AVIATION CULTURES: SCIENCE, TECHNOLOGY AND PEOPLE

Friday 27 February 2015

12.00 to 6.00 pm

Western Tower Room, Quad A14

THE UNIVERSITY OF
SYDNEY

Aviation Cultures: Science, Technology, and People

Programme

12.00–1.00: Lunch and informal introductions

1.00–1.15: Welcome from Prudence Black and Peter Hobbins

Flight Plan: Multidisciplinarity and Aviation Cultures

1.15–2.15: Pilots

✈ *Zeros, Zippers and Zoot Suits: Engineering the Fighter Pilot*, Dr Peter Hobbins, University of Sydney

Invited in 1950 to deliver the Annual War Memorial Lecture to the University of Sydney's Engineering Club, Frank Cotton entitled his paper "Engineering the fighter pilot against blackout in war time". This presentation ostensibly outlined the flying suit that he, as Professor of Physiology, had developed over 1940–45. Intended to prevent blackout during high-speed manoeuvres, the eponymous Cotton Aerodynamic Anti-G (CAAG) Suit was instantly dubbed the 'zoot suit' by fighter pilots. What these aviators and their superiors were seeking was an 'edge' in combat over agile enemy aircraft such as Japanese 'Zeros'. But in a war won largely via an industrial logic of standardisation, abundance and efficiency, Cotton's 'zoot suit' represented something more. It embodied a shift from maximising capability to an emphasis on extending human capacity. More than merely protective, the CAAG Suit followed the oxygen mask and pressure cabin in permitting humans to exploit new flight envelopes. Unlike high-altitude flying, however, the high-G milieu was intrinsically sensory. Pilots were intimately aware of both the directional forces acting upon them and the constrictive pressure applied by the suit, affecting how they 'felt' their aircraft and encountered the aerial environment. The suprahuman capacity offered by zipping up a zoot suit also led flyers to exceed their aircraft's structural limitations, literally bending the wings of their Spitfires. This problem necessitated additional sensory inputs, including a visual accelerometer to display G levels, a high-G buzzer and a stall-warning horn. The pilot was thus engineered into a novel, affective system that generated a more-than-human 'airspace' – one which could exist only via the enmeshment of biological, technological and physical capacities. Examining the CAAG system's protracted development, this paper focuses less on its operational irrelevance than on the unique spaces it composed, as read through contemporary cultural geography and science studies.

➤ *Absent Aviators: Gender Issues in Aviation,* Dr Jim Mitchell, University of Western Sydney and Dr Deanne Gibbon, Royal Australian Air Force

Considerable research has investigated gender issues in a wide range of occupations such as engineering, surveying and primary teaching. The occupation of aircraft pilot in commercial and military aviation is an example of a highly masculinised domain in which there is a paucity of women pilots. Identified in the research that underpins this presentation are a number of significant barrier with mitigate against women becoming pilots. Issues to be highlighted are cultural, medical, perceptual, attitudinal and cost. Barriers include recruitment, structural, preference for service roles, training and learning styles. Technical issues include anthropometric differences and perception of technology. Commercial aviation and the RAAF have introduced a number of initiatives to increase the number of women pilots in the military. These initiatives are briefly examined.

➤ *Cultures of Experience, Cultures of Experiment: Test Pilots in the Weimar Republic and Nazi Germany*, Dr Daniela Helbig, University of Sydney

From the 1920s through the 1940s, aviation became a scientific enterprise in Germany and developed rapidly alongside with various disciplines in the physical and engineering sciences. The profession of "test pilots" emerged as part of this process. The question about their role in the broad class of investigations labelled "flight experiments" provoked intense debates over the relationship between formalized scientifically-constructed knowledge and less-formally construed experience. This paper examines that debate in light of the practices of recording flight data, tracing the concurrent shift in both the notions of 'subjective experience,' and of 'experimental subjects' within and beyond the aviation research community.

2.15–3.15: Cabin Crew and Ground Staff

➤ *Matron's Intuition and Influence: Hazel Holyman in Australian Aviation Culture*, Dr Adam Gall, University of Sydney

This paper considers the influence of Hazel Holyman, Air Hostess Superintendent for Australian National Airways, 1939-1955. When she began training hostesses in 1939, Holyman drew upon international practice as she had encountered it in the UK, the Netherlands, and in the booming commercial aviation industry of the United States. She initially trained hostesses directly, before moving into a selection and supervision role where she oversaw the growth of the hostess workforce at ANA. The Matron, as she was known, was remembered affectionately by many, admired for her canniness in choosing the best candidates to become hostesses, and respected for her strength, and her fairness towards

those she oversaw. Holyman also had a legendary eye for uniformity of appearance and comportment among her hostesses and was responsible for the institution of the notorious check hostess supervisory system. Apart from her own direct role at ANA, her students (such as Eve Sexton at Ansett and Helen Somerville at TAA) carried her influence throughout the Australian industry.

➔ *Clear Air Turbulence: Work Relations on Board Qantas Aircraft*, Dr Margaret Robinson, Government of South Australia

This paper draws on research undertaken into the industrial relations history of Qantas cabin crew. Alongside a theoretical interest, is a personal involvement of working in the industry for over 14 years. This paper will focus on the Qantas flight stewards and considers the effect of class and masculinities on their position in the crew hierarchy. The position of the stewards will be seen in relation to the Qantas women whose gender limitations were overridden by their status.

➔ *Who's Security? Considering Similarities between 'Permanent' and Labour Hire Employees in the Aviation Industry*, Professor Lucy Taksa and Dr Alison Barnes, Macquarie University

The Qantas/TWU dispute occurred against the backdrop of increasing insecurity of employment in Australia and polarisation in its labour market, which led to the establishment of an Independent Inquiry into Insecure Work in Australia by the Australian *Council of Trade Unions* (*ACTU*) in 2011. The resulting Report, published in 2012, identified key indicators of insecure work and found that 'a new divide has opened in the Australian workforce …. between those in the "core" … and those on the "periphery"', with the former 'likely to be in full-time employment, either permanently within organizations .. or possessing skills for which there is steady demand and for which they can charge a premium' (Howe, 2012: 5). A critical issue not considered was the impact of labour hire arrangements on 'secure' or 'permanent' workers, an issue of prime significance to those employed by Qantas. In this paper we consider the impact of labour hire arrangement on the security of employment on aviation culture drawing on evidence collected in 2012 during an industrial dispute between the Australian airline, Qantas and the Australian Transport Workers Union (TWU) over the protection of job security. This case throws light on the way the growing use of labour hire arrangements affects the security not only of those who are hired under such arrangements but also those so-called 'permanent' employees in range of ground staff occupations in the aviation sector. Hence, our paper's focus shifts attention from the impact of labour hire arrangements on insecure workers to the impact on those who have traditionally been regarded as secure.

3.15–3.45: Tea Break

3.45–4.45: Aviation Spectacles

➤ *What Men do after the Crash,* Dr Lindsay Barrett, University of Technology Sydney

In his 1946 'Letter on Humanism' Martin Heidegger defined technology as a form of destiny, while also arguing that homelessness was coming to be the destiny of the world. The phenomenon of human mobility as facilitated by the technological was central to Heidegger's assertions. Meanwhile, as the pre-eminent global conveyance technology of the twentieth century, the transport aircraft was in turn central to this emergent reality of mobility as a way of life. But if we are to try to understand transport technologies as affective agents that have actually shaped human societies and cultures, then perhaps this singular conception of destiny needs to be rethought as multiple — as destinies — because the application of any technology to life is an inevitably fraught process that provokes a range of consequences in which the negative is constantly shadowing the positive. In this sense, any successfully completed flight in an aircraft is always predicated on the fact that the aircraft didn't crash. This paper will focus on two texts from the mid twentieth century: the Swiss German novel *Homo Faber* and the Hollywood film *The Flight of the Phoenix*. In both stories the mechanical failure of an aircraft results in a crash landing in a desert, but the consequences and outcomes of these events are markedly different in each case, illustrating radically different understandings of the relationship of the human to the technological, as well as the very different roles and responses of the male protagonists involved.

➤ *Scares, Spectacles and the Aerial Apocalypse: Reflections on Research.* Dr Brett Holman, University of New England

This is a brief overview of my research interests, which mostly focus on Britain in the first half of the twentieth century and revolve around the following themes:

1. The knock-out blow from the air - constructing a theory of aerial apocalypse
2. Mystery aircraft scares -hope, fear, technology and imagination
3. The aerial theatre - aviation spectacle in the service of nation and empire

➤ *'A Flying Machine for Military Purposes': Aviation and the Military in the British Dominions Before the Great War'*, Dr Michael Molkentin, UNSW Australian Centre for the Study of Armed Conflict and Society

Although geographically isolated from the great advances that occurred in aeronautics between 1908 and 1914 in Europe and the United States, the militaries and governments of

Britain's Dominions demonstrated a serious interest in aviation for defence purposes before the Great War. Each perceived in aviation different possibilities and threats and, to varying degrees, invested in the emerging technology. This paper outlines how Britain's settler societies responded to the emergence of aviation before the Great War to add an imperial perspective to the well-known account of early aviation and to provide a pre-history of aeronautics in the Great War-a conflict during which the Dominions would provide 1 in 5 of Britain's airmen.

4.45–5.45 The Spirit of Communities

✈ *Affective Performance and Negotiation of Female Flight Attendants*, Arratee Ayuttacorn, Chiang Mai University

This paper examines the everyday life practices the female flight attendants employ to negotiate with the dominant powers. It also investigates the way in which female flight attendants produce a particular form of affect as coping strategy to deal with serious problems caused by their working conditions, an affect that helps them achieve their career goals, and creates social and economic value for airline company. This study aims to explore how this affect is produced and circulated under multiple forms of power that impose on flight attendants' bodies. Under this regard, the concept of affective economy is employed to understand the linkage between emotion and society at large. The method used for this research is self-reflexive ethnography, and I engage the concept of reflexivity to reduce the effects of insider researcher since I myself worked as a flight attendant. The study relies on in-depth interviews of ten female flight attendants in various categories of age and position. The data are also gathered from participant observation by following short and long-route flights, and engaging with flight attendants' activities. Moreover, narrative analysis is employed to understand how flight attendants construct their subjectivity. The study reveals that 'winyann' as a spirit of professionalism is a form of affect accumulated through socialization and emotional management. This kind of affect circulates among the female flight attendants, among other colleagues and the passengers, to form an affective network. The ethic of care morally links affective producers and consumers in the global economy. Paradoxically, an affect is produced from the capitalist discipline namely organizational regulations and culture. At the same time and space, cultural bodies and the particular form of affect are strategically created to constitute a new subjectivity in order to relocate themselves from the dominant powers.

✈ *Social Airscapes: Flight Logistics and Memory in Myanmar*, Dr Jane Ferguson, University of Sydney

With the supposed opening up of Myanmar in recent years, increasing attention is being paid to the country's logistical infrastructure from both preservationist as well as development perspectives. The country's national airspace and Flight Information Regions (FIR) are subjected to increased traffic as well as projected upgrades, putting pressure on the country's Department of Civil Aviation to accommodate international consultancies and keep up to code with the ICAO. Following a brief overview of the history of the country's relationship with international aviation, I will also offer a vignette featuring violence, air disaster, and social memory through Buddhist and local spiritual codes. This is based on anthropological fieldwork carried out in Yangon, Mandalay, as well as the Shan State. As I will demonstrate airspace and logistics are also intertwined with local spiritual meaning and significance, but this does not preclude their users from being cosmopolitan or completely knowledgeable of international codes and practices.

✈ *More than Planes and Pilots: Connecting Communities and Collections of Aviation Heritage*, Dr Paul Ashton, Dr Tracy Ireland, Dr Alison Wain and Dr Mitchell Whitelaw, University of Canberra

Connecting the Nation- Australia's Aviation Heritage is a 2-year digital heritage project funded by Airservices Australia. Aviation heritage advocates have long sought a national aviation museum however this has never progressed beyond initial planning stages. This project aims to contribute to the conservation of aviation heritage, provide a national perspective and make aviation heritage more accessible through a custom built digital platform. In this paper we reflect on the different communities which value and care for diverse types of aviation heritage and how they articulate its significance. As Airservices is associated with air traffic control and related services and infrastructure, this has taken us away from the more visible and glamorous aspects of aviation, into the backrooms where technological innovation, safety and logistics contribute to distinctive forms of community and cultural identity.

5.45: Drinks