Good evening everyone, how wonderful to see you here at the Aerial Centre at UTS. I am Hael Kobayashi, the Executive Director of the UTS Creative Intelligence Unit and your host and moderator for this evening. Tonight in Shapeshifters, Tipping the Point we are turning the page in our quest to further understand how creative thinking and creative practice are now, more than ever before, essential to wellbeing and innovation. Everything that we know is changing. Our digital creative industries and creative technologies are carrying us forward and we are beginning to move from mobile to virtual platforms in a crescendo of innovative steps into the newly mapped fields of big data science and immersive video, where streams of imagery illustrate the visual grammar of the web.

At times we are thrilled and at other times we think that perhaps as Joel de Rosnay says, big brother has become a million little brothers, with the proliferation of social media and the ability to see everyone’s data. Still we are a very active world when it comes to the internet of things, with just over 90% of the world’s data created in the past two years. We are generating 2.5 quintillion bytes of data per day. Will social media become an absolute necessity and no longer an option by 2015? We’ll see.

While a relatively short few years ago we marvelled at the speed and creative potential of the first commercially available 3D printers, we are now seeing tremendous benefits for medicine with the 3D skin printing technology, which now reduces the number of skin grafts that a patient would require. We are also seeing early prototypes of technology that are digitally stimulating the sense of taste. These are two examples of creative technologies featured at the recent UNESCO Netexplo Forum in Paris. Our legions of creative entrepreneurs are growing exponentially every month and small is, indeed, the new big in those sectors being transformed by digital creatives.

In the travel industry Airbnb is worth more than Hyatt and Wyndham. In some regions of the world the start up culture is inspiring us to prototype new ways to better map our universities. Creativity and innovation is not the exclusive domain of the creative industries, yet we are beginning to really understand the tremendous benefit that the creative economy is now bringing to the world. We are becoming more attuned and perhaps accepting of individuals who not only cannot be put into a box, they are perfectly successful and at ease with human-centred technology and the diversity of options that BYOD, Bring Your Own Device, provides.

Creative thinking, the essence of innovation and discovery, continues to transform education as we know, while problem based learning and creativity based learning are now practised at some schools. In some regions of the world, we might consider a global call to action for knowledge generation that channels the fusion of the creative and connected intelligence of today. Tonight you will hear from three unique thought leaders, shapeshifters who are tipping the point towards new ways of learning, thinking and doing. Tonight we also want to hear from you the audience, questions you may have for our speakers and your views and ideas about creativity and innovation.

We will be opening up the discussion on tonight’s themes and questions once all three of our shapeshifters have given their perspectives. The original concept for the Shapeshifters Forum is the result of the ongoing collaboration between UTS and the Enterprise Connect Creative Industries Innovation Centre. So tonight we are very honoured to welcome Lisa Colley, the Director and driving force behind the CIIC, a shapeshifter herself who has spent three decades in strategic planning, policy and development in the arts and culture sector. She and her team are, indeed, helping to shape our national understanding of the value of the creative economy and she understands the value of balancing creativity with business outcomes.

To best introduce the impact of the creative industries in Australia, Lisa and the CIIC team have collaborated with production partners to produce this short video.

Video Played

Male 1:

When you hear the word creative, what springs to mind? Imagination, ideas, haughtiness, dreaminess, beardedness, angular haircuts, black skivvies, interesting spectacles. Now try the same thing with the word industry. Probably quite a different set of associations, yes? Machinery, manufacturing, mining, practicality, blue collars, production lines. Given the different association some people find it surprising that not only do the words creative and industry go together, they complement each other very well, because when you think about it without the creative industries, all other industries would find it harder to be, well, industrious.

For example, it’s the creative industries that design new machinery so essential to the mining and agricultural industries. It’s the creative industries that make all the content of the games and the apps that fuel our telecommunications industry, that give the manufacturing and retail industries things to make and things to sell, that design buildings so that businesses in other industries actually have somewhere to work in the first place. Of course, the creative industries keep us constantly entertained and enriched with films and TV, books and magazines, music and theatre.

The fact is that creative industries are very important to the whole Australian economy. They’re also, when you see them all together, surprisingly big, larger than other industries you might think would dwarf them, but they’re more than just big,
they're influential. Through their work the creative industries have a gearing effect on other industries, generating three times their own value overall. So while it may be true there are some beards and black clothing, there's also billions in bright ideas in the creative industries. Now, that's pretty creative and very industrious.

Video Completed

HAEL KOBAYASHI:

Please welcome Lisa Colley.

LISA COLLEY:

Good evening, everybody. Hopefully that short little video might give some of you something to give to your friends or family, who constantly ask you, what is it you do again? So we hope that might help a little bit. I'm delighted to be here. Australia's economic challenges are now starkly apparent. In the wake of a diminishing contribution to our national income our primary commodity exports, think iron ore and coal, we need to rebalance the economy with new sources of productivity and growth. I believe that tapping into the skills, workforce and knowledge of the creative industries is Australia's opportunity to do so.

There are great opportunities in the areas of internationally traded services, whilst currently dominated by tourism and education, professional services which include the creative industries, are increasingly part of the mix. Another major source, perhaps surprising in the light of recent events in Australian car manufacturing is advanced manufacturing; the use of innovative technology to improve products, with opportunities for smart specialisation in global value chains. In other words, making things that are faster, lighter, more efficient and simply better than that provided by mass manufacturing.

What these high potential growth activities have in common is an increasing emphasis in their business strategies on creativity and design innovation and consequently a deepening interdependence with Australia's creative industries. This report was released by us recently - I have a copy of it here - and it demonstrates the far reaching direct and indirect contribution made by the businesses and workers of the creative industries to a range of activities across the economy. The report applies a methodology first used by the UK's national endowment for the arts. More of you would know them more as Nesta, based on the degree of creative intensity of all occupations.

How is creative intensity defined? The research methodology is based on identifying occupations that bring cognitive skills to bear to bring about differentiation to yield either novel, or significantly enhanced products whose final form is not fully specified in advance. It thus documents the creative workforce in its entirety across all sectors of the economy. I'm going to take you through some of the key findings from the report, so it will be a little data heavy. I have to apologise for that. So stick with me, as it's not possible to give you this picture without going through the numbers. This is only the tip of the iceberg of the data though and we do have a great interactive visualisation on our website where there's much more information sector by sector.

Firstly, let me clarify what we are referring to when we use the term creative industries. We define them as the sectors that specialise in the use of creative talent for commercial purposes. These sectors include advertising and marketing; film, TV and radio; music and performing arts; software and interactive content; writing, publishing and print media; and architecture design and visual arts. The creative industries made a direct contribution to GDP of $32.8 billion in 2011/12. The activity of the creative industries also has a flow on stimulus for the greater economy. The study found that by taking into account indirect multiplier effects, the creative industries adds over $90 billion annually in turnover, $45 billion in GDP and generates annual exports of $3.2 billion.

These industries are surprisingly big based on direct GDP contribution alone. The creative industries contribute more than Australia's electricity, gas, water and waste services and agriculture, forestry and fishing industries. In employment terms, the creative industries are again a greater contributor to the sectors mentioned previously, as well as the information media and telecommunications industry and the mining industry, among others. This report shows that employment across the creative industries, however, goes beyond the ad agencies, design studios and app development companies.

There are a sizeable number of creative professionals who are working outside of the traditional creative industry borders; designers in construction companies; software developers with financial services; the copywriter working on in-house investor publications for a super fund. Once these creative professionals outside the creative industries are taken into consideration, we see that the creative workforce really is a sizeable and growing beast. The total creative workforce is now more than 600,000 people, across businesses within the creative industries and those outside, with 19% growth over five years, from 2006 to 2011. The total creative workforce, as shown here, is 6.2% of Australian employment.

Almost as many creative professionals work outside the creative industries as within them. Forty-three percent of the 600,000-plus workers across the creative workforce, in fact, work outside of agency and studio land. The number of embedded creators has grown 17% since 2006. I'll just explain these terms for those of you who are not familiar with them. The creative workforce, as shown here, is made up of embedded creatives, who are those undertaking creative occupations but who work outside the creative industries, for example, designers and software developers working in manufacturing and finance. Specialist creatives are those who are undertaking creative occupations and work within the creative industries, for example architects and film editors. Support workers are those who are undertaking roles in administration, finance and so on within the creative industries.

So where are these creative workers going and why? One obvious reason is to get a job. For example, the demise of the
publishing industry is well documented with the media union estimating that in the past two years some 1500 journalists have left the profession due to restructuring and redundancies. Along with the loss of manufacturing workers engaged in the printing process, demand for highly paid journalists and editorial staff has softened. Not only have we seen job losses, but a resulting declining average wage too. It is no wonder that over 6000 writing and publishing professionals were working outside the creative industries in 2011, up nine% on 2006 figures.

There are another 5000-plus working in other creative industries, such as advertising, marketing, film, TV and radio. This was up 26% since 2006. The up side for those who have found work outside the sector is that on average they've made more money when they left writing, printing and publishing. It's a similar story for architects. The highest paid architects are not working within the architecture sector but in other industries, such as construction and manufacturing, where they earn around 11.5% more. The number of architects working outside the sector grew 28% between 2006 and 2011. It isn’t all bad news with respect to incomes within the creative industries though.

Incomes for those employed within the creative industries are typically increasing. Over 20% of those employed within the creative industries in 2011 were earning $2000 or more a week, up from 13% in 2006. As you can imagine this is the case for some sectors more than others. Over 30% of employees within the software development and interactive content sector earn above that $2000 a week, whereas music and performing arts professionals have the lowest average weekly salaries within the creative industries, with only six% of employees earning $2000 or more.

One of the major through lines of this report is the growing demand for boundary crossing skills. Creative industries professionals are needed across the economy for their problem solving, collaboration and integrative thinking, all built upon specialised design centred knowledge. It highlights the uptake of writers and insurance services, designers in investment banks, developers and code cutters in science and pharmacy. The global economy requires a more integrated approach, which recognises that a printing company is now only competitive if it brings in a full suite of digital and graphic design services.

The clothing manufacturer will need to connect material science with high design values and the design agencies must increasingly apply the principals of lean manufacturing. We need professionals with deep domain knowledge and the ability to work with other professionals in adjacent disciplines. What we do see around the world is the increasing recognition that creative industries, with their associated skills and capabilities, are a major driver of competitive advantage in global markets and supply chains. We need to understand the best way to grow, sustain and engage small innovative businesses and how they can help us reconstruct declining uncompetitive industries and create new ones.

We know the Australian economy is changing, but do we really understand what our creative and knowledge industries do and how best to leverage their talents. This quote is from the Netflix CEO and founder, Reed Hastings. “As a society”, he says, “we’ve had hundreds of years to work on managing industrial firms. We’re just beginning to learn how to run creative ones. They’re doing a pretty damn fine job of it at Netflix; I have to tell you, in terms of their talent management. Because we have been working closely with creative businesses over the last five years, we are in a position to see creative business up close and personal”. The photos that will scroll behind me as I speak for the new few minutes show just a small sample of the 1500-plus businesses that Creative Industries Innovation Centre has worked with over the last five years.

These companies include people like the team at The Explainers, who made the video at the beginning of this presentation; Killanoodle, who designed the cover of our report and all our collateral; and Small Multiples who did the data visualisation for our report. These are just a few of the small but dynamic companies in the creative industries. We have seen firsthand what great opportunities come when creative professionals bring their skills to bear in other sectors and also what can happen when they decide to work together with other creative businesses combining their skills and talent, but doing so in a way that can create scale and still retain their creative leadership.

The research within our report is clearly at the macro level. At the CIIC we’ve also had the privilege of working at the micro level, one business at a time. We are witnessing what makes creative businesses profitable and what they need to do to take advantage of the great opportunities. We are in a highly volatile business environment that increasingly needs their skills and capabilities. We’re seeing some interesting and not insubstantial dilemmas as well being faced by these businesses. Within all the sectors we service there is a degree of sector creep, a blurring of boundaries of once distinct sectors to full-blown fragmentation of the industry landscape?

How does a business avoid ad hoc change, how to ensure they incorporate new or additional services and address the impact on the business as a whole? How do they successfully manage a chosen transition to their revenue or business model, successfully manage multiple revenue streams, or shift from a fee for service labour reliant model? How does one compete in a sector, which generally contains a broad set of competitors? For example, an SME architect co-existing with vertically integrated global multi-service operations and at the other end against lean, smaller outfits, sometimes one man bands, both of whom can compete aggressively on cost.

These challenges are the creative industries businesses in today’s economy are grappling with. These are big shifts and they don’t just apply to creative businesses. As has played out in recent months, even some of Australia’s businesses are very vulnerable. To meet these challenges my money is on an even greater take up of creative professional workers across the economy. We are seeing, and will continue to see, a growing demand for the services of creative industries businesses. Indeed, what we will have is a whole economic landscape shapeshifting into a truly creative economy. Please visit our website and take another look at the video. Play with the interactive visualisation and read about the work of our shapeshifting creative professionals. Thank you.
All right. Let us now meet our next shapeshifter known for aspiring to embrace her inner non-conformist from an early age. She found her way to UTS and become a researcher in our centre for Human Centred Technology. In 2011 she received the university medal for outstanding academic achievement and her research focuses on the complexity and diversity among user requirements, both human and non-human. Please welcome our creative technorati, Jessica Frawley.

JESSICA FRAWLEY:

Thank you. So I’ll start by just telling you a little about what I actually do. So my title is PhD student in the Faculty of Engineering and IT, which sounds quite serious and it includes things that you’d expect, mobile learning, looking at how mobile technology can support learning, ICT ecologies, this idea that we don’t just have a singular technology that we go to, but we might hop between the lot of them. New literacy’s, stories and storytelling; animal computer interaction, because humans are not the only ones who use technology and I’ll get to that in a little bit and also food systems; so how technologies can support and bridge gaps within those.

So how did I get to what is a pretty peculiar PhD topic or area to be in? Well, this is a photo of me aged 11. The photos I put - is not very good quality, and it’s obviously not taken with a digital camera, because no one is smiling. Also you’ll notice that I was a trendsetter back then, wearing a velvet and sequined waistcoat, so I was already shapeshifting back then. Just to tell you a little secret, for a PhD student in the Faculty of Engineering and IT, I hated IT when I was at school. So we had a subject called ICT and it largely involved learning how to use Microsoft Windows applications. So a really exciting learning task, or learning activity, would be to enter fake customer details from a fake company into a real access database.

So I decided I was never ever going to work with technology ever again. Then after school you get to the point where you choose which degree you want to do. Are you going to be BSc, are you going to be a BA, are you going to do Arts, are you going to Science, or are you going be abstract or are you going to do something more applied? Now, the feeling is as if you’re going into these various educational silos and I actually went into several academic silos. So my first degree was in English Literature and Philosophy. I then went on to do a Bachelor of Science in IT and I’m now a PhD student who’s trying to sort of make them fit together, which isn’t actually that hard.

Now, once you get outside of these silos of taught education, you find that outside in the real world things overlap anyway. So this brings me to my next thing, which is one of my favourite cartoons, which I sort of have a love/hate relationship with. It’s called The Evolution of Communication. It was drawn in 2009 and it shows - we’ve got this little caveman here chipping away at a stone, then we have the printing press, then we have mass publication, which seems to be portrayed as the peak of sophistication and culture, before we decline into email and this little urchin here is tweeting away, wearing the same clothes as the caveman.

You see what he did there? Yeah. But what I like about this cartoon is it shows the tools and the communication culture, how they work together. What it also shows is the fear and anxiety that we hold when we receive a new piece of technology. Now, I’ll show you a piece of technology that caused huge anxiety when it first came out, printed book, yeah, okay? So when people move - even though the first reference to a printed book came out in the first century AD, it took scholars and scribes about 300 years to adopt it, because scrolls were powerful. They had associations with them and there was fear about transitioning to this new technology that could be grasped by the unwashed masses, that was portable, accessible, had random access memory, all of these things that are rather good.

We’ve seen similar things with lots of technologies, including the telephone, so the fear that we might not - that if we take a phone call we’ll never speak to people face-to-face again. What this lovely illustration shows is that technologies of all kinds, digital and otherwise, very often occur before the culture adapts to house them and appropriate them. Okay? This is the same; we saw this with early mobile phone technology. As someone who at 16 years of age had a Nokia 3310, I do remember at that time there being this huge amount of fear within the newspapers about whether this mobile technology would be leading to a generation of illiterates who couldn’t distinguish between text speak and how to write for an academic essay or a CV. That it turned out was not the case.

Now, what we’re seeing here though is a shift in some of the communication artefacts and the tools with which we can produce and engage in participating with that. So we’ve seeing a move from text and the tools that we would use to generate those texts and engage with that to this, where we have technologies that would have previously been very expensive and required a huge amount of expertise to use. We’re seeing that becoming smaller and smaller and something that we can fit in our pockets. That understandably means that to be literate, to be able to communicate with other people, doesn’t mean I just need to learn how to read and write standard alphabetic or lexico-grammatic texts.

It means I might also want to know how to take a photo, how to use a video and how that fits in. When we think of the future, when we think of what could be a meaningful text that we might share and communicate with other people, yes, we might have visuals, but we’re also looking at tangible technology. Maybe we can communicate with things like touch. Maybe we can store things like touch. So what does it mean to be literate, given the extent to which tools have changed? This landscape here, it is Semiotic Landscape, which is dominated by the visual and how do we navigate through that?

So we’re seeing shifts between a culture that is logo-centric, logos coming from the Latin meaning word, to ocularcentric, something more visual.

Tools, such as pen and paper to SmartWare - Smartphones and software; the identities being readers and writers to,
perhaps, meaning maker or designer. This idea of literacy being a singular thing that we might do and teach, becoming something of a plural set of skills that we have to grasp. So in trying to understand this I did set up a small research project called nStories and it was a really simple premise and an idea that was to ask people why don’t you create some short stories with your mobile phone and let’s see what happens and the output was really interesting. So we had a combination of different types of stories come out. Some people did photo diaries, other people did video diaries and other people used the restrictions of the SMS of text to write short poems, so we had the iambic Textameter that was pretty cool.

We also had fiction. Yes, it’s quite interesting that people used pictures and videos. That was interesting, but more interesting was how people went about doing that. So even though a device, such as a mobile, has its affordances and constraints and even though that shapes peoples' practice, it doesn’t determine it. We’re not determined by our technologies. What’s interesting - what I like about mobile technologies is how we use them to engage with the environment around us. So one participant in my project, an author called Zena Shapter, she’s an award winning author of short stories and she’s used to sitting down and writing at a desktop.

She would say, well, when I’m normally writing I plan it out. I have characters, I have plot and I sit down and I plan and then I write. When she was writing mobile though, she describes the moment she knew what her story was going to be. She said, I’m sitting in the children’s playground looking after my children and all of a sudden the children were behind me. I couldn’t see any one and it went really quiet and I thought this is spooky. So she says right, I’m going to have a spooky story. So she took a photo of that, she made it black and white, she turned it into something else.

What’s important to notice about this is that it’s not that we’re just capturing the outside world; it’s that we’re shaping it into an artefact, into an image or a video. We’re choosing how we capture it and how we shape it. We’re not just limited to whatever one technology we’re using. If that one doesn’t have a great camera, or we find the editing software isn’t good enough on the phone, we’ll just use another one, okay? So there is this ecology of devices that we practice within. At the centre of it is always the person who’s making decisions, because they are a human. Which leads me onto my next topic, okay, what if the user was not human? What if the user was a cow, or even a chicken?

Now this might seem like a really esoteric, oh she’s a PhD student; she’s doing something really peculiar for research. But if you go to a robotic dairy farm, as I did on my holidays, (to get some su). Yeah, it’s very interesting how it changes the whole dynamics and practice of that farm. So the cows are - they learn how to use the robots. There were three in this particular dairy farm, which means that the cows when they want to be fed and milked, the actions happen at the same time. The food is used to get the cow in the machine. It means they normally queue to use the robot and get, because they get to choose when they’re milked, it means we find that there are rush hours, yeah.

So the cows queue up when there’s a demand and some of them queue jump and some of them push and shove, especially the Swiss cows - they’re known for that. What’s very interesting is that when humans said, right, we’re going to milk the cows at four am in the morning, but when you give the cows robots they will milk - they will go in and get milked at midnight to two am - that’s one rush hour - and six am to eight am. So it’s really changed what goes on on that farm. Also what’s very nice about it is the robotic arm before milking gives the cow a littler antibacterial scrub and clean.

Now that might sound like just a luxury, a wanton luxury, giving the cow a little bath like that, but in fact it actually lowers the instance of udder inflammation, infections and that is really good for the farmer, because if a cow gets an infection they need to go on antibiotics. If a cow is on antibiotics their milk is not fit for human consumption and they can’t sell it, okay, so there are things like that. There are also - I don’t know whether you can see this. This is a cow having a massage. It’s a rotating device, the cow will nudge this rotating device and it will give it a little massage and here are the cows queuing to use the device. It wasn’t rush hour, so there are only a few of them. But they will wait until they can go through, be milked and then exit, normally when the food is stopped.

So I think what questions this brings out is how do we deal with animals within our computing design methodologies? So normally if we’re doing user research, we might do interviews and focus groups and questionnaires. You’re not going to do that with a cow. Well, you can try, you can try, but it might it might not be very successful. Also if we’re thinking along those lines of animals as computer users, we might also start to think about them as stakeholders. So this is one farm that I went to visit and it’s a free-range egg farm. The philosophy is that those animals are stakeholders within that system, therefore they have certain entitlements and it means that it costs a lot more to look after those hens.

Now, if you’re going to design a system for them, how do you represent those stakeholders? So I personally chose the route of using an animal persona, but then that also raises more questions about how do you write an animal persona, given that you can’t interview them? This is a sort of multi-disciplinary area, which is involving animals, scientists, farmers, robotics, engineers and IT designers. There’s a lot going on in this rather niche area. Lastly, what I’d like to leave you with is that for me IT and computers have been a hugely creative space, because I can sort of do many different slightly peculiar things in one area.

One of the things I like about it most is that it’s very participatory, so it’s not solely experts who are engaging in creative practice, it’s everyone who’s got an iPhone and a YouTube account, which isn’t always a good thing, but it’s an exciting space to be in. I’d like to leave you with that. Thanks very much.

HAEL KOBAYASHI:

Our third shapeshifter for this evening is an internationally published author, an anthropologist, an advocate for creative thinking and having a very good understanding of today’s complex media landscape. She is transdisciplinary focus and
Hello, it’s lovely to be here. So I want to talk about knowledge when it comes out of the box. I want to talk about how we foster that kind of knowledge to create transformations and break throughs. I’d like to talk about creative intelligence, its role in making those kinds of break throughs, because from my earliest origins creativity and creative curiosity has been our impulse for progress. It’s been how we imagine transformations in the world, how we imagine new possibilities. I’d like to talk about how creative intelligence is ultimately a search for wholeness; some say a search for that which is holy.

As I’m a storyteller, I’ve been asked to tell a few stories from my life, so I thought I’d pick on a few definitive moments.

I thought I’d start with where I come from. I’m Indian by birthright, British by descent and an Australian by choice. So my sort of search for wholeness takes on a whole cultural twist if you like. One of my favourite books as a child was E.M. Forster’s, A Passage to India, and this is a clip from the film, from David Lean’s film, and it sort of captures that sort of sense of cultural disjunction - disconnection if you like. I grew up in England, spending all of my summers every year in Calcutta in the monsoons, dreaming of swimming in streets that were filled with water. No one had the sort of summer holidays I did back then, no one ever left England, leaving England was like saying you were going to the moon back then.

So I wasn’t Indian in India and I wasn’t British in England, which gives me a kind of shapeshifting necessity, imperative if you like. So I thought I’d read you a little snippet from E.M. Forster’s novel. “Why can’t we be friends now said the other. It’s what you want, it’s what you want, but the horses didn’t want it, they swerved apart. The earth didn’t want it, sending up rocks through which riders must pass single file. The temple, the tank, the jail, the palace, the birds of carrion, they didn’t want it. They said in their hundred voices, no, not yet and the sky said, no, not there.” So what do you do if you’re an aspiring writer and you believe that there should be unity? Not just this profound disconnection which Forster writes so beautifully.

Well, you stand on the shoulders of giants and you write it into being, you write that unity into being. That’s exactly what I did, pursuing this sort of impulse towards unity. I wrote novels that were not just about diverse cultures and differences, but about the profound things that also unite us. Another part of my story, this in New Zealand for Archaeology and Anthropology at Cambridge University, so I want to talk about education for a search for wholeness. This is a photo of the museum. Next door to this museum I was sitting writing and reading a lot. I studied Anthropology at Cambridge. This is a picture from one of the films that every anthropologist has to see in their first year, it’s called Onka’s Big Moka, a beautiful film. It’s about tribal gift exchange.

So what did I do there and what was that search for wholeness all about? Well, it started off with the study of dispirit tribes and bones, and nothing made sense, it was all - there was no sense of wholeness. Everything was sort of separate, happening in different tribes all over the place and I didn’t quite make sense of it. But as I continued on things fell into place and I’m sure all of you here have had those incredible experiences throughout your lives, especially when you’re in an educational institution, when things really fall into place when things make sense on a broader kind of canvas. Now, anthropology is a very broad canvas, it’s described as a study of man.

It was famously revised as the study of man embracing woman, so making that little bit more whole, which was kind of significant for me at that time, because there was only one woman to every four men studying where I was studying at the time. So yeah, it’s a very broad canvas, a broad church and so things did fit together and I could make use of my anthropology and I have made use of my anthropology ever since. I’ve used it to to understand deep consumer insights, like this one here from the Dove Campaign. Anthropology has helped me create concepts with real cultural relevance. This is an ad I made for a jewellery company with my partner who’s sitting there. Cultural anthropology has helped me understand about product relevance.

Here’s a really relevant product, the egg cuber. So if you don’t want eggs to fall off your plate you boil them in this. So I’ve also used my anthropology to devise a kind of anthropological method to creative writing, where you capture the unity of all things, here represented by Anish Kapoor’s mirror. You also capture the diverse cultural factors, the time and space in which your story takes place. Now, I didn’t realise when I started learning anthropology how it would make sense as a whole. How it would open up the sky. Knowledge served me well, but the possibilities of that knowledge served me even better. Those possibilities were opened up by a creative impulse, if you like, a quality of being not of knowledge in itself.

So I’d like to jump forward now to Windows 95, that’s Bill Gates. This was a definitive moment for our society. It was the introduction of the Internet for the first time. At that time I was the creative director on the launch of Windows 95 with my partner here and with its key words for the future, access and empowerment, it launched the whole Internet era. We were being briefed about what the Internet was and what it could do for us sitting in an ad agency in North Sydney and being told about this amazing tool that would be - allow us to gather all this information and find out anything we wanted. It was like being told about electricity, before the invention of the machine washing machine. You didn’t quite understand what it was going to be useful for.

I remember a discussion in the creative department about, yeah, but why do we need to have more information? We have the Encyclopaedia Britannica and no one ever looks at that, it just gathers dust. So how little we know about the future and how it will unravel. We couldn’t have possibly predicted the connectivity that would come. So now carefully coinciding with the launch of Windows 95 was the launch of my career as a mother. So the product and my child had the same due date, my first child, so a big leap into unknown for me personally, society, for everybody. Becoming a parent,
well, that’s a leap into the unknown if ever there was one. At that time I started to see the world from the perspective of a child, the child with this enormous learning journey ahead, the child that can’t even lift up their own head.

Now, shapeshifter if there ever was one, is a child who’s made that miraculous journey from water creature to air breathing creature, which is beautifully demonstrated here in the Birth of Venus by Gustave Moreau. So this child being born has so many different domains of knowledge it has to traverse and it faces this incredible unknown future. I became fascinated with that child’s search for wholeness. Another defining moment, not quite as happy, this was a story about when I fell incredibly sick once and I ended up in an isolation ward in hospital in London with an unknown illness. Nobody knew what I had.

There’s nothing like an unknown illness to take you to the edges of the known world and expose you to the limits of human knowledge. As universities and industries push to expand the boundaries of knowledge, knowledge and health particularly, it’s worth keeping in mind this idea of wholeness, because the word whole comes from the word hale or health, to be hale and healthy. A healthy approach to knowledge, I believe is always a holistic one, which is why innovation happens so often between fields of knowledge, has a sort of innate search for wholeness. So I want to move forward now to the - in my timeline to the birth of my second child.

I was running a creative consultancy and I wanted to write a novel. I’d never written one before, it was something I always wanted to do and I had this feeling that I shouldn’t wait until I had retired and had the money to do so. I thought, well, freedom if it’s going to be worth anything can’t be bought, it has to be stolen. So I stole my freedom and I took off to live in the foothills of the Himalayas with my small family and that’s where I started writing my novel. Waved goodbye to my clients and went off and sat in a little village there and I became a writer and continued writing and wrote my first novel, *The Seduction of Silence* there and to this day I know that I would never know what I know about creativity if I hadn’t made that leap, if I hadn’t jumped from one field to another.

So now I want to take you back to my Windows 95 baby, who’s currently just turned 18 and I want to explain - this is a photo he’s sent me, he’s now on LinkedIn, asked to connect from overseas where he’s having a gap year. He’s - and I want to explain some of my hopes for the future through him, because he is that age where he is moving to university now. So having a child of university age makes me really appreciate the investment, how totally and utterly invested we as a society in our children’s education. We don’t want them to be just able to rattle off facts. We don’t just want them to accumulate knowledge. We want them to succeed in the fullest possible sense and we can’t do any of these things for them.

We want them to grow to make a contribution to our society and we want them to help solve these enormous problems of the world. We want them to change the world. We’re not ambititious at all are we? The type of education we want I feel, is not just about learning a single discipline and gaining a single type of knowledge, because everything is more connected than it ever was. It’s more about an education for being, an education that goes beyond knowledge. It’s about being able to see the world through a variety of lenses, understanding connections between approaches to knowledge, being able to join the dots. So as my Windows 95 baby and the Internet come of age in 2014, technology continually disrupts society and it is not going to stop doing that.

It’s changing our landscape, challenging our understandings of knowledge and to respond to this convergence and disruption, I believe education must come of age too, for the sake of the next generation, for all our sake. The university as an institution must re-imagine what it can do to prepare students for an unknown future and who knows how that feature will look. You can see I’ve just seen the Lego movie. So what can the university do to respond to the changes in the outside world? Perhaps go back to the original word, university. This slide is my version of the university as it was first imagined. The world university means whole. Why is it whole, because it combines unity with diversity, and with the two we have the whole entire universe.

So the diversity can be found in the disciplines, which are continually expanding outwards and the unity is in the common ground of shared knowledge. In the middle there, the creative impulse that produces truly divergent thinking and innovation across all disciplines. So creativity for me in this imagination of it is the beating heart at the centre that enlivens all knowledge. So I now find myself as course director of the Bachelor of Creative Intelligence and Innovation and it’s a very exciting place to be and to share that journey with a brave institution such as this. I’m thrilled about this degree, because students combine their core degree with a unifying experience of creative intelligence across the disciplines.

So they combine academics - well, academics and students combine from the sciences, law, art, social sciences, design engineering, IT, health and so on. We go beyond disciplinary silos towards a troubling nature of open questions and challenges, challenges that must involve all the disciplines. In other words, we can go from just knowledge towards being to the heart of the institution. Now this is a shift from diversity to a focus on unity. It’s a shift from the dispirit to the whole, from the limits of knowledge to the unity of creative solutions. It’s a brave idea that needs big thinking, but when we get there - and I believe we’re getting there with the BCII - I believe that we’ll have a university that’s truly come of age.

If any of you feel inspired by that idea and you’d like to be involved, come and speak to me about it. Thank you for listening.

HAEל KOBAYASHI:

Lisa, your overview of the creative industries and really what it’s contributing to - not just to the creative economy, but to the economy overall and the development of the workforce and that. For students who may be coming out of university today, what kind of landscape would they expect to go to in terms of if they think, well, I’d like to go into creative
industries? Where do you think they would first land?

LISA COLLEY:

Well, just about anywhere. I think that's what - was the theme of what's coming out of our research, is that we have people with those creative skills moving into roles into businesses, right across the economy. What I see is that there are a number of those people who have very high entrepreneurial inclinations, who really want to get out there and do their own thing, and set up their own business. I'd say that's a really healthy place to go if they can, if they've got that kind of entrepreneurial spirit, because it's actually where the rubber hits the road I think. It's where passion meets your discipline, is to get out there and actually try and do that stuff on your own bat.

But just as much it really depends I think on what that person's interest and direction is. What we're seeing is they can go and work in manufacturing; they can go and work in professional services; in finance and so on. Obviously there are so many of them too who want to stay initially quite closely to their chosen area of discipline, whether that be in architecture or design, and want to go out and actually have a go at those things. So I truly do think the world is their oyster, particularly if they can go through a course like Bem's going to be - be in charge of - where they also get a chance to not only do their deep discipline, but also get a chance to work with others on how to solve problems. How to ask the right questions, how to understand what customers want, what people in the health - a patient in a hospital, what they need. I think we can give them that kind of open education and then I think they'll be in good stead.

HAEL KOBAYASHI:

That's like understanding the multiple fields of knowledge that Jessica has a look at when she's considering user requirements. Yet we've all heard of the infamous robot chicken animation...

[Laughter]

HAEL KOBAYASHI:

…and the cows having a massage while they're waiting to be milked. It's sounds like a really interesting and transformative thing. What else did you notice on the farm when you were there, in terms of changes to what we would think of as a regular farm?

JESSICA FRAWLEY:

Well, really each cow has its own identifying number and tag, so it changes the relationship that the farmer has with the herd. So instead of being reduced to manually putting cups onto udders all day, instead that's all done by the robot. So the farmer can, number 53 hasn't come in for a milk today, she's off in the farm, she's broody, or she's sick or she's not well. So it frees up time for the farmer to have a different relationship with those animals and with the flock. So I think it can be - I think technology can be quite important like that, because sometimes - the first thought I had when I went to the farm to find out about the robotic dairy was, I thought, well, does that technology distance the farmer from the herd? Because you'd imagine, well, you're spending less time and it's just taken over by this impersonal robot with its ability to clean udders and all that. But it's actually - it's really good I think.

HAEL KOBAYASHI:

Bem, your concept of the whole and that the diversity and the university and diversity, is that something that you've thought about for a long time, or is something that's become a more recent understanding for you?

BEM LE HUNTE:

Well, it’s something that I thought a long time about, from the time I was in university and I was trying to join the dots, the idea of a unified world and a dispirit world in a - the idea of combing them both, if you could. The idea I first came across Saussure's work, a linguist, who wrote about unity and diversity of language, and that sort of triggered a whole other heap of unity and diversity concepts. Because, for example, Saussure's idea of unity of language, a unified language would exist in a grammar book, but grammar book doesn't have meaning. You need language, the spoken, so that was - he described that was la langue, but you need the spoken word to make meaning.

So you need meaning and structure and you need the core principles that fuel language, which are these structural ideas of grammar and words and letters and so on. But they don't have meaning until we have diversity. We make sense of our world, because of diversity. I've taken that idea through my fiction, for example, the idea of exploring diversity and coming back to unity again. What unifies us in fiction is the fact that we have - we all have families, we all have parents, we all experience these human emotions. So you can explore those unifying principles and you can also go and do a novel set in Mongolia or one in India, or wherever you want to set it, and have that deep cultural sense of diversity as well, you can have both.

HAEL KOBAYASHI:

All right, a question. Yes, hello.

FEMALE 1:
Hi. I’m a farmer’s daughter and I often find that urban people are surprised by the adaptation of technology to agriculture and the willingness of farmers to adopt it. I guess my question is, for young urban creatives, how can we better expose them to the industries that might be outside their experience, have they’ve grown up and what sort of places they’ve interacted with, so that they see the application of their skills in a different world?

JESIĆCA FRAWLEY:

Well, I think that’s a good question. I think really it needs to be on like the methodologies that we use, so I think if I was going to think about designing a system for a farm, or a website for a food producer, I’d want to work with that producer first, because you’ve got a whole range of things you can do once you know what’s going on out there. Also if you are thinking about, yeah, if you’re thinking about design you can campaign, I’m not sure which creative industry we’d be referring to, but I think it needs more links and I think people need to go out and look at what’s going on. I don’t think it can be purely sort of mediated by technology. I think there is something about doing your research.

So when I was out on the free range egg farm, there’s something about going there and seeing exactly how it works and where those eggs are boxed and where those chickens live and that environment, because that’s part of your research. I think looking at design method research; I think that’s quite important, yeah, if that answers the question.

FEMALE 1:

Yes.

LAURENCE:

Hey, how’s it going? I’m Laurence, I teach here in the Business School. Firstly, well done to all of you tonight, you all spoke really, really well. So especially Bern at the end there, you mentioned a lot about education. I suppose my question is in grading creativity into education when we have such a rigid system of assessment, which encourages surface learning, as opposed to deep learning. You have standards, you have boxes to tick, you have assessment tasks, you have exams, which encourage memorising, regurgitating. So how can we redesign the system of assessment to actually encourage creativity?

BEM LE HUNTE:

Well, I think that your question is as very big one and it actually goes to more than just assessment. I think you need to almost reinvent a lot of the institutional thinking to incorporate creativity within the academy. I mean the deep learning is the creative process. You can’t ever have a surface approach to learning if you’re trying to do a creative exercise with people. But how do you judge that depth, that depth of learning? Sometimes an idea comes like that in a flash and yet the academy would sort of prefer you to spend hours on something brilliant and know how to access that accordingly, but there are all sorts of others challenges. Look, creativity in a revised Bloom’s hierarchy is at the very top of the pyramid and yet it’s not given the same sort of value as analysing, rote learning, memorising that we have that takes place here.

The whole system has to shift so that we can assess those qualities that are hard to assess. There’s one writer on creativity Csik Mihaly, Csikszentmihaly who says that creativity happens in the dark and mysterious spaces that are very hard to analyse. Well, the institution - the academy is all about analysis, so they would prefer you to write an essay that allowed you to analyse something, than to be able to put yourself in a space where you actually don’t use all of those logical linear thinking skills and perhaps use a few other skills that are expansive in a different way. Play, there’s lots of research done on playfulness, for example, and how useful that is for creativity. How would the Business School feel about people playing with ideas about businesses?

You’d come up with some really nice innovations and some fantastic new business models, perhaps if you had more play, more chance to experiment. But in our institutions we favour the whole idea of work over play and we favour the idea of— we privilege this notion of logical thought, which it isn’t always, it’s not always linear. Yeah, we need to spend more time allowing that sort of - those dark mysterious spaces. We need to structure ways for people to examine sort of big issues in new ways. It’s a really hard one, but I mean we’re working on assessments right now and we’re coming up with some quite fun ones. I think it has to be fun.

ROBERT:

I’ve got a question.

HAEL KOBAYASHI:

Yes, Robert.

ROBERT:

Two of the people I admire most, one dead is Leonardo de Vinci; one living is David Attenborough, almost anyone who knows me, knows how much I admire David Attenborough. The thing that stands out for me about them is the sheer wonder that they’ve had in the natural world, and unnatural world - the curiosity which they have brought to the experiences of their life that have led them on the journeys of discovery that they each had. What aspect of the education - that we can provide the next generations, to be collaborative, to be curious, to have both the long thought out process of problem solving as well as the ‘ah ha!’ moments, how are we going to bringing that to what we offer at UTS?
BEM LE HUNTE:

Do you want to answer that?

LISA COLLEY:

No.

HAE L KOBAYASHI:

Well, I think that’s a question actually that everybody might have a view on. I think everybody has a piece of that. Bem?

BEM LE HUNTE:

So do we create more higher experiences and how do we create those curious learners? I think you hit a really good word, I think curiosity is a very important characteristic of creativity and Attenborough and de Vinci certainly in those days you didn’t want to – you wanted to be an artist, because that made money, and yet you wanted to dabble in sciences because - I find that very interesting, the sort of temptation to study everything almost. It’s impossible to study everything actually and that’s why I think it’s really important that the Bachelor of Creative Intelligence and Innovation is studied as a combined degree with a core discipline. So you get that depth of disciplinary knowledge, but then you bring this incredible other way of seeing and you get the diversity of practices and methods from other disciplines. You can use those to look at your own discipline to make breakthroughs and transformations there. It’s like you’re almost broadening the bandwidth of a student’s capabilities in that way.

HAE L KOBAYASHI:

That’s very similar to what Lisa was talking about in terms of embedded creatives in other industries who are already working that way. It’s just they haven’t necessarily been educated that way, although they’ve migrated to this way of working it and a great part of it, as you were saying was they’d like to have a job, so they learn to adapt as a result.

LISA COLLEY:

They sure do. I think the curiosity is an interesting one and it’s also about a process of discovery. I think that that’s - and that’s something that I see a lot in the people that I work with in the current role I’m in, in businesses. But I’ve seen it working with artists who are engaging in - with sciences and working in those cross-collaborative areas. There’s a high degree of curiosity, which often drives people a bit nuts, because they tend to push things to the point where they break as well. I’ve seen artists do that with pieces of technology, they make it that hard.

HAE L KOBAYASHI:

That’s an R and D director’s dream now. [Laughs]

LISA COLLEY:

That’s fabulous. But I do think the big component of it is being curious, not just about your own, piece of it, it’s actually about what others are doing. Often I remember talking with someone and saying, have you read any industry magazines from industries that aren’t like yours, because I think you might find some relevancy there. I think it’s partly that curiosity about areas that you don’t - it’s not in your area - your realm and that’s it think what’s interesting about what you’re saying Bem, is I think we just need to create more opportunities for our students to actually be engaged with others coming from very, very different perspectives.

HAE L KOBAYASHI:

Jessica, what do you see happening in the research space, there’s a big shift going on now with that?

JESSICA FRAWLEY:

Well, I was just thinking about my experience with education and I think what I - what has always led to me doing my best, or getting the most out of a course, is a degree of freedom where you’re allowed to exercise that curiosity and bring your entire self to an assignment let’s say. So when I first got involved with my chicken project, this was actually my honour’s year of the Bachelor of Science and IT and we had the subject human computer interaction. We were tasked with go-there was parts of it, one research to form a design for a system that would bridge the divide between food producers and food consumers. So in my private life, home life, we had just got four backyard chickens.

So I was enamoured with these animals and I thought, oh I really want to find out about the egg industry. That - I think the assignment was in such a way, that it could be interpreted by the individual. So because curiosity, it’s not this abstract thing that’s out there that you can box up and teach like Microsoft Office and things like that. It’s something that is very personal and the ability to be recognised - to have that recognised and have an assignment on a course that said you can be an individual and you can interpret this assignment in the way you want and you can explore that, has just been brilliant for me. So I would say it’s about giving space, it’s not about sort of rote learning and drilling things in, it’s about having that space to play as Bem said, yeah.
HAEL KOBAYASHI:
Yes, right here.

CLEM:
My name is Clem. I'm just wondering, what do you think about technological singularity and will technology maybe take over once, perhaps like the cows, and will imagination be a currency in that matter?

JESSICA FRAWLEY:
Oh, I don't really...

HAEL KOBAYASHI:
That's a bit of a futurist question. It's a good one; it's a very good one.

JESSICA FRAWLEY:
Well, I don't sort of technology taking over. I think imagination I think exists everywhere. I think it's got a lot of potential with new technologies, because things change so quickly, so the imagination has to work really, really hard to try and work out what's going to happen next. It's not just about design, because you can design something and you can give it to users and it goes a totally different direction, so people appropriate that technology and do different things with it. In terms of imagination of the currency, it's hard to think of that as a metaphor, because I can't imagine how you'd measure it. But I think, yeah, I think in terms of it being embedded in jobs, I think it's valued whether it's labelled imagination, or whether it's labelled innovation, or whatever it's labelled.

I think it's valuable given the rate of technology change at the moment.

BEM LE HUNTE:
Yeah, that's a good answer.

HAEL KOBAYASHI:
Any other comments about the future?

BEM LE HUNTE:
[Laughs] Only the.

HAEL KOBAYASHI:
All right, question over here.

LAURENCE:
Hi, my name is Laurence. I was just wondering, because I suspect it's a place you're possibly been in, how do you convince people who are focused on the practical, the applied, that all of this is important. I mean I'm here because I believe it is and I suspect most people in the room share this view, but do you have any practical tips on how you navigate or convince the unconvinced?

HAEL KOBAYASHI:
Bem, yeah?

BEM LE HUNTE:
How do you convince people that this is practical did you say, applicable?

LAURENCE:
Yes, that creativity when compared against cold hard physical production, things that make money? You're talking about unity between professions like law, engineering and creativity. How...

HAEL KOBAYASHI:
Yeah, I think Bem will have some insights.

BEM LE HUNTE:
Yeah, got it.
HAEL KOBAYASHI:

Then Lisa can actually talk about some very practical examples of that. All right, go.

BEM LE HUNTE:

Yeah, so can it be - I'd go back to my point about it being at the heart of every innovation and every sort of bit of human evolution. I think it's a creative instinct; it's an idea before anything is ever built. It's got to be imagined before it's acted on. It's got to be conceived before it can be constructed and all of that is a creative process. Now, there are people who go, but I'm lawyer I'm not - we respond to things that have already happened perhaps. But there are all these areas of law opening up that - Copyright Law can’t keep up to speed on what's happening on the ground. Do you know we might need to actually have a more speculative look at those areas too, like what if scenarios for law?

I know some lawyer working on the whole idea of what if an island in the Pacific was to go down, what would our legal system do to incorporate, perhaps, new people? I think that every profession has to have that sort of core ability to move and shift, because if they don't have it, other people are coming in from the side the whole time and disrupting and creating the models that are new, that are competitive, if you don’t have them yourself. So there are certain professions where you apply the certain way of doing things again and again, but then one day you wake up and everything changes. That’s happened in publishing, one industry I've been involved in, for example.

HAEL KOBAYASHI:

Yeah, Lisa.

LISA COLLEY:

Look, as someone who spent their working life, all of their working life, I guess on the edges or the boundaries of areas. Like I've worked in community arts, I've worked in new media and these were all areas that were at - at the time they pretty edgy, they were pretty out there. I've seen those things now come into the centre. I had a really interesting experience the other day, where someone was describing to me a process that they were running within a community and I'm thinking - this was from a local government - I'm thinking that’s community arts. Like we were doing that process of engaging, questioning all that we were doing that 30 years ago.

New media, the cross-disciplinary stuff that was happening with artists, scientists and new media people 20 years ago. I really believe that we’re in a very interesting moment. I don’t think we’re going to have to convince anybody actually. I think people are desperate for it and I see it happening at the top levels of our major corporations, who know that they have to do something different. They know that what they are doing now is not working and they have to bring in a whole other range of ways of thinking and ways of looking at things. I interviewed a CEO of a very large manufacturing company a couple of months ago. They had been engaged in a process with us bringing design into their manufacturing firm.

I said to them, so what made the difference for you? Why have you done this? He said - you know, what was it? He said, well, I’ve really tried hard to put this into words he said, but you know they just see things differently. I said and you - and - I'm kind of going, is there something? He says no, no, like it’s really made a difference. I’m not saying it hasn’t made a difference, we’ve improved things, we’ve reduced our products down to a smaller level, we’ve got a much sharper focus on what we’re doing, but you know we wouldn't have done that if we hadn’t had those people come and work with us and see our business with a set of different eyes. Now, what’s that - behind that was a whole lot of rigour, an extraordinary amount of rigour.

It wasn’t just, I’m going in there and going mmm, you know.

[Laughter]

LISA COLLEY:

It wasn’t that at all. I’m looking at Sam Bookolo over here who’s done a lot of this work with manufacturing companies. But it was the fact that we have a team of people, you had someone who had a really strong industrial design background. You had someone with a lot of marketing, communications and branding experience, you had a high level business professional, all coming in as a team and looking at that business from a completely different perspective than by the owners of that business.

It’s making a real difference and it’s making a real difference to the bottom line, so that’s when people get really excited. So it’s not just about making people feel better, it’s not just about engaging their stuff, which of course all of those things is also what that’s all about. But right at the heart of it is people being able to see their business from the point of view of the people who use those products, those services. That’s the theme I think that curiosity, that questioning about being able to stand in someone else’s shoes, all of those things. I just see those things are what a lot of our creative professionals just do.

It’s part of their DNA, but when they actually break it down there’s a high degree of rigour and discipline, intuition and learning, that’s gone into the development of those skills, which we I think we can sometimes dismiss, because it just kind of looks a little bit like magic, but it’s not magic.

HAEL KOBAYASHI:
MALE 2:

Thank you all very much for your talks, beautiful talks, I really enjoyed them. Now, I have a question about the end game. When a university - and they definitively stuffy if - UTS is slightly less so, when a university embraces something like creativity, we could probably enter the end game. On the radio recently I heard that one of the major manufacturing economies of the world, South Korea, has declared that they are aiming to be a creative economy, which will leave perhaps one manufacturing country in the world and that’s China. Is there a problem if all the economies of the world become creative economies?

[Laughter]

HAEL KOBAYASHI:

Well, I’ll just add in there, like kick off the answer. I think what’s been happening is people are beginning to understand what the creative economy is and there is this great attraction to it. I don’t think it’s a trend. As Lisa was saying, we’ve been through the other options and we’ve been through the scenarios. We benefitted from each of those for a period of time and this is what’s coming next, because we’ve finally been able to describe it, articulate it, and show the benefit that it begins to have. But I don’t know - that’s my opinion.

LISA COLLEY:

I don’t know that it would be such a bad thing, but I guess it’s how you describe the creative economy though. We still need people to make stuff, we still need - it’s not - I don’t think any argument about the creative economy is saying we’re not going to have any manufacturing, or we’re not going - that’s - and I think it was part of what I was saying. It’s about being able to actually create things in a smarter, faster, more intelligently - you know, things that meets people’s needs, things that solve big problems, but we’re still going to need to make stuff. I think what’s quite interesting is looking at what’s happening in the US where, in fact, they’re bringing the manufacturing back into the country. They’re actually starting to manufacture again.

But they’ve got through this really deep dip and having to come back up the other side and think about, well, how do we make cars that people actually want to buy, which might have been a really good question for Australia to ask about 30 years ago? So we - it’s those kind of things are going to remake our economies in different ways. I think in Australia we’ve just - we’ve kind of been allowed to slow that down a little bit, because we’ve had such incredible resources in this country. But countries who don’t have that have had to think about that a lot sooner than we have. I think that’s an area - we’re just going to have to do bit more catch up on that.

HAEL KOBAYASHI:

Jessica, I was wondering when you thinking of the end game and embracing creativity, certainly when you’re describing your transition from what you thought was the world of IT and ICT and where you are today and you think of how much that has changed.

JESSICA FRAWLEY:

I don’t whether there is a final end game, like I think it’s a sort of ongoing process. I don’t like I finished one degree and that’s it and I’m qualified to do everything. It’s this idea of lifelong learning and continual process and continual dialogue with the world around you and the unknown, as Bem spoke about. So even if we - I mean let’s say we do have lots of different industries, there’s still ways for those to operate creatively without them necessarily being labelled as creative industries. So, yeah, I don’t think - I’m not sure there’s an end game, I think it’s just a continual evolution and discussion.

HAEL KOBAYASHI:

Bem?

BEM LE HUNTE:

I don’t know end game makes me think of gamification, it makes me think of some kid at the wheel too. But I think that if we’re talking about end games, we have think about the big questions, the inconvenient truths that we have, about our environment, about various challenges of our world. I think those represent much more of an end game and I think that creativity is an absolutely necessary factor in addressing those big issues, big challenges. I don’t think manufacturing is going to die for a very long time completely, I think what does get made will need creative input, it always does.

HAEL KOBAYASHI:

Thanks. A question in the back there?

MALE 3:

Hi, I’m wondering that if it’s given that the world’s population, environmental degradation and unemployment, systemic unemployment, continue to increase exponentially, at what time will UTS offer a bachelor of creating, making, selling and
using less, rather than more?

[Laughter]

HAEL KOBAYASHI:

Well, that’s a good question. I think also the values of a lot of the social entrepreneurs that we’re seeing in the start ups, not only around Greater Sydney, but in the many regions of the world, where they’re working alongside the people who are doing new financial service systems, new concepts for health technologies and that the fact that social innovators and entrepreneurs are now in the midst of those while these periods of transformation are happening and new industries are being defined. Thank goodness that they’re there, I think it certainly gives us some hope for the redemptive power of humanity, yeah.

BEM LE HUNTE:

I’d just to like to add to that it’s about relevance. I mean, if we can get people who are creating to understand relevance, we’re going to have fewer of those sorts of square egg makers; we’ll get more useful things happening.

HAEL KOBAYASHI:

Time for one more question.

MALE 4:

Yes, thank you. I was wondering more about the course itself that you’re the director of, Bem. Is it a course that you teach people appropriate ways of thinking in terms of addressing the challenges going forward, or is mind mapping and reapplication of techniques from different disciplines that you apply in different formats, which create innovation? I actually probably just pitch it in light of is the course one that one specialises in, as opposed to perhaps becoming generalist across all of the other disciplines and the faculties that you a re - that you want to - us - a student to tap into? It’s always been a challenge for me in life, is to be the specialist and society rewards the specialists well. I think the fellow at the back tried to allude to that, as opposed to the generalists.

I’ve been challenged with which is right, to be a specialist or to be a generalist in life. As you said, you relate over in renaissance towards generalism perhaps?

BEM LE HUNTE:

It’s a really interesting question. I don’t think that we’re attempting to make generalists, that’s not what we want. We want people who have - you see, creativity is not something that happens in abstract. I’m not - I am a creative person - I believe I’m a creative person, but I have fields. I have disciplines in which I have a creative practice. Now, there are some really useful things about those fields that can be taught across all other disciplines. Some ways of seeing, some ways of thinking as you described, and some practices and methods that are worthwhile learning, even if you're not traditionally - even if you’re a specialist in something. You can always expand the way you look at your specialist field. This degree really is about expanding the thinking and the possibilities of looking at fields.

It’s about looking beyond the confines of knowledge and around the corners. I agree that society rewards specialists, but the specialists don’t always feel rewarded in the sense that sometimes they itch for more. They want more on the edges, they want to explore more, they want to learn more and they want to be more than just the confines of the profession or a discipline. I think that’s where a degree like this is really useful and also we cannot predict the future. We don’t know in 10 years time, 5 years time, whether your specialisation is going to open up in a whole new way, like many industries have done, and we’re going to see more requirements for more diverse bits of knowledge to come filtering in.

We don’t where the links are going to be, but we’re certainly living in a more linked up connected world, where it’s worth making those connections beyond your practice or your profession.

HAEL KOBAYASHI:

Please me in join me in thank our wonderful three shapeshifters for this evening; Lisa, Jessica and Bem.

END OF TRANSCRIPT