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MUDDY FOOTPRINTS

Investigating Human Interplay with the Environment



Fun-Filled Classes

The gamification
of learning at
HKU



New Hopes for Renewable Energy

Cereal straw
for biofuel
production





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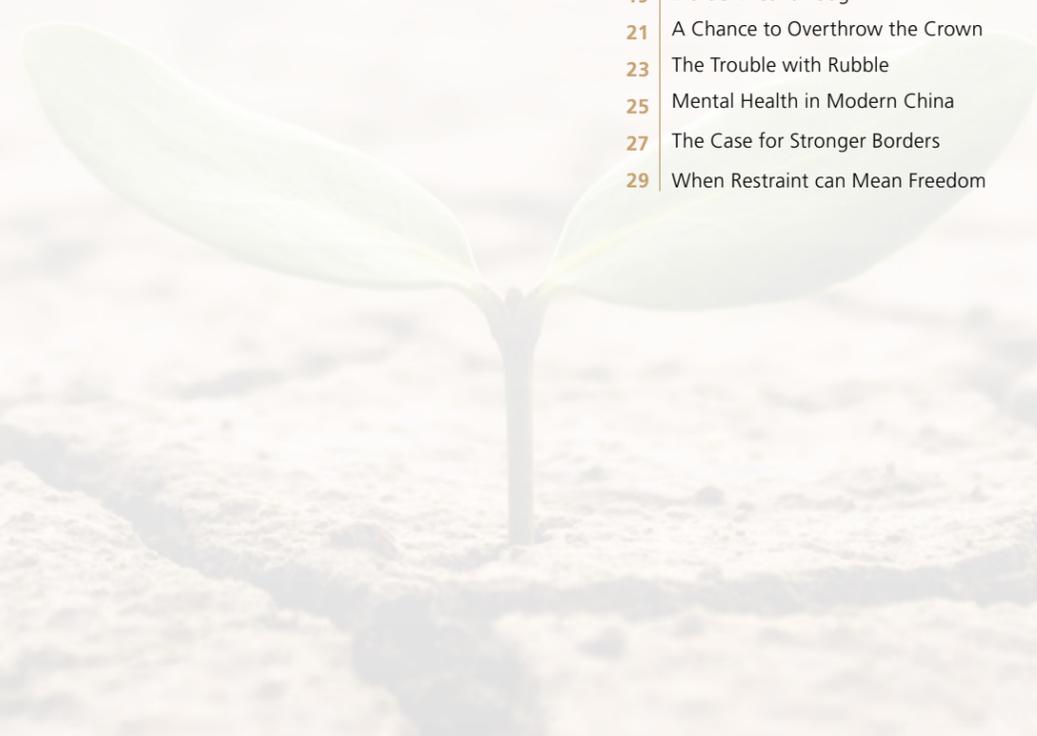
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MUDDY FOOTPRINTS

From victims to perpetrators, humans have often had a rocky relationship with the environment. In this issue, we report on HKU scholars who have taken a historical look at that relationship, and on research about human threats to animals and the seas. The University as a whole is also trying to set an example by addressing sustainability issues on campus.

EPIDEMICS AND CLIMATE CHANGE

Data from China shows how epidemics, alongside other human catastrophes, can be triggered by climate change.

Scholars in the Department of Geography have been using a rich trove of data from historical documents to show the human impact of climate change. Their first efforts, published a few years ago, found climate change was linked



“If the temperatures are cooler for one or two years, people can cope. But based on the data from the past, when the phenomenon is long-term, people do not have sufficient capability to cope with it.”

Dr Harry F Lee

to human crises across the northern hemisphere between 1400 and 1900, in particular wars in both China and Europe. Now, the focus is on an outcome that is especially pertinent to the 21st century: epidemics.

In these days of bird flu and SARS, the scourge of epidemics is once again threatening the population. Dr Harry F Lee, who worked with Professor David D Zhang on the war study, has found evidence that past epidemics coincided with climate change.

“When we talk about climate change in the past, we mean cooling. It’s only from the 20th century on that we talk of warming. But whether the temperature is too high or too low, the issue is whether it is the optimum. Cooling was disastrous for the middle to high latitude regions in the world,” he said.

The reason was the impact on grain production, which was the most valuable resource of the day. Sharp drops in production brought on by colder-than-average temperatures gave rise to conflicts and also epidemics.

Dr Lee showed the impact on human health by using county-level data from China on epidemics and comparing that with the temperature records. Some 5,961 epidemics incidents were recorded between 1370 and 1909 and the outbreaks peaked around the time

that temperatures, and per-capita grain production, were at their lowest.

Individuals with lower nutritional intake have weaker resistance to disease. They are also more likely to move in search of more resources, thus helping disease spread.

Dr Lee said it was important to understand that the impact depended on population size as well as fluctuations in climate. After a long period of stable temperatures, the population size would grow, meaning more grain had to be produced. When temperatures dropped, the pressure on grain resources would start to be felt, but it would take many years of falling temperatures for the situation to get catastrophic, he said.

“We’re talking about whether a society can cope with a long-term phenomenon. If the temperatures are cooler for one or two years, people can cope. But based on the data from the past, when the phenomenon is long-term, people do not have sufficient capability to cope with it,” he said.

Iraq invasion inspiration

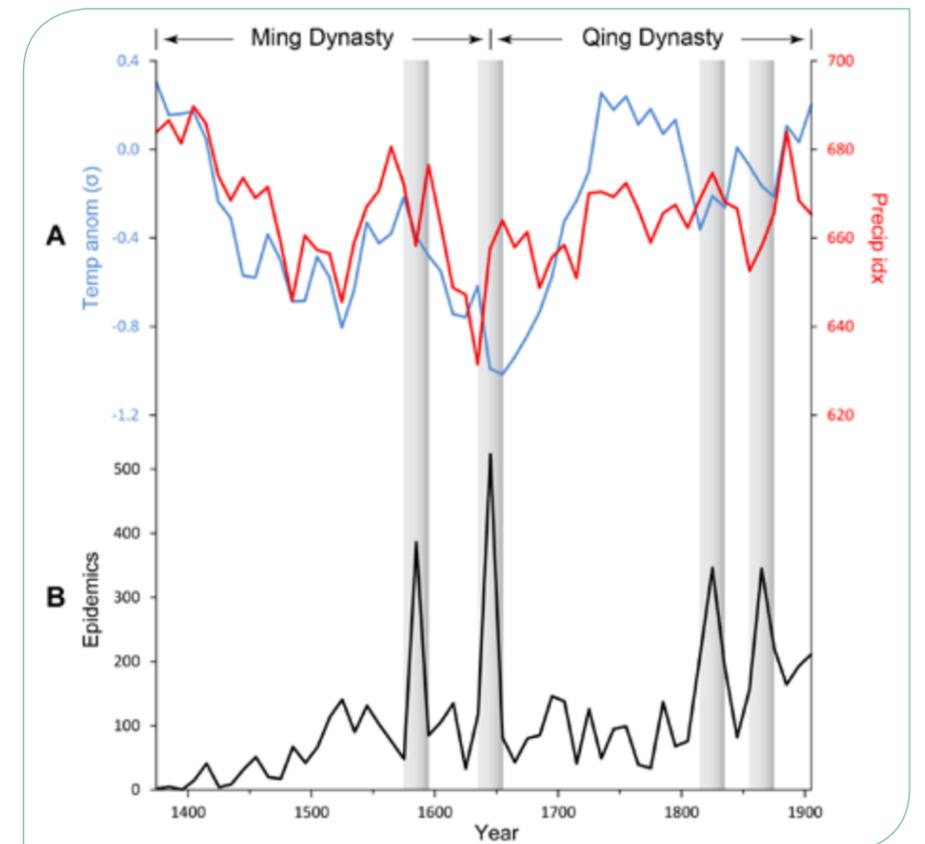
His inspiration for pursuing this line of research was a modern war over resources – the US invasion of Iraq in 2003, which can be seen as a conflict to gain control over oil fields. “Oil is a very important resource of the present day and

so we thought: What was the most important resource of the past? The definition of resources will change over time. Oil was not important in the past but food production was,” he said.

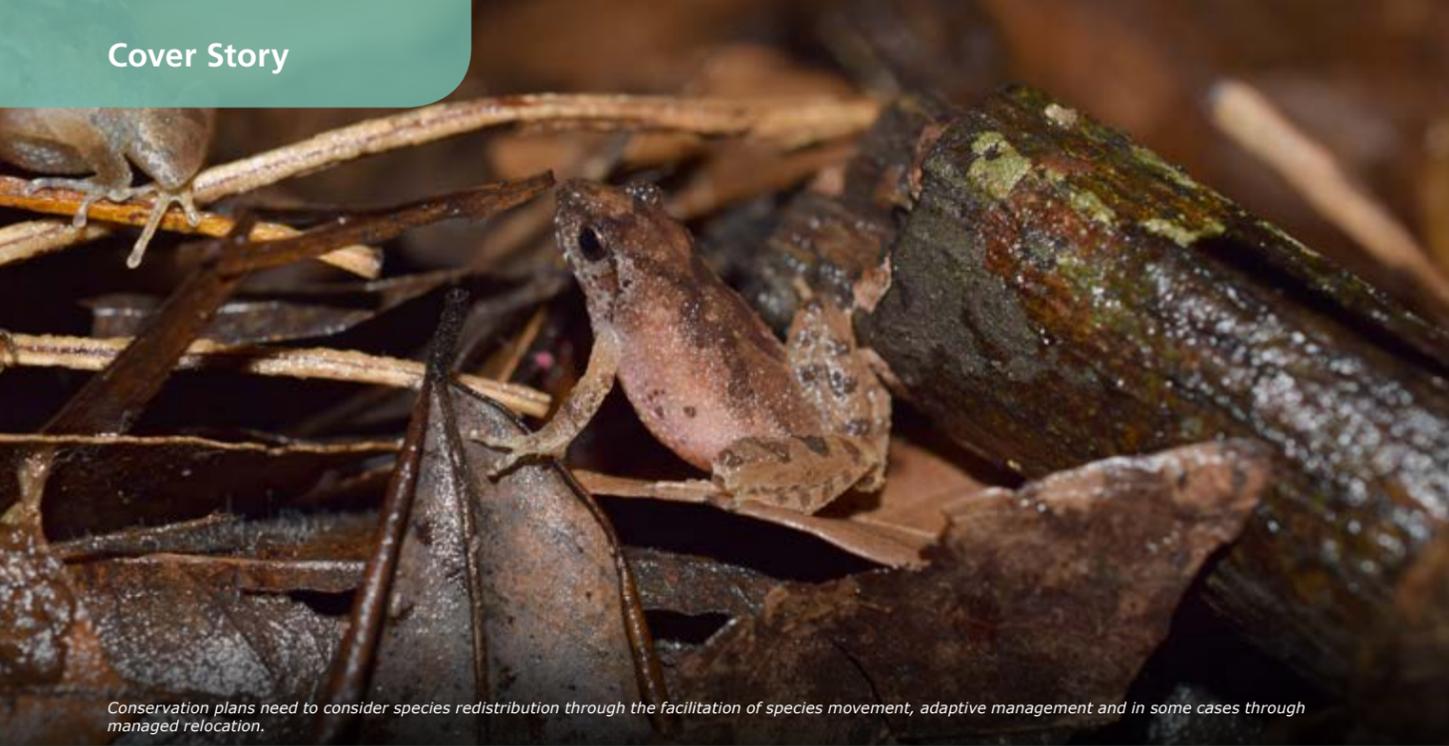
Yet food remains an unstable but valuable resource in poorer areas of the world. The patterns revealed in his data could repeat in these regions as climate change – this time warming – takes effect, he said. Indeed, other researchers have linked social stability in Sub-Saharan Africa to climate change.

Dr Lee next hopes to address the constraint of studying climate change on a range of temporal and spatial scales, to see if it is possible to understand, for example, the effect it has on a place as small as Hong Kong. It is a challenging task given the need for high quality data, but the outcome could be important in convincing people of the impact.

“When you look at places as large as Asia or Europe, you have no problem seeing the influence of climate change. But if you talk about Hong Kong or the New Territories, it can be difficult to detect the impact. I’m trying to see whether there is a threshold,” he said. ■



Climate change and epidemics in the whole of China, 1370–1909 CE. (A) Temperature anomaly (blue line) and precipitation index (red line), and (B) count of epidemics incidents. The aberrant peaks of epidemics (in 1580s CE, 1640s, 1820s, and 1860s) coincide with the fall in temperature. Additionally, the last three spikes of epidemics are also matched with the Manchurian Invasion, Hakka Migration, and Taiping Rebellion – the historical events associated with mass migration.



Conservation plans need to consider species redistribution through the facilitation of species movement, adaptive management and in some cases through managed relocation.

THE PLANET'S CREATURES NEED A BETTER RESPONSE

An HKU-led team of international climate change researchers calls for a new approach to managing the impact of climate change on species distribution.

Animals around the globe have been moving towards cooler climates above and beyond natural shifts, as well as towards the two poles, in a development that is ringing alarm bells among ecologists.

"This is not just a problem for animals," said Dr Timothy Bonebrake of the School of Biological Sciences. "One of the things we're finding is that tropical fish are moving into more

temperate areas and that has real consequences for people, particularly in this part of the world that relies on fish for food. Similarly when important vectors such as mosquitoes change their distribution, it can pose major public health challenges."

Dr Bonebrake recently led a large international team of climate change researchers from all five continents to propose that science needs a

different response to the problem, one that works more with local communities and is more action-oriented.

"Traditional research paradigms are ill-suited to respond adequately to the global and far-reaching effects of species redistribution," he said.

Rather than studying the impact of global warming on specific species, ecologists need to develop conservation actions that can be taken immediately to help species survive, and assess how the redistribution of a given species affects the ecosystem around it.

Indigenous populations can help

A key element in this approach is working with the humans who are living where the greatest changes are taking place. "Indigenous populations are particularly vulnerable to the impact of warming, yet they are some of our best allies in terms of science because they are on the ground. They know how the climate is changing and they can inform science," he said.



Dr Timothy Bonebrake (first from left) and his laboratory group.



“ We have the best chance of successfully adapting to the impact if we work together across disciplinary lines and interface directly with the communities most affected by climate change. ”

Dr Timothy Bonebrake

For instance, on the Tibetan plateau harvesters of the caterpillar fungus – a popular ingredient in traditional Chinese medicine – helped alert the scientific community about local changes in climate and the impact of warming. Citizen science, in which local communities collect data on species changes, is another example of a productive relationship between scientists and the public.

"We have the best chance of successfully adapting to the impact if we work together across disciplinary lines and interface directly with the communities most affected by climate change," he said.

"There is a lot of opportunity here to tackle global problems because the world is becoming more connected. As an American citizen, I was

disappointed when President Donald Trump chose to withdraw from the Paris climate agreement. But many cities across the US have decided they will commit to the agreement all the same. I think this is the right approach. Addressing climate change will require local engagement and I believe scientists have an important role to play in this effort," he said. ■



Caterpillar fungus accounts for a significant proportion of Tibet's rural economy. Climate change will likely change the distribution of either the caterpillar, the fungus and maybe both. (Courtesy of Li Liu)



Indigenous Skolt Sámi knowledge holder Vladimir Feodoroff cleans a grayling on river Näätämö, in Finland. (Courtesy of Chris McNeave)

Putting brakes on the wildlife trade

Climate change is not the only threat to wildlife. The trade in animal products continues to pose a threat to species.

Dr Bonebrake has been studying wildlife trade networks to understand the global connections. In one study he focussed on the pangolin, which was added to the CITES [Convention on International Trade in Endangered Species of Wild Fauna and Flora] list of endangered species last year. Pangolin scales are valued in Chinese medicine and have been largely hunted out in China. Now, the same is happening in Africa, in places like Cameroon and Nigeria, where they are being hunted for the Chinese market.

Research by Dr Bonebrake has identified the busiest entry points for pangolin products to

be Guangzhou, Kunming and Fangchenggang, a city on the Vietnamese border. "If we want to diminish the trade of pangolin scales in China, we should focus our efforts on environmental education and law enforcement in those three cities," he said.

There is also a role for using scientific know-how in detection and enforcement. He recently launched a Knowledge Exchange (KE) project with his colleagues on 'conservation forensics' to help reduce the wildlife trade – not just of pangolins, but also fish, seafood, ivory and other items. They have been developing and promoting technological tools such as stable isotope tools that can determine the origin of wildlife products, and educating stakeholders about the dangers of the trade to species survival.

The wildlife trade is also the subject of another KE project on informed sentencing for wildlife crime, led by Ms Amanda Whitfort in the Faculty

of Law. Globally, wildlife crime is the fourth most lucrative black market after drugs, people and arms smuggling, and Hong Kong is a regional wildlife trade hub.

Ms Whitfort is providing prosecutors with local and international data on the impact on target pieces for use in trials. She also addressed the Legislative Council in June to support tougher penalties for wildlife crime, and urged that it be recognised under the Organised and Serious Crimes Ordinance to enhance sentences in cases involving criminal gangs. Additionally, she urged the Government to completely ban the trade in ivory rather than allowing it under certain conditions as it does now, because this is encouraging poaching and smuggling.



Yellow-crested Cockatoo in Hong Kong.
(Courtesy of Peter and Michelle Wong)

CITY SLICKERS

In stories of animal extinction, the modern world and in particular urban developments wiping out natural habitats are often the villains of the piece. But in the case of the Yellow-crested Cockatoo, Hong Kong's urban sprawl may be playing a protective role.

The Yellow-crested Cockatoo is a common sight in our city sprawl, flying past office windows, perched on balconies – in particular on Hong Kong Island between Happy Valley and Pokfulam. Yet it is not a native bird nor is it usually a city slicker, and in its homeland this distinctive bird is critically endangered.

Dr Luke Gibson, of HKU's School of Biological Sciences, said: "These cockatoos are what is termed an 'introduced species', not native to Hong Kong but brought in by humans. Most are probably pets that have been released, either on purpose or because they have escaped into the wild, where they have been able to survive and breed."

Dr Gibson became interested in the species in May, 2015 when he read a news story about the interception of a shipment of 23 Yellow-crested Cockatoos from Indonesia. Each bird had been stuffed into a plastic water bottle, and the collection was being shipped out of Indonesia as part of the illegal pet trade.

"I was shocked to learn that a species so common here is critically endangered due to ongoing poaching in its native range in Indonesia. Although the introduced population in Hong Kong remains relatively stable, the native population in Indonesia continues to decline. It raised the obvious question: Can one situation help the other? Can a successful introduced population provide hope for its relatives threatened in their native habitat?"

Globally threatened

The situation is not unique to the Yellow-crested Cockatoo. Dr Gibson and Dr Ding Li Yong from BirdLife International Asia recently completed a study in which they identified 49 globally-threatened species – that is, those listed by the International Union for Conservation of Nature as Vulnerable, Endangered, or Critically Endangered – which have established populations outside their native distribution. The study, published recently in *Frontiers in Ecology and the Environment*, includes amphibians, reptiles, mammals, insects and plants, as well as birds including the Yellow-crested Cockatoo.

Dr Gibson's research now, being undertaken by PhD student Ms Astrid Andersson and joined by Dr Caroline Dingle, aims to compare introduced cockatoos in Hong Kong, which number approximately 200 or about 10 per cent of the total population globally, with native cockatoos in Indonesia. They will concentrate on investigating what, besides poaching, is causing such rapid population declines in the native



“I was shocked to learn that a species so common here [in Hong Kong] is critically endangered due to ongoing poaching in its native range in Indonesia.”

Dr Luke Gibson

range – by making comparisons between external factors in Hong Kong and Indonesia.

"Hong Kong has a population of seven million people, the Pearl River Delta has around 65 million, making these among the most densely populated areas in the world," said Dr Gibson. "That density has taken a huge toll on the natural environment. All of Hong Kong's forest is secondary – forests were cleared during WWII – and that has had a great impact on the biodiversity. While many species have disappeared, the Yellow-crested Cockatoo is a different story."

Most of the cockatoo population is situated at the border between urban areas and the forest, and the team has found a link between the number of large trees and trees with cavities suitable for nesting and cockatoo population size. Many such trees are found in the city parks, which accounts for at least some of the birds' urban habitat.

"We will be comparing behaviour, species interactions and threat levels for both the native and introduced populations," said Ms Andersson. "This may provide insight into the adaptability and risks for this critically endangered species, and help inform conservation efforts going forward."

On the other side of the coin, she is also currently observing whether the Yellow-crested Cockatoo threatens any native species in Hong Kong. Do they harm trees or compete with native birds for nesting places or food, for example? When she has completed her studies here, Ms Andersson plans to spend three months each year replicating this research in

Indonesia, to study interactions with predators and competitors in their native habitats.

When these studies are complete, the team may be able to consider further questions such as whether the reintroduction of the species to Indonesia and East Timor could help buffer the populations in its native range.

"Before this could happen there is a legal minefield to navigate, both in Hong Kong and in Indonesia," said Dr Gibson. "We would need

the support of many different people and bodies before the reintroduction could happen. And before that, we would need to be absolutely sure the cockatoos would be better protected in their native country than they had been previously."

It seems the fate of this critically endangered species might lie in the introduced population, with their raucous calls constantly reminding us of their presence here in Hong Kong. ■



Hong Kong is home to critically endangered Yellow-crested Cockatoo.



Dr Luke Gibson's research assistant Banson Leung, climbing a tree to install a camera near an active cockatoo nest next to HKU's Main Building to record their nesting behaviour.



HKU students onboard the Plastic Free Seas boat.

FLOATING IN A BED OF PLASTIC WASTE

Microplastics in the ocean are a growing concern worldwide. Dr Christelle Not and her students are trying to quantify the problem in Hong Kong and raise awareness.

The world's largest global environmental network, the International Union for Conservation of Nature (IUCN), published a report this year that estimated 15 to 31 per cent of the 9.5 million tonnes of plastic released annually into the oceans are primary microplastics – which is bad news not only for the seas but for sea animals and the humans who consume them.

"Microplastics are a problem because they can enter the food chain," said Dr Christelle Not of the Department of Earth Sciences and Swire Institute of Marine Science, who has created an experiential learning programme around the topic. "They are small enough to be ingested by plankton, which are consumed by fish and seafood, and so they can come back to us.

"This is a topic that can connect students with the ocean. Plastic waste is something that everybody should feel concerned about."

The most problematic aspect of microplastics is their size – they are smaller than 5 millimetres so

they are hard to capture. The IUCN study focussed on primary microplastics, which are manufactured to that size for use in such things as cosmetics, marine coatings and synthetic clothes or as pellets for cushions and the like. But secondary microplastics may be an even

bigger problem. These are created as larger plastic products degrade in the sea.

Dr Not was first alerted to microplastics in Hong Kong through the non-governmental organisation Plastic Free Seas, which until April



Sample collection onboard the Plastic Free Seas boat.



“ Microplastics are a problem because they can enter the food chain. They are small enough to be ingested by plankton, which are consumed by fish and seafood, and so they can come back to us. ”

Dr Christelle Not

this year ran boat trips for primary and secondary school students to educate them about plastic waste in the sea. They collected samples and Dr Not convinced them to hand these over to her and her students so they could analyse the microplastic content.

Painstaking work

Her laboratory now has more than 150 samples, each 100 litres of water, and has found concentrations ranging from no microplastics to thousands of pieces per sample. Remarkably, each piece is painstakingly being counted by students and sorted under the microscope by type: pellet, fibre (such as that used in nets or clothing), film (for plastic bags and wrap), beads, or other fragments. Polystyrene – from lunch boxes and fish containers – is a major source.

"You have to know which piece is which. It can be very difficult to tell if fibre is plastic or other material but we have ways to measure that. Different people can have a different appreciation of the plastics so I have a research assistant to double check the samples," she said.

The results are still being collated but undergraduate students have been inspired to

pursue their own research projects related to microplastics. One has been examining the guts of locally-caught fish and has found that about half of the samples contain at least one piece of microplastic. Another is looking at microplastic content near a beach, and a third student is studying the fluctuations of microplastics in the sea under different conditions.

Early findings from this research suggest that despite popular assumptions that Hong Kong waters are being polluted by waste from the Pearl River Delta, "microplastics are washing from the land in Hong Kong, it's not all coming from the Pearl River," Dr Not said.

Single-use plastic problem

This connects to a major goal for Dr Not, which is to raise awareness about the impact of plastic use in Hong Kong. "Plastic in itself, when it is used and reused, is not so bad, but single-use plastic is a problem. Even if there is a recycling facility for our plastic bottles, most of them do not get recycled. They end up in landfills and can get washed into the sea."

Her classes therefore also include a component to raise awareness. In her Environmental

Oceanography class for Science majors, students prepare a video for primary school students and lead discussions with them about microplastics. She also co-teaches a Common Core course called 'The Oceans: Science and Society' in which students keep a journal of their plastics usage for one week then give up one type of plastic for three weeks.

The message behind these lessons has come through loud and clear for Food and Nutritional Science major Lilia Tang Tsz-wing, who used to think plastic waste in the ocean accumulated as a big, tangible patch of trash. "I learned that these pieces are very tiny in size, which makes them very hard to remove and causes a big problem to marine organisms that end up eating them," she said.

Dr Not is also exploring a virtual reality project with the Faculty of Engineering to depict microplastics in the ocean alongside plankton and other sealife, and help people visualise the problem. ■

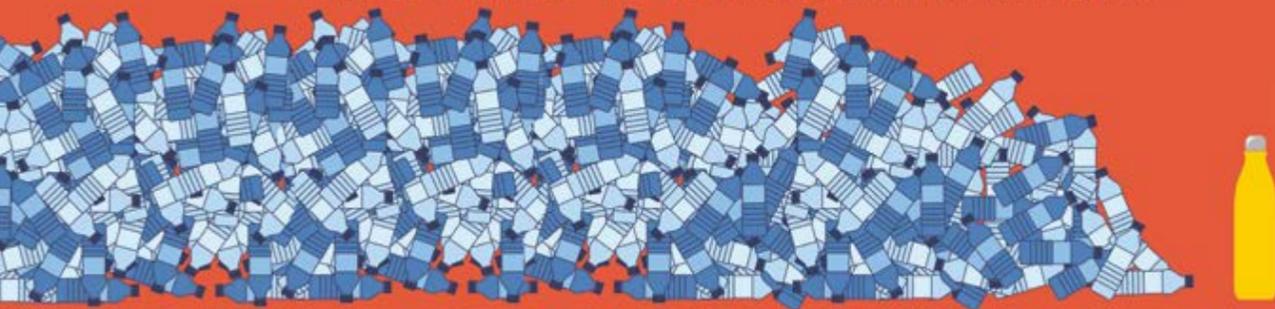


A student from the French International School observing microplastics under the microscope.



Plastic pieces smaller than 1mm found in a sample collected from Tung O, at the eastern shores of Lamma Island, in February, 2016.

5.28 MILLION PET BOTTLES
ARE THROWN AWAY PER DAY IN HONG KONG AND THEY TAKE UP TO
1000 YEARS TO DEGRADE IN A LANDFILL



DITCH DISPOSABLE
— CHOOSE REUSABLE —
Be Part of It

HKU has introduced Ditch Disposable, a University wide waste reduction and awareness campaign that aims to eliminate disposable plastic water bottles from the University campus.

SUSTAINABLE PLAN OF ACTION

HKU has renewed its long-standing commitment to sustainability by introducing a series of initiatives that will bring about meaningful change on campus and will involve faculty, staff and students.

The University's sustainability aims are set down in the planning document, *Asia's Global University, The Next Decade, Our Vision for 2016–2025*, which states: "The principles of sustainability will guide our planning and development at every level."

Plastics are front and centre in the environmental battle right now – with headlines almost daily of sea birds, fish and mammals killed by consuming plastic waste in the ocean. HKU has taken up arms against plastic and other disposable waste with a project called Ditch Disposable, which encourages stakeholders across the University to commit to reducing their waste through a combination of policies and behavioural change.

The first phase of Ditch Disposable focusses on single-use plastic bottles and includes a new policy on disposable plastic bottles, the first such policy in the city's higher education sector. With effect from July 1, 2017, the sale of water in disposable plastic bottles of one litre or less in volume has not been permitted in catering

outlets, retail locations, or vending machines owned by or located on university premises. Nor can they be distributed at any activities or events. "The University community has been really supportive, and we look forward to expanding the effort to include a wider range of single-use disposable goods," said Ms Ann Kildahl, HKU's Sustainability Manager. "We are also working with our colleagues in the Estates

Office to increase the availability of free, filtered water on campus."

A student-focussed, carbon reduction project called Smart Meter, Smart Energy was launched in 2015 through a pilot scheme on four floors of New College. Said Assistant Sustainability Manager Joy Lam: "Through the use of smart meters and a real-time data dashboard, teams



The kick-off ceremony of the Ditch Disposable campaign was held on campus on March 22, World Water Day.

“The principles of sustainability will guide our planning and development at every level.”

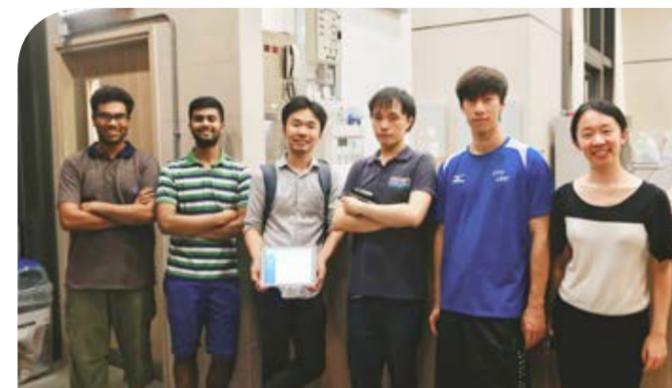
**HKU's 2016–2025
Strategic Plan**

of student leaders have been trained to innovate, develop and implement data-driven solutions on-site that reduced energy consumption by over 25 per cent." The initiative is the first of its kind in Hong Kong and was highlighted as an outstanding demonstration project by Hong Kong Government officials at the 2015 United Nations Climate Change Conference in Paris.

"Expansion of the scheme across four residential colleges in the coming year will enable 1,800 students from more than 50 countries to participate, with experiential learning programmes open to all HKU students," said Ms Lam. In addition to the project's environmental benefits, "this is an exciting opportunity for the University to demonstrate leadership in the community, pioneering smart building operations and outreach efforts as a 'living laboratory' for sustainability and low-carbon living," she said.

Sustainable funding

A new financing mechanism – the Green Revolving Fund (GRF) – has also been adopted, the first of its kind among universities in Asia. In cooperation with the University's Estates and Finance and Enterprises Offices, the GRF treats energy-efficiency upgrades as investments rather than costs and enables HKU to reduce its environmental impact in a financially sustainable manner.



This summer, student teams are optimising lighting in a residential college room.



The Lung Fu Shan Environmental Education Centre is located next to the HKU campus. The Sustainability Office organised an eco-tour for HKU staff and students earlier this year into the Lung Fu Shan Country Park.

"In short," explained Ms Kildahl, "the installation of more energy-efficient equipment drives reductions in utility and maintenance bills, allowing the money saved to be returned to the fund and invested in additional equipment upgrades." Initial funding of approximately HK\$1 million was allocated in a pilot phase to finance two lighting projects in the Kadoorie Biological Sciences Building and the Li Ka Shing Faculty of Medicine.

The potential benefits go beyond energy savings. Among tertiary institutions worldwide, GRFs have a track record of generating positive financial returns and can significantly outperform conventional endowment investment returns. In addition, the GRF can be used to support a wide range of projects on campus, encouraging participation and promoting awareness of environmental issues across the University.

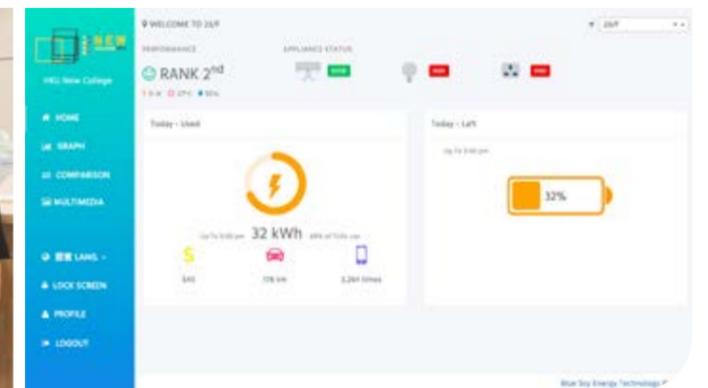
"As a leading higher education institution in the region, HKU has many opportunities to develop solutions to pressing problems and make a positive contribution to our community," Ms Kildahl said. Other projects that demonstrate this leadership include the Green Connections film and speaker series, which aim to get members from all parts of the University community involved with sustainability issues. The programme looks at all aspects of sustainability; topics this year have spanned from fast fashion, to conservation, to soil

science. HKU also works with the Environmental Protection Department to manage the Lung Fu Shan Environmental Education Centre, which is open to the public to explore sustainable living and the environment of the area through guided tours, workshops and other activities.

Engagement in sustainability work also extends to outside collaborations. "HKU is participating in a number of networks locally and globally where universities are working together to improve their capacity to address sustainability challenges," said Ms Kildahl. "Across the University, locally and overseas, people are working to realise our institutional vision to integrate principles of sustainability into all aspects of our facilities, operations and activities." ■



36 sets of new recycling bins, designed by Hong Kong artist Tommy Li, have been installed across the Main and Centennial Campus to make recycling even easier. Lightbulbs and batteries can also be recycled in specific bins around campus.



The installation of smart meters in student rooms and a real-time data dashboard can benchmark the consumption levels and prompt the residents to take action.



CHINA ASSERTS ITS HE-POWER

The ideal man in China has been changing in ways that reflect the country's modernisation and its growing political stature in the world.

When Dr Song Geng of the School of Chinese was growing up in Mainland China, it was a common assertion that the humiliations the country suffered from the time of the Opium Wars up to the founding of the People's Republic of China in 1949 were in part a reflection of the weakness of the Chinese character, in particular its men.

"We were told through the media and cyberspace that Westerners called us the 'sick man of East Asia', that Chinese men were not masculine enough, were not qualified enough, and that's why the country was humiliated," he said.

But now, as China has risen to superpower status and is interacting ever more frequently with the rest of the world, that view is being turned on its head.

Traditional Chinese culture has been revived on the Mainland along with a strong masculine ideal that triumphs not only at home but in encounters with foreigners.

Dr Song has been studying that evolution by analysing depictions in popular television, where an increasing number of shows feature characters who interact with foreigners or display evidence that they have spent time

abroad, such as speaking English or drinking wine.

This ease with things foreign – alongside the demonstrations of wealth that are expected of the modern Chinese man – has come alongside the strengthening trade, educational and other links that China has developed with the rest of the world.

Crucially, however, the Chinese characters and their ideals win out in the end.

For instance, some romance programmes feature European characters with whom the

female lead initially falls in love, only to discover in the end that her heart belongs to the Chinese protagonist, who is more knowledgeable or morally superior.

There is also a popular detective show *Love Me, If You Dare* that features a US-trained expert who returns home to China and is consulted by police officers from around the world to help them solve crimes.

"His image shows the confidence or ambition of China as a nation – he's not sacrificed as a marginal figure, he's at the top and he's superior to white men. The Hong Kong police, the American police, they all have to consult him," he said.

The combination of pride in the capabilities of the Chinese protagonists on the one hand and absorption of foreign influences on the other illustrates the unusual character of Chinese nationalism.

"Cosmopolitanism is not associated with nationalism. If you are cosmopolitan, you first identify yourself as a citizen of the world. But in Chinese popular culture, cosmopolitan works hand in hand with nationalism because it's a symbol of the success of reform and the development of China," Dr Song said.

Another curiosity in all of this is that the focus on masculinity is itself an outcome of China's engagement with the world. In pre-modern

China, people were identified firstly by their relationship to others and not by gender. Dr Song likens it to a yin and yang identity rather than masculine and feminine.

"Yin and yang are more fluid. So if I talk to my father, my father is yang to my yin, but when I return home to my wife and children, I am the yang and they are the yin. The emperor is always yang and the people yin. It all depends on your position in this pyramid.

"But all this has changed. Now, when China faces the globalising world, our self-identity is closely related to the imagination of masculinity," he said. ■



“ Now, when China faces the globalising world, our self-identity is closely related to the imagination of masculinity. ”

Dr Song Geng

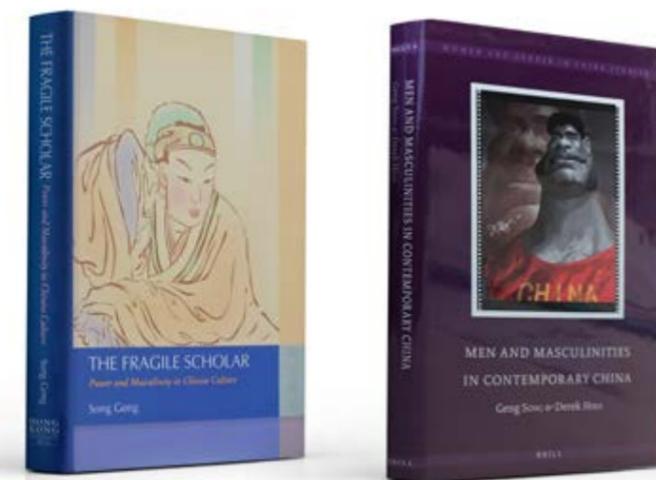


Dr Song presenting research findings at an international conference.

A curious response

Dr Song has also conducted focus interviews to understand how the masculine images on television are being received. A most odd result was obtained for a television programme about the Sino-Japanese war called *Red*, when he asked middle-aged women and women in their 20s for their responses to the male lead.

"The middle-aged women said they liked him because he was patriotic and sacrificed a lot for the country, and they said they were happy when the Japanese were killed because they hate the Japanese. But the younger group said they liked this character because of his handsome looks – he resembled a Japanese pop star! They said this was their ideal kind of boyfriend," he said. "They also said they liked the story, but they totally ignored the political message."



Dr Song's publications on Chinese men and masculinities.



Life reconstruction of the asymmetrically feathered troodontid Jianianhualong tengi. (Courtesy of Julius T Csotonyi, Xu, Currie, Pittman et al)

JURASSIC SPARK

New work using high-powered lasers to examine fossils has yielded a more accurate picture than ever of their true appearance. While fossils and skeletal remains imply what dinosaurs must have looked like, this new laser technique reveals images of soft tissue preserved as chemical signatures.

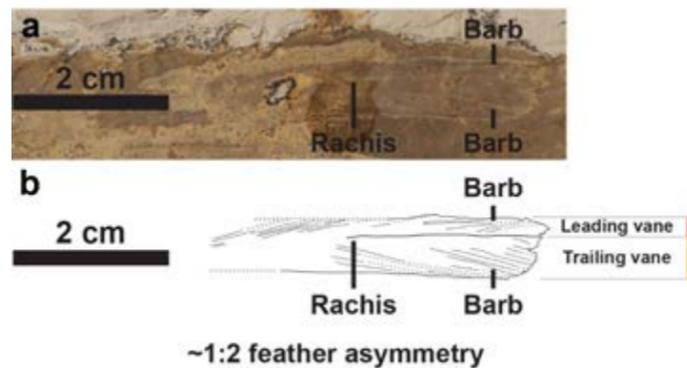
Dr Michael Pittman from the Department of Earth Sciences and his international team are the first to use Laser-Stimulated Fluorescence (LSF) imaging to reconstruct dinosaur appearance, and their study is a landmark in our understanding of the biology and origins of birds and of how flight evolved.

“We used high-powered lasers to reveal unseen soft tissues preserved alongside the bones of a feathered dinosaur called *Anchiornis*,” said Dr Pittman. The technique involves sweeping laser light across a specimen in a dark room while taking long-exposure photos with a camera. The resulting images reveal soft tissue details that are otherwise invisible under normal light.

“LSF involves shining violet-coloured laser light on the specimen. Energy goes in and interacts with the fossil, and then some leaves the fossil as fluorescence, giving us multi-coloured pictures. It is the impurities in the minerals making up the fossils that the laser light interacts with, and this process can give off light which we see as fluorescence,” he said, before adding: “This technique is not a magic wand – you don’t always get fluorescence. And, it requires specimens with exceptional preservation. Of the around 230 *Anchiornis* specimens we studied, we only reported 12 with pristine soft tissue preservation. But those 12 were stunning.”

The implications are major for questions about flight origins, particularly powered flight. “*Microaptor* is a bird-like dinosaur that was capable of gliding as well as flapping its arms to aid its movement, which probably included ability for powered flight. This is a major reason why scientists are now wondering if powered flight evolved more than once. *Anchiornis* lived 35 million years earlier than *Microaptor* and is seen as either a bird-like dinosaur or an early bird. We found that *Anchiornis* has a mixture of both primitive and advanced wing characteristics, providing important details about the diversity of wing anatomies present at the time when flight was first developing,” said Dr Pittman.

“Before, with feathered dinosaurs like *Microaptor*, we had to rely heavily on modern birds to estimate their wing shape. Our laser imaging shows the actual wing outline which supplies important calibration data for body shape estimates in feathered non-avian dinosaurs and early birds. This enables future work to improve on what we know about how they moved and transitioned to flight. The caveat is that we have only studied one animal so far. Extending this work to more recent fossil birds with more developed wing anatomy is particularly important as it will deepen our understanding of how early flyers refined their abilities towards those we see today.”



An asymmetrical tail feather from the troodontid Jianianhualong tengi. (a) Photograph, and (b) line drawing of the fossil feather. (Courtesy of Xu, Currie, Pittman et al)



“ Before, with feathered dinosaurs like *Microaptor*, we had to rely heavily on modern birds to estimate their wing shape. Our laser imaging shows the actual wing outline which supplies important calibration data for body shape estimates in feathered non-avian dinosaurs and early birds. ”

Dr Michael Pittman

Traditionally, dinosaur shape has been determined by taking a dinosaur skull or skeleton, comparing it with living animals and then making an educated guess. “Some fossils preserve tissue and feathers, including close relatives of *T rex*,” said Dr Pittman, “and so we can correlate from modern animals where bones went and reconstruct muscle patterns, and from this we can work out how dinosaurs moved. For bird-like dinosaurs we can make comparisons with living birds as well as crocodylians – birds being the only living dinosaurs and crocodylians are their closest living dinosaur relatives. But for some such as *Stegosaurus*, they are not bird-like, so comparisons with birds aren’t very helpful.”

The laser equipment used by the team is surprisingly small – about the size of a dim sum steamer – and therefore highly portable. It was developed by Thomas G Kaye, Director of the Foundation for Scientific Advancement in Arizona, USA, who has been collaborating with Dr Pittman since 2014. On a recent visit to several European universities and museums, a researcher in Spain told Dr Pittman and Mr Kaye she was stunned by the detail revealed by the laser on a specimen she had studied for almost a decade.

New dinosaur

Dr Pittman’s investigations have also led to the discovery of a new species of dinosaur with interesting feathering that may hold answers to some of the questions regarding the early function of feathers and its role in flight development.

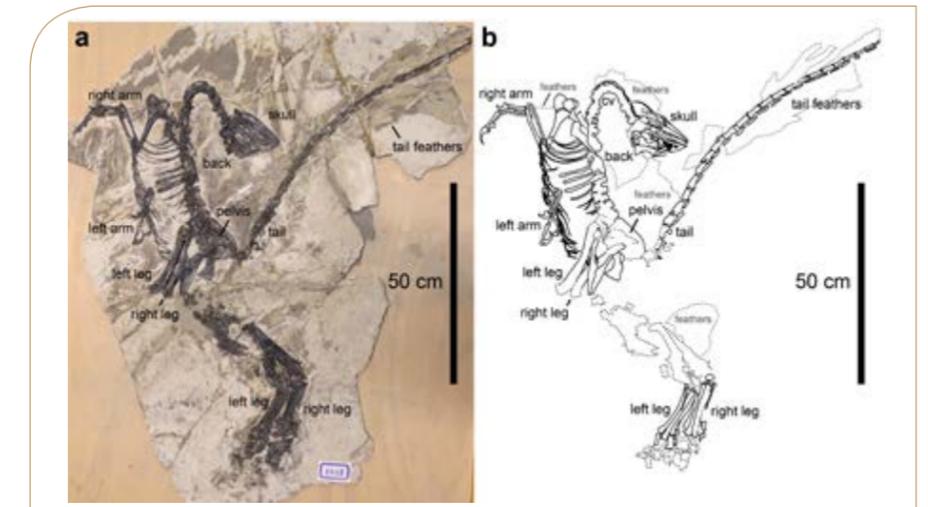
The new species, *Jianianhualong tengi*, is part of a family of bird-like dinosaurs called troodontids, which together with dromaeosaurids (*Velociraptor* and its kin) are the closest relatives to birds (these animals are collectively called paravians). Discovered in Liaoning province in northeastern China, the new dinosaur would have lived around 125 million years ago.

What is important about the discovery is that *Jianianhualong tengi* possessed asymmetrical

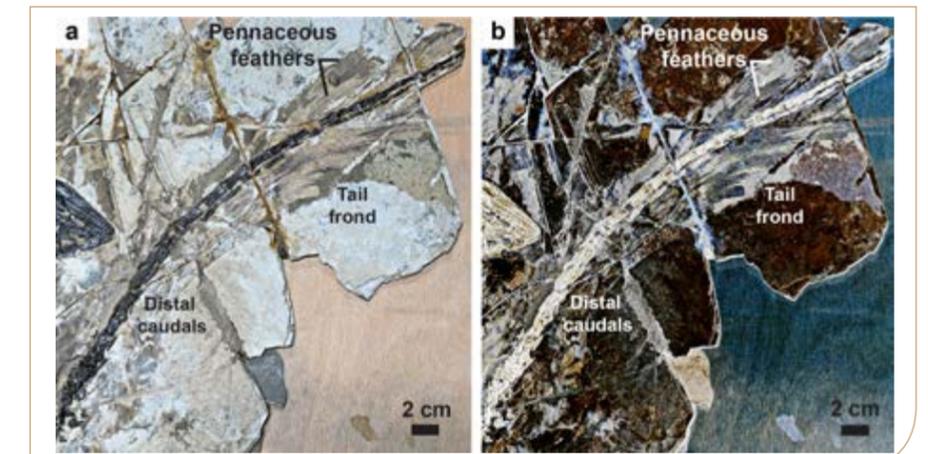
feathers, the first time these have been recorded in troodontid dinosaurs.

“This is the first unequivocal troodontid with feathers,” said Dr Pittman. “What’s more, it has asymmetrical feathers. While we can’t use this as a diagnostic tool for flight ability because some recently flightless birds still have asymmetrical feathers, this new evidence

indicates that asymmetrical feathers were present in the first paravians (birds, troodontids and dromaeosaurids) at least 160 million years ago, raising important questions about what was going on at that time. Therefore, despite the uncertainty surrounding the early function of asymmetrical feathers, we contribute a big piece to the puzzle.” ■



The asymmetrically feathered troodontid Jianianhualong tengi. (a) Photograph, and (b) line drawing of the fossil specimen. (Courtesy of Xu, Currie, Pittman et al)



The tail frond of the troodontid Jianianhualong tengi. (a) Photograph, and (b) laser-stimulated fluorescence image of the fossil frond. (Courtesy of Xu, Currie, Pittman et al)



Developed based on the theory of homology of medicine and food, all ingredients of the soup pack are processed medicinal food, including black soya bean, coarse cereals and phycomycetes. It is suitable for everyone as it is neutral.

SOUPED UP

Dietetic soup aims to relieve side effects of chemotherapy and to open new eyes to the benefits of traditional Chinese medicine.

A research team in the School of Chinese Medicine (SCM) has developed a medicinal dietetic soup which helps ameliorate the side effects of chemotherapy including reduced white blood cells, alopecia, fatigue and discolouration of the skin and nails.

“We are still doing clinical trials,” said team leader Dr Chen Jianping, Associate Professor of the SCM, “but mid-term results of the research show that the soup pack may ameliorate chemotherapy side effects, thereby not only improving the patients’ quality of life but also potentially reducing the chances of not completing the chemotherapy treatment.”

At the same time, the soup does not change the efficacy of the chemotherapy. Indeed, animal tests suggest it may enhance the effects of the chemotherapy drugs, and even help reduce the tumour. The team has tested it on

two types of chemotherapy – Taxanes, such as Paclitaxel and Docetaxel, and Anthrocyclines, such as Doxorubicine.

The dietetic soup has taken more than three years to develop and combines a mixture of Dr Chen’s knowledge and clinical experience in traditional Chinese medicine (TCM). The idea came about as a result of discussions she was having at her TCM clinic with patients suffering from breast cancer. “Advances in cancer diagnosis and treatment mean that the survival rate of cancer patients has been increasing, yet the side effects of chemotherapy can still be acute and affect the quality of life of patients. They told me about the pain and distress they were in because of the side effects of chemotherapy, so I started looking for a way to help,” said Dr Chen.

At first she was planning a TCM-based remedy, but realised that doctors of Western medicine

tend to disapprove. Instead the research team developed the soup pack based on the theory of ‘homology of medicine and food’ combining prescriptions from ancient texts with laboratory experiments and clinical trials.

Said Jessie You, Dr Chen’s PhD student who is doing the clinical trials: “The ingredients are not ordinary foods, they are what we term ‘function foods’. It is a mixture of processed medicinal food, including black soya bean, coarse cereals and phycomycetes. Black soya bean is known in TCM for its efficacy in cleaning out toxins – it contains anthocyanin, flavonoids and procyanide [PCS] which may help detoxification – and for its antioxidant properties.”

Black soya bean is also renowned for protecting normal cells. “Further, it helps with hair growth, and the hair grows back more black in colour,” added Dr Chen. “This may seem insignificant



“Some doctors of Western medicine are reluctant to try Traditional Chinese Medicine – I hope that when they see the advantages it brings to patients’ health and well-being, this soup will help change their minds.”

Dr Chen Jianping

but it is not, as this kind of thing makes the patients feel better about themselves and therefore more likely to be positive and stick to chemotherapy.”

The clinical trials began in 2015, with the team recruiting patients of any kind of cancer who were either receiving chemotherapy or had completed chemotherapy for no more than two weeks. More than 200 cancer patients were recruited, assigned to the soup pack group or control group, and required to take the soup for at least six weeks.

Dr Chen said: “Mid-term results of the 100 participants who completed the clinical trial indicate that the soup could prevent and ameliorate the side effects of chemotherapy; that it significantly increases the rate of hair

growth, improves nail and skin discoloration, reduces fatigue as well as white blood cells induced by chemotherapy. Basic experiments also showed that the soup did not affect the efficacy of chemotherapy drugs, but that it could strengthen the inhibitory effect of doxorubicin on cancer cells and demonstrated a protective effect on normal liver and kidney cells.”

Tea variety

In addition to soup packs, the team has also produced it in teabag form. It has a pleasant taste, and is easy to drink every day. “Appetite loss can be a problem for patients,” said Ms You, “but even if they have difficulty eating simple foods such as rice and vegetables, they can at least drink our tea or soup.”

They have now applied for a patent and want to move to the next stage of developing more products and making them available to public. It is not expensive to produce so it will be within many people’s price range.

“Crucially, both TCM and modern Western medicine agree on the qualities of black soya bean,” concluded Dr Chen, who is hoping that an important outcome of this research will be to open up more medical practitioners to the possibilities of TCM. “Some doctors of Western medicine are reluctant to try TCM – I hope that when they see the advantages it brings to patients’ health and well-being, this soup will help change their minds.” ■



Dr Chen Jianping (front), Associate Professor of the School of Chinese Medicine, Li Ka Shing Faculty of Medicine, with her researchers and patients.



Dr Chen Jianping (third from left in the back row) and her research team in the School of Chinese Medicine.



BIOFUEL BREAKTHROUGH

A collaboration between HKU and Kyoto University in Japan has resulted in a new strategy to improve the efficiency of cereal straw for biofuel production.

Increasing demand for biofuel has seen cellulose from non-edible plant materials such as sugar cane leaves, corn stalks and rice straw, being used as raw materials for bioethanol production. The process was always hampered by the fact that cellulose is cross-linked with lignin in plant cell walls making it difficult to

release the glucose from the cellulose. Now, research by teams from HKU and Kyoto University has found a new strategy to enable cellulose in straw to release fermentable sugar more efficiently.

HKU plant biochemist and principal investigator Dr Clive Lo Sze-chung said: “The collaboration began back in 2015 because we had published some papers in the international science journal, *Plant Physiology*, on a related area – the biosynthesis of triclin in rice. Dr Yuki Tobimatsu, who is a lignin specialist at Kyoto University, read the papers and was interested because triclin was recently recognised as a component of lignin in grass.

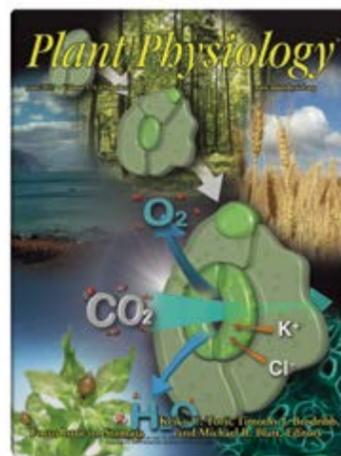
Mutant grass

“Yuki, who works mainly with rice and grasses, asked us if we could send him some materials, namely the mutant grass samples we have that can’t make triclin. We had a few discussions and exchanged ideas. Then I suggested that instead of sending him mutant grasses, perhaps my PhD student, Lydia Lam Pui-ying should go over to Kyoto to do the analysis. She spent eight months in Japan doing the research, and the results were very encouraging.”

What they discovered was that when flavone synthase II (FNSII) – a key enzyme involved in triclin synthesis – was knocked out, not only was triclin not produced, but the lignin content in

rice straw was also reduced by approximately one-third. Further, the amount of glucose released from cellulose degradation was increased by 37 per cent without any chemical treatment.

“In short, this strategy allows more efficient production of bioethanol from cereal straw,” said Dr Lo. “Glucose released from cellulose can be used for bioethanol production and it is more efficient to produce ethanol from this kind of rice straw, which means the cost of



The findings were published in the June 2017 issue of the international science journal *Plant Physiology*.

lignin treatment can be reduced and the production of ethanol can be enhanced.

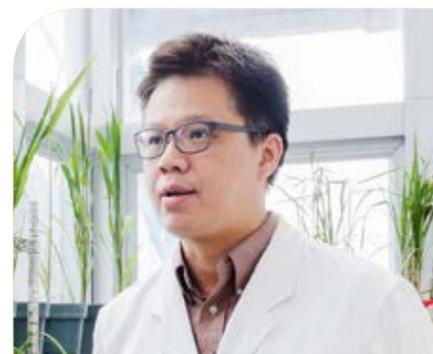
Loosen the barrier

“Cellulose is the raw material for bioethanol, but until now lignin has been the barrier. Our work provides plants with modified lignin, so cellulose is more easily degraded. By manipulating triclin we can loosen the barrier but, at the same time, this process does not affect plant growth. The implications are that

this strategy can be applied to different grass species, making them too more efficient raw materials for biofuel production.”

The work so far has been proof of concept – all done under laboratory conditions. Now the team is moving on to the next stage and seeking collaborations within the biofuel industry – possibly in the US – to start heading towards market production. HKU’s Technology Transfer Office has already initiated the patent application process.

“I hope this will attract more funding for our laboratory so we can do more work in this area,” said Dr Lo. “We would like to expand our research – this could work for other grass species in the Poaceae grass family such as corn, sorghum and switchgrass (a dedicated bioenergy crop) and for other cereals like maize, barley and wheat. These plants all produce triclin-bound lignin using the same set of enzymes, so we should be able to do the same for these other grasses.” ■



“ The implications are that this strategy can be applied to different grass species, making them too more efficient raw materials for biofuel production. ”

Dr Clive Lo Sze-chung



Dr Lydia Lam (left) and Dr Clive Lo (right) worked together with Kyoto University to reveal a new strategy to allow cellulose in rice straw to release its fermentable sugar more efficiently.



Cellulose in rice straw can be used for bioethanol production. However, the presence of lignin impedes the release of fermentable sugar from cellulose.



A CHANCE TO OVERTHROW THE CROWN

Replacing damaged tooth enamel with a crown could become a thing of the past if research to regenerate enamel-like mineralised tissue on the actual tooth is given a chance.

A team from the Faculty of Dentistry spent three years experimenting with different materials to regrow enamel crystal in test tubes. They received a grant from the National Natural Science Foundation of China (NSFC) and Research Grants Council (RGC) for their

work – the first such award given to Dentistry research at HKU.

“Enamel is mineralised tissue,” said Professor Chu Chun-hung. “It is not vital, it is dead – and when it is damaged or eroded away that is it,

it’s gone for good. Existing treatment for this loss is to use artificial dental materials on the surface through bonding or covering the tooth with a crown. Our team thought that given the current trend for regenerative medicine, working to recreate tissue is better than adding something new.”

Their findings have big implications for the management of non-cariou tooth loss resulting from dental erosion, attrition and abrasion.

“In non-cariou tooth loss, erosion to enamel can be caused by drinking acidic beverages, toothbrush abrasion and so on,” said Professor Chu. “When too much enamel is lost it causes abnormal, hypersensitive teeth which are painful. Right now, people can use special toothpaste to stop the pain. But if you stop the pain, you are stopping the alarm system – it’s the pain that lets you know something is wrong.”



From left: Dr Mei Lei, Professor Li Quanli, Professor Edward Lo, Professor Chu Chun-hung and Dr Cao Ying.



“ Our team thought that given the current trend for regenerative medicine, working to recreate tissue is better than adding something new. ”

Professor Chu Chun-hung

In addition to Professor Chu, the research team comprised Professor Edward Lo, Tam Wah-Ching Professor in Dental Science, Dr Mei Lei and Dr Cao Ying from HKU and Professor Li Quanli from Anhui University.

“So far, we have only regenerated the enamel within test tubes,” said Professor Chu. “Technique-wise we can do it, but clearly, a laboratory is far from the conditions of a mouth – for example, there is no bacteria. However, now we know we have the method we want to move on from test tube to animals then to humans.”

The team designed a hydrogel biomimetic mineralisation model for the regeneration of enamel-like mineralised tissue with a prismatic structure. *In vitro*, they were able to promote biomimetic mineralisation and thereby facilitate the formation of enamel prismatic

tissue on human enamel which they had demineralised earlier.

Self-assembled

The resulting oligopeptide amphiphile (OPA) was shown to have self-assembled into nanofibres in the presence of calcium ions and neutral acidity. The OPA was subjected to numerous tests, including transmission electron microscopy, scanning electron microscopy and energy dispersive spectrometry to evaluate the growth and assess its make-up.

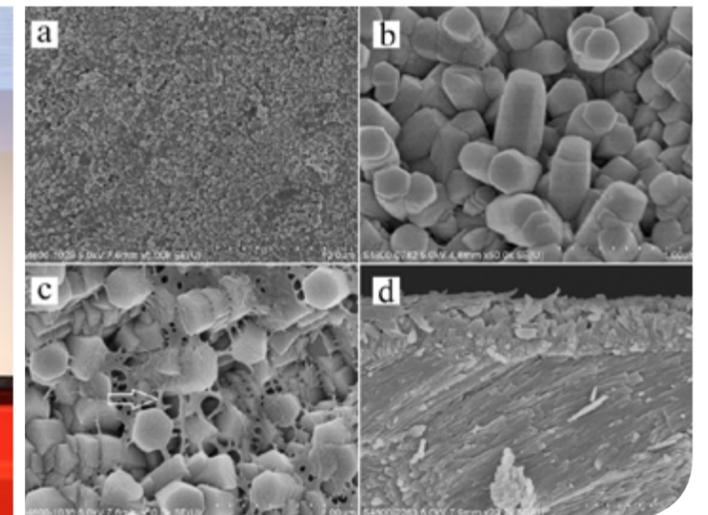
“We were able to conclude that we had fabricated a novel OPA, which fostered the biomimetic mineralisation of demineralised enamel,” said Professor Chu. “This is a primary step towards designing and constructing novel biomaterial for use in treating dental erosion.”

A scientific article has been published on the research – ‘Agarose Hydrogel Biomimetic Mineralisation Model for the Regeneration of Enamel Prismatic Tissue’ – and it was awarded an HKU Research Output Prize.

The next step is to move on from the research stage to clinical trials – first with animals and further down the line with humans. “For that to happen, the team needs to get more funding,” said Professor Chu. “We have shown we can grow enamel *in vitro*, and we are now seeking funding to enable us further these important studies. If we can find an innovative and practical method to regenerate tooth enamel inside the patient’s mouth, future generations will benefit.” ■



The team received the Research Output Prize from Professor Andy Hor (first from right), Vice-President and Pro-Vice-Chancellor (Research) in May, 2016.



Scanning Electron Microscope (SEM) micrographs showing the regenerated tooth structure (enamel) and its high-magnification views.



The big data generated from construction sites in Hong Kong.

THE TROUBLE WITH RUBBLE

Construction waste in Hong Kong is a major problem. As the city continuously builds and rebuilds itself, it is running out of space for its building waste. Dr Wilson Lu has been using big data to investigate.

To understand the scale of Hong Kong's construction waste problem, consider the state of the landfills. Hong Kong has three enormous landfills that were supposed to last until 2030 but are expected to fall a decade short of that in large part because of construction waste. About 28 per cent of landfilled waste in 2015 came from construction sites, which dumped on average about 4,200 tonnes per day.

"Hong Kong landfill space is extremely valuable, but this one single industry is taking up about one-quarter of the capacity. This is really a burning issue," said Dr Wilson Lu of the Department of Real Estate and Construction.

What's worse, the landfilled waste represents only five per cent of the building waste mountain. Inert waste, including concrete, boulders, bricks and sand, is too expensive to be taken to landfills and has to go elsewhere – either to public fill sites to await use in reclamation, or be shipped to China. Both outlets are becoming more restricted.

Dr Lu is trying to help address these challenges by using big data to understand the production

and disposal of construction waste in Hong Kong. He is drawing on records related to waste charges, as operators are charged HK\$71 to HK\$200 per tonne of waste, depending on whether it goes to public fill sites, waste sorting centres or landfills.

Shining a light

In one line of research, he acquired data for 25,000 construction sites and found that, despite the waste charge, public projects produced less waste than profit-motivated



A display of big data analytics for construction waste management.



“ Hong Kong landfill space is extremely valuable, but this one single industry is taking up about one-quarter of the capacity. This is really a burning issue. ”

Dr Wilson Lu

private ones. “The reason is the cost of labour. An ordinary construction worker is paid more than HK\$1,000 per day, so asking these expensive workers to sort waste is not economical. It's cheaper for them to pay waste charges,” he said.

Some operators try to reduce both labour costs and waste charges by dumping their loads illegally, which can be difficult to catch in the act. This is another area where big data can shine a light. Dr Lu is trying to detect patterns related to illegal dumping by tracking individual operators, project type, location or a combination of these.

“We're referring to research like that done in Cambridge University where they use big data to identify corruption. The approach is that you establish the criteria that indicate potential illegal dumping and screen all the data against those criteria. We're now trying to train the model using the plate numbers of lorries that have been involved in illegal dumping in the past,” he said.

He is also using big data to help the industry benchmark waste generation rates by plotting the waste arising from nearly 3,000 projects. These have been sorted into 'good', 'average' or 'not good' in terms of the quantities of waste they send to landfills over one year.

Yet another project has been looking at the waste from 808 buildings which have the Building Environmental Assessment Method (BEAM) certification. Dr Lu found that most of the points earned for the certification came from green measures in the construction and operation of the building, rather than managing construction waste.

'Unethical'

Apart from crunching numbers, Dr Lu and his colleagues are also developing technology. For example, a platform is in development to address the bizarre situation in which local developers have to import fill materials from China even while the Hong Kong Government is paying to transport excess fill materials across the border. The reason is that the materials are often not available when the developers need them. Dr Lu's platform would help match demand and supply more readily.

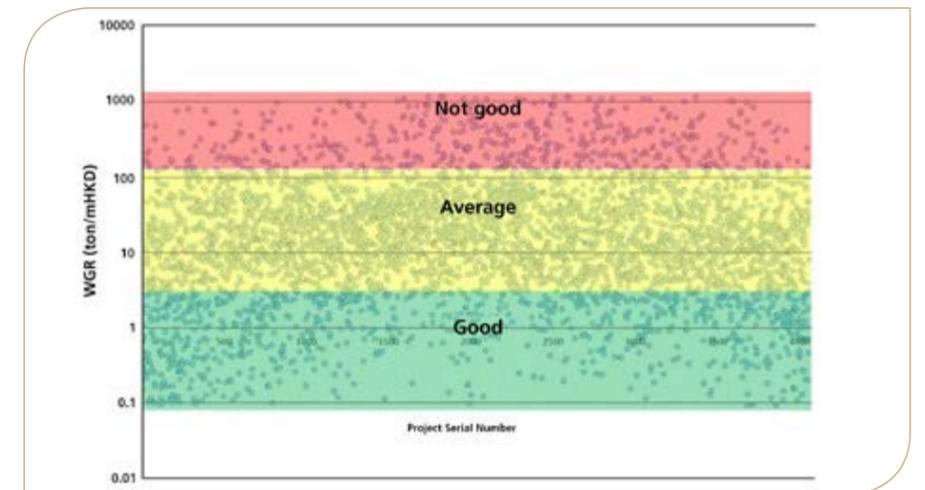
“It is unethical that 95 per cent of inert waste is hidden somewhere or simply sent to China. We don't even recycle it – only a very small portion of this waste gets recycled,” he said.

Despite the problems, he believes Hong Kong has made good progress on construction waste

management because the waste is tracked, there are charges for disposal, and the Environmental Protection Department maintains ongoing engagement with the construction trade.

This is all serving as an example to China. Dr Lu estimates waste loads there to be an unfathomable 1.13 billion tonnes per year but there are few proper systems in place for managing it. The problem came under the glare of the international media in 2015 when a huge pile of construction waste in Shenzhen collapsed, killing more than 70 people.

“Shenzhen has now started to charge for waste disposal and to use tracking technologies. They are learning from Hong Kong,” he said. ■



The benchmarking system for projects to compare their construction waste management performance against industrial standards.



The Chengdu Mental Health Project was set up to provide a platform for research and interventions on mental illness and mental health services in China.

MENTAL HEALTH IN MODERN CHINA

China's rapid economic growth and societal changes are having a tremendous impact on mental health, as revealed in a long-term project by Dr Ran Maosheng.

It is a given that when people experience a lot of change in a short period of time, they get stressed out. But just imagine the impact in a place like China, where in less than a generation, economic development has drastically changed people's standards of living and led millions of people to leave rural homes for jobs in the cities. The disruptions have put

many people's mental health to the test. Research by Dr Ran Maosheng of the Department of Social Work and Social Administration and his collaborators has been showing the extent of the impact.

Dr Ran, a psychiatrist by training, set up the Chengdu Mental Health Project (CMHP) in

1994 to provide a platform for research and interventions on mental illness and mental health services. Ever since, the project has been tracking more than 150,000 people in six townships in Chengdu through China's household registration system, which keeps people registered in their home towns even after they leave.

"My aim is to understand the impact of social development on mental illness and mental health services, so we can advise the government on what policies would be meaningful to improve people's lives," he said.

"This project is unique in the world because it is longitudinal and the population is large. To do this in a Western country would be too expensive and the refusal rate would also be very high."

Prevalence up nearly 50 per cent

Surveys conducted with the help of doctors, nurses and psychologists trained by the CMHP



“ This project is unique in the world because it is longitudinal and the population is large. To do this in a Western country would be too expensive and the refusal rate would also be very high. ”

Dr Ran Maosheng

show that the prevalence of mental illness has increased with China's economic development.

Between 1994 and 2015, the prevalence of all mental illnesses increased by 48.2 per cent. Economic change is one reason why. More industrial jobs and more motorcycles have resulted in more brain traumas from accidents, and so the proportion of mental illness cases linked with brain trauma has increased by 388 per cent.

Increasing wealth has also meant people have more money to buy alcohol and drugs, coinciding with a 373.8 per cent increase in mental illness from alcoholism and alcohol dependence and a whopping 1,808.7 per cent increase in mental illness from drug and substance abuse.

Other societal changes are also having an impact. An ageing society has led to a 214.8 per cent increase in mental illness associated with cerebrovascular disease, and a 126.4 per cent in senile dementia.

Even the one-child policy has had an impact. Apart from surveys, CMHP has conducted interventions, in particular on schizophrenia. One finding is that gender differences in schizophrenia have been exacerbated by the one-child policy.

While it is known that women have better long-term outcomes than men, possibly due to the protective effects of oestrogen, and they are less aggressive than men, Dr Ran and his team showed that gender imbalances may be aggravating the problem by making it that much less likely for men to marry, especially in rural China.

"The gender ratio in rural China means there are more males than females. Even males who are mentally healthy cannot marry. Females with schizophrenia have relatively less severe aggressive symptoms. So all that together means they are more likely to marry, and they are more likely to have a family caregiver," he said.

Focus on interventions

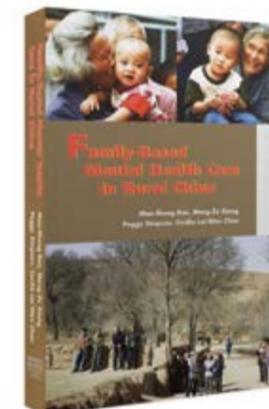
The importance of family in supporting patients has been another major focus of Dr Ran's work, given that in 1994 a CMHP survey found nearly one-third of schizophrenic patients did not receive medication due to poverty, ignorance, lack of a caregiver or other reasons. Since most patients are cared for by their families in the community rather than the State, it was felt they should be targeted, too.

A psycho-educational family intervention was devised for patients with schizophrenia and

their families and subjected to a cluster randomised control trial. "We trained family members, not only patients, in many different skills such as how to understand the illness, how to take care of patients, how to prevent relapse and how to handle their relationship with the patient," he said.

The results of a 14-year follow-up study were recently published and showed the intervention group did better in such things as the patient continuing to see a doctor and the family having a better understanding of the importance of medication compliance. More work might be needed to strengthen other outcomes in the long term, though, which this study is helping to highlight.

The CMHP also works with collaborators such as Harvard University, Yale University, King's College London, University of British Columbia, Peking University, Tsinghua University and Sichuan University, and recently started a new project with the University of Pennsylvania on reducing the stigma for patients with mental illness. "I hope the CMHP can develop as a platform, not just for mental health, but for issues related to the elderly and others as well, so we contribute to improving services for people in need," Dr Ran said. ■



Over 80 papers and one book have been published from the studies of the Chengdu Mental Health Project. Family-Based Mental Health Care in Rural China was published by the Hong Kong University Press in 2005.



The investigation team of the Chengdu Mental Health Project in 2015.



The Chengdu Mental Health Project provides training to primary health professionals in the Xinjin county, Chengdu city.



THE CASE FOR STRONGER BORDERS

For ethical reasons and the sake of democracy, Europe should tighten its border controls, argues Dr Stefan Auer, Programme Director in European Studies in the School of Modern Languages and Cultures at HKU.

A recent survey by Pew Research asked Europeans how they viewed the European Union (EU); the vast majority responded favourably. The survey also asked them if they wanted their government or the EU to control immigration; the vast majority chose their government, even when migration came from within Europe.

Under the terms of the EU, they cannot have it both ways, said Dr Stefan Auer, who has a research project funded by the General Research Fund on the crisis of a borderless Europe.

“The European integration experiment was meant to abolish nation states in favour of a

supranational one under which borders would melt away so people, goods, services and capital could move around freely,” he said.

“But the crisis of Syria, and the arrival of one million refugees in Germany alone since September, 2015, have intensified questions about this conception of the EU.”

Dr Auer shares the scepticism that found full voice in last year’s Brexit vote, even though he is a political refugee himself having fled communist Czechoslovakia in the 1980s for Germany.

“The fact that decent political communities require a certain level of cohesion makes

borders necessary,” he said. There are also ethical considerations in terms of the obligations countries should be expected to have towards strangers.

Germany’s policy of openly welcoming refugees to stay has created incentives for people to risk their lives to go there, even if they are not in imminent danger – for example, if they have already made it out of Syria to relative safety in Turkey. Moreover, having large numbers of refugees arrive in the community risks undermining social cohesion and the original goal of helping others.

“When people feel their government has lost control over migration, the outcome would be



“ When people feel their government has lost control over migration, the outcome would be that they become more hostile towards newcomers. That is not good news for newcomers or the existing social order. ”

Dr Stefan Auer

that they become more hostile towards newcomers. That is not good news for newcomers or the existing social order,” he said.

Such effects have led other countries in the EU to start questioning their obligations, such as Hungary, Poland, and most prominently the UK.

Democracy eroded

Before the Brexit vote, the British government sought concessions on border controls from the EU and failed in its goal. Brexit proponents

then took up the refrain that Britain needed to take back control of its borders.

Dr Auer believes the Brexit vote reflects what many in Europe are feeling, not only about migration but also the EU’s economic policies which are hurting countries like Greece and Spain and benefiting Germany the most.

“Even France and Germany can’t agree on fundamental questions of economic policy. The French are in favour of Europeanising problems that Greece, Italy, France and Spain have, but from Germany’s perspective, Europeanising them means Germans end up paying for

everyone else. So all the problems are still there,” he said.

More importantly, the structure for addressing these problems has become less and less democratic. “My key commitment is to democracy. Is the current EU still advancing that cause? That’s where I put a big question mark because the push towards a supranational quasi federation has eroded democracy at the national level, without substituting for it at the EU level. Over the last decade at least, I don’t think you can say that it’s been conducive to democracy.”

An answer to this dilemma would be if members could reclaim some of their powers as Britain had demanded, he said. The member states need only look to their own recent history for an example of how this could work. Before the Schengen Agreement in 1985 to abolish borders between members and the Maastricht Treaty in 1992 to formalise the European Union, member states maintained a special relationship while having control over their own affairs.

Interestingly, on Brexit, Dr Auer believes the strain of trying to maintain EU unity is likely to weaken its hand. “It will be much harder to maintain unity among the 27 member states. Each of them thinks itself sovereign even though they are not any more, and quite a number of governments openly oppose the EU. It will be easier for the UK to maintain its position, whatever government it ends up with, than these 27 independent states,” he said. ■



A refugee passes a baby through the fence at the Hungarian-Serbian border in Röszke, Hungary on August 28, 2015. This photo was taken by Australian photographer Warren Richardson when he camped with the refugees on the border and was selected as the World Press Photo of the Year 2015. (Courtesy of Warren Richardson)



WHEN RESTRAINT CAN MEAN FREEDOM

Legal restrictions on religious activities could actually increase religious freedom by providing a more level playing field in the competition for adherents and resources, argues legal scholar Dr Chen Jianlin.

Religious freedom is usually framed in terms of people's freedom to choose the religion they want to follow, and the freedom of different religions to function in society. This freedom is premised on the perceived sacred and divine nature of religion that is beyond easy human comprehension. But religions have earthly dimensions, like the need for material resources. When some religions have more resources than others and are allowed to run schools and social services without restriction, they gain a significant advantage over other religions in recruiting new adherents and further increasing their resource base – an advantage that can override the idea of religious freedom.

This dilemma is based on the concept of religion as a consumer choice and Dr Chen Jianlin argues that it could be resolved by using the law to regulate religion in much the same way as it regulates commercial activities.

"When the law looks at religion, it tends to say that the state should not intervene as far as possible. In contrast, the law never pretends to be neutral about commercial activities – we all know too much intervention is bad but everybody can accept that one should regulate such things as health and safety, child labour, the environment, and of course, anti-trust. The intention is to prevent certain commercial entities from getting ahead by what are deemed to be unfair or harmful means," he said.

Allowing religious organisations to provide schools with minimal restrictions on religious content is one such means in which religion



“Do we think a good religion is one that is effective at amassing funds or mobilising politically, or is it something else? The law can limit the inclusion of religious content in publicly-funded schools run by religious organisations, or it can allow great leeway.”

Dr Chen Jianlin

can get ahead by virtue of non-religious reasons, he said, pointing to a comparison between schools in Hong Kong and Taiwan that sheds light on the difference in religious demographics between the two jurisdictions.

Wealthier religions get an advantage

More than half of primary and secondary schools in Hong Kong are run by or affiliated with Christian organisations, and 12 per cent of the population identify as Christian. In Taiwan, practically no schools are run by religious organisations because until recently, they were not allowed to include religious content in education, and only 4.5 per cent identify as Christian. Moreover, only about one-quarter of Hong Kong people identify with Chinese folk religions against nearly 60 per cent in Taiwan.

"Although causation impact is not within the scope of my current research, these results suggest that the difference in school policy is at least a partial reason for this current difference in religious demographics between Hong Kong and Taiwan. If you allow a religion to spread its faith in the provision of social service, then wealthy religions – the ones with resources – will spread more. And in Hong Kong, Christian organisations – for a variety of external and historical reasons, including British colonial rule – have more financial resources," Dr Chen said.

"All of this makes money important to the success of a religion. So when religions compete for followers, they're not only competing on their teachings but also on how rich they are. Thus, in Hong Kong you have

double the proportion of Christians and half the proportion of adherents to Chinese religions as compared to Taiwan. This may or may not be a good thing, but it needs to be confronted and discussed."

Deciding the rules of competition

Given these issues, Dr Chen believes there is room for the law to redress the imbalances among religions. But first, society needs to start considering what kind of religion it wants. "The law sets the rules of competition so you must have a sense of who you want to win," he said.

"Do we think a good religion is one that is effective at amassing funds or mobilising politically, or is it something else? The law can

limit the inclusion of religious content in publicly-funded schools run by religious organisations, or it can allow great leeway. The law can also for example prohibit participation in political activities by religions, or it can allow it," he said. "Once we have that conversation, we can start thinking about how we are going to change the rules of religious competition to help us achieve that notion."

Dr Chen's arguments form the basis of a forthcoming monograph *The Law and Religious Market Theory: China, Taiwan and Hong Kong* to be published by Cambridge University Press. He wrote the book during his past six years with the Faculty of Law, where he was based until this summer when he joined the University of Melbourne. ■



A store selling religious figurines in Yau Ma Tei, Hong Kong.



AN ANTIDOTE TO 'FAKE' AND MISLEADING NEWS

A timely online course is arming students with the tools to tell fact from fiction, bias and opinion.

When Donald Trump was elected US President in November, 2016, there was an unintended beneficiary at HKU. The Journalism and Media Studies Centre had just announced a relaunch of its massive open online course (MOOC) on news literacy and with Mr Trump's win, enrolment and enquiries from around the world soared.

"People were curious about how to tackle fake news," said Dr Masato Kajimoto, Assistant Professor of Practice who leads the 'Making Sense of the News' course on Coursera in partnership with the Center for News Literacy at Stony Brook University. "We received invitations to speak at lots of conferences."

The course was not actually developed with Mr Trump's brand of 'fake news' in mind – the original impetus came from infomercials,

hoaxes and the like – but the critical thinking skills it teaches are applicable to any news story.

"Most news stories, whether in the *New York Times* or other outlets, are often presented as a package – they contain a mixture of verified facts, opinions, speculation, and reporter's observations which may not be factual," Dr Kajimoto said.

"The idea with our course is to learn how to identify verified fact and what we call actionable information. So when you decide, for example, to participate in a plastic bottle recycling campaign, you will know how to determine if your action will make a difference. Or when you decide to vote for a politician, you will be able to base your judgment on facts, not just belief. Actionable information is the key."

Overcoming hurdles

That might seem obvious at first glance, but there can be hurdles or diversions when it comes to determining fact. For instance, information is often conveyed by biased or self-interested sources. If a dermatologist is quoted saying mobile phones are creating problems with the skin around the neck because people are tilting their heads downwards for long periods of time, should that be a reliable source? Or are they trying to drum up business?

News also needs to be distinguished from entertainment and other forms of media, which can be especially difficult on social media where everything is mixed in together. And journalism needs to be distinguished from news – a press release can be news, but information that is verified and for which an



“Historians say fake news has been around since the printing press was invented. So instead of trying to find a cure, we should look for symptom relievers. I see news literacy as building the immune system.”

Dr Masato Kajimoto

independent organisation is accountable, such as a newspaper or broadcaster, is journalism.

People's own weaknesses also need to be overcome when it comes to receiving information they may or may not want to hear. "Our course is in part based on social psychology and cognitive science, because a lot of times our brain prevents us from recognising what is verified fact. So we talk about how confirmation bias works, how cognitive dissonance actually creates an environment in our brain where we tend to believe what we want to believe. One of the key areas we cover is understanding our tendency to bias," Dr Kajimoto said.

Bursting bubbles

Conveying these ideas to an international audience is a tall order. The news examples used must be general enough to be of interest in any country or culture, and accessible to people in places like China where certain news and social media organisations are blocked. Copyright must also be respected.

But given that enrolment to date has reached 126 countries, there is little doubt that interest in countering untrustworthy news is a global concern.

"One thing we have learned is that false information and disinformation really polarise

society, as we have seen in Hong Kong, the US and other countries. The filter bubbles on social media mean people hear the same information again and again, and they end up not hearing from the other side at all," he said.

Moreover, they mistrust the other side as well as traditional fact-checkers such as the established media. All the more reason why a course like this is needed to challenge the formation of bubbles.

"Historians say fake news has been around since the printing press was invented. So instead of trying to find a cure, we should look for symptom relievers. I see news literacy as building the immune system, so to speak. Critical thinking skills are the backbone of better news literacy skills," he said.

Since healthy practices are best established at an early age, the course also targets young people through their teachers and librarians, who are alerted to the MOOC as a free resource for developing news literacy skills in students ■



Dr Masato Kajimoto integrated his massive open online course (MOOC) 'Making Sense of News' into on-campus teaching.



Dr Masato Kajimoto delivering a keynote speech at the International Symposium on STEM Education 2017 held at HKU.

Bias checks

To check whether a quoted source is reliable, the 'Making Sense of the News' MOOC advises using the IM VAIN mnemonic. A reliable story should contain sources that are: Independent; Multiple (more than one source); Verified (they provide evidence for their statements); Authoritative/Informed; and Named.

To check one's own bias, visit the Project Implicit website operated by Harvard University, which has online tests on bias <https://implicit.harvard.edu/implicit/>

LIFE ON THE BOTTOM RUNGS

Students have been advising owners of small businesses in the Philippines on how to improve their operations through a programme that exposes them to the daily realities in a developing economy.



Students spent three weeks in the Philippines advising micro businesses such as grocery shops, beauty salons and bakeries on how to improve their businesses.

Business law lecturer Beau Lefler has no doubt that fate played a role in his success. He grew up poor, one of 11 children in a Utah family, living on a farm. But his parents taught him to work hard and he did well enough in standardised examinations to get into law school and from



“I want them to understand that developing countries are still developing for lots of reasons, not because the people are poor or incapable.”

Mr Beau Lefler

there, work in corporate law and travel the world. In 2007, his work brought him to Hong Kong and he and his family used their holidays to visit poorer countries in the region.

“I saw all these hardworking people and it taught me that in part I got lucky because my natural skill set happened to fit well in the time and place I was born,” he said.

That realisation led him to quit his job in 2010 and spend a year volunteering in Ecuador with three children in tow, before joining HKU in 2011 as a lecturer in the Faculty of Business and Economics. It also inspired him to develop a credit-bearing programme for students in which they live and contribute in a developing economy.

For the past three summers, HKU students have been spending three weeks in the Philippines living with host families and advising micro-businesses such as fast food shops, beauty salons and guesthouses on how to improve their businesses through better accounting, social media and other simple measures.

“Most of the people running these businesses are not doing it because they want to but because they can’t find a job elsewhere,” Mr Lefler said. “Typically, they don’t keep records: they don’t know what inventory they have, they don’t know how much money they

made in the past year and they don’t know which of their products have the best margins.”

The students help them address these issues using methods that may be less sophisticated than what they learn in the Business Faculty, but have immediate value. Importantly, they involve the owner-operators in designing accounting and record keeping systems that they can understand and sustain, and show them how to extract useful information from their data so they can make good business decisions.

Life-changing experience

Students also get exposure to the daily lives of the business owners and their community through their stay with host families. Two students are placed with each family and they each get a mattress, an electric fan, and daily meals with the family. There is no air-conditioning or WiFi, running water can be intermittent, and mosquitoes are ubiquitous. Yet students find the experience to be incredibly rewarding.

Samuel Chan, a Journalism and Marketing major, worked with a small cooperative producing hand-woven doormats and rugs. The business struggled with profitability and worker absenteeism and lacked expertise in marketing. So he and his partner revamped the business model and pricing strategy, and developed an

online presence including brand video, labelling and logo. They also helped the firm apply for national accreditation and grants.

Despite those achievements, the home stay was the most memorable part of the experience, he said. “It was eye-opening. Despite having so little – my host mother made the equivalent of about HK\$20 a day – they shared all they had with us and were perhaps the happiest people I have ever met.”

Lee Jee Soo, a Psychology and Business Design and Innovation major, worked with a local

guesthouse whose records were full of errors. She and her partner digitised the records and discovered the firm had not broken even in some years and had overpaid its taxes. They also helped the firm improve its online presence and modernise its website.

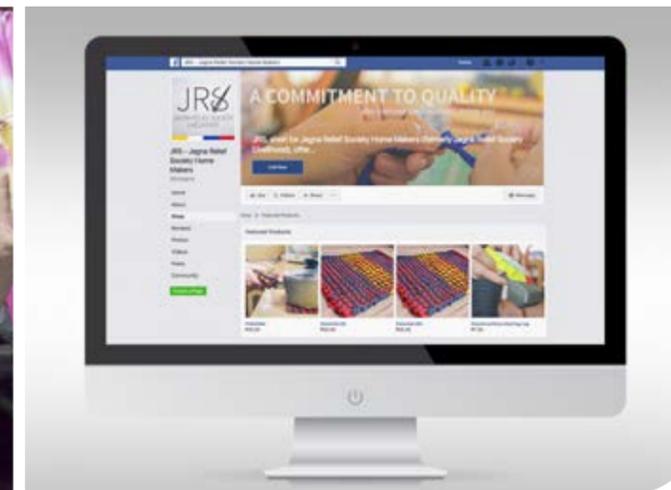
“The experience truly reshaped how I view my life,” she said. “It made me appreciate the things I have been blessed with as someone born and raised in more developed societies (Korea, the US and Hong Kong). But more than that, it made me ask what I really want to do with my life.”

Samuel has already found an answer. He graduated this year and has taken up a position as a corporate social responsibility analyst in a bank.

It is the kind of direction that Mr Lefler hopes for with this programme. “I want them to understand that developing countries are still developing for lots of reasons, not because the people are poor or incapable,” he said. “When these students become leaders in their industries, I hope they will think about the ways that their skill sets and their positions can be used to do good.” ■



Samuel (first from left) had a great time with his host family in the Philippines.



Samuel worked with a small cooperative producing hand-woven doormats and rugs and helped set up a Facebook page and take product shots for the business.



State of the art sterilisation facilities visited by members of the Dental Council and Dental Association.

CLEAN BILL OF HEALTH

The Dental Faculty has recently further enhanced its reputation for state-of-the-art teaching facilities with the opening of an Infection Control Teaching Suite (ICTS). The new suite is the first of its kind in Hong Kong and marks the Faculty's commitment to ongoing excellence.

Professor Gary Cheung, Associate Dean in Undergraduate Education, Faculty of Dentistry, was instrumental in the creation of the teaching suite, said: "This is a crucial part of training for dental students. They need to know the necessary steps for infection control, namely instrument cleaning, disinfection and sterilisation as well as waste disposal, before they become practising dentists.

The ICTS is equipped with the most advanced sterilisation facilities and technologies for the decontamination of dental instruments, including a twin instrument cleaning sink, a hand-piece cleaner and lubricator, a thermal washer-disinfector and two vacuum type autoclaves.

Professor Cheung said: "Some of our students will work in hospitals where there will be

a central sterilisation unit, but most will be dentists in clinics where they will lead a dental team. The chances are they won't sterilise the instruments or the equipment themselves, their nurses will. But it is vital that they have hands-on knowledge of the entire cycle, from buying the best equipment to using it, to how chemical sterilisation works."

Stringent guidelines

The equipment in the ICTS is for standard procedure based on stringent guidelines from Europe – "which are stricter than those in the US," commented Professor Cheung. "We adhere to guidelines from the Department of Health in the UK, the Department of Health in Hong Kong and the Dental Council. This means that all stages of sterilisation must be logged

and traceable – so that if there is a problem you can show that all sterilisation procedures were carried out to the letter – and this equipment does all that."

During their studies, students will learn in ICTS in their second year before they go into a clinic situation for the first time and again in year six, just before they graduate. The latter sessions will act as a refresher course before they go out to practice.

"Before the ICTS was opened," explained Professor Cheung, "students learned via theory and through observing nurses in clinics as they prepared instruments. Now, it is hands-on, they do it themselves." He added that the suite has also opened up the possibility of starting practical courses for



“ Before the Infection Control Teaching Suite was opened, students learned via theory and through observing nurses in clinics as they prepared instruments. Now, it is hands-on, they do it themselves. ”

Professor Gary Cheung

nurses working in dental clinics. The first one is planned for October.

Other apparatus includes a Cou Cou box, which shows how well you have washed your hands. "This always startles students," said Professor Cheung. "Throughout their training we remind them about the importance of washing hands properly and paying attention to every part of the hand – but this box uses fluorescent lights to show up areas where there are still germs."

The ICTS is not the Faculty's only new facility. At the moment the simulation laboratories are being renovated. "Simulators are now being used frequently in Medicine, but Dentistry has used mannequin heads, jaws, and so forth for decades," he said.

"Our simulation laboratories had room for 60 students, the new ones – due to open this September ready for the new academic year –

will house 80. The old units – first built around 35 years ago have had tech add-ons over the years, but now everything will be in-built, so all 80 units will be state-of-the-art."

Self-learning areas

The new software also has implications for student management. "When it is put in place, along with other adjunct facilities, I hope we will be able to use the simulation laboratories as self-learning areas – that is the vision," said Professor Cheung.

"We will be able to see who has logged in to use equipment and for how long, so it also has the potential to generate big data on student activity. For example, if one student takes 30 seconds to do a procedure and another takes 30 minutes, perhaps we will be able to look into why the discrepancy. Further, since Dentistry requires manual skills – in addition to diagnostic skills and medical

know-how – perhaps this kind of equipment will enable us to test if potential students have any manual capability before they even embark on the course."

The Faculty also boasts a Haptic simulator laboratory, which uses software to produce a three-dimensional image of a tooth or a patient, and a hand-piece drill so that students can practise virtual dentistry. For students it is a safe environment to learn to hold and operate a drill. "This laboratory is also being upgraded," said Professor Cheung. "The new software enables you to upload an image of a real patient, meaning that trained dentists in clinics who are about to embark on complex surgery can practise the operation first in the virtual mouth of that patient. This is cutting-edge technology, and the equipment will give our students valuable training opportunities." ■



To improve awareness and training on the prevention of infection in dentistry, the Infection Control Teaching Suite was opened in February, 2016.



Dean of Dentistry Professor Thomas Flemmig (third from left), Professor Gary Cheung (third from right) and nurses who teach in the Infection Control Teaching Suite.



Students working in groups of four or five to use algorithms to solve Rubik's cube.

GAME CHANGER

Solving Rubik's cube and containing an epidemic outbreak on a virtual map are now on the syllabus as HKU teachers embrace the 'gamification' of learning.

At the start of every course, experienced teachers encounter a conundrum: how can they change up the same set of lectures they have been giving for the past five, 10, or 20 years, and still ensure students get the content and contact time they are due?

To Professor Ricky Kwok, Associate Vice-President (Teaching and Learning), the answer lies in technology. Whereas some teachers would ban phone use in the classroom, he embraces phones and makes them a tool of learning. Fittingly, he is leading

the Technology-Enriched Learning Initiative (TELI), which was set up last autumn to provide an unprecedented level of support to teachers.

TELI has about 30 staff including software engineers to help turn content into apps, games and other technological forms that would otherwise be too time-consuming for teachers or beyond their capabilities.

"Our role is to empower teachers," he said. "They can still do things the old way but now we can support them to apply e-learning, too."

Professor Kwok sets an example for them through the Common Core course he teaches on algorithms. Last year he put all of his lectures online, asked students to watch them before coming to class, and during class had them solve puzzles based on what they learned in the lectures.

For example, in one class students used algorithms to solve Rubik's cube. They had to work in groups of four or five, compete with other groups, film their efforts using their phones, and produce a five-minute video explaining how they solved the problem, on which they were assessed.

"Once I uploaded the lectures, I had to give students a reason to come to class which was on a Saturday," he said. "Assessment drives learning so there had to be something they were assessed on. The activities are also designed to reduce free-riding so everybody in the group has to be doing something. And having them collaborate and compete against other teams is another way to motivate them."

More than just games

Professor Kwok calls this the 'gamification' of learning. Another example is the Epidemics MOOC [massive open online course] on edX led



“ Our role is to empower teachers. They can still do things the old way but now we can support them to apply e-learning, too. ”

Professor Ricky Kwok

by the Dean of Medicine, Professor Gabriel Leung, in which students try to contain the spread of a virus using the knowledge they have learned about different spreading models and strategies for such things as vaccination programmes and communications.

But e-learning is not only about games. For instance, TELI developed an app for the Centre for Applied English Studies that helps research students write their theses – they type in a word and see how it was used in previous HKU theses, particularly in their field.

Professor David Pomfret in History has also made use of e-learning with a higher aim than testing knowledge or making learning more interesting. Students role-play characters in a historical period and use their learning of that period to evolve their character along different paths, for instance by having them become politically engaged.

"The intention is not to coddle the students or 'gamify' their learning. Instead I hope to draw them in and package difficult or not obviously relevant but valuable material in new ways that might motivate them to engage with it," he said. "I also want to encourage them to see

themselves as having a stake in history, and to recognise their right to challenge or critique other (e.g. state-sponsored) historical narratives."

Labour-intensive

Needless to say, such projects are labour-intensive for teachers. TELI provides software development, video production and other support, but the number of requests and ideas from across the University has been overwhelming. Professor Kwok said they were also trying to build capabilities at the faculty and department levels through workshops and seminars. The Faculties of Dentistry, Education and Medicine have already set up their own small e-learning units.

Ultimately, the goal is to contribute to a change of culture towards e-learning. It's a long process, as Professor Kwok witnessed during his own student days at HKU when PowerPoint was being introduced.

"There were two groups of teachers, those who used transparencies and those who used PowerPoints," said Professor Kwok. "At first most teachers still used transparencies, and we

students saw their resistance to change. But today, how many of us are still using transparencies?

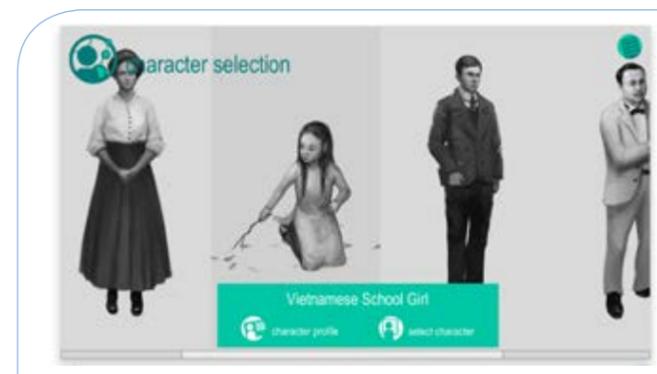
"That change happened because people come and go and because there are leaders, like the Dean of Medicine and the Vice-President for teaching and learning, Professor Ian Holliday, who decided to demonstrate that things can get done if you want them to be done." ■



A game app which allows students to learn about fighting epidemics is under development.



In the massive open online course on Epidemics, students were asked to contain the spread of a virus using their knowledge.



Via the e-learning platform, students role-play characters in a historical period and use their learning of that period to develop their character along different paths.





PAY IT FORWARD

A study into the links between a person's altruistic behaviour and his or her sense of well-being suggests that to help others is indeed to help yourself.

A research project to compile an Altruism Index based on a survey of Hong Kong citizens' behaviour found a strong link between helping others and feeling good about yourself. The survey was carried out by the Hong Kong Jockey Club Centre for Suicide Research and Prevention (CSR) at HKU.

"It also found a strong correlation between offering help and being prepared to seek help yourself when you need it," said Dr Emily Cheng Qijin, who is Research Assistant Professor at CSR. "And that is very important in Hong Kong where asking for help is sometimes viewed as weakness. There is less

stigma attached to seeking help if society is more helpful in general.

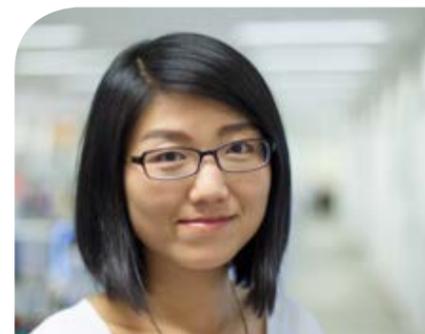
"To put this into context: over the past few years Hong Kong has not been seen as a happy place – in world happiness rankings we rate low, and there has been a rise in the number of youth suicides. Our research team felt it was time to address this and ask pertinent questions – Should we be rethinking our lifestyle? How do we rectify the situation?"

An initial Altruism Survey was carried out in 2014, commissioned by the Government and funded by the Hong Kong Jockey Club. It was meant to be a one-off, but was so well-received that the CSR decided it was worthwhile doing more. The most recent one is part of an ongoing three-year project which began in September, 2016, and was funded by the Chow Tai Fook Charity Foundation.

Principal Investigator in the research team was Paul Yip, Director of the CSR and Chair Professor in the Department of Social Work and



Professor Paul Yip (first from left), Mr Patrick Tsang On-yip (first from right), Governor of the Chow Tai Fook Charity Foundation, and two volunteers at the Hong Kong Altruism Index release and mobile application 'Helppiness' launch ceremony.



“ [The survey] also found a strong correlation between offering help and being prepared to seek help yourself when you need it. And that is very important in Hong Kong where asking for help is sometimes viewed as weakness. ”

Dr Emily Cheng Qijin

Social Administration. Dr Cheng conceived the ideas and they had two research assistants helping actualise them.

"I did a systematic review of all the literature on similar surveys in other countries and discovered that most are either outdated or inapplicable to Hong Kong," said Dr Cheng. "For instance, there is a validated scale originally developed in the US, which includes one item asking whether the respondent would help push a stranger's car out of the snow. When it was introduced to India, that item was modified into 'A stranger's scooter is stuck in a pit. Would you help him/her take it out?' The Hindi version has been further translated into Chinese in 1990s. However, neither the car nor the scooter situation is applicable to Hong Kong now."

In order to develop a new survey that would be both up-to-date and relevant to local people and thereby render a useful Altruism Index, the team brought together a panel of local experts – two from HKU and two from NGOs – to suggest more pertinent ideas.

The team has already published one peer-reviewed paper and two survey reports on the results, to validate the Index and to show that the research is robust. More papers are

under preparation. They found a stark correlation between a high score on the Altruism Index and a person's well-being. "It seems that the saying 'to help others is to help yourself' has more truth to it than we knew – the Index suggests you get a definite sense of well-being from helping others," said Dr Cheng.

More caring society

Dr Cheng feels too that the very existence of an Altruism Index can also make people have a more objective understanding of the society's altruism level and be more optimistic in general. "I hope we can continue to do the Index, as I feel that it also serves to improve people's sense of well-being. The latest survey showed marked improvement in helpful behaviour in Hong Kong, however, the survey respondents continuously perceived society's overall altruism level lower than their own altruism level. I think it is important to inform people about this as it gives them a boost knowing they are part of a more caring society. It also serves as a reminder of where society is strong in altruism and the areas that need improvement."

What also emerged from the original survey was that many people said they would like to help in the community more, but didn't know how to



The mobile application 'Helppiness', developed by the Hong Kong Jockey Club Centre for Suicide Research and Prevention, serves as a platform to provide information on helping opportunities including volunteer work, flag day collections, blood donation, and daily acts of kindness.

volunteer their services. This revelation led the team to develop 'Helppiness' – a mobile application on opportunities to help. It covers everything from volunteer work, flag day collections and blood donation to daily acts of kindness, and provides direct links to the organisers so users can volunteer.

An unexpected outcome of the app has been a collaboration with the Hong Kong Red Cross. "They contacted us when they saw reports in the media about the survey, which found local people's participation in blood donation is relatively low. They asked us to work with them to help promote their blood donation service," said Dr Cheng. "Every day the Hong Kong Red Cross puts out a notice indicating which types of blood stocks are low and asking people of that type to donate. But it seems very few people even know of the existence of this daily notice. Now we have added it to our app in the hope this will raise awareness and encourage more people to give blood." ■



A group photo with project participants.



A pop up installation in the Black Box featuring collaborations between HKU students of Landscape Architecture and Creative Writing for the Island Cities and Urban Archipelagos conference in March, 2016.

OUTSIDE THINKING IN THE BOX

In just over two years, HKU Black Box Theatre has become a centre for creativity on campus and has started to establish its place as a character in Hong Kong's rich story.

Officially launched in the autumn of 2014, the HKU Black Box as it is commonly known, is a hive of activity, a curated and creative space which plays host to performances, seminars, readings, screenings, discussions, recitals and workshops throughout the year and aims to help writers, dramatists, artists and students realise the possibilities of their creativity.

Dr Page Richards, HKU Black Box and Creative Writing Director, and Associate Professor in the School of English, is the brainchild behind the theatre and began concept planning and talking to designers in 2008. "I wanted a creative studio space dedicated to writing and drama," she said. "I grew up in theatre and universities were places we always looked to, where new and exciting arts events were happening – I wanted that for HKU.

"The HKU Black Box is a place for stories to be told, which may seem simplistic. But, while burgeoning stories are everywhere, to develop an original story takes research, wide historical knowledge and immersion with dedicated writers, artists and scholars of all ages. Students can learn here the skills and discipline it takes to

create and expand a story, across fields of expertise, across faculties."

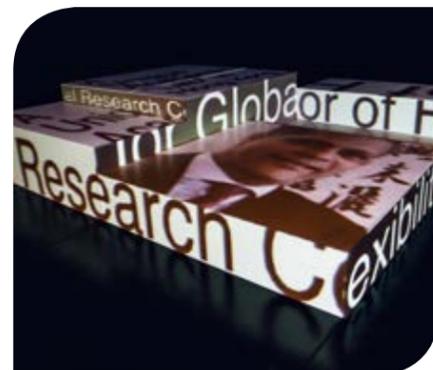
Works in progress

Theatre Manager Aarti Hemnani added: "We invite people not just to watch stories but to make stories, and the Black Box gives them both the space and the time – both relative rarities in the creative arts in Hong Kong. Space is famously at a premium; there is nowhere you can develop and explore, and it's often all about the finished project. Whereas, the concept behind the Black Box is having the freedom to explore works in progress – often it's where something starts."

Dr Richards emphasises that this is freedom with responsibility. "There is a fine balance between freedom and self-indulgence. We help students understand that we supportively hold standards high with them in the Black Box, across their studies as well as their active trial-and-error participation." She cited one experience – *Incubation to Publication*, the project presented to the Research Grants Council – as important; it offered the

opportunity for students and scholars in the arts, architecture and other fields, to showcase work perspectives tested from multiple directions of research.

In addition to students, the Black Box brings the city's wider community together, and it has already evolved to identify very much with Hong Kong. "We work in creative writing, drama and the Master of Fine Arts (MFA) with writers of often three or more languages," Dr Richards



The installation and exhibition of *Incubation to Publication* in interdisciplinary research was presented to the Research Grants Council in the Black Box during their visit to HKU in 2016.



“ The level of detail needed for Black Box production translates into any project or research of intense focus. They [the students] also discover the beauty of how hard it is. That kind of confidence-building is important to a city's emerging generations. ”

Dr Page Richards

said. "In no other MFA programme, for instance, is there formal multilingual and comparative study, along with cutting-edge creativity, through the historical prism of multiple languages."

One of the fundamental aspects they reiterate is that in the Black Box there are blended differences between participant and witness/ audience. "When we can see ourselves as both at the same time that offers a greater sophistication," said Dr Richards. "The act of witnessing needs to get credit as this is what opens up the participants to realise they can create wonder. The pivot between the witness and the participant is crucial in small theatre. It forges the creativity in intimate ways that require the scale of the Black Box."

One of their recent achievements was a production earlier this year of German composer Engelbert Humperdinck's opera *Hansel and Gretel*, a multidisciplinary collaboration which featured puppetry as well as dance, drama and music, and which involved students and professionals from inside and outside HKU and Hong Kong.

"*Hansel and Gretel* is a familiar tale, so accessible to all, but we wanted to tell the story through Hong Kong," said Dr Richards. The cooperative local and international production team "brought out surprising cultural and intergenerational contexts".

"We don't want simply to hand the audience a story," said Miss Hemnani. "It also made me think and reconsider stories I was spoon-fed as a child – Western stories, which I enjoyed, but which had little resonance in my own life."

The production brought different bands of audience to the campus, including members of the public who'd never been to HKU before. "The feedback from that show has been immense," said Dr Richards. "From students too," said Ms Hemnani. "For some it opened their eyes to what is possible creatively, and we're now getting a lot more interest in doing multicultural courses. The process of doing the show opened up whole new areas of research for them – suddenly it pertains to them."

The logistics of the Black Box also make it an attractive starting-off point for students new to expressing themselves in a theatre setting. "There is a friendliness and a scale of invitation," said Dr Richards. "It is almost portable, making it less intimidating than a bigger theatre." Students can discover that creating here gives them chances to test out a work collectively, find weaknesses and strengths, and revisit individual decisions once more with greater knowledge.

On this shifting ground, she added: "If they have done a play, reading, or show in the Black Box they can now, with more raised awareness and expertise, curate an exhibition or shape a

research project after they graduate. The level of detail needed for Black Box production translates into any project or research of intense focus. They also discover the beauty of how hard it is. That kind of confidence-building is important to a city's emerging generations."

Livy in the Garden, a new play by Ellen Kaplan, Head of Theatre at Smith College, was another piece which engaged the interest of not only HKU but the wider community. Faculty of Arts students were also able to do internships on the play and were involved in its adaptation, research and production from start to finish.

The next major project for the Black Box is a new Hong Kong Festival, anchored at the HKU Black Box but also spiraling to venues across the city and including performance, lectures and global links. The theme will be the proverbial 'third culture' – Third Culture Kids, Third Culture Individuals and Third Culture Identity.

"We have chosen this because the whole third culture concept is so advanced in Hong Kong, often more advanced than certain discussions of 'identity politics' have admitted so far," said Dr Richards. "It opens up anew questions such as, where or what is 'home' in 21st-century global contexts, and where do our community responsibilities lie? The question of home and culture becomes very complex, and that is where it all comes around again to original voices in innovative story-telling for the future." ■



An innovative showcase from Humperdinck's opera *Hansel and Gretel*, featuring songs, large-scale puppets, and identity in Hong Kong, in February and March, 2017.



Students participating in the performance in the Black Box for a course focussing on the history of happiness and comedy.



The Sounding Architecture project aims to exchange knowledge between the Departments of Architecture and Music in the design and production of new musical instruments as inspired by the theory and practice of architectural furniture.

SOUND AND SPACE

A unique collaboration between HKU's Departments of Architecture and Music has resulted in the exchange of knowledge regarding the relationship between sound and space.

The project began in early 2016 when students from the HKU Percussion Ensemble began recreating Harry Partch's iconoclastic instruments under the guidance of Dr Deborah Waugh, Assistant Lecturer in the Music Department, Dr Eli Marshall from Cornell University and HKU Architecture graduate Jason Chong.

Students performed on their newly-created instruments alongside members of the Hong Kong New Music Ensemble in a concert of Harry Partch's music at the Asia Society Hong Kong in April, 2016. Their work was brought to the attention of Associate Professor of Architecture Thomas Tsang, who has worked extensively with composers, and led to an exchange of ideas and expertise between the two disciplines.

A collaboration between Architecture and Music was formalised in the summer of 2016, after securing a two-year Interdisciplinary Knowledge Exchange grant, and the project was launched in September with a symposium 'Towards A Manifesto: Sounding Architecture'. Here,

renowned composer Dr Ken Ueno from UC Berkeley, Dr Eli Marshall and William Lane, Artistic Director of the Hong Kong New Music Ensemble, debated and theorised the relationship between sound, space and music

with faculty and students from the Departments of Architecture and Music.

The collaboration led to the development of an interdisciplinary studio, which involved 67 year-two



The Hong Kong New Music Ensemble and HKU Percussion Ensemble performed the concert Genesis of a Music: The Genius of Harry Partch at the Asia Society Hong Kong in April, 2016.



“ The production of architecture and music inform each other in surprising ways, challenging disciplinary notions of tradition and experimentation, expanding the boundaries of both practices. ”

Mr Thomas Tsang

Architecture students designing and building musical instruments under the guidance of six teaching staff. The students were encouraged to experiment with sound, shape and materials, and then developed drawings which became blueprints for instruments.

They had practical workshops with Dr Ueno, Dr Marshall, Dr Waugh and Fabrication Laboratory Manager, Donn Holohan, at the Faculty of Architecture. Postgraduate students and faculty from the Department of Music were also involved in providing feedback and suggestions to the Architecture students throughout the process. “The aim was to raise their awareness of sound by helping them invent and build new musical instruments and then see how they sound in different spaces,” said Dr Waugh.

“This aspect of Architecture is often ignored,” said Mr Tsang. “Usually what happens is architects design and inhabit various distinctive spaces, but acoustic engineers work to dampen the sound. We felt we needed to get back to the fundamentals – tactility.”

Expanding the boundaries

“This project is like an octopus – there are new tentacles emerging all the time,” he added. “The production of architecture and music inform each other in surprising ways, challenging disciplinary notions of tradition and experimentation, expanding the boundaries of both practices.”

Dr Waugh said: “The beauty of the collaboration is the cross-fertilisation. I've built instruments before, but getting practical help with design has been incredible. It opens up new possibilities that we would not have thought about. What we are looking for is that 'surprising connection'.

“There is nothing new about adapting instruments to the space in which they are played. Informally, musicians have done this for centuries – instruments are shaped by the architectural spaces in which they are played, and *vice versa*. For example, early instruments were developed because they sounded good in theatres, while later ones were refined for the concert hall.

“In a sense,” Dr Waugh continued, “architecture is fixed, but music is portable. As a musician, whenever you go to a new venue you tune your instrument to suit it – be that tuning a violin or doing a sound check for electronic instruments.”

Mr Tsang added: “We are asking questions such as what is music, what is architecture and what are the common themes? In architecture we think about emptiness, in music you add and take things away to define the emptiness.”

“This collaboration is only now really evolving,” said Dr Waugh. “It wouldn't have happened five years ago. Sometimes it takes a positive happenstance of like-minded people coming together at the right time in the right place. Traditionally, there is no link between the two disciplines – now we keep wondering why did we not think of this before. Architecture and music complement each other in multiple ways.”

The collaboration is the first in a series of experiments relating music and architecture, and sets up a framework for future knowledge exchange activities that will take place at the Bi-City Biennale of Urbanism and Architecture (UABB) in Shenzhen and Hong Kong in December this year. ■



The HKU Percussion Ensemble and Hong Kong New Music Ensemble (HKNME) rehearsing a Harry Partch work in HKNME's studio.



Training workshops on the rule of law are organised for Liberal Studies teachers.

PRESENTING THE CASE FOR RULE OF LAW

A project by the Faculty of Law is helping secondary school teachers and students understand one of the cornerstones of justice in Hong Kong.

'Rule of law' is a term used by people across the political spectrum in Hong Kong, who attach very different meanings to it. Some believe it means following rules, others that no one is above the law. Even lawyers can struggle with the concept, as Mr Benny Tai Yiu-ting, Associate Professor of Law and an expert on the rule of law, can relate. "They may have some ideas about what it means but not have the kind of understanding to be able to put it in a structural framework and explain it to other people," he said.

At the urging of a lawyer friend, Mr Tai decided to do something about this deficiency. In 2012 he launched the Rule of Law Education (ROLE) project, in which Faculty staff and HKU law students go into secondary schools to help raise awareness.

"The rule of law has four levels," he said. "The first is the existence of law. The second is regulation by law. The third is limitation by the law – how the law is used to limit the powers of government. And the fourth level is about using

the law to achieve justice such as protecting fundamental rights."

This conception is conveyed through workshops, teaching kits and lessons taught by HKU

students – many of them future lawyers – who not only instruct senior secondary school students but also strengthen their own understanding and ability to explain the concepts. They also receive teaching training.



Many textbooks have quoted Mr Benny Tai's writings on the rule of law.



“ To maintain the rule of law, we need to nurture a rule of law culture in the community. ”

Mr Benny Tai Yiu-ting

Their lessons cover the relationship of the rule of law to such topics as same-sex marriage, police powers, copyright, judicial independence, judicial review and the rights of minorities – all of which have been in the news in recent years. Interactive discussions and activities are used to sustain student interest. The sessions are held at the end of the academic year and over the past three years, more than 6,500 secondary school students have participated.

In addition, Faculty staff have organised workshops on the rule of law for more than 350 Liberal Studies teachers from 80 schools. Teachers also can access the lessons taught by HKU students and other materials uploaded to ROLE's website (<http://www.role.hku.hk>).

Correcting misconceptions

These contributions all help supplement the Liberal Studies curriculum. Many textbooks have quoted Mr Tai's own writings on the subject, but there are also errors in the texts so ROLE provides another service by checking them for accuracy. HKU law students help identify the

errors, explained Ms Isabella Liu Wenting, who is helping administer ROLE.

"Some are basic factual errors but some are about differences in values. I think it is very encouraging that most of the publishers do follow our suggestions even though they don't reply to us directly," she said.

This year about 65 students joined ROLE including a few students from outside the Faculty, some for a second or third time. Edmund Leung, a fourth-year LLB student, said he was motivated to join in November, 2014 in the wake of the Occupy Movement.

"I wished to be able to provide secondary school students with a better understanding about the rule of law and how it is closely related to institutions in society such as the police and the courts. The concept of the rule of law has been misappropriated and misinterpreted to further political objectives and it is important to equip students with the knowledge to judge whether different formulations are reasonable or not," he said.

Aaron Chan, who has just completed his LLB, similarly aspired to improve understanding in society. "After I was admitted to the Faculty of Law, I realised that there is a huge gap between what the law means and what people think it means. For instance, some people think a judicial review only abuses and wastes government resources, without realising that it is an effective way to ensure the government is exercising its power properly," he said.

Mr Tai hopes the experience would not be just a one-off for students. "We hope that students, after they graduate, will continue to have this *pro bono* spirit when they become lawyers," he said. "To maintain the rule of law, we need to nurture a rule of law culture in the community."

He added that ROLE also expanded its audience this summer with sessions for community groups, and plans to organise a whole-day camp for secondary school students. ■



Fourth-year LLB student Edmund Leung teaching 'Interpretation of Basic Law' in a classroom.

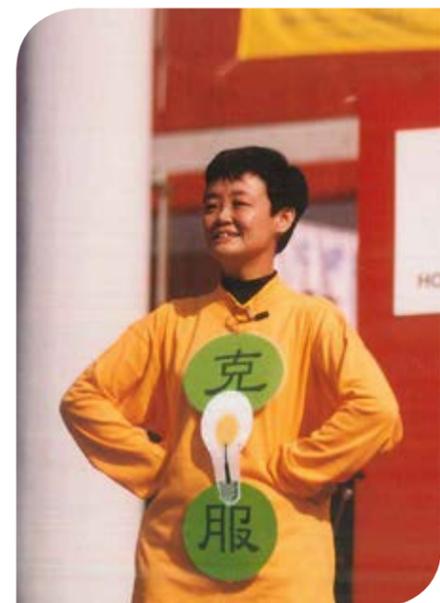


Oscar Tsoi uses interactive discussions and activities when teaching 'Selective Law Enforcement' in a school hall.



STUDENTS' ADVOCATE

The career path of Dr Eugenie Leung has taken several left turns, from prisons in Canada to Castle Peak psychiatric hospital to HKU. Now, as the new Dean of Student Affairs, she is helping students prepare to navigate their own paths.



Dr Eugenie Leung participating in a drama play to promote mental health when she worked in the out-patient clinic at Castle Peak Hospital.

Ask Dr Eugenie Leung what her unit, the decade-old Centre of Development and Resources for Students (CEDARS), does and she will tell you about the Tsing Ma Bridge.

The bridge is a major thoroughfare for bringing people and traffic to the airport. But it is not the only way of getting there. Similarly, while CEDARS has typically been seen as the main bridge between students and the University, it should not be considered the only channel of communication.

"We're a point of contact for communicating with students and reflecting what they need, but it doesn't mean students necessarily have to go through the Dean of Student Affairs to communicate with management," she said. "It all depends on where you are. If you are already on Lantau Island, then perhaps you don't need the Tsing Ma Bridge at all. Or you might want to take a helicopter instead of the bridge. If you know your way, if you know where you are, you

can take whichever route you like. But we do provide a direct and simple route."

Dr Leung's openness to different styles and different needs in part reflects changing times – the remit of CEDARS has evolved alongside the University's growing recognition of co-curricular activities as an important part of learning and the need to step up support for students in terms of housing, career and personal counselling, service activities, and special needs. But it also reflects her acceptance of the unconventional.

Using the Tsing Ma analogy, Dr Leung could be said to have walked over the hills, stopping along the way to plant new seeds, before arriving at her destination of HKU.

The indirect route

A clinical psychologist by training, she graduated from the University in the early 1980s and, after

“If you know your way, if you know where you are, you can take whichever route you like. But we do provide a direct and simple route.”

Dr Eugenie Leung

working for five years with young offenders in Hong Kong, headed to Canada where she worked for another five years in the reception centre of a maximum-security prison.

She returned to Hong Kong in 1992 and had to wait 10 months for an opening for a clinical psychologist. During that time she volunteered at a hotline and worked overtime comforting people after the New Year's Eve tragedy at Lan Kwai Fong where 21 people were crushed to death.

In 1993 she joined Castle Peak Hospital, working with psychiatric patients in the out-patient clinic. She stayed there until 2006, during which time she also ran a mental health education project and became a media spokesperson on psychological matters, before joining HKU as the Director of Counselling and Person Enrichment.

It was a sharp turn in a new direction, but Dr Leung said there was a thread running through these different experiences. "I saw a lot of young adults, such as university students, who were depressed and had other problems and I hoped that I could help with early detection and prevention," she said.

Her activities were not confined to counselling, though. She encouraged whole person development to help students cope with stress, time management and other demands. In recent years she also devoted increasing time to special educational needs support, which covers mental illness as well as physical disability and learning



Dr Leung (second from right in the back row) joined HKU as Director of Counselling and Person Enrichment in 2006 and became Dean of Student Affairs in early 2017.

and developmental disability. She has also been involved in HKU's efforts to make the campus more accessible. "We are sending a good message that we are inclusive and welcoming," she said.

New responsibilities

In early 2016 Dr Leung became the Acting Dean of Student Affairs and had to face new challenges and novel tasks. She expanded the umbrella further by providing the first all-gender toilet on campus within her offices. This attracted media attention, but again sent the message of inclusion and diversity.

Since being confirmed as the full-time Dean in February this year – the first woman to hold that

post – Dr Leung said her work is continuing as before: "The only difference is now I am responsible and accountable for everything."

That includes ensuring the smooth running of CEDARS as a one-stop shop for students so they can get support across a range of areas to support their learning outside the classroom – whether it occurs in the student halls, during service activities, with people from different backgrounds or elsewhere. This reflects the University-wide goal of recognising all learning as important, whether it is credit-bearing or not.

"CEDARS provides a student service plus co-curriculum plus student learning place. We always have student learning in mind," Dr Leung added. ■



Dr Leung welcomed first-year students at the Inauguration Ceremony for New Students as the Acting Dean of Student Affairs last year.



Dr Leung (fourth from left in the first row) with the staff from the Centre of Development and Resources for Students (CEDARS) and student helpers on the Registration and Academic Induction Day 2017.



Sex Workers Rights Movement is a worldwide campaign to promote and protect sex workers human and labour rights.

WORKING HARD FOR A LIVING

Sex work as a job like any other is the focus of research by Dr Julie Ham in the Department of Sociology.

How do sex workers decide where to ply their trade? How do they feel about other sex workers? And what do they do when they decide it is time to retire?

Dr Julie Ham has been posing these questions to sex workers in Vancouver and Melbourne, in research that seeks to fill a gap she identified after working with women's rights organisations and migrant workers' organisations in her native Canada. There, the stigma attached to sex work had created what she called 'interesting tensions' that stymied constructive discussion.

"With women's organisations the discussions were very polarised between those who see sex

work as exploitation and those who see sex work as work. With migrants' organisations, there was a kind of silence about sex work," she said.

Dr Ham therefore turned to the women themselves, interviewing 65 sex workers about their lives and attitudes for her book, *Sex Work, Immigration and Social Difference* published last year.

Many of the interviewees were of Asian-descent or other minorities, whom she felt were particularly susceptible to misperceptions. "There is a lot of mystique conjured up about this group of women. In anti-trafficking campaigns, for example, Asian women are

portrayed as the exoticised 'other'. It almost fetishises a perceived vulnerability or helplessness," she said.

Needless to say, the women saw themselves in very different terms. They were largely in the sex trade by choice or because they could not find other work, and most of them were citizens or permanent residents of their countries, not temporary migrants. Many of them also liked their work or at least found it suited their lifestyles – some even decided to work within the vicinity of their children's school, albeit at a discrete distance.

"What they're concerned about is making money, keeping safe, supporting their families.

So their goals are not all that different from any family's goals," Dr Ham said.

Rescue agenda

This was seldom recognised by organisations that purportedly wanted to help women, though. The starkest example concerned strategies for exiting the sex trade, which was the focus of another study by Dr Ham and Dr Fairleigh Gilmour at the University of Otago.

They found that sex workers wanted to be recognised as workers who are planning for their future. "Many of them conceptualised exiting the industry as an eventual career transition," she said. But those who wanted to help them often had a different agenda.

"Most exiting interventions are ultimately based around the idea of rescuing women from the industry – 'we will swoop in and we will rescue you and then you will be safe.' There are going to be problems if workers see it one way but the dominant social service model continues to develop programmes based on rescue. Because what that really says is that the worker can't be trusted to make her own decisions."

Organisations representing sex workers have been fighting against the rescue mentality in places such as Thailand and Cambodia, while acknowledging that trafficking in sex workers

and women needs to be stopped. "Thinking that everyone in sex work is a victim and needs to be rescued is not going to stop trafficking," Dr Ham said.

Safety first

Safety nonetheless is a major concern to sex workers, but again, official prescriptions do not always line up with what the women want. Many of the interviewees felt safer when there were other sex workers nearby that they could rely on if there was trouble. They also viewed other sex workers largely as allies who could advise on such things as how to screen clients and what to charge (although a minority viewed other co-workers as risks to be managed or to keep at arm's length).

But these relationships are complicated by legal regimes. In Melbourne the sex trade is legalised through a licensing framework. But in Canada, and also Hong Kong, sex work has an uncertain legal position: it is not illegal but the activities around it are often criminalised, for instance assisting a sex worker in their business. This makes it more difficult for workers to join forces.

Dr Ham has shared her findings with organisations and has a clear goal. "Our understanding of sex work must be grounded in workers' day-to-day realities, so that rather than trying to imagine what workers are concerned

about, we can find out from them what is going on," she said.

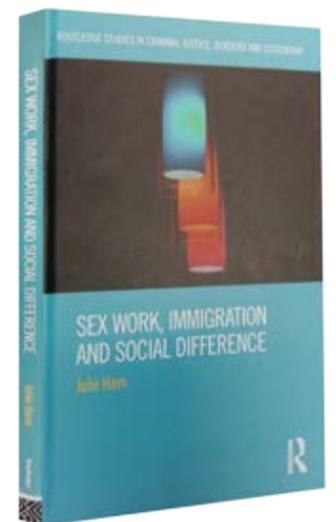
On Hong Kong, Dr Ham, who came to HKU in 2015, has started a project looking at the concerns of non-Chinese sex workers here. She is also doing a project on domestic workers – "another gendered industry," she said, in collaboration with the Asia Pacific Mission for Migrants.

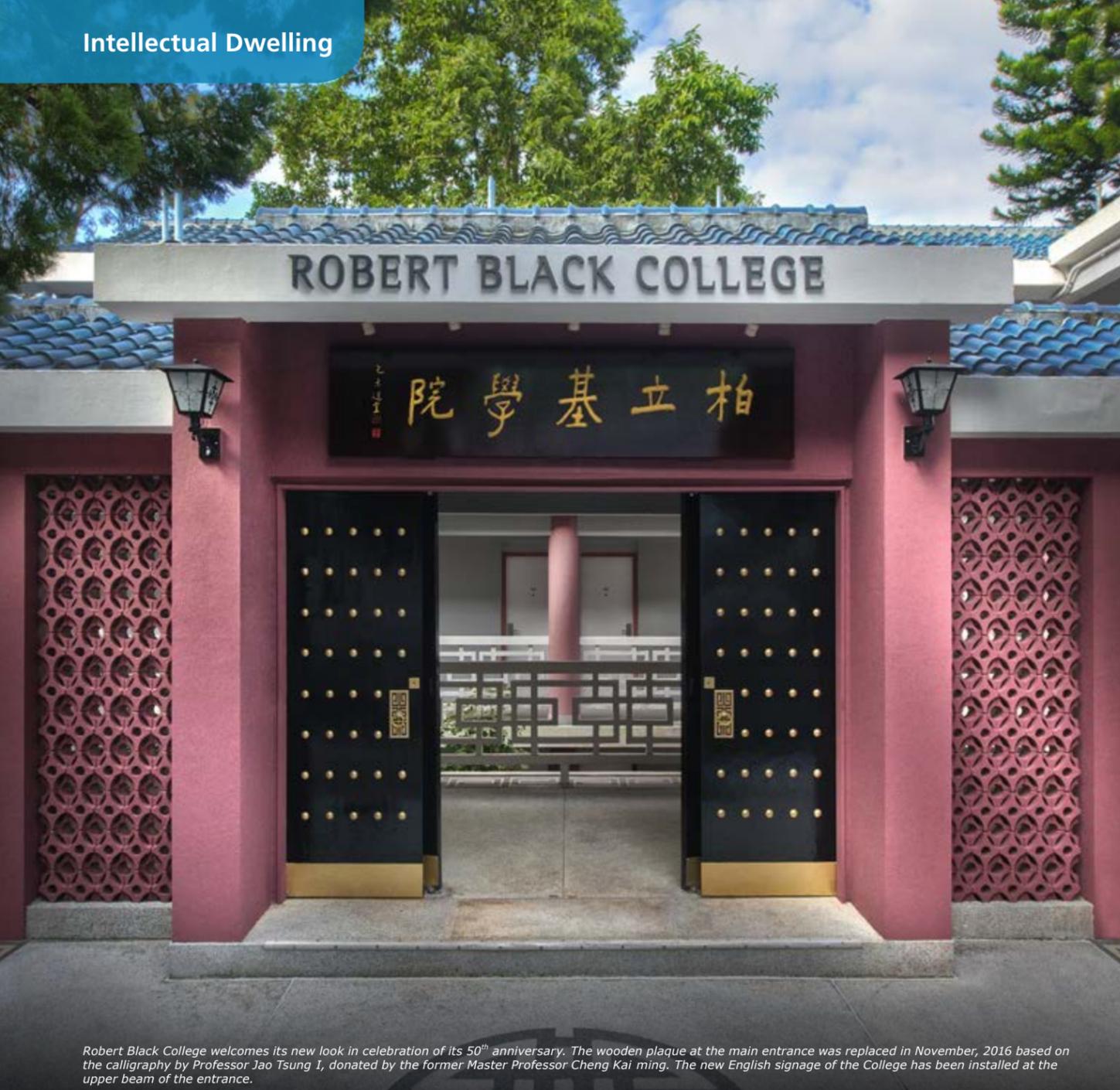
Sex Work, Immigration and Social Difference is published by Routledge. ■



“What they're concerned about is making money, keeping safe, supporting their families. So their goals are not all that different from any family's goals.”

Dr Julie Ham





Robert Black College welcomes its new look in celebration of its 50th anniversary. The wooden plaque at the main entrance was replaced in November, 2016 based on the calligraphy by Professor Jao Tsung I, donated by the former Master Professor Cheng Kai ming. The new English signage of the College has been installed at the upper beam of the entrance.

A HAVEN FOR SCHOLARLY EXCHANGE CELEBRATES ITS GOLDEN ANNIVERSARY

Opened in 1967 with the aim of providing a meeting point for outstanding local and global academic minds to enjoy each other's company and exchange ideas, Robert Black College is celebrating its 50th anniversary.



“ [Robert Black College] puts visiting scholars directly on-campus – and far from Hong Kong’s madding crowds – so it is quiet and offers plenty of scope for reflection and to work in peace. ”

Professor C Y Jim

The Board of HKU’s Institute of Oriental Studies came up with the idea for an academic college of residence for outstanding overseas scholars and elite local research students in 1957. The University’s Vice-Chancellor at the time, Sir Lindsay Ride followed up the idea, and then Sir Robert Black, Hong Kong Governor and Chancellor of HKU oversaw the start of construction in 1963.

Said Mrs Annie Bentley, Chair of the Robert Black College (RBC) Management Committee: “Sir Robert Black wanted it to be a place of academic energy and vigour, in both the Chinese and Western context. Remarkably, through half a century it has managed to remain – and will continue to be in future years to come – an oasis of tranquility and charm in an increasingly busy and fast-paced campus.”

The College is as famous for its blue-glazed tiles and architecture – which are reminiscent of the Tang Dynasty and designed by renowned local architect Sir Szeto Wai – as it is for being a tranquil haven from the city with quiet courtyards and covered walkways. Major donors to the College were Sir Shiu-kin Tang and John Swire and Sons. The latter still supports the College’s nine Swire Scholars – all top research students at HKU – jointly with funding for accommodation from the College.

“The scholarships are very prestigious,” said RBC Assistant Master Mable Tang. “There are a total of nine scholars who stay at the College for a maximum of three years. It’s not a cash scholarship, it is accommodation. They represent the best of the best from across the Faculties.”

Former Swire Scholars include film director Ann Hui On-wah, former Director of HKSAR’s Social Welfare Department Dr Stephen Frederick Fisher and internationally renowned chemist Professor Vivian Yam Wing-wah.

The current and eighth Master of the College is Professor C Y Jim, HKU Chair Professor of Geography, and himself a Swire Scholar in the 1970s. He describes his duties as two-fold:

“One, managing what is basically a boutique hotel for visiting academics, and two, providing pastoral care for the nine Swire Scholars.” He also helps organise regular functions, inviting people to give talks, workshops *etc.* Those functions include the regular Ambassadors Nights for HKU academics and outside guests, for which Swire Scholars choose the topic for the talk, and lead the question and answer session afterwards.

“RBC is special to HKU as it is operated by the University itself,” he said. “Guests can go to hotels but most opt to stay here where there is a scholarly ambience and a chance to meet other academics – both visiting and the Swire Scholars. It puts visiting scholars directly on campus – and far from Hong Kong’s madding crowds – so it is quiet and offers plenty of scope for reflection and to work in peace.

“We have lots of returning guests – some even specify a favourite room for their return visits. Some visiting scholars stay months, and they are welcome to stay longer.” Famous guests include: Nobel laureate Physics Professor Daniel Tsui Chee; HKU’s first Chinese Vice-Chancellor, the late Professor Rayson Huang; Lady Pamela Youde, wife of the late Hong Kong Governor

Sir Edward Youde; former Vice-Chancellor Professor Wang Gungwu; and Mrs Barbara Black Rust, daughter of the College founder and former Hong Kong Governor Sir Robert Black.

Asked which his favourite part of the College is, Professor Jim said: “It has to be the courtyards – they are lovely in both natural and cultural terms. The greenery is beautiful and we see amazing wildlife there including squirrels, civet cats and all sorts of birds.”

Robert Black College has put together four events to mark the golden anniversary, organised by the Chairman and staff. Mrs Bentley has been on the board for 12 years and Chair since 2011. She is also an HKU alumna, graduating in 1971, just four years after RBC opened. Asked to sum up the philosophy behind the College, she refers to two large embroideries which sit side by side in the RBC’s Swire Lounge.

“One is a flying Apsara, a mythical image found in the Dunhuang murals on the Silk Road. These caves are also known as the Thousand Buddhist Grottoes and contain some of the finest examples of Buddhist art spanning more than a



Mrs Barbara Black Rust (fourth from left in the first row), daughter of Sir Robert Black, was invited to the Unveiling Ceremony at the main entrance on November 29, 2016.

thousand years. The other is Guan Gong, a famous general of the Three Kingdoms Dynasty. He represents integrity and loyalty, and he is venerated even by the Hong Kong Police Force.

“Guan Gong embodies much of Confucian philosophy of the dominant Han majority people in central China, and the Apsara presents Buddhist art and culture of the minority tribes in Asia Minor and western China,” said Mrs Bentley.

There is also a third picture in the room – an embroidered reproduction of Gustav Klimt’s work *The Kiss*, whose predominantly gold colouring symbolises the 50th anniversary. “The first two pictures basically represent the Orient, while the Klimt could not be more Western,” said Mrs Bentley. “Although East meets West is a cliché, it is still what constitutes an essential element of Hong Kong. That is beginning to change, but at this moment it remains true. A happy meeting of East and West is what we want Robert Black College to be.

“Eighteen months ago, when we began planning the golden anniversary celebrations, I started thinking about the College’s beginnings and it struck me as quite incredible that Swire and Sir Shiu-kin Tang decided to donate money for the creation of such a place just prior to the 1967 riots which was a very turbulent time for Hong Kong. However, their faith in Hong Kong and HKU was well-placed and we are fortunate to have such a wonderful stage for the convergence of intellect and culture.”

Anniversary events

The first event to celebrate the College’s 50 years was ‘Forward We GOLD’, an anniversary dinner, organised by the Swire Scholars Association in January. That was followed in February by *Good As Gold Opera Evening*, a concert celebrating Western opera and featuring singers from the London Festival Opera, alongside three local opera singers and a



The two large embroideries featuring a flying Apsara and Guan Gong respectively (left) and the embroidered reproduction of Gustav Klimt’s work *The Kiss* (right) in the Swire Lounge of the Robert Black College represent Mrs Annie Bentley’s great aspiration of the College being the cultural convergence of East and West.

pianist, and 15 undergrads from the university choir. In March, a premiere cantonese opera was performed to celebrate Heritage Cantonese Opera (HCO) – *Monk Biancai Releases the Demon* is sung in the Guilin vernacular and receded in popularity against repertoire sung in the Cantonese dialect. “We had to have Chinese and English subtitles,” said Mrs Bentley. “But we chose HCO as it became obsolete in Hong Kong shortly after the 1960s. Veteran Law Kar-ying led the concert and is a top singer of this kind of opera, but he is approaching 70, so who will keep the tradition going? We wanted to choose something special for the RBC concert, to show HCO to a new audience. Perhaps we can help revive it.”

As important to Mrs Bentley as the content of the events were the audiences invited to enjoy them. “For the *Good As Gold Opera Evening* concert we had not only HKU students, alumni, academic and administration staff, but also choirs from some of Hong Kong’s best secondary schools. We found a sponsor to give free tickets to schools, who then auditioned their choir members to see who would benefit most from attending the concert. We also sponsored a charity supporting children with epilepsy to come.

“For the HCO concert the audience list included 75 students from schools where Cantonese opera is part of the curriculum. The make-up of the audience is relevant to what I want RBC to achieve. It is all about bringing town and gown together in the same way the College brings people together.”

Other events include a talk by Hung Leung Hau Ling Distinguished Fellow in Humanities Professor Lung Yingtai scheduled for October, and a joint exhibition with University Museum and Art Gallery scheduled to run from December, 2017 to February, 2018.

But perhaps the most striking sign of renewal is the make-over to the main entrance of the College. The old wooden signage above the main entrance has been replaced with a new one, based on calligraphy by Professor Jao Tsung-I and engraved by renowned wood carver Mr Cheung Sing-hung. The new plaque was donated by the former Master Professor Cheng Kai-ming. New English signage has also been installed on the upper beam of the entrance. Mrs Barbara Black Rust officiated at the unveiling ceremony in November, 2016. ■



Good As Gold Opera Evening, performed by three soloists from the London Festival Opera, three local soloists and a local pianist, and a 15-member choir from HKU’s Music Department, was held at the Grand Hall, HKU, in February, 2017.



Monk Biancai Releases the Demon performed by a troupe of more than 15 performers and 10-member Cantonese orchestra led by the renowned artist Mr Law Kar-ying, was staged at the Grand Hall as one of the events celebrating 50 years of the Robert Black College.



Professor C Y Jim (centre) and the Swire Scholars taken at the ‘Forward We GOLD’ dinner in January, 2017.

Andrew Hoang

BA (Honours) in philosophy and criminology from Western University, Canada. MSW from Wilfrid Laurier University, Canada. Now pursuing his doctorate in HKU’s Department of Social Work and Social Administration. Also, Chairperson of Swire Scholars Association.

At Robert Black College, something new – an idea, an event, a curiosity – is always on the horizon. It is a privilege waking up each morning, knowing that you could potentially discuss and learn something exciting over breakfast with your fellow College mates and visiting guests. At the same time, there are enduring aspects of the College that bring a sense of peace and belonging – its tranquility, the friendliness and devotion of the staff, and the several species of birds whose songs signal the start of a new day. I start and end each of my days here feeling very lucky, and very grateful.

Furthermore, academic, professional and personal lives can be nurtured and come alive when you have a space on campus dedicated to bringing both developing and established scholars together.

Brian Chan

BSc in HKU as an undergraduate, double major in Physics and Astronomy. He is currently an MPhil student in the Department of Physics, focussing on Astrophysics.

I love the College environment and the beautiful Chinese style architecture – particularly the antique rooftop. The residents here are usually extremely bright and intelligent researchers, for example professors from top universities or research journal editors, who are nice to chat with. It is literally the best living environment you can find on campus.

Rachel Yiu

Pursuing a double degree at the Li Ka Shing Faculty of Medicine in MBBS and an intercalated PhD (MBBS/PhD), and expecting to graduate in 2020. The PhD is in Surgery, specialising in paediatric liver diseases.

I am quite an explorer and simply enjoy life, meeting new people, exchanging new ideas and cultures on both casual and academic grounds. To me, being one of the College student ambassadors is a once-in-a-lifetime experience where you gain valuable ideas, advice and friendships, and challenge yourself to go beyond your major with an open mind about the world we’re living in. I like all the people who make the College what it is. From our Master, Assistant Master and College staff to my fellow Swire Scholars and guests, they are the pillars and bricks on which the College is built!

Words from loyal guests

Professor Liaquat Hossain

Faculty of Education, HKU
A loyal guest since June, 2013, when he stayed at RBC while being interviewed for a Chair position at HKU. He has since stayed several times.

Coming from Australia, I was concerned about living in such a busy city as Hong Kong. The Robert Black College made the transition so much easier. You are on campus, so you are in the heart of things, yet you are in a peaceful place, with beautiful view of the mountains and harbour and you feel close to nature.

The breakfasts are a great time to meet visiting professors and scholars and to exchange ideas, form informal cliques, talk about each other’s work and swap impressions of Hong Kong and HKU.

Professor Alison W Conner

School of Law, University of Hawai’i at Mānoa
A loyal guest since the 1990s.

I first saw Robert Black College in the mid 1980s, when I was teaching at HKU and we would put guests up at the College. I loved the place and then in the mid 1990s when I went to Hawaii I returned as a guest myself. I’m a big fan – it is a community, which is the whole point of a residential college. The community and academic atmosphere is unique – while you are staying here, be it short- or long-term, you are viewed as a member of the University.

Across the board, the staff are outstanding – from the office, the dining room, through house-keeping to the groundsman – they are kind and attentive and combine to create a wonderful atmosphere. My feeling is that while HKU is constantly changing and expanding, as a university should, the Robert Black College has a great sense of continuity and calm.



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