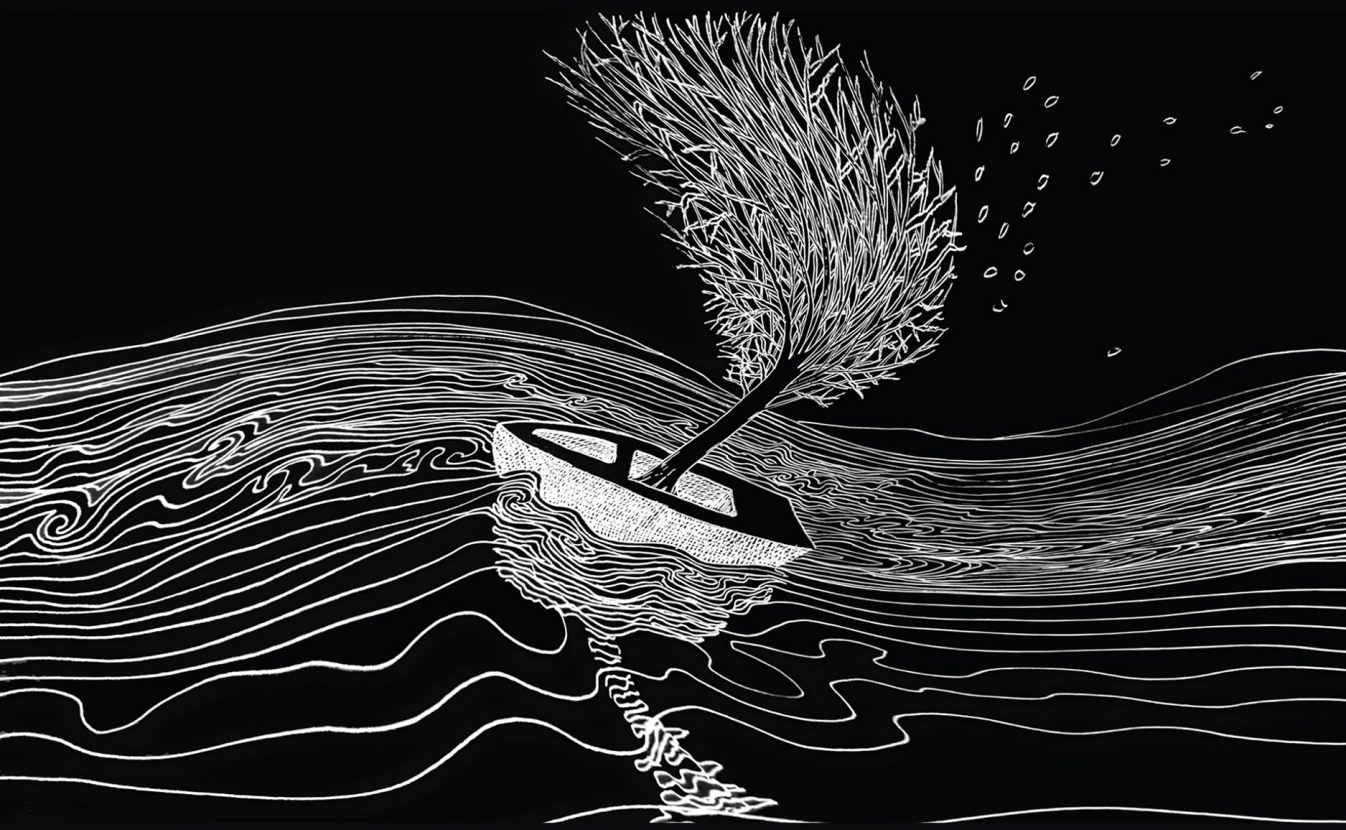
Higher Education for Good

Teaching and Learning Futures



Edited by
Laura Czerniewicz and Catherine Cronin

https://www.openbookpublishers.com

ISBN Paperback: 978-1-80511-127-6
ISBN Hardback: 978-1-80511-128-3
ISBN Digital (PDF): 978-1-80511-129-0
ISBN Digital ebook (EPUB): 978-1-80511-130-6
ISBN XML: 978-1-80511-132-0
ISBN HTML: 978-1-80511-133-7

DOI: 10.11647/OBP.0363

Cover image: George Sfougaras, *Hope*, CC BY-NC-ND
Cover design: Jeevanjot Kaur Nagpal

6. Closing the factory: Reimagining higher education as commons

Jim Luke

Learning is essential to human survival, but opportunities for advanced education have historically been limited. With the invention of the printing press, the proliferation of literacy, the adoption of technology to automate production, and the need for more educated workers, societies have become increasingly motivated to extend longer and longer periods of education to more and more of its members. In this unprecedented process of expanding access to education, the organising structures, and the imaginaries that inform them, have transformed over time.

This chapter, like this book, is explicitly about higher education and the good it provides. The author invites the reader to explore concepts such as "higher education", "good", "imaginary", "commons", and "knowledge commons" which may have varying connotations and are worthy of discussion to arrive at a shared understanding.

My perspective is a global, macro, historically informed economic perspective. By "economic", I do not mean market, capitalist, or any specific economic system. Rather, I mean higher education is in significant ways an economic institution. It uses real resources, and people engage in economic activity: producing, consuming, enjoying, and accumulating. The economics of higher education considers how these activities are to be organised and governed and their purpose or function in society. It is a macro perspective, because it is concerned with the degree to which the society supports higher education and why, and the ways that education benefits society.

The chapter encompasses the evolution of three imaginaries of higher education, two of which have repeated historically across the

 https://doi.org/10.11647/OBP.0363.06

globe. In the early 21st century, an opportunity for a third imaginary has emerged, one that holds great promise and I propose needs the attention and efforts of both academics and the larger society.

The first describes how the social imaginary of higher education has been remarkably similar across civilisations. I will call this the "elite knowledge commons". The specifics of the membership of the elite, the organisation, support, subjects, traditions, and even pedagogies may differ, but there has been a shared imaginary, which has been socially beneficial albeit limited and inequitable.

The second involves the broadening of higher education beyond the historically elite due to economic development, much of it resulting from the Industrial Revolution and its accompanying production and communication technologies. This expansion of participation, itself a social good, brought with it a major alteration in the imaginary of higher education, which I call the "knowledge factory". This imaginary is illustrated by the experience of higher education in the US over the past 150 years. However, the emergence of this second imaginary is not unique to the US. As areas of the world have become industrialised, the knowledge factory imaginary extended its influence.

Current developments, such as internet technology, open pedagogy, OER, and open access publishing are creating the conditions to realise a third imaginary. Societies cannot and should not return to the elite knowledge commons because of its inequitable, undemocratic, and exclusive characteristics. Instead, I invite the reader to imagine a new knowledge commons, encompassing an open and equitable higher education. I do not provide a specific design for that commons because the rules and structure of a commons must arise from the community it serves. Rather, I identify the tasks and work needed to create that imaginary.

Terms

Higher education

In *The Origins of Higher Learning*, Lowe and Yasuhara (2017) provide a sweeping history of how humankind first evolved centres of higher learning from ancient times onward, throughout the eastern hemisphere. They use the term "centers of higher learning" as an umbrella term

for what today we call higher education institutions (HEIs). Their term embraces a variety of different institutional arrangements across centuries and cultures, including the predecessors to today's universities and colleges.

Although I will use the term "higher education" and the acronyms HE and HEIs (higher education institutions) in keeping with the general practice of this book, I am referring to the broad conception of "centers of higher learning" referenced by Lowe and Yasuhara. This corresponds to the UNESCO (2012) concept of tertiary education, which encompasses all organisations that build on secondary education including advanced academic education, but also advanced vocational or professional education.

Imaginary

Charles Taylor (2004) defines a social imaginary as

> the ways people imagine their social existence, how they fit together with others, how things go on between them and their fellows, the expectations that are normally met, and the deeper normative notions and images that underlie these expectations. (p. 23)

The social imaginary of higher education represents the "normative notions and images" of what people expect the social role and purpose of HEIs to be. Imaginaries are important because they form the background or presumption of how things work that in turn drives the development of specific institutions, behaviours, and even language.

David Foster Wallace (2005 as cited in Clear, n.d.) frequently told a story of

> ... these two young fish swimming along and they happen to meet an older fish swimming the other way, who nods at them and says "Morning, boys. How's the water?" And the two young fish swim on for a bit, and then eventually one of them looks over at the other and goes "What the hell is water?" (para. 1)

The imaginary of higher learning is the water in which academics swim. The size, organisation, access, topics, and motivations for study in HEIs are driven by the imaginary. The imaginary shapes how we think

about HEIs and higher learning as a pursuit. To better understand the imaginary, to see the water, it is helpful to examine:

- What good does higher learning provide? For whom?
- Who is higher learning for? Who determines the scope of what is to be learned? Just a few or many?
- What are the metaphors and language we use to describe higher learning and HEIs?
- Why sustain higher learning? What stories or theories do we tell to justify or explain it?
- How are the people involved to be organised? How is the endeavour structured or governed?

Lowe and Yasuhara discerned a common pattern from ancient times and across civilisations, geography, and cultures regarding these questions and more. What they found in the origins has been quite consistent and forms an imaginary for HEIs that persists today. I call that imaginary the elite knowledge commons. The elite knowledge commons provided society with great good by furthering civilisation and social, domestic, and political order, but was limited. A primary effect was to entrench and perpetuate the power of ruling classes. In little more than a century, a new imaginary has emerged to overcome the flaw but has also had its flaws and limitations.

Good

Higher learning develops technologies and knowledge that improve and extend lives. But beyond the practical, it provides meaning. Lowe and Yasuhara (2017) describe it as "sustained interest in questions that went beyond daily survival" (p. xiii). HE nurtures culture, governance, religion, arts, and science. It helps people make meaning of life. It is common to all civilisations in some fashion, and we may consider it essential to civilisation.

However, being essential to civilisation does not mean universally applicable. In addition to the content and extent of knowledge created and stewarded by HEIs, I explicitly consider the extent of participation

in higher learning. Access, more participation by more people, is itself an important dimension of goodness to be considered.

There are numerous examples of the ways higher education, by extending the collective pool of human knowledge and technology, has provided social good. Let us consider just one, the example of longevity and health. Less than 150 years ago, the average human life expectancy throughout the world, across all cultures and throughout history, hovered between 26 and 40 years. Then in the past 150 years, the knowledge created and shared, most often via HEIs, triggered a great transformation. According to *Our World in Data*, "Since 1900 the global average life expectancy has more than doubled and is now above 70 years" (Roser, Ortiz-Ospina, & Ritchie, 2019). The authors explain there is still inequality between countries but all countries have improved. The nations with the shortest life expectancies today have longer life expectancy than existed in the best countries before 1900. This more than doubling of life expectancy at birth, primarily from reduced child mortality, in a mere century and a half has benefited humanity. Entire diseases have been eradicated and sanitation greatly improved. The solutions that extended life arose from communal knowledge pools created and shared by scholars working together in HEIs.

Learning is literally an economic good in the sense that people and society demand more of it. These benefits are mostly externalities. Yes, learning provides individual benefits for the scholar involved, but the greatest portion of the benefits accrue to people who are not directly involved in a particular learning activity. This existence of externalities is critical to acknowledge since it means that imaginaries that rely on market-oriented decision-making by individuals will not achieve a social optimum.

Commons

By commons I mean a communal-based economic institution designed to resolve collective action problems with respect to a shared resource pool that is valuable but limited. I follow the guidelines and definitions of Elinor Ostrom and related scholars (Caffentzis, 2013; Hess, 2012; Hess & Ostrom, 2007; Nordman, 2021; Ostrom 1990, 2005). They identify conditions for commons, making it clear that a commons is not

just a collection of things. There must be a "common pool resource" (CPR), a collection of resources that people share. Contrary to popular understanding, a commons is not the CPR itself. The community of people and the rules, norms, and mechanisms they evolve to govern and steward the CPR constitute the commons. For example, the fish in a particular river may be a CPR. The community comprises the fishery and the people who do the fishing, extract, and possibly consume those fish from that CPR. The community evolves norms and mechanisms for self-governance and stewardship of the CPR. In our fishery example, this may include limits on sizes of the catch or times to fish. Fish are not a commons; fisheries are.

Key elements of any commons are that it is (1) neither state-owned nor private, (2) neither centralised nor totally decentralised, (3) not hierarchical. A very large commons typically has a polycentric, nested structure that comprises many smaller networked commons, each of which determines its own norms and governance.

Further, there must be some collective action problem associated with the community's use of the common pool. Typically, a collective action problem is a conflict between individual choices and community benefit or sustainability. Can individuals be prevented from making choices that benefit themselves at the expense of the community? Can the individual be protected from abuse by the community? In a commons, the community transparently and democratically organises itself, establishes behavioural norms or rules, and then enforces those norms. In other words, it creates its own governance. Governance is not imposed from outside or above. It may be informed by networked knowledge of other commons — what is called polycentricity but must govern itself. Transparency and communication are usually key to self-governance.

Ostrom (1990) also determined empirically that a commons, particularly the longest lasting and most sustainable, is strongly bounded. A bounded commons is clearly defined in both membership and the scope of activity or CPR involved. Behaviour is transparent and observable by other members of the community. Intra-commons communication is easy. The issue of boundedness will prove central to our story of the changing imaginary of higher education. Ostrom and the scholars of the Ostrom Workshop in their empirical studies of commons throughout the world have found that, contrary to the popular

fallacy of the tragedy of the commons, many well-organised commons are among the most sustainable and long-lasting social and communal structures known, outlasting most governments, nation-states, empires, and businesses (Nordman, 2021).

Knowledge commons

In recent decades, many scholars, including Elinor Ostrom herself (Caffentzis 2012; Hess 2012; Ostrom & Hess, 2007), began work to define and analyse higher education and the knowledge commons. One of those scholars, Caffentzis (2012), observed that knowledge is "a vast communal product being produced prodigiously on a daily basis... knowledge is both an end and a means to an even higher end" (p. 31). This communal product, this knowledge commons, has been a boon to humanity.

Caffentzis (2012) makes a powerful case for thinking of knowledge, which is the product of learning, as a commons. The tangible artefacts of higher learning, the journal articles, books, and other writings, are not the knowledge commons. These artifacts aren't even the sum of the common pool resource. The common pool resource is the intangible sum of human knowledge. Knowledge is intangible. It is in the knower, a human being for whom it is meaningful. However, human knowledge is ephemeral, and we humans long ago invented texts and other means of more permanently encoding that knowledge so that others may share in it. The CPR is both what the scholars know and what the library encodes for the learner.

The commons, then, is the community of scholars that establishes the rules and norms and that navigates and manages the use, creation, and sharing of this CPR, this shared pool of human knowledge. Caffentzis (2012) suggests that universities:

> ...are the institutions that present themselves both as providing the preliminary training required to access knowledge and as expanding the dimensions of the knowledge commons through scientific and scholarly research and artistic creations. (p. 35)

I will expand Caffentzis' assertion in two ways. First, we should consider all institutions of tertiary education not as separate institutions, but as

a polycentric network of smaller commons within the larger knowledge commons. Second, teaching and research are two facets of the same activity: stewardship of the knowledge pool.

The past and still present imaginary: The elite knowledge commons

HEIs have roots in commons structures, as is evident in Lowe and Yasuhara's (2017) survey of the origins of higher learning. They describe a pattern that holds across cultures and societies including Europe, the Islamic world, India, China, Persia, Korea, Japan, and Vietnam, summarised as follows:

- Libraries, a collection of artifacts, developed first, to accumulate and preserve human knowledge. These libraries attracted groups of scholars to study the texts, forming small communities.
- Higher learning was and is communal and social. Even a solitary reading of an old text is social. The scholar is still engaged in dialogue, albeit across time and space. As scholars learn, they generate artifacts of their learning and creativity. They write and add to the pool.
- Stewardship of the pool of knowledge was the mission. This occurred through scholars' own study, their additions to the pool, and the dissemination of their learning through documents or teaching.
- Teaching at these centres of higher learning became powerful mechanisms of dissemination of knowledge, distributing the benefits of the pool of knowledge to the larger society.
- Higher learning has powerful, positive externalities and benefits for the larger society. Indeed, these social benefits have nearly always been the primary motivation for a society's funding and support of higher learning centres, rather than the benefits to individual learners. While the mass of people indirectly benefited from the pool of human knowledge, it was the elites of power structures, the rulers, religious leaders, and

aristocrats, who benefited most, leading to their willingness to economically support the centres.

- Long-term scholars at these centres evolved their own rules and governance. External economic support often came with restrictions on topics of study, but in general internal norms and conventions were set by each centre in a manner consistent with a commons. Eventually, with the advent of universities, the scholars came to be seen collectively as "the faculty" with rights to self-governance.
- To realise the benefits to society, scholars have had to be supported. Higher learning centres have nearly always been funded or supported by governments, large religious organisations, or wealthy patrons. Stewarding a knowledge commons does not feed the scholars unless they were previously endowed with land. HEIs are not self-supporting.

In the early examples of higher learning, the elements of commons are present. There is a CPR: the pool of knowledge, in the libraries' collections of texts and the collective learned knowledge of the scholars. There is a defined and bounded community: the scholars that evolved to become known as faculty. There is shared self-governance. There is polycentricity in the existence of networks of HEIs each with their own idiosyncratic self-governance and CPR yet sharing and communicating between the different HEIs.

There is also a collective action problem. The metrics that shape HE encourage and reward recognition and reputation, resulting in a perpetual choice between cooperation and competition amongst scholars. When the community is small and the faculty all know one another, the collective action problem is manageable. The stronger norms are communicated and shared with other commons. Strong norms, such as the prohibition on plagiarism, evolve to handle the collective action problem.

But who are the scholars? Who is included in the knowledge commons? How many are there? Historically, it has consisted of a small number of elite scholars in any society or civilisation. Until the twentieth century, enrolment in higher education was typically limited to a tiny percentage of the population aged 14 and over, regardless of nation or culture. Membership as a full scholar, a professor or equivalent, was even rarer. The

specifics of who or what types of individuals were privileged to pursue higher education varied widely with culture and the society. Some societies valued religious scholarship, some valued the potential for administrative arts, yet others valued artistic merit, and some valued science.

The restriction to a very small number of participants — an elite — had multiple causes, most of which changed in the twentieth century. First, from a practical standpoint, agricultural productivity and economies simply could not produce the economic surplus to support any but a very small number of scholars. Second, the rulers and patrons providing the support often did not want expanded access. Finally, expanded access to higher learning depends on prior access to elementary (basic literacy) and secondary education. Those preconditions were not widely met in many countries until after they had experienced the Industrial Revolution.

Limiting access to higher education was socially a two-edged sword. By bounding and limiting access and membership in HEIs, the sustainability of the elite knowledge commons was enhanced. Few HEIs were self-supporting (other than by initial charitable endowments). Higher education has long been dependent on patrons, sovereigns, governments, and religious institutions for economic support, and the relationship was interdependent. HEIs provided the learned advisors and administrators who supported the powerful in return for financial support and the freedom to pursue their scholarly interests. Limitations on higher education access also served to limit HEIs' claims on the limited economic resources of society.

The limited access did not always result in social good for individual citizens. The greatest individual benefits were concentrated among the ruling classes. Much of society lacked the formal education necessary to achieve a better quality of life. In some cases, higher education became a conservative force perpetuating social injustice by supporting oppressive power structures.

Nonetheless, the elite knowledge commons proved a sustainable imaginary for millennia across cultures and nations. It remains today most clearly in a small number of centuries-old universities, the self-styled elite universities of today.

Opening access to knowledge: The knowledge factory

In roughly the same period as the great transformation of life expectancies, social and economic forces have been at play that would form a new imaginary, the knowledge factory.

In the late nineteenth century and early decades of the twentieth century, the US experienced dramatic economic growth and development. Technological, communication, and organisational innovations, themselves often (though not always) the product of HEIs or highly educated individuals, drove a need for a larger, better educated population. This economic growth, particularly when driven by improved agricultural productivity, enabled society to support a vastly larger class of scholars, either temporarily as students preparing for entry to the labour force or as permanent scholars working in HEIs. Improved living conditions and survivability naturally also led to a greater desire for learning among larger numbers of the population. In 1897, there were 386 HEIs in the US with the typical institution enrolling less than 780 students (Goldin & Katz, 1999, p. 41–44). By 2010, there were over seven thousand HEIs enrolling, on average, more than 3,075 students each (NCES [National Center for Education Statistics], 2019). The bulk of this growth happened between 1920 and 1970 (Goldin, 1999). This expansion gained momentum in the US around the beginning of the twentieth century. As the century progressed, new colleges and universities were created, and new forms of HEIs and new structures were developed. Two-year schools emerged, called junior colleges or community colleges. Colleges added professional schools and degrees, as well as graduate programs. When the twentieth century dawned, most colleges and universities were small, flat organisations with perhaps a president, a registrar, and the faculty. What is currently considered administrative work was divided among faculty members. As complexity grew, so did the need for more management and an apparent need for specialisation.

Economic development drove a need to increase both access to and the scope of HEIs. In the popular parlance, HEIs had to scale-up to handle vastly larger enrolments. This phenomenon started in, but was not limited to, the US; rather, as economic development spread across the globe, the pattern repeated. The examples I cite are from the US, but

they are relevant to most economically developed countries and have been adopted as a model by many developing countries.

We should consider the increased access to HE as most definitely good because it corrected a flaw in the elite knowledge commons imaginary. Increased access enables improved opportunities, quality of life, and democratic participation. However, organising and coordinating this explosion of knowledge production and dissemination called for a new imaginary, as did the number and variety of forms of higher education.

A new imaginary for organising productive work was already available: the mass production and bureaucratic structure of the modern capitalist corporation — visible, praised by leaders, and intuitively understood by many. Alfred Chandler's (1977) revolutionary history and analysis of the modern corporation, *The Visible Hand*, recounts the formation of large-scale corporate enterprises during this period as part of the industrialisation process. Chandler details the increased demand for educated managers, engineers, and other professionals that it entailed. The connection to mass production is explicit. He describes the new managerial-focused imaginary of the multi-unit corporate enterprise as built upon the earlier work on bureaucracy by Max Weber in the previous century.

Chandler's managed multi-unit organisation is based on hierarchy, bureaucracy, a division of labour, plans, and defined, measurable, and repeatable objective outcomes. Production is the goal, and processes must be well-defined. The organisation is independent of the people involved. Metrics, plans, standardisation, objectification, defined lines of authority, and decision-making are essential.

HEIs in the US rapidly adopted this new bureaucratic, hierarchical structure built to achieve scale. As a practical matter, they couldn't adopt the use of accounting profits as the supreme goal or metric of success since most HEIs were financially supported by religious organisations, charitable contributions, endowments, or government funding rather than the fee-for-product/service characteristic of a capitalist firm. Explicit financial profits are not necessary to the adoption of the organisational paradigm; HEI leaders in the mid and late-twentieth century adopted the concept and language of mass production via an organisation that resembles a modern industrial enterprise. Clark Kerr (2001), the president and chancellor of the University of California, an advocate

and architect of a massive publicly funded university system, compared the modern university to a corporate holding company. He said that a university was just the owner of a series of different entrepreneurial knowledge-producing enterprises to be managed by a professional manager for efficiency and effectiveness.

Words have power: The semantics of the knowledge factory

The adoption of the knowledge factory imaginary is visible in the semantics frequently used today. The imaginary itself is a metaphor. In a commons, there is little distinction between production and other activities such as consumption or appreciation. A household is a commons, yet we don't consider it exclusively a production facility. In the new imaginary, instead of centring learning as the core activity with all its implications, we have imagined a production process, a factory. We do not learn. We produce knowledge.

The new imaginary, unlike a commons, focuses predominantly on production, outcomes, and measurement of productive activities. The production must be objectively observable and countable. But what does higher education produce? How can it be measured? How is knowledge measured? What is success in learning?

The knowledge factory objectifies, commodifies, and reifies metrics as evidence of production. Production must have defined outcomes and plans so that the defined objects can be counted. The knowledge factory focused obsessively on institutional rankings, degrees and credentials granted, materials created and published, grade point averages, success, retention, and completion. HEIs seek to help students "acquire" job skills. I am sure the reader can add more.

Multi-unit corporate organisations have well-defined processes for production managed by engineers, often separate from the production workers themselves. Division of labour predominates. The knowledge factory has its own version of these processes. It has its own specialised administrative staff units/departments for human resources, facilities, legal, and accounting. There are research and lab specialists. It also has evolved instructional design, a group of specialists to define and manage the learning process and resources for maximum effectiveness to achieve preset learning outcomes.

The theory behind the knowledge factory imaginary: Human capital and intellectual property

Starting in the 1950s, economists led by Theodore Schultz (1981) and Gary Becker (1975) of the University of Chicago, developed "human capital theory" (HCT) (Blaug, 1976). Originally conceived to reconcile empirical wage differences with orthodox "free market" theory, HCT was soon embraced by policymakers as a normative principle. HCT defined the value of education in strictly individualistic economic terms: higher wages for educated workers due to higher market productivity. Widespread embrace of HCT and the language of HCT helped to reframe the purpose of higher education.

HCT in the HEI-as-mass-producer imaginary easily penetrated the consciousness of higher education, at least at the leadership and policy maker level, because HCT aligned well with the goals of neoliberal political forces in developed countries in the 1970s and 1980s.

HCT analogises the individual to capital. Education is an "investment" in an individual's future ability to produce marketable output. In HCT, what matters is individual financial gain and what can be traded in the market. The output of HEIs is now split. The "teaching" side of the enterprise produces valuable college graduates, with value measured by the increase in the earnings that the labour market assigns. The "research" side produces new knowledge as measured by publications, citation counts, and monetisable inventions, all created in a publish-or-perish environment. The broad social benefits of higher education, largely the result of economic externalities and human lived experience, are no longer considered.

Equally important as HCT was the emergence of the concept of "intellectual property" (IP). IP locates knowledge not in the scholar or the learner but in the tangible artefacts produced: the writings, publications, and inventions. Capitalist-oriented governments were increasingly willing to bestow market monopoly privileges to the creators of these artefacts via copyrights and patents. Instead of recognising knowledge as accumulated learning known and shared by scholars, knowledge was reduced to a tangible, measurable product.

HCT and IP together redefined knowledge and learning in the higher education imaginary and helped to create a new division of labour.

Teaching produced graduates and research produced knowledge products: journal articles, patents, inventions, and books. Between HCT and IP, the reimagination of higher education as purely a production enterprise was complete, and, in theory at least, measurable. All that was missing now in the imaginary of the knowledge factory were the engineering or design components embodied in standardisation of courses, assessment metrics, the role of instructional design as separate from the instructor, and increased division of labour. Education's value could be measured as return-on-investment (ROI). The society-wide benefits of higher education became the higher GDP growth rate resulting from the sum of the individuals' ROIs.

A contested imaginary

The imaginary of the knowledge factory continues to animate higher education in the US and many other countries today. It is successful if measured by the number, size, or growth in number of HEIs that implicitly have adopted it. However, it is not widely popular. The older HEIs of the elite knowledge commons have, unsurprisingly, long resisted the call for widespread access. Wide access is anathema to elite-ness. Elite institutions have largely responded by adopting factory tactics: rankings and competition. The elites can maintain their elite-ness by establishing that they are the best and the others are all lesser.

Knowledge factories enable enclosure of the CPR since knowledge is no longer a common pool. It is property to be privately-owned for the generation of profit, deriving its profits from redirection of the economic resources devoted to supporting higher learning. To the neoliberal supporters of IP, HCT, and the knowledge factory imaginary, this is a feature not a bug. But to thousands of scholars worldwide, it has been the trigger for a world-wide movement advocating open education and open educational resources (OER).

Nor is the knowledge factory popular even among its own scholars. The knowledge factory imaginary improves upon the knowledge elite imaginary by improving access, a beneficial effect. However, it does so by promoting bureaucracy, competition, and the reduction of scholars and scholarship to commodities in a corporate enterprise. Meaningful

scholarship is likely to be diminished in the drive for increased productivity. These forces limit our collective ability to imagine and create beneficial solutions to compelling social problems today, such as climate change, inequity, global public health, poverty, and others. We have a pressing need for a different imaginary.

An open knowledge commons

The great good of the knowledge factory imaginary is dramatically expanded access, i.e. the value of bringing higher learning to masses of people instead of a small elite. Yet it appears that the factory imaginary is not sustainable. Kate Raworth (2017) in *Doughnut Economics*, her popular book on reimagining economics, identifies four realms of provisioning for people's needs: the state, market/firms, households, and commons. The large hierarchical bureaucracies of the knowledge factory make it appear that HEIs must belong to either the realm of the state or the market/firm, depending on direct funding source and ownership. Raworth reminds us that there is a proven alternative for education: the commons. Our challenge then is to reimagine and find ways to implement a sustainable knowledge commons as open to all.

What would such a knowledge commons look like? The commons, its norms, and its governance mechanisms must evolve from the community itself, not be imposed from a central authority, whether by state or private capital. There is no panacea, as Ostrom (1990) quite frequently preached. There are, however, clear principles which can be used, and are being used, as alternatives to the predominant knowledge factory imaginary.

Scope not scale, humanocracy not bureaucracy

HE leaders often refer to increasing access as "scaling up"; this language, adopted from capitalist mass-production oriented corporations, misleads. Strictly speaking, higher education cannot scale in the economic sense, rather it can increase scope or proliferate (Luke, 2018). Economically and organisationally speaking, scale means to produce the same thing, the same way, repeatedly until a high volume is achieved.

Education is different. Teaching and learning are not so much scalable, rather they are expandable in scope via networks.

By reframing increasing access as expanding the network of HEIs, by increasing scope instead of the size of each HEI, the commons can be protected while expanding the numbers reached. This is a viable alternative to scaling. In addition, polycentricity supports respect for self-determination and differences between entities. The same network principle can help us to redesign existing HEIs as flat enterprises instead of hierarchical bureaucracies (Hamel & Zanini, 2020).

Focus on the social, not the individual

HEIs are not self-sustaining. The current embrace of HCT and IP discourages social and public support of higher education. HCT reduces the public support question to a financing mechanism for what is assumed to be solely private, individual benefits. At one time, the social and public benefits of higher education were commonly acknowledged, such as an informed and discerning electorate, a functional infrastructure, a stable, sustainable, and equitable economic system, acknowledged universal civil rights, optimal public health and longevity, and the opportunity to engage in leisure, self-development, and personal growth. Scholars and HEIs must return to a focus on public, social benefits.

Resist new forms of enclosures

Private enterprises, in particular publishers, edtech vendors, land developers, and finance firms, extract their revenue and profits from the flow of resources intended to support HEIs, often under a demonstrably false assumption of greater efficiency. This is a form of enclosure of the commons and represents a failure to effectively solve the collective action problem. Such enterprises have used new technologies to effectively breach the bounds of the commons and siphon off resources. Many of these firms are creating a new version of the knowledge factory in which knowledge production is privatised and managed by investors outside the HEIs (Williamson, 2022). An alternative imaginary, the new open knowledge commons, must be disseminated and protected at least as effectively and persistently as these privatisation narratives.

The various "open" movements including open access publishing, OER, open pedagogy, and free, open-source software provide a promising beginning. They need not only greater participation and support by HEIs and academics, but also better explication of their role in forming an open knowledge commons rather than just being a cheaper alternative to for-profit firms and vendors. An alternative imaginary requires academics to spend more time and effort building networks across both HEIs and education-adjacent organisations such as libraries and museums, and less time or effort on hierarchies and rankings. Such a shift in effort entails the willingness to forego the knowledge factory paradigm in HEI governance.

Resolving the collective action problem by cooperating, not competing

Corporations are built on competition between institutions and between people in the institution. Competition creates collective action problems and sub-optimal choices. Institutional rankings, for example, are destructive and less than zero-sum: most lose — and the winners gain little. A restoration of the commons would require a change in our language, our behaviour, and agreed norms to restore cooperation at all levels, from individual scholars to institutions. Structures and roles need to be reimagined internally to reduce division of labour and bureaucracy, focusing instead on building teams and networks both within existing HEIs and between organisations. Research already happens at the cross-institution level, but such collaboration and sharing could be expanded to pedagogy and support functions.

To restore cooperation requires more communication and more perspectives. It requires listening and trust. Both result from more active communication and human connections. While it sounds daunting and idealistic, it is possible through the communications technologies now available based on the internet and the open web. The difficulty of communication between physically distant groups has long been a major barrier to collaboration, whether in HE or the rest of the economy. The existence and continued development of the internet and web, themselves the creation of academic collaboration and sharing, make a dream of a global networked knowledge commons feasible.

Conclusion

Two imaginaries have dominated higher learning, both of which have produced some good, but both have flaws. The elite knowledge commons created and stewarded human knowledge and higher learning for millennia across the world, delivering broad social benefits, but allowing the elite and their sponsors or patrons to retain power and control of society.

In the past century or so a new imaginary, the knowledge factory emerged to mass produce knowledge and spread the good of higher education to millions, even billions, more people — a good thing indeed. But the knowledge factory itself is not sustainable and is not a good steward. It objectifies and commodifies knowledge, leaving it lifeless and separated from the humans who would know it. It values possession and accumulation, not learning, living, knowing, and sharing.

HEIs are not knowledge factories. Learning is individual and knowledge is not a commodity to be mass produced. When learning is structured as mass production — as a factory — the power to control learning and ultimately people's future lives is concentrated in just a few leaders. The people in higher education: students, educators, scholars, and administrators are not interchangeable parts in a production process. Rather, knowledge is a living pool stewarded by people, each unique but connected to others. Collectively, the pool is a profound good from which all humanity can draw creative solutions.

As a species, we humans face daunting challenges today. Our technology connects us across the globe but has not yet overcome our divisiveness. Our planet is rapidly burning up due to our own activities, yet we haven't been able to stop it. Even our signature accomplishment of the past century and a half, the lengthening of our very lives themselves, appears to have reversed in some countries as we struggle with a pandemic and diseases of despair. The key to our collective survival is our collective knowledge and our willingness to collaborate in good faith. To unlock and utilise the great and growing pool of knowledge, we need to reimagine higher education as an open commons. Scholars are not cogs in a capitalist knowledge factory. We need stewards of the public knowledge commons.

Acknowledgements

I'd like to acknowledge Sue-Anne Sweeney, my wife, partner, and colleague for her constant support, inspiration, assistance, and patience. Without her, my ideas and words would still be stuck in my brain. I'd also like to thank Laura Czerniewicz and Catherine Cronin, Robin DeRosa, Su-Ming Koo, Kate Bowles, and many others for their insistent encouragement to pursue my research on the commons in higher education.

References

Becker, G. S. (1975). *Human capital: A theoretical and empirical analysis, with special reference to education*. University of Chicago Press.

Blaug, M. (1976). The empirical status of human capital theory: A slightly jaundiced survey. *Journal of Economic Literature, 14*(3), 827–55. https://www.jstor.org/stable/2722630

Caffentzis, C. G. (2012). From lobsters to universities: The making of the knowledge commons. *St Antony's International Review, 8*(1), 25–42. http://www.jstor.org/stable/26229085 Chandler, A. D. (*1993*). *The visible hand: The managerial revolution in American* business. Harvard University Press.

Clear, J. (n.d.). "This is water" delivered by David Foster Wallace. *James Clear*. https://jamesclear.com/great-speeches/this-is-water-by-david-foster-wallace/

Goldin, C. (1999). *A brief history of education in the United States*. National Bureau of Economic Research. https://doi.org/10.3386/h0119

Goldin, C. & Katz, L. (1999). The shaping of higher education: The formative years in the United States, 1890 to 1940. *Journal of Economic Perspectives, 13*(1), 37–62. https://doi.org/10.1257/jep.13.1.37

Hamel, G. & Zanini, M. (2020). *Humanocracy: Creating organizations as amazing as the people inside them*. Harvard Business Review Press.

Hess, C. (2012). The unfolding of the knowledge commons. *St Antony's International Review, 8*(1), 13–24. https://www.jstor.org/stable/10.2307/26229084

Hess, C. & Ostrom, E. (Eds), (2007). *Understanding knowledge as a commons: From theory to practice*. MIT Press. https://doi.org/10.7551/mitpress/6980.001.0001

Kerr, C. (2001). *The uses of the university*. Harvard University Press.

Lowe, R., & Yasuhara, Y. (2016). *The origins of higher learning: Knowledge networks and the early development of universities*. Routledge. https://doi.org/10.4324/9781315728551

Luke, J. (2019, May 20). *Scale and scope*. Econproph. https://econproph.com/2019/05/20/scale-and-scope/

NCES. (2019) *Digest of education statistics*. National Center for Education Statistics. https://nces.ed.gov/programs/digest/2019menu_tables.asp

Nordman, E. (2021). *The uncommon knowledge of Elinor Ostrom: Essential lessons for collective action*. Island Press.

Ostrom, E. (1990). *Governing the commons*. Cambridge University Press.

Ostrom, E. (2005) *Understanding institutional diversity*. Princeton University Press. https://doi.org/10.1515/9781400831739

Roser, M., Ortiz-Ospina, E., & Ritchie, H. (2019). *Life expectancy*. Our World in Data. https://ourworldindata.org/life-expectancy

Raworth, K. (2017). *Doughnut economics: Seven ways to think like a 21st-century economist*. Chelsea Green Publishing. https://doi.org/10.1525/9780520318540

Taylor, C. (2004). *Modern social imaginaries*. Duke University Press. https://doi.org/10.1215/9780822385806

UNESCO. (2012). *Standard classification of education 2011*. UNESCO Institute for Statistics. https://doi.org/10.15220/978-92-9189-123-8-en

Williamson, B. & Komljenovic, J. (2022). Investing in imagined digital futures: The techno-financial "futuring" of edtech investors in higher education. *Critical Studies in Education*, 64(3), 234–49. https://doi.org/10.1080/17508487.2022.2081587