored. It is actually hard to imagine a more ‘Orwellian’ scenario.

However, it is the public response to the escalation that is most alarming. The popular reaction has included: panic; regimented following of orders, including innumerable U-turns; informing on neighbours; unquestioning reception of incessant press and broadcaster propaganda; social media ostracism of alternative viewpoints, even rational-critical dissent, about the ‘narrative’; and eastern bloc-esque spectacles of acclamation, as in the British Thursday-evening clapping of National Health Service staff. Many of these behavioural patterns can be understood at one level, and some even to some extent justified, but in the long run they implicate the rights of liberty and personal privacy. It is troubling that a virus—or anything—can induce a social psychology which cancels virtually overnight hundreds of years of democratic work.

The authorities’ handling of the pandemic has arguably (this of course is a personal position, not that of the volume’s other contributors or publisher) therefore resulted in what may be called the *normalization of neurotic panopticism*. It remains to be seen whether any of the civil damage can be undone if and when the viral threat has receded, but it is surely likely that panopticism—always the chief fear of information society theorists and especially when it is conducted, as admittedly it was in this case, genuinely for the sake of public health and welfare—will have to a considerable extent been permanently advanced.

Liberty and privacy are direct information policy issues. No one recognized this more clearly than Bell. His entire career was spent scaling the interface between academic research and public policy; that is why he co-founded *The Public Interest*, the policy quarterly which published his preliminary notes on post-industrial society (Waters 1996, p. 15). *The Coming of Post-Industrial Society*, while mainly empirical in its body, ends with a lengthy coda evincing an impressive command of both theoretical political philosophy and applied public policy

(Bell 1973 [1976], pp. 370–489). In ‘The Social Framework of the Information Society’, Bell ranged again over multiple political and legal issues and designated them, not least the protection of personal data, as problems for national information policy:

Libraries have largely been private or locally controlled; now great data banks are being assembled by government agencies and by private corporations. Are they to be under government supervision or unregulated? All of these are major questions for the future of the free society and bear on the problem of a national information policy. (Bell 1980, p. 515)

Bell did not presume to have ready-made answers, not surprisingly given that the metamorphosis to information society was *ex hypothesi* at a formative stage. He wrote ‘Social Framework’ in the second half of the 1970s. Twenty years later his arguments were still controversial, especially for the economic left, which struggled to see anything authentically revolutionary about the information age. ‘Capitalist economies’, Nicholas Garnham, for example, cautioned, ‘have been knowledge economies for a long time and for the “information society” thesis to hold up we would need to establish a large change in what are long-term trends’ (Garnham 2000, p. 143). It was a fair challenge, but I am suggesting that it has now, not necessarily fully but in three specific, substantive senses, been met, notwithstanding the undeniable resilience of ‘capitalism’. The *manifestation of scientifico-political power*, the *decisive consolidation of mass communications* and the *normalization of neurotic panopticism* together amount to a great societal change, as major as anything that attended the earlier transition from pre-industrial to industrial society. Now, in the third decade of the final millennium, finding ourselves much further along the post-industrial path—a path floodlit all of a sudden by a global emergency—we ought to be in a better position to adjudicate on the outstanding issues of information policy.

1.2 THE FIELD OF INFORMATION POLICY

The first wicked problem when thinking about information policy as a field is simply finding an acceptable definition. It is no use highlighting a specialist area, say freedom of information, as information policy and leaving it at that. Drawing up lists of putative information policy topics is also inevitably short-sighted. What is needed is a sufficiently broad and open-ended—hence, future-proofed—conception of the subject matter. Here I will briefly discuss in chronological order four such approaches, all of which catch in overlapping ways key dimensions of what is at stake. Of course, this does not mean that they are the only important approaches. On the contrary, the present volume is full of chapters by leading scholars who have themselves made equally viable contributions to the definition of the field. However, a beginning can be made with the four selected here. In the final section of this Introduction, I will then attempt to pick out some of the ways in which the *Research Handbook on Information Policy* aspires to drive the field forward.

A classic source is Marc Uri Porat’s groundbreaking report, *The Information Economy* (Porat 1977). In its final chapter, entitled ‘The Elements of Information Policy’, Porat propounded the following definition: ‘information policy attends to the issues raised by the combined effects of information technologies (computers and telecommunications) on market and non-market events’ (Porat 1977, p. 207). These issues, Porat explained, are both ‘vertical’, meaning ones internal to the information infrastructure, and ‘horizontal’, or problems arising

from the impact of information and communication technologies (ICTs) on all other sectors of the economy (Porat 1977, pp. 205–7). Porat's definition was thus highly inclusive. Broken down, it incorporated not only familiar issues such as national library policy and copyright, but also computer literacy in school curricula, medical records, management information systems, media concentration, the survival of daily newspapers (a looming democratic crisis even then!), computer-assisted crime, satellites and even maritime law and green issues, among dozens of others (Porat 1977, pp. 208 ff.). If the largesse seems reckless, the defence resided in the eminently sensible claim that 'no portion of the U.S. economy is untouched by information technology' (Porat 1977, p. 207).

Porat not only labelled as information policy every issue in any way involving ICTs, he went much further and recommended the immediate installation of an 'interagency coordinating body' inside the 'Executive Office of the President [of the United States]' (Porat 1997, p. 208). This was perhaps exceedingly ambitious, at least for its time, so it is not surprising that the proposal did not gain traction, despite Porat's report having been issued by the Department of Commerce. Invocation of a 'national information policy' has already been observed in Bell's writings, and it is a totem that surfaces periodically, for example in the work of the late Nick Moore (e.g., Moore 1998). Nor should it be laughed at. There is indeed a complete lack of coordination in the ministries dealing in aspects of information policy, even with reference only to core issues, not to mention those arising at the remote periphery of the economy.

The current disorganization of course has many drawbacks: like capitalism itself, to adapt a well-known remark from Leon Trotsky, information policy suffers from being a framework in which 'every department thinks for itself and none thinks for all'. However, there are also profound politico-philosophical questions around whether a centrally directed information economy is preferable. Moreover, there is the logistical conundrum of how exactly an information commissariat with a universal remit could work in practice—even under totalitarianism. Nevertheless, Porat was absolutely correct that information policy should be examined, if not coordinated, at the macro level, and he furthermore provided (in the preceding chapters and in subsequent appendices to his report) robust econometric tools for doing so.

Another important definition was offered by Terrence Maxwell (2003). Maxwell interprets 'information policies' (he uses the plural) as 'social, political, economic and technological decisions about the role of information in society' (Maxwell 2003, p. 1). This definition captures very well the basic rationale of information policy, which is to interrogate and influence the role that information plays in society. It also brings out the fact that this role results entirely from human decisions; it is not, as some would have us believe, technologically determined, although human agents in the technology industries, programmers as well as executives, make choices which shape that role, as do political and economic actors, and many other individuals and groups in society.

'These decisions', Maxwell explains, 'operate both at a societal level when applied to national and international policy, and at an instrumental level, as they impact the creation, dissemination, use and preservation of information' (Maxwell 2003, p. 1). He alludes here to a highly fecund concept often called the 'life-cycle' of information. That is to say, to fully understand information's role in society it is necessary to examine how it is created, as with, say, authorship; how it is distributed, as with, for example, broadcasting; how it is used, as with, say, downloading; and how it is preserved, as with, for example, the cloud. What might be added is the very end of the life-cycle: decisions often also need to be made about infor-

mation's destruction—as with child pornography and the putative right to be forgotten. All of these 'stages' lie within the purview of information policy properly understood.

Information policy has also been defined as 'the normative theory of the information society' (Duff 2004, 2012). This reading, like Porat's and Maxwell's, demonstrates the reach of information policy, its penetration into the entire structure of contemporary and future society. In addition, it emphasizes the normative, that is to say, the ethical, element that should be at the heart of all information policy. *A Normative Theory of the Information Society* opens with a declaration that the 'existential crisis of the information society is over' (Duff 2012, p. 1). To reprise: 'is' questions have been more or less settled; the focus now must shift to 'ought' issues. The information society is not what it ought to be, in numerous respects: privacy is disappearing, the digital divide persists in various guises, information quality—as in 'fake news', for example—is, sadly, a growing problem, and so on. Policy-making should therefore be geared to reform, in pursuit of a good information society; any such policy is good information policy. Of course, perfection can never be realized, but that is no excuse for not trying to be better, just as the clinical impossibility of being completely clean, as British social philosopher R.H. Tawney once humorously remarked, is no excuse for not washing. Synthesizing and updating the political philosophies of Tawney and John Rawls, *Normative* outlined a just social-democratic information polity which could easily be achieved given sufficient human will.

Finally, it would be remiss not to mention the exceptional corpus produced by Luciano Floridi. As is well known, Floridi has significantly developed the field of the philosophy of information. Most of his contributions thus far have been to branches of philosophy unrelated (or not closely related) to information policy, but he has trailed a forthcoming monograph, the fourth in a 'tetralogy', entitled *The Politics of Information* (Floridi 2020). Until that arrives, I will settle here for a few tentative comments on his essay 'Hyperhistory and the Philosophy of Information Policies', published in a major open-access volume, *The Onlife Manifesto: Being Human in a Hyperconnected Era* (Floridi 2015).

Floridi maintains that developed countries have entered a new stage that he calls 'hyperhistory', wherein societies have 'move[d] from being ICT-related to being ICT-dependent' (Floridi 2015, p. 52). The philosophy of information policies in hyperhistory 're-interprets humans as informational organisms living and interacting with other informational agents in the infosphere' (Floridi 2015, p. 54). The body of Floridi's argument recalls Alvin Toffler's 'third wave' (Toffler 1980), the central postulate being the alleged imminent decline of the state and its territorially based institutions. In history, according to Floridi, 'the State developed by becoming more and more an Information Society, but in so doing it increasingly made itself less and less the main information agent' (Floridi 2015, p. 54). In hyperhistory, by contrast, there will be and already are many other powerful information agents, especially what he terms 'multiagent systems' (MAS). These 'have the data, the power (and sometimes even the force, as in the case of cyber threats), the space, and the organisational flexibility to erode [the State's] political clout, steal its authority and, in the long run, make it redundant' (Floridi 2015, p. 56).

Floridi focuses, and this of course is more reminiscent of Castells, on global social movements, regional organizations and other formations thriving on networks, or what he (Floridi) calls 'an ontology of interactions' (Floridi 2015, p. 59). These MAS can also be artificial, as in, to use his own example, a coffee-machine combined with a timer and a human inputter (Floridi 2015, p. 60). In the event, Floridi never does explicitly define information policy, but

(unless I am mistaken) his underlying philosophy suggests—and this is what would take his politico-informatic position beyond Tofflerism—that hybrid and artificial information agents will be the central players in the new aeon.

It is necessary now to make some points about information policy's locus in the academy. To begin with, it should be acknowledged that information policy is a bona fide 'field'. That is to say, it is more than a research stream, in the way that, for example, *Drosophila* research is a research stream. There are literally thousands of *Drosophila* papers, since fruit flies have proven themselves to be very amenable to being researched, but these are authored by scientists working in a large number of different fields (Nature.com 2020). Information policy research is more than that, more cohesive, more freestanding than a research stream. However, information policy research is also less than a discipline, in the strong sense that classical disciplines such as philosophy and physics are disciplines, or newer disciplines such as library and information science (LIS) and media studies are disciplines. Some might wish for it to be a discipline but, at present at least, there is no sign that it is anywhere near being such. A Google phrase-search will reveal the existence of only a handful of 'professors of information policy' in the entire world and, to my knowledge, literally zero departments of information policy akin to departments of philosophy or LIS.

However, there is certainly an expanding cadre of specialists in information policy across the globe; there is a healthy conference circuit; there are established journals of information policy; there are burgeoning book series; and of course there is now also a research handbook on information policy. These prove all that is needed, that information policy is a *field*, in the sense of a major, coherent subject—and one with a future.

This then begs the question of where the field should 'sit' in the disciplinary structure of the modern academy. The affiliations of contributors to this volume, for example, include LIS, journalism, communication, political science, sociology, management and law. Other contestants are computer science, philosophy (several contributors are qualified in philosophy) and Porat's home discipline, economics. A few departments in some of these disciplines house centres or institutes dedicated to information policy research, of varying longevity and distinction. Some information policy research also emanates from large multidisciplinary schools within universities. There is in addition the occasional centre or institute with 'information policy' in its name outside of 'academia'. All this implies, of course, that information policy is essentially an interdisciplinary field, and that it therefore does not belong to any one discipline.

That sounds fine, except that despite the voluble lip-service paid to interdisciplinarity in the academy, not sheltering under a 'mother' discipline is in practice highly perilous. A recent British Academy report on careers in interdisciplinary fields, based on interviews with holders of a range of academic ranks, makes sober reading. Doctoral and post-doctoral researchers, and even established scholars, are severely warned about the job risks of straying outside the protective cover of a discipline, with its attendant regular funding, professional networks, and so on (The British Academy 2016). It is all very well to say that information policy research is of epochal importance—which it is—but scholars must also ask mundane questions about how many salaried posts are available and how many academic departments treat it in practice as a core area.

The discipline that is on the record as having often staked a serious claim is LIS (e.g., Browne 1997, Cornelius 2010, Jaeger & Greene Taylor 2019). This is not only because specific matters of information policy, such as copyright, open access and legal deposit (the right of national libraries to free copies of every publication), are clearly of workaday importance

to librarianship. It is also because librarians, and the associated professions of information scientist and information manager, have recognized that information policy as a whole is systemically related to their roles in society. Reverting again to the information society thesis, I would argue, as others have done (e.g., Harris et al. 1998, Webster 2014, chapter 9) that libraries are among the most important information institutions of the information society, and professional librarians among the foremost information workers. Being a central part of any country's information infrastructure, librarians and information scientists must therefore think and engage at the level of public policy, not just worry about what the latest copyright regulation might entail for their lending or copying facilities.

To some extent, this has happened. As Paul Jaeger and Natalie Greene Taylor (contributors to the present volume) have pointed out, 'LIS does have the distinction of being the only academic field that gives regular attention to information policy as a broader topic area, rather than to just the individual issues that fall within information policy' (Jaeger & Greene Taylor 2019, p. 14). However, the place of information policy within LIS is far from secure. It is quite rare for an LIS department to advertise lectureships or chairs in information policy. Emerging LIS scholars with academic ambitions might actually be better advised to specialize in more pedestrian, practice-based fields such as management studies or information retrieval.

The core LIS journals also have a mixed record in publishing information policy research. For example, the *Journal of Information Science* used to be one of the favourite stables of information policy thinkers. In the last ten years or so, however, this high-ranking journal, associated with the Chartered Institute of Library and Information Professionals, has published very little in the field. Instead its issues are now filled with multi-authored technical papers which, while no doubt competent in their own way, can hardly contribute to the big international debates about the direction of the information society. We seem to have failed to redeem the promise that library and information professionals would be at the vanguard of the new technological and sociological era.

Moreover, a case can be made for journalism studies being a better home for information policy research. Like librarians, journalists make decisions about practical information policy matters on a daily (and often also nightly) basis. These matters include copyright, censorship and freedom of information, all of them staples of the journalism syllabus. But above and beyond quotidian editorial issues, journalism can be seen as being located as a prime information institution of intrinsic importance to the information society as a whole. Whereas libraries occupy the 'deep' information infrastructure, providing an indispensable archival and educational service, newspapers and other media comprise its ever-active 'surface', supplying the news information and current commentary that keeps democracy alive. Journalism as an academic field is therefore a natural repository for information policy research. Its remarkable development at the start of the twenty-first century, with the birth of many new journals of high calibre, such as *Journalism Studies*, *Journalism: Theory, Practice, and Criticism*, and *Digital Journalism*, to name three British-based titles, as well as a plenitude of undergraduate and graduate programmes, should and hopefully will attract many future scholars of information policy.

Of course, journalism, like librarianship, has suffered much turbulence from the mighty winds blowing us all into the information age, but both fine professions will surely come through as salient features of the reconfigured socio-political landscape.

There is a further reason why journalism studies should be considered a promising academic base for information policy research. Too much such research has failed to have a discernible

impact upon the public policy issues with which it ostensibly deals. This is not because it is poor research, but because it is published mainly in scholarly journals of modest circulation and exposure. Bluntly, and of course generalizing, politicians do not read scholarly journals, they only, qua politicians, read newspapers. They engage at the level of the surface information infrastructure, where topical news and punditry flow at high velocity through social media, broadcasting studios and the online and offline press. Journalism academics are naturally more comfortable in this space than others, and have in many cases the skill sets and personal networks to make their expert voices heard there. This is not to suggest that the arduous task of deep research and scholarly publication should be neglected, only that journalism as an academic discipline is ideally placed to serve as a bridge whereby scholarship on information policy can carry over into the Habermasian public sphere, where it can do some real good.

However, these remarks are only tentative, and perhaps tendentious. In giving an institutional ‘shout’ for journalism studies, I do not seek to negate information science’s case, or indeed that of any other discipline. In the end, information policy research is and will always be an interdisciplinary field, and that is one of its great strengths. What I am asserting firmly though is that whatever its provenance, it must make its voice heard more loudly outside the ‘ivory tower’. It must find outlets in the mass media, where its insights can be passed on to the general public and to the policy-makers.

This section may thus be brought to a close with a final mention of Daniel Bell, who was a model of how to make scholarship relevant. When he left a successful career in magazine journalism for academia, Bell did not become less engaged; on the contrary, he used his tenures at Columbia and Harvard not only to work up his ideas properly but also to then disseminate them forcefully in the literary and political public spheres. He became in so doing one of America’s leading public intellectuals, influencing not just the direction of expert and lay social thought but also the language and content of public policy (Fuller 2005, Kadushin 2017, Waters 1996). Every researcher in information policy—to reiterate, one of the most important fields of the new millennium—needs to become, to some extent at least, a public intellectual.

1.3 THE CONTRIBUTION OF THE PRESENT VOLUME TO INFORMATION POLICY RESEARCH

The present volume is not the only English-language handbook on information policy. A quick Google search will throw up at least two earlier efforts. There is *The Information Resources Policy Handbook: Perspectives on the Information Age*, edited by Benjamin Compaine and William Read (1999). Operating on the true premise that information is as much a ‘resource’ as energy or matter, this worthy tome mixes ‘evergreen’ chapters by major figures including Daniel Bell with ‘contemporary’ chapters on current issues. There is also *An Information Policy Handbook for Southern Africa: A Knowledge Base for Decision-makers* (James 2001). This is a multi-authored state-of-the-art report on information policy in Southern Africa. It is not a conventional research publication, but rather the kind of documentation that would have been linked with the terms ‘manual’ or ‘handbook’ prior to the rise of the genre of scholarly handbooks. There may be other titles as well, and of course English is only one human language among circa 6500.

However, the *Research Handbook on Information Policy* still hopes to be a significant milestone. It brings together and in systematic form a very wide diversity of contemporary leading-edge scholars associated in one way or another with work classifiable as information policy research. As I see it, the contents of a research handbook today should be twofold. Firstly, it should contain groundbreaking studies at a standard comparable to the regular contents of research journals. Many of the chapters in the present volume are of this kind; they offer either new empirical data or fresh conceptual studies, or a combination of both. As such, they are generative, in the sense that they will stimulate new understandings of information policy.

Other contributions, secondly, are consolidating in nature. These chapters are benchmarks, summarizing in an authoritative way a body of work on a particular aspect of information policy. They do not open new horizons; instead, equally usefully, they present distinctive overviews of the current landscape in their subfields. In any case, all of the chapters are original pieces of work, specially commissioned for the present publication. All of the authors are recognized experts, with, as is healthy for research handbooks, a majority of senior professors, some of them highly distinguished, complemented by a minority of emerging scholars at the post-doctoral and lecturer stages.

An effort was also made to approximate a gender and regional balance. It was evidently more successful as regards the former (12 women, 17 men), but at least continental Europe is well represented herein alongside several countries of the United Kingdom (England, Scotland and Wales) and North America (Canada as well as the United States); and Israel is welcomed too. I am grateful to every one of these contributors. Special credit should also go to emeritus professor Youichi Ito, 'Japan's most internationally prominent media researcher' (Splichal et al. 1994, p. 17), whose learned Foreword details his nation's world-leading role in information policy research and practice.

As regards structure, the Handbook is divided into three parts. Part I, General Theory, seeks to approach information policy as a totality. It addresses directly Ian Rowlands's charge (1996, p. 13) over the 'relatively scant attention ... paid to the theoretical foundations of the subject'. The first section goes straight to the essential question of the nature of the field. It commences with the reflections of Ian Cornelius, who builds upon his comprehensive textbook, *Information Policies and Strategies* (Cornelius 2010). He probes the nature of both information and policy, explaining information's relations with powerful economic, political and cultural institutions. Cornelius emphasizes the importance of wise (not necessarily 'smart', in the much-misused modern sense) 'intervention', for example in the information market, for the securing of social goals. Registering all the standard contemporary issues, such as free speech, data protection and 'fake news', he ends by floating an interesting new theoretical direction: the 'aesthetics' of information policy.

Sandra Braman's input to the theory of information policy is second-to-none, and it is no surprise that various other contributors cite her in the present volume; her treatise *Change of State: Information, Policy, and Power* (Braman 2006) is one of the classics of the field. In her chapter here, she proves that she has been thinking just as hard recently. Stressing the dynamic nature of information policy, she introduces the original idea of information policy 'punctuations', or acute shifts. Braman identifies three such: 9/11, the Trump 'administration' (it is difficult to apply the term to such shambolic conduct) and Covid-19. All of these have in various ways compromised the steady progress of information policy in such areas as privacy

rights and open government. Information policy will therefore need to regroup, and Braman offers excellent materials for figuring out how this might be done.

The first section ends with the thoughts of Steve Fuller, one of the United Kingdom's (though he is a New Yorker) most prolific intellectuals. Fuller's interests range more widely than information policy, spanning much of the terrain at the interface of philosophy and science and extending to the invention of the field of 'social epistemology'; so it is fascinating to see how he locates information policy epistemologically. His differentiation of the 'prophetic' and 'priestly' modes is a novel and important one. Working forwards from the classical world, Fuller suggests that the internet has given a strong lease of life to the prophetic mode (individualistic, creative, popular), to the chagrin of the priestly aficionados of order and institutionalization. Characteristically, Fuller advances his core themes by enlisting an impressive lineup of authors and schools, from the Sophists and the Jesuits to Marshall McLuhan and Walter Lippmann.

In order to understand anything, to anchor definitions and trace contours, it is helpful to inquire into its history. It is probably fair to say that the history of information policy is not the most popular of subfields, but it has attracted keen scholars, three of whom appear in the second section, *The History of Information Policy*. It begins with László Karvalics's notes on 'information policy before information policies'. Drilling down into ancient history and earlier, and with intriguing illustrations, he shows that information policies were practised long before the term came into existence; the whole panoply of issues, including information security, personal identity, intellectual property, information privacy, access and fake news, has historical antecedents. As he observes, there was no need for a state apparatus or even politics: wherever there has been unequal access to crucial information, for example regarding food's whereabouts, there has been information policy in this broad, long sense of the term. Karvalics then moves to the modern period of bureaucratic government, giving due honour to the seminal work of James Beniger (1986) on the 'control revolution'.

Too often information policy has been marginalized as the bailiwick of copyright, statistics and other administrative matters. What stands out in the contribution from Alistair Black, who is one of the leading lights in information history generally, is his vision of its sheer breadth. Black's historical analysis sweeps in military intelligence at one end of the spectrum and mass media regulation at the other. Its focus is Britain, whose informational development he charts from the mediaeval era to just before our own digital epoch. This of course is one country's experience only, but Black makes the point that Britain, given its history as a global actor and 'workshop of the world', can serve as 'a case-study that can be adapted to other national contexts'. It is also salutary to see his thematization of surveillance and the panopticon: this brings home the sheer unavoidability of information policy in all our lives, whether or not we are on the secret services' radar or have been on the 'telly'.

The final chapter in this section addresses recent history and paints expressly on a global canvas. Julia Pohle, building upon her doctoral dissertation, examines the role of the United Nations Educational, Scientific and Cultural Organization (UNESCO) in the development of the international information society. As she notes, UNESCO's mandate is explicitly fastened to a normative mission, that of putting communication and information at the service of intercultural understanding and the global exchange of knowledge. Focusing not on the much better-documented World Summit on the Information Society, she details two little-known UNESCO programmes, the General Information Programme and the Information For All Programme. She also brings things right up to date with the ongoing Internet Universality

initiative, which pursues the ‘vision of a human rights-based, open and accessible internet, nurtured by multi-stakeholder participation’. In these times of preoccupation with regional blocs, it is good to be reminded of the supreme importance of the United Nations. That body is the only path to peace on earth—and, as Pohle’s chapter suggests, to effective information policy outcomes.

Following these historical studies, the third and final section under General Theory, predictably enough, contains perspectives on the future of information policy. Richard Taylor, who co-founded one of ‘our’ journals, the *Journal of Information Policy*, presents material that is both theoretically rich and technically informed. ‘We need’, he writes, ‘a refreshed vision of information policy responsive to an historic inflection point in which technologies not part of the traditional information policy portfolio become dominant.’ Like Sandra Braman, he believes that human history is one of long periods of stability followed by sudden bursts of change. ICTs, he asserts, are taking us through a ‘digital punctuation’, creating the information society. However, Taylor thinks that the standard economic indexes of informatization need to be supplemented with a new human-centred formula called ‘information well-being’. Information policy of the future, he convincingly argues, must work with some such criterion; only that will enable society to respond sympathetically to formidable emergent systems such as big data, the internet of things and quantum artificial intelligence.

William Dutton is another prominent figure in information society and information policy research. Here he and co-author Aljona Zorina revisit a concept that Dutton introduced to information policy many years ago, the ‘ecology of games’. Counter-arguing the deterministic thesis that information must be free, and its equally deterministic antithesis, the authors explain that policy can best be understood as the upshot of a game involving many ideas, actors and interests. They explicate their theory with two European case studies. The first describes how local communities in Minsk, Belarus, succeeded in getting online despite rather than because of the actions of the state. The second deals with the potential closing of access to information in the United Kingdom as a consequence of efforts to address the problem of cyber harms. It might be thought that this chapter does not belong in the Future of Information Policy section. However, it is placed there because of the authors’ plausible claim that ‘[the ecology of games] is the soundest approach not only for describing the historical dynamics shaping information policy, but also for thinking about the future of information policy’. Information policy thinking, they argue, needs to move from ‘an overly rational techno-economic determinism’ to a more nuanced, qualitative approach based on such ‘sensitizing concepts’.

The final contribution in this section, by Paul Jaeger and Natalie Greene Taylor, both productive scholars in the field, discusses the ‘intertwining’ of information policy and information literacy. As they point out, even though ICTs have become integrated into every aspect of our lives, many users have no idea how the technologies actually work, what data they collect or what they do with it. This includes policy-makers, who, at least in the United States, have tended to display either abject ignorance of or uncritical enthusiasm for the information revolution. Some institutions, such as libraries, schools and news organizations, have tried to educate people, but even these, Jaeger and Taylor contend, have generally failed to include information policy instruction. It is hard to disagree with their argument that the future of good information policy will depend on the spread of critical information literacy skills. Like the ecology of games and information well-being, information literacy is the sort of conceptual tool-box that can indeed sensitize us to what lies ahead—that can, in a once-popular phrase (Toffler 1970), prevent us from suffering debilitating ‘future shock’.

While Part I is overarching and holistic, Part II is specialist and specific. It has been arranged topically, reflecting the field's problem-oriented focus. While the sections are not in order of importance, having privacy first is not entirely arbitrary; most of the early visionaries of the information age highlighted privacy risks. This section duly opens on an authoritative note with a chapter by Priscilla Regan, whose *Legislating Privacy* (Regan 1995) has been on core reading lists since its appearance. In the present contribution, Regan provides an account of the modern political history of information privacy (i.e., personal-data privacy, as distinct from physical privacy), separating it into several 'waves'. Regan addresses current-wave controversies over online privacy, big data, Cambridge Analytica, the influence of major internet platforms and the European General Data Protection Regulation, taking the story right up to Trump. Her main postulate is that organizational—particularly corporate—interests have usually prevailed over the public interest. Regan also faces up to the perennial problem of fragmentation of official responsibility. While acknowledging the colossal power of the tech giants, she proposes a modest 'co-regulatory forum' (i.e., policy determined jointly by government and industry), whose 'mandate should not be to stifle innovation, but to ensure socially responsible innovation'.

Michael Katell's chapter contains a sophisticated attempt to apply Rawlsian theory in an original way. Katell is quite rightly burdened about the oppression of disadvantaged groups by means of surveillance technology (see especially Gilliom 2001), manifested currently in discriminatory police use of automated number-plate and facial recognition systems. He argues that the voices of members of these groups deserve a special place in consultations and other processes of 'public reason', wherein decisions are made about new technology. Katell produces evidence that policy-makers in some enlightened US cities have already actually instantiated his 'equity view of public reason', in so-called 'surveillance ordinances', that is, regulations which require 'inclusive' deliberation on matters of government surveillance. While this conception of public reason will not find universal agreement among Rawls specialists, it is precisely the kind of rigorous applied political philosophy that the information age requires.

The last chapter in this section comprises an attempt to defend privacy as a progressive ideal. Too often privacy interests have been smeared as right-wing, as mere property rights, or else dismissed as quaint, unsustainable relics of a bygone era. Moreover, philosophers have rarely in the past seen fit to spring to privacy's defence, although that situation is now happily changing. The chapter explores the work of three outstanding left-liberal thinkers, namely, Jurgen Habermas, John Rawls (again) and R.H. Tawney. While none of these is known for being a privacy theorist, they all provide ideas out of which a progressive ideal of privacy can (or so it is argued) be synthesized. Being liberal, they do not crucify the individual; being left, they lift up the common good. A tenable doctrine of privacy, one that can command enough allegiance to see off technocracy, has to be some such compound.

The next section is in a sense at the opposite end of the spectrum, since it involves critiques of privacy. However, there is no contradiction. What freedom of information (FOI) is about is not freedom of personal data but freedom of government files, about open government; it is perfectly consistent to be a strong advocate of both privacy and FOI. The section begins with Ivan Szekely's powerful case for FOI as a fundamental component of democracy and the rule of law. Citing historical and conceptual materials, he shows how it is at the heart of modern progress, implicit if not explicit in the American and French Revolutions and later in the founding charter of the United Nations. Szekely does not make the extreme claim that FOI

is absolute, that there can be no legitimate exceptions; his argument is rather that, alongside other goods such as privacy, it is a 'constitutive public good' in which we are all invested. He then traces its recent development internationally, registering the increasing calls for a more proactive, participatory approach to FOI. Szekely also takes the issue into the present, examining how the right to information has fared under Covid-19 conditions.

Ben Worthy provides another masterly survey, focusing on the access to information situation in the United Kingdom. He shows how FOI sits alongside other modes in a 'wider ecology of openness', such as whistleblowing and leaks, and how the impact of FOI laws depends very much on political and cultural contexts. The United Kingdom has often been accused of having a stuffy, secretive political culture, so it is interesting to read Worthy's detailed account of the coming of the 'right to know' there. He justifiably highlights the shameful, almost Pythonesque situation where Members of Parliament voted to exempt the Houses of Parliament from their own new FOI statute, in order to prevent release of their expenses receipts (including famously one aristocratic MP claiming for the cleaning of the moat around his castle!). The chapter concludes with some reflections on an emerging form of information policy related to FOI, namely, open data initiatives.

The last chapter in this section contains Ben McConville's case study of FOI in Scotland. Scotland has a comparatively good reputation for its FOI regime (as Ben Worthy explains in his chapter), but that of course does not make it perfect. McConville approaches the issue from the perspective of the journalist, whose quest is always for a 'scoop' (exclusive story). He frames the sometimes tense relations between journalists and public bodies in terms of Pierre Bourdieu's theory of struggles for dominance within a 'field'. McConville, who wrote this chapter at extremely short notice as a result of defaulting by a contracted contributor, has gone to the effort of interviewing some major contestants in the Scottish field, including the first Scottish Information Commissioner. He (McConville) concludes that open government requires further improvements in FOI legislation.

Freedom of expression is sometimes confused with freedom of information, but they are analytically completely different, even though they are often symbiotic in practice. Freedom of expression thus has its own section. Arne Hintz opens it by tackling head on the 'chilling' effect on free speech that results from our knowledge that our every move online is being multiply tracked. As he points out, this 'datafication' of our conduct might not seem as bad as outright censorship, but its effects are still serious; the hideousness of China's 'social scoring' of its citizens is only the most egregious manifestation of a worldwide authoritarian trend. Hintz demonstrates a detailed understanding not only of surveillance developments but also of legal responses, such as the General Data Protection Regulation, and of grassroots social movements in the arena of digital activism. He concludes robustly that what is needed is an 'information policy agenda to protect the right to free expression'.

Emily Knox for her part begins with the astounding but true assertion that the information age we inhabit is 'one in which people express their ideas in real time to the entire world'. This, she deduces, means that we need an 'agile' policy response which respects human rights while keeping abreast of changes in technology. Knox approaches the issue of one such right, freedom of expression, from the perspective not of the speaker but of the hearer. She sketches a promising theoretical framework combining freedom of communication as a pivotal human right with a 'flow' model (rather than the static space often imputed to Habermas) of the political public sphere. It does not, however, absolutize freedom, instead indicating that the United States, where the likes of the Ku Klux Klan are still able to spout atrocious language with

impunity, should follow the European tradition of civil discourse. Knox also offers a useful conception of information policy as involving both ‘Big-P’ policy—laws, regulations—and ‘Little-p’ policy—guidelines, decisions, norms. Her chapter in addition manages to reference a whole range of highly topical issues, including Black Lives Matter, fake news and the pandemic. It helps to show why information policy is such a vital field of research.

The final piece in the freedom of expression section involves a welcome reminder that the information age is not all about autonomous adults; we need to think about children too. As Victoria Nash points out, the architecture of the internet was not built with children in mind. The focus of her chapter is attempts by the authorities to ‘age-gate’ the net, that is, ‘differentiating online experience by age’, as a way of assuaging the moral panics that have arisen from time to time. Nash highlights the practical problems of verifying people’s identity and age online, so much harder than when we can be seen and heard in the offline world. She also sets out the ‘spillover effects’ of trying to protect children, such as the potential compromising of adults’ rights of privacy and freedom of expression. This tension has been there from the beginning of the information age, but it remains far from resolution. Nash’s authoritative review of the state-of-play of the official debate on this issue in the United Kingdom, where she has been an active player, makes for sober, and probably generalizable, reading.

Intellectual property, especially copyright, has always been a preoccupation of information policy research, a sign that the field (as noted earlier in this Introduction) has some strong roots in the discipline of library and information science. Its societal importance, however, has been accentuated as such property has become a foundation of post-industrial economies. This section duly opens with John Feather’s overview of the nature and history of copyright. He locates its origins in both commercial and political factors, noting astutely that ‘the histories of censorship and copyright cannot be entirely disentangled’. Feather documents the role of the book trade in Europe, emphasizing the significance of the (slow) recognition of the rights of the author, before briefly considering the ambivalent impact of new technology. He suggests that, while the basic principles of copyright and associated rights are, at long last, now widely accepted, legislation (Hegel’s ‘paper world’) will continue to struggle keeping up with innovations in the real world.

Margaret Ann Wilkinson’s chapter adds the rare perspective of a scholar professionally qualified in both law and librarianship. Wilkinson has chosen to examine two vital moral rights associated with intellectual property, namely, paternity (which allows authors to insist that their identities remain associated with their works) and integrity (allowing authors to insist that the content of their works remains true to their expression of it). She provides guidance through the modern history of these rights, covering European, North American (with welcome attention to Canada) and global legal developments. What is particularly interesting is her argument that paternity and integrity rights uniquely contribute to fulfilling end-users’ need for indications of epistemic authority when selecting materials. The lack of ‘authority control’ is indeed one of the main reasons why the world wide web is so chaotic and the information society has not yet lived up to expectations.

Blayne Haggart’s chapter closes the intellectual property section with a contribution that effectively combines the political economy of communication and historical institutionalist research traditions. Haggart analyses the essential tension between copyright’s protectionist and disseminating impulses, illustrating his argument with a case study of the fraught relationship between the United States, an intellectual-property superpower, and its developing-nation neighbour, Mexico, in the context of the 2017–18 renegotiation of the North American Free

Trade Agreement. The relentless elongation of the copyright term and tightening of digital locks—what he aptly calls the ‘ratcheting racket’—are trends that should concern us all. Haggart’s chapter offers some hope, however, in the shape of user-rights advocacy. Copyright policy, he concludes, ‘remains contested and contestable’—like, it might be added, most information policy.

Digital divides, or more generally information inequality, are another key issue for information policy, one that takes us right to the centre of social and political philosophy, and all three chapters in the final section of Part II show this. Amit Schejter begins with some clarifications about the nature of information, noting that while its relationship to communication is very close there is as yet no authoritative ‘unified theory’, even though information and communication technologies are usually now lumped together, as in ‘ICTs’. Schejter is critical of policies which have reduced the problem of information inequality to a simple binary of having or not having ownership of or access to technology, policies that he blames on an aggregating, ‘utilitarian’ philosophy. The problem can only be solved if policy-makers address the whole social process of how information is actually used, and Amartya Sen’s redistributive ‘capabilities’ approach, which foregrounds individual needs as defined by individuals themselves, is for Schejter the most promising way forward. The ‘conversation regarding [information] policy’, he persuasively concludes, must ‘be broadened to include such areas as education and cultural policy’.

Kim Thompson also digs deep, asking the searching question of how we can know whether the policies that we enact are really engaging with the many underlying factors that create information inequality. Access to technology and infrastructure is obviously important, as are digital literacy skills, but further down is a ‘third layer’, involving the behavioural and cultural aspects of information access and use. Thompson adopts the profound ‘information worlds’ theory pioneered by the late Elfreda Chatman (see, for example, Chatman 1992) and developed for contemporary conditions by Paul Jaeger (another contributor to this Handbook) and others. The chapter, admirably international in outlook, expounds an ‘information worlds matrix’ which is then applied to a 50-year stretch in the informatization of South Korea. The matrix is, as Thompson says, the kind of theoretical tool that can help both in the evaluation of information policy vis-à-vis informational inequality and in planning more effective policy for the future.

Petr Lupač, the last member of the section, also finds most digital divide research too shallow; hence, he too ventures a ‘contextual’ and ‘critical’ approach. Lupač analyses and problematizes basic assumptions often attributed to the information society thesis, such as that increased internet usage is the only route to a more informed society. Examining a long list of empirically oriented studies, including the ‘knowledge gap’ and ‘diffusion of innovations’ schools that grew up around earlier technologies, he claims that information policy today lacks a robust empirical foundation. He makes a cogent case for information poverty being ‘a differentiated, domain- and topic-specific phenomenon’, from which it follows that policy should ‘focus on specific, clearly defined facets of information inequality (e.g., health, economic, civic, environmental, etc.), instead of being limited to supporting expediently selected online functions and activities (e-banking, e-government, etc.)’. Lupač also offers stimulating ideas about mobile phones being part of the solution—and not just (per most digital divide research) in developing countries. However, it is his very important conclusion about the specificity of information content that sets up the final part of this volume.

Part III is slightly different. It is not devoted to any issue as such, but to specific types of information. This is deliberate: it is designed to send as the volume's final message the key point that information policy is ultimately not about problems, nor issues, and certainly not about technology: it is about *information itself*. Information is not homogeneous: some categories are far more personally sensitive than others, some far more societally—politically, economically or culturally—important. Thus, the best way to approach information policy is *always to start by thinking about the type of information at stake*; technology and policy considerations follow therefrom. Accordingly, the third and final part completes the *Research Handbook on Information Policy* by foregrounding three extremely important categories of information: genetic information, statistical information and news information. These are not, of course, the only crucial categories of information, but by being singled out for special attention they can serve as examples of such.

Ruth Chadwick is a distinguished applied ethicist, who has sat on official committees tasked with deciding on leading-edge policy issues. In her chapter, she sets out the fundamentals of genetic information. Her lucid explanations of terminology in this complex area will probably be welcome to many readers of the present volume. Chadwick leaves us in no doubt about the gravity of genetic and genomic information, and the sheer magnitude of the ethical challenges which their galloping sciences pose for individuals and society. The chapter covers the criminological as well as research and health care domains, with evaluations of recent legislative moves in the United Kingdom, Europe and beyond. With her final section being on gene editing—a terrifying prospect to the non-specialist—it is appropriate for Chadwick to conclude that 'information policy has to confront not only the uses of genetic information but also potential misuses'. It is clear from her chapter that genetics must be a major focus of information policy research from now on.

Statistics are another very special category of information. Catherine Heeney's chapter examines the role of national statistical institutes (NSIs), such as the United Kingdom's Office of National Statistics, and the ethical challenges their work presents in the 'big data' era. While such organizations usually comply religiously with privacy legislation, seeking to preserve the cardinal principles of confidentiality and informed consent, the distinction between aggregate and personal information is coming under increasing pressure. Official statistics when combined with other data freely available online, such as geographical and consumer information, lead inexorably to such troubling commercial practices as data mining and individual profiling. Under such conditions, Heeney suggests interestingly, the 'contextual integrity' model (Nissenbaum 2010) breaks down. Heeney believes that NSIs 'cannot be held responsible' for a 'data environment in which data released by them may and may not be playing a part'. Rather, she concludes, society as a whole must work out an informational settlement which protects the liberal value of personal autonomy while at the same time maximizing the social utility derivable from large-scale datasets.

This and all other needed societal settlements can only be brought about through *politics*, and politics—democratic politics, at any rate—are themselves largely dependent upon the circulation of relevant, accurate news. It is why the chapter by Sue Curry Jansen was chosen to be the end-piece of the *Research Handbook on Information Policy*. Jansen, author of several influential treatises, explores the relationship between news information and democracy through a re-examination of the life and work of twentieth-century political columnist Walter Lippmann. Lippmann did what everyone who wishes to make their information policy research effective should do: he led, in his own words, 'two lives', 'one of books and one of

newspapers'. Jansen tracks his unique contribution to American and international democracy, showing how a commitment to pure information and civil politics has become so very timely again today. The chapter closes with an important Coda which identifies common ground between Lippmann and the twenty-first century's greatest theorist of democracy and the public sphere, Jurgen Habermas. Both Lippmann and Habermas underline democracy's 'essentially dialogic character', and we would all do well to heed this if we wish to avoid ending up as little more than numbers in a digitized technocracy. Information policy research must indeed do its utmost to promote what Jansen calls 'a renewal of democratic hope'.

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