



2016 ANU Student Research Conference

Proceedings



THURSDAY 14 JULY

8AM

Yoga ANU Sport

8:30AM

Free Breakfast Brian Kenyon Study Space

9AM

Conference Registration Opens Manning Clarke Centre

9:30AM

Session 1: Welcome and Plenary Speaker MCC T2

10AM

10:30AM

11AM

Morning Tea MCC Foyer

11:30AM

Session 2a: Public Policy and Social Research MCC T4

12PM

Session 2b: Postgraduate Scholarship Showcase MCC T5

12:30PM

1PM

Session 3: Lunch + Poster Presentations MCC Foyer

1:30PM

2PM

Session 4a: Dimensions of Security MCC T4

2:30PM

Session 4b: Be Visible or Vanish? Using Social Media MCC T5

3PM

Afternoon Tea MCC Foyer (3:10-3:30pm)

3:30PM

Session 5a: Digital Technology and Society MCC T2

4PM

Session 5b: Exploring Jazz and Contemporary Composition Teatro Vivaldi

4:30PM

Networking Reception MCC Foyer Begins 4:40PM

5PM

5:30PM

Session 6: Science Fiction Futures MCC T3

6PM

FRIDAY 15 JULY

Yoga ANU Sport

Free Breakfast Brian Kenyon Study Space

Conference Registration Opens Manning Clarke Centre

Session 7: Welcome and Plenary Speaker MCC T2

Morning Tea MCC Foyer

Session 8a: Science at Multiple Magnifications MCC T4

Session 8b: Policy, Politics and History MCC T5

Session 9: Lunch + Poster Presentations MCC Foyer

Session 10a: Cultural Perspectives MCC T4

Session 10b: Leadership Symposium MCC T5

Session 10c: Research Careers Beyond the Ivory Tower MCC T6

Afternoon Tea MCC Foyer (2:40-3PM)

Session 11a: Biology, Behaviour and Beliefs MCC T4

Session 11b: Leadership Symposium MCC T5

Session 12: Honours 3-Minute Thesis MCC T3

Begins at 4:20PM

Conference Reception and Award Presentation with Vice-Chancellor Brian Schmidt MCC Foyer

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Guest Speakers

Pro-Vice Chancellor (Research & Research Training) Professor Jenny Corbett

Professor Jenny Corbett has been Pro Vice-Chancellor (Research & Research Training) since 2012. Her portfolio includes recruitment and support of higher degree research (HDR) students, improving the education and experience of HDR students and developing innovative approaches to research training, so she is a fitting choice to open this year's ANU Student Research Conference!

Prior to taking on the role of PVC (Research & Research Training), Professor Corbett was the Executive Director of the Australia-Japan Research Centre, at the Crawford School of Public Policy. She has a PhD in Economics and positions at a number of institutions besides ANU, and been a consultant to the Asian Development Bank, the OECD, the World Bank and the European Commission.

Plenary Speaker

Professor Joseph Hope, Research School of Physics and Engineering

"Lectures where you broadcast information or work collectively are an inefficient way to use everyone's time".

Professor Joe Hope is an ARC Future Fellow in the Research School of Physics and Engineering. His research focuses on quantum theory and investigates atom lasers, quantum memories and atom-light entanglement - prompting speculation on strategies for teleportation. He also has a strong interest in teaching, transforming conventional lectures into workshops "where we can play with ideas".

Plenary Speaker

Dr Jill Sheppard, ANU Centre for Social Research & Methods, and School of Politics & International Relations

"I like breaking conventional wisdom. I like questioning things like when people say young people don't care."

Dr Jill Sheppard is a political scientist and survey researcher at the ANU Centre for Applied Social Research and Methods and the School of Politics and International Relations. Her research focuses on Australian government and politics, including political behaviour, internet politics and e-participation. A leading political commentator, Jill Sheppard also explores issues such as national identity through ANUpoll, a quarterly survey of Australian public opinion.

LC1 Postgraduate Scholarship Showcase

Hosted by History Learning Community and Global Challenges Learning Community

Anne Baly (Fulbright Scholarship). The Australian-American Fulbright Commission is a non-profit organisation sponsored by the U.S. and Australian governments and other institutional and business partners. It's mission is to promote education and cultural exchange between Australia and the U.S., including through the Fulbright scholarship program.

Lindell Bromham (Rhodes Scholarship). The Rhodes Scholarships support outstanding all-around students at the University of Oxford.

Peter Francis (Westpac Future Leaders Scholarship). The Westpac Future Leaders scholarship supports the postgraduate studies of exceptional scholars chosen for their potential to make a difference to Australia's future in one of three focus areas: technology & innovation, strengthening Australia-Asia ties and enabling positive social change.

Chris Lowe (General Sir John Monash Foundation). The General Sir John Monash Foundation raises funds for, and administers, the John Monash Scholarships to foster leadership, expertise, international networks, and Australia's capacity for the future.

LC2 Be Visible or Vanish?

Speaker: Dr Inger Mewburn, Director ANU Research Training

Hosted by Cultures Learning Community and Global Challenges Learning Community.

Dr Inger Mewburn is Director of Research Training and editor and contributor to 'The Thesis Whisperer', a blog dedicated to preparing a thesis or dissertation. As Director of Research Training, Dr Mewburn is responsible for co-ordinating, communicating and measuring centrally-run research training. Her research focuses on research students' experiences of university.

LC3 Exploring Jazz and Contemporary Composition

Speakers: Tait Sheridan and Brendon Keller-Tuberg

Hosted by the Creative Arts Learning Community.

Exploring composition as a form of research, award-winning ANU School of Music alumnus Tait Sheridan will discuss his inspirations and what it means to compose. He will be joined by current student Brendan Keller-Tuberg who will present jazz compositions he has written for a jazz trio with Tate Sheridan and Daniel Faber. Brendon Keller-Tuberg is a third year Bachelor of Music (Jazz Band Performance)/Bachelor of Laws studying Jazz Band Performance at the ANU School of Music.

LC4 Science Fiction Futures

Speakers: Chris Palmer, Cat Sparks, Zoe Tulip

Hosted by the Sustainability Learning Community

Speculating on science fiction, collective consciousness and environmental narratives, writer and academic Chris Palmer (Castaway Tales, La Trobe University) is in Conversation with writer Cat Sparks (Lotus Blue (forthcoming), Agog! Press) in the conference evening session. They are joined by current visual arts student Zoe Tulip, who will discuss her recent research on a strategy for prompting viewers to reflect on differing opinions of controversial issues in science.

Zoe Tulip, Bachelor of Science/Bachelor of Arts

Research completed during ARTV3615: Animation and Video Project Development

This semester-long digital project aimed to use a theory by Plato to explore an alternative idea on how and why people might oppose consensus views on controversial issues in science, even in the face of overwhelming scientific evidence. The history of conflict and debate surrounding hot topics and issues surrounding the sciences is a long, complicated and protracted affair. In recent times it has been highlighted in topical areas such as vaccination, GMO crops, and climate change. This can lead to situations such as for instance dealing with an individual at a BBQ who might have a strong opinion about an issue, where frustration on the part of both parties can result in heated exchanges that nobody wants to have a part in nor be a witness to.

The idea of this work was to act as a window to how people think and feel about scientific issues in general, and in the process to offer the opportunity for the viewer to perhaps reflect on the ideals of either themselves or those

around them where it concerns some of these issues. The metaphorical window acts as a medium in which to offer a variety of insights. The narration includes insights drawing from Plato's Allegory of the Cave (i.e. the idea that if someone experiences the world in one way all of their lives, and then is suddenly exposed to a new idea that could drastically alter their world view, it may be hard for them to adjust or even accept this new understanding), and acknowledgement of perceptions concerning key issues related to science. The work culminates in a single commonality that ties those insights together in an effort to avoid confusion to the audience as to the intent of the work. Research material was gathered from coursework and readings sourced from studies in both science communication and visual arts, as well as discussion about and the observation of other works produced in a similar vein. The result is the following short video: <https://www.youtube.com/watch?v=D3jCxKAclh8> --

LC5 Research careers beyond the ivory tower

Speakers: Tempe Archer and Ian Brotherson

How do you translate your research skills and experience for a wider audience? How do you find jobs in which you not only use your research skills and experience, but develop them further through a rewarding career? Join careers consultants Tempe Archer and David Rockawin in a focused, practical workshop.

Tempe Archer is a Careers Consultant in the Student Experience and Career Development Team within the Division of Student Life. She brings her knowledge of the labour market and needs of employers in all sectors regarding research and analysis skills to her position at ANU. In this workshop Tempe shares her own academic research background as a HDR student at ANU and career stories through discussion of her experience applying these skills in a wide range of sectors and jobs.

Iain Brotherson is a social worker and careers consultant in the Student Experience and Career Development team within the Division of Student Life. His background includes student facing roles at universities, youth justice/child protection roles within government, and mental health/counselling roles in the community sector. Iain's passion is understanding and supporting people in new ways to reach their goals whether that be within employment, university or other areas of life.

Oral + Poster Presentations

O1 The Role of the Postal Ombudsman for a Privatised Australia Post

Alexander Ferguson, Bachelor of Laws/Bachelor of Science

Research completed during LAWS2330: Law Internship (listed as LAWS4230: Law Internship from 2016) at the Commonwealth Ombudsman's office.

In 2014, the National Commission of Audit recommended the privatisation of Australia Post. This follows the privatisation of the United Kingdom's Royal Mail and a general trend towards privatising Australian Government corporations, such as Telstra. However, the federal government has put-off privatising Australia Post and many groups continue to express reservations. Currently, Australia Post is Australia's largest postal operator for parcels, has a monopoly on delivering small letters within Australia, and must meet service standards, such as making deliveries to rural Australia. If privatised, Australia Post would probably provide less of these public services. Indeed, Australia Post has moved in this direction, by introducing a regular service that is two days slower than the priority service and raising the price of sending a letter. If Australia Post was privatised, it is unknown whether it would continue to be subject to independent oversight by the Postal Industry Ombudsman and/or the Commonwealth Ombudsman. Originally, ombudsmen were intended to protect citizens from the government. However, the Commonwealth Ombudsman is increasingly regulating industry, such as the Private Health Insurance Ombudsman, and more ombudsmen are independent of government, such as the Telecommunications Industry Ombudsman. This talk is based on research conducted at a Law Internship at the Commonwealth Ombudsman's office in 2015. The research aimed to investigate the potential role of ombudsman if Australia Post was privatised. A review of literature in the fields of administrative law, competition and rule of law theory were undertaken. The conclusion of this research was that there should be a continued, but modified role for the ombudsman, because the ombudsman provides access to justice. Further, based on the rule of law, the ombudsman's role should be expanded to mandatorily include all postal operators so they are all subject to the same regulatory regime.

O2 Gifted Underachievement: Causes and Interventions

Zixin (Jessy) Wu, Bachelor of Philosophy (Hons)

Research completed during an ANU Summer Research Scholarship program 2015/2016

Giftedness is generally seen as a precipitate to superior academic performance. Therefore, the specter of the gifted underachiever leaves educators scratching their heads. Despite being widely observed - a Victorian inquiry found that up to 50% of gifted students do not perform at the level of which they are capable - the underlying causes of gifted underachievement are not well understood. In this report, I integrate evidence collected from interviews and from a literature review to devise a schematic for understanding gifted underachievement. I argue that giftedness is distinct from the ability to achieve. Instead, the development of gifts into talents is a continuous process, which can only occur if certain intrapersonal and environmental catalysts are present. With this understanding, I evaluate interventions schools use to reverse this trend, and analyse why certain elements of the interventions are particularly effective. I find motivation, the influence of peers, and self-esteem to be particularly important catalysts. Following this, I make several recommendations as to how we can optimize learning environments to ensure these catalysts are present.

O3 Factors Associated with Under Five Mortality in Sierra Leone

Lilipramawanty Liwin, Master of Social Research

Research completed during SOCR8002: Survey Data Analysis

Sierra Leone is a country in sub-Saharan Africa which had a crude birth rate of 37 children per 1000 people in 2014. However, many children born in this country die before reaching the age of five. In 2014 Sierra Leone's under five mortality rate was 126 per 1000 live births, the fourth highest under-five mortality rate in the world. This study attempts to identify which risk factors are associated with under five mortality in Sierra Leone. The risk factors used are selected according to Mosley and Chen's theoretical framework for the study of child survival. The study focuses on maternal and child factors, personal health care, household factors, and health systems. A total of

twenty risk factors are examined in this study. The data source used in the analysis is the 2013 Sierra Leone Demographic and Health Survey. The study examines the risk factors evident in the individual data of the last child from sample households, born between 2008 and 2013, with a total of 9073 children. Logistic regression is employed to test the relationship between the risk factors and each child's outcome. Logistic regression is a statistical method to analyse binary outcome data, which is 'died' or 'survived' in this study. The study finds eight factors associated with under five mortality in Sierra Leone, namely the type of mosquito net, mother's age at last birth, child sex, single or multiple birth, birth order and interval, child weight at birth, postnatal check within two months, and breastfeeding status.

O4 Transformation of Participation in Development: Trajectory to Sustainable Development

Muhammad Hali Aprimadya, Master of Public Policy

Research completed during POGO8072: Development Theories and Themes

The participatory approach has become one of the major discourses in development and policy fields. A participatory approach to development or participatory development is a process of enhancing the involvement of people or beneficiaries of the development into the decision-makings. Proponents of this approach advocate that involvement of beneficiaries of the development projects or programs will increase the receptivity and success of the program. Participation and participatory development are not new concepts and the practices can be traced back throughout the history of civilizations. Nevertheless, they experienced ups and downs. Participatory development re-emerged into policy discourses and practices in the 1970s initiated by NGOs. The re-emergence was a response to government and market failures in addressing development issues. It did not take long before participatory development became the preference of policy makers across the globe. In the 1990s, participatory development, which was once a 'radical' approach, has become a 'mainstream' approach that prescribed by numerous governments and development agencies. This paper argues that transformation of participatory development from alternative to mainstream approach creates a trajectory for a sustainable development. The assessments of the argument use a case study approach through reflection on a participatory development program in Indonesia, IBEKA Micro Hydropower Plant (MHP) projects. This qualitative research uses data from various online sources (i.e. news, official websites, project reports), which gathered through Internet searches by using keywords such as "IBEKA", "empowerment", "participatory", and "micro hydropower plant". The findings show that transformation of a participatory project from alternative to mainstream is inevitable for project sustainability. The data analyses indicate that people empowerment through MHP projects is not adequate without integration into governance system and embracing the market mechanisms. For instance, government regulations were required before the national electricity company can buy excess electricity generated by MHPs. This research signifies challenges upon theoretical assumptions that bottom-up and people-centred approaches as all-encompassing ingredients to development success.

O5 Challenges and Opportunities of Integrating Check-In, Security and Customs Systems at the Airport

Natasha Disha, Bachelor of Engineering/Bachelor of Science

Research completed during ENGN2225: Systems Engineering Design

Air travel is increasing rapidly and is expected to double or triple by 2025. Airport departure systems that include parking the car in the airport to boarding the passengers are one of the most complex systems in the world. Due to the increasing flow of passengers at international airport terminals stakeholders are facing immense pressure to provide satisfactory experience to the passengers around the world. Although an automated border processing system known as 'SmartGate' is found to be efficient as an universal technology; huge queues in the check-in, baggage delays in the customs, repetitive security process, long walking distance between check-in, security and customs lead to an average waiting time of 2-3 hours at the international airport terminals. In this project a system design approach has been used to analyze the challenges and opportunities of integrating check-in, security and customs systems to reduce waiting times at the international airport terminals. Design criteria were established in

order to evaluate the current airport system against the customer requirements that have been established based on interview questionnaires. A diverse range of tools including Journey maps, logical flow diagrams and system-architectures has been used in order to explore the proposed design. Efficient collaboration of stakeholders and worldwide introduction of a universal technology have been found as the main challenges of this integration. From the investigation it has been found that the integration of check-in, security and customs systems will halve the average waiting time in the airport by reducing human interaction in the entire process.

O6 Military Force and the Protection of Human Rights

Avnav Pujara, Master of International Relations

Research completed during INTRO8065: Writing International Relations

Does the international community accept that it has a right and a duty to use military force to end the most egregious violations of human rights, when no other means will work? This paper will seek to address the aforementioned question through a qualitative analysis of secondary sources such as journal articles and books, published by prominent authors in the field of International Relations. Specifically, it looks at authors conducting research on the fragmented post-Cold War world order, domestic sovereignty of States, humanitarian intervention, and the Responsibility to Protect (R2P). The historical context of this paper is based on the domestic conflicts that erupted around the world in the 1990s, characterized by the gross violation of human rights by the State itself. Prominent examples looked at include the conflicts in Somalia, Rwanda, Bosnia, and Kosovo. This paper then examines the international community's inability to respond to these conflicts due to being locked in a debate between the principle of domestic non-interference and military intervention on humanitarian grounds. The concept of R2P was put forth to bridge the gap between this debate, allowing for military intervention under certain criteria. R2P was consequently included within certain UN Resolutions and adopted unanimously by Member States. This paper argues that whilst States accepted their moral duties by adopting resolutions on R2P, there existed immense contestation when it came to exercising their right to use military force to protect human rights – as will be demonstrated in the case of intervention in Libya in 2011.

O7 Skeletal Evidence of Torture: How can the past help the present?

Victoria Tasker, Bachelor of Archaeological Practice

Research completed during BIAN3010: Scientific Dating and Isotope Analysis

Isotopes identified in various materials and substances can reveal a great amount of information about the environment, peoples, cultures, and most appropriately here, biology. This paper will use ^{14}C isotope values in human tissue to further understand tissue turnover. Atmospheric ^{14}C values are reflected in human tissue due to the direct influence of humans eating plants that absorb atmospheric carbon and animals that eat said plants and are then eaten by humans. Nuclear testing in the early 1960s doubled the amount of atmospheric carbon and did so until testing ceased in 1963 due to the implementation of the Limited Nuclear Test Ban Treaty. Atmospheric carbon has been gradually declining ever since this peak. Due to this significant rise and resulting decrease in atmospheric carbon and its parallel in human ^{14}C values, tissues can effectively be given an age and therefore a formation date. Tissue turnover will be examined in different types of brain tissue, adipose tissue and tendon tissue. Understanding tissue turnover could lead to advances in scientific research on specific pathologies and eventually lead to their prevention. The limitations of using ^{14}C values from the nuclear testing ^{14}C graph have their own implications and as such, are explored thoroughly. A tangible future of this method may be uncertain but it is clear that, while still possible, it should be utilized to its full extent.

O8 Digital Histories and Historical Research

Rebecca Hilton, Master of History

Research completed during HIST6239: Digital History, Digital Heritage

Technology in the twenty-first century has not just changed the way people shop or communicate; it has profoundly impacted the way historical research can be conducted. This research explores whether the creation of digital histories re-enforced the Western and elitist character of historical research, through examining changes in research methods over the past half-century and the extent to which digital histories have influenced these changes. Since the mid twentieth century a number of historians have questioned Western and elitist historical research methods, which resulted in the rise of social history and increased research being undertaken by amateur historians, most particularly family history researchers. Historians are also more aware of, and make adjustments for the inherent Western influence of historical research, and research is significantly less elitist. The emergence of digital histories has enabled the Western bias of historical research to be tested and has further assisted in reducing the elitism in research by making historical records more readily available. Digital histories have created a new way to approach research. Digital histories are not a panacea, and there are issues associated with their use, including concerns regarding access, the creation of new types of elitism and the full engagement of the technology by professional historians. Digital histories do not change the need for historians interrogate relevant sources and interpret information. Digital histories provide a new method to undertake a longstanding practice, and will continue to impact historical research. The future capability of digital histories is unknown as the technology that could be available by the end of the twenty-first century is impossible to imagine. Historians, indeed all researchers, will need to insert themselves into digital processes that influence information collected for digital histories and thus future historical research.

O9 'Click, Print, Fire': 3D Printing and the Arms Trade Treaty

Alex Catalán Flores, Bachelor of Laws/Bachelor of Economics

Research completed during LAWS4258: International Organisations (Geneva) (2015/2016)

On 3 June 2013, countries united to sign the Arms Trade Treaty (ATT) in an effort to combat illegal arms transfers and also regulate legal arms transfers between countries. The ATT provides an unprecedented regulatory framework which encompasses previously unregulated military materiel such as combat aircraft and battle tanks. However on 3 May 2013, exactly one month earlier, a new threat emerged when shots were fired from the world's first entirely 3D-printed plastic polymer firearm – *The Liberator*. On 12 May, two *Daily Mail* journalists printed a copy of *The Liberator* and smuggled it past airport-style security. Despite this threat, 3D firearms are not mentioned in either the treaty negotiations or the final treaty text. This paper analyses whether the legal architecture provided by the ATT can address the three main challenges posed by 3D printing: firearms, components, and digital design files. This paper reviews the ATT through the lens of international disarmament law and international institutional law, analysing commentary from superior international courts and eminent legal scholars. Ultimately this paper posits that while the ATT adequately addresses 3D-printed firearms, it creates a legal void in the space of 3D-printed components and digital design files, meaning that weapons can still be transferred by sending them component by component or by sharing the original design file online. A solution is possible within the current parameters of international law, but this will depend on states' willingness to give proactive legal powers to the ATT's primary institutional organ – the Conference of States Parties.

O10 NGOs and the Internet: an analysis of NGO web presence

Sachini Muller, Bachelor of Asia-Pacific Studies/Master of Globalisation

Research completed during ANIP3005: Australian National Internships Program at the Development Policy Centre

This research analyses the websites and social media of Australian aid and development NGOs, and to what this web presence is devoted; soliciting donations, encouraging action or raising awareness of global issues. It then explores correlations between the uses for various media platforms as well as correlations between internet and

non-internet characteristics of NGOs. The websites and social media pages of the largest 39 NGOs were analysed through content and regression analysis. It was found that 48% of the web presence of NGOs is devoted, on average, to soliciting donations, 9% to encouraging action and 22% to raising awareness. There are also correlations between different media platforms; NGOs who use the front page of their websites mainly for a particular purpose use social media to the same ends. Those who use the website front page to encourage action on issues also use Facebook for this reason. A key finding of this research is that particular non-internet characteristics of NGOs are associated with the way in which NGO web presence is used. One such characteristic is revenue from DFAT funding: an increased proportion of total revenue from DFAT funding does not silence NGOs on encouraging action on issues, and appears to be associated with greater awareness raising activity. This research is significant as the web presence of Australia's aid NGOs has never been analysed in a quantifiable way. This is also the first time that such data has been used to examine what non-internet characteristics influence the web presence of NGOs.

O11 The other CO₂ problem: measuring the effect of carbon dioxide in the Southern Ocean

Ellen Cliff, Bachelor of Philosophy (Sciences) (Hons)

Research completed during Honours at the Research School of Earth Sciences

A third of man-made carbon dioxide emissions have been absorbed by the ocean, leading to a decrease in seawater pH, a phenomenon called ocean acidification. This is most acute in the Southern Ocean surrounding Antarctica, where the cold waters readily absorb the carbon dioxide. Micro-organisms that produce calcium carbonate shells for protection form the base of the Southern Ocean food web. These organisms struggle to form their shells in acidified, carbon dioxide-rich ocean water. To measure the amount of calcium carbonate produced by these organisms and track their fate in seawater, I developed a high precision isotope-dilution multicollector inductively-coupled-plasma mass spectrometry technique to measure calcium content in seawater samples. I applied this technique to samples of seawater from the Southern Ocean collected at points between Tasmania and Antarctica, and at various depths from the surface to 1000 m deep. My results provide the first precise estimates of the amount of calcium carbonate formed by micro-organisms in the Southern Ocean at the surface and at the fate of this at depth. My results suggest that calcium carbonate of the micro-organisms' shells is mixed into deeper waters, transporting carbon from the surface to store in the deep ocean carbon-sink. My honours research provides a promising method to track the effects of ocean acidification on the calcifying organisms. With this tool, ocean scientists can better model the amount of calcium carbonate in the Southern Ocean, which will be essential for humanity to predict what we will face in the coming decades as the ocean and climate changes.

O12 Life Cycle Assessment of a Condom

Mun Nyee Chew, Bachelor of Economics/Bachelor of Finance

Research completed during MKTG2002: Sustainable Marketing

This is a research report on the life cycle assessment of male latex condom. I present a cradle-to-grave analysis on the physical flow of resources, waste and carbon emission to and from the life cycle and its subsystem. This report begins with the history of condom, the scope of research followed by (1) the environmental impacts of forest land conversion to rubber plantations in South and Southeast Asia, (2) energy consumption, carbon emission and waste generation by rubber mills and (3) condom manufacturers and also welfare of factory workers. Life cycle assessment is the methodology used here to study all potential environmental impacts attributable to the life cycle of a condom, from acquisition of raw materials, manufacturing plant to post-use and disposal of condom.

We discuss some market forces that drive the rising demand of condoms as the revenue and volume of condoms industry will experience compound annual growth rate of 9.28% and 9.07% respectively from 2015 to 2019. Although when used correctly and consistently, male condoms are estimated to be 90% effective in reducing HIV transmission and 87% as a primary means of contraception yet due to marketing and social challenges, accessibility of condoms mainly in African countries remains low.

The future of the industry is studied by weighing the long term social benefits and environmental costs. Dual protection advantages of condoms seem to outweigh the environmental costs because it is also a solution to the rising world population. We conclude that perhaps in the future, the use of recoverable resources and pollution prevention technology can create a more sustainable condom industry.

O13 Association between serum 25-hydroxyvitamin D level and the risk of first clinical diagnosis of central nervous system demyelination, a common precursor of multiple sclerosis

Courtney Tiller, Bachelor of Science/Bachelor of Medical Science

Research completed during BIOL3208: Biology Research Project

Vitamin D deficiency has been associated with increased risk of multiple sclerosis (MS). Assays for 25-hydroxyvitamin D (25(OH)D) can be imprecise and inaccurate, and may affect estimates of the association between 25(OH)D and MS. Using data from the Ausimmune Study, we test agreement between two assays, and investigate the association between 25(OH)D and the first clinical diagnosis of central nervous system demyelination (FCD) for each assay. The Ausimmune study is a case-control study investigating risk factors for a FCD. Serum 25(OH)D was measured for cases (n=198), and age- and sex-matched controls (n=246) aged 18-59 years, using two different liquid chromatography tandem mass spectrometry assays: RDDT Technologies and at UWA Centre for Metabolomics (UWACM). The latter assay is standardised to a reference measurement protocol. The agreement between assays was analysed, and for each assay the association between FCD and 25(OH)D. 25(OH)D levels were, on average, 13.56 nmol/L (95% limits of agreement: -20.55, 47.68) higher in the RDDT assay than the UWACM assay. Using the UWACM results, the effect size of 25(OH)D level on FCD risk is attenuated compared to previous findings, and is not statistically significant (AOR=0.94 (95% CI: 0.84-1.05) per 10nmol/L). There was a clinically significant positive bias comparing one "gold standard" assay with another, with implications for clinical decision-making. Using an accurate and precise assay, there was no significant association between 25(OH)D and risk of FCD. Previous findings of a protective effect of higher 25(OH)D levels for MS may be due to assay bias that exaggerates the case-control difference.

O14 Validation of ligands in X-ray crystal structures using Molecular Dynamics simulation

Martyna Judd, Bachelor of Philosophy (Science)

Research completed during SCN2102: Advanced studies 2, while completing a summer research scholarship project at the University of Queensland

Identifying the conformation, binding mode and orientation of a small molecule such as a ligand in a large protein system still poses major challenges in modern structural elucidation. Refinement processes in X-ray crystallography, which elucidates molecular structures from X-ray diffraction patterns, often inadequately account for non-bonded ligand-protein interactions and can lead to erroneous characterization of the ligand structure. Accurately understanding the binding mode of fragments in the active site of a protein is of high importance in computer-aided drug design and in correctly interpreting biomolecular processes. In this experiment, molecular dynamics simulations were employed to validate 11 crystal structures of small molecules bound to the endothiapsin protein, challenging in terms of their protonation state, functional groups, and ease of parameterization. The ligand parameters were generated from the Automated Topology Builder and Repository (<http://atb.uq.edu.au>) and preliminary simulations were carried out using the GROMOS11 (54A7 forcefield) simulation package. The ligands were analyzed in terms of stability in the protein binding pocket, change in orientation from the original crystal structure, and distance variations from specific protein residues. While a large proportion of the original crystal structures could be well validated, a number of ligands were unstable in the binding pocket. The results prompt discussion on the limitations of modelling small molecule structures and electron densities from crystallographic data, current constraints on the quality of forcefield parameters for molecular dynamics simulations of small molecules, and the difficulties encountered in X-ray crystallography in identifying correct protonation states, orientations and alternative interactions of inherently dynamic processes.

O15 Imperial Pink: Australia, the Idea of Greater Britain and the Imperial Federation Movement, 1868-1919

Daniel McKay, Bachelor of Arts (Hons)/Bachelor of Laws (Hons)

Research completed during Honours in History

Australia made a significant contribution to the development of the idea of Greater Britain and the life of the imperial federation movement. In this paper I propose that many Australians identified with the cause, seeing in it an opportunity for Australia to renegotiate its place within the Empire and leverage a greater say in imperial affairs. Encouraged by innovations in transport and communication technology that seemed to draw the Empire closer together, people in Britain and its settler colonies like Australia began to imagine the possibility of a globe-spanning imperial polity. Not content to leave the prospect of Empire unity to chance, the most ardent proponents of Greater Britain became champions of an imperial federation. Australians played a special role in this movement: and were not only critical to the formation of the Imperial Federation League, but would subsequently assume leadership over it when the parent league in London dissolved in 1894. This paper takes an expansive view of the Australian contribution by going beyond a nationalist frame and locating it within its imperial context. The fluidity of dual Australian and imperial identity, as well as the mobility and interaction of key players in different parts of the Empire, necessitates this approach for a holistic understanding. The nuanced interplay of specific Australian interests with British and other colonial interests can be better appreciated in such a picture. Filling a gap in the historiography, this paper expands our knowledge of the Australian contribution to the development of the idea of Greater Britain and the political project of imperial federation. It does this by highlighting the presence of Australia and Australians in the development of key ideas, texts and organisations. In spite of its eventual failure, the history of this movement is critical to deepening our understanding of British imperialism and its manifestations within settler colonies like Australia.

O16 The impact of the Euthanasia Laws Act on territory rights

Amelia Dowey, Bachelor of Laws/Bachelor of International Relations

Research completed during ANIP3005: Australian National Internship Program, working on a report for Senator Nova Peris

Between July 1996 and March 1997 four people legally ended their lives through the use of the Northern Territory's Rights of the Terminally Ill Act 1995. The Federal Parliament passed the Euthanasia Laws Act 1997 (Cth) with the intention of overturning this trail-blazing law and despite opinion polls to the contrary. This Act was an unprecedented use of the Commonwealth's constitutional power. Multiple attempts to reinstate territory legislative power have failed. This briefing report focuses on the legal mechanisms the Federal Government has adopted to undermine territory rights and self-governing autonomy. Underlying political motivations on social issues by the Federal Government have resulted in an inconsistent application of the law. The Government is guided on whether and how to intervene by populist political motivations, rather than any objectively assessed national interest criteria. This report provides an analysis and evaluation of the impact of the Euthanasia Laws Act on the Northern Territory (NT). The research concludes that the Act was an unprecedented use of the Constitution and detrimental to the NT's legislative autonomy and self-governance. There are other separate instances, the NT National Emergency Response in 2007 and the disallowance of the Civil Unions Bill 2006 (ACT), that are illustrative of there being a pre-existing pattern of territory rights being undermined. The report finds that the self-governing powers of the NT, undermined by the Euthanasia Laws Act, should be restored and protected. Recommendations discussed include the drafting of a Bill to overturn the Euthanasia Laws Act and the transition of the NT from a territory to a state to relieve the NT from its subordinate status to the Federal Government.

O17 Developing a Framework for the Assessment of the Australian Research System

Albert Patajo, Bachelor of Laws (Hons)/Bachelor of Science

Research completed during ANIP3003: Australian National Internship Program, at the Federal Department of Education

The aim of this research was to develop a framework for the holistic assessment of the Australian research system. Through the identification of indicators and the presentation of data from metrics that encompassed these indicators, this research presented an accurate portrayal of the performance of the Australian research system. This research was developed in response to the Boosting the Commercial Returns from Research report that was presented by the Australian Government in 2014. The current assessment tools are fragmented and do not provide a holistic approach to the evaluation of the Australian research system. Indicators are used to provide a quantifiable analysis of the research system. The indicators used in this research project were: resourcing, quality, engagement, return on investment and responsiveness. These indicators had been identified by the Department of Education and other Government research. Research was conducted through data-mining available databases and through data request from organisations. This data was presented against the OECD average in order to determine how Australia was progressing internationally. The quality of Australian research is stronger than the OECD average, with Australian research receiving more citations per publication and publications per researcher. However, Australia should improve on resourcing its research system through an increase in investment in research to remain competitive, as well as providing incentives for industry collaboration and research commercialisation. This research made several key recommendations based on improving research evaluation frameworks and data collection. The collection of sufficiently robust data will ensure that future frameworks are able accurately assess the Australian research system.

O18 Rationalising religion: the role of religion and conscience in Australian politics

Jonathan Tjandra, Bachelor of Politics, Philosophy and Economics/Juris Doctor

Research completed during VCUG3001: Vice-Chancellor's Course Unravelling Complexity

This paper investigates the complex problem of the role of religion in Australian politics. As a liberal democracy, Australia is a state in which no state religion is established and the free expression of religion is upheld. Religionists, like all citizens, are free to express their personal opinions but implicitly must follow a "principle of secular rational, i.e. any religious motivations should be translated into secular reasons if their opinion would be given any weight in public policy. This paper traces the development of this principle, and evaluates its usefulness in current times, where religion and politics in Australia are converging, even as they already have in the Middle East. Compounded upon this is the idea that religious authorities, such as the Roman Catholic Church, command the beliefs of their adherents. In a representative democracy like Australia, it is expected politicians represent their electorate rather than being accountable to religious authority, so this paper investigates its origins in theology and its effectiveness in Australia. This paper proposes a way forward in the weakening of the principle of secular rationale, replacing it with one based on conscience, through the semantics of religion and conscience. It is proposed religion should be seen as one of many influences on one's conscience and combines and evaluates existing threads in theological, philosophical and political science literature to weave a unified "systems theory of conscience to the extent its key determinants affect public policy.

O19 Looking East – Vincent van Gogh and Japan

Clive You, Bachelor of Commerce/Bachelor of Science (Hons)

Research completed during ARTH1007: Art & Design Histories: Making and Meaning

During the formative years of his life in Arles, France, Vincent van Gogh became deeply enamoured with the art of Japan. Although he never saw Japan for himself, in his head he imagined it as an oriental utopia. This vision, while short-lived, was crucial for the eventual flowering of his unique painting style. Therefore, it is vital for us to understand the Japanese aesthetics and philosophy hidden in his paintings. The essay commences with a discussion

on the origins of van Gogh's Japonism interests and then proceeds with an analysis of how this manifested itself in three periods of his "Japanese Era". The first period is the learning stage for van Gogh. Visually, his paintings are close to the original pieces, but they are not simply the copies as he normally intensified the colours and created additional borders. The second period mainly features the *Portrait of Père Tanguy*, indicating the Japanese art in his social and spiritual life. The peak was reached around 1888, *Self-portrait as bonze* is the one which reflects his Japanese preference most obviously, which is further discussed in the third part. The visual analysis technique is widely utilised in this paper to conduct the research of Vincent's paintings and select the representatives of three periods. A visual analysis addresses an artwork's formal elements—visual attributes such as color, line, texture, and size. It may also include historical context or interpretations of meaning.

O20 ANZAC Parade: A Shifting Narrative of Memory

Ian Dehlsen, Bachelor of Arts/Bachelor of Science (Hons)

Research completed during HIST3007: Making History

Australian historian Ken Inglis once called Canberra's ANZAC Parade "Australia's Sacred Way". A quasi-religious encapsulation of the military legends said to define our national character. Yet, it remains to be discussed how the memorials on ANZAC Parade have been shaped by these powerful and pervasive narratives. Each memorial tells a complex story. Not just about the conflicts themselves, but also about the moral qualities the design is meant to invoke. These memorials chart the changing perceptions of Australia's military experience through the permanence of concrete and bronze. The goal of my research was to investigate how the evolving face of ANZAC Parade reflects Australia's changing relationship with its military past. With a particular emphasis on how shifting social, political and artistic trends have influenced the memorials' design and symbolism. I have studied the history of ANZAC Parade from the time of Walter Burley-Griffin to today. Drawing on a broad selection of archival sources including government records, letters, newspaper articles and speeches as well as the memorials themselves. My work investigates the politics, patriotism, financing and aesthetics of the memorialisation project. It tells a story of political influence, spiteful culture wars, forgotten veterans and confused metaphors. It shows how the memorials' designers have grappled with how to interpolate often unpopular conflicts and marginalised groups into the framework of the ANZAC legend. A legend grounded in the racial, philosophical and cultural perceptions of 1915. Ideas now far removed from contemporary Australia, one hundred and one years on.

O21 The Making of 'Monument'

John Carolan, Masters of Philosophy (Digital Arts)

Research completed as part of the Masters of Visual Arts programme.

John Carolan is a Canberra-based multimedia artist, whose practice focuses on interactive installations and site-specific projections. His work 'Monument' focuses on the relationship between structure and repurposing, with the use of recycled objects and new technology to create an effervescent quality from used objects.

O22 Audio-Visual Storytelling technique for eliciting tacit knowledge: Literature review

Akshit Sandhu, Masters of Business Information Systems

Research completed during a 2015/2016 summer research project through the College of Business & Economics and an industry partner, being an extension of a group research project completed during BUSN8102: Special Topics of Commerce

This research is a literature review study of major academic papers that focus on finding a solution for eliciting tacit (personal) knowledge in an organization. The main objective of this research is to review the potential of utilizing audio-visual tools with storytelling technique to better share personal knowledge with others in an organization. This research might be helpful for organizations looking for creative solutions to extract tacit knowledge. According to Polanyi (1958) as described in a research journal by Lam (2000), tacit knowledge is a part of personal

experiences that is gained while practically working on projects in an organization. Unlike explicit knowledge, it is hard to extract and codify using Information system tools (Nonaka 1994). This personal knowledge of employees has been recognized as an important intangible asset from competitive advantage perspective. The reason to select this technique is that only a few researches acknowledge the potential of using storytelling as an instrument for capturing tacit knowledge. There is no literature review which compares and contrasts the views of other papers in this area. In conclusion, major critical conditions are highlighted for using this technique as a knowledge management tool. Further research is required to investigate these factors based in specific organizational environment.

O23 The effect of female social status on human stature sexual dimorphism: evidence of self-domestication?

Ben Gleeson, Masters of Biological Anthropology

Research completed during BIAN8008: Data Analysis and Methods in Biological Anthropology

Charles Darwin noted that domesticated mammals share multiple traits when compared to their wild ancestors. These shared characteristics are known to occur following breeding selection against aggression. Domesticated traits are also apparent in modern humans when compared to earlier *Homo sapiens*, which has led researchers to propose that a form of human 'self-domestication' has occurred. One of three hypotheses proposed to explain this process suggests that human females preferentially selected against aggressive male partners. Over time, this would lead to lower aggression, as well as other domesticated traits across our species, including reduced body size difference (dimorphism) between the sexes. In all human populations mean male stature is always greater than mean female stature, however, the relative magnitude of stature sexual dimorphism (SSD) varies. In order to test the hypothesis that self-domestication was effected through female mate choice, this study examines whether elevated female social status (hence higher female capacity to exercise mate choice) is associated with lower levels of SSD in different human populations. To do so, SSD data were compared with selected statistically-coded variables from the Ethnographic Atlas (a cross-cultural sample of 1267 societies). Linear regression models were used to assess correlations between SSD and variables associated with female social status. After controlling for world region and latitude, matrilineal property inheritance remained a significant predictor for lower SSD. This result may lend weight to the hypothesis that female mate choice was a contributory mechanism in human self-domestication, however, further empirical investigation is required.

O24 Behaviour and Beliefs Related to Male Aggression: Evidence of Intra-sexual Selection in Humans?

Tara-Lyn Carter, Master of Biological Anthropology

Research completed during BIAN8002: Topics in Human Population Biology/Health

Sexual selection favours traits that increase mating and, thus, reproductive success. As termed by Darwin: intersexual selection occurs between mates, i.e. a peacock's plumage is a result of females favouring these impressive and colourful feathers. Intrasexual selection however occurs between members of the same sex over mates and results in armaments, i.e. the horns on a stag give him an advantage when fighting other males for access to females. Some scholars have suggested that if intrasexual selection is driven by contest competition, this has shaped human male aggression. If this is the case, one testable hypothesis is that beliefs and behaviour related to male aggression should be more prevalent in societies where the intensity and strength of sexual selection is higher. Measured by factors such as the presence and scope of polygyny (one male mates with multiple females), the number of same-sex competitors relative to potential mates (sex ratio), and male contribution to subsistence activities. We used data from 78 societies from the Standard Cross Cultural Sample, a widely used ethnographic data set combining years of data collection from many societies around the world. We found strong support for this hypothesis. We discuss potential alternative explanations for the relationships, ruling out some using multivariate methods to control for confounding variables such as political complexity, warfare and geographic clustering.

O25 Negotiating Terrorism: Making the Pen Mightier than the Sword

Bhavani Kannan, Master of Diplomacy (Advanced)

Research completed during DIPL8011: Research Thesis – Diplomacy, in preparation for the thesis

Terrorism poses one of the greatest challenges to international peace and security in the 21st century. Although a universal counter-terrorism strategy is yet to coalesce, States have shown remarkable uniformity in their individual approaches. Not only have States prioritised military responses, but they have rejected negotiations as counter-terrorism measures. Unfortunately, the continued rise and spread of terrorism indicates that the current counter-terrorism orthodoxy is ineffective. Thus, this paper argues that the dominant non-negotiation rhetoric is flawed, and hence, dismissing negotiations as a diplomatic tool is counterproductive. This thesis builds on discourse supporting negotiating with terrorists. Specifically, it aims to address the gap between theoretical knowledge and practical application. Accordingly, it explores existing literature, practices, and philosophies on negotiating terrorism. Additionally, it undertakes a paired comparison through examining the case studies of the Irish Republican Army and the Liberation Tigers of Tamil Eelam. This paper concludes by proposing a Terrorism Negotiation Map for evaluating the likelihood of a successful negotiated outcome. Understanding the specific context in which negotiated success is likely can considerably reshape diplomatic responses to terrorism, facilitating the maintenance of international peace and security. This paper further advocates re-framing understandings of terrorism and negotiation discourses. Finally, the paper applies these findings to the on-going conflict with Islamic State. Hence, this thesis contends that terrorism negotiations are possible under much wider circumstances and criteria than currently espoused.

O26 Building Medical Leaders

Christopher Wilder, Medicinae ac Chirurgiae Doctoranda

Research completed during the Vice-Chancellor's Student Leadership Program, supported by experience as President of the ANU Medical Students' Society in 2015.

Professionalism and Leadership is one of the four themes underpinning the ANU Medical School curriculum. Legal and ethical considerations are addressed before moving to professionalism in the work place and teamwork. The chance to learn the skills and attributes that underpin leadership would further equip students and aid the development of the next generation of medical leaders. The clinical environment is one that demands leadership from key individuals, yet these individuals are trained and promoted predominantly based on clinical acumen without consideration of their leadership ability, nor is there structured support for its development. The aim of this project was to build and implement a Medical Leadership Program for the ANU Medical School. The author, a student of the ANU Medical School, took part in the ANU Vice Chancellor's Student Leadership Program. The skills developed during the Vice Chancellor's program were applied to the process of building a Medical Leadership Program (MLP) for the ANU Medical School (ANUMS). Key stakeholder's were engaged in the process of program design and development, and a structure and timeline for a pilot program was agreed to by all parties. Funding sources were identified and established, a candidate selection criteria and process was developed, and program promotion began. The ANUMS MLP was launched as a pilot program in March 2016. The launch of the MLP by the ANUMS seeks to build the next generation of medical leaders for the ACT. Successful transition from a pilot to an established program will be dependent on program success and support.

O27 Addressing Intimate Partner Violence in Student Residences

Bestlyn Loo, Juris Doctor

Research completed during the Vice-Chancellor's Student Leadership Program, supported by experience as a Senior Resident in a residential pastoral care team. Mentored by Carolyn Farrar, Head of ANU Counselling Centre.

This leadership project works on the issue of intimate partner violence (IPV) in student residences at the ANU. Domestic and intimate partner violence is an issue of urgent policy concern in Australia. Students who live on

campus face unique vulnerabilities when faced with IPV, sexual assault and stalking because residential halls are a closed environment in which people may feel trapped by their social circles, and the sense of isolation may be exacerbated if they are far from home. There is also a small and mostly invisible number of men and women who co-habit unofficially with their partners, and they too face unusual challenges in terms of reporting and help-seeking. This project seeks to understand the needs of the diverse student population in residential halls through a series of qualitative semi-structured interviews with students, staff and working groups across campus. I critically evaluate the existing coordinated community response approach taken by the ANU by identifying the issues residents face in handling or responding to critical incidents, and the barriers they face in accessing support services or resources for addressing IPV. The preliminary results indicate that factors such as a lack of understanding about IPV behaviours, a perception of the inaccessibility or unavailability of resources, and cultural and linguistic barriers increase the risk of IPV remaining unresolved. These findings inform a short list of recommendations for reform which will be submitted to the university for consideration.

O28 The Elusive Event

Melanie Toombs, Bachelor of International Relations/Bachelor of Laws

Research completed during a residential leadership role at Fenner Hall and first presented at the 2016 Fenner Hall Leadership Symposium 11 July 2016.

During the transition to university, many students require extra support to fill gaps in their academic skillsets and help them adjust to university expectations. Event organisers face a conundrum where despite these needs, students often fail to attend events run by academic support systems or express sentiments that the events do not effectively meet their expectations. As such, this project seeks to establish any shared qualities of popular Academic Program Organiser events and what attendees found valuable within these events. This will involve analysis of a range of data from the most well-attended APO events occurring throughout 2016 so far, such as the Academic Dinner, APO High Tea, Essay Writing Festival and Creative Study Sessions. Data includes surveys, verbally collected feedback and written correspondence, and I will utilise a thematic approach to formulate my recommendations. Analysing whether there were any shared characteristics of the most well-attended events and what people found valuable from them will help to clearly define residents' desires and expectations of events. Ultimately, my research will cultivate a series of recommendations that will significantly assist the development of future events. I will further test these hypotheses through several interactive activities during my presentation. At the outset of the presentation I will gather from symposium attendees what qualities made them attend events this year (not restricted to APO events) and what made these events valuable. At the conclusion of the presentation I will draw any parallels between my own findings and the initial ideas raised by the symposium attendees. The implications of this research are wide-reaching, as the recommendations will be applicable to a range of events run by the leadership team, staff and residents within Fenner Hall and throughout the ANU community.

O29. Presentations from the Vice-Chancellor's Course VCUG3002: Mobilising Research (IARU GSP)

O29a Preparing for dinner: the need for a better typology for climate refugees

Jasmin Logg-Scarvell (ANU), Kendra Gonzalez Duran (UC Berkeley), Tanya Ma (ANU)

O29b The Art of Giving a Sh*t about Endangered Species

Chiara Bleckenwegner (Oxford), Edith Shum (McGill), Jared Peralta (Yale)

O29c How Can We Improve the Health Outcomes of Indigenous Australians?

Catherine Leedon (ANU), Felix Tong (HKU), Kavya Anchuri (McGill)

O29d Inequality of Education

Capella Lin (BIT), Yuanyuan Deng (ETH Zurich)

O29e Social media of the future

Anthony Newman (ANU), Adrian Ng (HKU)

P1 Conditional Cash Transfers as the Panacea to Poverty? An Analysis of India's Safe Motherhood Scheme

Shankar Ravikumar, Master of Public Administration

Research completed during POGO8072: Development Theories and Themes

Modern states have a myriad of duties to perform in relation to taking care of their citizens. This function, collectively called social protection, differs significantly from country to country both in its methods and purposes. One method involves getting people to access goods and services by directly providing them with a cash incentive for doing so. This presentation examines the effectiveness of this type of social protection conditional cash transfers - using the example of India's Janani Suraksha Yojana (Safe Motherhood Scheme) and will argue that this method is ultimately insufficient on its own as a social protection mechanism. This will be done by presenting the results of several studies that have been done over the years to examine its effects, both direct and indirect, on improving the maternal health of underprivileged women and their children. It is found that the scheme has been successful in achieving the narrow goal of increasing demand, but without much evidence of that goal making a significant difference to its broader policy purpose of improving health due to deficiencies on the supply side. It suggests that cash transfers as a relatively cheap and quick panacea for the alleviation of deprivation are insufficient on their own and that they also fail to challenge deep-rooted structures of oppression necessary for permanent change. This calls for a much more integrated approach to social upliftment.

P2 The Economics of Nationalism

Visesh Agarwal, Master of International and Development Economics and Tong Zhang, Master of International and Development Economics

Research completed during IDEC8029: Case Studies in Econometrics

Nationalism as a relatively new but powerful force has received extensive study in political science and sociology with the view that for better or worse, nationalism provides the ideological foundation for political consensus in a country, based on which policies are made and implemented. However, the study of nationalism has received little scrutiny from economists as an economic rationale behind nationalistic behaviour has remained ambiguous. Building on Lan and Li (2015), this paper tests the economic framework linking nationalism and economic openness with its claim that *ceteris paribus*, greater economic openness in the form of increased foreign trade leads to falling nationalism within countries. With ever-increasing globalisation characterised by increasing foreign trade and capital openness, its consequences on the changing nature of nationalism is of vital significance. Using World Values Survey data to construct a nationalism index for regions in India and China, the paper employs OLS regression techniques as well as instrumental variables, to show that the relation between nationalism and economic openness is weaker than that shown by Lan and Li. Similarly weaker results are found between nationalism and economic openness using fixed effects estimation on cross country data for over 30 countries

showing that greater economic openness has been accompanied by greater nationalism in a majority of nations in the past decade. The paper concludes by highlighting some other factors which might account for this increasing nationalism as well as a few exogenous variations in cross-country openness that can be used to conduct further empirical research.

P3 Security Sector Leadership under Failing Political Leadership

Ring Mayar, Master of National Security Policy

Research completed during a 2015/2016 Summer Research Scholarship

This paper surveys the intertwining between political leadership, conflict and security impact in South Sudan. Research tell us that political stability is important for maintaining security although more advancements are recommended. The complementariness between political stability and other factors in enhancing security and efficiency are commonly seen as the driving force of an effective security. However, the empirical evidence is ambiguous due to competition for natural resources. Statistical analysis suggests that political stability and viable security in South Sudan have multi- problems. Nevertheless, political stability has been widely accommodated with rampant corruption. As a result, consistent political wrangling among rival political groups presents a hive for competition for resources and consequentially plunges the entire country into an abyss of civil war, regardless of whether civil conflict will lead to death of civilians. South Sudan political system is formed and extended in close tribal linkages: the higher the level of political domination, the greater the demand for resources and the higher political rivals resorting to violence.

P4 The Age of Personalistic Parties: Case of the Philippines and Indonesia

Arya Budi, Master of Asia Pacific Studies

Research completed during ASIA6070: Democracy in Southeast Asia

Party organization is an important dimension in accordance with social rootedness, party competition, and legitimacy for party system institutionalization (Mainwaring and Scully 1995), which in turn contributes to democratic consolidation. Given that the political reforms that were begun in the post-authoritarian regimes, how Indonesian and Philippine parties run their organization? Why do such party organizations survive or even revive in the countries? Proposing an institutional approach, this research conclude that parties in both countries suffer party personalization in certain ways. In addition, the extent to which intra-party democracy in accordance with modes of the presidency explains such party personalization in the Philippines and Indonesia. This paper is thus devoted to assessing further features of party personalization in the Philippines and Indonesia in the last elections. To be sure, the research employs meta-data and media analysis in presenting organizational features of the parties, and content analysis in assessing intra-party democracy through parties' official documents.

P5 International comparative analysis of the effectiveness of government innovation policy

Max Alston, Bachelor of Politics, Philosophy and Economics

Research completed during ANIP3003: Australian National Internship Program

Innovation results in knowledge spill-overs which benefit the wider economy, as well as the innovating entity. As a result, governments often try to increase innovation, for example, the 2016 Turnbull government in Australia. This research attempts to empirically test the effectiveness of government innovation policy. This research takes advantage of a rich cross-country data set to test the relationship between government support and innovation through ordinary least squares regression. The research finds that public sector expenditure on research and development is significantly positively correlated with innovation and that tax incentives for business research and development and direct funding of business expenditure on research and development do not have a statistically significant relationship with innovation. These findings show a potential to reallocate public funds for greater

effectiveness, particularly in the Australian context where the R&D tax incentive accounts for nearly 30% of R&D spending.

P6 Coating and characterising graphene on carbon fibre-PEEK for enhanced mechanical properties

Thomas Larkin, Bachelor of Engineering (R&D)/Bachelor of Arts

Research completed during ENGN3712: Independent Research Project

Thermoplastic (TP) materials are of increasing use in high performance composite applications. When manufactured from pre-preg form into a laminate structure, these composites exhibit the properties of high-strength and high-stiffness. Further improvements in the mechanical properties of these materials is very desirable, since this could result in weight reductions and strength optimizations for products using TP composites. Graphene is a nanomaterial which is well-known for its exceptionally high strength to weight ratio and Young's Modulus. This paper will discuss the process of coating and characterising graphene coated carbon fibre-PEEK composite substrates. Additionally, the mechanical properties of graphene reinforced carbon-fibre PEEK composites manufactured using a heat press will be examined. The graphene particles were deposited from an aqueous based suspension onto the carbon fibre-PEEK pre-preg fibre tapes by way of a spray coating procedure. Typically, the tapes were plasma treated to increase the surface energy (improve wetting of the suspension) prior to deposition of the graphene. The coating was characterised using scanning probe microscopy. The enhancement of mechanical properties due to the presence of graphene on the fibre pre-preg will be discussed.

P7 Learning linguistics and history from a language in Bhutan

Naomi Peck, Bachelor of Asia-Pacific Studies (Year in Asia)

Research completed during LING3012: Field Methods

Language is used universally by humans, yet each and every language differs in principled ways. The field of linguistic typology is centred on making sense of these differences, in order to form generalisations about how we use Language. One commonly-examined parameter of variation is word order. In particular, much research has been conducted on how different languages code the roles of subjects, verbs and objects at a sentence level. However, work into how languages order words at lower levels is often neglected.

Noun phrases are groups of words centred on an obligatory noun which can be extended to include other types of words such as adjectives and numerals. These 'modifiers' will generally either precede the noun as in English and Japanese or follow it like in Indonesian and Arabic. More rarely, a language may position some modifiers before the noun, and others after it. Through data collected in a Field Methods class in 2015, I found that Bumthang, a language from central Bhutan, exhibits characteristics of this rare type with no single prevalent order. After comparing to other noun phrase structures worldwide, I discovered that Bumthang is similar to only one other language – Zhang-Zhung, an extinct language from a millennium-old Tibetan empire. This thus implies a previously unsuspected shared social and linguistic history between the two societies. The discovery of this rare structure will prove invaluable for linguistic typology and also help fill in the blanks of Himalayan and central Asian history.

P8 An Autosegmental Analysis of Cayuga Pitch Accent Assignment

Jessica Johnson, Master of General and Applied Linguistics

Research completed during LING6019: Phonological Analysis

Language is unique among communication systems in conveying multiple levels of meaning at the same time. The choice of which language to use is the first step in communication, and then what to say with which words. The same words can be used in different ways: 'Now this is a book' vs. 'Now this is a book', with very different

implications. Most languages use prosody to add pragmatic nuance to words formed of consonants and vowels. Others use prosody to form words as well. Japanese contrasts words such as *ame* 'rain' and *amé* 'candy', for instance. Linguists describe two kinds of lexical prosody: tone, shown in Japanese, and stress, marking the contrast between English *increase* (noun) and *increase* (verb). Tone necessarily specifies pitch, while stress simply specifies the possibility of different pitch inflections (based on pragmatic nuance). A third type of language exists, in which prosodic contrasts are assigned lexically using a combination of the rules for stress and for tone. In the course of a project for my Phonology class I examined the prosodic system of Cayuga, an endangered Iroquoian language from north-east North America. While previous work on Cayuga developed a complex series of rule, with numerous exceptions, to describe how accent works in Cayuga, I discovered an elegant set of rules indicating that a complex process, utilizing the principles behind both stress and tone, operates in the language. Interestingly, prosody in Cayuga is not contrastive, showing that it functions to communicate solidarity between speakers through its opacity.

P9 Is Geographic Information Systems (GIS) a useful decision support tool for evaluating facility location problems for bike sharing schemes?

Catherine Pilley, Bachelor of Science (Resource and Environmental Management)/Bachelor of Laws (Hons)

Research completed during ENV53010: Independent Research Project, conducted while completing an International Alliance of Research Universities (IARU) Sustainability Internship at Oxford University.

Facility location problems are common planning challenges frequently faced by local authorities. Such problems are particularly pertinent in relation to optimising the location of transport hubs in multi-modal urban transport systems. The topic of locating docking stations in a bike sharing scheme provided a sufficiently narrow focus to conduct a feasibility study for a facility location problem. The topic of bike sharing schemes is an interesting one, given their increasing popularity worldwide, providing a valuable link between existing public transportation stops and desired destinations. My research question involved discerning whether stations in an existing bike sharing scheme had been distributed to maximise scheme usage and whether GIS was a useful decision support tool. The goal of my research was to contribute to ongoing policy discourse about which tools are best suited to the developing, configuring and planning of a bike sharing scheme. Oxford was selected as the case study given my experiences completing an IARU Sustainability Internship at the Oxford University in 2015. Methodology involved the locations of existing bike sharing stations being compared to an optimal distribution. The optimal distribution was obtained through a location-allocation analysis, incorporating demand variables such as educational facilities, residential and commercial activity and tourist attractions. Results indicated the optimal distribution of stations was remarkably different to the existing distribution. A literature review highlighted the range of approaches which have been employed to investigate this problem, with the usefulness of a GIS approach likely to be highly context dependent.

P10 The Eugenics Stigma: the role of the Genetic Counsellor in Prenatal Testing

Emma Murdoch, Bachelor of Science/Bachelor of Arts

Research completed during BIOL3208: Biology Research Project

This report examines the role of genetic counsellors in discussing prenatal testing, and the affect that resulting options have on perpetuating the eugenics stigma in the field. Research was conducted through a literature review of current discussions surrounding the issue. Initial interest and a case-based foundation were gained through experience and communication with genetic counsellors working at ACT Genetics. Genetic counselling is the process of helping people understand and adapt to the medical, psychological and familial implications of genetic contributions to disease. A specific aspect of this care surrounds prenatal testing. In particular, whether it is an option, the process involved, and the subsequent decisions. When the issue of newer technologies is introduced, such as Pre-Implantation Genetic Diagnosis (PGD), the selection of embryos based on genetic testing, the issue quickly becomes linked to eugenics practices. Prenatal testing varies in its forms as do the laws regarding PGD, but

the overarching issues remain. Eugenics today is defined, medically, as the act of increasing the prevalence of desirable traits in a population, through the decreasing frequency of negative alleles at specific chromosome sites, through controlled breeding. The findings of this study are significant in highlighting the practical role of genetic counselling in helping patients understand changes of modern medical genetics. The conclusions drawn from this report determine whether PGD is recognisable as eugenics. It was also found that the role of PGD and selective implantation is complex. It may never have a simple conclusion on how it fits into current societal expectations.

P11 Safety Perception: The Relationship with Age and Driving Environments

Jolene Cox, Bachelor of Science (Psychology)

Research completed during PSYC3023: Special Topics in Psychology

With the number of licensure attainment and the frequency of traffic collisions increasing amongst teenagers today, it is essential to investigate the differences in driving behaviours and perceptions across drivers of various expertise. Given that prior research found significant differences in driving attitudes and behaviours due to driving environment and experience. However, there is a lack of investigation in the role of safety perception in driving behaviours. The aim of the study is to explore safety perceptions in drivers across age in rural and urban driving environments. In this study 64 licensed drivers (22 young novice drivers aged 18-24 years, 21 experienced drivers aged 25-40 years and 21 older experienced drivers aged 55-70 years) rated the safety relevance of key elements (e.g. trees, animals, road signs, pedestrians) in urban and rural driving environments. Participants also provided data on their driving behaviour, attitudes and risk perception more generally. A significant difference was found between rural and urban driving environments ($p < .001$). However, driver categories did not have an influence on safety perceptions of driving environments ($p = .949$). Safety ratings by change type was also analysed and several sub-conditions across both rural and urban driving environments demonstrated significant differences in safety rating scores. In conclusion, participants rated rural driving environments at a lower safety relevance as compared to urban driving environments. Findings from the current study and prior studies investigating driver safety have practical implications for road safety, in particular, road policies and education for novice and older drivers.

P12 America's Key Security Interest in the Asia-Pacific Region: US-Backed Liberal International Order

Leyang Wang, Bachelor of International Relations

Research completed during INTR2016: US Security Policy in Asia

In 2011, the US government proposed a strategy known as “rebalance”, giving the highest US priority to the Asia-Pacific, a shift that indicates that the United States has many significant interests in this region. The purpose of this research is to identify the most important security interest of the US in the Asia-Pacific and explore approaches protecting this interest. The research chooses to apply liberalism, one of International Relations theories, to the analysis and demonstration. According to liberalism, international institutions and norms, liberal values and economic interdependence are pillars contributing to peace and stability of the world. In this research, I argue that the most important US security interest is the American-designed and backed liberal international order. This order is based on and organized around an open market; democratic solidarity, or at least shared democratic values; multilateral institutions and norms; as well as alliances and partnerships. This new order leads to economic interdependence and common norms, and institutions among states, which effectively reduces conflicts and maintains the stability in the region and the world, and, in turn, making America more secure. In addition, there are several approaches for the US in maintaining this liberal international order. Firstly, the US government ought to safeguard and expand the free flow of trade. Secondly, the US is expected to spread democracy and other American values. Thirdly, it is essential for the American government to defend the international rules and norms. Finally, the United States should accommodate emerging powers, such as China and India.

P13 Enhancing Capacitance Response through the Manipulation of Dielectrically Anisotropic Metamaterials

Lachlan Oberg, Bachelor of Philosophy (Science) (Honours)

Research completed during a summer research scholarship

The manipulation of dielectrically anisotropic electromagnetic metamaterials such as hexagonal boron nitride can greatly enhance capacitance response. Oscillating an electric field through such metamaterials at near resonance frequencies produces strong anisotropy, which can be exploited to achieve dense, non-divergent field line behaviour. We establish a method of rescaling transformations, a technique for analysing electrostatic systems under anisotropic conditions. We then show that strong anisotropy in dielectric metamaterials can greatly minimize the size of field-effect transistors and increase the accuracy of carrier charge traps. Furthermore, long range capacitance response is shown to be feasible under a sufficient degree of anisotropy.

P14 When is it necessary to include CSR within a business's corporate strategy?

Rebecca Weatherby, Bachelor of Laws/Bachelor of Commerce

Research completed during MGMT3015: Corporate Strategy

This study provides a nuanced exploration of the impact of Corporate Social Responsibility (CSR) on business profitability. CSR is the level of consideration a business gives towards its social and environmental impact. We sought to determine the levels of CSR engagement that exist within different industries, and to identify contributory causes to these differences. The impetus for this study is derived from the movement away from the use of a traditional criterion (of price, quality and convenience) in product selection. Modern consumers now consider a company's engagement with legal, ethical and philanthropic responsibilities within their decision-making process. As consumer-buying is linked to firm profitability it is important for businesses to ensure their CSR obligations are met. Our study consisted of a multi-method approach. Firstly, a scenario-based survey was undertaken. Respondents were made to choose between two products. Factors exemplar of a CSR scandal were included. The questions pertained to three overarching industries—food, clothing and technology. To test concurrent validity, results were compared to the percentage-change in revenue of three major brands before and after a CSR scandal. Each company correlated with a different industry. This was to determine if our survey was reflective of a wider phenomenon. Our findings reveal that in industries with multitudes of competitors producing substitutes CSR is important for the maintenance of profitability. Comparatively, CSR is less important in industries with higher product differentiation. Our subsidiary findings reveal that consumer attachment to a product may also offer an avenue for companies to mitigate CSR obligations.

P15 Academic Procrastination: Impact, At-risk Demographics and Recommendations for Management

Stephanie Franks, Bachelor of Engineering/Bachelor of Arts

Research completed during a residential leadership role at Fenner Hall and first presented at the 2016 Fenner Hall Leadership Symposium, 11 July 2016

This project is an investigation of the science behind procrastination, and its prevalence specifically in tertiary institutions. Procrastination is an important topic for university students, as it can be both a symptom and a trigger of broader and more complex mental health issues, including anxiety, which commonly affect students. Because of the topic's importance, this project explores not only the causes of procrastination, but also student demographics that are most commonly affected, and the reasons for the variation in students' experiences. This understanding of the mechanisms behind procrastination and those who are most likely to struggle with it helps to determine correlations between procrastination and various habits, thought processes, and external factors. As a result, recommendations can be made to help students reduce procrastination and related tendencies, and subsequently to reduce stress and anxiety associated with their studies. Further, the management of procrastination also leads to increased productivity and decisiveness, and overall helps students to achieve a more positive outlook and improved general health.

P16 Drinking Trends at Fenner Hall

Lucie Niederer, Bachelor of Arts/Bachelor of Laws

Research completed during a residential leadership role at Fenner Hall and first presented at the 2016 Fenner Hall Leadership Symposium, 11 July 2016

As a Canteen Coordinator in 2015, I observed that students consumed a noticeably greater quantity of alcohol in particular weeks of the academic year. Although the alcohol consumption levels were obvious to me, often the reason for this spike in consumption was not. Using data collected from Semester one of 2016 (already obtained) and (if available) data collected throughout 2015, I will map the levels of alcohol consumption throughout the academic year and discover the reasons associated with the differing levels of alcohol consumption. The purpose of this project is to better equip the leadership team and the Canteen Coordinators with information surrounding drinking trends within the hall. In doing this, on a practical level, the Canteen Coordinators will know specifically at what times of the year they need to order more and less stock. In addition to this, the leadership and pastoral care teams may use the information as a tool to identify periods of greater alcohol consumption (which may lead to an increase in alcohol related issues within the hall) that are perhaps currently unknown or underestimated. For example, the leadership team is prepared for Commencement, however are they prepared for post mid-semester exam celebrations? To add depth to my research, I will also explore the effects of drinking on young adults and the ways in which it may interfere with social or academic life, possibly including a section relating to identifying problems with alcohol within the hall. I aim for my research to be a useful tool to those running the hall bar as well as those providing pastoral care in our community. This research may be used at other colleges on campus as all colleges follow the same academic schedule and similar social calendars throughout the year.

3-Minute Thesis

H1 More than a game: sport, legitimacy and unrecognised states

Kieran Pender, Bachelor of Arts (Hons)/Bachelor of Laws

Research completed during Honours, at the Centre for Arab & Islamic Studies

This research analyses the use of sport by unrecognised states for political legitimacy purposes. These unusual territorial entities, fulfilling the empirical criteria of statehood yet lacking recognition, exist with a deficit of legitimacy. While the legitimisation strategies adopted by unrecognised states have been scrutinised in several recent studies, none have fully interrogated the use of symbolic legitimacy building methods. Drawing on a developing academic understanding of the interplay between sport and politics, this research asks: why do unrecognised states participate in 'international' sporting competitions? It adopts a fieldwork-informed qualitative single case study methodology to propose a two-part explanation. Firstly, it suggests that unrecognised states use sport to legitimate themselves internally, with the hope of fostering national identity and improving national unity. Moreover, participation in such events is seen as having external legitimacy benefits: offering an avenue for outward-oriented image-building and international engagement. The importance of sport, it seems, goes far beyond the final score.

H2 Mechanistic Expectation of the Pasadena Game

Yao Fan, Bachelor of Arts (Hons)

Research completed during Honours in Philosophy

This research is within the field 'decision theory', which isn't just a aspect of philosophy, but also widely studied in economics, psychology, and mathematics. This research involves certain mathematical computation as well as philosophical investigation by clarifying certain concept, e.g. infinity. The Pasadena game is a game (or technically, a gumbel) proposed by Nover and Hájek (2004), for which classical decision theory fails to give a unique evaluation. We find the expectation series, i.e. the series of probability-weighted utilities of all potential outcomes, of the Pasadena game is a conditionally convergent series, which due to Riemann series theorem, converge to any number by probability. It brings us numerous puzzles forcing us to rethink classical decision theory. We will try to give a unique evaluation to the Pasadena game by taking the mechanism of a game into consideration. We will see our method is able to evaluate the Pasadena properly and after that we will give a justification of this method. The justification is based on the mechanistic thesis, which vaguely says 'summing the expectation series, or products, of a game in the order determined by the mechanism for determining payouts gives the expectation of the game'. We will refine the Mechanistic Thesis by presenting a precise and unique way to generate what we will call "mechanistic order" for summing expectation series from any given mechanism. We will see our refined Mechanistic Thesis can avoid all arguments previously proposed against the original Mechanistic Thesis. So my conclusion will be when evaluating the Pasadena game, and more generally any game with a conditional convergent expectation series, we shall take its mechanism into consideration.

H3 Investigation of cardiac biomarkers in ambulatory type 1 diabetic patients

Han Ling Fam, Bachelor of Philosophy (Science)

Research completed during Honours at the ANU Medical School, and Department of Endocrinology, Canberra Hospital

Cardiovascular deaths are common in diabetic individuals. Serum cardiac troponin (cTn) T and I, and NT-proBNP are markers of heart muscle cell stress or damage. In ambulatory type 2 diabetic patients, cTnT concentrations have been shown to predict cardiovascular events and death. In this study, the measurement of serum cardiac biomarkers (cTn and NT-proBNP) in ambulatory type 1 diabetic (T1D) patients for complications risk assessment has been investigated. In a cross-sectional study of 107 ambulatory T1D patients, serum cTn T and I, and NT-proBNP were measured and were related to patient characteristics and diabetes complications using a generalised linear model. In the results, 14/107, 5/107 and 10/107 patients had elevated cTnT, cTnI and NT-proBNP, respectively. All

biomarkers were associated with patient characteristics and diabetes complications; strongest for cTnT. Age, gender, body mass index and hypertension were independently associated with cTnT. After adjustment for these patient characteristics, cTnT was independently associated with retinopathy ($P<0.001$), peripheral neuropathy ($P<0.001$), serum creatinine concentration ($P<0.001$); urine albumin/creatinine ratio ($P<0.001$) and any macrovascular complication ($P<0.001$). In conclusion, the presence of associations between cardiac biomarkers and diabetes complications in ambulatory T1D patients justifies future longitudinal studies to ascertain their prognostic value for adverse outcomes in this patient group.

H4 Reactivity of a Terminal Methylidyne

Richard Yuze Kong, Bachelor of Philosophy (Science)

Research completed during Honours, Research School of Chemistry

Can we teach a new molecule old tricks? In late 2015, Hill et al. reported the synthesis of an organometallic compound unique in its stability and bond arrangement, a terminal methylidyne complex. Up until this point, only a few examples of terminal methylidyne complexes had been reported in the literature, which decomposed at room temperature and were only achievable in milligram quantities. With access to gram-scale quantities of compound through the Hill group synthesis, we have been afforded the opportunity to thoroughly probe their reactivity. The research I am undertaking during my Honours year involves elucidating the reactivity of this molecule by subjecting it to a range of different conditions and reagents. Beginning with results reported by Templeton et al., our first course of investigation was to deprotonate the molecule and subsequently functionalise the deprotonated molecule. Several different reagents were tried to achieve this outcome with little success, however upon treatment with an incredibly aggressive deprotonation reagent, radically unexpected reactivity emerged. Organometallic chemistry, while foreign in name, pervades almost every aspect of our lives from the catalytic converters in our cars to playing a key role in the industrial production of vinegar, plastics and fertilizer. The amazing utility of metals to catalyse a host of useful reactions has provided an impetus to investigate the mechanisms by which these reactions take place. My research thus falls within this broader narrative of contributing to the wealth of knowledge on inorganic chemistry which has proved critical to the modern world.

H5 Healing Bones: a case of health care practice in the metal period Philippines

Melandri Vlok, Bachelor of Arts (Hons)/Bachelor of Science

Research completed during Honours in Biological Anthropology

Almost 2000 years ago in the Philippines, an individual likely fell from a tree leading to permanent disability for the rest of his life. By analysing the skeletal remains, this thesis explores a case study of this individual from a Metal Period site in the Philippines who suffered trauma to the right limb resulting in the disability until death. Significant limitations due to the disability suggests that care from others in the community would have been required to necessitate survival. As such cultural understanding of the value of extending human life outweighed the costs of factors of biological needs and the costs of giving care. This provides insights into social aspects and knowledge of health care in the community. Furthermore, the potential for exploring the relationship between the disabled, their carer or carers, and their community is considered. Completing this research provides insight into the fundamental values of a society where very little is known about.

H6 New ways of Managing Weeds

Simon Mulvaney, Bachelor of Interdisciplinary Studies (Sustainability) (Hons)

Research completed during Honours at the Fenner School of Environment & Society

Noxious weeds represent a complex and intractable environmental problem. In addition to the significant financial cost of managing weeds, the problem is compounded by the often competing management strategies adopted by landholders, and diversity of land uses between properties. In this instance, ultimately weeds management

represents a collective action problem. While there has been recognition and action around grassroots community involvement in weeds management, few authors have used Community Based Social Marketing as a tool to encourage collective action around weeds management. Community Based Social Marketing (CBSM) has been touted as an effective tool to motivate behaviour change. The purpose of this project is therefore to design and assess the suitability of a CBSM campaign to encourage collective action around managing noxious weeds in the NSW Snowy Mountains. The CBSM framework involves determining what constitutes appropriate behaviour change; identifying barriers and benefits to the existing arrangements in the Snowy Mountains and any proposed changes; implementing a pilot project; and testing the suitability of the pilot project for broader implementation across the Snowy Mountains.

H7 Hello Foreign Aunty! A study of Chinese address terms and social interaction

Codie Bell, Bachelor of Languages

Research completed during Honours in Linguistics

Using correct address terms in conversation is an important politeness norm for Chinese speakers, and also provides researchers with a small microcosm of politeness with which to study wider cultural values. My study will analyse the use of address terms in selected works of 21st century Chinese literature, relying both on the cultural script theory of the Natural Semantic Metalanguage methodology and textual analysis following literary theorist Rita Felski's manifesto *The Uses of Literature*. My study will analyse how address terms are used in dialogue and the evaluations that both characters and narrators make about the appropriateness of certain turns of phrase. This will contribute to an understanding of what is considered 'good to say' for Chinese speakers and how this contrasts with what is 'good to say' in English, my native language, providing further knowledge both on cross-cultural pragmatics and on specifically Chinese politeness. By studying Chinese cultural values through literature, I will also contribute to the understanding of the applicability of western literary theory to Chinese literature, being critically aware of the cultural lens and interpretative frameworks that I bring as an English-speaking reader to Chinese texts.

H8 Characterisation of Attitude Determination and Control Systems for Cub Satellites

Ali Haji Babaei, Bachelor of Engineering/Bachelor of Information Technology

Research completed during summer internship at the Advanced Instrumentation and Technology Centre

The introduction of commercially available off the shelf (COTS) standardised components for Cube Satellites have enabled miniaturised and cheaper access to space, increasing innovation and research in the space industry. Due to their compact size, there are compromises to consider when designing and configuring different components and payloads inside a standardised Cube Satellite. For any mission that requires some form of manoeuvrability during space flight, Attitude Determination and Control Systems (ADCS) are a fundamental subsystem to consider. A comprehensive database and catalogue for ADCS solutions can prove useful for catering to the needs of a whole range of space missions as Cube Satellite applications become more prevalent, enabling designers to select the most appropriate ADCS for their application. Information regarding ADCS components has been catalogued into a database which was then compared to a rubric outlining all possible design considerations. Different types, makes and models of Attitude Determination devices (sensors) and Attitude Control devices (actuators) are characterized and distinguished from one another as this project report explores the pros and cons of each subsystem choice. Results from this report will be verified by performing a case study on the *Australian Space Eye*, a space telescope project employing a Cube Satellite. The case study outlines and justifies which combination of ADCS components is best suited to meet Space Eye requirements including all future work needed. The report is intended to be a resource for those investigating the various merits of ADCS components for Cube Satellite design. In addition, this report will provide a foundation and tools for more Cube Satellite work to be completed and show how the ADCS database can be used to betterment any space mission requiring ADCS.

H9 Great Expectations: The influence of prior information on hallucinations

Paula Ozola, Bachelor of Arts (Psychology)

Research completed during Honours at the Research School of Psychology

This project aims to test a model of the perceptual mechanisms that underlie hallucinations. Previous research has shown that hallucinations are relatively common in the general population (approximately 6% of people experience hallucinations at least once a month (Ohayon, 2000)) and do not always signal psychopathology. Here, we propose that hallucinations arise secondary to inferential processes that are built-in to normal perception processes that ultimately facilitate computational efficiency. The inferential processes that are fundamental to human perception are robustly captured by Bayesian mathematical models, which specify that perception is the product of the quality of one's sensory experience and one's expectations. Importantly, these two components work in balance such that as the quality of sensory information deteriorates, expectations impact perception to a greater degree and vice versa. Individuals that are prone to hallucinations have been shown to have brain systems that are imprecise (Winterer et al., 2006), giving rise to poor perceptual clarity and greater reliance on expectations. Collectively, these observations suggest that hallucination prone individuals may be susceptible to hallucinations because, in the context of noisy or imprecise perceptual brain systems, they rely excessively on expectations. The current study proposes to use a simple computer-based task to create false perceptions based on expectations. Given the arguments presented above, we expect that hallucination prone individuals will experience (a) more incidents of false perceptions (i.e., perceiving stimulus when one was not presented) and (b) false perceptions that reflect the experimentally induced expectations to a greater extent.

Programme

Thursday 14th July 2016

REGISTRATIONS: Manning Clarke Centre (MCC) foyer

Presenter contact: Marika Niihori

TIME	PROGRAMME
9:00-10:00	Poster presenters put up posters
9:00-9:30	Conference registration and refreshments

SESSION 1: Welcome and Plenary Session 1, MCC Theatre 2

Chair: Andrés Guitian

TIME	PROGRAMME
9:30-9:35	Welcome, acknowledgment of country and introducing the opening speaker (Chair)
9:35-9:50	Opening speaker Pro-Vice Chancellor (Research & Research Training) Professor Jenny Corbett
9:50-9:55	Vote of thanks and introduction of the first plenary speaker (Chair)
9:55-10:25	Plenary Speaker 1: Professor Joseph Hope, Research School of Physics and Engineering
10:25-10:30	Vote of thanks and arrangements for morning tea (Chair)
10:30-11:00	Programme outline and logistics (Executive Committee)

11:00-11:30 MORNING TEA, MCC Foyer

SESSION 2a Academic Programme: *Public Policy and Social Research*, MCC Theatre 4

Chair: Mitchell Porter

TIME	PROGRAMME
11:30-11:35	Introduction to Session 2a (Chair)
11:35-11:55	01 <i>The Role of the Postal Ombudsman for a Privatised Australia Post</i> Alexander Ferguson, Bachelor of Laws/Bachelor of Science
11:55-12:15	02 <i>Gifted Underachievement: Causes and Interventions</i> , Zixin (Jessy) Wu, Bachelor of Philosophy (Hons)
12:15-12:35	03 <i>Factors Associated with Under Five Mortality in Sierra Leone</i> , Lilipramawanty Liwin, Master of Social Research
12:35-12:55	04 <i>Transformation of Participation in Development: Trajectory to Sustainable Development</i> , Muhammad Hali Aprimadya, Master of Public Policy
12:55-1:00	Closing Remarks and arrangements for poster session & lunch (Chair)

SESSION 2b Postgraduate Scholarship Showcase, MCC Theatre 5

Chair: Karan Dhamija

TIME	PROGRAMME
11:30-1:00	LC1 Advice and Q & A session with representatives from some of the most generous scholarships available to Australian students pursuing further study, including the Rhodes, Menzies and Monash Scholarships. Hosted by History Learning Community and Global Challenges Learning Community. All welcome.

SESSION 3: Academic Programme Poster presentations over lunch, MCC foyer

1:00 – 2:00

- P1** *Conditional Cash Transfers as the Panacea to Poverty? An Analysis of India's Safe Motherhood Scheme*
Shankar Ravikumar, Master of Public Administration
- P2** *The Economics of Nationalism*
Vishesh Agarwal, Masters of international and Development Economics and Tong Zhang,
- P3** *Security Sector Leadership under Failing Political Leadership*
Ring Mayar, Master of National Security Policy

P4 *The Age of Personalistic Parties: Case of the Philippines and Indonesia*

Arya Budi, Master of Asia Pacific Studies

P5 *International comparative analysis of the effectiveness of government innovation policy*

Max Alston, Bachelor of Politics, Philosophy and Economics

P6 *Coating and characterising graphene on carbon fibre-PEEK for enhanced mechanical properties*

Thomas Larkin, Bachelor of Engineering (R&D)/Bachelor of Arts

P7 *Learning linguistics and history from a language in Bhutan*

Naomi Peck, Bachelor of Asia-Pacific Studies (Year in Asia)

P8 *An Autosegmental Analysis of Cayuga Pitch Accent Assignment*

Jessica Michele Johnson, Master of General and Applied Linguistics

P9 *Is Geographic Information Systems (GIS) a useful decision support tool for evaluating facility location problems for bike sharing schemes?*

Catherine Pilley, Bachelor of Science (Resource and Environmental Management)/Bachelor of Laws (Honours)

SESSION 4a Academic Programme: *Dimensions of Security* MCC Theatre 4

Chair: Guohui Tan

TIME	PROGRAMME
2:00-2:05	Introduction to Session 4a (Chair)
2:05-2:25	O5 <i>Challenges And Opportunities Of Integrating Check-In, Security And Customs Systems at the airport</i> Natasha Disha, Bachelor of Engineering/Bachelor of Science
2:25-2:45	O6 <i>Military Force and the Protection of Human Rights</i> Avnav Pujara, Masters of International Relations
2:45-3:05	O7 <i>Skeletal Evidence of Torture: How can the past help the present?</i> Victoria Tasker, Bachelor of Archaeological Practice
3:05-3:10	Closing Remarks (Chair)

3:10-3:30 AFTERNOON TEA, MCC Foyer

SESSION 4b *Be Visible or Vanish?* MCC Theatre 5

Chair: Waheed Jayhoon

TIME	PROGRAMME
2:00-2:05	Introduction to Session 4b (Chair)
2:05-3:05	LC2 <i>Be Visible or Vanish? Using Social Media to Promote Your Research. A workshop focusing on what you can do to build a credible public profile in social and other media.</i> Led by Dr Inger Mewburn, author of the blog <i>The Thesis Whisperer</i> , and Director of ANU Research & Research Training. Hosted by Cultures Learning Community. All welcome.
3:05-3:10	Closing Remarks (Chair)

3:10-3:30 AFTERNOON TEA, MCC Foyer

SESSION 5a Academic Programme: *Digital Technologies & Society* MCC Theatre 2 Chair: Sin Sin Phoebe Fok

TIME	PROGRAMME
3:30-3:35	Introduction to Session 4a (Chair)
3:35-3:55	O8 <i>Digital histories and historical research</i> , Rebecca Anne Hilton, Master of History
3:55-4:15	O9 <i>'Click, Print, Fire': 3D Printing and the Arms Trade Treaty</i> Alex Catalán Flores, Bachelor of Laws/Bachelor of Economics
4:15-4:35	O10 <i>NGOs and the Internet: an analysis of NGO web presence</i> Sachini Muller, Bachelor of Asia-Pacific Studies/Master of Globalisation
4:35-4:40	Closing Remarks (Chair)

SESSION 5b *Exploring Jazz and Contemporary Composition Teatro Vivaldi, Union Court Chair: Caitlin Magee*

TIME	PROGRAMME
3:30-3:35	Introduction to Session 5b (Chair)
3:35-4:35	LC3 Exploring composition as a form of research. ANU School of Music alumnus Tate Sheridan is an award-winning jazz pianist, composer and singer-songwriter who will discuss his inspirations and what it means to compose. He will be joined by Brendan Keller-Tuberg who will present jazz compositions he has written for a jazz trio with Tate Sheridan and Daniel Faber. This session includes musical performances and will be held in <i>Teatro Vivaldi</i> , ANU Arts Centre, Union Court. Brendon Keller-Tuberg, Bachelor of Music/Bachelor of Laws (Jazz Band Performance)
4:35-4:40	Closing Remarks (Chair)

SESSION 6 *Science Fiction Futures MCC Theatre 3* Chair: Elena Tjandra

TIME	PROGRAMME
	Introduction to Session 6 (Chair)
	LC4 Academic and writer Chris Palmer in conversation with writer Cat Sparks, speculating on science fiction, collective consciousness and environmental narratives. Joined by Zoe Tulip, Bachelor of Science/Bachelor of Visual Arts.
5:30-7:00	Closing Remarks (Chair)

Friday 15th July 2016

REGISTRATIONS: Manning Clarke Centre (MCC) foyer

Presenter contact: Rose Iles Fealy

TIME	PROGRAMME
9:00-10:00	Poster presenters check posters
9:00-9:30	Conference registration and refreshments

SESSION 7: Welcome and Plenary Session 2, MCC Theatre 2

Chair: Brody Hannan

Time	PROGRAMME
9:30-9:35	Welcome, acknowledgment of country and introducing plenary speaker (Chair)
9:35-10:20	Plenary Speaker 2: Dr Jill Sheppard, ANU Centre for Social Research and Methods & School of Politics and International Relations
10:20-10:30	Vote of thanks and conference housekeeping (Chair)

10:30-11:00 MORNING TEA MCC Foyer

SESSION 8a Academic Programme: *Science at Multiple Magnifications*, MCC Theatre 4 Chair: Andrés Guitián

TIME	PROGRAMME
11:00-11:05	Introduction to Session 8a (Chair)
11:05-11:25	O11 <i>The other CO2 problem: measuring the effect of carbon dioxide in the Southern Ocean</i> Ellen Cliff, Bachelor of Philosophy (Science) (Hons)
11:25-11:45	O12 <i>Life Cycle Assessment of a Condom</i> Mun Nyee Chew, Bachelor of Economics/Finance
11:45-12:05	O13 <i>1,25-hydroxyvitamin D as a risk factor for CNS demyelination</i> Courtney Tiller, Bachelor of Science/ Bachelor of Medical Science
12:05-12:25	O14 <i>Validation of ligands in X-ray crystal structures using Molecular Dynamics simulation</i> Martyna Judd, PhD(Science)
12:25-12:30	Closing Remarks and arrangements for poster session & lunch (Chair)

SESSION 8b Academic Programme: *Policy, Politics and History*, MCC Theatre 5

Chair: Mitchell Porter

TIME	PROGRAMME
11:00-11:05	Introduction to Session 8a (Chair)
11:05-11:25	O15 <i>Imperial Pink: Australia, the Idea of Greater Britain and the Imperial Federation Movement, 1868-1919</i> Daniel McKay, Bachelor of Arts (Honours)/Bachelor of Laws (Honours)
11:25-11:45	O16 <i>The impact of the Euthanasia Laws Act on territory rights</i> Amelia Dowey, Bachelor of Laws/International Relations
11:45-12:05	O17 <i>Developing a Framework for the Assessment of the Australian Research System</i> , Albert Patajo, Bachelor of Laws (Honours) / Bachelor of Science
12:05-12:25	O18 <i>Rationalising religion: the role of religion and conscience in Australian politics</i> , Jonathan Tjandra, Bachelor of Politics, Philosophy and Economics/Juris Doctor
12:25-12:30	Closing Remarks and arrangements for poster session & lunch (Chair)

SESSION 9: Poster Presentations, MCC foyer

12:30 – 1:30

P10 *The Eugenics Stigma: the Role of the Genetic Counsellor in Prenatal Testing*

Emma Murdoch, Bachelor of Science/Bachelor of Arts

P11 *Safety Perception: The Relationship with Age and Driving Environments*

Jolene Alexa Cox Bachelor of Science (Psychology)

P12 *America's Key Security Interest in the Asia-Pacific Region: US-Backed Liberal International Order*

Leyang Wang, Bachelor of International Relations

P13 *Enhancing Capacitance Response through the Manipulation of Dielectrically Anisotropic Metamaterials,*

Lachlan Oberg, Bachelor of Philosophy (Science) (Honours)

P14 *When is it necessary to include CSR within a business's corporate strategy?*

Rebecca Weatherby, Bachelor of Laws/Bachelor of Commerce

P15 *Selected posters from the Fenner Hall Leadership Symposium: Stephanie Franks, Bachelor of*

Engineering/Bachelor of Arts 'Academic Procrastination: Impact, At-risk Demographics.

P16 *Selected posters from the Fenner Hall Leadership Symposium: Lucie Niederer, Bachelor of Arts/Bachelor of Laws 'Drinking Trends at Fenner Hall'.***SESSION 10a** Academic Programme: *Cultural Perspectives* MCC Theatre 4

Chair: Keri Yuk Ling Chui

TIME	PROGRAMME
1:30-1:35	Introduction to Session 10a (Chair)
1:35-1:55	O19 <i>Looking East - Vincent van Gogh and Japan</i> Clive You, Bachelor of Commerce
1:55-2:15	O20 <i>ANZAC Parade: A Shifting Narrative of Memory</i> Ian Dehlsen, Bachelor of Arts/Bachelor of Science (Honours)
2:15-2:35	O21 <i>'Doing Masculinity': enactments of masculinity in drawings of rifles and bayonets in the AIF, 1914-1918</i> Emily Gallagher, Bachelor of Arts (Honours)
2:35-2:40	Closing Remarks (Chair)

2:40-3:00 AFTERNOON TEA, MCC Foyer

SESSION 10b *Leadership Symposium* MCC Theatre 5

Chair: Jonathan Tjandra

TIME	PROGRAMME
1:30-1:35	Introduction to Session 10b (Chair)
1:35-2:15	<i>Selected presentations from the VC Course Mobilising Research</i>
2:15-2:35	O22 <i>Audio-Visual Storytelling technique for eliciting tacit knowledge: Literature review</i> Akshit Sandhu, Masters of Business Information Systems
2:35-2:40	Closing Remarks (Chair)

2:40-3:00 AFTERNOON TEA, MCC Foyer

SESSION 10c *Research careers beyond the ivory tower* MCC Theatre 6

Chair: Tianhao Zhou

TIME	PROGRAMME
1:30-1:35	Introduction to Session 10c (Chair)

1:35-2:35	<i>How do you describe your research skills and experience for a wider audience? How do you find the kinds of jobs in which you not only use your research skills and experience but develop them further through a rewarding career?</i> Workshop facilitated by ANU careers consultants, ANU Student Experience and Career Development
2:35-2:40	Closing Remarks (Chair)

2:40-3:00	AFTERNOON TEA, MCC Foyer
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SESSION 11a Academic Programme: <i>Biology, Behaviour and Beliefs</i> MCC Theatre 4		Chair: Erica Chu
TIME	PROGRAMME	
3:00-3:05	Introduction to Session 11a (Chair)	
3:05-3:25	O23 <i>The effect of female social status on human stature sexual dimorphism: evidence of self-domestication?</i> Ben Gleeson, Masters of Biological Anthropology	
3:25-3:45	O24 <i>Behaviour and Beliefs Related to Male Aggression: Evidence of Intrasexual Selection in Humans?</i> Tara-Lyn Carter, Master of Biological Anthropology	
3:45-4:05	O25 <i>Negotiating Terrorism: Making the Pen Mightier than the Sword</i> Bhavani Kannan, Master of Diplomacy (Advanced)	
4:05-4:10	Closing Remarks (Chair)	

SESSION 11b Leadership Symposium MCC Theatre 5		Chair: Jonathan Tjandra
TIME	PROGRAMME	
3:00-3:05	Introduction to Session 11b (Chair)	
3:05-3:25	O26 <i>Building Medical Leaders</i> Christopher Wilder, Medicinae ac Chirurgiae Doctoranda	
3:25-3:45	O27 <i>Addressing Intimate Partner Violence in Student Residences</i> Bestlyn Loo, Juris Doctor	
3:45-4:15	<i>Selected presentations from the Fenner Hall Leadership Symposium</i>	
4:15-4:20	Closing Remarks (Chair)	

SESSION 12: HONOURS 3 MINUTE THESIS, MCC Theatre 3		4:20-5:30	Chair: Rose Iles Fealy
H1 <i>More than a game: sport, legitimacy and unrecognised states</i> Kieran Pender, Bachelor of Arts (Honours)/Bachelor of Laws			
H2 <i>Mechanistic Expectation of the Pasadena Game</i> Yao Fan, Bachelor of Arts (Honours)			
H3 <i>Investigation of cardiac biomarkers in ambulatory type 1 diabetic patients</i> Han Ling Fam, Bachelor of Philosophy (Science)			
H4 <i>Reactivity of a Terminal Methylidyne</i> Richard Yuze Kong, Bachelor of Philosophy (Science)			
H5 <i>Healing Bones: a case of health care practice in the metal period Philippines</i> Melandri Vlok, Bachelor of Arts (Honours)/ Bachelor of Science			
H6 <i>New ways of managing weeds</i> Simon Mulvaney, Bachelor of Interdisciplinary Studies (Sustainability) (Honours)			
H7 <i>Hello Foreign Aunty!: a study of Chinese address terms and social interaction</i> Codie Bell, Bachelor of Languages			
H8 <i>Characterisation of Attitude Determination and Control Systems for Cube Satellites</i> Ali Haj Babaei, Bachelor of Engineering/Bachelor of IT			
H9 <i>Great Expectations: The influence of prior information on hallucinations</i> Paula Ozola, Bachelor of Arts (Psychology)			

5:30-7:00	CONFERENCE RECEPTION & AWARDS with Guest VC Brian Schmidt	MC: Tianhao Zhou
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Awards

Conference Awards

Poster Presentation prizes

Undergraduate Prizes (*funded by conference committee's SEEF grant, plus nomination to attend the Australasian Conference of Undergraduate Research*)

- Catherine Pilley, Bachelor of Science (Resource & Environmental Management), Is Geographic Information Systems (GIS) a useful decision support tool for evaluating facility location problems for bike sharing schemes? (First Prize: \$500)

Postgraduate Prizes (*funded by conference committee's SEEF grant*)

- Vishesh Ararwal Master of International Development Economics & Tong Zhang, Master of International Development Economics, The Economics of Nationalism. (First Prize \$500)

Oral presentation prizes

Undergraduate Prizes (*funded by conference committee's SEEF grant, plus nomination to attend the Australasian Conference of Undergraduate Research*)

- Victoria Tasker, Bachelor of Archaeological Practice, Skeletal evidence of torture: how can the past help the present? (First Prize, \$1000)
- Clive You, Bachelor of Commerce, Looking East: Vincent van Gogh and Japan (Second Prize, \$500)

PhB Prizes (*funded by Professor Paula Newitt, Dean of Students, from a PhB-related grant, includes nomination to attend the Australasian Conference of Undergraduate Research, registration, travel and accommodation*).

- Ellen Cliff, Bachelor of Philosophy (Science), The other CO2 problem: measuring the effect of carbon dioxide in the Southern Ocean
- Martyna Judd, Bachelor of Philosophy, Validation of ligands in X-ray crystal structures using Molecular Dynamics simulation

Postgraduate Prizes (*funded by conference committee's SEEF grant*)

- Tara-Lyn Carter, Master of Biological Anthropology, Behaviour and beliefs related to male aggression: evidence of intrasexual selection in humans? (First Prize, \$1000)
- Bhavani Kannan, Master of Diplomacy (Advanced), Negotiating terrorism: making the pen mightier than the sword, (Second Prize \$500)

Audience choice prizes

Thursday's presentations:

- *Poster Presentation Prize:* Naomi Peck, Bachelor of Asia-Pacific Studies (Year in Asia), Learning linguistics and history from a language in Bhutan.
- *Oral Presentation Prize:* Jessy Wu, Bachelor of Philosophy (Hons), Gifted Underachievement: Causes and Interventions

Friday's presentations:

- *Poster Presentation Prize:* Emma Murdoch, Bachelor of Science/Bachelor of Arts, The Eugenics Stigma: the Role of the Genetic Counsellor in Prenatal Testing
- *Oral Presentation Prize:* Bhavani Kannan, Master of Diplomacy (Advanced), Negotiating Terrorism: Making the Pen Mightier than the Sword

Honours 3MT Prizes

(Funded by Pro Vice-Chancellor (Student Experience) Professor Richard Baker)

Paula Ozola, Bachelor of Arts (Psychology): The influence of prior information on hallucinations (First prize, \$500)

Richard Yuze Kong, Bachelor of Philosophy (Science): Reactivity of a Terminal Methylidyne (Joint Second Prize, \$250)

Han Ling Fam, Bachelor of Philosophy (Science): Investigation of cardiac biomarkers in ambulatory type 1 diabetic patients) (Joint Second Prize, \$250)

Posters selected for display in the ANU Library

Selected by Roxanne Missingham, University Librarian

Naomi Peck

Jessica Johnson

Jolene Cox

Rebecca Weatherby

Vishesh Agawal and Tong Zhang

Thomas Larkin

Catherine Pilley

Papers selected for the 2016 volume of ANU Undergraduate Research Journal

Zixin (Jessy) Wu

Victoria Tasker

Alex Catalan Flores

Sachini Muller

Ellen Cliff

Martyna Judd

Daniel McKay

Albert Patajo

Jonathan Tjandra

Clive You

Ian Dehlsen

Presentations selected for Digital Collection

Zixin (Jessy) Wu

Avnav Pujara

Victoria Tasker

Rebecca Hilton

Alex Catalan Flores

Sachini Muller

Ellen Cliff

Mun Nyee Chew

Martyna Judd

Daniel McKay

Albert Patajo

Jonathan Tjandra

Clive You

Ian Dehlsen

Ben Gleeson

Tara-Lyn Carter

Bhavani Kannan

Christopher Wilder

Bestlyn Loo

Posters Selected for Digital Collection

Naomi Peck

Jessica Johnson

Jolene Cox

Rebecca Weatherby

Vishesh Agawal and Tong Zhang

Thomas Larkin

Catherine Pilley

Committees + Crew

Conference Committees + Crew

Conference Executive Committee

Matthew Flower
Bachelor of Philosophy (Science)
Priyanka Giri
Master of Business Administration
Brody Hannan
Bachelor of Science/Bachelor of Policy Studies
Dongqing Li
Bachelor of Actuarial Studies

Liam Osawa
Bachelor of Economics/ Bachelor of Law
Jennifer Tinston
Bachelor of Science Advanced (Honours)
Amelia Tan
Master of International Relations
Shelley Zhao
Bachelor of International Relations/Bachelor of Economics

Conference Programme Committee (Executive)

Erica Chu
Master of International Relations
Keri Chui
Master of Philosophy (Research)
Rose Iles Fealy
Bachelor of Arts
Sin Sin Phoebe Fok
Bachelor of Science
Andrés Guitian
Bachelor of Science
Brody Hannan
Bachelor of Science/Bachelor of Policy Studies
Marika Nihori
Bachelor of Philosophy (Science)

Veronica Oh
Bachelor of Arts/Bachelor of Law
Mitchell Porter
Bachelor of Philosophy (Arts)
Eleni Ravanis
Bachelor of Science, exchange from University of Sheffield
Prince Sebastian
Bachelor of Philosophy (Science)
Guohui Tan
Bachelor of Science/Bachelor of Arts
Tianhao Zhou
Masters of Actuarial Studies

Conference Programme Community (Leadership)

Jonathan Tjandra
Bachelor of Politics, Philosophy and
Economics/Juris Doctor

Andrés Guitian
Bachelor of Science

Conference Programme (Learning Communities)

Alix Biggs
Bachelor of Arts (Honours)
Karan Dhamija
Bachelor of Politics, Philosophy and Economics /
Bachelor of Laws
Duc Dao
Bachelor of International Security Studies
(Honours)

Waheed Jayhoon
Bachelor of International Relations/Bachelor of Law
Caitlin Magee
Bachelor of Music/Bachelor of Law (Honours)

Elena Tjandra
Bachelor of Interdisciplinary Studies

Conference Judging Committee

Zohair Abu-Shaban
PhD (John Curtin School of Medical Research)
Joshua Chu-Tan
PhD (John Curtin School of Medical Research)
Tenzin Dagpo
PhD (Medical Science)
Nilisha Fernando
PhD (John Curtin School of Medical Research)

Richmond Lee
PhD (Research School of Chemistry)
Guy Leedon
PhD (College of Business & Economics) & graphic designer
Soniya Sharma
PhD (Research School of Astronomy & Astrophysics)
Kelzang Tashi
PhD (School of Culture, History & Language)

Kelsie Long
PhD (Research School of Earth Sciences)
Paul Preston
Manager, Student Experience & Career
Development

Conference Photographers

Rory Gillen
Bachelor of Visual Arts
Catherine Nacion
Bachelor of Visual Arts

Conference Director

Dierdre Pearce
Student Experience & Career Development

Roxanne Missingham
University Librarian (Chief Scholarly Information Officer)
Stephen Milnes
Deputy Director Student Experience

Conference Graphic Design

Daniel McKay
Bachelor of Arts (Honours)/Bachelor of Laws (Honours)

Conference Support (SECD)

Cris Clucas
Chidarth Kathirgamarajah
Rachel Howard
Juliette Lumbers
Daniel McKay
Bachelor of Arts (Honours)/Bachelor of Laws (Honours)
Jade McKenna
Bachelor of Science
Simon Mulvaney
Bachelor of Interdisciplinary Studies (Sustainability)
Emily Wotherspoon
Bachelor of Arts



Program committee members reviewing abstracts during one of the program review workshops leading up to the conference. Program committee members listed on page 43.



Executive committee member Priyanka Giri talks to new students about the Student Research Conference during Mini-Market Day, Semester 2, 2016. Priyanka is studying a Master of Business Administration.



Dr Jill Sheppard discusses the significance of student research, with reference to images obtained through a Google Images search using the term 'researcher'.



Ariya Budi discusses his paper during one of the poster sessions at the conference. Ariya is completing a Master of Asia Pacific Studies.



Naomi Peck discusses research presented in her award-winning poster *Learning linguistics and history from a language in Bhutan*. Naomi is completing a Bachelor of Asia-Pacific Studies (Year in Asia).



Award-winning alumnus Tate Sheridan joins current student Brendan Keller-Tuberg at Vivaldi's to discuss the inspirations and process of composition during the workshop Exploring Jazz and Contemporary Composition, hosted by ANU Creative Arts Learning Community as part of the 2016 Student Research Conference.



Bhavani Kannan delivers her prize-winning paper 'Negotiating Terrorism: Making the Pen Mightier Than the Sword.' Research completed during DIPL8011: Research Thesis – Diplomacy, in preparation for the thesis, Master of Diplomacy (Advanced).



Kelsie Long, PhD student, Research School of Earth Sciences, former participant PhD-3MT, and judge, Honours-3MT, explains the format and purpose of the 3 Minute Thesis Competition.



Han Ling Fam, 'Heart Disease in Type I Diabetes', joint second prize in the Honours-3MT competition. Research completed during PhB (Honours) in the ANU Medical School and Department of Endocrinology, Canberra Hospital.



Paula Ozola's winning Honours-3MT Presentation 'Great Expectations: The Influence of Prior Information on Hallucinations.' Research completed during Bachelor of Arts, Honours in Psychology.



Clive You presents his prize-winning paper 'Looking East – Vincent van Gogh and Japan'. Research completed during ARTH1007: Art & Design Histories: Making & Meaning, Bachelor of Commerce/Bachelor of Science (Honours).



Christopher Wilder, 'Building Medical Leaders'. Research completed during the co-curricular Vice-Chancellor's Student Leadership Program. Chris is enrolled in the graduate medicine program.



Catherine Pilley accepts prize for best undergraduate poster from Vice Chancellor Professor Brian Schmidt for paper 'Is Geographic Information Systems (GIS) a useful decision support tool for evaluating facility location problems for bike sharing schemes?' Research completed during ENV53010: Independent Research Project, conducted while completing an International Alliance of Research Universities (IARU) Sustainability Internship at Oxford University. Catherine is completing a Bachelor of Science (Resource & Environmental Management)/Bachelor of Laws.



Avnav Pujara, accepts commendation from Professor Brian Schmidt for his paper 'Military Force and the Protection of Human Rights', together with an invitation to submit his work to the Library's new student research digital collection. Research completed during INTRO8065: Writing International Relations, Masters of International Relations.



Ben Gleeson, Masters of Biological Anthropology, accepts commendation and invitation to submit his paper 'The Effect of Female Social Status on Human Stature Sexual Dimorphism: Evidence of Self-Domestication?' to the new digital collection. Research completed during BIAN8008: Data Analysis and Methods in Biological Anthropology.



Naomi Peck, receives certificate of commendation and invitation to submit her poster 'Learning Linguistics and History from a Language in Bhutan' to the Library's new student research digital collection. Research completed during LING3012: Field Methods, Bachelor of Asia-Pacific Studies (Year in Asia)



Zixin (Jessy) Wu, enrolled in PhD (Honours) receives a certificate of commendation and invitation to submit her paper 'Gifted Underachievement: Causes and Interventions' to the new digital collection. Research completed during an ANU summer research scholarship program 2015/2016.



Presenters, conference student committee and audience mingle at the closing reception, 2016 Student Research Conference.



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THANKS TO EVERYONE WHOM
MADE THIS CONFERENCE POSSIBLE



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