

Higher Education's Dew Point and the Art of *Kintsugi*

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Abstract

Publications focused on technology's impact on future society, especially from artificial intelligence (AI), have become almost ubiquitous, appearing in newsprint, panel discussions and on best-seller book lists. In particular, much of the discussion has focused on technology's affect on future jobs. For example, an author of the 2017 International Bar Association report claimed that "Jobs at all levels in society presently undertaken by humans are at risk of being reassigned to robots or AI..."ⁱ Added to the discussion we need to include the reality that wage stagnation and minimal wage increases have been witnessed in several of the traditional powerhouse economies, from the United States to Japan. The McKinsey Global Institute reported that up to 70% of people in advanced economies had seen no real increase in their earnings for ten years since 2005. The slump has been particularly unkind on those without higher qualifications and toward those not of the Science Technology Engineering and Math (STEM) disciplines.

Conversely, the pressure to obtain a higher education degree has increased. But, higher education fees have followed an upward spiral trend in most countries, with some reports highlighting that in the U.S. public university fees have increased dramatically more than private fees. The British Government has recently announced the possibility of a further rise in university fees, capped presently at £9000 (US\$11,000) per year. The increase will be allowed to those institutions that score highly on scales that measure time students spend in class, jobs offered and average graduate earnings. Given the British directive to focus on graduate earnings, the return on investment (ROI) of the degree should be commensurate and needs discussion. The evidence demonstrates that students graduating with professional STEM-related degrees will earn vastly more, not only over their lifetime, but also within the short term, than nearly all Humanities graduates, raising serious concerns for those who choose non-STEM degrees.

Higher education is not immune to the changing paradigms in our contemporary society. This paper will discuss some oversights from higher education in adequately preparing futures for their clients by addressing these impacts above. The paper will conclude that higher education needs to consider a Japanese cultural artistic process, *kintsugi*. The futures present many unknowns. We in the academy must not merely let the futures be created for us: we must be a part of the creative process.

Introduction

The OECD has estimated that worldwide 16% of an individual's expenditure is on education costs. Although this figure also accounts for primary and secondary education, we could almost claim that university education has become *basic education*, for without the experience – rather, without the diploma, we are committing ourselves to futures that, given current societal structures, limit our possibilities. On the other hand, is it simply that no viable alternatives exist to the credentials higher education provides in securing better futures? Has it become a truism to state that those with a higher education diploma will earn vastly more over their lifetime than those without a degree? Of course, this is true if we compare graduates from science, technology, engineering, maths (STEM), and economics or finance degrees, with those from the Arts and Humanities. When we add into the analysis graduates from Humanities, Arts, Education, etc., we find the remuneration equation becomes a little fuzzy and the confident claims made about a university diploma and financial rewards, perhaps, become a little more tenuous. The claim we can make with some confidence is the Academy's declarations that a higher education diploma is mandatory for a reasonable future – at least presently.

The 2006 TED talk by Sir Ken Robinson *Do schools kill creativity?* has been viewed more than 37 million times.ⁱⁱ His subsequent 2010 talks *Bring on the learning revolution* has been viewed more than six million, the animated *Changing education paradigms* 1.5 million, and the 2013 *How to escape education's death valley* has been accessed more than five million times. It is not important whether one agrees with Sir Ken Robinson's position, although I would be happy to take up the issue with you, the crucial component of the talk, the cornerstone, if you like, was not about art and creativity: it is found at the one minute forty second mark:ⁱⁱⁱ

“We have a huge vested interest in it, partly because it's education that's meant to take us into this future that we can't grasp. If you think of it, children starting school this year will be retiring in 2065. Nobody has a clue, despite all the expertise that's been on parade for the past four days, what the world will look like in five years' time. And yet we're meant to be educating them for it.”

We should take a moment to reflect on what Sir Ken Robinson has challenged us with. How do you envision the future in 2065? The truth of the matter is that it should be difficult to imagine a future that far into the unknown. However, that does not mean we should not try?

To think toward a future society in 2065 is difficult because we are confronted with ideas like Moore's Law, an idea considered vis-à-vis micro-chips, but which has permeated so widely that it is also attributed as a basis for driving technological, social and even economic change – the latter is quite dubious, especially if we use the current global indicators as the data set. Moore's Law was simply an observation outlining that the number of transistors on an integrated circuit would double approximately every two years. Moore's Law proved consistent for nearly twenty years and has become the 'mantra' for research in technology, from quality, to price, to size, to power to pixels. David House from Intel later argued that computer power would also double but adjusted the timeframe to 18 months.^{iv} It should not come as any surprise that the 18 to 24 month benchmark has proven to be relatively consistent

although it may be showing signs of slowing recently – at least until the en masse arrival of Quantum computing.

If we change the parameters to 2035, does it become any easier? Even 2020 might pose a problem for some. We might assume driverless vehicles taxiing us on call (almost here); A.I. directing enquiries at reception (here); A.I. speculating at investment banks (here); face recognition replacing passports (nearly here and is targeted for use at the Tokyo 2020 Olympic Games); playing croquet with the dolphins (unlikely); universal translators (getting much better – but there are still other more important reasons why we should learn a second language); robots building houses, replacing the human worker as witnessed in the motor vehicle manufacturing industry (here). At the university specifically, we might imagine widespread personalized learning (here, if you want it); a rise in alternative paradigms for higher learning, such as a return to apprentice-type models with links to institutional studies as deemed necessary in the different career pathways, or an opening-up of higher education for over-thirties so more than token lip-service to lifelong education can be realized. Or will it be a further over-inflating of the university degree until university is ‘basic’ and ‘compulsory’ education? Will universities stagnate, attaining saturation in capacity and capability to reproduce diligent citizens? Perhaps we will witness the arrival of curricula with no-discipline (Joi Ito) or a π -philosophy (M. H. Field) that meets the need for a new skilled and different brain-wired graduate, able to draw on knowledge from multiple fields, able to create the plus-alpha add-on in the emerging markets, skill- and proficiency-sets that technology cannot bring to an organisation.

I am sure I hear screams that Sir Ken’s humorous tirade was not directed at higher education, but to the primary and high school systems. However, if you have nodded in agreement at the opening hypothesis iterated above that higher education has become almost basic education, then perhaps *Do schools kill creativity?* applies equally to institutions of higher education. I invite you to read on and let us begin the discussion.

It is not my intention to delve too deeply into many of the wicked problems facing us in the Academy with this paper. For starters, the discussions require a thesis far larger than the parameters applied on this paper. The primary intention of this paper is to act as a catalyst – one of the many now appearing – to stimulate the conversation amongst us within the Academy by highlighting some ambiguities, inconsistencies, fallacies, and assumptions we seem to be taking as givens. These include technology’s impact on future work, the rising costs of higher education, and financial remuneration *vis-a-vis* the return on investment for the diploma.

The Business of Rising Fees

From my experience, context and world-view, universities, so often considered as the sole representatives of higher education, have become confused about the business they are in: are we a service, a profit-making entity, social good, or a simply learning, teaching and research organisation? A recent Dilbert comic strip (© Scott Adams) in my Facebook feed had the following conversation between an employee (E) and the boss (B).

E: There seems to be some confusion about what our company culture is.

B: Our priorities are honesty, integrity, and return on investment.

E: Which priority is highest?

B: Integrity won't buy me a new boat.

Of course, the irony is easily noticed. However, would we find it as humorous if we were to edit the conversation slightly and create a similar conversation between a student or professor and a university board or chief administrator or owner?

Student: There seems to be some confusion about what the university culture is.

President: Our priorities are education, integrity and return on investment.

Student: Which priority is highest?

President: Integrity and education won't pay the creditors. (Should I dare to say Porsche or Mercedes instead?)

The recent predominant focus when discussing universities has been on the rising costs for the privilege of the higher education experience. In the U.K., the pre-2017 election government passed a new Teaching Excellence Framework, earmarked to commence in 2020. Prior to that date, however, universities seem able to make inflation-linked increases to their fees^v, for which currently a domestic student should expect to pay around £9000 for tuition (about US\$11,500) per year. The government's Framework policies are intended to force universities to declare the time students spend in classes, the jobs they are offered on graduation and the salaries received. Institutions that were considered to provide 'quality teaching' could increase their tuition fees above the £9000 barrier. I have two points of concern. Firstly, as a point of reference, the £9000 has more than surpassed the international levy I was required to pay at a British institution for both university and college fees, which at the start of my doctoral course in the late 1990s was around £8000 per annum. My second concern is the belief that 'time in class' seems to be equated to 'quality teaching'. Although Japan is perhaps unique for the cultural trait of students happily sleeping the class away, attendance, as is required in many courses in Japan, does not equate to learning, engagement or quality.

Although the rising fees in the U.S. have slowed, which were at one point rising three times faster than inflation^{vi}, the trend has migrated to increasing fees disguised as costs for student activities, building maintenance, libraries, administration, etc. The average charges at an in-state public institution for 2016-17 were around \$25,000 (median \$9910), and for private non-profit \$33,500 (median \$35,020). The ten-year percentage change in inflation-adjusted figures varies from \$2000 to \$3600 (an increase of between 24% - 66%) for the four-year public in-state institution, to between \$4100 and nearly \$10000 (an increase of between 16% - 46%) for private non-profit institution^{vii}.

In Japan, although higher education costs are somewhat less than those in the U.K. and the U.S., similar patterns have been evidenced. The Ministry of Education's 2014 survey^{viii} highlighted that the average tuition fees at a private institution were around ¥864,000 (approx. US\$8000). However, Japanese universities charge an entry fee (average around ¥261,000 or approx. US\$2300) plus the other 'creative' fees, raising the average annual fee paid to a private institution to approximately ¥1.4 million. In contrast, the average private higher educational institution's fee in 1970 was

¥180,000 (\$1600), in 1987 it was over ¥500,000 (\$4500), and by 2002 it rose to ¥800,000 (\$7250). Public universities, which are the more popular and therefore are harder to enter, have seen their fees increase fifteen fold rising from about ¥40,000 in 1970. Undergraduate fees at Japan's premier institution, the University Tokyo, include (one-time) admission fee ¥282,000 (\$2500), (annual) tuition fee ¥535,000 (\$4800) and examination fees of around ¥20,000 (\$180).^{ix} Incidentals may also need to be considered. Some institutions in Japan have become very creative: they promote 'global' programs, some of which have mandatory study-abroad components – others only strongly recommend an outside Japan study experience – but they develop policies to charge students who want to take an academic absence to study abroad between 25% and 80% of their annual tuition fee to 'hold' their place. These fees are justified as administrative as credit may be awarded for units completed abroad. However, an academic concern arises for these credits as in some cases block credits are awarded just for the 'experience' of 'studying' abroad; in others, credit is given for units completed abroad for which no real knowledge of the academic content in the course for which credit is granted exists at the 'home' institution, putting institutions into dangerous degree mill education territory.

Cost and Benefit

We could perhaps tenuously attribute the rising tuition fees and incidentals on inflation, cuts from government subsidies and other increased administrative costs. I mention tenuously as the claims are spurious. The trend in some countries has been to raise tuition costs and fees at a rate much higher than the country's inflation-rate, as outlined above. Moreover, institutions have further increased their debt and annual expenditure through new infrastructure development,^x which in some cases may be necessary, and increasing administrative staff with little to no equivalent expenditure made toward teaching faculty or toward quality learning practices. For many institutions a potential client's choice of university is critical, a balance between success and possible financial failure^{xi}. This has knock-on effects for the academic teaching staff. Although not limited to Japan, the Japanese tradition requiring all academic staff to carry an administrative load has increased, changing the 3-2-1 ratio (teaching-research-administration [TRA] or RTA in many National universities) to 3-2-1 TAR, resulting in the reduction of the quality of research being undertaken.

These trends reflect the changing business of the higher education institution. Traditionally, universities were in the education and knowledge creation and dissemination business. Higher education was a pathway for people (albeit for a minority) to become an 'expert' in some field or profession. Although it has always been a claim that universities are training people with the knowledge and skills that are not needed – or above the task being required after being employed, I would claim this has particularly become more commonplace in the contemporary market, especially in the non-STEM professions. For example, there is an increased abundance of graduates with Bachelor diplomas from both the traditional disciplines and from the explosion of new degree programs (Reality TV Participant Management¹). A post-graduate degree has quickly become the new Bachelor, and the Bachelor has replaced the High School Diploma. In the near future, we could easily

¹ To the best of my knowledge this is a fictional course

envisage the Doctorate replacing the Masters as the minimal requisite for professions, as it already has become in the health professions in many countries. Simply we have created *degree inflation* to the point where presently in the U.S., the number of people with a Master's degree is about equal to the number of people with a Bachelor's degree in 1960.^{xii} Even with a professional-focused program, we should question whether the *inflation* is actually necessary. Is it merely an indication of supply and demand? Or is it that many of our university programs are out of date?

What business is higher education in? The business universities should focus on the student, and then the teaching staff; however, the business higher education is in has become confusing as the focus is currently on economic goals, rather than on output educational standards and proficiencies. I would sympathize with an idea I heard proposed in conversation that institutions should not be funded on how many students they enrol, but on how many can graduate with globally acceptable proficiencies and skills, and who become meaningfully employed within one year of graduation. On this latter point, I believe the British's Teaching Excellence Framework should be commended.

Given that higher educational institutions are chasing the financial remuneration and benefits, potential students should realize that they are in the buyer's market – not the seller's, as the mass marketing spin proclaims. Notwithstanding, the current goal for most students – and the dream that higher education sells – is to be reasonably remunerated in employment after graduation. Statistics have shown that those with a university diploma will generally earn vastly more than those without and higher educational institutions have marketed this pitch adeptly. For example, according to a report by The College Board, in 2015 of full-time workers aged between 35 and 44 earning more than \$100,000, 2% did not have a high school certificate, 5% only had high school diplomas, 25% had attained a Bachelor's degree, and 38% held a more advanced educational award.^{xiii} We should immediately be cautious with this data as the age bracket for these salaries are 10-20 years post-graduation for most students. There are, furthermore, several additional concerns that have put pressure on the higher education dream, especially for the non-STEM graduates: wages and return on investment (ROI).

Firstly, nearly all developed countries have witnessed either wage stagnation or wage decreases for all but the top earners since the mid-nineties. Wage stagnation and/or minimal wage increases have been and are being witnessed in the traditional powerhouse economies, from the United States^{xiv} to the United Kingdom^{xv} to Japan.^{xvi} The McKinsey Global Institute reported that up to 70% of people in advanced economies had seen no real increase in their earnings between 2005 and 2014.^{xvii} The slump has been particularly unkind on those without higher qualifications and toward those outside STEM and economics-related disciplines. Using the data from the same College Board report, “between 2013 and 2014, median earnings for early career bachelor's degree recipients ranged from \$30,000 a year for early childhood and psychology majors to \$54,000 for computer science majors, a range of \$24,000” (p.4) and by mid-career (I assume the 35-44 age range), the median earning was \$46,000 per annum. According to some reports, Agriculture and Veterinary Science in the U.K. earn average salaries of around \$35,000 (£20,000), but Economics majors earn as higher as \$175,000 (£100,000).^{xviii} STEM-related degree graduates' remuneration was higher even in their first year, with engineering, computer science and

mathematics graduates likely earning the most initially, both in the U.K.^{xix} and in the United States^{xx}. However, in 2013, inflation-adjusted wages for college graduates in the U.S. were lower than in the late 1990s^{xxi}, a downward trend since 2000, and this has been particularly more severe on female graduates, perhaps because less females graduate from the STEM courses.

Japan has also been experiencing wage stagnation and/or deflation since the 1990s. The IMF has encouraged the Japanese government to set policies that increase wages by 3% per annum to offset the two decades in deflationary outcomes.^{xxii} In Japan, the average new graduate salary (across all fields) is ¥2,503,000 (\$25,000-\$27,000). The average salary for an administrative or office support employee with a degree ¥5,240,000, and with only high school education or below, ¥5,500,000 (\$45-50,000 for both), but the average maximum for a university-degree employee rises to ¥8,130,000 whilst a non-degree employee to ¥7,500,000² (\$70-75,000).^{xxiii}

As the trend in higher educational institutions is a focus on the ‘bottom line’, or simply, making a profit from their investments, why should we not consider the return on investment (ROI) any less paramount for our investors – namely the students? I have outlined that it is commonly agreed that a person with a university education has higher earning potential than someone without a degree. This is particularly the case with the professional degrees.^{xxiv} How long would it take graduates to get a return on their investment, excluding incidental expenses, add-ons and optional extras – ROI from the tuition fees? To calculate a student’s ROI, we would need to consider the difference between what the incremental salary per annum might be at *Organization X* for someone without a degree with the salary of someone who has a degree. We would need to factor in the cost of the degree by the salary difference to arrive at the number of years it would take to *pay off* the degree – a positive ROI. Simply, only once the cumulative sum of the salary difference is equal to or greater than the cost of the degree, can we claim (financial) ROI has been achieved. Using the below formula, the ROI for a degree (*ROI_d*) is equal to when the cost of the degree (*C_d*) plus the opportunity cost (*OC*) – revenue not earned whilst studying for the degree – is less than the cumulative differences between the indexed salaries of an employee with a degree (*S_{di}*) and one without a degree (*S_{dni}*).

$$\square ROI_d = C_d + OC < \sum (S_{di} - S_{dni}) \square$$

Using Japan as an example again, the amount to be recovered from a four-year degree could conservatively be estimated at ¥13,200,000 (about \$110-\$120,000), that being the cost of a four-year degree (¥3,200,000) plus the opportunity cost of lost salary (¥10,000,000 – 4 years @ ¥2,500,000 per year). To recover ROI, therefore, a graduate would need to accrue between \$110,000 and \$120,000 from the cumulative incremental differences in salary between him- or herself and a person without a degree. According to Japan’s Ministry of Health, Labour and Welfare statistics^{xxv} for 2015, the average starting annual salary for females with high school diploma or lower is ¥1,562,000 (\$15,000) and for males ¥1,634,000 (\$16,000). The average annual starting salary for women with a four-year university degree is ¥1,988,000

² This data may be skewed from the National average as it refers to predominantly bilingual and slightly older individuals.

and for males ¥2,045,000 (nearly \$20,000 for both). The difference for a non-degree and a degree candidate for females is ¥426,000 and for males ¥411,000 (about \$4000). Without adjusting for the increased minor proportion in salary between the degree and non-degree employee (the salary of a person with a degree is likely to increase slightly more rapidly than the person without a degree), it could take between twenty-five and thirty years for the ROI to be achieved. That is, $\$110,000/\$4000 = 27.5$ years.

For the graduates in Japan, the ROI takes considerably longer to achieve because the difference between the two salary paths is less than those in the U.S., U.K. or elsewhere – which is surprising since university fees are much lower. Notwithstanding, the time to achieve ROI is something that prospective students (and institutions) should consider. ROI is important for students in any country – especially those who are likely to enter the workforce in administrative and clerical positions as already we are witnessing headlines claiming that students graduating from creative arts and communication courses go on to be the lowest paid.^{xxvi}

And the Future Jobs are?

We know that entry into most white-collar administrative and clerical positions requires a university diploma. What is difficult to defend is the belief that for the general white-collar administrative position, the degree-bearing employee brings greater return to the organisation than the non-degree bearing employee. Of course, *worth* and *value* are only what someone is willing to pay. If students are willing to pay ever-increasing fees and costs toward obtaining a university degree then perhaps – at least by economic models – this is the *market value*. If organisations are willing to pay extra costs for a graduate student to undertake administrative tasks that could easily be completed by a high school graduate - or a computer, it is the discretion of the free market. As with the market, there are bulls and bears, ups and downs, wins and losses, and buyers should beware.

There is little doubt that graduates with STEM-related (minus M, perhaps) degrees will be in demand for the foreseeable future. Questions about what knowledge, skills and proficiencies will be required in general white-collar employment (non professional) are in dire need of discussion. At this juncture, I will deviate slightly to address the STEM (minus M) factor. There is a dearth of evidence that consistently shows a correlation between studying complex algebraic equations and making people better citizens, better prepared for, or more likely to be ‘successful’ in the world into which they will graduate. Please read that sentence again! Carefully! *Complex algebra - success - prepared for the world*. I have not claimed that complex mathematics is not needed. Of course it is! For some... It is necessary for engineers, Quantum Mechanics researchers, mathematicians, securities and encryption programmers, some theoretical economists, A.I. programmers and researchers, space researchers, astronauts, amongst others. However, where the water gets murky is when we discuss medical doctors, dentists, pharmacists, game programmers, architects, aeroplane pilots, investment bankers, and, again, amongst others. There is no doubt that a certain proficiency level and understanding in mathematics would be desirable; but how much is sufficient? Of course, some mathematics is necessary; however, STEM advocates want us to believe *one size fits all* necessity and

governments fund accordingly. Given the parameters of this paper, it is suffice to draw attention to the general root fallacy: STEM equals improved society. Not necessarily.

Let us return to the earlier discussion about possible futures ahead. What are the future jobs? It is common to hear claims of technology, particularly artificial intelligence (AI), ‘taking over’ many professions. An author of the 2017 International Bar Association report claimed “Jobs at all levels in society presently undertaken by humans are at risk of being reassigned to robots or AI...”^{xxvii} Some claims suggest that the vast majority of the population, possibly up to 44% won’t be in high demand in the not too distant future^{xxviii} – bank clerks, white collar administrators and bureaucrats, health care workers, social service care givers, mechanics, designers, reporters, entrepreneurs, restaurateurs, musicians, and the myriad other people that quietly keep our society functioning without too much reality-media narcissistic hype. We need to assume that tomorrow’s jobs will be different to what is available today. We need to assume that technology will modify many of the jobs. We need to assume that new skills and knowledge will be required to fill the gap for both the deficiencies and new opportunities that will emerge. We need to assume that higher education, which is becoming a more and more costly exercise, cannot produce workers that are cheaper or more efficient and effective than a piece of technology in either the so-called low-skilled white or blue collar industries – especially for many of the tasks that exist today. Recent historical trends reveal, low-skilled workers are being replaced by faster, more efficient, and cheaper skilled technology – by robots. General white-collar low-skilled repetitive system-based tasks will also be replaced by technology. As machine learning technology and big data analyses are improving rapidly, the costs to maintain more senior managerial or professional positions may also be more effectively and efficiently undertaken by technology.^{xxix} Simply, will there be a need for an organization to employ numerous professionals – or will they be outsourced via technology to equally skilled but cheaper ‘other’ professionals? As cruel or repulsive as that may be to one’s values, we need to understand that for the organization, under the existing economic paradigm, it is about the bottom line: the ROI. It deviate slightly from Martin Ford’s^{xxx} challenging scenarios, as I believe health and higher education are not immune to the encroaching technologies. Of course, technology is often only as effective as the degree of take-up within societies and even good technology can fail because societies do not provide incentives to learn the new skills required^{xxxi}.

Presently, perhaps we in the academy are limiting the widespread use of technology in our practices. Technology will not necessarily replace people from working. As in the past, new jobs will emerge from the rise of the technological workforce.³ This is where higher education should look and the astute learner should seek out institutions that understand that the futures will be different and are offering pathways toward those futures. This is where the opportunities for the non-STEM programs lie and can have the most impact.

³ Two outstanding publications that address the new workplace futures created by technology are *The Future of the Professions* by Richard and Daniel Susskind; and *Humans are Underrated: What high achievers know...* by Geoff Colvin.

Dew Point is coming?

In the very late 19th and early 20th Century, the United States, as well as Europe, had begun to prioritize its secondary school subjects toward science and engineering^{xxxii} - similarly evident today in many countries by the STEM discussions. For a theory to be beneficial it needs to have both explanatory and predictive power. The hypotheses about A.I. replacing many existing jobs are explanatory because they are based on current understanding of existing science and technology; they are predictive because we have hindsight into historical patterns and combined with existing data and results; we are able to make reasonable educated forecasts about the direction our societies may be moving. Will the worlds be exactly as espoused? Unlikely, but we risk peril if we ignore the scenarios completely.

How are we preparing students for these futures?

Other than for professional degrees or research-based degrees, which have their own issues in need of attention, universities are not adhering to their “image” sales pitch: the provider of an education that enables graduates to be assets in their society or for a future employer. There can be no debate that institutions do provide graduate fodder, many whom find employment. However, universities market themselves as essential for employment, but are, unfortunately, providing an education more suited to ‘naval gazing’, producing students poorly-equipped to handle contemporary society. Simply put, many institutions of higher education are out of alignment.

Whether we like it or not, higher education has become commoditized. It is about economics: dollars and cents (or lack of sense). It is no longer free. It is about bringing in stipends, grants and awards. It is publish or perish (and much published should be perished). Students incur substantial expense for the privilege of the experience – the fiscal wherewithal most often a gift from parents who also dream of the day their child will be independent. Education is marketed as improving wealth and health, for which we in the Academy proudly highlight evidence to correlate the claim. Higher education is proclaimed as necessary because graduates earn more throughout their life than those who do not have an advanced degree^{xxxiii xxxiv}. Generally, this is true, but we quite conveniently forget about [mining] boom societies, like Australia, where trades professionals and unskilled labour can earn as much or more than university-trained office workers. Education is necessary – but what is being offered within the educational process is no longer sufficient. Degree inflation could be the last drop that causes the saturated sponge to finally lose its capacity to absorb water. Will universities elsewhere in the world follow the trend being experienced in Korea where graduates are finding it harder to be employed?^{xxxv}

If we were to design a universally agreed upon rubric for ‘acceptable’ knowledge and application of that knowledge measured as output proficiencies, many institutions may discover that they have inadvertently positioned themselves within the degree mill business. It is easy to tar all with one brush stroke, and I apologize to those institutions that are leading the way in creating the futures. However, many are talking the talk but only the facade is changing. Many institutions claim the new ‘business-speak’ but the reality is thin when tested.^{xxxvi} A by-line from a 1970s

television police drama should be paramount: *if you can't do the time then don't do the crime.*

The Art of Kintsugi

Contemporary society is in transition between paradigms, much the same as it was during the Industrial Revolution. Higher education is not isolated from or insulated against the changes: rising fees, knowledge explosion, technological advancement, student end-goal motives, social practices, multicultural campuses, education as a business, amongst many other pressures, are challenging the Academy. I am not advocating that a university education is not important. Over and above any ROI, the non-tangible benefits are immense – if we in the Academy are willing to meld paradigms.

The Japanese art *kintsugi* – breaking a bowl and repairing it with gold to create a beautiful new artefact, a blending of two forms – provides an apt analogy. The art of breaking something to repair it with gold makes the original more valuable, both as an object, and aesthetically, as a piece of art. We can leave higher education reform to the politicians and the administrators who usually know little of education or of academic practice, and/or we can be stubborn, remaining firmly in our established practices and beliefs. The end result will be a broken bowl. We can be assured of that. However, if we instigate the discussion and changes, we might still break the bowl or ceramic work, but we can offer the creation of a beautiful *kintsugi mono*..

Our futures are not known. We can leave them for others to decide or we can choose to create the futures. We can choose how we want universities to evolve. As Jon McGee^{xxxvii} has put it: “How are you preparing for what you don't know?” Mine would be the *kintsugi* pathways.

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