

# THE SCHOLAR

## BEYOND THE EARTHQUAKE

Working with the  
enterprising  
women of Nepal



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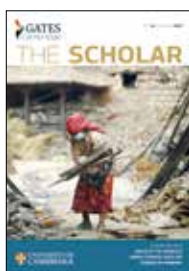
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*The Scholar* is the publication of the Gates Cambridge community. Articles that offer a window into the lives and work of Gates Cambridge Scholars and Alumni or articles that tackle large interpretive questions relevant to the Gates Cambridge mission are particularly encouraged. Highly focused contributions are welcome, but preference will be given to submissions that are of interest to a diverse cross-section of readership in more than one discipline of study. Contributions are subject to editorial approval. Ideas expressed are those of the authors alone.



The Gates Cambridge community fosters leadership and a desire to enact positive change in the world in a variety of fields and through a variety of means.

Within the pages of this magazine, we have showcased merely a subset of the excellence of multidisciplinary work that scholars and alumni have pursued during and after their time at Cambridge. We received a superb array of pitches this year from Gates Cambridge scholars and alumni at different walks of life, more than we possibly had space to include.

Themes arose within the array of articles this year. For example, two of our authors write of shedding light on ignored contributors to the economy: Hosna Jahan argues for the recognition of unpaid activities (primarily completed by women). Mi Zhou makes a parallel point regarding workers in the informal economy in Pakistan.

Several scholars also are working towards rediscovery of past cultures: Callie Vandewiele writes of a revived art of weaving by a single *Q'eqchi'* woman in Guatemala. Sara Morrisset reveals evidence of a previously obscured thriving culture in the Later Intermediate Period of Peruvian History. Antonia Ruppel describes the process of reviving Sanskrit – a language previously only used to command an army, not function in modern life.

In our first feature article, Alanna Just writes of the Hemlock Transcripts – interviews conducted by the Hemlock Aid in Dying (AID) in Canada – and the insights these conversations with those desiring medical assistance in dying (MAiD) offer, especially regarding possible reasons why someone might consider MAiD.

Wilatluk Sinswat writes of surviving the April 2015 Ghorka Earthquake in Nepal, which had a magnitude of 7.8, and the strength and determination of the survivors. With the desire to help provide income-generating opportunities for local women, Wilatluk's enterprise aims to aid the process of rebuilding a community and

working with Nepalese women to create crafts for domestic and global markets.

The Gates Cambridge community is especially strengthened by a sense of solidarity and shared purpose. We highlight some of the varied projects and organisations that have grown out of internal Gates Cambridge collaborations, such as the e-democracy work by Halliki Voolma and Geo Saba; Flavalley, which provides coding education for marginalised youth; We Are Sister Stories, the platform for embracing women and girl's everyday strength; and Simprints, who are creating an opensource software and biometric hardware as mobile tools for identification to be used by NGOs, governments, and researchers around the world.

The magazine showcases only a portion of the ever increasing impact of our scholars and alumni and efforts for social change and education impacting the world. Our scholarship body consists of over 1,500 scholars from over 100 countries. With each passing year, our scholars and alumni and the impact they are having on the world strengthens. From current scholars studying at Cambridge to our alumni network, the geographic reach and multidisciplinary impact of the Gates Cambridge community continues to grow and provides a positive impact in a wide variety of fields.

We are grateful for the contributions of our authors included within, for the support of the Gates Cambridge Trust, and the work of the editorial team. Without the dedication of our authors and editors and support of the Gates Cambridge Trust, this magazine would not be possible. I hope you find this edition of *The Scholar* to be informative and thought-provoking.

Editor-in-Chief  
**Annika Pecchia-Bekum**  
2014, USA, PhD Medical Science

## (IM)MOBILISATIONS:

# Freedom of movement and the contested urban space of Jerusalem

Global connectivity appears at odds with the increasing securitisation of borders. While global elites move with ease and virtual space appears to take on more importance than geographical territory, states increasingly inhibit the movement of unwanted outsiders. My research examines this trend on an urban scale, using the contested city of Jerusalem as my case study.

This year, Israel celebrates fifty years of the 'reunification' of Jerusalem. For the 300,000 Palestinian residents of the city, this is a sombre anniversary because it marks half a century of life under Israeli occupation without full citizenship rights. Their unresolved status in the city is evidenced especially in the realm of everyday mobility.

Palestinian areas of East Jerusalem have suffered from infrastructural neglect for decades. Roads built in these areas were mainly intended to serve Israeli settlements, cutting off local connections and thus immobilising Palestinians to ease Israeli movement. The Israeli Separation Wall, built a decade ago, cuts entire Palestinian neighbourhoods off from the rest of the city, isolating residents and thereby undermining their hope for long-term inclusion.

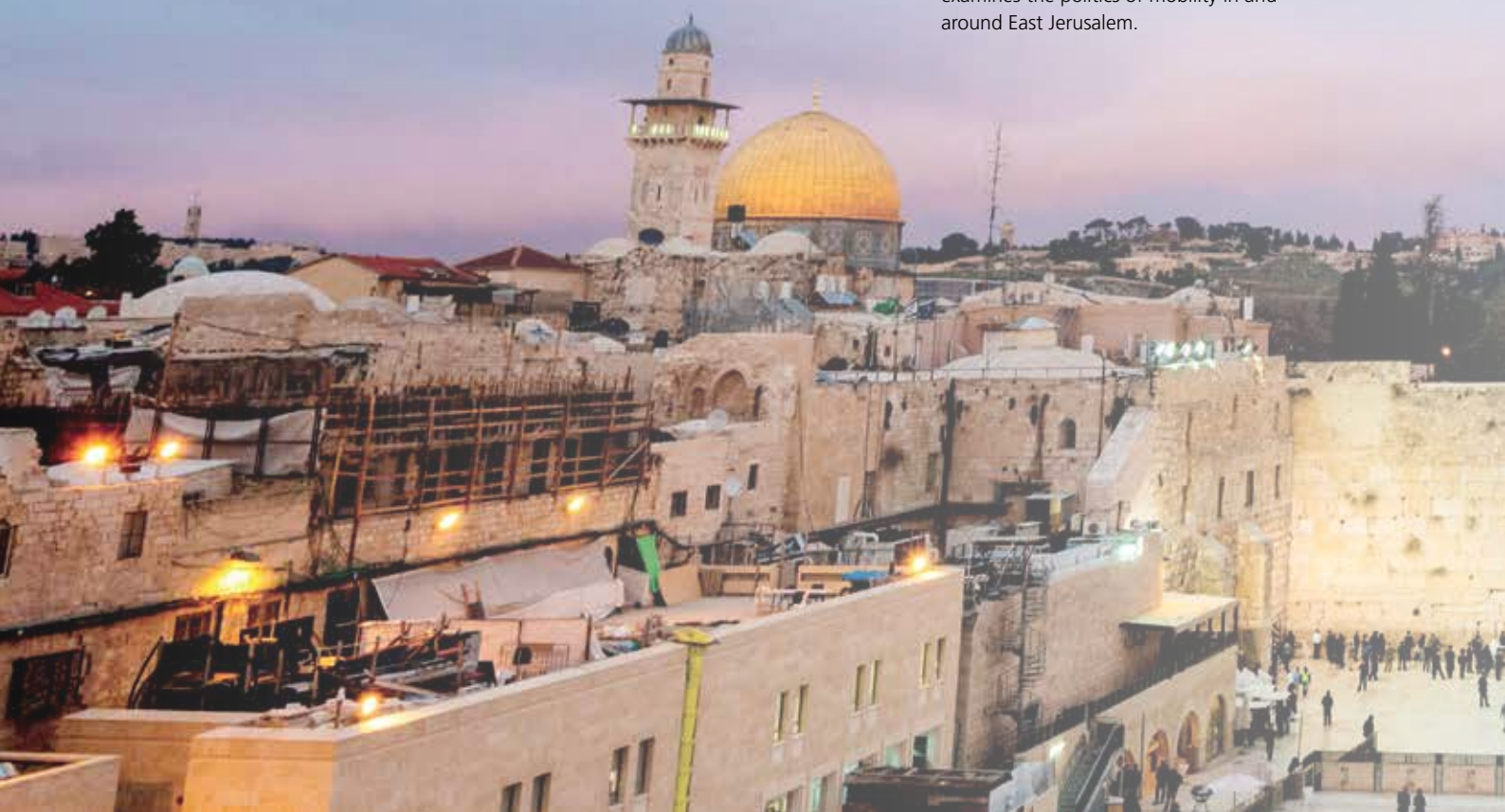
While some Arab areas of the city are cut off by the Israeli Separation Wall, others have been included in urban renewal projects in recent years. More than neutral upgrades, infrastructural projects like the new Light Rail unfortunately also serve to (quite literally) cement the Israeli occupation of the city's East. The new mobility permits Palestinians to move through the city with more ease – but on Israeli terms, and under highly securitised conditions. Thus, paradoxically, both hindering and enhancing East Jerusalemites' mobility undermines the possibility of a Palestinian capital in the city. Such ambiguity can also be seen in 'non-conflict' cities, where improved public transport links may appear to benefit the local population but in the longer term lead to gentrification and displacement.


Parts of this Palestinian mobility dilemma echo debates over freedom of movement of non-citizens on a global scale. Here too, the regulation of mobility is a technique of power – a means of determining who is included and who is excluded. Borders are reinforced and movement is restricted in times of political tension and fear. When states are willing to include outsiders, they prefer regulating immigration through highly securitised channels, rather than allowing for full freedom of movement.

**Hanna Baumann**  
2012, Germany, PhD Architecture


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Biography: Hanna Baumann is a PhD Candidate at the Centre for Urban Conflicts Research. Her dissertation examines the politics of mobility in and around East Jerusalem.






*Ever since I was fourteen, I wanted to go to college. So when I got old enough and got tired of working in the factories, I decided to go. I received my associate's degree, but right after, I had open heart surgery. I lost my insurance, and I had to choose between buying my medicine and paying my rent. I chose to buy my medicine, which made me homeless.*



*Four and a half years ago, I got hit by a train. I was working on my dad's car late one night, and I went around the tracks, and it just happened so fast. It was there in seconds. I spent three months in a coma. I had thirteen surgeries altogether. I've got 64 screws in my body. I owe \$875,000. No one could ever pay that kind of debt off.*



*For me, I had to swallow my pride and do what I had to do for me and my kids, and not even for me, for my babies. Because they look up to me as a role model. I am their mother. I'm all they've got.*

## Street-side voices: De-stigmatising homelessness through empathy

Walk the streets of Cambridge and you'll find a story on every corner, from the vendors who wave Big Issues in the air to a vacant stoop carrying the mangled neck of an acoustic guitar: one person's former livelihood. The stories are always there, they just need an audience.

In a homeless shelter in my hometown of Lawrence, Kansas, I heard similar stories from the guests about the cause of their homelessness: a relationship had failed, a job was lost, or a medical condition had cost someone everything. One guest was a single mother of four who escaped an abusive relationship; another a man just over twenty years old whose parents dropped him off at the shelter. Still more chose between paying their medical bills and paying for housing.

Meanwhile, in Cambridge, England, I have found that the City Council ensures that the night shelter is well-supplied; there are a handful of groups that offered free meals each day; and very few women and no children stay at the shelter. However, the causes of homelessness are similar to what I heard in Kansas, with an increased focus on relationships. A person's partner may have left them or passed away, and they were unable to make

ends meet on their own. Others seeking help are turned away by family and friends. While these stories are difficult to hear, guests staying at Jimmy's (one of the only 24-hour shelters in Cambridge) are happy to share them if it means a chance at being viewed as humans and not just a statistic or problem to solve. They seek to remove the negative implication of the phrase "homeless people" and go back to being "people".

Shelters provide temporary relief – here, guests have hot meals, private rooms, and compassionate staff. Inspiration is scrawled on the whiteboards: "your value doesn't decrease based on someone's inability to see your worth." But here is overshadowed by uncertainty of whether guests will find housing once their time at the shelter has ended. Some will move on to subsidised housing and find employment. Others will eventually return to the streets,

and their stories will continue. Their fight to be heard requires nothing more than an audience to listen and to care.

I am working with the Cambridge Homeless Outreach Programme to share the stories, perspectives, and portraits of homeless men and women at Jimmy's Shelter through a photo series and gallery. The gallery will include photos taken by Jimmy's guests on disposable cameras to shift the focus to what is most important to them, from material possessions to the temporary stability that different organizations in Cambridge provide.

**Alex Kong**  
2016, USA, MPhil Pharmacology

Biography: Alex is studying antibiotic resistance in *Streptococcus pneumoniae*. His passion for service and helping the homeless stem from involvement with his hometown's local shelter.



# (HUMAN) RIGHTS COME ALIVE

Working together to promote  
and protect human rights

**The UN Human Rights Council enters its second decade this year amidst growing human rights challenges around the world. To help address them, the Council is looking to strengthen cooperation and capacity-building efforts to bring about concrete improvements on the ground.**

Over a decade ago, Sakaodeuan Somkate tested positive for HIV. She returned to her hometown in northern Thailand to receive treatment, only to be stigmatised by healthcare personnel at the local hospital. Disrespect and exclusion was the norm, with a separate room and bed reserved for HIV patients.

Today, the situation has completely changed. The Thai government, United States Agency for International Development (USAID) and Joint United Nations Programme on HIV/AIDS (UNAIDS) have instituted a comprehensive stigma-reduction initiative. The initiative conducted a survey to assess stigmatisation. The resulting training programme designed to ensure “zero discrimination” has made an extraordinary difference for Sakaodeuan (now an HIV peer educators) and for others living with HIV. Now, the rights and dignity of people living with HIV are upheld. The programme is being expanded to other hospitals in several provinces.

This story is a powerful illustration of how technical cooperation and capacity-building can impact the protection and promotion of human rights. The goal is to educate government officials, business people, professionals and other relevant actors to enhance their knowledge on human rights, which can then be applied in their work, helping to end discrimination and prevent human rights abuses.

This is especially important for women, children, people with disabilities, people living with HIV and others who suffer from discrimination on a daily basis. While human rights crises make global headlines, these rather “routine” cases of discrimination often escape the world’s attention.

The international community has a crucial role to play. Many countries intend to embrace international human rights standards. However, they sometimes lack the practical know-how to translate those standards into concrete improvements on the ground. This is why Thailand and a core group of countries have co-sponsored a yearly resolution on the enhancement of technical cooperation and capacity-building at the UN Human Rights Council. The resolution received overwhelming support from more than 120 countries. As a result, the Council will hold a panel discussion in June 2017 to reflect on the challenges and identify ways forward. With a true spirit of cooperation, as demonstrated by the joint stigma-reduction initiative, countries can build productive partnerships to promote equality and human dignity.

## **Pongsiri Vorapongse**

2011, Thailand, PhD Politics and International Studies

Biography: Dr Pongsiri Vorapongse is a diplomat covering human rights issues at the Permanent Mission of Thailand to the United Nations in Geneva.

*\*Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of any agency of the Royal Thai Government or the United Nations.*

# Fighting for recognition

Women around the world are still fighting for recognition for their work: Hosna Jahan (2013) on the unrecognised contribution of women to the economy and Mi Zhou (2004) on informal workers in the textiles and garment industry, most of whom are women.

## CHORE, NOT A JOB?

Estimating women's contribution to the economy

**A large part of economic activities, predominantly undertaken by women in the developing world, such as household chores, care and agriculture work, remain unaccounted for due to the limitations of conventional economic measures.**

Conventional measures of economic productivity, such as Gross Domestic Product (GDP), fail to capture the range of economic activities predominantly undertaken by women. The exclusion of unpaid work is a major shortcoming of existing national accounting systems in many countries. This underestimation not only undermines women's social status and economic contribution, but also misleads policymakers influenced by these data.

Our book, *Estimating Women's Contribution to the Economy: The Case of Bangladesh* (2015), surveyed members of 5,670 households across Bangladesh to understand their use of time and its implications for the System of National Accounts (SNA). The existing SNA counts market-bound production outputs and excludes non-marketed services produced by household members for their own final consumption. This leaves various unpaid activities – mostly carried out by women – out of the national accounting system, even when their products and services are similar to those produced for market.

Our study finds that on a typical day in Bangladesh, women work three times longer on non-SNA tasks. This pattern is similar in both rural and urban areas and is consistent with studies from other South Asian countries. The estimated value of women's unpaid non-SNA activities ranges from 75% to 85% of Bangladesh's GDP, representing 2.5 to 3 times the income women currently receive from paid work.

Ignoring unpaid work perpetuates unequal power relations between men and women. In developing countries, such as Bangladesh, this lack of recognition renders much of women's productive activities invisible. The integration of unpaid work into a satellite national account can help policymakers acknowledge the importance of unpaid household and family work for economic development, and formulate effective policies that improve women's market participation as both producers and consumers.

### Hosna Jahan

2013, Bangladesh,  
MPhil Development Studies

Biography: Hosna Jahan works as an economic and social policy researcher in Bangladesh.

## THE INVISIBLE MAKERS

Informal economy and the international garment industry

**Efforts to tighten up the international supply chain in the textile and garment industries are failing workers in the informal economy in Pakistan, with home-based women the most affected.**

Rubab, a 15 year-old girl, sits in Orangi Town, Karachi, affixing beads on a piece of cloth for which she hopes to be paid £0.19 per piece. Around the corner, a group of three women are doing the same. Each shirt earns them £0.12. Across town, in an unregistered factory, workers – mostly men – make t-shirts and tracksuits for export to other parts of the world. The men can make £0.01 to £0.04 per piece.

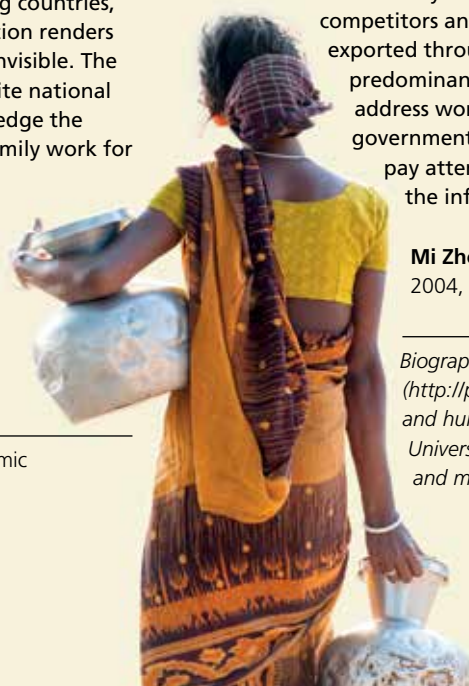
These are just some of the workers in Pakistan's vast informal economy. International Labour Organisation (ILO) estimates that 60% of workers globally are employed informally. Although Pakistan has set statutory minimum wages since 1961, a majority of workers are substantially underpaid. In Karachi, the law requires that workers paid per piece earn the equivalent of £0.52 per hour. I interviewed, in collaboration with the ILO and the Home-Based Women Workers' Federation, over 400 home-based workers and workers in informal factories to gather data on the type of work, duration, and actual wages. We found that home-based workers in the garment sector earn an average of £0.41 per hour, for which the most common form of work (cropping or cutting loose threads) pays just £0.14 per hour.

Informal economy workers work in conditions far below national and international labour standards. Actors in the informal economy are often multifunctional and have multivalent relationships with each other. Workers are simultaneously sellers and employers, buyers are competitors and middlemen, and goods are informally exported through the diaspora. Home-based workers, predominantly women, are the worst paid of all. To address work condition deficiencies, the Pakistan government and the international community must pay attention to the most vulnerable workers in the informal economy.

### Mi Zhou

2004, Australia, PhD English

Biography: Mi Zhou founded Praxis Labs (<http://praxis-labs.weebly.com/>), a human rights and humanitarian collective. She lectures at the University of Hong Kong and consults on labour and migration issues.



In spite of the hype, big data does not help psychologists make inferences about specific individuals. Psychology remains an inexact social science.

## SMALL DATA, **BIG DATA**

Psychologists will never be mind readers

From self-driving cars to quantum computing, big data promises to revolutionise how humans interact with the world. In social psychology, big data has been lauded by some as the crystal ball providing insight into everything from your personality to why you like certain sunsets. This plays into the common misconception that psychology is the study of individuals, rather than groups. Big data can increase our confidence that certain psychological characteristics are overrepresented in certain groups, but the individual remains eminently unknowable within large sets of data.

To illustrate, say we administer a survey about your demographics, regular behaviours and attitudes and combine it with your online behaviour. Assuming you are actually moderately extraverted, we might use all this data to guess that you are somewhere between slightly introverted and extremely extraverted. This insight becomes yet more imprecise when we assess multiple characteristics. If we try to predict whether you are low, medium or high on each of your five core personality traits (extraversion, agreeableness, conscientiousness, emotional stability and intellect), we're actually about five times as likely to be 100% wrong than 100% correct. Instead, predictions are

only accurate for groups of people: for example, we might say that, on average, coffee drinkers may be more extraverted. No amount of data will ever allow psychologists to make reasonable predictions about specific individuals.

What, then, is the value of big data to social psychologists? The more comprehensive our data, the more confidence we have in our rules. For example, we might find that on average, coffee drinkers are more extraverted across cultures, age groups, religions, economic standing, and even whether they are living in urban or rural locations. Big data gives social psychologists a minimum level of confidence that our general rules apply, probabilistically, and to a meaningful subset of humanity.

Psychologists tend to think human behaviour is driven entirely by cause and effect. However, due to the uncertainty inherent in all social sciences, our rules are useful only because real world interventions – promoting happiness, reducing alcoholism – are predicated on probabilistic rather than absolute successes. So, the next time you find a sunset beautiful, don't ask a psychologist 'why'. They are probably wrong.

### **Matthew Samson**

2014, Australia, PhD Psychology

Biography: Prior to Cambridge, Matthew studied social psychology in Australia, the US and Singapore, where he focussed on how emotions influence decision making. Now he investigates how big data, combined with machine learning, can improve the validity of well-being research.





# When mobile meets farming

## Smallholders and the mobile revolution

When most of us picture a farm, we think of massive fields of sweeping grains with big equipment rumbling through. But this isn't the case for the global food supply. More than half of the world's calories and up to 80% of the food supply are grown on smallholder farms.

The United Nations' Food and Agriculture Organization estimates that globally around two billion people live on 500 million smallholder farms, which can be up to two hectares or roughly the size of two rugby pitches. That is a lot of people fed on relatively little land. Smallholder farmers are some of the world's poorest and tend to farm a greater diversity of crops than massive commercial farms. They often do not have much crop surplus to sell, making revenue difficult to generate and future re-investment into their farms unlikely.

Inadequate market access and transparency can be major barriers for smallholders. When market prices are not clear to them, middlemen at the farm gate can underprice the farmers' surplus crops, thereby leaving them vulnerable to price exploitation.

The use of mobile technology can help make pricing fairer and expand opportunities for smallholders by disseminating information about local market prices and locations rapidly and inexpensively. For example, although agricultural extension workers are already spread thin in many countries, they can now reach more smallholders through SMS or mobile apps to offer farm advisory services.

Technology also encourages smallholders to move beyond subsistence farming and to view themselves as entrepreneurs. Imagine a smallholder selling their meagre surplus for a higher price because of better information. Then, they receive an alert with better farming practices, leading to a higher surplus during the following harvest. Amplify this effect over millions of smallholders and, eventually, these farmers can consistently re-invest back into their farms, stimulating local economies and lifting people out of poverty.

Major challenges still exist though, including inadequate transportation infrastructure to move surplus to better



markets or when exactly mobile technology will reach a rural community. Social enterprises, such as e-Soko and WeFarm that aim to close the gap between smallholders and commercial farmers, are seeking to bring the mobile technology revolution to smallholders around the world. Given the innovative advances in mobile technology, we are hopeful that smallholders will experience their own technology revolution in the next few decades and continue to produce food for a substantial part of the world's growing population.

### Jacquelyne Poon

2012, Canada, PhD Plant Sciences

### Paul Bergen

2013, USA, PhD Pathology

Biographies: Jacquelyne Poon and Paul Bergen are co-founders of Farming Data ([farmingdata.io](http://farmingdata.io)), a UK-based social enterprise that seeks to provide smallholders with innovative market solutions.

As a survivor of the April 2015 Nepal Earthquake, I, like many others, have been involved in the relief and recovery efforts in Nepal from the early days. Amidst destructions and despairs, I have also witnessed countless stories of humanity, solidarity, compassion and courage from those who have lost everything.



# BEYOND THE EARTHQUAKE

Working with enterprising women of Nepal

My husband and I were in a furniture workshop in Kathmandu when the first earthquake struck at midday on Saturday, April 25th, 2015. This quake was relatively small, a warning sign. My husband quickly led me to an open field, before going to fetch our son who was sleeping in our relative's home. This was when the 7.8 magnitude earthquake struck Nepal.

After our family finally reunited, we camped out in the open space as the aftershocks continued. As night fell, the temperature quickly dropped. Warm drinks were distributed by fellow survivors. By dawn, temporary shelters, made out of bamboos and tarpaulin sheets, were already being built by a group of people.

My son and I flew to Bangkok three days later while my husband stayed in Nepal to help. Upon my arrival, I started sending some tents and tarpaulin sheets to Nepal. These were collected at Tribhuvan airport in Kathmandu by volunteers from the Himalayan Area Development Centre, an NGO where I am an advisor, and distributed to those affected by the earthquake. Within the first 15 days, I raised enough funds to send over three tonnes of relief materials to Gorkha, the epicentre of the earthquake.

Five weeks later, I returned to Nepal, and was humbled by the strength and serenity of all the survivors I met. Most of them, particularly the women, expressed their wishes to rebuild their homes with their "own two hands" and

did not expect any handouts. With these sentiments in mind, I came to believe that providing income-generating opportunities, particularly for women, would be an effective way to support individuals' and communities' recovery and future development in a more sustainable manner.

I felt at first that the natural next step would be to write a grant application. However, with the uncertainty that we may not have received the funding, I decided to use my savings to get the project started. The initiative would provide skills training and offer income-generating opportunities for women.

I took the phrase "with our own two hands" quite literally and began exploring crafts that would connect well with Nepalese women and be relevant to domestic and global markets. Wool crafts came first on the list, as for centuries women in the Himalayas had been making rugs and coats from the wool of their sheep. While a majority of women are familiar with wool crafts, wool needle felting is still a novel technique, so I decided to introduce needle felting as a value-added craft.

I organised a weeklong training session on needle felting in Kathmandu in September 2016, with a designer/tutor invited from the UK. The training was open to interested women free of charge. We had expected about 15 participants, but 40 women turned up. We welcomed everyone and had to promptly restructure and extend the training period.





After the training, we continued working with a smaller group of women to further train them to be instructors and lead artisans. We began the trial production in October and sent our pilot order to Christmas fairs in the UK. The products were well received, selling out and generating encouraging feedback.

In honour of my late Nepalese mother-in-law, who was an orphan from the age of five and who became a widow and single mother of three boys at the age of 25, I named this project *Nauseni Women Initiative*, which trades needle-felted gifts and decorations under the name NAUSENI (pronounced *now-si-nee*). We have conducted two outreach training sessions and are connecting with wool farmers in Gorkha to share with them methods of preparing raw wool for felting.

NAUSENI's team comprises nine full-time members, with a network of over 15 women, in their twenties through sixties, from Gorkha and

the Kathmandu Valley. Hardworking, resilient, and creative, after three months of training and without any instructions, the team collectively invented a new method that would speed up a part of the creation process. The result of their self-initiated collaborative efforts was increased efficiency and improved quality of craftsmanship. I am excited to discover what lies ahead in my journey with the enterprising women of Nepal.

**Wilatluk Ging Sinswat**

2001, Thailand, PhD Development Economics

Biography: Wilatluk is a development practitioner with experience working in public sector and non-government organisations. Founder of Lanyt Theatre for Change, she is committed to participatory approach to development. Wilatluk is currently spearheading a women's initiative in Nepal. Please visit [www.nauseni.org](http://www.nauseni.org) for more information.

**BACK TO THE BASELINE IN NEPAL**

On 30 November, I stepped onto the tarmac of Tribhuvan Airport in Kathmandu, Nepal, to plan glaciological fieldwork for the next field season. I wasn't sure what to expect. A year and a half had passed since the Gorkha Earthquake (25 April 2015). I was packing to fly to Nepal when the earthquake began, curtailing my final PhD field season and interrupting the lives of the Nepalis I had met, especially those in my field site, the Langtang Valley. My research cancelled, I had time and motivation to help, and participated in a scientific humanitarian response, analysing NASA-supplied satellite imagery to map co-seismic cryospheric and geomorphic hazards, to inform the rapid relief efforts preceding the monsoon. My PhD has now come to a close, and my focus has since been data analysis, manuscripts, and theses. My Nepali friends have meanwhile endured relief efforts, fuel shortages, psychological trauma, constitutional reform, and elections. Walking around Kathmandu, life goes on. But has Nepal recovered? No, serious rebuilding has yet to begin.

**Evan Miles**

2012, USA, PhD Polar Studies



Women help to rebuild their community as part of an Oxfam-supported scheme in Dachi Nkali municipality, Kathmandu valley.

IMAGES: © OXFAM/KIERAN DOHERTY



# Caring for sick babies

## Evidence-based neonatal care policy in Kenya

In Kenya, almost half of all deaths among children under the age of five occur in the first month of life. In many African and South Asian countries, neonatal mortality is tenfold or more higher than in high-income countries. To make progress in reducing neonatal mortality, interventions at the health system level will be crucial.

There are particular challenges in providing high quality neonatal care for sick newborns. Premature and sick newborns often have multiple illnesses. They require many interventions given repetitively for several days as well as continual monitoring, feeding, warming and hygiene care. These vulnerable newborns are thus highly dependent on the adequacy of nursing care.

**Together, we strive to reduce neonatal mortality and give every baby the best start to life.**

In high-income countries, it is recommended that at least one nurse should care for every two to four sick babies. In Kenya's main maternity hospital, two or three nurses often provide care for up to 80 sick babies. The demands on these nurses are unrealistic, and burnout is high.

How can quality care be provided for sick babies under such constraints? One solution could be to employ more nurses. However, despite Kenyan universities training many nurses, many are unemployed and hospitals remain understaffed due to financial constraints in the health sector.

Another solution could be to introduce a new low-cost level worker: an auxiliary nurse or healthcare assistant who could assist the nurses with their work. This is common in many countries, including the UK. However, such 'task-shifting' is a sensitive topic among health professionals in Kenya; thus, the exact role of these assistants, along with their regulation, training, and supervision, would need to be explored.

My research team in Oxford and Nairobi is working together with the nursing community, local experts, and policy-makers in Kenya to understand newborn health services and ways to create effective and sustainable solutions to strengthen healthcare.



Together, we strive to reduce neonatal mortality and give every baby the best start to life.

### **Georgina Murphy**

2009, Ireland, MPhil and PhD Global Health and Epidemiology

Biography: Georgina Murphy is a Senior Postdoctoral Researcher at the Centre for Tropical Medicine and Global Health at the University of Oxford and at KEMRI Wellcome Trust Research Programme in Kenya.



# TODAY'S PERSISTENT RESISTANCE

## Antibiotic resistance is already here

Most people know that antibiotic resistance is a growing threat, but fewer know that threat is already present. Antimicrobial resistance already kills, particularly where access to diagnostic tools and newer antibiotics are limited. Preventing the most urgent consequences of antibiotic resistance requires recognising the unique challenges of such settings.

Several times per year, headlines announce the spread of new antibiotic-resistant infections with grim phrases such as “dreaded superbugs” or “fundamental threat.” Although we must be wary of the possibility of a post-antibiotic world, this narrative of antibiotic resistance as a looming apocalypse ignores its urgency and its present-day victims.

The more we use antibiotics, the more bacteria evolve to resist them. Occasionally bacteria develop simultaneous resistances to multiple types of antibiotics or to “last resort” drugs saved to treat such cases. These multiply-resistant superbugs tend to generate the most alarm because they are particularly hard to treat. However, an infection does not need to be resistant to all the drugs in our arsenal in order to kill – only to the drugs people are using against it. This means in places like India, for example, approximately 60,000 infants already die from antibiotic-resistant sepsis every year, representing about 9% of all infant deaths (estimates range from 33,700 to 89,600 deaths per year, or between 5 and 14% of annual infant deaths in India).

In many low- and middle-income countries, patients and doctors have

limited access to the tools that make antibiotic resistance less immediately dangerous. It can be difficult, for example, to test which antibiotics an infection is susceptible to. Newer, more effective antibiotics are often inaccessibly expensive due to the costs of bringing drugs to market, especially when those drugs may not remain effective for long. As a result, patients commonly take antibiotics with little guarantee of efficacy.

Considering these challenges, relieving the most pressing costs of antibiotic resistance requires a careful multi-faceted approach. Blanket restrictions on antibiotic access would only make matters worse; a lack of access, or delayed access, to these life-saving drugs still kills more people than resistance does. Averting deaths requires stewardship of the antibiotics we have by limiting their

use in livestock, facilitating appropriate prescriptions with rapid diagnostic tools, educating patients about compliance, and vaccinating whenever possible to reduce the need for them.

Everyone needs access to effective antibiotics at one point or another, whether as treatment or as prevention during childbirth or surgery. Preserving that access and preventing a post-antibiotic era matters worldwide, but we cannot afford to think of that era as only a distant future.

### Emma Glennon

2016, USA, PhD Veterinary Science

Biography: Emma studies infectious disease ecology. In 2016 she worked with the US and Delhi Center for Disease Dynamics, Economics & Policy on a Fulbright Research Grant to India.



### ANNUAL LECTURE 2017

On 7 March 2017 Professor Dame Sally Davies, Chief Medical Officer for England, delivered the Gates Cambridge Annual Lecture entitled *Antimicrobial resistance: a cause for collaboration*. You can watch the lecture at [www.youtube.com/gatescambridge](http://www.youtube.com/gatescambridge) and read more about Dame Sally at [www.gov.uk/government/people/sally-davies](http://www.gov.uk/government/people/sally-davies).

# Rediscovering cultures

A selection of articles by scholars and alumni studying the recovery of craft techniques, rediscovery of a lost culture, and revival of languages.



## The sands of time Unearthing civilizations of the past

**In a world where every inch of land seems to be mapped and catalogued, modern archaeologists are still uncovering forgotten people and places. Entire cultures lay waiting to be studied through the art, architecture, and materials left behind under our feet.**

Amidst the massive sand dunes of Southern Peru lay perfectly preserved textiles, ceramics, and gold of ancient cultures. The hyper-arid environment of these southern desert valleys provides preservation qualities many archaeologists only dream about.

Providing a natural form of mummification, the extremely dry environment allows for the perfect preservation of perishable goods such as fabrics, plants, and feathers from the ancient past. Preserved human hair even allowed Cambridge scientists to trace the exact diet of individuals that lived thousands of years ago. Over 6,000 years of human history are preserved in the Ica Valley of Peru. Yet working in this awe-inspiring natural laboratory requires an appetite for adventure. With scorching sun, little rainfall, and 100 mile per hour winds, the Ica Valley can be a harsh environment in which to conduct archaeological excavation. And yet the thrill of uncovering forgotten objects that can reveal stories about the lives and beliefs of past people calls me back to the desert.

I seek to understand the cultures that lived in the Ica valley during a misunderstood period of Peruvian history. Referred to as the Late Intermediate Period (1000-1400 CE),



archaeologists have interpreted the first 200 years of this period on the south coast of Peru as one of cultural hiatus, widespread abandonment of cities, and environmentally-induced political collapse. However, ongoing investigations in the region suggest that this supposed collapse is an artefact of the history of local archaeology itself, due to improper material analysis and other complications. Indeed, recent archaeological work in the Ica valley suggests that there was a thriving culture throughout the coastal desert during the Late Intermediate Period. In this way, my work looks at the persistence and resistance of cultures despite the rise and fall of powerful empires.

**Sara Morrisset**  
2016, USA, PhD Archaeology

Biography: Born in California, Sara Morrisset's love for the fine arts sparked her interest in how artifacts can express individual and cultural identities of the past.

# Held together by a thread

## Weaving, heritage and history

How one Q'eqchi' woman has reimagined and rescued a traditional textile weaving tradition, and reconnected an entire community to an ancient heritage.

Eighty-seven year-old Rosario Coy Xol sits at a table shelling corn. Her bright eyes dance as I ask her why she wasn't home. "We had a meeting," I say. She laughs.

"You found me, didn't you?" She's not wrong. To find her, I followed an 11 year-old from house to house through the valley where she spent her life, checking in with her children and grandchildren, asking where the "Qana" or "Abuelita" was; where we could find "The Weaver." Rosario Coy Xol is known as "The Weaver" because she is responsible for the recovery of a nearly-lost textile tradition called *pikb'il*. This delicate white-on-white gauze brocade textile was once worn across Guatemala's central highland region of Alta Verapaz.

Potentially one of the oldest textile traditions still practiced in Guatemala, the *huipils* – or blouses made of *pikb'il* – once signaled to the world that the wearer was a proud Q'eqchi' woman. The white signifies the purity of her soul, but as imported Chinese lace fabric became cheaper, women gradually stopped weaving. A single garment can take six weeks to produce: each thread is smaller than what is run through a modern sewing machine. Thousands of threads must be handled with expert care throughout the production process – and even then, cold or a particularly rainy day can snap threads and ruin a garment. Learning to weave is a process of several years, and one that Rosario started at the age of four. She isn't sure how many women she taught to weave over the years, but the vast majority of the few hundred *pikb'il* weavers remaining in Guatemala can trace their weaving heritage to Rosario. Weaving connects Rosario



(affectionately called *Na 'Rux* meaning Grandmother Rosario) to a vast community of Q'eqchi' women weavers who are long dead and weavers who are yet to be born. "Weaving," she tells me, "is part of what makes us Q'eqchi' women. We cannot forget how."

Today, Doña Rosario's daughters and granddaughters continue to weave, selling their textiles both locally and with the support of the Federation of Cooperatives of Verapaces (FEDECOVERA), in the municipality of Coban. Rosario considers herself just one thread in an unbroken history of weavers stretching back into an unknowably long history. But for the *Pikbi'l* weavers today Rosario is the root of a blossoming tree.

**Callie Vandewiele**

2014, USA, PhD Latin American Studies

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Biography: Callie Vandewiele is a PhD candidate at the Centre of Latin American Studies at the University of Cambridge.

Callie Vandewiele has worked on and off in the Alta Verapaz of Guatemala since 2008. This article was written with the support of FEDECOVERA in Guatemala to ensure that Rosario and her family were given input.

# Reincarnating Sanskrit

When a language is only understood through literature describing how you pray or command an army, how do you revive it?

It's simple. Among the many forms and constructions that literary languages offer, you choose the simplest. You keep at least one straightforward way of making your verbs refer to the past, present, and future; at least one way of having your nouns express their function in a sentence; and a simple set of rules for how to combine those verbs, nouns, and other kinds of words to express any thought you want. You then fill the gaps in your vocabulary and find words for the things that did not exist when the language was last spoken. Scholars of modern Hebrew have done this. Scholars of modern Icelandic are doing some of this. And now scholars of Sanskrit are doing it.

The oldest Indian language, Sanskrit was once used for literary, official, and scholarly writing, as the language of Hindu, and some Buddhist and Jain scripture. Now it is being

revived in spoken form around the world. In India, Sanskrit might come to serve as a national language, supplementing Hindi (native language of less than half the population) and English (language of the Western colonial power). Whether Sanskrit becomes a national language will depend on how much the Indian government tries to 'saffronise' Sanskrit: that is, tie it in with just Hinduism. Literary Sanskrit was once a regular part of the Western academic landscape because of its close relationship to European languages. Here, spoken Sanskrit is of less practical value, yet it offers a path into the manifold literary traditions of Classical Sanskrit and thus into new ways of looking at the world. Since the grammarian Pāṇini fixed the rules of written Sanskrit around 2,500 years ago, the language hasn't changed. Knowing Sanskrit thus offers access to millennia of literature. Maybe give it a go?

**Antonia Ruppel**

2001, Germany, MPhil and PhD Classics

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Biography: Antonia Ruppel currently teaches at St James Senior Boys' School, which offers Sanskrit from Year 7 on. She is the author of *The Cambridge Introduction to Sanskrit* (CUP 2016).

# Environmental protection, indigenously

Original stewards join the restoration economy after oil bust



The Aboriginal Environmental Services Network, launched last year in the heart of Alberta's oil production, promotes Indigenous participation in the delivery of environmental services. It was established to fulfill a need for skilled, locally available professionals to conduct environmental monitoring, restoration, and climate change mitigation.

Before European colonisation in what is now Alberta, Canada, Indigenous groups such as the *Siksika*, *Piikáni*, and *Káínaa* (more commonly known as members of the Blackfoot confederacy), *Nehiyawak* (members of the Cree First Nation), and *Denésoliné* and *Dene Tha'* (members of the Dene First Nation) practiced an indigenous way of life dating back thousands of years. They lived a largely nomadic lifestyle, hunting bison and moose, fishing, and collecting Saskatoon berries and medicinal rat root. Fast forward to the discovery of oil and gas reserves in the 20th century and the province of Alberta has grown wealthy, but also developed a reputation for "dirty oil" linked to the infamous "tar sands".

In 2014, the price of oil crashed from US\$110 to US\$50 a barrel (similar boom and bust cycles had occurred in the 1980s and 90s). With less lucrative oil extraction, the adverse impacts of recent rapid energy development in Alberta fell under further scrutiny. Many residents noted declines in air and water quality and wildlife populations such as woodland caribou, an endangered species.

As a result, there emerged a growing need for a group with a vested interest in conducting restoration, monitoring, and mitigation work. Indigenous Peoples have been deemed strong candidates for this role. To ensure they are well-equipped for the role, it is important that both Western science and traditional ecological knowledge are combined.

The Aboriginal Environmental Services Network (<https://www.aesninfo.ca/>), developed by InnoTech Alberta, was established in 2016 in collaboration with Indigenous communities that saw the need for promoting Indigenous participation in the delivery of environmental services. The Network recognised that relatively few Indigenous peoples possessed Western science qualifications, and that much needed to be done to overcome this barrier. Now over 150 members strong, the Network curates resources that facilitate the delivery of environmental services by Indigenous Peoples. It pilots new training programs with an experiential learning approach and provides information about grants, reports, and jobs. In line with the spirit of the recent "Calls to Action" released by Canada's Truth and Reconciliation Commission, as well as the United Nations Declaration on the Rights of Indigenous Peoples, the Network is a model for positive interaction between Indigenous and non-Indigenous Peoples, Western and traditional ways of knowing the world, and working towards environmental conservation.

#### Shauna-Lee Chai

2007, Jamaica, PhD Plant Science

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Biography: Shauna-Lee Chai is a Research Scientist based at InnoTech Alberta. As a Jamaican expatriate, Shauna-Lee knows about socio-economic marginalisation and how this can adversely affect the environment. Shauna-Lee works with both people and other species for environmental conservation.



# Humans in harmony

Connecting people through collaborative songwriting

Music is a unique form of participatory, relational communication. So what happens when a teen in juvenile detention connects with a child with cancer through song? How about a high schooler and a veteran? Humans in Harmony, a newly formed non-profit organization, connects and empowers communities and heals divides through collaborative, original songwriting.

Humans in Harmony empowers people to connect with and understand each other in the communicative, relational way that music allows: not simply as a form of self-expression, but by collaboratively creating original songs to honor the story of another person. The newly-founded nonprofit is reflective of much of what I learned in my MPhil year as a Gates Cambridge scholar: academically, how music functions as relational communication; socially, how deep bonds and community make an impact on our lives.

We know music education can empower children and that music therapy can help treat developmental, neurological and psychiatric disorders. The first pilot of Humans in Harmony was about conjoining those two verticals: at-risk teens writing for children with cancer. The teens developed enhanced self-esteem, empathy, and pro-social behavior. The children with cancer found the inspiration and hope that music provides.

But music is about more than empowering or healing as disjointed entities – at its core is connection and communication. Scholars have argued that music predates language as a relational, communicative medium. The ambiguity of musical content allows people to hold their own views and interpretations while at the same time being together in time and movement. Furthermore music acts similarly to non-verbal gestures in communication. Studies revealed that the more two conversants imitate each other's non-verbal gestures, such as nodding, the greater the rapport. Therefore mimicry and togetherness as

experienced in collaborative music-making breeds affinity.

When I returned to the US, I took all these lessons with me. The second pilot of Humans in Harmony connected health professional students with children in foster care. Our third connected high school students with elderly veterans. At the core of these sessions was communication as a reciprocal exchange. The storyteller shares a personal story; the songwriter interprets the narrative. The final product is a song composed as an expression of both storyteller and songwriter, which connects the imagination and understanding of both people.

Humans in Harmony changes the way music is made to bridge the distances

between individuals and communities. In many ways, it also seems intuitive that music originated from people joining together. Humans in Harmony teaches us that we can work together in the face of challenges, regardless of our origins or our destinations, and that we have a community which empowers us as individuals while reminding us of our shared humanity.

## Erica Cao

2013 and 2017, USA, MPhil & PhD Music Studies

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Biography: Erica Cao is Co-founder of Humans in Harmony. She believes that the arts, humanities, and sciences intersect to make the world a better place. To get involved with Humans in Harmony, please visit [www.humansinharmony.org](http://www.humansinharmony.org).





# THE HEMLOCK TRANSCRIPTS

Interviews with the dying

There is a lot to learn about the end of life from those who are dying. Unfortunately, the knowledge of these experiences is often lost because most people don't like talking about death. Yet, we don't have to talk; we just have to listen.

Voluntary death has played a dynamic role in the Western world. Depending on the time and place, it has been seen as an expression of heroism, faith, treason, madness, political protest, sin or honour. It has inspired literary tragedies, ancient philosophers, and art. Despite its historic influence, the idea of voluntary death is heavily stigmatised in Western society. In this last century we have witnessed substantial increases in control over human life – both its beginning and its end. As a result, medical assistance in dying (MAiD) has become one of the most contentious issues in Canada's healthcare system.

On February 6, 2015, the Supreme Court of Canada ruled that criminal laws prohibiting MAiD violated the rights of Canadians by preventing them from making decisions about their own medical care and bodily integrity. A year later, the Supreme Court of Canada amended the Criminal Code, permitting MAiD for those

with a "grievous and irremediable medical condition that causes them enduring and intolerable suffering" and for whom "natural death is reasonably foreseeable." In response to this ruling, Hemlock Aid in Dying (AID) was established as the first MAiD clinic in Canada. Since its inception, Hemlock AID has conducted, transcribed, and analysed interviews with patients pursuing MAiD. The Hemlock transcripts reveal important perspectives often overlooked in the MAiD debate.

When asked "why do you want to die?" interviewed patients in Canada responded by highlighting their need for autonomy and control over their own lives. Patients wanted to decide for themselves whether their quality of life and level of suffering are acceptable, and if they find that they are not, they want to have end-of-life options. Patients requested MAiD if they lost the ability to participate in meaningful activities. For some this

meant work, while for others it meant social relationships or leisure activities. Once physically active patients were most affected when their mobility declined, while conversationalists were devastated to lose their ability to communicate. One individual compared being forced to live with a grievous condition to being condemned to an endless prison sentence. Another equated their experience with being tired after a long day and simply wanting to sleep.

Another striking observation from the Hemlock transcripts was that although people differed in how they imagined their death – be it alone or with family, in a hospital or at home – no one expressed a fear of death. The only fear patients expressed was that they would be denied MAiD, that they would be forced to live, and to suffer. Many patients shared the notion that it was cruel to insist that people continue to suffer when there could be an alternative. Most patients

When asked “why do you want to die?” interviewed patients in Canada responded by highlighting their need for autonomy and control over their own lives.

were concerned about making the process as easy as possible for those left behind. Many agreed that it is easier to grieve and recover following the peaceful, rather than painful, death of a loved one. People find peace in the knowledge that they can control their death.

It was my privilege to transcribe the first of these important interviews and to bear witness to the intimate end-of-life experiences of strangers. Although the topic of death could be upsetting, I found that people wanted and needed to share their stories. Those who had kept their end-of-life wishes quiet were finally given validation

that seeking death was not wrong or shameful. The Hemlock transcripts tell us that while suffering is rooted in symptoms of illness and aging, the ability to bear suffering is found in hope; it is with hopelessness that suffering becomes unbearable.

There are real and valid concerns with the legalisation of MAiD. It forces us to confront ethical dilemmas including consent, medical paternalism, discrimination, elder abuse and psychiatric illness. Canadian legislation and practice surrounding MAiD is in its infancy, and it will continue to change as we learn from our experiences. During this learning process, we will likely hear the opinions of outspoken physicians, policy makers, healthcare workers and administrators. It is critical that we also continue to listen to those whose voices often go unheard: the people who want to die.

**Alanna Just**

2016, Canada, MPhil Medical Science

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Biography: Alanna is currently at Cambridge conducting research in substance dependence. Her interest in end-of-life issues and work at Hemlock AID is ongoing.



# FENDING OFF MALARIA

The most advanced candidate vaccine



Malaria is estimated to have killed 50 billion people, or one-half of all humans who have ever lived. In 2015, there were 212 million malaria cases, and over 400,000 deaths from malaria. Phase 3 clinical trials of the most advanced vaccine are complete, offering hope for controlling this terrible disease.

In the last 15 years, malaria incidence among at-risk populations fell by 37%, with a corresponding 50% decrease in malaria deaths among children under 5 years of age. The majority of this burden lies in the Sahel and a band across sub-Saharan Africa that includes most of Namibia, Zambia, Malawi, and Mozambique, where about 39 million children are at-risk. Despite substantial resources directed toward the reduction of malaria in Africa, Malawi has not seen a significant decrease in transmission.

The multi-site, phase 3 trial of the most advanced candidate malaria vaccine, RTS,S/AS01, is complete. Among the four phases of the drug development process, phase 3 trials are generally the most costly but also the most definitive phase in determining whether a drug goes to market. When tested in seven African countries, administration of the vaccine reduced clinical malaria by 36% in children, although efficacy varied across sites. The European Medicines Agency has adopted a positive opinion of the

vaccine, which led to a recommendation by the World Health Organization (WHO) for the implementation of large-scale pilot projects.

Implementation of the vaccine may be particularly effective in certain environments, such as areas where malaria transmission is high or seasonal. An understanding of the seasonal variations in efficacy is critical for deploying effective pilot interventions. Nevertheless, RTS,S/AS01 will not serve as a panacea and must be used in conjunction with other control measures, such as insecticide-treated nets and appropriate artemisinin (a drug isolated from the plant *qinghao* or sweet wormwood, and its synthesised derivatives) combination therapies, the current first-line therapy for malaria.

Our analysis of the phase 3 trial of RTS,S/AS01 in Malawi is the first study to consider the modification of vaccine efficacy by precipitation, and it showed that efficacy was not associated with

variation in rainfall, despite surges in new cases following a time lag of two months. These findings suggest that despite increased malaria incidence in the rainy season, efficacy of RTS,S/AS01 does not change throughout the year. Thus, considering waning vaccine efficacy over time, vaccination prior to peak transmission seasons is likely to maximise impact. These findings should prove useful as the WHO has selected Malawi as one of the sites to pilot the vaccine in phase 4 trials, offering hope to the children and parents who continue to face the terrible, but increasingly preventable, reality of this disease.

#### Larry Han

2017, USA, MPhil Strategy, Marketing and Operations

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Biography: Larry Han is completing a MM in Global Affairs at Tsinghua University on a Schwarzman Scholarship. He graduated from UNC Chapel-Hill with a BSPH in Biostatistics.

Operational flexibility, which energy storage can provide, is crucial to develop decarbonised electricity systems. Battery technology and energy storage business models are advancing at rapid pace and so enabling construction of new projects. Pioneering battery project developers, utilities and manufacturers are leading the way towards cleaner energy.



# Energy storage takes off

One of the key features of the Paris Climate Agreement is that we must decarbonise electricity – it currently contributes up to 30% of manmade carbon dioxide. The challenge lies in balancing decarbonisation goals, cost, and energy security.

This balance is not impossible. In 2016, for example, Great Britain saw the first day since the Industrial Revolution when no coal was burned to produce electricity. Further, over 20% of the electricity generated globally in 2016 was produced using renewable sources.

Until now, it has been straightforward to incorporate renewable energy into existing electricity systems. These systems were designed for centralised generation of electricity by large scale fossil-fuel or nuclear power plants. Today, however, a dominant feature in the operation of whole electricity systems is the distributed generation of variable renewable energy. This means

that more flexibility in electricity system operation is required to integrate the amount of renewable resources for decarbonisation, while minimising the consumer cost.

Energy storage has long had the potential to deliver this flexibility in multiple ways. One way is by rapidly responding to system needs to maintain the second by second supply-demand balance. Others include deferring expensive upgrades to electricity distribution infrastructure, and adding value in wholesale electricity markets. Historically, however, energy storage technologies have had their challenges. They have been typically too expensive or unproven, and subjected to outdated industry regulations that do not reward value created by newer technologies.

Improvements in battery technology have rapidly changed this situation: Lithium ion batteries have had their

performance tested and proven on a large scale. Global manufacturers producing them now offer sufficient warranties to give investors confidence. Deployment is further aided by cost reductions as more factories begin to operate at a gigawatt-scale.

In response to these developments, electricity industry regulations and procurement processes are improving across the world to facilitate battery project construction, enabling project developers and investors to build new battery projects. For example, National Grid, the electricity system operator in Great Britain, ran an auction for balancing services from batteries, saving consumers £200m over four years. Forecasts now predict global investment of tens of billions of dollars in up to 45 gigawatts of energy storage by 2030. To give some context, that capacity would provide peak power back-up for over 130 large scale offshore wind farms, or equivalently for four times the world's current deployment of offshore wind. The resultant system flexibility will be critical in decarbonising electricity at minimum cost.

**John Prendergast**  
2003, Ireland, PhD Engineering

Biography: John Prendergast is Head of Energy Storage Business Development for the UK at RES (Renewable Energy Systems), a global leader in renewable energy and energy storage. He played a lead role in the development of the UK energy storage market. His views on energy storage have been quoted in the *Financial Times* and *The Guardian*.



The Gates Cambridge community is united by a shared sense of civic responsibility, which is demonstrated in the work of our scholars and alumni. That shared desire to improve the lives of others has sparked rich collaborations addressing a wide range of issues affecting populations around the world.



# GATES CAMBRIDGE CONNECTIONS

Scholar collaborations leading to lasting initiatives

## e-Democracy and Estonia: A common interest

After finishing at Cambridge, Halliki Voolma (2011, Estonia, PhD Multi-Disciplinary Gender Studies) returned to Estonia, where she had not lived since age 10, to direct a social innovation start-up project called Action-Metre (Teomeeter in Estonian), a web platform for running social campaigns. The emphasis of the platform is on everyday micro-actions that individuals can commit to move towards a more inclusive and healthy society.

In May 2016, Halliki participated in the Global Scholars' Symposium in Oxford as an alumna. During which she met Geo Saba (2015, USA, MPhil International Relations and Politics), a fellow Gates Cambridge scholar, whom she discovered shared a common interest in e-democracy and Estonia. Geo was pursuing an e-democracy start-up in the US and wanted to visit Estonia because of its vibrant start-up and e-governance scene. As Halliki was living in Tallinn, Geo was excited to visit and, within a week, they were both attending the annual flagship e-Estonia start-up and tech conference "Latitude59." They assisted each other in pitching to investors and enjoyed the sights and culture of Halliki's hometown, experiencing what the Gates Cambridge network could mean for them and for others beyond the time spent in Cambridge.

More information: [www.teomeeter.ee](http://www.teomeeter.ee)

## We Are Sister Stories

We Are Sister Stories began on October 11, 2014, the International Day of the Girl Child, when Stephanie Lopez (2014, USA, MPhil Latin American Studies) shared a photo essay on Facebook depicting the various struggles of girl children from around the world. This sparked a conversation and later a partnership with Sheina Lew Levy (2014, Canada, MPhil Human Evolutionary Studies), another Gates Cambridge scholar. Both had travelled extensively and witnessed the suffering of women and girls across the world, especially in societies with extreme inequality.

Instead of focusing on the negative, Stephanie and Sheina found themselves in awe of the power and resilience of girls. We Are Sister Stories believe that the everyday strength and resilience of women and girls should be celebrated to convey the message that social inequality, not being a woman, is the problem.

Stephanie credits the Gates Cambridge scholarship for the conception and growth of We Are Sister Stories. Furthermore, being in Cambridge also gave Stephanie and Sheina the opportunity to receive support from their colleges (Pembroke and Fitzwilliam) and to partner with Cambridge-based organisations, such as the Cambridge Hub.

Stephanie adds: "Our hope for this year is that We Are Sister Stories will continue to grow and make a positive impact in the lives of those who read our stories. [...] We believe in the power, strength, resilience and intelligence of women and girls and if you do too, check out our website."

More information: [www.wearesisterstories.org](http://www.wearesisterstories.org)





## Simprints

Simprints, a startup building low-cost fingerprint scanners for workers in the developing world, was founded by Alexandra Grigore (2012, Romania, PhD Nanotechnology), Toby Norman (2011, USA, PhD Management Studies), Tristram Norman, and Daniel Storisteanu (2012, Canada, PhD Medicine). Three of the founders (Alex, Toby, and Dan) met through the Gates Cambridge community. Interacting in the scholars' room and on orientation, they noted similar interests in entrepreneurship and the developing world. A year later, the Simprints team had an opportunity to compete in the Biotech, Yes! Competition in Oxford. While Simprints did not win the competition, after three intense days and nights, the idea for Simprints was more concrete.

The team initially worked part time. A fourth founder joined, Toby's brother Tristram, and meetings were held in the scholars' room. Five scholars were volunteering with Simprints, which Alex credits with helping the team feel like they were part of a community.

In Summer 2014, Simprints received their first grant (the Bill and Melinda Gates Foundation's Saving Lives at Birth competition) worth \$250,000. Afterwards, Dan and Alex intermitted to work full time, and in February 2015, Simprints was established. At this time, Simprints has about 10 people on staff and has raised \$1.5 million (from partners such as the Gates Foundation, ARM, USAID, UKAID, and others). Simprints launched its product in August 2016, pursuing four pilot projects in Nepal, Bangladesh, Uganda, and Zambia. Without the Gates Cambridge community, Alex stated that they would not have met, and Simprints would not be possible.

More information: [www.simprints.com](http://www.simprints.com)

## Favalley



Paulo Savaget (2015, Brazil, PhD Engineering) used the Gates Cambridge Facebook group to kickstart a project related to social entrepreneurship. After posting a general call to other scholars interested in social entrepreneurship, he partnered with Stefano Martiniani (2013, Italy, PhD Chemistry). Through much brainstorming, the two scholars came up with the rough idea for Favalley: a platform to train marginalised youth for future programming careers.

Paulo and Stefano received support from another Gates Cambridge Scholar, Shraddha Kaur (2015, India, PhD Biological Science), and with two others – Nikita Hari, who was very engaged in social entrepreneurship (especially education and gender empowerment) and later on Martin Geissdoerfer, who works on sustainable business models. Four members of the team (Niki, Stefano, Martin and Paulo) designed the business model and applied for the Hult Prize and reached the regional finals. Simprints (see above), which Paulo cites as a big source of inspiration, won.

Favalley is currently at the stage of initiating a low-cost pilot. Favalley welcomes the support from anyone interested in making Favalley a reality.

For more information, please contact: [paulo@favalley.com](mailto:paulo@favalley.com)

*These are only a few examples of the strength of work and collaboration within the Gates Cambridge community, ranging from more informal support and shared interests to startups and social enterprises. Common advice from each of these featured scholars included taking the time to find people you resonate with (within the Gates Cambridge community and beyond) and who share common values by talking about your ideas and interests with others, even if it feels like your ideas are not fully formed.*



# STRENGTH IN NUMBERS

Alumni community grows and mobilises



As the Gates Cambridge community continues to grow, the Gates Cambridge Alumni Association (GCAA) evolves with it. The Biennial at Cambridge in July 2016 brought together 250 alumni and scholars for a successful first major alumni weekend, and the GCAA board's focus for 2017–18 is to build on this momentum with action-oriented events around the globe.

The board seeks to strengthen the Gates Cambridge network beyond the gates of Cambridge. The aim of the GCAA is to strengthen this community through meaningful events and collaborations with local communities, building “a global network of scholars who work together to improve the lives of others” now and in the future.

In the United States, alumni and scholars gathered in Washington, DC in January 2017 for a gracious reception at the Residence of the Deputy Head of Mission of the British Embassy. Guided tours of National Public Radio and the U.S. Capitol Building and a day-long alumni workshop on 2016's geopolitical tumult capped the weekend.

In Shanghai, alumni and young professionals convened on March 3, 2017 for a panel on educational innovation and access. Sparked by keynote remarks from Prof. Joanna Waley-Cohen (Cambridge MA '77), the panel debated how we can expand access to transnational education across borders, amidst political obstacles and rising fees.

Inspired by the European refugee crisis and in collaboration with human rights activists, journalists, migrant groups and the Central European University, the first-ever Gates Cambridge Scholar Forum on Migration took place on March 18, 2017 in Budapest, Hungary. Organizer Szilard Fejer (2005, Hungary, PhD Chemistry) notes that at a time

of migratory and security concerns, the Gates Cambridge scholar community has a responsibility to contribute to critical social dialogue.

In that spirit, the GCAA board encourages all alumni with an idea for a workshop, training, discussion or action to contact a board member to initiate a proposal and apply for funding. The GCAA is a growing and evolving initiative, built on your initiative. Contact Rebecca Saunderson ([co-chairs@gatesalumni.org](mailto:co-chairs@gatesalumni.org)) with your interest.

**Anna Kathryn Kendrick**  
USA, 2011, PhD Spanish,  
GCAA Director of Membership







# Lauren Zeitels 1984 – 2017

The passing of Lauren Rachel Zeitels 1984 – 2017, who was killed in an avalanche in Banff National Park in Alberta, Canada, is an immense loss for the GCAA and the Scholar community.

Lauren epitomised what it is to be a Gates Cambridge Scholar. She was an extremely talented individual who wore many hats, all concerned with contributing to the greater good. This included her commitment to the Gates Cambridge community, to her patients through her work as a doctor at the Massachusetts General Hospital where she established an innovative Pathways Program, and to humanitarian endeavors through her work with Baltimore's Thread Mentoring Program, Rescue Mission, and Habitat for Humanity.

Lauren had a profound impact on the Gates Cambridge Scholar community. In 2008 she signed up to be an Ambassador and shaped the early stages of this program. Her motivation and vision led her to be quickly snapped up by the GCAA and in 2010 she became secretary. Her contributions were immense and she established many of the strategic goals of the organisation. She was appointed to a Director position in 2014 and was made Co-Chair in 2016. Throughout her time, she was strategic and laser sharp. She was committed to the organisation, and asked hard questions in order to push the organization further in new directions. She was a champion of the organisation and worked tirelessly towards

initiatives she felt would better connect the alumni community, such as the 2016 Biennial.

Lauren epitomised what it is to be a Gates Cambridge Scholar. She was an extremely talented individual who wore many hats, all concerned with contributing to the greater good.

Lauren's passing has been deeply felt by the GCAA, the scholar community and everyone associated with the Trust and indeed all of the circles she moved in. Her commitment to the greater good was inspirational.

The Gates Cambridge community has lost someone who cared deeply about its future direction and who has helped to make the alumni body what it is today. Thank you Lauren for all you have given, and for all that you have inspired in us. You were a very special person and will be deeply missed.

**Dr Rebecca Saunderson**  
Co-Chair, GCAA

## Revealing the lost world of unknown creatures

**Dr Martin L. Kaonga**

2001, Zambia, PhD in Biogeochemistry



My career has been driven by the quest to discover the unknown world, which at times meant crossing broken bridges and getting trapped in cloud forests.

My PhD in Geography launched me into the conservation world, where I blended biodiversity and carbon research with

practice. Major assignments have included designing and directing multi-country biodiversity and climate change programmes; overseeing over 50 community-based research and practical conservation projects in 20 countries, including three research projects in France, Ghana, and India, which I personally designed; writing peer-reviewed publications and editing a book; and managing a biodiversity conservation programme in Papua New Guinea which discovered over 200 species new to science. I have also validated eight projects in eight countries, and evaluated over 35 biodiversity and poverty reduction project proposals for the Department for International Development (UK) and Department for Environment, Food and Rural Affairs (UK). I recently founded the Cambridge Centre for Environment, an environmental consultancy firm.

No path is without challenges, and my case has been no different. After completing an MPhil degree in Environment and Development at the University of Cambridge, I received a conditional offer on its PhD programme. As a mature student not all funding opportunities were open to me, but my prayers were answered through the Gates Cambridge scholarship scheme, which has no age limit.

I have learned that success in a career requires, amongst others, two things: setting realistic goals and investing every accessible resource to accomplish them; and having an ambition to try again and again, even if it means changing strategy. I am inspired by the words of King Solomon who said, "*For a wise man falls seven times, and rises again*" (Proverbs 20:16). As a scientist, I can never discover truth unless I am willing to build on previous discoveries. This is my advice to Gates Cambridge scholars: set your goals and work steadily to achieve them. No matter how complex your work appears, do not quit. Failure is a steppingstone to greatness.

## Mental health intervention in remote Australia

**Dr. Alice Chang**

2008, Australia, MPhil Public Health



My studies in public health at Cambridge gave me a foundation in conducting research, developing policies, and taking up leadership roles in the public health arena. However, the best thing about being at Cambridge was the exposure to world experts, and the connections I made with other Gates Cambridge scholars.

I feel those experiences are what propelled me to a different level, shaped my career pathway, and most importantly, shaped me as a person.

I am a Child and Adolescent Psychiatrist based in Cairns, Australia. I currently serve as the Consultant Child Psychiatrist at Cairns Hospital, and I am head of the Infant and Perinatal Mental Health Unit, as well as on the board of the Royal Australian and New Zealand College of Psychiatrists. I also lecture at the University of Queensland and James Cook University Medical School.

My work is predominantly based in rural and remote Australia, where I work with Aboriginal children and families with significant and complex generational trauma, a community with a high prevalence of suicide and substance use and the poorest health profile of any Australian population.

I am passionate about early intervention in mental health and the importance of parent-infant attachment. Research shows that good parent-infant attachment is instrumental in the neurological and developmental trajectory of children. Early intervention at this stage, especially in at-risk groups, can have an enormous impact on prevention and reduction of multiple mental and physical health issues. I am also actively involved in clinical ethics and medical education through a number of board and mentorship positions.

In addition to my work, I am the mother of two young boys and find my leisure time increasingly taken up by child-friendly activities and socialising in venues with animals, big jumping castles, and lots of cakes, sometimes all together at once.

## Making opportunities accessible

**Noa Epstein Tennenhaus**  
2010, Israel, MBA Management



The Gates Cambridge scholarship offered me a life changing opportunity. Having previously worked for several years in peace-building NGOs in Israel, I had experienced the power of educational change-making programmes, such as Seeds of Peace, which bring together youth from areas of conflict and encourage

dialogue. However, I aspired to gain business skills to ensure long term, mutually beneficial cooperation between Israelis and Palestinians. The Gates Cambridge scholarship enabled me to do my MBA at the Judge Business School without loans.

I returned to Jerusalem after graduation to become CEO of Middle East Entrepreneurs of Tomorrow: an educational organization that partners with MIT and Google to empower exceptional Israeli and Palestinian youth to learn computer science and entrepreneurship, and to build change-making projects together. After three years in this meaningful and challenging job, my husband, two kids and I moved to India, where we have been teaching for the past two years at the United World College (UWC), of which I am also a graduate (Norway branch).

I have been fortunate to win incredible scholarships to fund opportunities of a lifetime. For many years now, I have been building a database of such opportunities with the aim of making them more accessible to a diverse pool of applicants. This recently led me to establish a consultancy called applicationshine.com, which helps people find and apply for opportunities. Getting more women, minorities and members of other marginalised groups to apply successfully for change-making fellowships and scholarships will no doubt extend the impact of these programs.

We move back to Israel in June and I am keeping myself open to future opportunities that might arise in the field of business with a social impact, especially in EducationTech. I love the idea of life as a series of adventures and hope to continue living opportunities off the beaten-track.

## The unconventional tech start-up

**Riaz Moola**  
2014, South Africa,  
MPhil Advanced Computer Science



My career has taken a wild path – from Product Manager at Google to running a tech start-up in Africa.

I read for my MPhil in Advanced Computer Science as a Gates Cambridge scholar in 2014. During these studies, I also ran a volunteering initiative called Hyperion Development

([www.hyperiondev.com](http://www.hyperiondev.com)). Hyperion consisted of a network of volunteers – mostly other Computer Science students – who would meet online once per week to maintain and deliver free online coding courses for struggling students in South Africa.

Computer Science students at Cambridge are continually bombarded by opportunities in tech startups. Microsoft, Apple, and Google have all acquired tech startups with links to Cambridge Computer Science (Deepmind, VocalIQ, SwiftKey). The allure is obvious.

There is, however, little room for non-traditional tech start-up ideas. I wanted to grow Hyperion to become an online course platform for coding education, serving the unique needs of the African market, whilst also generating social impact. Yet in Cambridge, the “formula” of raising venture capital, then tackling a large and sexy problem, and finally making a profit is seen as the set path for start-ups.

I took a completely different route with Hyperion. Despite the advice of tech start-up accelerators and incubators in London, during my time at Cambridge I chose to slowly transition the volunteering initiative to a startup that sells online courses in coding to high income demographics to subsidise free education for low income and unemployed youth in Africa. Rather than pitching to venture capitalists, we wrote grant applications. Rather than following the formula, we bootstrapped and made progress slowly.

Today, Hyperion is backed by Facebook and Google. It has raised over \$400,000 in grant funding and never accepted money from venture capitalists. Our social impact is core to our business model, and I believe we’ve used tech to do something unconventional and useful for an underserved demographic. There’s always an alternative solution, and I encourage you to keep looking.

# PROFESSIONAL UPDATES

Scholars and alumni from across the community share their professional activities and accomplishments.

## 2001

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**Amanda (Codd) Kelly** (USA, MPhil Biological Sciences) has accepted a new position at Incyte Corporation, as Manager of Publications and Scientific Communications.

## 2003

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**Shiladitya Paul** (India, PhD Material Science) published two chapters in handbooks: "Corrosion Control for Marine- and Land-Based Infrastructure Applications", *ASM Handbook, Volume 5A: Thermal Spray Technology*, published by ASM International and "Thermal Barrier Coatings", *Encyclopedia of Aerospace Engineering* published by John Wiley & Sons.

## 2004

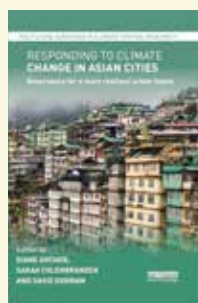
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In late 2015, **Robyn Scott** (New Zealand, MPhil Bioscience Enterprise) co-founded Apolitical, the first global impact network for government and its partners. Just over a year after starting, Apolitical has measurably helped public servants in more than 30 countries, from Canada to South Africa. Our customers include the UK Cabinet Office, Chatham House and the Wilson Women in Public Service Project. Apolitical's media collaborations include The World Economic Forum, Vice and Fast Company and is also backed by mission-driven investors in the UK Europe and North America and supported by the EU.

## 2005

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**Diane Archer** (France/Thailand, MPhil and PhD in Land Economy), in collaboration with colleagues Sarah Colenbrander and David Dodman at the International Institute for Environment and Development (IIED), released a book published by Earthscan Routledge following on from a 4-year research and capacity building initiative in Asian cities, working with researchers and practitioners in Asia. The volume is entitled *Responding to Climate Change in Asian Cities: Governance for a more Resilient Urban Future*.



## 2006

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**Pradipta Biswas** (India, PhD Computer Science) accepted a position as Assistant Professor at the Indian Institute of Science (IISc), set up a laboratory on Human Computer Interaction Design and is currently supervising three PhD students.

## 2007

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**Aisling Byrne** (Ireland, MPhil and PhD English Literature) was appointed Lecturer in Medieval English Literature at the University of Reading in 2015. This followed four years as Fitzjames Research Fellow at Merton College, Oxford. Her first book, *Otherworlds: Fantasy and History in Medieval Literature*, was published by Oxford University Press in 2015. Currently, she is co-principal investigator of the 'Crossing Borders in the Insular Middle Ages' project, an interdisciplinary research initiative funded by the Humboldt Foundation.

**Kelly Gardner** (USA, MPhil Bioscience Enterprise) was recently selected for the MIT Tech Review's TR35 list, a list of the top 35 innovators under 35 internationally for her work building a novel tool to profile tumours and provide insight into cell subtypes important in disease progression.

**Lawrence Owusu** (Ghana, MPhil Computer Speech, Text and Internet Technologies) has been appointed Senior Java Developer (contractor) with the European bank, Unicredit, where his job is helping to build pricing and trading systems for investment banks.

**Ian M. Ralby** (USA, MPhil & PhD Politics & International Studies) was named a Nonresident Senior Fellow at the Atlantic Council where he led, with his firm I.R. Consilium, the largest study ever conducted on global downstream oil theft. In addition, he served as an expert to the US Government, NATO and the Indian Ocean Commission on numerous maritime security missions and initiatives, and received the distinguished alumni award from his undergraduate alma mater, University of Maryland (Baltimore County). He was also appointed to the Board of Directors of the Henry Clay Center for Statesmanship.

**Nabil Wilf** (USA, PhD Biochemistry) has been appointed as a Resources Credit Analyst at Rand Merchant Bank in Johannesburg, South Africa.

## 2008

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**Sytske Besemer** (Netherlands, PhD Criminology) has accepted a positions as a criminal justice researcher with the Trust and Safety team at Uber. She will be doing applied research to increase job opportunities for people with a criminal record.

**Rajna Golubic** (Croatia, MPhil Public Health, PhD Epidemiology) has been appointed Associate Editor of the Oxford Handbook of Clinical and Healthcare Research. She has been working with Prof Sumantra Ray, the Editor of the book and the Chair of the UK Need for Nutrition Education/Innovation Programme (<http://www.nnedpro.org.uk/>). The book represents a toolkit for healthcare professionals planning to conduct a research project, covering research methods, study design and conduct, reporting, publishing, good clinical practice, and ethical and legal aspects of clinical research. It serves as a platform to deliver training in research skills in health-related field through courses worldwide.

**Andrew Lynch** (USA, PhD Biosciences Engineering) has been appointed as Lead for Google Strategy and Operations.

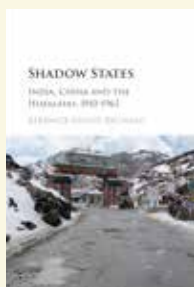
## 2009

**Braxton Boren** (USA, MPhil Physics) was appointed as an Assistant Professor in the Audio Technology programme at American University in Washington DC.

**Yama Dixit** (India, PhD Earth Sciences) published an invited review on the climate variability on the Indian subcontinent in the past millennium in 'Earth-Science Reviews'. She is currently a PRESTIGE Marie Curie Postdoctoral Scholar at L'Institut Français de Recherche pour l'Exploitation de la Mer (IFREMER), France.

**Bérénice Guyot-Réchar** (France, PhD History)

published her first book, based on her Gates-Cambridge funded PhD thesis: *Shadow States: India, China and the Himalayas, 1910–1962* (Cambridge University Press, 2016). It examines the roots of six decades of tensions between China and India.



**Usha Chilukuri Vance** (USA, MPhil Early Modern History) will be a law clerk to Chief Justice Roberts of the Supreme Court of the United States in October Term 2017.

**Jordan Blair Woods** (USA, PhD Criminology) accepted a tenure-track position as an Assistant Professor of Law at the University of Arkansas School of Law in Fayetteville, Arkansas.

## 2010

**Mohammad Ghassemi** (USA, MPhil Information Engineering), in collaboration with Tuka Al-Hanai, another graduate student in the department of Electrical Engineering and Computer Science (EECS) at MIT, has launched <https://connected.mit.edu/>. Connect is a platform that links undergraduates, graduates, postdocs, alumni and employees at MIT interested in meeting other people with similar interests for platonic one-on-one lunches.

**Ramone Faith Williams** (USA, MPhil Translational Medicine and Therapeutics) graduated from Harvard Medical School and is currently a resident in Dermatology at Albert Einstein – Montefiore Medical Center in New York.

## 2011

**Annalijn Conklin** (Canada, PhD Medical Science @ MRC Epidemiology Unit) has started her new position as Assistant Professor at the University of British Columbia after her CIHR Postdoctoral fellowship at UCLA (Oct 2014-Dec 2016).

**Tara Cookson** (Canada, PhD Geography) was appointed by the Mayor to the Seattle Women's Commission. The Seattle Women's Commission advises the Mayor, City Council and city departments on issues that impact the women of Seattle. The Commission identifies areas of concern and recommends policy and legislation, provides feedback and opinion on issues of city and state budget, and acts as a liaison between the women of Seattle and City government.

**Kevin Grove** (USA, PhD Philosophical Theology) has taken up a new job as an Assistant Professor of Theology at the University of Notre Dame.

**Yang Hu** (China, PhD Sociology) is now a Lecturer in Sociology and Data Science at Lancaster University, UK, and has published a new book (*Chinese-British Inter-marriage – Disentangling Gender and Ethnicity* published by Palgrave Macmillan) and four journal articles about sex ideologies and marriage in China in the last year.

**Greg Nance** (USA, MPhil Management), a life-long Seattle sports fan, was named "12 Ambassador" to the Seattle Seahawks football team. In his role, Greg runs ultra-marathons in Seahawks gear and connects with fans around the world.

## 2012

**Zachary Guiliano** (USA, PhD History) was promoted to Associate Editor at The Living Church magazine ([www.livingchurch.org](http://www.livingchurch.org)), and will blog regularly for the Anglican Communion News Service. From July 2017, he will be serving as a curate at St. Bene't's Church, Cambridge.

**Lucinda Lai** (USA, MPhil Sociology) will graduate from Harvard Medical School in May 2017 and begin residency in Emergency Medicine. Through her work with Burmese refugees on the Thai-Burma border, she helped to publish the book *Trauma and Recovery on War's Border* (Dartmouth College Press, 2015).



**Kevin T. Nead** (USA, MPhil Epidemiology) published a research paper showing a link between the use of androgen deprivation therapy in the treatment of prostate cancer and a risk of future dementia (*JAMA Oncology*, 3(1):49-55).

**Derrick Roberts** (Australia, PhD Chemistry) was awarded a Marie Skłodowska Curie Postdoctoral Fellowship to work in the group of Professor Molly Stevens at the Karolinska Institute, Stockholm. During this two year fellowship Derrick aims to develop novel polymer hydrogels that can accelerate the regeneration of chronic skin wounds.

**Anand Shrivastava** (India, PhD Economics) has been appointed as an Assistant Professor at Azim Premji University, Bangalore, India.

**Brielle Stark** (USA, PhD Clinical Neuroscience) is now a postdoctoral Fellow at the University of South Carolina in the Center for the Study of Aphasia Recovery

**Todd Tucker** (USA, PhD Development Studies) has been appointed a Fellow at the Roosevelt Institute and he is interested in global economic governance. He will be running the think-tank's work on international economic law and policy.

## 2013

**Elijah Mak** (Singapore, PhD Psychiatry) is now a Postdoctoral Research Associate at the Department of Psychiatry, University of Cambridge. He will be working with Professor John O'Brien on dementia projects. He has published two papers in 2016: a study of the connectome in late life depression (*Neurobiology of Aging*, 48:212-221) and neuroimaging in pre-clinical dementia (*Ageing Research Reviews*, doi:10.1016/j.neurobiolaging.2016.08.013).

## 2014

**Veronika Siska** (Hungary, PhD Zoology) published an article on genomes from two hunter gatherers from Devil's Gate, located in East Asia (*Science Advances*, DOI: 10.1126/sciadv.1601877).

## 2015

**Carol N. Ibe** (USA, PhD Plant Sciences) has started two new initiatives that she developed under JR Biotek Foundation, a not-for-profit organisation that she founded in July 2015. The first initiative is a Molecular Laboratory Training Workshop that will be held at the Department of Plant Sciences, Cambridge University in March 2017, and subsequently, at a Federal University of Agriculture in Nigeria in September 2017. The second initiative is the inaugural African Diaspora Biotech Summit, held at the Sainsbury Laboratory Auditorium, University of Cambridge on 4 April 2017. The Summit brought together 70 early-career life science and biotech

professionals (including research scientists, entrepreneurs, policy experts, and present and future bio-industry leaders) from Africa and the diaspora to discuss the current state of Africa's biotech and life science sector.

## 2016

**Sagnik Dutta** (Indian, PhD Politics and International Studies) has published an article in the peer reviewed journal *Asian Journal of Law and Society* entitled "From Accommodation to Substantive Equality: Muslim Personal Law, Secular Law and the Indian Constitution 1985–2015" (*Asian Journal of Law and Society*, doi: 10.1017/als.2016.54)

### Annalise Higgins

(New Zealand, PhD History), in collaboration Associate Professor Maartje Abbenhuis (University of Auckland) and Christopher Barber, has



co-edited a book entitled *War, Peace and International Order? The Legacies of the Hague Conferences of 1899 and 1907*. This collection of essays by an international team of contributors, which considers the conferences' myriad legacies in fields including international law, chemical warfare prohibitions, the prosecution of sexual assault, disarmament, public activism, and humanitarianism, is published by Routledge in March 2017.

**Emily Kassie** (Canada, MPhil International Relations & Politics) published investigative feature entitled "The 21st Century Gold Rush: How the Refugee Crisis is changing the World Economy" in the *Huffington Post*.

**Paul Meosky** (USA, MPhil English) published his first article, alongside Prof. Jennifer S. Lerner of the Harvard Kennedy School and Dr. Brian Gill of Mathematica Policy Research, titled "Reimagining Accountability in K-12 Education" (*Behavioral Science and Policy*, 2(1): 57–70). The article compares four main accountability systems from a behavioural science perspective and their historic and potential use in American education.

**Geo Saba** (USA, MPhil International Relations and Politics) is now a legislative Assistant for Congressman Ro Khanna (U.S. Representative for California's 17th congressional district).

**Aya M. Waller-Bey** (USA, MPhil Education) founded The College Admissions Literacy Consulting Company (CALCC, <https://thecalcc.org/>), an online admissions counseling company which aims to supply low cost college admissions guidance to students and communities.



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