



Knowledge for the unknown? A history of the future in Swedish higher education and research policy, 1970–2020

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Abstract

This article analyses how the future has been discussed in Swedish higher education and research policy, providing an overview of public inquiries during the period 1970–2020. Expanding on the conceptual framework of German historian Reinhart Koselleck, the article approaches discourses on the future through the analytical lens of sociology of expectations. The findings demonstrate that all inquiries that attempt to advance arguments for policy change address the future—with temporal perspectives usually limited to the coming 15–20 years—whereby the future is conceptualised as an unknown and complex ‘knowledge society’, characterised by acceleration, high demands and fierce competition. A number of inquiries discuss the future development based on empirical data like shrinking age cohorts among potential students, while others describe threats and challenges based on needs for creating a sense of urgency. Inter- and multidisciplinary, with respect to such future needs in both research and education, is consequently a key area of discussion throughout the period in question. Several other themes emerge as prevalent, including technological change and digitalisation as well as broader issues of how to organise the curriculum and lifelong learning. The historical analysis presented in this article is crucial for ongoing university debates, as it is demonstrated that temporal dynamics and future imaginaries have been highly formative for the development of Swedish higher education and research.

Keywords History · Future · Higher education policy · Change · Scenarios · Arguments

Introduction

In 1966, Swedish Nobel laureate, physicist Hannes Alfvén published a futurist essay under the pseudonym Olof Johannesson. The essay was entitled *The Story of the Great Computing Machine* (*Sagan om den stora datamaskinen*), and it projected a future of rapid

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development into the so-called ‘computing age’ with radically new conditions for humanity, wherein computers have resolved all manner of problems for the user; ‘Total Freedom Democracy’ is implemented everywhere, and wars are fought no longer. While the text envisages a bright future, it is essentially a satire, criticising short-sighted politicians, increasing bureaucratisation, unrestrained urbanisation and utopian beliefs in the potential of new technology. Interestingly, Alfvén/Johannesson also discusses the consequences for higher education and even the organisation of universities. The envisaged introduction of ‘teletotal’—a device that constituted ‘a combination of automatic telephone, radio and TV’—would facilitate communication to the extent that basically all activities at universities would be fundamentally ‘rationalised’ via e.g. recorded lectures and automatised laboratory work (Johannesson, 1966, p. 58, 62).

A few years later, in 1970, Alvin Toffler published his bestseller *Future Shock* (Toffler 1972) in which he also addressed future education systems, contrasting ‘the industrial era school’ with ‘the new educational revolution’. Toffler offers a comprehensive analysis of the future across grand themes, such as social relations, work, societal planning and technology. One section focuses on the future of education, and Toffler is profoundly critical of traditional ideas concerning how teaching and learning activities should be organised. He argues that all knowledge should be profoundly assessed in relation to future needs and that the standardised curriculum (i.e. the same disciplines and the same disciplinary content across educational institutions) is not only outdated but also poses a threat to future societies, which would require more flexibility. Greater freedom for students in selecting courses would undermine the old disciplinary regime of ‘academic guilds, each bent on aggrandizing its budget, pay scales and status’ (Toffler, 1972, p. 371).

These two radical visions of the future have been partially realised: the teletotal concept shares clear similarities with the internet and discussions pertaining to the workplace, technology, and design of education have been ongoing since, not least in recent years with the ongoing development of artificial intelligence (AI). We are witnessing a revived interest in the future, as we live in turbulent times, contending not only with the aftermath of the COVID-19 pandemic and wars but also with pressing long-term challenges concerning climate change, energy and sustainability, democracy and freedom of speech (Daniels, 2021). In the higher education and research sector, the future is ever present in the production and circulation of knowledge. In addition to training the future workforce and the development of cutting-edge research at ‘the endless frontier’, universities are increasingly being tasked with tackling key societal challenges, contributing to economic development and serving as ‘growth engines’, regionally, nationally and globally. Universities’ mission in society, therefore, is typically framed as spearheading the future. Consequently, higher education institutions (HEIs) must balance their legacy, traditions and cultural heritage with persistent claims for renewal, responsiveness and reform (‘modernisation’) (Olsen, 2007). In some sense, this future-generating function has been foundational ever since the establishment of the Humboldtian research university, which coincided with the breakthrough of the modern historicist mode of thought (e.g. Hartog, 2015).

Scholarly interest in the future of higher education has also yielded numerous publications that mount various challenges to the status quo. The very role of higher education has emerged as a key question: are universities necessary when large companies can organise their own qualified training? Do we need higher education degrees and credentials at a time when the best and most highly qualified professors are available online (Gallagher, 2022)? Arguably, in today’s fast-paced society, few people have time to study for 4 to 5 years before entering the labour market (Baum & McPherson, 2022). The dimensioning of the higher education sector, and its relation to other ‘higher’ learning, training and development, has gained new energy in the renewed discussion on lifelong learning (Wolf, 2002).

Alexander has discussed the (multiple) futures of higher education from both the short- and long-term perspectives. Short-term challenges include persistent inequalities in participation, ‘adjunctification’ and over-administration in the academic profession, alternative certification and declining age cohorts, prompting the characterisation of the current system as ‘peak higher education’, whereby the future is configured as a slope, a downward journey from here. In the longer term, beyond 2035, climate change and environmental challenges will fundamentally affect life conditions, while political tension between globalists and neonationalists and growing illiberalism will lead to instability. Technological transformation rooted in artificial intelligence and virtual reality will change the way we live, according to this narrative. However, despite all these challenges, Alexander asks, ‘once more, what other institution is better positioned to guide us through such extraordinary challenges than the academy? And to what extent will colleges and universities shape such a future through research, producing technologies, practices and concepts?’ (Alexander, 2020, p. 211). In line with Toffler above, various disciplines/subjects have been the target of considerable criticism on the grounds that they are less favourable with respect to employability and future careers and that they are conservative with little capacity to change. Solutions have varied over time; as early as the 1960s, problem-based learning (PBL) was introduced as an alternative approach to organising the curriculum. Currently, challenge-driven education (i.e. addressing real world problems/challenges) in multidisciplinary teams is a yet another way of challenging subject-based higher education (Foster et al., 2021).

The present article aims to better understand how the future has been described in relation to perceived needs and demands for change in Swedish higher education and research policy by providing an overview of how future perspectives have been articulated in the aggregated national policy discourse over the last 50 years (1970–2020). It will contribute to a growing body of literature across the humanities and social sciences dealing with historical perspectives on future studies (e.g. Andersson & Rindzevičiūtė, 2015; Seefried, 2015; Andersson, 2018) and the role played by various temporalities in academia (e.g. Gibbs et al., 2015; Vostal, 2021).

Chronologically, the article begins circa 1970, when future studies flourished, and several decades of progress and rapid growth had contributed to the formation of the Swedish welfare state. Subsequent years, which witnessed a global oil crisis and the restructuring of the industrial sector, altered this optimistic outlook towards the future. During this period, the Swedish higher education sector also expanded significantly, with increasing student numbers and the foundation of new colleges, leading to a perceived need for more ‘knowledge workers’ (e.g. Börjesson, 2011). New modes of governance and decentralisation of the sector (New Public Management) were introduced in the 1990s, and during this period, following a serious financial crisis, Swedish universities also changed significantly. While remaining state agencies, they have become more market-driven and competition-led, steered by the state from a distance, although in several cases marked by a strong process of decollegialisation (Ahlbäck Öberg & Boberg, 2023; Gribbe, 2022). This development created a tension between the desire to cultivate reputations for ‘excellence’ and ‘world-class’ on the one hand, and for inclusion, equality and free education with wide participation on the other (see Geschwind & Pinheiro, 2017). While previous research has offered both chronological and thematic analyses of this period in Swedish higher education and research policy (Benner, 2001; Benner, 2008; Askling, 2012; Andrén, 2013; Widmalm, 2016; Lundborg & Geschwind, 2021), as well as investigations of future expectations in specific scientific fields (Tunlid & Widmalm, 2016), no comprehensive investigation of future-oriented political arguments and narratives in the national policy discourse has yet been undertaken.

Theory and method

Ideas of the future are typically rooted deep in history, where the future has been painted in either bright or dark colours as a utopia or dystopia, respectively (see, e.g. Brissman, 2021). The future has also become a scientific, political and economic battlefield on which ideas and visions compete. Historical and sociological research regarding the future and how it is interpreted, discussed and approached is indeed proliferating (Adam, 2010; Andersson, 2018; Brown et al., 2000). It has been noted that temporal perspectives engaging with the future were clearly present among key social science scholars during the period studied in this article (e.g. Beck, 1992; Bell, 1973). Bauman's influential works on a 'liquid' modernity and 'retrotopia' (Bauman, 2013) (Bauman, 2017) as well as Rosa's on social acceleration (Rosa, 2013) indicate how temporal understandings of current societies as being in a state of constant flux have become commonplace in philosophical and sociological literature. All these thinkers (and many others) make explicit and implicit assumptions about the future, sometimes incorporating rather distinct imaginaries. While studies of the temporal dynamics of universities have become increasingly common in recent years (Vostal, 2016), the formative power of the future as a concept in higher education and research policy deserves further attention.

The present article is influenced by philosophical and historical discussions around time and temporality that centre on the works of German historian Reinhart Koselleck (e.g. 2004)—more specifically, his categories 'space of experience' and 'horizon of expectation'. The categories claim a high degree of generality on the one hand and an indispensable application on the other, providing a useful tool for empirical historical studies, not least by illuminating how past futures were constructed: 'Similarly with expectation: at once person-specific and interpersonal, expectation also takes place in the today; it is the future made present; it directs itself to the not-yet, to the nonexperienced, to that which is to be revealed. Hope and fear, wishes and desires, cares and relational analysis, receptive display and curiosity: all enter into expectation and constitute it' (Koselleck, 2004, p. 259). This approach has been further developed within the field of science and technology studies (STS), presented as 'sociology of expectations' (Borup et al., 2006; Brown & Michael, 2003). By systematically surveying the shifting constellation of expectations and experiences within a certain discourse, it is possible to historicise the temporal politics at specific times and places.

The future is accordingly interwoven with the past and the present. In the following, a diachronic perspective on horizons of expectation will be applied. The horizons of expectation comprise projections and forecasts, arguments for change and contested statements and assumptions. Such imaginaries (cf. Jasanoff, 2015) and 'battles for the future' possess a performative dimension. Future perspectives may thus be used for 'politicking', to use Kari Palonen's term (2003), in the sense that they influence the political decision-making that fundamentally alters the sense of urgency and future development of higher education and research. The occurrence of such more or less explicitly stated future perspectives have guided the collection and analysis of data.

The empirical material consists of a certain type of written sources that have been of central importance to the evolvment of the national politics of knowledge throughout a longer period of time. Swedish policy making, across all areas, is characterised by a comprehensive and historically strong tradition of state-initiated public inquiries (SOU), involving committees that comprise politicians, civil servants, and various experts. Over the years, these committees have produced a significant number of printed (now digitised)

reports. Serving as platforms that amalgamated political and academic viewpoints early on in the law-making process, the public inquiries legitimised and underbuilt major political decisions. Through their continuous publication within the same series, the reports also tended to cement certain discursive logics and genre conventions (e.g. Premfors, 1983). As can be expected in most policy reform processes, these reports recurrently include sections that describe future challenges or demands, supporting the proposed modifications and alterations of the present system.

A selection of state public inquiries addressing issues of relevance to higher education and research has been made, comprising recurrent sector topics such as education, research, governance, careers, organisation, resource allocation and the structure of the higher education landscape. Fourteen reports across these areas were selected (see Table 1), all initiated by the Ministry of Education under various governments (varying from social democratic to liberal constellations). In these reports, descriptions of and discussions about possible or desirable futures have been analysed and structured thematically in order to showcase the breadth of prevalent topics that were discussed in connection to the future. The selection of reports was made to ensure a broad coverage of higher education and research policy themes. In the further analysis, we have identified more general themes based on our theoretical framework. As a critical reminder, it should be noted that this group of sources typically sought to create a sense of urgency and a need for change, done through the employment of claims about the future. However, the reports differ significantly with respect to how specific they are in doing so: some are more knowledge-oriented and less ideological whereas others are more driven by ready proposals and ideas and supported with scarcely any empirical evidence.

It has been possible to search the digitised versions of the public inquiry reports for occurrences of the words ‘future’ (*framtid*) and ‘futures’ (*framtidern*). The frequencies of these words are reported in Table 1. In addition, the publications were examined in their entirety to ensure that no discussions about future expectations were omitted. As will be shown, discussions about the future (or indeed temporal perspectives) are not exclusive to the use of these particular words. All reports are written in Swedish, and all quotes have been translated by the authors.

Results

Table 1 presents a thematic overview in chronological order, demonstrating that the future is discussed in all reports, although the frequencies vary significantly. However, two of the reports from the 1990s (SOU, 1992, 1996) include chapters that focus specifically on future perspectives. The latter report, with 0 hits in the word search, is a particularly interesting case that includes interviews with a selection of key informants who were asked to discuss the sector’s future in a 10–15-year perspective. Several of the reports also refer to projects such as technology forecast, future universities and future commission. One of the most recent reports, focusing on the development of higher education over the last 20 years, including the experience of continued expansion, explicitly discusses how an historical narrative could inform present policymaking aiming for a better future:

The aim of reconstructing twenty years of educational offer is twofold. Partly, the historical picture should be reshaped. The background picture of twenty years’ expansion of higher education is interesting as such, but of course it is even of greater

Table 1 Overview of themes related to the future in reports

Document	Freq	Sector	Education	Research	Organisation	Profession
SOU, 1973: 2 (education)	24	Accommodating an expanded university system	HE should prepare for professional practice; early specialisation to avoid excessive study time		Expansion should happen outside traditional universities	
SOU, 1981: 29 (research)	24	Concerns about the future of research and doctoral education		Support basic, theoretical research beyond the current challenges to be prepared for future		
SOU, 1989: 27 (research at university colleges)	17	The role of HEIs in regional development	Teaching–research links, greater demand for PhDs	Interdisciplinary profiles		Few teachers with PhD, recruitment challenges (unless more research)
SOU, 1992: 1 (basic education)	29 (and Ch. 25 perspectives)	Impossible to foresee needs of working life, society or individual, further expansion, competition	Content and study environment crucial for future development, continuing ed, distance ed	Parallel systems of teaching–research (Scott, 1991)	Need for ed development unit, more flexibility in ed programmes (af Trolle 1990)	Increased demands on teaching quality
SOU, 1996: 166 (academic profession)	0 (Ch. 5 interviews about the future)	Period of transition, rapid change, competition, breakthrough of ‘female values’ in HE, feminisation of work and norms	Competition from other providers and foreign HEI, digitalisation, student centred, PBL, interdisciplinary	More applied research and strategic basic research with many collaborating partners, interdisciplinary	Internationalisation a given, integrated, not a specific theme	Increasing demands pedagogy, subject knowledge, beyond a separation of teaching and researching staff
SOU, 1998: 128 (research)	20	Transition from industrial to knowledge society. Different roles for research. Potential of IT. Impossible to plan research. Acceleration	Further expansion incl. PhD level	Interdisciplinarity (humanities–technology). Basic research as basis	Priorities, other R&D organisations, diversified funding, unbounded, digitalisation, internationalisation	
SOU, 2000: 82 (governance)	1		Increasing no. of students leaving without degree			

Table 1 (continued)

Document	Freq	Sector	Education	Research	Organisation	Profession
SOU 2004: 27 (doctoral education)	26	More competent population with HE	Need for more PhDs outside academia, digitalisation of courses		Research schools, but risk of mainstreaming	
SOU, 2005: 48 (resources)	6		Demography—decreasing no. of students			
SOU, 2007: 81 (resources)	70	Competitive (international)			Independence, diversity of HEIs, responsibility	
SOU, 2007: 98 (career)	76	Insecurity, need for priorities and strategies			Mergers (Denmark), autonomy/responsibility	Job insecurity, dismissals
SOU, 2015a, b: 70 (education)	53	Aim to look at history for shaping future. Stakeholders: student demands, labour market and societal needs	Courses vs programmes. Lifelong learning		Costs for lifelong learning	
SOU:2015: 92 (leadership)	34	HEI role in addressing global challenges and competitiveness of countries and regions. Knowledge as main production factor. Complex world, strong competition	Smaller age cohorts, fewer students	Needs-driven research, commercialisation	Increased autonomy, priority-making	Higher quality of leaders
SOU, 2019: 6 (governance)	77	Unknown future, higher demands on competence development. Future is uncertain, unpredictable knowledge and competencies	Role of HEIs in lifelong learning, sustainability, net-based education (MOOCs)	Free and curiosity-driven research and education decisive	Possibly a different judicial form of HEIs in the future	

weight how this image can be used to better satisfy the future of students' demand, labour market needs and society's other needs as well as the goal that higher education should be of high quality. (SOU, 2015a, b, p. 30)

Table 1 presents an overview of important themes related to temporal concerns that were discussed in the reports and the main arguments pertaining to the future. These relate to the core responsibilities of HEIs—education and research—as well as organisation and profession. The second column indicates the number of times the terms 'future' and 'futures' occurred.

The future is unknown

One general finding to emerge from the inquiries is that the future is frequently described as 'unknown', 'unpredictable' and 'uncertain'. This conclusion has implications for how education and research should be organised. A 1981 report, focused on the future of research and doctoral education, argued in favour of increased funding for basic research with the purpose of enhancing knowledge development in the long term:

A better balance between the current and the more timeless must be accomplished. [...] Many of today's pressing problems may turn out to be outdated tomorrow. If, through zeal, one also built up an extensive permanent research organisation around such a problem area, it may ultimately be difficult to dismantle this organisation when it is no longer needed. The reverse also applies. One must constantly try to maintain a certain knowledge preparedness for the problems that are the future and that therefore have not yet made themselves clearly felt. (SOU, 1981, p. 49; see also Benner & Schwaag Serger, 2023, p. 53)

This statement should be interpreted against the background that, during the 1970s, Sweden had invested considerably in sector-oriented, applied research. By the early 1980s, there thus emerged a perceived need to prioritise essential, curiosity-driven research over various sectors' needs. The way in which the future is used as an argument is particularly interesting. Given the future's unknowability, research should not be limited to current needs and challenges.

Excessively intrusive steering of education and research should thus be avoided, as SOU, 2019, for example, also advocated. Such recent conclusions regarding future needs should be considered in the context of the increased governmental interference in recent years in both research and education. The vast increase in research funding has been focused on strategic research areas targeting current global and national challenges.

We cannot know beforehand which knowledge and competence will be valuable in the future – except that the future is always uncertain, the development of knowledge as such through research findings and students create new questions, goals, problems and opportunities. (SOU, 2019, p. 105)

The arguments across time are strikingly similar. They could be interpreted as a response to experienced detailed steering, albeit with different facets. However, other reports have discussed the future in terms of more or less the opposite: more needs-driven research. Over time, the pendulum has swung back and forth in relation to what kind of knowledge production will be needed/important in the future. In the 1996 inquiry entitled 'Teachers for higher education in development' (our translation), it was for instance stated that:

The current development points towards a continued relative increase in applied research and to some extent directed basic research within the framework of large and complicated projects with many cooperating parties, not infrequently someone or some with an industrial domicile. (SOU, 1996, p. 57)

The 2015 report 'Leadership for Quality' serves as a more recent example that focuses on leadership and management of Swedish HEIs:

Furthermore, it is urgent that in the future the universities will work even more actively to operate for research results obtained at the university to be of benefit, i.e., by promoting the commercialisation and transfer of knowledge to business and society in general, as the government lined out in the bill A lift for research and innovation (prop. 2008/09:50). (SOU, 2015a, 2015b, p. 415)

These two report statements are more normative with the intention of creating not only a sense of urgency but also a future imperative for HEI leaders and decision-makers to direct research towards commercialisation and knowledge transfer. They also discuss needs-driven, applied research in collaboration with external partners as something the future inevitably will bring.

The future is a knowledge society

Although the future is generally considered unknown, consensus exists throughout several of the reports regarding an ongoing transition from one society (industrial) to another, most frequently referred to as the 'knowledge society', based on the notion of an ever-changing knowledge dynamics that requires constant flexibility as current knowledge is expected to swiftly become obsolete:

The societal development now seen is sometimes described as a transition from an industrial society to a knowledge society. The knowledge society, however, does not replace the industrial society but rather constitutes a new dimension of it. Sweden, like other countries, will in a foreseeable future be dependent on an effective industrial production. However, the power of change lies within the new dimension, the knowledge dimension. (SOU, 1998, p. 17)

In the contest of such expected change, most inquiries discuss the need for more highly educated employees, and further expansion of higher education is expected. In the short run, this was very much the case, as student numbers increased significantly during the 1990s, in a second wave of expansion following the first major one in the 1960s.

Against this background, it is quite clear that a very large part of the population active in working life during the first decades of the 21st century will have some form of higher education. In that perspective, it is obvious that the content of university studies and design, as well as the total study environment, will be of decisive importance for the development of society in the immediate foreseeable future. (SOU, 1992, p. 96)

In light of such experiences of vast expansion, the inquiries conclude that higher education is expected to play a key role in the development of the knowledge society. At the beginning of the new millennium, the so-called 50 percent target was high on the political

agenda, meaning that half of a given age cohort was expected to go on to higher education. One inquiry, entitled *A New Doctoral Education* (2004), also stressed the crucial role of third-cycle education. In this report, doctoral education is frequently framed as ‘an investment in the future’ that is expected to yield high revenues in upcoming decades. This economic approach is typical of the later inquiries studied herein. The purpose of the new doctoral education, the inquiry stresses, is to ‘accommodate future needs for high competence for research and development work both within academia and in working life outside’ (SOU 2004, p. 74). The need to secure the future academic workforce is merely one aspect of doctoral education; the production of more PhDs for extramural work is the second, which also requires changes on the demand side. The labour market must appreciate candidates who hold doctoral degrees, and academia must better prepare them for advanced services in the knowledge society.

The dimensioning of doctoral education also has implications for discussions about the higher education landscape (i.e. the number and profile of HEIs and their distribution across the country). One means of securing a highly qualified cohort of academic staff for the future would be to also develop research and doctoral education at university colleges (SOU, 1989). Traditional universities are not expected to be sufficient to supply qualified teachers and researchers to meet the needs of the future. More graduates from HEIs, including the doctoral level, are thus depicted as an essential need for the future knowledge society. However, demographical data indicated early on that future age cohorts were expected to decrease (SOU, 2005, p. 252).

Deeply interwoven with imaginaries of a coming knowledge society was the ongoing IT revolution (the ‘information society’ being a close contender to ‘knowledge society’ in debates on how to label the new era). While technological development features prominently in most discussions of the future, its presence in the inquiries examined in this study appears somewhat limited, as to what could be expected. Digitalisation nonetheless stands out as a prominent theme. As early as 30 years ago, the 1992 inquiry into digital learning stated that:

The need for distance higher education—perhaps mostly regarding further and continuing education—will grow the coming years. In a tougher international competition, it is important to take advantage of and develop individuals’ knowledge and creativity. It is necessary to find methods to quickly bring about new knowledge to professionals. For this, distance education is often the only realistic alternative. (SOU, 1992, p. 288)

In the latest report in the sample, digital learning is also discussed in relation to lifelong learning and massive open online courses (MOOCs):

One question for the future is how MOOCs and other net-based education will develop. Net-based education, unlike MOOCs, has admission criteria and gives credits. Both MOOCs and credit-giving net-based education may need to expand in order to meet working life’s demand for further education. (SOU, 2019, p. 246)

Digital learning with net-based solutions is seen as opening new opportunities and increasing flexibility—in particular, for professionals seeking to develop their competence. This also includes doctoral education (SOU 2004). In the case of research, information technology has also been expected to serve as a key facilitator: ‘[...] access to research information over the web enables both a more decentralised research practice and faster access to up-to-date research information in the innovation process’ (SOU, 1998, p. 33). Digitalisation would thus enable new temporalities and means for surveying the transient research frontier.

The future is complex

Although it is generally held that it will be extremely difficult, if not impossible, to predict what the future may hold, inquiry reports frequently predict that the future will be more complex, which further explains the above emphasis of flexible knowledge. The suggested implications for HEIs are depicted as of a fundamental character, as they include deep organisational and epistemic changes, whereby universities' disciplinary organisation is challenged. Complexity, several inquiries argue, therefore requires work across disciplinary boundaries, and thus more multi- and interdisciplinary approaches for tackling the issues.

SOU, 1996 (p. 166), in particular, details what should be done in terms of educational reform. Students should be better prepared for working life by being acquainted with and exposed to other scientific areas. Other reports also highlight the importance of cross-disciplinary research. In a report focusing on research at university colleges, thematic, interdisciplinary research is highlighted as a future opportunity, particularly with regard to the smaller volumes at these institutions (SOU, 1989). Another committee report focusing on research states the following:

Important research for the future may require interaction between humanities and technology. Not least the development in IT and in the biotechnology area has demonstrated the need for a broader approach that places the human being and the individual at the centre. (SOU, 1998, p. 19)

Calls for more cross-disciplinary approaches typically come with a differentiation between basic research, asking for more multidisciplinary, and applied, needs-driven research with more integrated interdisciplinarity. The most recent inquiry in this study stresses that 'many work tasks will require a sustainability perspective, in which for instance technical competence is combined with ecological and social perspective' (SOU, 2019, p. 243). Sustainable development was introduced in the Swedish Higher Education Act as early as 2004, but this is the only explicit mention of the need to incorporate it into higher education. The passage also highlights that the concept of sustainable development challenges the classic disciplinary university organisation, carrying a robust integrative and boundary-crossing imperative.

At the same time, as more needs-driven, applied, and inter- or multidisciplinary research (together with extramural actors) were requested, especially in the 1990s, and then with a rather deterministic touch, the future's unknowability worked as a common argument in favour of more basic research and less specialised education throughout the period of study. Research cannot be too specific or near-sighted as it carries the risk of being irrelevant even in the near future, and study programmes should provide a broad basis for further studies and working life.

Future demands on education are particularly discussed in relation to curriculum design. One source of tension that changed over time (pre-Bologna) is the juxtaposition of early specialisation versus a broader, more general education. In the 1970s, central planning was undertaken by sector agencies, and universities would educate the number of students determined by the government (af Trolle, 1990; Scott, 1991). The 1973 SOU clearly expressed this as follows:

Higher education shall prepare for future work. This has consequences for its dimensioning and organisation and to a certain extent localisation. Of course, it is not the intention that each course or other study unit should be directly linked to a profession. The aim is that the entirety of an individual's basic education shall be preparing

for work. Working life should, according to the inquiry, be an important source of renewal for education, and at the same time, education should be an important tool for change of working life. (SOU, 1973, p. 10)

Whereas future estimations of labour market needs were believed to be the decisive factor in the central state planning model, students' individual preferences were considered more important from the 1990s onwards—reflecting how an individualised and market-oriented customer logic increasingly has entered higher education. The 1992 SOU criticised the rigid education programme system 'for being inflexible, bureaucratic and inhibitory for students' own initiative', voicing a critique that been occurring ever since the introduction of so-called fixed study paths at the end of the 1960s (SOU, 1992, p. 67).

In the 1996 inquiry, curriculum design is also discussed in relation to what is referred to as 'future needs'. In line with many futurist educational thinkers, the role of the teacher/lecturer is a frequent topic of interest. The inquiry advocates a move away from teacher-oriented teaching and lectures as the dominant approach to organising education:

The importance of the teacher as a source of information is reduced – there is consensus that teaching of the kind that has so far occurred to a large extent and which involved a pre-planned review of the course literature by the teacher, will largely cease. (SOU, 1996, p. 54)

Future education will encourage greater emphasis on synthesis skills as a complement to the current focus on analytical skills. This would be facilitated by a transition to problem-based learning (PBL) and continuous, formative student assessment. This pedagogical approach, it is argued, would also place students at the centre of education and allow students and teachers to assume joint responsibility for the learning environment, with teachers in a 'qualified service role' (SOU, 1996, p. 55) rather than their current role as experts. The recent 2019 report, moreover, discusses future education with respect to how development of new knowledge creates opportunities for students to approach 'new issues, goals, problems and opportunities' (SOU, 2019, p. 105), acknowledging that we cannot predict which aspects of knowledge and competence will be needed in an open-ended future.

The future is marked by acceleration and competition

Not only is the future framed as unknown and complex; the inquiries also assume that it will bring higher demands in terms of speed. The new society will require continuous education to an unprecedented degree in order to meet societal criteria of efficiency (Rider, 2016). The concept of lifelong learning was devised early during the studied period but has attracted increased interest in recent years.

In the future labour market, it is taken for granted that a professional worker will change jobs several times during his/her professional life and will thus need to undertake continuous competence development. (SOU, 2015a, 2015b, p. 30)

The latest report, from 2019, considers the future role of higher education in a similar vein:

Higher education plays a big role in lifelong learning, even if it seems rather limited. Should higher education play a bigger – or different – role in the future? The question could be asked against the background of an internationally unanimous view that the future labour market – with increased digitalisation, increased internationalisa-

tion and a labour force working longer – will put demands on competence development during the course of a work life. (SOU, 2019, p. 243)

During the period under examination, internationalisation became an integral aspect of Swedish universities. This was also related to competition: ‘Modern information technology makes it possible to take part in foreign education without even leaving Sweden. Big companies establish their own higher education activities for basic education as well as continuing and further education’ (SOU, 1996, p. 52). The 1996 report thus predicted fiercer competition in the arena of education: Swedish universities’ historical monopoly on higher education was expected to be challenged by international seats of learning as well as other education providers.

The inquiry on resource allocation (SOU 2007a) also refers to international competitiveness in a discussion regarding how many universities the country should have:

In relation to Sweden’s size, we have too many universities [...] but the essential question is not the number of universities, but how Sweden will be able to conduct education and research at the highest international level in the future and thus be able to compete on the international research and educational arena. (SOU 2007a, p. 144)

To achieve this, the inquiry recommends a more diversified higher education landscape and, in addition, higher institutional autonomy, although the majority of the funding will still be public, and no tuition fees will be introduced (SOU 2007a, p. 17).

At the individual level, university teachers have long been expected to be under greater pressure to exhibit more ‘professionalism’ and to be better educated and thus ready to meet students with varying prior knowledge and abilities in an increasingly heterogenous landscape of higher education. The 1996 inquiry also envisaged a transition of the norm system of higher education in a feminising direction that would make HEIs more attractive to women both as places of study and as workplaces, for example, with new pedagogical models and greater breadth (SOU, 1996, p. 63). A more competitive situation would also intensify demands for generalist competences and continued professionalisation of the teaching profession, not only in pedagogy but also in terms of having an ‘overview of one’s own subject and the ability to relate knowledge within this to other subjects and to socially relevant issues’ (SOU, 1996, p. 52, 61). Students, in turn, have been expected to act as capable individuals with the ability to take responsibility for the content and provision of their education. One of the future challenges identified concerned the fact that many students tended to leave their educational programmes without obtaining degrees (SOU, 2000).

This new, fast-shifting and volatile future economy is also expected to lead to more unstable and insecure working conditions, as noted by the 2007 inquiry into academic careers. As academic careers will become less secure, the university as a workplace will also change:

The inquiry’s assessment is that we approach a system in which more persons with permanent positions will be laid off for various *reasons* than we hitherto have been used to. This increased insecurity will have its roots in the needs for prioritisation and strategic efforts. [...] It is therefore of the highest importance that seats of learning improve their abilities to deal with restructuring, including layoffs. (SOU, 2007b, p. 231)

Interestingly, the inquiry linked this tendency to lay people off to an expected increase in the number of permanent positions. However, this prediction has gone in the opposite direction, with more temporary positions relying on external project-based funding—which in itself has deep-going epistemic as well as organisational effects on academia, including its temporalities (Ylijoki, 2015).

Conclusion

The period studied, 1970–2020, is acknowledged as an era of transition from an industrial society to a knowledge society/knowledge economy, which constituted an underlying metanarrative in the higher education and research policy discourse. All inquiries (SOUs) included in this study apply a future-oriented perspective, with the future serving as a political resource and battleground. The inquiries regularly also include historical perspectives or background narratives, clearly framing the present between the space of experience and horizon of expectation (Koselleck, 2004). The future perspectives applied typically adopt a 10–15-year outlook, with some longer-term perspectives occasionally included (Andersson & Keizer, 2014). Expected change is primarily outlined with reference to notions of an increase in speed, an acceleration of work pace and social and technological change, the consequences of which include work insecurity and a constant need for new knowledge and skills as well as greater efficiency.

Despite representing a period where continuous growth was no longer taken for granted, the Swedish public inquiries cited in this study generally exhibit a positive outlook regarding the future of higher education and research, which are expected to play an important role in the knowledge society. Further expansion of the system was long expected with strong support from the population. In the early 1990s, however, more threats also emerged in visions of the future, including decreasing age cohorts, increasing student dropout rates and increased competition from other providers, both domestic and international. Strong traces of neoliberal thinking are evident from the 1990s onwards, also affecting the way in which the future is portrayed (Benner & Holmqvist, 2023), with increased autonomy for universities, and individual students' greater responsibility for their own education (Krücken, 2021; Pinheiro & Pulkkinen, 2023). Regarding the core academic activities, teaching and learning are predicted to become increasingly challenging with wider variety in ability and aptitude among students.

Many of the challenges described in the public inquiries have long been acknowledged but addressed only to a limited degree. In the organisation of education and the curriculum, calls for reform (such as PBL) continue to echo the critical attacks on disciplines by the futurist Toffler (1972). The role of technology seems to have been largely underestimated (Selwyn & Facer, 2014), as technological change generally was described as limited or complementary, with a clear distinction between 'distance', 'net' and 'regular' education (Hrastinski, 2019). The digital transformation experienced in many countries (including Sweden) during the pandemic was certainly closer to what was considered utopian by Johannesson/Alfvén (1966) quoted above, than what is more cautiously described in the public inquiries.

It is safe to conclude that higher education and research policy has been marked by an ongoing struggle about how to define and interpret the future (Amsler & Facer, 2017; Andersson, 2018). Several public inquiries also mention competition as an important overarching aspect to be expected of the future. Higher education turns into a competitive—and increasingly internationalised and privatised—arena wherein various actors strive for 'excellence' (Krücken, 2021). The future society is expected to require new skills and knowledge to address the supposedly complex challenges that currently remain unknown. Particularly oriented towards the needs of the future, higher education and research not only respond to but also generate change in society. General consensus in the inquiry reports thus holds that well-educated students have the potential to shape the future and that new research will continuously alter our living conditions.

The dynamic notion of the future as a knowledge society, in tandem with the emergence of new management ideals in the late twentieth century, challenged an older regime based on central, rational planning for the future, which had been characteristic of the politics of knowledge of the Swedish welfare state (Östh Gustafsson, 2020). Predominant notions of the unpredictability and complexity of the future, likely generated through experiences of expansion and social acceleration, made older forms of governance seem obsolete. It is therefore possible to identify a consensus regarding the future being a knowledge society, but its distinct contents remaining practically unknowable due to its ever-shifting character.

Here, one may ask whether the knowledge society will remain as strong as a guiding future imaginary in upcoming decades, keeping the epistemic turbulence and post-truth discourse of the last decade in mind. Will the knowledge society morph into a past future? In any case, it is imperative to historicise it as an idea as well as further examining the role it has played in higher education and research policy. Much work clearly remains to be done in exploring the dynamic dialogue between the past, present and future in higher education research, including higher education researchers' own temporal positionalities. Such endeavours would also contribute to a more stable foundation for future policy making.

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Declarations

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