Lessons from the History of Internet Studies

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A Keynote Presentation given at the Open Literacy Digital Games, Social Responsibility and Social Innovation Symposium in celebration of the 20-year anniversary of the founding of Internet Studies at Curtin University. Matthew is Australia’s first Professor of Internet Studies, having established the world-leading Internet Studies department at Curtin University where he worked from 1993 to 2012.

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Matthew Allen was invited to give a Keynote Presentation given at the Open Literacy Digital Games, Social Responsibility and Social Innovation Symposium. Matthew is Australia’s first Professor of Internet Studies, having established the world-leading Internet Studies department at Curtin University where he worked from 1993 to 2012. He then took up the role of Head of School, Communication and Creative Arts at Deakin University (2013–2019). Matthew is former president of the Association of Internet Researchers, and co-editor of the prestigious Handbook of Internet Research, now in its second edition. Matthew is also a nationally awarded educator (AAUT, 2000) and Fellow of the Australian Learning and Teaching Council. His research covers topics including the history of the Internet, drug use and online communication, Australia’s development of broadband usage, and online learning and education. He joined the University of Tasmania’s Institute for Social Change at the start of 2020 and is currently researching the uses of Internet technologies during the COVID-19 pandemic and the response of students to enforced online learning.

Introduction
I am honoured to be invited to speak at this event to help celebrate the foundation of Internet Studies, now 20 years old here at Curtin University. As evident from the other papers presented during the conference, we are now able to explore futures more open and playful than ever seemed possible when first I started to think about the Internet back in 1994, and on a much more profound and secure basis than in the early days of the Internet Studies program which I started in 1999. It is a privilege for me to speak alongside colleagues such as Henry Jenkins and John Hartley, whose wit and important insights have for decades helped us understand humans’ complex interactions with computers and networks, media and culture, and the possibilities for communication, play and self-expression which stem therefrom (two examples are Jenkins 2004 and Hartley 2012). My heartfelt thanks to the organizers for their kind invitation to give this keynote address and for the acknowledgment it gives to my role in the initial formation of Internet Studies.

I had the great pleasure of working at Curtin University from the mid-1990s through until the start of 2013, becoming during that time Australia’s first Professor of Internet Studies in 2011. I remember well that Curtin was a place where, more or less, innovation and invention were regarded favourably: it was, as I will explain below, the kind of ‘young university’ in the 1990s where new ideas could flourish, and risks could be taken, but also where such approaches were economically necessary (see M. White 1996 for discussion of how Curtin’s transformation in 1987 from an institute of technology to a university). It is, therefore, great to return, and share with you the history of the formation of Internet Studies and what it might say about disciplinarity, higher education, and the affordances of network communication. But, of course, my appearance today is only possible because of the continued vitality of the Internet Studies program, some seven years since I left. This vitality may owe something to what came before, but it is also due to the insights,
hard work, and dedication of the many academics who continue to make Curtin an intellectual hotspot for internet studies.

At appropriately significant times, such as a 20-year anniversary, it is wise to turn our eyes to the past and observe some of the ways in which things like internet studies come to be. I will take us today on a journey into that history, while noting that the ghosts of professors past are by no means a trustworthy source. Along the way, I want to explore how history – not the past itself, but the discipline, which is a practice of thinking about the relations of past and present – was a useful disciplinary foundation on which to establish a project to make sense of the internet and bring it within the academy (evident in my much later work such as Allen 2012). The internet was, for many years (and perhaps is still), a socio-technical intervention into human development over time which suffuses the world with futuricity. By futuricity I mean a way of thinking that replaces or obscures the dominant cultural logic of looking back in time for a sense of how we came to be ‘here’ in the present. Futuricity thus is a competitor with, though intimately linked to, the normal experience of ‘historicity’ (for historicity, see Hartog 2015; also Carter 1987). It is a powerful desire to imagine ourselves, collectively and individually, as about to go somewhere next and to make our current world meaningful through that gaze into the future.

I also want to use the history of Internet Studies (perhaps in more traditional Marxian sense of ‘history’, Hirst 2009) to suggest that, whatever the internet’s irresistible impact on society that might legitimate and fund academic attention, and whatever the inevitability that scholars would necessarily be motivated to discern truths about this new technology, these necessities are not sufficient explanations of why Internet Studies came to be. Instead, the material heart of the academic transformation accompanying the emergence of the internet, of which Internet Studies at Curtin is a leading example, is the economy of knowledge itself. More precisely, the transformation is an outcome of the political-economic game of knowledge that scholars and universities must play. This game, like all games, has rules and objectives, players and moves, dimensions and rhythms that stand in for, but never are, the same as the reality which knowledge claims to know. These games are language-made material, with very real political and economic consequences emerging from the discourses which conjure into being the order of things “internet” we take for granted.

Origin myths
When did Internet Studies at Curtin begin? There is, of course, no comprehensive reply despite the beguiling simplicity of this question. But let me venture three approximate answers to help create the conditions for telling the history of Internet Studies.

First, we should acknowledge the formal institutional commencement of Internet Studies which means 2019 is a year of anniversary: we act today to ‘make’ a certain kind of past, retrospectively. Casting my mind back 20 years, I recall that Internet Studies was, in 1999, perched uncomfortably within the then–School of Social Sciences and Asian Languages. It was a new program enrolling its first students in a graduate course in Internet Studies, with a staff of one (me) and a postgraduate student, an energetic and cheery person called Mike Kent (who, after a brief sojourn at Murdoch and Brighton has successfully found his way home to Curtin and is thus the only remaining original Internet Studies person). I will discuss how this institutional commencement came to be in more detail in a moment.

But perhaps we might also point to the day in late 1994 when the faculty systems administrator came into my office, distracting me from the mundanity of teaching critical thinking to accounting students (the reason for my initial employment at Curtin) with news of an exciting development: the availability of Mosaic (one of the very few then in existence) and waited, and waited, until it loaded. As someone then in the process of becoming a media studies scholar (history having proven a highly insecure field of professional employment since my first job as a tutor in 1991), I can still remember my amazement, even though not very much was there on the screen. As a budding researcher of television (having recognized the career limits of remaining an historian), I was already alert to the transformation of our understanding of media use through the concept of the ‘active audience’ (Hartley 2009). As an emerging internet scholar, I had spent much of 1994 investigating telnet, FTP and so on and had come to see the potential of the internet for information distribution, but in ways that did not seem coherent with television, not least because of the frustrating limitations of command-line networking and overreliance on text. As I gazed at the Web and understood how it worked for co-created, interactive, visual content, I thought: ‘this is going to change everything’.

I also happened to read, some months later, Mark Poster’s thoughts from 1995 on the internet in which he said:
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The internet is more like a social space than a thing so that its effects are more like those of Germany than those of hammers. The effects of Germany upon the people within it is to make them Germans (at least for the most part); the effects of hammers is not to make people hammers. (Poster 1997)

This distillation also had a profound effect on me, reminding me that, at the heart of this new web, was not technology but people and the social systems which make them who they are. I soon experienced something of what Poster meant in using the internet to teach distance-education students and saw well past the shallow screens to the deep possibilities of community thereby enabled.

Third, the answer to the question of when Internet Studies began also lies in one of those curious moments in an academic’s career, when circumstances allow or require a re-examination of one’s own interests and ways of working. As a new academic, still without tenure, I had to continue to justify my existence with colleagues, to evade what appeared then to be the inevitability of unemployment at a time of financial pressure on university budgets, and to be more than the person who was just here to teach that critical thinking program to accounting students which had brought me to Curtin. Later in 1995 I began to teach, with John McGuire and Peter Reeves, a new unit of study called “histories of the future”. This unit is where I discovered that history was as much about the future as about the past, led to this conclusion by Peter’s knowledge of end-of-the-18th century millenarians and John’s knowledge of end-of-the-19th century utopian socialism. I added my rapidly developing knowledge of how, at the end of the 20th century, our society seemed to be in the hypnotic grip of visions (largely associated with virtual reality, e.g. Heim 1994) of a future that seemed to determine what was going to happen now, before it had even arrived. Soon enough, too, I developed another unit of study, first taught in 1997 and replacing the ‘futures’ unit, which focused on the internet itself, designed around a narrative of whence had the net had arisen and how it might develop in future. Incidentally, I recall a grumpy colleague in Library Studies (an historian of the book as it happened) criticizing my proposal for this unit by declaring at the relevant committee meeting: “what would an historian know about the internet?” My youthful zeal in telling her why probably did not impress; but, in the spirit of openness that is a hallmark of great librarians, she and her colleagues did not refuse my new unit’s approval, and, in time, we became friends. Along the way I learned that, when few in Australia knew what the internet was, librarians had played vital roles in its development (Clarke 2013).

These three stories are, of course, origin myths: they serve as post-facto explanations which, in the time of telling, slyly suggest the higher purpose of decisions made earlier for many reasons, poorly understood and without clear intentions, and thus distinguish those few successful decisions we make from all the other unsuccessful ones that are soon forgotten. They are of their time of writing, not the time they claim to recover.

Indeed, one of the most fascinating topics of my early engagement with the internet was the internet’s own origin myths. The most powerful myth of the 1990s was that the internet had been ‘stolen’ (or at least repurposed) by civilian users from the US military, where it had been designed as a means of communication in the event of nuclear war or served as part of DARPA, a shadowy military-industrial research complex. There are small grains of truth in this mythology (Baran’s work on packet-switching for RAND; the use of ARPANET for supercomputer seismographic work largely concerned with nuclear test monitoring, the funding through the Department of Defense: see Rosenzweig 1998; Abbate 1999; Navarria 2016). But this myth gained much stronger truth effect from how it served the interests of libertarians, such as John Perry Barlow (1996), in their desire to claim for the internet a freedom from governance inherent in that technology. That its design might theoretically (but not actually) prevent censorship only added to the liberation from control which the internet seemed to provide. It also conformed to a general sense of excitement and change, at the end of the Cold War, with the internet seemingly being a peace-time dividend for the long years of militarized fear.

The origin myth also helped ‘explain’ for newcomers where the internet had come from. The internet arrived unheralded for most users, inexplicable and not at all what the telecommunications and media corporations, who desired to dominate ‘broadband interactive services’ (as they were termed in the pre-internet period – for example, in a comprehensive Australian government report: BSEG 1994; also in P. White 1996), had planned to deliver. The virtues of a packet-switched, free information and communication service became evident to many people, very quickly. Internet use in Australia rose from just under 3% of Australians in 1995 to 50% some 5 years later (Clarke 2004), despite the complete absence of the broadband infrastructure and ‘compelling content’ thought to be the essential pre-requisite for consumer uptake. Indeed this dramatic rise in use destroyed the easy expectations of media and telecommunications companies as to how they would profit from the future of broadband, while preventing them from using consumer
payments to fund the infrastructure Australia needed. In this confusing space, where the predetermined expectations of broadband were rapidly replaced by the present success of the internet, there was a need to make sense of this unexpected irruption into the present of what seemed, in the early 1990s, to be a far-off future possibility. The origin myth of the internet as ‘stolen military technology’ served this purpose well: by concealing many other important and complex aspects of the historical development of this technology, it both explained disruption and heightened our sense of a breakthrough into the future (as I explore in Allen 2012; Allen 2013).

**Institutional Games**

Internet Studies, as I signaled before, commenced in 1999: named, identified, and thus existing in a different way to the ongoing everywhere study of the internet. Institutionalization, carried out within a system of rules and moves, created Internet Studies, with both limits and advantages, and with a character that reflected the games at play at that time.

Central to the history of Internet Studies are the economic conditions of Australian universities and the people within them (myself included). In the 1990s, universities were caught in a financial pincer, trapped between the demand for them to operate as market-driven businesses and yet restrained by government policy from fully embracing the market, in that the price charged to Australian undergraduate students was fixed as were the number of students who might be recruited (Meek & Wood 1997). Costs were rising; and government subsidies for students were shrinking in real terms. Furthermore, a tectonic shift was occurring within higher education: until 1991 a smaller number of traditional universities received disproportionately higher funding to pay for research activities, and a larger number of colleges received funding principally to educate students. After 1990, this binary system ended and all universities (new, old, and amalgams of both) were expected to conduct both research and teaching, with funds distributed more equitably but at levels which enforced new kinds of efficiencies (see among others Bessant 2002 and Pick 2006).

The financial pressures of this system were more than evident by the mid-1990s when I began to conceive of Internet Studies as something bigger than just my personal scholarly response to socio-technical change. They were directly affecting my own employment circumstances and were driving institutional behaviours, leaving little space for innovation unless it was directly linked to income generation. There ‘online’: the internet was still too new, too tentative, despite or even because I was a junior and untenured academic I was both able to, and had to, lead. Even government policy, whether here or in the USA, still largely focused on the ‘coming’ of broadband interactive services which would be delivered by an organized capital convergence of telecommunications and media and was missing the real point of the internet (see Kyrish 1996). The future was here, I thought, but was so unevenly distributed that it could not be seen, at least not inside the Australian academy (to paraphrase the aphorism often attributed to William Gibson). As I read more, I realized that international scholars, including such leaders as Steve Jones and Nancy Baym (to name just two) were writing on this topic already. Further, there was a history, back into the 1970s and 1980s, of theorization and investigation of things internet, including works such as *The Network Nation: Human Communication via Computer* (Hiltz and Turoff 1978) which explored through future fore-telling a world that 20 years on was seemingly coming true. Just as Australia was lagging behind in the social emergence of the internet, compared to America, so too it seemed there was a lag in established, identified research into this phenomenon. For every ground-breaking work from overseas, there was an absence here in Australia. It seemed an opportunity for my own personal career prospects but also more generally as something which the academy needed to do for the society it served.

While research grants appear often to be central to the processes of scholarly innovation, in fact much research (and most of it in the Arts, Humanities and Social Sciences) is funded from student enrolments, especially at newer universities like Curtin (more generally see Turner and Brass 2014 on where and how humanities research occurs). The surplus between the cost of teaching and the student income pays the time of staff to do research, noting that each student generates the same income per head but, if they learn en masse, most of those students can be taught at marginal cost only, creating surpluses. Thus, I reasoned, the only way to generate enough income to build a new research focus on the internet was to tie research to the generation of income, enabling the employment of new academics who could join me in developing the deeper project of studying the internet. It is for this reason that I sometimes describe Internet Studies as something of a dot.edu startup: boot strapping our way to success from very little but ideas and opportunities like the rush of dot.com businesses emerging in the 1990s.

But where might such students come from? Within the steady-state of permitted student enrolments at undergraduate level, new bachelor degree courses would only redistribute income within the university.
Such a move would undoubtedly be resisted by the academic areas already established, whose intellectual identities and successes required conservation not innovation. As a result of this conundrum, I learned to play the institutional bureaucratic game and to identify the way in which some moves are permitted, while others are not. Curtin University, in recognition of the problem of declining income relative to cost, had encouraged innovation in graduate coursework (not research) education by permitting faculties to retain a significantly higher proportion of revenue from such students than was normal rather than surrendering the income to the university’s central accounts. These courses also did not compete for existing students and did not make colleagues nervous as to the effect of innovation on current enrolments. Postgraduate course offerings did not require negotiation for the way they might fit as components within larger undergraduate programs, enabling them to be developed autonomously. I could retain control of the curriculum and the ideas behind it, preventing interference from those who did not understand the internet or saw it through an older, conservative lens.

Thus the ‘business case’, as universities have become comfortable in describing such ventures, for the innovation of Internet Studies was strong, as was the opportunity for a single academic alone to pursue it. The only danger was that, in my enthusiasm for innovation (and after reading too much European theorizing about the future of an information society and Rob Kling’s important work from the USA, for example Kling et al. 1998), I was considering calling the new program ‘social informatics’. This move, while probably justified now in our automated, algorithmically shaped networked society (Meyer et al. 2019), was fortunately deflected by some wise colleagues who convinced me that marketing a course of that name might prove challenging. So was born Internet Studies: a name deliberately vague to mobilize both the popularity of the internet among intending students and, also, to defer decisions as to the precise nature of the curriculum. In 1999, we enrolled our first students in the Graduate Diploma of Internet Studies. The future had arrived.

Of longer-term significance, however, was a much more substantial organizational change which was in the offing in 1999 and, without which, Internet Studies may well not have survived its early emergence. This change was the establishment, at the intersection of the older schools of Social Sciences, and Communication and Cultural Studies, of a new school, the School of Media and Information. The move involved complex bureaucratic political work and was the result of two motive forces. First, and evident in its name, the school was formed to anticipate and reflect the then-emerging discourse of convergence: the coming together of media and information in a new social and economic formation implicit in at least a decade’s prior work towards the so-called information society, and requiring or enabling transformation of media industries (see Jenkins 2004 for an astute critical analysis). The school was one of Curtin’s attempt to compete for students who might otherwise choose to study elsewhere and improve its standing in the narrow educational market in Perth. Yet this forward-thinking move concealed a deeper and more complex conservatism, largely borne of the frustrations of traditional film, television and journalism academics and educators in the School of Communication. Together, they mostly were the income-generating engine for that school, cross-subsidizing traditional humanities areas and, in their view, unrecognized and overworked. For them, the new school was a chance to achieve status, power and long-held desires for autonomy for their traditional approaches, focused largely on professional training rather than research.

Thus, the new school of which Internet Studies was to become a part, looked backwards as much as it looked forwards. This uncomfortable mingling of identities and knowledge formations created an at-times awkward mix, though also the potential for positive change, and took some years to stabilize. It reflected perfectly the vastly more profound games of power and money being played within the media industries (which the new school was in theory to serve and study) to shape convergence to their own corporate financial ends, to create a future which did not disrupt but in fact reinforced their dominance. I explored this topic in detail in my work on Web 2.0 some years later (particularly in Web 2.0: An argument against convergence, Allen 2008) and suspect the insights in that research were prompted at least in part by living through the complexity of change within the new school.

The change was, nevertheless, a boon for Internet Studies. In a classic moment of organizational ‘unfreezing’, as Kurt Lewin would term it (Cummings et al. 2016), the field for academic staffing and programs was liberated from constraints. New staff were appointed and an undergraduate degree in Internet Studies was introduced. This degree, in conformance with revised library, journalism, film and similar degrees, was constituted from the start as a professional education, not a major in a generalist degree. Its curriculum served student, employer, and social needs first, including knowledge applicable to a career, rather than reflecting the research agendas of scholars in a liberal arts manner. This change was significant at a time when the vocational requirements of university study in Australia, particularly at newer universities such as Curtin,
were becoming a key requirement for success in attracting students, especially from overseas, and it established Internet Studies as a distinct field of practice rather than a topic within existing disciplines.

That said, the Internet Studies course did subtly promote a more traditional humanities agenda, which might be summed up as enabling students to learn critical thinking, creative expression, ethical and political behaviour and a wider grasp of social problem-solving. This double game reflected the professional histories of its academics (from the ‘humanities’) but also spoke to the awkward reality that there was not yet any established internet ‘professions’ into which graduates could move. Futuricty left its mark here, too, not just in how the internet came to be conceived, but also in the birth of a course which imagined its own future success, coming into being before its time.

I could spend much more time on the complexities of the on-going struggles to sustain and grow Internet Studies. There were disputes with colleagues. For example, one older journalism academic thought the internet would soon die away and could not, for the life of him, see why it should take attention away from the journalism school he wished to build: my reply that I, too, did not see a future for Internet Studies amused him: but he failed to appreciate my implication: that, soon enough, all media would become ‘internet’ and thus proposed his own end and not mine. There were sneaky moves to generate revenue by making some internet units compulsory within other degrees. One key moment came when I persuaded colleagues that the Mass Communication degree really ought to require students to study web communication – for some, this was a radical move even as late as 2007. Not only did this boost our ‘metrics’ (student enrolments per staff member), thus providing security from financial micro-management, but it actually made this venerable Curtin degree more attractive and successful for everyone: indeed, recently, Internet Studies has taken responsibility for the course which, at first, it had to fight to be part of. There was the largely unobserved success of the offering of our course through Open Universities Australia, a unique program which allowed students to study online (see Cottingham 2008 for more detail), outside of the quota on university admissions, and which for many years was the primary income stream for Internet Studies. There was our emphasis on doctoral student recruitment – gaming the system since we all got higher research allocations for having such students because the university was “incentivizing” people to grow doctoral study enrolments. On a more negative note, I even recall a secretive hostile “review” of Internet Studies in 2010 by a former dean – a classic move of the internal political game – divorced entirely from the reality of the program’s success and the evidence all around as to why the internet mattered. It is no wonder that, at times, we in Internet Studies imagined ourselves to be engaged in a kind of insurgency, using ways and means outside of conventional institutional conflict, to build our strength until the revolution might occur.

In summary, Internet Studies required more than just a good idea, more than just insights into the coming technological transformation of networked computing, more than just an inevitable turning of academic eyes to new social technologies and cultural formations. Internet Studies’ formation was founded in a particular set of governing economic conditions, as well as good timing, structural opportunities and plenty of institutional gaming – knowing the moves to bring resources to a new program, building alliances, avoiding unwinnable battles, and contributing to the common wealth through innovations.

Based on this experience, I would conclude that, for all the grand narratives which seek to describe and to know the subject of “knowledge work” in late modernity, we should refuse this turn to the overarching theoretical explanation. Evident in what happened in the formation of Internet Studies, knowledge work is grounded in the microeconomics of each location in which it occurs. At Curtin, in the last 20 years, that has meant Internet Studies has thrived in a distinctive manner, not an example for others so much as a case study in the influence of local conditions on research and teaching formations within the academy. And, I now realize, my PhD (which concerned strategy, organizational change, new technology, and the conservatism of bureaucracy) really was relevant after all: if not to the internet, then very much to founding and developing internet studies, for it was within this research that I encountered the work of Allison on the critical role of bureaucratic political games in understanding decision-making, particularly in relation to new technologies and their institutional adoption (Allison and Halperin 1972).

**Conclusion: Beyond the Game**

Yet, as I come to the end of this keynote, I also remember that Internet Studies was not just a game, a successful exercise in what I like to think of as applied Foucault, bringing into being the dispositif of #netstudies (Peltonen 2004 has an insightful piece on this key aspect of Foucault’s intellectual legacy). Internet Studies at Curtin was also very much part of the emerging new realities that the internet was creating: it was an expression of futuricty, an anticipation of the way these realities were disrupting the established business of...
media and information, within the academy (just as the internet was doing in its work beyond the academy). Five short examples should suffice to explain this point.

First, Internet Studies was able to generate sustainable student enrolments because of the way the Internet aggregates the attention of an economically significant number of people, despite them being spread, in many small numbers, across dispersed geographic locations (see Gneccchi & Corniani 2003 for further discussion). Second, its teaching methods embraced the propensity of Internet technologies to favour user-generated content, thus making for engaging courses ahead of their time with active learning (for example, for a later study, see Lee & McLoughlin 2007). Third, the rhythms of asynchronous communication gave to Internet Studies the kind of virtual community which, as elsewhere online, sustains the individual’s successful participation despite the exigencies of competing demands on one’s time (something evident for decades prior to our current fascination with Zoom: Hiltz & Turoff 2002). Fourth, the internet was always technologically emergent (rather than a fixed-in-time change) allowing Internet Studies to stay ahead of the ‘ordering’ process by which innovation normally folds back from the future into the now. Finally, and this is perhaps its real defining quality, Internet Studies was always also our own constant study of the internet. To use a later analogy, from the time of Web 2.0 developments, the program was in continuous beta release, never quite knowing if it was working and thus demanding of staff, and students, an engagement with what was ahead and generating a shared and sustaining academic identity (part of the reason why the work of Internet Studies scholars on educational affordances is so astute: Kent and Leaver 2014).

While Internet Studies might, in part, be accounted for as another bureaucratic game, played within the largely self-referential ruleset of such games, it cannot fully be divorced from the way the Internet has itself changed the rules of how individuals and groups interact socially and economically. Internet theorists we were reading (and asking students to read) such as Michael Goldhaber, danah boyd, Axel Bruns, Jean Burgess, Lisa Nakamura, Hal Varian and more gave us the ideas that helped Internet Studies be successful and sustainable as the academy of the 2010s and beyond reformatted itself to accommodate the network society we all knew was coming. There was, essentially, a coherence between the observed internet, researched and theorized at distance, and the enacted internet, through which Internet Studies was lived, and prospered on a daily basis.

In the 1990s, I knew so very little of what the internet itself might become and had modest ambitions for what Internet Studies might be. That these ambitions have been so comprehensively exceeded is due not to any particular myth of origin but to the continuing excellence of everyone who is part of Internet Studies then and now. And, into the future, Internet Studies will I think continue to be the kind of community of inquiry Australia needs, as we enter a new and less optimistic time of technological development, trapped between fake news and unregulated big tech, while blithely asking Alexa if we should worry about robots and privacy breaches.

For all its history, Internet Studies remains a place, in time as well as space, where we can together make a bit more sense about futures to come and futures past.

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