

The ANU Undergraduate Research Journal

Volume Three 2011

The ANU Undergraduate Research Journal

Volume Three 2011





Published by ANU eView
The Australian National University
Canberra ACT 0200, Australia
Email: anuepress@anu.edu.au
This title is also available online at: <http://eview.anu.edu.au/>

Email: aurj@anu.edu.au
Web: <http://aurj.anu.edu.au/>

ISSN 1836-5331 (print)
ISSN 1837-2872 (online)

Cover design and layout by ANU eView

Front cover art by Christine Atkins. *Esse*, 2010. Photographer: Greg Piper

Back cover art by Naomi Somerville. *The space in between my kiss and her neck*, 2010.
Photographer: Greg Piper.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior permission of the publisher.

Opinions published in the ANU Undergraduate Research Journal do not necessarily represent those of The Australian National University, or the Editors.

This edition © 2011 ANU eView

Contents

Foreword	vii
From the Editors	ix
List of Reviewers	xi
List of Authors	xiii
Cover Art	xvii
Drugs, Pleasure, Sexuality and the Australian Space in Christos Tsiolkas' <i>Loaded</i> and Kate Holden's <i>In My Skin</i>	1
<i>Anna Dunkley</i>	
Speech is Silver, Silence is Golden: The Cultural Importance of Silence in Japan	17
<i>Sally Jones</i>	
Why Cooperate? The Place of Strong Reciprocity in the Evolution of Human Altruism	29
<i>Zid Mancenido</i>	
Trends in Stereoselectivity and Regioselectivity for Trimethylsilyl Trifluoromethanesulfonate Addition to Alkynes	47
<i>John Rivers</i>	
Wicked Sisters	57
<i>Martina Donkers</i>	
Depression Risk in Young Adults: Could a Dopamine Receptor Gene Moderate the Role of Childhood Adversities?	63
<i>Courtney Landers</i>	
Change at the Top: Succession in the Chinese Communist Party . . .	81
<i>Brendan Forde</i>	
Native Tears: Conflict on the Colonial Frontier and <i>R v Kilmeister (No 2)</i>	97
<i>Haydn Marsh</i>	
Bodies, Bare Life and Dehumanisation in the My Lai Massacre. . . .	111
<i>Rebecca Russell</i>	
The Exact Velocity in Low-redshift Stationary Radio Sources from its Apparent Longitudinal and Transverse Velocity . . .	125
<i>Wing Tang</i>	
Remembering Australian Prisoners of War: Memory and Mourning at the Changi Chapel Memorial. . . .	141
<i>Davina French</i>	

Foreword



Publishing in a peer-reviewed journal is the pinnacle of academic research. Undergraduate publication is a particularly noteworthy achievement and reflects exceptional performance by students.

The ANU Undergraduate Research Journal is a high-quality compilation of student research that demonstrates the breadth and depth of undergraduate education at ANU.

I am particularly pleased that the research presented in the third edition of the journal highlights the diverse range of fields our undergraduates are involved in, including: human evolutionary biology, war history and contemporary literature.

The publication of the ANU Undergraduate Research Journal will continue to be an important annual milestone for the ANU community. It is a pleasure to witness some of the best research talent being nurtured across ANU.

A handwritten signature in black ink, reading "I. R. Young". The signature is written in a cursive style with a large, stylized "Y" at the end.

Prof. Ian Young
Vice-Chancellor
The Australian National University

From the Editors

It is with pleasure that we present Volume Three of the ANU Undergraduate Research Journal.

The ANU Undergraduate Research Journal provides an opportunity to showcase the outstanding research of undergraduate students at the ANU. As a distinguished research university, the ANU nurtures the formation of Australia's future scholars.

Form is key to any intellectual creative pursuit. Without giving form to the ideas and knowledge around us, we are doomed to exist in ignorance, misunderstanding the most simple events that life has to offer. This does not mean form should be pursued without consideration. Part of the academic process is to challenge the forms of previous scholars and to ensure they remain robust contours that fit the progression of human knowledge. Within this volume of the Journal, the theme of form emerges in, for example, the shaping of meaningful political relationships, in understanding human evolution and in new methods of chemical synthesis.

The success of the Journal would not be possible without the contribution of the Vice-Chancellor, Professor Ian Young, the Dean of Students, Professor Penny Oakes, and Dr Dierdre Pearce, Project Coordinator, Dean of Students Office.

We owe a debt of gratitude to the academics who have graciously given their time to review articles and mentor the student-authors in preparing their manuscripts for publication. Thanks also to Aditya Chopra, Project Assistant, for providing advice and technical support, and to ANU eView for their guidance.

And finally, we would like to thank the student-authors for their hard work and unbounded enthusiasm in bringing their work to the high standard exhibited within these pages. It has been inspiring to see the dedication you have brought to your research and we wish you all the best for your future careers. Congratulations on your publication!

The 2011 editorial team:

Michelle Almirón

Rachael Eddowes

Shaun New

List of Reviewers

A/Prof. Donald Anton

ANU College of Law

Prof. Mauricio Arcos-Burgos

ANU College of Medicine, Biology & Environment

Dr José Basutto

ANU College of Physical & Mathematical Sciences

A/Prof. Frank Bongiorno

ANU College of Arts & Social Sciences

Ms Cate Clelland

ANU College of Arts & Social Sciences

Mr Craig Collins

ANU College of Law

Dr Dominique Dalla-Pozza

ANU College of Law

Mr Christian Downie

ANU College of Asia & the Pacific

Dr Salman Durrani

ANU College of Engineering & Computer Sciences

Dr Michael Eburn

ANU College of Medicine, Biology & Environment and ANU College of Law

Dr Thomas Fallon

ANU College of Physical & Mathematical Sciences

Dr Paul Francis

ANU College of Physical & Mathematical Sciences

Dr Grayson Gerrard

ANU College of Arts & Social Sciences

Dr Peter Hendriks

ANU College of Asia & the Pacific

Ms Margaret Hutchison

ANU College of Arts & Social Sciences

Ms Liyana Kayali

ANU College of Arts & Social Sciences

Ms Wendy Kukulies-Smith

ANU College of Law

Dr Katrina Lee-Koo

ANU College of Arts & Social Sciences

A/Prof. Vivienne Lewis

Centre for Applied Psychology, University of Canberra

Dr Moyra Mortby

ANU College of Medicine, Biology & Environment

Mr Tristan Moss

ANU College of Arts & Social Sciences

A/Prof. Graham Reynolds

ANU College of Medicine, Biology & Environment

Dr Monique Rooney

ANU College of Arts & Social Sciences

Ms Jane Sisley

ANU College of Arts & Social Sciences

Dr Kim Sterelny

ANU College of Arts & Social Sciences

Dr Catherine Summerhayes

ANU College of Arts & Social Sciences

Dr Samantha Wimala

ANU College of Physical & Mathematical Sciences

List of Authors

Anna Dunkley

Anna Dunkley is a third year Bachelor of Philosophy (Arts) student, majoring in literature. This paper was written during an individual research course supervised by Dr. Helen Keane as part of this program. Anna also has a strong interest in Gender Studies and Development Studies, which was furthered during her recent internship at the NGO the Australian Reproductive Health Alliance. She hopes to undertake Honours in 2012 in the field of eco-criticism, particularly in Australian literature.

Email: u4677338@anu.edu.au

Sally Jones

Sally is a current third year Bachelors of Asia-Pacific Studies and Science student majoring in Japanese, Japanese Linguistics, Mathematics and Statistics. As a child, she came under the spell of Japanese cartoons and dreamt of one day being fluent in Japanese. She also developed a deep fascination of numbers and ultimately, she moved from Hobart to begin studying these two childhood passions at the Australian National University. In 2009, she participated in the Japan-East Asia Network of Exchange for Students and Youth Program (JENESYS) under the sponsorship of the Japanese government. She hopes to do Honours in Japanese linguistics upon the completion of her double degree.

Email: u4681351@anu.edu.au

Zid Mancenido

Zid is a third year Bachelor of Philosophy student majoring in anthropology. His research focuses on the history of anthropological theory as it applies to a wide variety of research areas, including models of human evolution, colonial and post-colonial cross-cultural encounters, and mediating technologies such as television, the internet and Facebook. In 2012, he will begin his Honours project on how 'culture' has been historically theorised in order to assess whether defining it is possible or just absurd. He hopes the former.

Email: u4666893@anu.edu.au

John Rivers

John is a second year Bachelor of Philosophy (Science) student, in chemistry and molecular plant science. His secondary schooling was undertaken at Lake Tuggeranong College, Canberra where he excelled in maths, English and chemistry. John is committed to the university community, working for peer mentoring programs in chemistry and biology. He was recently elected ANU 2012 Biology Society President, promising more beer and barbeques. This year, John won a scholarship to conduct a summer research project at the ANU Research School of Chemistry, studying anti-mitotic drugs. After completing his degree, John hopes to pursue post-graduate teaching, and studies in biochemistry.

Email: u4541684@anu.edu.au

Martina Donkers

Martina is a double degree arts science student studying drama and science communication. Her passion for drama and theatre has been life-long, and over her time at ANU she has combined it with her other more newly developed passion, science communication. Martina has hopes of one day running a theatre company dedicated to staging new and innovative science plays. She hopes to begin her PhD in the next few years.

Email: martinadonkers@gmail.com

Courtney Landers

Courtney has just completed her third year of a Bachelor of Philosophy (Science) (PhB) and is looking forward to beginning her Honours year investigating amino acid transporters and epigenetics in honeybees. Originally from Queensland, she decided to pursue science in Canberra after attending the National Youth Science Forum and being offered the ANU National Merit Scholarship. She has since become a proud resident of Bruce Hall, where she has won several academic excellence awards since arriving. Other achievements include the IG Ross Scholarship for highest award in first year chemistry (2009), winning the 16th Lions Oratory Competition (2010) and receiving Chancellor's Letters of Commendation for every academic year.

Email: u4679155@anu.edu.au

Brendan Forde

Brendan completed Honours in Asia-Pacific studies at the ANU in 2011. His thesis focused on the development and operation of institutions governing leadership change in the Chinese Communist Party (CCP). In 2009, Brendan studied at Tsinghua University in Beijing as part of the College of Asia and the Pacific's Year in Asia Program and completed a sub-thesis in Chinese as part of that program. Brendan's research interests include Chinese elite politics; the emergence of political institutions in authoritarian polities; and political change within the CCP. He plans to pursue these topics with further study. From 2010-2011, Brendan was the President of the Asia and Pacific Studies Society at the ANU.

Email: forde001@hotmail.com

Haydn Marsh

In 2011 Haydn will complete his fourth year of study towards a Bachelor of Arts/Laws double degree, majoring in history, and gender & cultural studies. Haydn has a keen interest in the areas of law which interact with his chosen fields in arts, particularly in the historical development of the law and the modern effects of that development. In 2010 Haydn was the joint winner of the Sir Victor Windeyer prize for Australian Legal History. In 2012 Haydn hopes to undertake honours research in law, and complete his degrees.

Email: ha_marsh@hotmail.com

Rebecca Russell

Rebecca recently graduated with a Bachelor of Arts with Honours, majoring in anthropology and political science. Interested in social justice issues, she has volunteered for Oxfam, was an Aurora Project Native Title Intern in 2010, and has worked in diverse industries including media, health advocacy, and law. Her academic interests are based around the cultural causes of complex political situations, and the manipulation of culture for political benefit. She plans to travel overseas before undertaking further study in political anthropology, focusing on the anthropology of war and how civilians and combatants navigate and understand the landscapes of conflict.

Email: r.j.m.russell@gmail.com

Wing Tang

Wing is completing his Bachelor of Science (Honours) at the ANU majoring in double mathematics and double physics. He hopes to graduate with a Bachelor of Science with Honours in 2012. For the past two summers he - as a summer research scholar - has been working on relativistic jets and radio astronomy at the Research School of Astronomy and Astrophysics. He was a tutor for MATH 1013 Mathematics and Applications 1 in 2010 Semester 1, and has privately tutored high school physics and mathematics since 2007. He is particularly interested in topology and geometry, high energy astrophysics and cosmology; he would like to work on the fields related to these interests.

Email: u4351159@anu.edu.au

Davina French

Davina is a mature age student studying part-time for a Bachelor of Arts majoring in history. She began her degree at the University of Western Australia but enjoys the opportunities for historical research that Canberra has to offer. She expects to finish the degree in 2012 and hopes to continue to complete Honours. She is especially interested in twentieth century Australian history and the public use of history, for example in museums and public commemorations. Davina's first degree was in psychology and she still enjoys working with people; she plans to try her hand at an oral history project for Honours.

Email: davina.french@anu.edu.au

Cover Art

Christine Atkins

Bachelor of Visual Arts

Front cover - *Esse*, 2010

Hot sculpted and cold worked glass

10 × 43 × 69.6 cm, photographer: Greg Piper

In my work, I aim to capture a sense of stillness and tranquillity within a form. The experience of tranquillity is something that I encounter in nature, typically at moments when I have been completely surrounded by a natural environment and overwhelmed by a sense of beauty. These moments of observation and contemplation give rise to a feeling of connection with nature. Glass is a powerful material for transformation; through its capacity to alter light, it penetrates form to create an illusion of inner energy. Glass also has the ability to evoke a sense of calm and contemplation.

In *Esse* I used a hot sculpted and cold worked solid glass form, placed on a dark reflective glass surface. The reflection produced, coupled with the glass object, echoes my roots in the natural world.

Naomi Somerville

Bachelor of Visual Arts

Back cover - *The space in between my kiss and her neck*, 2010

Cast glass

280 × 45 × 45 cm, photographer: Greg Piper

I value more than anything the connection and energy I share with other people in my life. The space, interaction and energy that exist between my daughter Jacqueline and myself is the relationship I am exploring in this work.

The process of creating the work involved covering my mouth with alginate and kissing my daughter (aged 8 months) on the back of the neck. The alginate filled the space in between my lips and her skin, giving form to the space in between us for that one moment. I then used the shape formed by the alginate to build a mould in which I melted clear glass to create "*The space in between my kiss*

and her neck". Each part of the completed work is an individual kiss located on a different part of Jacqueline's neck, and has been suspended in the order as I kissed her.

I use the fluid, transparent and fragile qualities of glass to represent the energy I see, to create a symbol that is representative of the connection I feel.

In removing our physical selves from the experience, and leaving only the interstitial space, I have highlighted the energy and emotional exchange of the moment rather than the skin to skin sensation.

Giving shape to the way I interpret interaction between the people around me helps me to remember that there is much more beyond the physical to consider, and that we all have an energy that unites us.

Drugs, Pleasure, Sexuality and the Australian Space in Christos Tsiolkas' *Loaded* and Kate Holden's *In My Skin*

Anna Dunkley

Abstract

This paper draws on theories regarding the connection between pleasure and space in illicit drug use, and investigates the Australian socio-cultural understanding of this connection through a close reading of illicit drug use in Christos Tsiolkas' novel, *Loaded*, and Kate Holden's memoir *In My Skin*. This combination of texts – which illustrate the experiences of a gay youth and a prostitute set in the same Australian urban space in approximately the same period – also illuminates the ways in which illicit drug use is often understood as gendered and sexualised, as performed as such. Ultimately, this paper draws on the two texts to provide a greater understanding of the linkages between gender, sexuality, pleasure, spatial context and illicit drug use.

Introduction

The aching longing to be somewhere else, out of this city, out of this country, out of this body and out of this life¹.

Illicit drug use, along with its associated harms, pleasures and social ramifications, is an essentially contested issue, and often clouded by folklore, pseudo-scientific hypotheses and ill-informed political policy. One thing, however, is clear: drugs are not taken in a vacuum, and the pleasures associated with drug use are not only obtained through isolated psychological and physiological reactions. Rather, aspects of the context in which drugs are consumed can affect and enhance the experience of drug-related pleasure for individuals. Hence, this essay will explore the relation between illicit drug-related pleasure and context, specifically spatial context, to further understandings of the complexities of illicit drug use².

1 Christos Tsiolkas. *Loaded*. (Sydney: Vintage Random House, 1995) 19.

2 Please note that this paper will be discussing the ramifications of illicit drug use, and not legal medications.

While the first section will involve a brief overview of a scientific hypothesis surrounding the significance of space in the experience of drug use, the main focus of this essay will be the socio-cultural understandings of this connection; therefore, the second, third and fourth sections of this essay will largely draw on the fields of addiction studies and human geography, as well as two works of creative writing, to present a picture of drug-related pleasure and space. This diversity of disciplinary frameworks provides greater understanding and breadth, indeed, Thrift applauds the “work currently being undertaken as a result of alliances between social sciences and artists”³ as creatively uniting both theoretical and practical knowledge.

The combination of Christos Tsiolkas’ novel, *Loaded*, and Kate Holden’s memoir *In My Skin* is complementary. While the authors employ aspects of autobiography and set their stories in the same city, they illustrate different experiences of the connection between drug-related pleasure, space, and sexuality. The elements of autobiography infuse the texts with authenticity, suggesting to readers that aspects of the experiences of the characters are grounded in reality. By basing their work on personal experience the authors are able to write with credibility about their own perspectives on drug-taking, space and sexuality, reiterating the particularity of drug-use. Similarly, both Holden and Tsiolkas set their stories in Melbourne, at approximately the same period – late 1980s until the early 2000s – and portray the city so vividly that it almost becomes a character. Tsiolkas even divides *Loaded* into sections corresponding to the four regions of Melbourne: East, North, South, and West. Despite locating their stories in the same city, the texts depict quite different experiences of drug-use. Tsiolkas’ novel explores a young gay man’s experience with ‘recreational’ drugs, while Holden highlights a very different experience of heroin use as a prostitute. Tsiolkas’ protagonist Ari emphasises this divide, declaring “they’re on heroin, I’m on speed, different drugs, different moods.”⁴ These differences underline the importance of the varying interactions between space, sexuality, identity and drug choice.

This essay will firstly provide a brief outline of the scientific hypothesis which presents evidence for the connection between space and drug-related pleasure. This will be followed by an exploration of the notions of ‘intensive’ and ‘affective’ space, and how these concepts are illustrated by Tsiolkas and Holden. The third section will explore how the texts show the links between drug use, the performance of sexuality, and space. Finally, the fourth section of this essay will illustrate how drug users can imagine spaces as an entrapment, an escape, or, sometimes, both simultaneously. Ultimately, the experience of using drugs

3 Nigel Thrift, ‘Intensities of feeling: towards a spatial politics of affect’. *Geografiska Annaler: Series B, Human Geography*, Vol. 86, No. 1, Special Issue: The Political Challenge of Relational Space 57-78. (2004) 75.

4 Christos Tsiolkas, *Loaded*, 77.

is not limited to the purely physiological effect on the body, but encompasses a diverse range of factors, particularly including the corporeal context of space. To begin with, it is important to clarify what is meant by the general term 'space'. According to Thrift, space can be understood as relational, thus, "rather than space being viewed as a container within which the world proceeds, space is seen as a co-product of those proceedings."⁵ Space, therefore, can be understood as being comprised not only of the physical structures and objects in a location, and its landscape, but of networks of movement and interactions, weather, sounds, smells, and the 'feel' or 'vibe' of the area as experienced by individuals, amongst other aspects. Thus, as de Certeau argues, "space is a practiced place".⁶

Section One: Science

Both scientific studies and social science concur that there is a connection between the experience of drug-related pleasure and space. The article by Trevor Robbins and Barry Everitt outlines the hypothesis that

drug-seeking behaviour can become powerfully associated with environmental cues, which, as 'conditioned stimuli', predict... the availability of drugs (and their associated hedonistic effects).⁷

This process is described as one of 'associative learning', in which the drug user connects these environmental cues, such as particular spaces, with the pleasures involved in their drug use. Thus, entering or re-visiting a space in which one has previously used drugs may act as a conditioned stimulus, and "activate the specific neural network that consolidated the original memory, through a series of plastic neuronal changes",⁸ even without actually using drugs on that occasion. Thus, re-visiting such a site may evoke some of the sensory effects or patterns of behaviour associated with taking the drug, despite the absence of the actual drug on this later occasion, which may have implications for individuals attempting to curb their drug usage.

⁵ Nigel Thrift, 'Space: The fundamental stuff of human geography' in S. Holloway, S. Rice and G. Valentine (eds). *Key Concepts in Geography* (London: Sage Publications, 2004) 96.

⁶ Michel de Certeau, *The Practice of Everyday Life*. trans. Steven Rendall, (Berkeley: University of California Press, 1984) 117.

⁷ Trevor W. Robbins, and Barry J. Everitt, 'Drug addiction: bad habits add up' *Nature*. Vol. 398, 567-570. (April 1999) 569.

⁸ Ibid. 569.

Section Two: Affective Spaces

The previous section briefly outlined the process of associative learning which causes individuals to connect their experiences of drug taking and pleasure with particular spaces, and this section adds to this by arguing that this is at least partially due to the 'affective' and 'intensive' natures of such spaces. Thrift focuses on the notion of 'affect', and its role in shaping experiences of urban environments. The term 'affect' can be broadly understood as a kind of force of emotion, of joy or anger or alienation, which works upon people, however, he stresses that it is "non-individual... an impersonal force".⁹ He imagines 'affect' to take the form of a "'transhuman' framework in which individuals are generally understood as effects of the events"¹⁰ to which their bodies respond. Thus, as Thrift highlights, space is an important factor in the production of affects as it has an inherently expressive quality.¹¹ Therefore, the many, complex aspects of which space is comprised – including built forms, objects, music and noise, decoration and lighting – all contribute to the 'vibe' of that space, and this affects individuals and shapes their experiences. Duff draws on this idea of affective space to argue that the pleasures linked to drug use encompass the "corporeal experience of space".¹² Zinberg also influenced Duff's argument, by outlining the idea of the importance of 'set' and 'setting' in the experience of drug taking.¹³ Furthermore, Thornton suggests that rave culture moved away from traditional venues into "new sites like disused warehouses, aircraft hangars, municipal pools and tents in farmers' fields... partly in pursuit of forbidden and unpredictable senses of place."¹⁴ This search reflects Duff's suggestion that the spatial contexts of drug use shape experiences to the extent that different sensory and psychological effects are felt depending on the location in which drugs are consumed.¹⁵ Moreover, individuals can be aware of being positioned and influenced by affective spaces, and, as Duff argues, drug use should therefore be viewed as a "heterogeneous assemblage of risks, conscious and unconscious choices and decisions, physical and psychical sensations, affects, corporeal processes, structural and contextual forces".¹⁶

Both of the novels portray affective spaces, and *Loaded* in particular shows how some individuals take drugs to enhance the experience of their surroundings. For example, Ari uses many illicit, 'recreational' drugs, which are often taken

9 Nigel Thrift, 'Space: The fundamental stuff of human geography' 104.

10 Nigel Thrift, 'Intensities of feeling: towards a spatial politics of affect'. (2004) 60.

11 Nigel Thrift, 'Space: The fundamental stuff of human geography' 104.

12 Cameron Duff, 'The Pleasure in Context'. *International Journal of Drug Policy* 19 (2008) 384.

13 N. Zinberg, *Drug, set, setting: the basis for controlled intoxicant use*. (Yale: Yale University Press, 1984).

14 Fiona. Measham. 'Play space: historical and socio-cultural reflections on drugs, licensed leisure locations, commercialisations and control'. *International Journal of Drug Policy* Vol. 15 (2004).

15 Cameron Duff, 'The pleasure in context'. 386.

16 Ibid. 385.

to intensify activities such as dancing and sexual acts in recreational spaces such as clubs and pubs.¹⁷ Ari's connection between the drug 'speed' and the Greek term *kefi* – "the urge to dance, to be with good friends, to open your arms to life"¹⁸ – reveals one of the motivations for his drug use: to enhance his experience of clubbing. As Duff highlights, the pleasure associated with drugs can be "deeply embedded in specific contexts and specific places, like clubs, bars, private homes and open spaces",¹⁹ and Tsiolkas' depiction of 'grounded' drug use matches this. Ari, for example, 'blasts' (injects) speed at the home of his dealer, though he doesn't often inject drugs because it makes him "apprehensive".²⁰ However, at his dealer's house he does inject, ostensibly because he feels lethargic, yet it seems that the choice is also influenced by the space's atmosphere, which is conducive to that form of behaviour because it is inhabited by "smackheads".²¹ There are more subtle aspects of difference swirling throughout the space, such as reggae music, incense, cigarette and dope smoke, and conversations about opium dens in Kashmir. All of these aspects affect Ari, and the unusual, intensive scene makes his unaccustomed mode of drug use seem more permissible.

Tsiolkas thus explores the potential for drugs to enhance the experience of a space, frequently using detailed language to evoke sensuous details of sounds, smells, and sights, to highlight the sensual spaces in which he sets his scenes. For example, he writes that Ari perceives that the "speed accentuates the lights and colours of the street... the air seems to hum from the electricity".²² This short line perhaps encapsulates the notion of 'intensive' space, which, according to the philosopher Manuel DeLanda, is 'felt' profoundly. He distinguishes between 'extensive' space, which involves the basic understanding of space as comprising of three geometric dimensions, and 'intensive' space, which incorporates the potential for spaces to exude affect, and thus is more meaningfully perceived as possessing a particular energy or 'vibe'.²³ This 'vibe' is comprised of the whole of the space, including physical forms, lighting, music, and the people interacting and moving within that space. Thus, Ari links the sense of community within a club to its music, and the physical effects of the array of drugs he has taken:

Noise connects with the pleasure emanating from my gut... LSD, the ecstasy, the speed, the dope, the alcohol rush around my body and I feel one with the pulsating crowd...²⁴

17 Ibid. 387.

18 Christos Tsiolkas, *Loaded*. 23.

19 Duff, Cameron. op. cit. 388.

20 Christos Tsiolkas, *Loaded*. 21.

21 Ibid. 20.

22 Ibid. 33.

23 Cameron Duff, op. cit. 388 cites philosopher Manuel DeLanda's (2005, 80-83).

24 Christos Tsiolkas, *Loaded*. 94.

Thus, as Duff suggests, the use of drugs offers individuals a means of ‘tapping into’ this vibe, amplifying existing feelings of closeness and connection.²⁵ Of course, as Thrift emphasises, the affective power of spaces is not ‘natural’, rather, urban environments are consciously designed by humans intent on producing particular responses, through their knowledge of strategies such as event management, logistics, music, performance, lighting, urban and interior design.²⁶ Thus, the pubs and clubs that Ari attends reflect efforts to engineer the atmosphere of enjoyment and excessive consumption.

In contrast, throughout the majority of her memoirs Holden does not depict her drug use as predominately driven by the desire to enhance her experience of a pre-existing situation, though on she writes that on one occasion “it was a sunny day, and I felt cheerful; some smack would make everything sparkle just that little more”.²⁷ Her use of drugs differs drastically to Ari’s, as his kind of ‘recreational’ drugs are accepted by both his peers, and Holden, as acceptable, while heroin is seen as “radiating transgression”.²⁸ This sense of difference extends to the way in which it is considered in connection with space, as she suggests that “heroin insulates against sensation”²⁹ and thus the experience of space. Moreover, Holden eventually uses the drug, not because she wants to, but rather because she becomes unable to stop; indeed, she writes that “the drug took me out of the house, on cold bleak nights, on aching feet; it drove me to places I didn’t want to be”.³⁰ Thus, Holden’s experience of drugs is linked to space, but not necessarily positively, indeed, she shows how individuals can be compelled to enter into unappealing spaces. Ultimately, Holden is generally less focused on enhancing pre-existing pleasure through drug use, and more concerned with preventing the pain of withdrawal.

Nonetheless, her memoirs do illustrate the affective power of intensive spaces to a certain extent, particularly in her descriptions of the pleasures and dangers inherent in ‘scoring’ heroin in inner city Melbourne. She highlights the heightened atmosphere of the area, the “bustle of that street just before midnight”,³¹ and suggests that it seemed like a space separate from the others she moved in, a “different scene”,³² which enabled her to enact a different persona in pursuit of a deal. The various expressive elements of the space, such as the blue lights of the bar’s bathrooms, and the strident sounds of the amusement parlours on the street and their “clashing lights and bells and yelling boys”³³

25 Cameron Duff, op. cit. 388-9.

26 Nigel Thrift, ‘Intensities of feeling: towards a spatial politics of affect’ 75.

27 Kate Holden, *In My Skin*. 111.

28 Ibid. 17.

29 Ibid. 82.

30 Ibid. 38.

31 Ibid. 36.

32 Ibid. 35.

33 Ibid. 36.

enhanced her sense that the space was a “surreal”³⁴ sphere separate from the normal daylight world. Moving through this space in the city, she performs the role of the aggressive, “swaggering junkie”.³⁵ The academics Dovey and Fitzgerald have studied the often contradictory feelings of safety and danger for drug users in public spaces, and they discuss the common sense of a ‘buzz’ of exhilaration surrounding such spaces known to be used by drug dealers. One of the heroin-users that they interviewed, for instance, responded “...I don’t know a junkie who doesn’t love scoring off the street...there’s always this bit of a thrill of anticipation...”³⁶ This reinforces Holden’s personal account of enjoying the sense of danger and power in the dark streets of inner city Melbourne. This combination of pleasurable thrills in potentially dangerous spaces reoccurs throughout much of both the creative or personal accounts of heroin use, and the academic work done surrounding this drug use. For example, Dovey and Fitzgerald examine in great detail a section of Smith Street in Melbourne, and the way in which liminal or periphery zones are often used for injecting, including laneways, car parks, public toilets, in an effort to shield illegal drug use from the attention of the authorities.³⁷ However, as Holden realises at one stage in her memoirs, this kind of seclusion and isolation can simultaneously protect the drug user from legal ramifications, yet also be dangerous for them in the case of an overdose of the drug. Holden calculates the balance of pleasure, safety and danger when deciding where to use heroin, writing

I looked around the drab cream walls of the room, the peeling carpet, the harsh dense light from the lamp suspended above... I thought, quite soberly, if I have it here, then when I fall I’ll be visible from the hall. Someone passing might see me. Someone might save me.³⁸

Thus, there can be a desirable, pleasurable risk inherent in such intensive spaces, which is enhanced by drug use, just as the pleasures associated with drugs are amplified by the space in which they are taken.

Section Three: Sexuality

This section will explore the links between sexuality, drug use, and space, as sexuality is the dominant reason that Ari and Kate use drugs. Holden demonstrates the connection between female sexuality and drugs by showing how Kate begins using drugs to maintain her sexual relationship, and then starts

34 Ibid. 37.

35 Ibid. 37.

36 K. Dovey, J. Fitzgerald, and Y. Choi, ‘Safety becomes danger: dilemmas of drug-use in public space’. *Health and Place* Vol. 7. Issue 4. (2001).

37 Ibid.

38 Kate Holden, *In My Skin*. 199.

to 'sell sex' to maintain her dependency. Kate's movement from her family home, to the streets, and then to brothels is largely due to drug use, and shapes her sex work. Ari also consumes drugs to enhance his sexual experiences, which take place in liminal spaces outside his traditional Greek-Australian household. By using drugs and moving beyond the physical bounds of his suburb, Ari attempts to find a space in which he can enact an identity which accommodates both his homosexuality and ethnicity.

Thus, through his endless movement across the city, Ari seeks freedom, particularly the sexual freedom he feels is denied by his culture and home life. He declares "home is the last place I want to be",³⁹ and revels in the liberty of liminal spaces in the city, finding joy through drug use and sexual interactions "in bedrooms, toilets, cars, under railway bridges, on the beach, in strange lounge rooms, in the back row of porn cinemas".⁴⁰ Like Kate, Ari's enjoyment is partly rooted in the sensation of exhilarating risk and pleasurable potential danger. For example, when he leaves the security of the familiar Greek pub The Retreat with a stranger, Ari immediately notices the difference in his surroundings, as the cheerful "mass of people and noise"⁴¹ gives way to the dark car park and then alleyway, where the "smells of beer mix with the stench of garbage".⁴² This change of location, the shift in scents, sounds and company is more than merely a physical movement of a few metres, and it affects Ari profoundly. He becomes suddenly conscious of the potential danger of entering a secluded alleyway at night with a stranger, hesitates, thinking "of those crazy men who get off on death",⁴³ thereby highlighting the link between pleasure and the notion of destruction. Yet, he is not deterred, and walks "into the dark landscape of a dream"⁴⁴ in search of sexual pleasure, buoyed by his drug intake, which exaggerates and enhances his libido. Tsiolkas makes clear the connection between Ari's use of drugs, his corporeal experience of bodily sensations, and his drive to experience sexual gratification, writing:

The drugs are circulating through my body. My skin is alive in sharp bursts of electricity. My nipples are erect, my face is flushed, the hair on my naked arms tingling. I'll have to dance soon, or fuck soon. The energy inside me is pushing against the confines of my body.⁴⁵

Once sated, at least temporarily, Ari smokes a cigarette and tosses it away, "mixing the tobacco in with the come and piss on the ground".⁴⁶ This graphic

39 Christos Tsiolkas, *Loaded*. 112.

40 Ibid. 108.

41 Ibid. 53.

42 Ibid. 57.

43 Ibid. 57.

44 Ibid. 58.

45 Ibid. 54.

46 Ibid. 59

image visually represents the way in which his use of substances such as nicotine, alcohol and illicit drugs are irrevocably intertwined with his broader experience of the landscape that surrounds him, and his sexuality. Fitzgerald and Threadgold explore this notion of intermingling bodily fluids with the shared space of the city, arguing that this represents “something profound”,⁴⁷ a kind of unifying of the individual and the universal. Ari, almost certainly, would abhor this idealism.

Tsiolkas makes it clear that Ari is aware, to a certain extent, of the way in which his sexuality is a performance shaped by the space that surrounds him. For example, when in *The Retreat*, he is vividly conscious of the atmosphere of sensuality, the “availability of sex”,⁴⁸ noting that “everyone in this place wants to be seen, to be admired”,⁴⁹ and this heightens his own desire. This is further exaggerated in the inner city. In the club, the drug use and search for sexual partners is more pronounced, and the two are shown to be inseparable:

Drugs mould the club, drugs initiate the dancing, the search for sex...
Without the drugs the music would be numbing, monotonous. Without
the drugs the faces would be less attractive...⁵⁰

This also hints at the notion that communities can be formed and fuelled by shared drug taking, which Holden refers to as “the bonhomie of complicity”.⁵¹ Duff describes the idea that “the various clubs, bars and venues that make up Melbourne’s night-time economy support vast, loosely integrated affective networks”,⁵² and Slavin furthers this by imagining a kind of “tribal space”⁵³ that can be shaped by shared drug use. Tsiolkas, however, is ultimately despairing about the possibility for such comradeship; indeed, near the end of the novel Ari denies the validity of friendships founded in shared drug and alcohol use, saying that “none of this connection between us is real, it is all hallucinations”.⁵⁴ This is illustrated by the way that Ari and George fail to properly connect, despite their mutual attraction. Throughout the novel they exchange cigarettes and joints, passing them from one to the other as a proxy for verbal communication. Yet, while this shared drug use enables them to establish ties of giving and receiving, and sharing pleasure, Ari is determined to maintain

47 Fitzgerald and Threadgold ‘Fear of sense in the street heroin market’ *International Journal of Drug Policy* 15 407-417. (2004).

48 Christos Tsiolkas, *Loaded*. 54.

49 Ibid. 54.

50 Ibid. 89.

51 Kate Holden, *In My Skin*. 24.

52 Cameron Duff, ‘The drifting city: the role of affect and repair in the development of ‘Enabling Environments’ *International Journal of Drug Policy* 20: 3 202-8. (2009).

53 Sean Slavin. ‘Drugs, space, and sociality in a gay nightclub in Sydney’. *Journal of Contemporary Ethnography*, (2004 266).

54 Christos Tsiolkas, *Loaded*. 141.

his performance of his identity a young, non-feminised gay man, so he cannot properly communicate his feelings for George. This paradox is encapsulated in the lines:

I must appear strong for him to want me. He too wants the one hundred percent genuine wog fuck... [but] I want to tell him I adore him.⁵⁵

Ari's adherence to the code of sexual desire results in his enactment of "a wog boy, a straight boy"⁵⁶ in an effort to attract George, yet this very performance, and lack of tenderness and honesty, drives him away.

Holden depicts a different experience of drug taking, which nonetheless irrevocably intertwines drug use and sexuality with space, firstly as a metaphor for love, and later as a movement through physical spaces to exchange sexual services for drug money. She initially imagines drug use as a metaphoric space, a different 'world', and thus, she begins to use heroin to follow her boyfriend to "a strange place I didn't know".⁵⁷ She envisages her boyfriend and their drug using friends as "people who had crossed a river, who were going somewhere joyously while I stood alone on the other bank".⁵⁸ Holden's text explores the way that drugs became an intrinsic part of her romantic relationships, shaping their sensuality and sense of love. For example, one of her motivations for beginning to use heroin was the promise of potential pleasure, and she imagines her boyfriend "sinking backwards on a bed in the ecstasy of a smack rush, with an almost erotic charge of horror".⁵⁹ Further, the actual process of drug taking initially involves a heightened sense of intimacy:

with junk in our veins, we were the most beautiful people in the world...
the sex was fantastic... now we couldn't stop talking, touching...⁶⁰

Thus, Holden illustrates how heroin was originally a way of enhancing their shared sexuality, and describes how they declared their love "every time we slid the needle into the other's arm".⁶¹ Yet, with more frequent use, this dynamic changed as their relationship faltered: "when we scored, we were full of love... when we didn't, there was silence".⁶²

Thus, Holden increased her use of heroin, and eventually began to work as a prostitute to fund both her own drug habit, and that of her boyfriend,

55 Ibid. 126.

56 Ibid. 126.

57 Kate Holden, *In My Skin*. 17.

58 Ibid. 17.

59 Ibid. 18.

60 Ibid. 21.

61 Ibid. 25.

62 Ibid. 35.

highlighting the disturbingly prevalent link between sex work and drug use.⁶³ According to studies done by Wellisch *et al* this pattern of dyadic relationships is common in the heroin using community.⁶⁴ Of course, the link between selling sex and drug use goes both ways; indeed, while studies by Boyd *et al* in 2000 acknowledge the many women who become prostitutes to fund their drug use, they focus predominately on the high instance of female prostitutes who begin using drugs *after* becoming prostitutes.⁶⁵ Sex, for Holden, became “a currency”;⁶⁶ and once again, like Ari, the liminal spaces of the city were the areas in which both her sexual interactions and drug use took place. In their study of the connection between prostitution and illicit drug use Cusick and Martin highlight the significance of this “shared environmental space on the streets”.⁶⁷ Holden describes her search for discreet spaces, such as “cul-de-sacs, canal-sides, back lanes, the parking spots of empty office blocks”⁶⁸ and laneways, reiterating the notion that both illicit sexual interactions and drug use are pushed to the peripheries of society. Holden highlights the bleakness of working on the streets, the dangers of being arrested by the police, or molested by aggressive individuals, and the grimness of Melbourne winter weather at night. She also illustrates the isolation of her lifestyle, underlining the divide between the space of the streets and private dwellings, writing “I stood in the dark on the footpath and gazed in on bright living rooms”.⁶⁹

Holden, however, shows that by moving to a brothel she began to close this divide, as “compared to the streets...[the brothel] was comfort itself”.⁷⁰ She depicts the physical details of the brothels in great detail, noting the differences between these spaces and the street, and suggests that these differences altered the atmosphere and the behaviour of the people who move through them. Thus, privacy of the tasteful, comfortable lounge rooms and bedrooms, low lighting, the warmth, the quiet and the “clean ambience”⁷¹ created an environment of greater formality than the streets,⁷² and, therefore, she “felt more performative”.⁷³ Accordingly, the men also behaved differently, and they

63 C. Sterk, and K. Elifson, ‘Drug-Related Violence and Street Prostitution’ in *Drugs and Violence: Causes, Correlates, and Consequences*, a part of the National Institute on Drug Abuse Research Monograph Series. Number 103.(1990) 212.

64 D. Wellisch, and G. Gay, and R McEntree, ‘The Easy Rider Syndrome: A Pattern of Hetero- and Homosexual Relationships in a Heroin Addict Population’ *Family Process* Volume 9, Issue 4, pages 425-430 (December: 1970).

65 C. Boyd, A. Young, and A. Hubbell, ‘Prostitution, Drug Use, and Coping with Psychological Distress’ *Journal of Drug Issues* 30: 4, 789-800. (2000) 1.

66 Kate Holden, *In My Skin*. 104.

67 Linda, Cuisick, and Anthea Martin, ‘Vulnerability and involvement in drug use and sex work’. Home Office Research Study 268. 3. <http://rds.homeoffice.gov.uk/rds/pdfs04/hors268.pdf>

68 Kate Holden, *In My Skin*. 91.

69 Ibid. 2.

70 Ibid. 127.

71 Ibid. 121.

72 Ibid. 120

73 Ibid. 120.

shared a “stagnant intimacy”⁷⁴ that was absent in the streets. Other factors such as the presence of security, administration, and facilities for showering also change their behaviour. Indeed, the status of individuals, and the amount that they charge, depends largely on the space in which they work, even though they offer similar services whether they work on the streets, cheap motels or brothels.⁷⁵

Moreover, because in brothels female sexuality is classed as a commodity, the performance of femininity is a particularly important part of business; however, Holden illustrates how it became a point of professional and personal pride to be the best, the most attractive, the most skilled sex worker. She describes how she “constructed”⁷⁶ Lucy – her prostitute persona – with lingerie, dresses and makeup. She “became a creature of glittery eyes, brilliant red lips and smooth velvet”,⁷⁷ and saw the decadent dresses as “costumes, my armour: my becoming... I put them on and became a woman”.⁷⁸ While Holden suggests that her self-esteem grew in these spaces, throughout the narrative it is clear that her work serves as a means to an end: heroin. The portrayal of prostitution as positive is undermined by the stark line: “I would need all the girly wiles I’d disdained my entire life if I were to make the money I needed”,⁷⁹ and thus, readers are reminded of the commercial connection between drugs and sexuality. Both Holden and Tsiolkas portray characters who are very different, yet whose performances of sexuality are nevertheless intertwined with their drug use, and the varying spaces they inhabit.

Section Four: Escape

This section will explore the notion of drugs and ‘escape’, firstly by examining Ari’s attempts to use drugs to escape the dreariness and alienation of his life, and secondly in terms of physically moving to escape drug addiction, as Kate does. Throughout *Loaded*, Ari rejects his home, his culture and his parents, and longs to “be somewhere else, out of this city, out of this country, out of this body and out of this life”.⁸⁰ While in the East of Melbourne, Ari notices the suburban landscape:

74 Ibid. 120.

75 C. Sterk, and K. Elifson, . op. cit. 208.

76 Kate Holden, *In My Skin*. 154.

77 Ibid. 197.

78 Ibid. 285.

79 Ibid. 131.

80 Christos Tsiolkas, *Loaded*, 19.

every street around here looks like every other street, every stranger you meet walking along looks like the same stranger you passed blocks ago... East, west, south, north, the city of Melbourne blurs into itself...⁸¹

He uses drugs to keep him “quiet... and relatively content”,⁸² and the general description of why some individuals use drugs seems to fit Ari exactly: “some young people turn to drugs as a means of dulling, or escaping from, awareness of their lack of ability to find meaningful ways to participate in society”.⁸³ Thus, Ari tries to use drugs to transcend, rather than fit into the landscape that surrounds him, and this is illustrated by his joy as he drives with his friends into the city “grinning from ear to ear... watching the suburbs drop away”.⁸⁴ Melechi writes that this use of drugs and partying as an escape is prevalent, describing the tendency of ‘clubbing culture’ to attempt to disappear into the dark spaces of cities, the areas which both embody and “represent a fantasy of liberation, an escape from identity. A place where nobody is, but everybody belongs”.⁸⁵

Yet, even being in the city, using drugs, only offers him momentary freedom, and so he is always on the move, and refers to himself as a runner, “running away from a thousand and one things that people say you have to be”.⁸⁶ As Schwarz notes, this quote demonstrates how Ari connects the spatial performance of the body, his movement across the city, and his identity.⁸⁷ Moreover, Tsiolkas depicts Ari aspiring to escape physically in two ways, firstly, Ari speaks vaguely of going to Greece, and “meeting new people, getting excited about unfamiliar sights, sounds, and smells... a couple of years away from the family and all their hang-ups and expectations”.⁸⁸ Yet, while Ari dreams of “new places, new faces, new lives possible to live at the other side of the world”,⁸⁹ the grasping protectiveness of his family, and his refusal to get a job, keep him stationary. The second way in which he aspires to permanently escape is through loving George, and this too is imagined as a physical movement into another space, separate from the suburbs which he detests so much. He dreams of “a little house by the sea with George and me in it”,⁹⁰ yet he refuses to tell George that he loves him, and thus, this avenue is also abandoned. On the first page of

81 Ibid. 37-38.

82 Ibid. 146.

83 Mark Peyrot, ‘Institutional and Organizational Dynamics in Community-Based Drug Abuse Treatment’. *Social Problems* Vol. 38. No. 1 20-33. (Feb 1991) on page 20-21 cites Kolton, Doshier, and Dwarshuis (1972: 335).

84 Christos Tsiolkas, *Loaded*. 48.

85 Fiona Measham. op. cit.

86 Christos Tsiolkas, *Loaded*. 149.

87 Anja Schwarz, ‘Mapping (Un)Australian Identities: ‘Territorial Disputes’ in Christos Tsiolkas’ *Loaded*’ pages 13-2 in Bartels, Anke, and Wiemann, Dirk. (eds) *Global Fragments: (dis)orientation in the new world order* (New York, 2007) 20.

88 Christos Tsiolkas, *Loaded*. 27.

89 Ibid. 13.

90 Ibid. 146.

Loaded, Ari alerts the reader to the fact that he is staying at his brother's share house by saying "it's not my place".⁹¹ By the end of the novel, Tsiolkas leaves readers doubtful whether or not Ari will ever escape this alienation to find a place of his own.

Holden writes of a different kind of escape: a physical move into a new space to escape from drug use back into 'normal' life. In an interview, she spoke of the notion of "doing a geographical".⁹² This concept, according to Holden, was an important one in the drug using community, and centres on the idea that drug use is tied to physical space, and so, if one can get out of the drug 'scene', then they will be able to stop using drugs more easily. Cusick and Martin reiterate this idea, but expand it to include sex work as well, and support it with empirical evidence. Thus, they argue that

Successful treatment for drug use in the case of these sex workers was strongly linked to residential separation from the drug selling markets that share pavement space with sex markets.⁹³

This reflects the way in which individuals can be aware of their 'associative learning' and connection between space and drug use. Holden exemplifies this by asserting that she did not dwell on drugs while at work, however "once home, the idea was automatic",⁹⁴ thereby highlighting how she had unintentionally conditioned herself to associate drug use with a particular spatial context. Further, when she attempts to break her heroin habit, Holden goes to a rehabilitation clinic, which is, importantly, "sealed from the outside world".⁹⁵ She describes in some depth her behaviour at the centre, highlighting her eventual happiness, energy and self-confidence, and noting "how different we felt inside here",⁹⁶ thereby stressing the perception of a dichotomy between the secure, drug-free 'inside', and the outside world of the city. This is only underlined when she goes immediately to her dealer after leaving the centre. "Out of the safe environment," Holden writes, "I felt like I'd walked out of a dream",⁹⁷ and this illustrates how entrenched her patterns of behaviour in the city were. Similarly, when she travels to the countryside, she can stop using heroin, however, once she returns, she begins using again.

91 Ibid. 2.

92 Interview with Kate Holden. Radio National 9:30am 'Life Matters' 11th October 2010.

93 Linda Cusick, and Anthea Martin. op. cit. page vii. <http://rds.homeoffice.gov.uk/rds/pdfs04/hors268.pdf>

94 Kate Holden, *In My Skin*. 245.

95 Ibid. 48.

96 Kate Holden, *In My Skin*. 245.

97 Ibid. 55.

This romanticisation of the country as a drug-free zone of health and simplicity (in stark opposition to the city) is echoed by Chalmers, who argued that it is impossible “not to think of heroin and the needle in terms of the city... in connection with the intensification of urbanity”.⁹⁸

Similarly, Holden twice returns to her parents’ house to try and escape her addiction, in a move which was simultaneously symbolic, and practical. This is encapsulated in the line “the flat was too full of memories, and Jake [her dealer] was just across the road”.⁹⁹ Thus, Holden highlights the seductive attraction of the knowledge that drugs are easily available in certain places, and also the power of the memory of past pleasures. Further:

away from the claustrophobia of my little house... I felt removed from my recent history... The grimness of housing commission flats and dull drugs seemed so very far away...¹⁰⁰

Her parents’ house is, significantly, her childhood home, and therefore evocative of her previous, non drug-using identity and past behaviour. She again imagines space as both physical, and metaphorical, writing that “it was like a return to one’s own country to be at my parents’”.¹⁰¹ While she does use heroin at her family home, she managed to mostly maintain her performance of the “nice polite, middle-class girl living with her parents in an old haven of innocence”.¹⁰² Yet, when she left the security of her family home, she was conscious of a change in her behaviour, thus, “in the city, I was a swaggering junkie in dark streets”.¹⁰³ It is not until she combines living at her parents’ with the goal of travelling to Europe that Holden manages to finish her methadone program and escape her addiction. By idealising her move overseas as a “glowing portal on the horizon ahead”,¹⁰⁴ and leaving the drug-saturated city, Kate manages to escape her destructive heroin use, even though, when she returns to St Kilda, “the place is a palimpsest of memories”¹⁰⁵ and temptations for her, even now.

Conclusion

This essay has argued that the gratification associated with illicit drug use includes those pleasures connected to the space in which the drugs are

98 Nicole Vitellone, ‘Just another night in the shooting gallery?: the syringe, space, and affect.’ *Environment and Planning D: Society and Space* Volume 28 pages 867-880. (2009).

99 Kate Holden, *In My Skin*. 34.

100 Ibid. 253.

101 Kate Holden, *In My Skin*. 34.

102 Ibid. 73.

103 Ibid. 37.

104 Ibid. 268.

105 Ibid. 281.

consumed. While, according to Vitellone, this method of understanding drug use in connection with its spatial context is a relatively new one,¹⁰⁶ context is clearly a vital part of drug use, and this is reflected by *Loaded* and *In My Skin*. Drugs are not consumed in a vacuum, and the consumption of drugs is inherently linked to physical context due to its inherently corporeal nature. Hence, this essay has explored the pleasures associated with spatial context and drugs, examining theories of associative learning, and affective and intensive spaces. Further, the way that performances of sexuality are linked to drug use and space have been outlined, by exploring the fictionalised experiences of Kate and Ari. These characters have been shown to embody hopes for escape, though Ari is apparently unable to leave the city and its repressive socio-cultural notions of manhood. Conversely, Kate manages to escape her dependency, but temptation remains in the spaces in which she once consumed drugs.

106 Nicole Vitellone, op. cit. 869.

Speech is Silver, Silence is Golden: The Cultural Importance of Silence in Japan

Sally Jones

Abstract

In Japan, there exists a strange dichotomy. On the one hand, it is a noisy place: the constant announcements in the train stations and shopping centres, the loud cries of shopkeepers greeting customers to their stores, the hustle and bustle of the busy streets. On the other hand, the Japanese value silence. It might seem odd that silence is valued in a place where such a cacophony exists, but silence in everyday interaction is a vital form of non-verbal communication for the Japanese. This is because silence (like speech) conveys emotions, shows respect, creates personal distance, avoids conflict and even negates the meaning of verbal messages. The purpose of this paper is to examine silence as a communicative act in a cultural context. Four culturally salient and highly valued dimensions of Japanese silence will be examined, as well as the role of silence in intercultural communication between the Japanese and other cultures. In examining silence, the author suggests that silence is merely more than just a void in communication, but it is also a window into Japan's underlying cultural beliefs and values.

Introduction

In a 2007 paper on the cultural importance of silence, Takie Lebra identified four dimensions of Japanese silence - truthfulness, social discretion, embarrassment and defiance.¹ This paper will analyse silence through these dimensions. Notably, due to its ambiguous nature, cultural outsiders can easily misinterpret silence. Thus, this paper will also seek to examine the source of this misinterpretation, which lies primarily in the linguistic and cultural differences between cultures. An understanding of these differences is key to effective cross-cultural communication.

¹ Lebra, Takie. "The Cultural Significance of Silence in Japanese Communication". Ed. Takie Lebra. *Identity, gender, and status in Japan: collected papers of Takie Lebra*. Folkestone, Kent, U.K.: Global Oriental, 2007.

Four Dimensions of Japanese Silence

Truthfulness

Historically in Japan, silence has been associated with truthfulness. This belief originated in Zen Buddhism, where the spoken word was discouraged and silence was encouraged because it was believed that enlightenment could not be attained by talking about it.² Furthermore, Buddhist chants enabled people to realise the emptiness of words. This belief is perhaps best exemplified by the concept of *ma* (間). One of the Japanese words for silence, *chinmoku*, has a strong connection with *ma*.³ In both traditional and modern-day Japanese music, *ma* that refers to “the 'space' or silence between notes... this notion of space is not just about musical timing, but also concerns the idea that music is both the notes played and the silence in between”.⁴

Moreover, Japanese proverbs, expressions and poetry warn against the use of the spoken word. The proverbs *kiji mo nakazuba utaremai*⁵ (“silence keeps one safe”) and *mono ieba kuchibiru samushi aki no kaze*⁶ (“it is better to leave many things unsaid”) highlight this belief. These proverbs highlight the Japanese belief that verbal expression cannot be trusted and has consequences for the speaker. In a modern day context, this dimension of silence is relevant in politics. Even with the introduction of speech-giving in the late nineteenth century, Japanese politicians are still judged by virtues such as silence rather than their oratory skills, where the contrary is mostly true in the Anglo-West.⁷

On the intra-personal level, truthfulness is related to the idea of a person's inner (private) and outer (public) realms. The outer realm of a person concerns one's outer body, which includes one's speech organs and verbal expression, while silence is associated with the inner realm, which the Japanese equate with truthfulness.⁸ This socio-psychological idea is central to the Japanese mind-set. Unlike the English language, the Japanese word for 'mind' does not

2 Wright, Dale S. *Philosophical Meditations on Zen Buddhism*. Cambridge: Cambridge University Press, 2000, p.94.

3 Hasegawa, Tomohiro, and William B. Gudykunst. *Silence in Japan and the United States*. Journal of Cross-Cultural Psychology 1998 29: 668-682, p.669.

4 Deal, William E. *Handbook to life in medieval and early modern Japan*. New York: Infobase Publishing, 2006, p.268.

5 *Kiji mo nakazuba utaremai* (雉も鳴かずば打たれまい): literally translated, “If the pheasant did not sing, it would not have been attacked”.

6 *Mono ieba kuchibiru samushi aki no kaze* (もの言えば唇寒し/秋の風): literally translated, “If something is said, the lips become cold like the autumn wind”. This haiku was written by Edo poet, Bashō Matsuo.

7 Lebra 2007 op. cit., p.117.

8 Maynard, Senko K. *Japanese communication: language and thought in context*. Honolulu: University of Hawaii Press, 1997, p.154.

invoke notions such as emotion and perception.⁹ Instead, concepts such as belly (*hara*) and heart (*kokoro*) are used to describe this.¹⁰ *Kokoro* (one's true feelings) originate from within the inner realm and silence is hence associated with the truthful inner realm. The Japanese believe in a lower amount of verbal expressiveness due to the wide-held belief that the inner self should be hidden as much as possible.¹¹

Social Discretion

This dimension of silence refers to the use of silence to improve one's social standing. A prime example is a person's politeness. In 1978, Brown and Levinson formulated a socio-psychological theory called 'Politeness Theory'.¹² This hypothesis dictated that every individual has a public self-image, referred to as 'face'.¹³ There are two types of face: 'negative face' is the desire to act freely whereas 'positive face' is the desire to be liked by other people.¹⁴ This commutated in the idea of 'Face-Threatening Acts' (hereafter FTA); any (verbal) act that potentially threatens either the speaker's or the addressee's face.¹⁵ Politeness hence involves the maintenance of one's face and the avoidance of harming the addressee's face.

Silence is one FTA technique utilised by the Japanese because there is always a threat to an individual's positive or negative face through the verbal interaction between an addressee and a speaker. However, the degree of FTA is determined by a number of factors, including social distance and the manner of the FTA.¹⁶ Consequently, social discretion through silence is an example of a "don't do the FTA" strategy. This strategy involves maintaining the positive face of the addressee through the speaker's avoidance of disagreement with the addressee.¹⁷ For instance, students may deny the teacher's request to answer a question in class. A possible explanation is the "don't do the FTA strategy" whereby students avoid threatening the teacher's positive face or losing face themselves by not answering questions. Thus, silence in this case is the avoidance of doing

9 Johnson M.D., Frank A. *Dependency and Japanese Socialization: Psychoanalytic and Anthropological Investigations into Amai*. New York, London: New York University Press, 1993, p.227.

10 *Ibid.*

11 Barlund, Dean C. *Public and Private Self in Japan and the United States: Communicative Styles of Two Cultures*. Tokyo: The Simul Press, 1975, p.35.

12 Brown, Penelope, and Stephen C. Levinson. *Politeness: some universals in language usage*. Cambridge, New York: Cambridge University Press, 1987.

13 Sifianou, Maria. "Silence and politeness". Ed. Jaworski, Adam. *Silence: interdisciplinary perspectives*. Berlin, New York: Mouton de Gruyter, 1997, p.66.

14 Brown and Levinson *op. cit.*, p.62.

15 Sifianou *op. cit.*, p.66.

16 Sifianou *op. cit.*, p.68.

17 Brown and Levinson *op. cit.*, p.72.

a certain communicative act. In contrast to the association between truthfulness and silence, the speaker hides their misgivings and disagreements from the hearer in polite and socially acceptable silence.

Embarrassment

In Japan, silence is an indicator of the degree of intimacy in private relationships. In particular, silence in this case is to provide a rapport between husband and wife. It is expected that the husband will exhibit some emotional distance with his spouse through the use of silence.¹⁸ This is due in part to the belief in Japan that silence is characteristically associated with men.¹⁹ Despite the apparent emotional distance between husband and wife, this relationship is instead judged on whether the couple can understand one another without words. The verbal communication of their affection is considered to be highly embarrassing so nonverbal communication of this affection is preferred by couples.²⁰ This is in part due to a Japanese ideal called *ittai*, which is the belief that husband and wife are one entity.²¹ In other words, it is culturally expected that husband-wife relationships place important emphasis on non-verbal communication. This includes the Zen Buddhist concepts of *ishin-denshin* (communication through telepathy) and *enryo-sasshi* (intuitive sensitivity).²² Moreover, this function of silence is not limited to only the private relationship between husband and wife, but is also an indicator of the rapport in any private relationship, including business associates and close friends.²³

The role of non-verbal communication in relationships highlights the significance of the uniquely Japanese concept called *haragei*. Originating as a theatrical technique, the term *haragei* (literally “belly art” or “belly performance”) is implicit communication or mutual understanding through non-verbal means (such as *ishin denshin* and *enryo-sasshi*).²⁴ It is widely believed that the belly (located in the inner realm) is the source of a person's truthfulness. Hence

18 Lebra, Takie. *Japanese Women: Constraint and Fulfillment*. Honolulu: University of Hawaii Press, 1984a, p.125.

19 *Ibid.*, p.126.

20 Lebra 2007 *op cit.*, p.119.

21 Lebra 1984a *op cit.*, p.125.

22 Jackson II, Ronald L. *Encyclopedia of Identity*. California, London, New Delhi: SAGE Publications, 2010, p.251.

23 Doi, Takei. “The Japanese Psyche: Myth and Reality”. Eds. Strozier, Charles B. and Michae, Flynn. *Trauma and self*. London: Rowman and Littlefield Publishers, Inc., 1996, p.200.

24 Davies, Roger J., and Osamu Ikeno, eds. *The Japanese mind: understanding contemporary Japanese culture*. Boston: Tuttle Pub., 2002, p.103.

only through non-verbal communication such as *haragei* can individuals truly understand one another.²⁵ If one understands how to utilise *haragei*, silence becomes a non-verbal means of communicating one's true emotions successfully.

Defiance

In contrast to the other dimensions that help to maintain positive communication between individuals, silence in this instance is used instead to convey defiance and estrangement. To identify the dimension of silence being used, *sasshi* (listener's ability to guess what a person is inferring) is considered to be an important paralinguistic skill for the Japanese.²⁶ Furthermore, defiant silence is often used in conjunction with other non-verbal communication, such as sulking, prolonged eye contact and facial expressions.²⁷ Alongside these non-verbal gestures, if a speaker remains silent for a certain amount of time, this may indicate to the listener that the speaker is being defiant.²⁸ Granting this, silence is still highly ambiguous because silence can have various meanings depending on context. For instance, in a school classroom setting, a student's refusal to answer a teacher's question can be considered as an act of defiance.²⁹ However, this might also be attributed to: politeness towards the teacher, the inability to answer a question and the negative connotations associated with expressing one's opinion. Additionally, a wife may utilise defiant silence if her husband committed adultery,³⁰ but it may also indicate "feminine modesty, compliance, patience, resentment, unforgiveness".³¹ For those unaccustomed to this highly contextualised silence (notably Anglo-Westerners), this may cause many miscommunications due to the complex nature of silence in Japan.

Silence in Intercultural Communication

This section will analyse the use of silence in intercultural communication, with particular emphasis on the perceived roles of silence in Japanese and American

25 Yamada, Haru, and Deborah Tannen. *Different games, different rules: why Americans and Japanese misunderstand each other*. New York, Oxford: Oxford University Press, 1997, p.17.

26 Nishida, Tsukasa. "Communication in Personal Relationships in Japan". Eds. Gudykunst, William B., Stella Ting-Toomey and Tsukasa Nishida. *Communication in personal relationships across cultures*. California, London, New Delhi: Sage Publications, Inc., 1996. p. 114.

27 Lebra, Takie. "Nonconfrontational Strategies for Management of Interpersonal Conflicts". Eds. Krauss, Ellis S., Thomas P. Rohlen and Patricia G. Steinhoff. *Conflict in Japan*. Honolulu: University of Hawaii Press, 1984b, p.43.

28 Nishida *op. cit.*, p.115.

29 Sifianou *op. cit.*, p.68.

30 Lebra 2007 *op. cit.*, p.120.

31 Lebra 2007 *op. cit.*, p.121.

cultures. An analysis was done on Japanese and American intercultural communication, and not Japanese and Australian, because there has been significantly more academic work done in the former rather than the latter.

Cultural Stereotyping

Our understanding of silence in the intercultural communication between Japanese and American English speakers has been based primarily on subjective observations rather than through empirical means. Consequently, much of the study in this area may unnecessarily reinforce cultural stereotypes of another culture, thus creating dichotomies that may not necessarily exist.³² In the instance of silence in intercultural communication, Japanese speakers are often stereotyped as being 'non-verbal' juxtaposed with the 'talkative' American stereotype. Such an assumption that people within a culture are homogeneous rather than heterogeneous is problematic. A person's attitude to silence is determined by their own internal linguistic and cultural belief system, so their perception of silence and meanings attached to silence can defy cultural norms. For instance, the perception that Japanese speakers have a preference for silence is not always true - Japanese speakers can be quite talkative. Additionally, there is variation in attitudes regarding verbal interaction between the United States' western and eastern regions, which are considered to be more talkative and less tolerant of silence, and less talkative and more tolerant of silence respectively (naturally, there are also variations in how people use silence in these regions as well).³³ Stereotypes thus tend to neglect the individualistic and regional aspects within a culture.

It is important to understand the reasons for the linguistic differences in cultures that cause these perceived differences. It is also important to realise that there are cultural differences in how silence is utilised because it can cause miscommunication between parties if silence is wrongly interpreted. For instance, in an Australian university seminar setting, Japanese students may utilise silence similarly to the 'social discretion' aspect of silence mentioned previously in order to be polite.³⁴ However, in an English-speaking environment, the Japanese speaker's use of silence may be judged unfavourably by their fellow peers and lecturers, miscommunicated as an unwillingness to participate.³⁵ Hence, it is important to understand that there are different perceptions of silence between cultures, which need to be known so that such miscommunication is avoided.

32 Miller, Laura. *Japanese and American indirectness*. Journal of Asian Pacific Communication 1994 5(1-2): 37-55, p.52.

33 Nakane, Ikuko. *Silence in intercultural communication: perceptions and performance*. Philadelphia: J. Benjamins Pub. Co., 2007, p.53.

34 Nakane, Ikuko. *Silence and politeness in intercultural communication in university seminars*. Journal of Pragmatics 2006 38, p.1828.

35 *Ibid.*, p.1830.

High- and Low-Context Cultures

Differences between the Japanese and American cultural interpretations of silence can be in part explained by Hall's concept of high- and low-context communication:

A high-context (HC) communication or message is one in which most of the information is either in the physical context or internalized in the person, while very little is in the coded, explicit, transmitted part of the message. A low-context (LC) communication is just the opposite; i.e., the mass of the information is vested in the explicit code.³⁶

The United States has a primarily low-context communication culture whereas the Japanese have a primarily high-context communication culture. Low-context cultures place emphasis on active verbal interaction in interpersonal relationships because low-context cultures lack group consciousness and tend to only encode meaning in verbal utterances.³⁷ Thus, silence is not an important communication act for American English speakers. On the other hand, Japanese culture is a high-context communication culture that puts meaning into silence, which is primarily shown through the social contexts regarding Lebra's four dimensions of silence. High-context cultures tend to encode messages in the context of the verbal utterance (including the non-verbal communication) rather than the verbal utterances themselves.³⁸ However, in typical high-context cultures such as Japan's, silence can have ambiguous meanings, which is evident by the positive and negative emotions associated with the different dimensions of silence.

The concept of high- and low-context communication can be interpreted in terms of individualism and collectivism. According to Nishida, "individualist cultures emphasize the goals of the individual, whereas collectivist cultures stress group goals over individual goals".³⁹ In this sense, Japan is a collectivist culture whereas America is an individualist culture.⁴⁰ This is an important distinction. In an individualist society, there is a need to be accepted by others. Whereas in a collectivist society such as Japan's that has active group consciousness, there is no such need for acceptance by others.⁴¹ The Japanese expression *deru kui wa utareru*⁴² ("A tall tree catches much wind") best exemplifies this

36 Hall, Edward Twitchell. *Beyond Culture*. New York: Anchor Press, 1976, p.91.

37 Hall, Edward Twitchell, and Mildred Reed Hall. *Hidden differences: doing business with the Japanese*. Garden City, N.Y: Anchor Press, Doubleday, 1987, p.8.

38 Hall *op. cit.*, p.101.

39 Nishida *op. cit.*, p.108.

40 Nishida *op. cit.*, p.109.

41 Gudykunst, William B., and Tsukasa Nishida. *Bridging Japanese/North American differences*. California, London, New Delhi: Sage Publications, Inc., 1994, p.51.

42 *deru kui wa utareru* (出る杭は打たれる): literally translated, "the stake that sticks up gets hammered down".

because it enforces the ideal that no-one should stand out from the crowd. Due to the collective group consciousness, the Japanese seek to avoid situations that involve anger, disagreement and negative emotions that could harm the group consciousness.⁴³ Silence is thus utilised as a way of avoiding this. Consequently, through silence, one can reveal the structure of society, and the relationship between group consciousness and silence.

One needs to be aware that the characteristics of individualist and collectivist societies are not always applicable on the individual level.⁴⁴ Moreover, in recent times, the younger generations of Japanese society have become more individualist than previous generations.⁴⁵ This perhaps might be a signal of the growing influence of American culture in Japan. More appropriately, this might reveal how the Japanese are accommodating Western concepts such as individualism in both their culture and communication.

Nonetheless, the concept of low- and high-context cultures enables one to understand culture through silence.

Private and Public Relationships

Though high- and low-context communication it is understood that Japanese and American English speakers may use silence differently, there are also instances where these speakers use silence similarly. This is evident through the difference between public and private relationships. According to Gudykunst and Hasegawa, Americans use silence in a similar manner for both private and public relationships because “there are not major differences in Americans' communication with ingroup and outgroup members”.⁴⁶ Whereas for the Japanese, the behaviour of people outside of their in-group is difficult to assess and thus highly face-threatening.⁴⁷ The risk of FTA is greater, so the Japanese treat silence more negatively with members of the out-group than with members of the in-group.⁴⁸ This idea is related to the Japanese concept of '*uchi-soto*', which emphasises that individuals should treat members of the in-group (*uchi*) and out-groups (*soto*) differently.⁴⁹ This is similar to the manner in which the Americans

43 Hasegawa and Gudykunst *op. cit.*, p.670.

44 Gudykunst, William B., Yuko Matsumoto, Stella Ting-Toomey, Tsukasa Nishida, Kim Kwangsu and Sam Heyman. *The Influence of Cultural Individualism-Collectivism, Self Construals, and Individual Values on Communication Styles Across Cultures*. Human Communication Research 1996 22: 510-543, p.514.

45 Dohanue, Ray T. *Japanese culture and communication: critical cultural analysis*. Maryland: University Press of America, 1998, p.12.

46 Hasegawa and Gudykunst *op. cit.*, p.670.

47 Ibid.

48 Barnlund *op. cit.*, p.117-118.

49 Nakane 2007 *op. cit.*, p.53.

utilise silence - Americans tend to reveal more of their private, inner self to members of their in-group rather than strangers.^{50,51} Hence, interculturally, silence is used as a communication act to limit this threat in this instance.

Conclusion

Silence is a complex phenomenon. The truthfulness traditionally associated with silence in Japan is not always reflected in the other dimensions of silence. Due to its indirectness, silence can reveal one's innermost thoughts but can also hide them, and express love but also express anger as well. This means that silence can still be highly ambiguous. Furthermore, a significant difference exists between the cultural norms regarding silence in Japanese and Anglo-Western cultures, but learning to understand such differences will prevent cultural misunderstandings that could damage Japanese–Anglo-Western relations. The more one tries to understand the culture of the other, the more there will be an increased mutual awareness. The consequences are positive: better understanding leads to better communication and in an intercultural setting, more effective business dealings and learning in the classroom. More importantly, silence can provide a better understanding of not just Japanese culture but also human (verbal and non-verbal) communication and interaction as well. Not only does silence have a variety of meanings and functions, silence was shown to be a form of communication and not a lack of it. Therefore, the adage 'speech is silver, silence is golden' holds true for the Japanese.

Acknowledgments

I would like to sincerely thank Dr. Peter Hendriks, of the School of Culture, History & Language, Australian National University, and the anonymous reviewer for their valuable comments on this paper.

References

Barlund, Dean C. *Public and Private Self in Japan and the United States: Communicative Styles of Two Cultures*. Tokyo: The Simul Press, 1975.

50 Hasegawa and Gudykunst *op. cit.*, p.670.

51 Barlund *op. cit.*, p.34–35.

- Brown, Penelope, and Stephen C. Levinson. *Politeness: some universals in language usage*. Cambridge, New York: Cambridge University Press, 1987.
- Davies, Roger J., and Osamu Ikeno, ed. *The Japanese mind: understanding contemporary Japanese culture*. Boston: Tuttle Pub., 2002.
- Deal, William E. *Handbook to life in medieval and early modern Japan*. New York: Infobase Publishing, 2006.
- Dohanue, Ray T. *Japanese culture and communication: critical cultural analysis*. Maryland: University Press of America, 1998.
- Doi, Takei. "The Japanese Psyche: Myth and Reality". Eds. Strozier, Charles B. and Michael Flynn. *Trauma and self*. London: Rowman and Littlefield Publishers, Inc., 1996.
- Gudykunst, William B., and Tsukasa Nishida. *Bridging Japanese/North American differences*. California, London, New Delhi: Sage Publications, Inc., 1994.
- Gudykunst, William B., Yuko Matsumoto, Stella Ting-Toomey, Tsukasa Nishida, Kim Kwangsu and Sam Heyman. The Influence of Cultural Individualism-Collectivism, Self Construals, and Individual Values on Communication Styles Across Cultures. *Human Communication Research* 1996 22: 510-543.
- Hall, Edward Twitchell, and Mildred Reed Hall. *Hidden differences: doing business with the Japanese*. Garden City, N.Y: Anchor Press, Doubleday, 1987.
- Hall, Edward Twitchell. *Beyond Culture*. New York: Anchor Press, 1976.
- Hasegawa, Tomohiro, and William B. Gudykunst. Silence in Japan and the United States. *Journal of Cross-Cultural Psychology* 1998 29: 668-682.
- Jackson II, Ronald L. *Encyclopedia of Identity*. California, London, New Delhi: SAGE Publications, 2010.
- Johnson M.D., Frank A. *Dependency and Japanese Socialization: Psychoanalytic and Anthropological Investigations into Amae*. New York and London: New York University Press, 1993.
- Lebra, Takie. "The Cultural Significance of Silence in Japanese Communication". Ed. Takie Lebra. *Identity, gender, and status in Japan: collected papers of Takie Lebra*. Folkestone, Kent, U.K.: Global Oriental, 2007.
- Lebra, Takie. *Japanese Women: Constraint and Fulfillment*. Honolulu: University of Hawaii Press, 1984a.

- Lebra, Takie. "Nonconfrontational Strategies for Management of Interpersonal Conflicts". Eds. Krauss, Ellis S., Thomas P. Rohlen and Patricia G. Steinhoff. *Conflict in Japan*. Honolulu: University of Hawaii Press, 1984b.
- Maynard, Senko K. *Japanese communication: language and thought in context*. Honolulu: University of Hawaii Press, 1997.
- Miller, Laura. Japanese and American indirectness. *Journal of Asian Pacific Communication* 1994 5(1-2): 37-55.
- Nakane, Ikuko. *Silence in intercultural communication: perceptions and performance*. Philadelphia: J. Benjamins Pub. Co., 2007.
- Nakane, Ikuko. Silence and politeness in intercultural communication in university seminars. *Journal of Pragmatics* 2006 38: 1811–1835.
- Nishida, Tsukasa. "Communication in Personal Relationships in Japan". Eds. Gudykunst, William B., Stella Ting-Toomey and Tsukasa Nishida. *Communication in personal relationships across cultures*. California, London, New Delhi: Sage Publications, Inc., 1996.
- Sifianou, Maria. "Silence and politeness". Ed. Jaworski, Adam. *Silence: interdisciplinary perspectives*. Berlin, New York: Mouton de Gruyter, 1997.
- Wright, Dale S. *Philosophical Meditations on Zen Buddhism*. University Press: Cambridge, 2000.
- Yamada, Haru, and Deborah Tannen. *Different games, different rules: why Americans and Japanese misunderstand each other*. New York, Oxford: Oxford University Press, 1997.

Why Cooperate? The Place of Strong Reciprocity in the Evolution of Human Altruism

Zid Mancenido

Abstract

What makes humans cooperate is a core question of biology and anthropology. The question is no doubt complex but answers have been historically quite simple, revolving on singular categories of kinship or reciprocity. Recent findings in experimental economics have proposed a new answer: strong reciprocity, an empirically proven universal behavioural pattern that can account for the evolutionary development of human altruism. These proposals however have conceived it as quite a simple behavioural pattern rather than a complex suite of interrelated coevolved behaviours. This article critically examines the validity of strong reciprocity by considering the research methodology from which it developed and its component parts: altruistic punishment, conformist transition, third-party punishment, antisocial punishment, prosocial emotions, memory and trust, and life history and socialization. It argues that to answer the difficult question of cooperation, evolutionary models must be considered not just as coherent wholes but also disaggregated, with an attention to its coevolving component behaviours.

Introduction

It is generally accepted that the history of human evolution was complex and that human altruism has played a significant part in our ongoing survival as a species. There have been numerous models attempting to explain altruism (see Fehr & Fischbacher, 2003; Humphrey, 1997). This paper deals with a specific, relatively new evolutionary model of human cooperation termed *strong reciprocity*.

Four features define strong reciprocity. First, agents are predisposed towards cooperation. Second, agents will continue or increase their cooperation with those who cooperate with them. Third, agents will not cooperate with and will take extra costs to punish those who do not cooperate. And last, agents have a

tendency towards third-party sanctions against and punishment of those who do not cooperate. Simply put, it is a behaviour that rewards those who cooperate and abide by social norms and punishes those who do not. The costs associated with rewarding and punishing are borne by strong reciprocators even if this decreases their fitness relative to the group (Boyd, et al., 2003; Carpenter, et al., 2009; Bowles & Gintis, 2006; Fehr, Fischbacher, & Gächter, 2002; Fehr & Fischbacher, 2003, 2004; Gintis, 2000a; Gintis, et al., 2003, 2008).

The problem with current models of strong reciprocity is that they treat these four different features and their proximate determinants as a singular, relatively simple trait developed within a complex environment. This is done to differentiate it from and suggest its comparative advantage against other proposed evolutionary models of human cooperation such as kin altruism—where agents cooperate based on biological relations; reciprocal altruism—where agents cooperate because others cooperate with them; and by-product mutualism; where all agents benefit by contributing towards a public good. But strong reciprocity is neither simple nor singular: the behavioural ‘rules’ that undergird it aren’t just “ $rB - C > 0$ ” or “if you will help me, I will help you”. Rather, they are contingent on a complex of interrelated behaviours that are contingent on context-specific social norms and other-regarding preferences.

The following is an attempt to disaggregate the component parts of strong reciprocity in order to move forward in this debate over the evolutionary development of human cooperation. I begin with an assessment of the experimental economics games from which this evolutionary theory developed and the cultural variation amongst these results. I then turn to the component parts: looking at altruistic punishment, conformist transition, third-party punishment, antisocial punishment, prosocial emotions, memory and trust, and life history and socialization.

This paper is a response to current evolutionary models of strong reciprocity that speculate it could have evolved: from ‘a rather trivial modification of fitness-enhancing behaviours’ like kin altruism modified to include non-kin and/or reciprocal altruism modified to ignore future payoffs (Bowles and Gintis, 2004); or that it was only selected for through cultural group selection (Boyd, et al., 2003; Fehr & Henrich, 2004). By considering how the manifold cognitive and cultural elements that make up this uniquely human behaviour were developed and operate both individually and interactively, we can better understand that it was actually a complex of interrelated selection pressures that led to its evolutionary significance.

Experimental Economics Games

The biggest problem with models of strong reciprocity is that they are primarily derived from the games of experimental economics in which research participants are subjected to interactions and conditions that do not resemble hominin evolutionary history. Admittedly, these experimental economics games were not developed with evolutionary models in mind; they were produced to test specific behavioural patterns cross-culturally. Therefore, it is problematic to extrapolate evolutionary models from these findings without sufficient critical revision of research intent and design.

To explain, two commonly played economics games from which strong reciprocity has been derived are the Ultimatum Game and Public Goods Games. In the former, two players are allotted a sum of money. The first player offers a portion of the total sum to a second person. The second person can either accept or reject the first player's offer. If the second person accepts, she receives the amount offered and the proposer receives the remainder. If the responder rejects, then neither player receives anything. Public Goods Games are a little more complex in design but the premise is the same: interactions are based on resource allocation and cooperation between multiple people, each who have the opportunity to accept or reject cooperating in a group. Experiments are then modified slightly to test for particular variables and behavioural cues, including the addition of punishment, anonymity, repetition, and other stimulating factors. In brief, findings from experimental economics games such as these have shown that the picture of humans as rational maximizers is wrong; in no society has there been an Ultimatum Game with a mean offer near 0% (Bowles & Gintis, 2006; Fehr & Fischbacher, 2003; Gintis, 2000b; Henrich, et al., 2004, 2005).

I cannot dispute these findings but I have two serious methodological concerns. First, as Price (2008) argues, 'when subjects play economic games, their psychological adaptations for social behaviour are being deployed in environments that are radically different from those in which they evolved'. These highly structured experiments attempt to draw out universal behaviours by eliminating context. But evolutionary history was never modular; cooperative interactions were abundant and hominins were inundated with informational cues, such as reputation, relationships, and emotion (Sterelny, in press).

Frequent instances of cooperation and costly punishment of defectors in one-shot anonymous interactions have been used to support adaptive models that see cooperation as an end rather than a means (Fehr & Fischbacher, 2004; Gintis, et al., 2003; Henrich, et al., 2006). But this ignores the reality that historically most of our interactions were not anonymous, but were repeated, and our reputation was always at stake (Dreber, et al., 2008).

The response offered by Gintis (2011) and Fischbacher and Gächter (2010) is persuasive but does not deal directly with this problem. By considering first, how the rate of cooperation by players naturally “decays” as the games are repeated, and second, how the same players’ rate of cooperation is restored to its initial levels when they begin to play a second round of games (even after only a short break), Gintis argues that players completely understand the game situation. Cooperation decays within the game because players want to punish free-riders, not because they are learning how to maximize their payoffs in the context of highly structured economic experiments (as they would if the decay carried on to further sessions).

What this doesn’t deal with are the informational cues inherent to social environments. These findings show that, “The anonymity of the laboratory may indeed be sufficiently extraordinary that subjects simply play by the prudent and self-regarding rules of everyday life” (Gintis, 2010: 2), but that does not mean these rules are played within the *contexts* of everyday life. Anonymity and reputation aside, informational cues such as facial expressions, priming from previous experiences, the natural environment, or interested but uninvolved bystanders also affect the nature of human decision-making.

Second, experimental games only prove that people aren’t income-maximizing. This does not necessarily mean they are not fitness-maximizing. Price (2008) argues that strong reciprocity in its contemporary form is maladaptive; having evolved in conditions where strangers were rare and punishment hindered free riders’ development of fitness strategies. I don’t go so far, but I do question the link between income and fitness. It is true that fitness has always been measured by proxies; but some proxies, such as time, energy, and reproduction, are more cogent than others. By tagging cooperation to income, it includes quite contemporary attitudes about money; some of which are not fitness-maximizing. This is because “income” is a contemporary concept, born from the rise of capitalism and market structures that inhere values that did not exist during the Pleistocene Era. The influences of these attitudes on player behaviour need to be critically examined. Ultimately, evolutionary models can be inspired by contemporary behavioural experiments but these behaviours need to be given proper historical focus and mapped against more plausible evolutionary conditions.

Cultural Variation of Strong Reciprocity

If strong reciprocity is ‘a universal structure of human morality’ (Gintis, et al., 2008; Gintis, 2009) — and therefore governs altruistic behaviour — then we cannot ignore its phenotypic plasticity. We cannot ignore how it varies across

different human cultures. Early cross-cultural experiments suggested that variability wasn't an issue. Roth et al. (1991) found no significant difference in offers in Ultimatum Games played in Jerusalem, Ljubljana, Pittsburgh, and Tokyo. But more recent work attests otherwise; critiquing previous experiments for their engagement of too similar research subjects. Henrich (2000) presents Ultimatum Game results from the Machiguenga of the Peruvian Amazon, with average offers of 26 percent of the total: a far cry from the means of 40-50 percent observed until then in other experiments in Los Angeles and Yogyakarta (Indonesia) (Cameron, 1999; Roth et al., 1991). It is now generally accepted that culture greatly influences behaviour in economic games (Henrich, et al., 2004, 2005, 2006; Oosterbeek, 2004), especially in the extent to which strong reciprocators will go to punish those who defect (Gächter, Herrmann, & Thöni, 2010; Marlowe, et al., 2008; Wu, et al., 2009) and the occurrence of anti-social punishment (Gächter and Herrmann, 2008).

Cultural variability is important because strong reciprocity is contingent on social norms rather than on the more objective categories (such as biological relatedness or the concurrent or previous existence of cooperation) of other altruistic models. For strong reciprocity, cooperation and punishment are based on whether others adhere to or defect from expected culturally mandated behaviour. For example, Gurven et al., (2008) argue that one reason for the low average offers in economic games (32-37%) among Tsimane of the Bolivian Amazon is that they have 'no strong social norms governing a specific form or level of resource distribution'. The Tsimane still exhibit the behavioural pattern of strong reciprocity, just to a lesser, culturally determined degree.

This begs two questions about the development of strong reciprocity. First, if culture sets the bar for cooperative behaviour, what type of cultural norms 'set off' strong reciprocity? The term 'cooperation' is bandied about but there are many types, such as ecological, informational, reproductive. If the basic tenet of strong reciprocity is that violation of social norms encourages altruistic punishment, do these social norms include religion and ritual or alloparenting? Sterelny (in press) argues that cooperative behaviour coevolved between these complex social fields, as social interaction is not activity modular. Therefore, evolutionary models of strong reciprocity need to develop a more inclusive and robust framework to take these cultural and social structures into account.

Second, how closely did cultural norms and social institutions coevolve with strong reciprocity? Considering that the behaviour is contingent upon them, could it have stabilized with a small set of cooperative activities (such as hunting and reproduction) and then expanded to deal with other more complex ones characteristic of modern behaviours? Or was it the other way around? After all, it is not hard to imagine how the advent of social institutions in the Holocene would have selected for social conformity and regulatory behaviours akin to

the 'rule of law'. So far, studies on the variations in culture have been set aside in favour of the universalities of strong reciprocity, but consideration of the nature, limits, and guiding influences of this variability is necessary for the development of an evolutionary model.

Altruistic Punishment and Altruistic Cooperation

Strong reciprocators need to have the propensity, capability, and ability both to cooperate and to punish. Current models conceive these two as inextricable (cf. Gintis, 2000). This is true conceptually and phenotypically but we cannot assume that they mutually evolved from identical selection pressures and/or that their genetic biases are linked (West & Gardner, 2010). To illustrate the difficulties of this, Gardner & West (2010) model strong reciprocity as a greenbeard behaviour, where cooperation is a phenotypic marker indicating that the individual is also a punisher. Players are more likely to cooperate, considering once they see that someone is a cooperator, they understand this individual is also a punisher. Gardner & West argue that this sort of development is unlikely. This is because of the possibility of invading players who take advantage by mimicking the informational cues of greenbeards (to reap the benefits of others thinking they are greenbeards) but ultimately acting in a different way. In this case, Gardner & West argue that players who cooperate but do not punish or punish but do not cooperate are more likely to be dominant in the social environment.

Evolutionary models need to disaggregate these component parts of cooperation and punishment in order to gain a better understanding of their coevolved development. For example, structured teaching of cooperative behaviours cannot teach cooperation *and* punishment; but they can teach cooperation *or* punishment.¹ These behaviours are expressed differently and while they are contingent on the same informational processes to assess social norm compliance, the propensity, capacity, and ability to cooperate or punish utilize different cognitive and physiological processes. This is further complicated by the fact that cooperation and punishment are not zero-sum choices; one can choose to cooperate to a particular degree and choose to punish noncooperation to a particular degree. Experimental economics games express this by using scales in offers and punishments (Henrich et al., 2004).

So far it has only been established that insufficient cooperation can lead to punishment that is costly to the punisher. But there are other-regarding influences, such as the difficulty in punishing someone, the capacity for someone to punish, and the capacity for someone to defend themselves from punishment,

¹ However, Lehmann et al. (2006) argue that in small populations with little migration, behaviours of altruism and punishment could be identical in terms of resource availability and usage.

which affect the decision to cooperate or punish- some that are even mutually exclusive from one but influential on the other. For example, third party punishment occurs when a person punishes a defector in an interaction that they were not directly involved in. Third party punishment has been demonstrated in economic games but rarely to the same degree as second party punishment (Henrich, et al., 2006; Fehr & Fischbacher, 2004). What differentiates between these degrees? What other-regarding preferences and pressures determine the extent to which someone engages in costly punishment? These need to be taken into account because while some may be by-product adaptations, some may be key to the selection pressures that developed these behaviours.

Marlowe et al. (2008) find third party punishment much more prevalent in larger communities. In the evolutionary story then, is it possible that third-party punishment is a relatively recent addition to the complex of strong reciprocity, selected for in the Early Holocene as human groups became larger and there was a greater need for social control and stability? After all, costly punishment has been observed in other animal societies to coerce individuals and establish dominance (Clutton-Brock, 1995). Questions like these are brought to the fore when consideration is taken of the component parts of the whole behavioural suite. Because strong reciprocators don't just choose not to cooperate, but actively punish with costs to themselves, evolutionary models need to account for different coevolving developmental processes and selection pressures.

Costly Punishment and Conformist Transmission

It has long been assumed that costly punishment leads ultimately to conformism (Boyd & Richerson, 1985; Henrich & Boyd, 1998; Efferson et al., 2008) but recent experiments have shown that retaliation and non-conformism do occur (Denant-Boemont et al., 2007; Hopfensitz & Reuben, 2009; Nikiforakis, 2007; Wu et al., 2009). For example, and as will be explained in the next section, costly punishment can lead to feuds and other forms of anti-social punishment, such as those directed at players who cooperate *too much*. This disjuncture between theoretical models and empirical behaviour has centred on the questions: what gets people to conform, and what do they conform to? Theoretical models first suggested the fitness-enhancing benefits of conformism; not just at the individual level if the conformed-to behaviour was fitness-maximizing, but at a group-level if the behaviour reached fixation and for inter-group competition. But the propensity, capacity, and ability to conform is complex; Efferson et al. (2008) show that social learning is a behavioural tendency in and of itself, with some much better at identifying the fitness-maximizing behaviour and conforming more quickly as it becomes more common. While conformism can increase group homogeneity, accelerate fixation, and therefore be the

multiplier of strong reciprocity, greater consideration into the processes that people can 'acquire' the behaviour is necessary. Ultimately, the question must be, can coercion force strong reciprocity onto individuals weakened by lack of cooperation *and* punishment?

Current experiments signal no. For example, Nikiforakis (2007) presents evidence of retaliation following a quarter of costly punishments in Public Goods Games, attributing it to desire for reciprocal punishment and strategic motivations aimed at reducing future punishments. In evolutionary history, retaliation was most definitely a possibility; cooperation and defection were not managed by an economist; disagreements over cooperative norms such as food-sharing could most definitely have devolved into violence. Further, Hopfensitz & Reuben (2009) link retaliation to the social emotions of guilt and anger; the former triggers conformism and is activated when punishment (for one's lack of cooperation) is considered just; the latter triggers retaliation and is activated when punishment is considered unjust.

These suggest punishment and retaliation are expressions of personal opinions about social norm adherence and violation. Considerations of the evolutionary significance of costly punishment and conformist transmission have just begun. Future developments on evolutionary models of strong reciprocity need to take these into account. Conformism can be a fitness-enhancing behaviour, but the extent to which it was necessary for the spread of strong reciprocity needs to be critically revised. Conformism to the social norms and cultural practices of a dominant invading group may be easy for survival (cf. Boyd & Richerson, 2009), but acquiring (or even mimicking) the complex of strong reciprocity seems much harder.

Antisocial Punishment

Conformism is also contentious when costly punishment is not just limited to defectors. Herrmann, Thöni and Gächter (2008) report highly culturally variable instances of punishment directed at those who cooperate too much, even to the point that it inhibits the cooperation-enhancing effect of the punishment of defectors. Gächter & Herrmann (2008) extend these findings with one-shot interactions in four cities in Switzerland and Russia, isolating cultural differences in Russia as the root causes for more severe punishment of low contributors and antisocial punishment of high contributors. Their working hypothesis is that weak norms of civic cooperation and a weak rule of law are significant predictors of antisocial punishment.

Rand et al. (2010) model antisocial punishment as a mutated invading behaviour in a small structured environment with limited migration and show that it

can prevent costly punishment from enabling the evolution of cooperative behaviour. This is a clear problem for the efficacy of strong reciprocity. It is clear that antisocial punishment is culturally contingent; but it could be either evolutionarily tied to the bedrock psychology of strong reciprocity or a relatively recent adaptation of niche construction as a result of social institutions that rigidify fairness norms. Either way, it muddies the assessment criteria of cooperation, revealing complex relationships and contingencies in the evolution of strong reciprocity.

Prosocial Emotions

The Bowles & Gintis evolutionary model of human cooperation argues that prosocial emotions like shame evolved from repeated interactions of strong reciprocity as an informational shortcut to direct cooperation and punishment (2003 & 2006; cf. Gintis, 2004). It is true that emotions are proximate determinants of behaviour in economics games (and more generally, life). Harlé and Sanfey (2007) show that induced sadness results in higher offer expectations in the Ultimatum Game; and anger and guilt have been suggested as ultimate determinants of retaliation and punishment (Hopfensitz & Reuben, 2008). But the evolutionary story must be more complex; emotions direct much more than just cooperative behaviour; these other utilities were not by-product adaptations but coevolving design pressures. Further, the debate over prosocial emotions in non-human primates is unresolved; there is the possibility that shame is actually evolutionarily ancient. If this is true, it would validate Sterelny's argument for an inversion of the Bowles & Gintis model; specifically, that the bedrock psychologies of cooperation evolved first, and that strong reciprocity was dependent on cooperation, and therefore developed later (in press).

But emotions are not just psychological, they are physically displayed and used as information cues to influence social behaviour. The conditions under which human cooperation evolved must have been inundated with informational cues, and cooperation, defection, and punishment must have been physically effective. Considering emotions can be suppressed, manufactured, and faked, this suggests that these affective signals must have coevolved with either strong reciprocity or other informational processes — like a folk psychology — that could filter free-riding strategies like faking sadness or inducing guilt. While preliminary research has shown that rejection of unfair offers in Ultimatum Games is significantly lowered when responders can convey their feelings to the proposer concurrently with their decisions (Xiao & Houser, 2005), there is a way to go to test physically effective cues and their effect on cooperative behaviour.

Memory and Trust

Two underrated cognitive processes that are integral to strong reciprocity but underrepresented in the literature are memory and trust. In this paper it is proposed that they must have either coevolved, hitchhiked on other cognitive processes, or were hitchhiked upon, considering that strong reciprocity is so contingent on past interactions, assessments of social capability, and expectations about other people's social behaviour. For example, when partner choice in Ultimatum Games is allowed and previous results are public knowledge, more cooperative players are demanded (selected for) and reputational competition amongst players develops (Sylwester & Roberts, 2010). In this case, cooperation is a dynamic informational cue constructed through remembered past interactions that signal trustworthiness and therefore enable trust. Whatever the evolutionary dynamic, models of strong reciprocity need to take into account the extent to which the behaviour is reliant on memory and trust.

Reputation is the combined expression of these two processes of memory and trust and has been shown to significantly improve cooperation in experimental economics games (Bolton, et al., 2005; Brandt, et al., 2003; King-Casas, et al., 2005; Kreps & Wilson, 1982; Milinski, et al., 2002). In the conditions under which cooperation must have evolved, recognizing and internalizing informational cues about reputation must have been fitness-maximizing; reputation assessment would mean avoiding defection and maximizing opportunities for cooperation. These processes of acquiring, storing, and utilizing information must be considered as separate to (but of course, mutually evolving) with altruistic cooperation and punishment (Sterelny, in press). There is much written on the evolutionary development of memory; it has been integral to a whole suite of human faculties, including language and sensory functions. This literature needs to be accounted for within models of strong reciprocity. After all, just because these behaviours and processes are closely related, it does not mean they evolved simultaneously.

Life History and Socialization

So far, we have assumed that strong reciprocity is a universal behaviour based on studies of fully socialized persons. But developmental evidence offers a different picture, suggesting differences in cooperative behaviour based on life history stages (Harbaugh, et al., 2002; Sutter & Kocher, 2007). Nearly half of Grade Two students examined playing Dictator Games — similar to the Ultimatum Game, but without the ability for the responder to reject offers — gave nothing to their second players. This is a rationally maximizing behaviour, not replicated

in any other social group. Findings have also shown that the rate of cooperation in repeated interactions increases linearly from early childhood until the mid-twenties. These results support the intuitive picture of the phenotypic flexibility of strong reciprocity. After all, the behaviour of strong reciprocity is dependent on individuals internalizing particular social norms to learn when to cooperate or punish.

Developmental psychology has already provided evidence supporting the theory that children have a predisposition towards acquiring the social norms that make up strong reciprocity. Children understand what norms are and that they should be learned and followed: for example, those as young as two assume the world is full of social norms (Rakoczy, et al., 2008) and five-year olds can distinguish conventional rules that can be broken from natural laws that cannot (Kalish, 1998).

These studies bring to the fore two important questions in the development of strong reciprocity. First, *how do children internalize social norms?* As noted above, conformism is a possible but not a universal mode of transmission of the social norms that make up strong reciprocity. Sterelny (in press) offers an evolutionary story of niche constructed socialization beginning from tolerated watching to intentional teaching. If this true, the social norms upon which strong reciprocity is contingent must somehow have developed piecemeal through this process. They must have coevolved in complexity with modes of social learning. In this way, the social norms that originally demanded cooperation or punishment could have begun as quite simplistic, such as cooperative hunting, and then coevolved to support more complex behaviours, such as the division of labour. Further studies into the development of social learning of norms, both in the modern era and from an evolutionary perspective, are necessary for a more complete picture of strong reciprocity.

Second, *how do children learn, apply, and calibrate normative behaviour?* Developmental psychology suggests children first acquire norms in contextually specific circumstances and then apply them in different circumstances. Experience then calibrates their understanding of the nature and contextual limits of the norm (Lancy, 1996; Sterelny, in press; Want & Harris, 2002). I suggest that this could be somewhat similar to the conditions of early social learning in the Pleistocene; cooperative and punishment behaviours based on social norms were developed and calibrated at both the individual and group level in a series of trial and error interactions. If this is true, current models that see strong reciprocity as a simply acquired invading behaviour are flawed because they assume the domain of the behaviour is static rather than being constantly expanded and fine-tuned depending on social and environmental context. Social learning then is an important component in the transmission of strong reciprocity. Greater integration of literature in developmental psychology —

including the acquisition and internalization of social norms through teaching, conformism, and usage — is required for a more cogent evolutionary model of strong reciprocity.

Conclusion

Strong reciprocity is a complex of interrelated coevolving traits and needs to be considered as such in evolutionary models. Most work in this field has emerged from experimental economics, a discipline focused on contemporary social institutions and problems. Creating an evolutionary model of human cooperation was not the original intent when these economics games were developed but it is now a promising by-product. Future developments have great potential; including a greater historical focus to explain the evolutionary story as well as further attention on other component parts not discussed above, including but not limited to neural structures and social contexts. Further considerations could also take into account non-human primates; for example, recent research suggests dominant macaques behave pro-socially to emphasize their dominance (Massen et al., 2010). All of these paths can strengthen evolutionary models of strong reciprocity and present a more cogent story of human cooperation.

It is important to note that strong reciprocity is not mutually exclusive from other cooperative behaviours and models. There is nothing to suggest that preference for cooperation with kin can override some tendencies of strong reciprocity or vice versa. In fact, I believe that when theory has developed enough to sustain a complex picture of human cooperation, a multi-level evolutionary story is quite likely. The starting point must be, however, on a smaller-scale; it must begin with papers like this, which conceive the models we already have as complex behaviours, before mapping them all together.

That strong reciprocity is a behaviour has been established. That it is relatively similar around the world has been established. Now questions about origins, its genetic and cultural locus, and the nature of transmission await answers. This paper has sought to guide such enquiries by deconstructing what has so far been conceived as a singular behaviour into a complex suite of interrelated coevolved behaviours. Only with a complex understanding of the nature of human cooperation can we recreate what was surely a complex evolutionary development.

References

- Bolton, G. E., E. Katok, & A. Ockenfels, 2005. 'Cooperation among strangers with limited information about reputation'. *Journal of Public Economics*, 89(8): 1457-1468.
- Bowles, S. & H. Gintis, 2003. 'Prosocial Emotions'. Accessible online at: <<http://www.umass.edu/preferen/gintis/arrowfes.pdf>>.
- Bowles, S. & H. Gintis, 2006. 'The Evolutionary Basis of Collective Action'. Accessible online at: <<http://www.umass.edu/preferen/gintis/Evolutionary%20Basis%20of%20Collective%20Action.pdf>>.
- Boyd, R., & P.J. Richerson, 1985. *Culture and the Evolutionary Process*. Chicago: The University of Chicago Press.
- Boyd, R., & P. J. Richerson, 2009. 'Culture and the evolution of human cooperation'. *Philosophical Transactions of the Royal Society of the Biological Sciences*, 364: 3281-3288.
- Boyd, R., H. Gintis, S. Bowles, P. J. Richerson, 2003. 'The evolution of altruistic punishment'. *Proceedings of the National Academy of Sciences of the United States of America*, 100(6): 3531- 3535.
- Brandt, H., C. Hauert, & K. Sigmund, 2003. 'Punishment and reputation in spatial public goods games'. *Proceedings of the Royal Society of London. Series B: Biological Sciences*, 270(1519): 1099-1104.
- Cameron, L. A., 1999. 'Raising the Stakes in the Ultimatum Game: Experimental Evidence From Indonesia'. *Economic Inquiry*, 37(1): 47-59.
- Carpenter, J., S. Bowles, H. Gintis, & S. Hwang, 2009. 'Strong Reciprocity and team production: Theory and evidence'. *Journal of Economic Behaviour & Organization*. 71: 221-232.
- Clutton-Brock, T. H. & G. A. Parker, 1995. 'Punishment in Animal Societies'. *Nature*, 373: 209-217.
- Denant-Boemont, L., D. Masclet, & C. N. Noussair, 2007. 'Punishment, counterpunishment, and sanction enforcement in a social dilemma experiment'. *Economic Theory*, 33: 145-167.
- Dreber, A., et al., 2008. 'Winners don't punish'. *Nature*, 452: 348-351.
- Efferson, C., et al., 2008. 'Conformists and mavericks: the empirics of frequency-dependent cultural transmission'. *Evolution and Human Behaviour*, 29: 56-64.

- Fehr, E. & U. Fischbacher, 2003. 'The nature of human altruism'. *Nature*. 425: 785-792.
- Fehr, E. & U. Fischbacher, 2004. 'Third-party punishment and social norms'. *Evolution and Human Behaviour*. 25: 63-87.
- Fehr, E., & Henrich, J., 2004. Is strong reciprocity a maladaptation? On the evolutionary foundations of human altruism. In: P. Hammerstein (Ed.), *Genetic and Cultural Origins of Cooperation*. Cambridge: The MIT Press.
- Fehr, E., U. Fischbacher, & S. Gächter, 2002. 'Strong reciprocity, human cooperation, and the enforcement of social norms'. *Human Nature*, 13: 1-25.
- Fischbacher, U. & S. Gächter, 2010. 'Social Preferences, Beliefs, and the Dynamics of Free Riding in Public Goods Experiments. *American Economic Review*, 100(1): 541-56.
- Gächter S. & B. Herrmann, 2008. 'Reciprocity, culture, and human cooperation: previous insights and a new cross-cultural experiment'. *Philosophical Transactions of the Royal Society of the Biological Sciences*, 364: 791-806.
- Gächter S., B. Herrmann, & C. Thöni, 2010. 'Culture and cooperation'. *Philosophical Transactions of the Royal Society of the Biological Sciences*, 365: 2651-2661.
- Gardner, A. & S. A. West, 2010. 'Greenbeards'. *Evolution*, 64(1): 25-38.
- Gintis H., 2000a. 'Strong Reciprocity and Human Sociality'. *Journal of Theoretical Biology*. 206: 169-179.
- Gintis, H., 2000b. 'Beyond *Homo economicus*: evidence from experimental economics'. *Ecological Economics*. 35: 311-322.
- Gintis, H., 2004. 'The genetic side of gene-culture coevolution: internalization of norms and prosocial emotions'. *Journal of Economic Behaviour & Organization*, 53:57-67.
- Gintis, H., 2009. 'Behavioural Ethics'. Accessible online at: <<http://www.umass.edu/preferen/gintis/BehaviouralEthics.pdf>>. Accessed on 10 September 2010.
- Gintis, H. 2011. 'Reply to Binmore: Social Norms or Social Preferences?'. Accessible online at: <<http://www.umass.edu/preferen/gintis/ReplayToBinmore.pdf>>. Accessed on 1 November 2011.
- Gintis, H., S. Bowles, R. Boyd, E. Fehr, 2003. 'Explaining altruistic behaviour in humans'. *Evolution and Human Behaviour*. 24: 153-172.

- Gintis, H., J. Henrich, S. Bowles, R. Boyd, & E. Fehr, 2008. 'Strong Reciprocity and the Roots of Human Morality'. *Social Justice Research*, 21: 241-253.
- Gurven, M., A. Zanolini, & E. Schniter, 2008. 'Culture sometimes matters: intra-cultural variation in pro-social behaviour among Tsimane Amerindians'. *Journal of Economic Behaviour and Organization*, 67(3-4): 587-607.
- Harbaugh, W. T., K. Krause, & S. G. Liday, 2002. 'Children's Bargaining Behaviour'. Available online at: <<http://harbaugh.uoregon.edu/Papers/KidBargaining.pdf>>.
- Harlé, K. M. & A. G. Sanfey, 2007. 'Incidental Sadness Biases Social Economic Decisions in the Ultimatum Game'. *Emotion*, 7(4): 876-881.
- Henrich, J., 2000. 'Does culture matter in economic behaviour: Ultimatum game bargaining among the Machiguenga'. *American Economic Review*, 90(4): 973-979.
- Henrich, J. & R. Boyd, 1998. 'The Evolution of Conformist Transmission and the Emergence of Between-Group Differences'. *Evolution and Human Behaviour*, 19: 215-241.
- Henrich, J., R. Boyd, S. Bowles, C. Camerer, E. Fehr, & H. Gintis (eds.), 2004. *Foundations of Human Sociality: Economic Experiments and Ethnographic Evidence from Fifteen Small-Scale Societies*. Oxford: Oxford University Press.
- Henrich, J., et al., 2005. "'Economic man" in cross-cultural perspective: Behavioural experiments in 15 small-scale societies'. *Behavioural and Brain Sciences*, 28: 795-855.
- Henrich, J., et al., 2006. 'Costly Punishment Across Human Societies'. *Science*, 312: 1767-1771.
- Hermann, B., C. Thöni, & S. Gächter, 2008. 'Antisocial Punishment Across Societies'. *Science*, 319: 1362-1367
- Hopfensitz, A. & E. Reuben, 2009. 'The Importance of Emotions for the Effectiveness of Social Punishment'. *The Economic Journal*, 119: 1534-1559.
- Humphrey, Nicholas, 1997. Varieties of altruism – and the common ground between them. *Social Research*, 64: 199-209.
- Kalish, C.W., 1998. 'Reasons and causes: Children's understanding of conformity to social rules and physical laws'. *Child Development*, 69: 706-720.
- King-Casas, B., et al., 2005. 'Getting to know you: reputation and trust in a two-person economic exchange'. *Science*, 308: 78-83.

- Kreps, D. M. & R. Wilson, 1982. 'Reputation and imperfect information'. *Journal of Economic Theory*, 27(2): 253-279.
- Lancy, David, 1996. *Playing on Mother Ground: Cultural Routines for Children's Development*. London: The Guilford Press.
- Lehmann, L., K. Bargum, & M. Reuter, 2006. 'An evolutionary analysis of the relationship between spite and altruism'. *Journal of Evolutionary Biology*, 19(5): 1507-1516.
- Marlowe, F. W., et al., 2008. 'More 'altruistic' punishment in larger societies'. *Proceedings of the Royal Society of the Biological Sciences*, 275: 587-592.
- Massen, J. J. M., L. M. van den Berg, B. M. Spruijt, & E. H. M., Sterck, 2010. 'Generous Leaders and Selfish Underdogs: Pro-Sociality in Despotic Macaques. *PLoS ONE*, 5(3).
- Milinski, M., D. Semmann, & H. Krambeck, 2002. 'Reputation helps solve the 'tragedy of the commons''. *Nature*, 415: 424-426.
- Nikiforakis, N., 2008. 'Punishment and counter-punishment in public good games: Can we really govern ourselves?'. *Journal of Public Economics*, 92(1-2): 91-112.
- Oosterbeek, H., R. Sloof, & G. Van de Kuilen, 2004. 'Cultural Differences in Ultimatum Game Experiments: Evidence from a Meta-Analysis'. *Experimental Economics*, 7: 171-188.
- Price, M. E., 2008. 'The resurrection of group selection as a theory of human cooperation'. *Social Justice Research*, 21.
- Rakoczy, H., F. Wameken, & M. Tomasello, 2008. 'The sources of normativity: Young children's awareness of the normative structure of games'. *Developmental Psychology*, 44(3): 875-881.
- Rand, D. G., J. J. Armao, M. Nakamaru, H. Ohtsuki, 2010. 'Anti-social punishment can prevent the co-evolution of punishment and cooperation'. *Journal of Theoretical Biology*, 265(4): 624-632.
- Roth, A. E., V. Prasnikar, M. Okuno-Fujiwara, S. Zamir, 1991. 'Bargaining and Market Behaviour in Jerusalem, Ljubljana, Pittsburgh, and Tokyo: An Experimental Study'. *The American Economic Review*, 81(5): 1068-1095.
- Sanfey, A. G., J. K. Rilling, J. A. Aronson, L. E., Nystrom, & J. D., Cohen, 2003. 'The neural basis of economic decision-making in the Ultimatum Game'. *Science*, 300: 1755-1758.

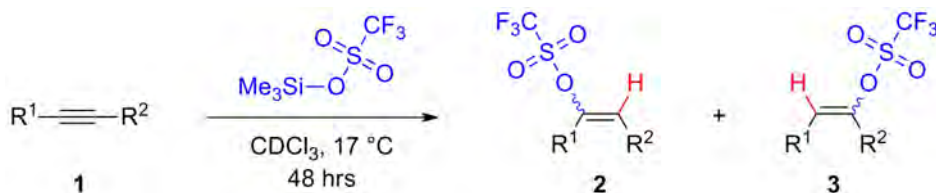
- Sterelny, Kim, in press. *The Evolved Apprentice: The Nicod Lectures, 2008*.
- Sutter, M. & M. G. Kocher, 2007. 'Trust and trustworthiness across different age groups'. *Games and Economic Behaviour*, 59: 364-382.
- Sylwester, K. & G. Roberts, 2010. 'Cooperators benefit through reputation-based partner choice in economic games'. *Biology Letters*, 6(5): 659-662.
- Want, S. C., & P. L. Harris, 2002. 'How do children ape? Applying concepts from the study of non-human primates to the development study of 'imitation' in children'. *Developmental Science*, 5(1): 1-14.
- West, S. A. & A. Gardner. 'Altruism, Spite, and Greenbeards'. *Science*, 327: 1341-1344.
- Wu, J., B. Zhanga, Z. Zhoub, Q. He, X. Zheng, R. Cressman, & Y. Tao, 2009. 'Costly punishment does not always increase cooperation'. *Proceedings of the National Academy of Sciences (USA)*, 106(41): 17448-17451.
- Xiao, E. & D. Houser, 2005. 'Emotion expression in human punishment behaviour'. *Proceedings of the National Academy of Sciences (USA)*, 102(20): 7398-7401.

Trends in Stereoselectivity and Regioselectivity for Trimethylsilyl Trifluoromethanesulfonate Addition to Alkynes

John Rivers¹

Abstract

The trends in stereoselectivity and regioselectivity have been characterised for the reactions of trimethylsilyltrifluoromethanesulfonate (TMS triflate, or TMSOTf) with alkyne substrates. A variety of alkynes were reacted with TMS triflate, yielding the corresponding enol sulfonates, often with high levels of regio- and stereoselectivity.



Introduction

Enol triflates are useful functional groups employed in cuprate and palladium-based coupling reactions. In these reactions, they serve the purpose of halogens, allowing formation of carbon-carbon bonds. They are particularly useful due to their labile nature; studies suggest that triflate is $\sim 10^6$ times more labile than comparable leaving groups such as mesylates or tosylates.

Although enol triflates have been previously synthesised by trapping enol tautomers of ketone substrates, this technique lacks significant stereoselective control. In previous work, Stang and co-workers have found that synthesis of enol triflates may be achieved by the addition of triflic acid to vicinal and symmetrical alkynes. The acidic nature of these syntheses however, resulted in low yields ($\sim 65\%$) due to observed acid-catalysed polymerisation, as well as isomerisation between regio- and stereoisomers.

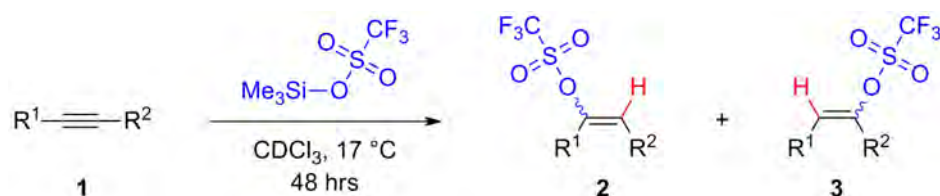
¹ As part of an Advanced Studies Course related to the Bachelor of Philosophy (Science) program at the Australian National University. Additional authors Phillip P. Sharp and Martin G. Banwell.

Studies into the alternative reaction of trimethylsilyl triflate with symmetrical alkynes by Norris have demonstrated that the addition of triflate occurs with high levels of stereoselectivity.

Herein, the trends in stereoselective and regioselective control with respect to unsymmetrical alkynes are reported, with a view to further optimising this mild generation of enol triflates.

Results

Our investigation sought to assess the effect different substituents have on both the stereoselectivity and regioselectivity of the formation of enol triflates from alkynes with TMSOTf. The results of these reactions are summarised in Table 1.



Scheme 1. General scheme for addition of TMSOTf

Table 1. Reactions of alkyne substrates with TMSOTf

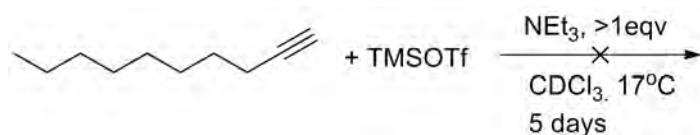
Entry	R ₁	R ₂	Regioisomers (2:3)	Stereoisomers (E:Z)	Combined yield
a	<i>n</i> -Pr	<i>n</i> -Pr	-	75:25	99% ^a
b	<i>n</i> -Pr	Me	50 : 50 ^a	85:15 ^a	60% ^a , 58% ^b
c	TMS	Me	-	-	0% ^a
d	Ph	Et	100 : 0 ^c	40:60 ^d	73% ^a
e	<i>n</i> -octyl	H	100 : 0 ^a	-	99% ^b

a: Determined by ¹H NMR analysis

b: Yield based on isolated product

c: Yield based on isolated 1-phenylbutan-1-one.

d: Approximate ratio due to an overlap of peaks in the ¹H NMR spectrum



Scheme 2. Attempted reaction of dec-1-yne with TMSOTf in the presence of triethylamine

Treatment of the symmetrically substituted alkyne 4-octyne with TMSOTf (a) resulted in good levels of stereoselectivity 75:25, favouring the *E* isomer, and

excellent conversion (99%) to the enol triflate product as judged by ^1H NMR analysis. Reaction of the unsymmetrical alkyne 2-hexyne, (b) which contains an *n*-propyl and a methyl substituent, under the optimal conditions afforded the product in good yields (58%). Although a statistical mixture of regioisomers was observed, these product were obtained with high levels of stereoselectivity (85:15), favouring the *E* isomer.

When a trimethylsilyl substituted alkyne was subjected to the reaction conditions (c), only the starting material was observed, even after 5 days.

Reaction of a phenyl substituted alkyne (d) afforded a single regioisomer, which corresponded to the enol triflate formed at the benzylic position, as judged by ^1H NMR of the crude reaction mixture. This reaction proceeded with little stereoselectivity, observed in an *E:Z* ratio of 40:60.

Attempts to isolate the enol triflate product by flash chromatography, using silica gel as the stationary phase, resulted in hydrolysis of the product to the corresponding ketone producing 1-phenylbutan-1-one in 73% yield, based on isolated product. The structure of this ketone was confirmed via comparison of the NMR spectrum with that previously reported.

Overall Interpretation of the Results

Regioselectivity

With respect to regioselectivity, the reaction of TMSOTf with alkynes appears to follow Markovnikov addition in that the carbon atom of the alkyne most able to stabilise a carbocation is attacked by the triflate anion. For example, when a terminal alkyne was used, a secondary enol triflate was observed (entry e), which agrees with the formation of a secondary carbocation over a primary. Furthermore, when a phenyl substituted alkyne was used, the enol triflate generated corresponded to the trapping of a benzylic carbocation (entry d).

The results of entry c also point to the regioselective dependence on the distribution of electronic density along the alkyne bond. No reaction was observed in entry c.

Considering entry c, we observe that the alkyne bond of the substrate should be polarised, with more negative character towards the silyl group,⁷ and proton addition should occur at the α -carbon with respect to the silyl substituent. This result is plausible evidence that the proton source is more sterically hindered than triflic acid.

Further examples, that contain more hindered alkyl groups such as *t*-butyl, would be required in order to prove this hypothesis and also to understand the deactivation effect of the TMS group.

Evidence that the proton source is a Brønsted acid was demonstrated by the lack of reaction observed in the presence of triethylamine (Scheme 2), which was present in a 1:1 molar ratio with respect to the starting material.

The TMSOTf reagent could simply be a reagent that slowly releases triflic acid in small quantities, due to the presence of residual water and the reactivity observed would be similar to acid addition to alkynes. The proton-source may be the hydrolysis by-products of TMSOTf, such as TMSOH_2^+ or $(\text{TMS})_2\text{OH}^+$.

This proposition would be supported by the observed Markovnikov regioselectivity, the total lack of reactivity in the presence of base and the long reaction times.

Stereoselectivity

With regard to stereoselectivity, there are two observed modes of addition, apparently dictated by the identity of the substrate. In the case of triflate addition to internal, aliphatic alkynes, the reactions studied display preference for *E* isomers, with *syn* addition of triflate anion and proton (entries a and b). In contrast, addition to alkynes bearing an aromatic group (entry d) resulted in an *E*:*Z* ratio of 40:60, with only slight preference for the *Z* isomer.

It is possible that the presence of a charge stabilizing aromatic substituent allows for the formation of a cationic intermediate, resulting in the loss of specificity, although little evidence currently exists to support this.

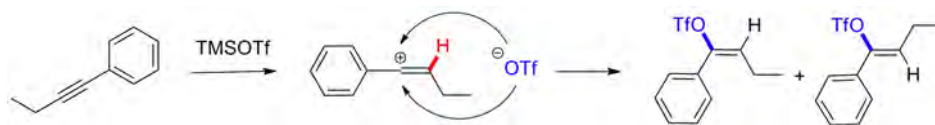
The mode of addition of TMSOTf to terminal alkynes has not been examined and further insights may be gained from reaction of TMSOTf with deuterated substrates such as *d*-1-decyne, as well as aromatic substrates such as *d*-phenylacetylene.

Proposed Mechanism

In proposing a reaction mechanism, the points to be considered are that the reaction is halted in the presence of a base, favours *syn* addition for aliphatic substrates and has reduced selectivity in the case of aromatic ones.

Previous work by Summerville and Schleyer¹⁰ has demonstrated that addition of triflic acid to 1-hexyne also proceeds with complete *syn*-selectivity. The observed *syn*-selectivity is not unique to TMSOTf and the arguments justifying *syn*-selectivity in TMSOTf addition must also hold for the triflic acid addition.

The most plausible explanation involves a cationic intermediate. Such a pathway would be stabilised by resonance in the case of aromatic substrates, as depicted in Scheme 3. In the case of aliphatic substrates, the triflate addition would occur on the least hindered face of the intermediate, consistent with *syn*-selectivity.



Scheme 3. Proposed cationic-intermediate reaction pathway

Syn-selectivity of triflate addition to carbocations due to steric hindrance has been previously observed. In a reaction by Chavre and co-workers,¹¹ the carbocation obtained was trapped by a triflate anion, giving the enol triflate product depicted in Figure 1. The addition of the triflate ion is dictated by steric hindrance, supporting the *syn*-selectivity observed in this study.

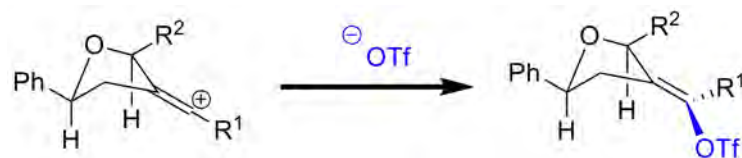


Figure 1. Trapping of sterically less-hindered enol triflate by Chavre et al.
 $R^2 = \text{CHO}$

With respect to entry d, if it is true that a cationic intermediate intervenes in aromatically-substituted substrates, solvent choice may be expected to influence stereoselectivity.

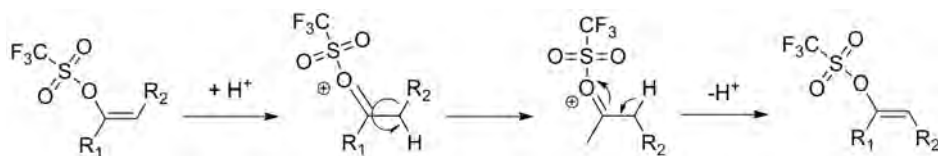
Further understanding of this reaction will require greater knowledge and understanding of the proton source. Use of deuterated TMS in studies would be able to conclusively verify TMS as the proton source.

Experiments could also be undertaken to determine the fate of the deprotonated TMS group. It has been hypothesised that 1,1-dimethylsilene is formed, a theory that could be verified by addition of 1,3-cyclohexadiene to the reaction mixture, trapping any silene by-product via a Diels-Alder reaction.¹² The work of Trommer and co-workers has also noted that the silene can be trapped via a [2+2] cycloaddition with formaldehyde.

Previous studies by Norris have also found that stereoselectivity may be modified by the use of *t*-butyldiphenylsilyl (TBDPS) instead of TMS as the silyl substituent for the triflate, suggesting crucial participation of the silyl group in the transition state. It is likely further studies reacting TBDPSOTf with unsymmetrical substrates will provide further insight into the mechanism of TMSOTf addition to alkynes.

Yield

Yields for TMSOTf addition are generally reasonable, with >80% conversion to product for TMSOTf addition to aliphatic internal alkynes observed here and in previous studies. This is a significant improvement on previous techniques for enol triflate formation employing triflic acid, in which significant proportions (30-40%) of the starting material were found to polymerise into a dark, reddish-purple mass. A similar polymeric mass is also present in our reactions, although to a diminished extent. The tendency of the enol triflates to regio- and stereoisomerise under acidic conditions has also been observed by Stang and co-workers. This isomerisation could explain the incomplete selectivity, which would favour the formation of the thermodynamically more stable isomer(s).



Scheme 4. Acid-catalysed stereo-isomerisation mechanism

Considering the previous success of triflate reactions with oct-4-yne, it is particularly surprising that reaction b should yield only 58%. This is assumed to be an isolated incident.

It is interesting to note the instability of enol triflates 2-*Z* d and 2-*E* d towards silica gel. This is attributed to silica-mediated hydrolysis proceeding via a known mechanism. This degradation was not observed during isolation of other enol triflates. The presence of the phenyl substituent may be activating with regards to hydrolysis, suggesting other aromatically- β -substituted enol triflates are also prone to silica hydrolysis; this remains to be confirmed. Should the use of aromatically- β -substituted enol sulfonates in further synthesis be desired, another means of isolation must be employed, or further reactions attempted *in situ*.

Conclusions

The regio- and stereo-selective properties of TMS triflate regarding addition to unsymmetrical alkynes have been established, suggesting complete Markovnikov regioselectivity in terminal and aromatically-substituted alkynes. TMS triflate appears to promote selective addition to internal aliphatic alkynes, with up to 85% selectivity for the *E* isomer. The stereoselectivity of addition to aromatically-substituted alkynes, under current conditions, appears to be substrate-controlled.

Further studies in this methodology should be directed towards greater mechanistic understanding of TMS triflate addition to alkynes. Deuterated substrates, as well as deuterated TMS triflate should yield further insights into the reaction mechanism(s), allowing greater control over triflic acid addition. The proposed intermediary effect of water should also be investigated; both reactions carried out in dry solvent and those with added water are of interest.

This mild method for the formation of enol triflates has considerable potential for application. The use of alternative solvents, with aromatic alkynes in particular, should lead to greater control over stereoselectivity.

Experimental

Reactions were carried out in CDCl_3 solvent at 17°C , with deuterated chloroform employed in order to eliminate possible acidic conditions known to catalyse *E/Z* isomerisation. Regio- and stereoselectivity were determined, as described in the entries below, via ^1H NMR analysis. A nitrogen atmosphere was employed to avoid exposure to excess moisture.

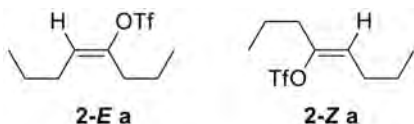
General Procedure A for the Formation of Enol Triflates

A magnetically-stirred solution of alkyne (1 eq) in CDCl_3 (0.3 M with respect to the alkyne) was treated with TMSOTf (1.3 eq). After the specified time (48hrs) a 1ml aliquot was taken and analysed by ^1H NMR. When the reaction was deemed complete, the reaction was subjected directly to flash chromatography (silica, 100% hexane eluent). In some cases isolation was not pursued due to time constraints; nevertheless it has been noted by Norris that aliphatic enol triflates can be isolated via flash chromatography.

General Procedure B for Determination of Regio- and Stereoisomers via ^1H NMR

Regioisomers were determined on the basis of signal-splitting. For the ^1H NMR spectrum of 2b and 3b (i.e. (2*E/Z*)-hex-2-en-3-yl trifluoromethanesulfonate + (2*E/Z*)-hex-2-en-2-yl trifluoromethanesulfonate) example below, regioisomers were distinguished due to their different vinylic proton splitting patterns, with the hex-2-en-2-yl isomers expected to give a triplet, and a quartet expected of hex-2-en-3-yl isomers.

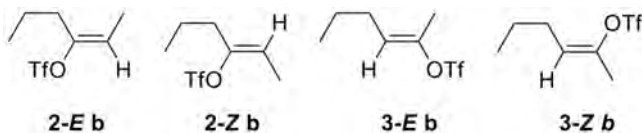
Stereoisomers were distinguished based on chemical shift of the vinylic proton signals in the region 4-6 ppm. The downfield signal in each case of regioisomers was attributed to the *Z* isomer, due to the greater negative-induction known to be exerted by *trans*-substituents. In the example below ((4*E/Z*)-oct-4-en-4-yl trifluoromethanesulfonate), the *Z*-isomer vinylic peak occurs at 5.45 ppm whilst the *E*-isomer (with vinylic proton *cis* to triflate) has a peak at 5.20 ppm.



(4*E/Z*)-oct-4-en-4-yl trifluoromethanesulfonate

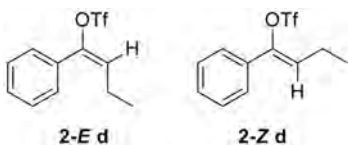
General procedure A: Oct-4-yne (0.07ml, 0.48mmol) was employed. The product was not isolated from the work-up.

^1H NMR(300MHz, CDCl_3): δ ppm 0.91-0.97 (6H, m, CH_3), 1.39-1.47 (2H, m, $J = 7.4$ Hz, CHCH_2CH_2), 1.51-1.58 (2H, m, $J = 7.5$ Hz), $\text{C}(\text{OTf})\text{CH}_2\text{CH}_2\text{CH}_3$), 2.11-2.19 (2H, q, $J = 7.8$ Hz, CHCH_2), 2.27-2.32 (2H, t, $J = 7.7$ Hz, $\text{C}(\text{OTf})\text{CH}_2$), 5.19 (0.75H, t, $J = 7.4$ Hz, $\text{C}(\text{OTf})=\text{CH}$ (*E*)), 5.46 (0.25H, t, $J = 7.4$ Hz, $\text{C}(\text{OTf})=\text{CH}$ (*Z*)).



(2*E/Z*)-hex-2-en-3-yl trifluoromethanesulfonate + (2*E/Z*)-hex-2-en-2-yl trifluoromethanesulfonate

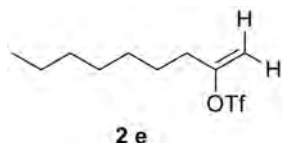
General procedure A: Hex-2-yne (0.214ml, 1.9mmol) was employed. Approximately 58% conversion of starting material was achieved. The product mixture was separated from the work-up. No attempt was made to isolate the isomers.



(1*E/Z*)-1-phenylbut-1-en-yltrifluoromethanesulfonate

General procedure A: 1-phenylbut-1-yne (0.27ml, 1.9mmol) was employed. Approximately 73% conversion to product was achieved. In a modification to the general chromatography procedure, hexane eluent was used to remove the starting material before use of ethyl acetate to elute the product. It was found, upon NMR analysis of the product, that hydrolysis had occurred during elution, with the isolated product ^1H NMR identical to that of 1-phenylbutan-1-one.

^1H NMR (300MHz, CDCl_3): Vinylic peaks: 5.74 (0.4H, t, $J = 6\text{ Hz}$, C(OTf)=CH (*E*), 5.77 (0.6H, t, $J = 9\text{ Hz}$, C(OTf)=CH (*Z*).



dec-1-en-2-yl trifluoromethanesulfonate

General procedure A: dec-1-yne (0.34ml, 1.9mmol) was employed.

In addition to General procedure B, ^{13}C NMR and IR techniques were used to characterise the molecule.

$^1\text{HNMR}$ (300MHz, CDCl_3): δ 0.829 (3H, t, $J = 5.5\text{ Hz}$, CH_3), 1.251 (10H, m, $(\text{CH}_2)_5$), 1.48 (2H, m, $J = 4.0\text{ Hz}$, $\text{C(OTf)CH}_2\text{CH}_2$), 2.274 (2H, t, $J = 5.70\text{ Hz}$, C(OTf)CH_2), 4.864 (1H, dt, $J = 2.7\text{ Hz}$, C(OTf)=CH (*E*), 5.025 (1H, d, $J = 2.7\text{ Hz}$, C(OTf)=CH (*Z*). ^{13}C NMR (100MHz, CDCl_3): δ 12.156, 20.75, 24.103, 26.758, 27.238, 27.285, 29.910, 31.969, 102.055, 155.262 IR (neat oil film): $\nu\text{ cm}^{-1}$ 2931-2859 (m, CH stretching), 1671 (m, C=C stretch), 1458, 1419 (m, CH_3 and CH_2 deformations), 1210 (s, S=O stretch), 1141 (s, CF stretch).

References

- Scott, W. J., McMurry, J. *Acc. Chem. Res.* 1968, 21, 47.
- Fleming, I., Ramaro, C. *Org. Biomol. Chem.* 2004, 2, 1510.
- Summerville, R., Senkler, C., Schleyer, P., Stang, P., et. al. *J. Amer. Chem. Soc.* 1973, 96, 1100.
- Norris, M., Sharp, P. P., Banwell, M.; Australian National University: Canberra, 2009, unpublished manuscript.
- Pan, P., et. al. *J. Org. Chem.* 2009, 74, 7364.
- Pouchert, C. J. *The Aldrich library of FT-IR spectra*; Aldrich Chemical Company: Milwaukee, Wis. USA, 1989.
- Colvin, E. W. *SILICON IN ORGANIC SYNTHESIS*; Butterworths: Boston, 1981.

Kresge, A., J. Chiang, Y. *J. Amer. Chem. Soc.* 1962, 84, 3976.

Noyce, D., Schiavelli, M. *J. Amer. Chem. Soc.* 1968, 90, 1023.

Summerville, R. H.; Schleyer, P. V. R. *Journal of the American Chemical Society* 1972, 94, 3629.

Chavre, S. N.; Choo, H.; Cha, J. H.; Pae, A. N.; Choi, K. I.; Cho, Y. S. *Organic Letters* 2006, 8, 3617.

Auner, N., Seidenschwarz, C., Sewald, N. *Organometallics* 1992, 11, 1137.

Trommer, M., Sander, W., Patyk, A. *Angew. Chem. Int. Ed.* 1995, 34, 929.

Trommer, M., Sander, W., Patyk, A. *J. Amer. Chem. Soc.* 1993, 115, 775.

Stang, P. J., Summerville, R. *J. Amer. Chem. Soc.* 1969, 91, 4600.

Goundry, W. *Synlett* 2003, 12, 1940.

Wicked Sisters

Martina Donkers

Abstract

Since the 1950s, C.P. Snow's 'Two Cultures Divide' has dictated a pessimistic opposition between the sciences and the humanities. Yet a growing number of theatre scholars examining the ever increasing body of dramatic works that explore scientific concepts argue that such works transgress simplistic notions of two opposing cultures, allowing for a cross disciplinary examination of ideas that benefits both areas of thought. In this essay, I argue that Australian playwright Alma De Groen's *Wicked Sisters* represents precisely this transgression by using concepts from evolutionary and artificial biology to explore human relationships. This exploration is more nuanced than simple metaphor; by juxtaposing these two concerns against each other, De Groen allows questions to be asked and ideas to be considered that would not be possible were each area of thought considered individually. This amalgamation of the scientific and the artistic sheds new light on both areas, and reflects not only an understanding between the two cultures, but a merging of them.

There's no morality now, only biology

-Meridee, *Wicked Sisters*, page 28.

"Artistic practice and scientific inquiry are commonly perceived as distinctly opposed modes of thought," explains Gautam Dasgupta in his 1985 essay *From Science to Theatre: Dramas of Speculative Thought* (237). "The underlying assumption is that art – specifically theatre in this case – concerns itself with human and social relations, while science purveys the domain of physical reality." If this is true, then Alma De Groen's 2002 play *Wicked Sisters* is the antithesis of this common perception. *Wicked Sisters* transgresses the traditional barrier between science and theatre. It is a play that uses human social relations to explore the ethical implications of scientific concepts, while using those scientific concepts to question human social relations. The play is "a rambunctious and argumentative and very ballsy discussion of all sorts of ideas" (Williams, 2002), and demonstrates not only the successful engagement of theatre with science, but the ability of theatre to explore scientific concepts in a unique and useful way, and in doing so elucidate new ideas about the implications of science for society.

Wicked Sisters is a play about biological competition and competition in life. Elizabeth Perkins (2003:v) explains that "In less than two hours spent with four women in their fifties, Alma De Groen presents the issues surrounding the elevation of rational intelligence above imaginative intelligence and the effect this has on the way we try to ensure our personal survival." The play juxtaposes the lives of four women, Meridee, Judith, Lydia and Hester, against a computer created by Meridee's deceased husband Alec which is "evolving strategies for artificial life forms: things that life anywhere in the universe would have to do in order to survive." (De Groen, 2002:1). The artificial life forms in the computer are ruthless, blindly competing for superiority and survival. At times, the women also behave that way, exemplified by Judith's ruthless "My first responsibility is to myself" (24), but they cannot always compete blindly as Alec's "critters" do. Each struggle to ensure the best life for herself, and to do the right thing by her companions. Each of the women has secrets, revealed over the course of the play, and together they question the role of biological survival in their actions. Meridee concludes "Competition. That's what drives us, whether you like it or not." (28), but Hester counters, "In their heart of hearts I think people are more altruistic than that. Even those in this room." (27). This juxtaposition of human relationships with ruthlessly competing computerised life forms allows the audience to see the connections forged between the two sets of ideas, between the human and the scientific. In this play, Alec's scientific experiment acts as a metaphor for the relationships between the four women, yet the connections between these two narrative elements go deeper than mere metaphor, and the women's relationships shed light on the validity and implications of Alec's experiment. The two do not exist in isolation, nor do they interact on a merely superficial level. In *Wicked Sisters*, the scientific and the humane are intrinsically and fundamentally related.

The play questions the notion of survival of the fittest and whether it truly applies to the human situation. Alec, the researcher investigating competition through the artificial life forms in the computer, clearly believed that it did. He took a mistress but discarded her when she refused to have his child, something Hester describes as "a Darwinian maximising his offspring" (39). He delighted in his computerised extinction events, to which he added all sorts of sound effects and paraphernalia. Describing his research, Hester explains:

It's one of the dreams of science: to start from nothing and create organisms we'd consider intelligent. It was what he did with that dream that scared me. Alec truly believed it was a universal law that the weak would die out no matter what you did, and that his results proved it. He was such a fundamentalist I often thought it must have been difficult reminding him he wasn't God. (11)

It is ironic that Alec lived his life by the credo of ruthless maximisation of survival, yet it was this attitude that ultimately led to his demise. His lack of respect for the emotional requirements of his wife drove her to push him off a cliff – “Proving, in fact, he wasn’t God” (11) says Meridee. It is also interesting to contrast Alec’s ruthless and unfeeling view of evolution and survival of the fittest against Charles Darwin’s view. Writing in *The Origin of Species* (1859), Darwin says:

There is a grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved. (460)

Darwin, one could interpret, viewed the notion of evolution with a certain majesty and beauty, delighting in the notion of new species arising. Alec, though described as Darwinian, delighted in the notion of extinction and destruction, quite opposite to Darwin himself. It is Hester, who plans to take over Alec’s research (which she claims he originally stole from her), whose more moderate views more closely resemble those of Darwin.

In *Wicked Sisters*, “there is no secure divide between the domestic world and the laboratory,” (Beer, 1996:331) – they are, in fact, one and the same. The single room in which the play takes place is Alec’s study within Meridee’s home, a space which in itself merges research and domesticity. Over the course of the play, the space becomes “feminised” (13), further showing the permeation of the humane into the scientific, while the computer dominates the set and periodically calls attention to itself with loud noises reminding the audience of the importance of the concepts of survival of the fittest and competition to the relationships between the four characters. Visually, this space represents the convergence Dasgupta says must exist in the individual searches of “both science and theatre [to] comprehend the nature of reality in all its varied manifestations” (238).

According to Giovanni Frazzetto (2002:820), “The amalgamation of scientific and artistic activities can be seen as an auspicious goal, linking two cultures that, in reality, are not so very far apart.” By combining the ideas of competition in evolution and competition in human individual survival, De Groen creates a situation thick with ethics and dilemmas over right and wrong. According to Kirsten Shepherd-Barr (2006: 53), it is this concern with ethics and morality that makes theatre the ideal medium for exploring the impact of science on society. She explains that “The heightened role of ethics in discussions of science and medicine deeply connects these fields to the theatre, since at some level most dramas have a concern over moral problems, and none more so than science plays with their inevitable ethical tangles.” As a science play, *Wicked Sisters*

emphatically tackles some of the ethical questions of evolutionary biology, such as the existence of altruism, social selection pressures, and the concepts of intelligence and empathy as an influence of the evolution of a species.

By examining these ethical dilemmas through theatre, De Groen can pose her argument in a way not available in science alone, and in doing so explores different aspects of the issues. Where purely scientific discussions are limited to more abstract concepts, *Wicked Sisters* examines evolutionary issues in a more humane environment, showing their relevance to society. This is not to say that discussions of abstract concepts are not important or necessary, but such theatrical explorations of issues allow a different sort of discussion to occur. Gillian Beer (173) states that “questions can change their import when posed within different genres.” By exploring the issues that are important to science by means of theatre, new and different concerns can and will arise. Beer (1) explains that “ideas cannot survive long lodged within a single domain. They need the traffic of the apparently *inappropriate* audience as well as the tight group of co-workers if they are to thrive and generate further thinking” (emphasis in original). By this thinking, we cannot hope to fully understand the full implications of scientific ideas without appropriating them into new contexts such as theatre. Dasgupta asserts that “Ideas exist in the world to be shared. And in any particular era, the most adventurous artists incorporate the advanced thought of their times (and all times) into their work” (246). This sharing of ideas is essential for progressing as a society and fully coming to grips with the ethical issues advances in science pose. Shepherd-Barr shows that “theatre can play a vital role in helping us understand our encounter with the increasingly urgent questions and issues posed by science” (218), and *Wicked Sisters* clearly exemplifies this ability.

In an interview with Robyn Williams (2002), Alma De Groen explained “I think it's important for theatre to be presenting ideas about science because science is so important and theatre I think neglects science as a subject.” It is this engagement with themes in science that makes *Wicked Sisters* such an engrossing play. According to Perkins (2003:xi-xii), De Groen “does not encourage the notion that everything is relative. The firm moral centre is an imaginative understanding of the human effort to survive, an effort that requires empathy and sharing, and intelligent ethics rather than Darwinian competition.” It is by combining issues in human relationships and issues in evolutionary biology that *Wicked Sisters* makes this argument, and successfully confronts its audience with issues that are perhaps outside of their usual sphere of thought but are important to consider for understanding both our place in the universe and the ways that we act as individuals.

According to Shepherd-Barr, “theatre [has] pride of place as the site of substantive intersection between the hard sciences and the humanities. No other genre

or art form has seen such a powerful merging of the two cultures of science and humanities" (1). Plays such as Caryl Churchill's *A Number*, Michael Frayn's *Copenhagen* and Čapek's *R.U.R.* demonstrate this intersection, dealing with scientific themes and ideas in a humane rather than abstract manner. Frezzetto (820) agrees, saying that "theatre, which is often a means of entertainment or a stimulus for moral, political and personal reflection, is becoming a vehicle for scientific didacticism. It can convey concepts and stimulate elaborate reflections about them," thus enabling the public to effectively engage in active debate about these issues. Shepherd-Barr goes one step further, suggesting that "the intersection of science and the stage may represent precisely the kind of 'third culture' that [C. P.] Snow envisioned" (45). It is the duality of ideas, the humane and the logical, the artistic and the scientific, that makes this exploration possible.

Eminent dramatist Peter Brook (quoted by Shepherd-Barr, 49) said that "today ... we have a new mythology. Science explores the same eternal mysteries with a new symbolic language." The symbolic language of the stage makes scientific issues accessible to a new audience. By exploring the intersection of morality and biology, *Wicked Sisters* sheds new light on both ethics in evolutionary biology and human relationships. It transcends notions of a barrier between science and art, effectively using art to probe new questions and posit interesting solutions to questions in science.

References

- Beer, Gillian (1996). *Open Fields: Science in Cultural Encounter*. Clarendon Press, Oxford.
- Čapek, K. (1921). *R.U.R.* (P. Selver, Trans.). *R.U.R. and The Insect Play* (pp. 1-104). Published 1961 Oxford: Oxford University Press.
- Churchill, C. (2002). *A Number, Plays: 4* (pp. 161-206). Published 2008 London: Nick Hern Books.
- Darwin, Charles (1859). *The Origin of Species*. Edited by J. W. Burrow. Penguin Books, London.
- Dasgupta, Gautam. (1985). From Science to Theatre: Dramas of Speculative Thought. *Performing Arts Journal*, 9(2/3) p.p. 237-246.
- De Groen, Alma (2002). *Wicked Sisters*. Current Theatre Series, Currency Press, Strawberry Hills.
- Frayn, M. (1998). *Copenhagen*. London: Methuen Drama.

Frazzetto, Giovanni (2002). "Science on the Stage: Recent Plays on Scientific Topics Show That Science and Theatre Have More in Common Than It Appears." *EMBO Reports*. 3(9) p.p. 818-820.

Perkins, Elizabeth (2003). "Introduction" in *Wicked Sisters* by Alma De Groen, Current Theatre Series, Currency Press, Strawberry Hills.

Shepherd-Barr, Kirsten (2006). *Science on Stage: from Doctor Faustus to Copenhagen*. Princeton University Press, Princeton.

Snow, C. P. (1959). *The Two Cultures*. Cambridge University Press, Cambridge.

Williams, Robyn (2002). "The science of Wicked Sisters", interview with Alma De Groen. *The Science Show*, ABC Radio National, 18 May 2002. Transcript available at <http://www.abc.net.au/rn/sciencehow/stories/2002/554437.htm>.

Depression Risk in Young Adults: Could a Dopamine Receptor Gene Moderate the Role of Childhood Adversities?

Courtney Landers

Abstract

The mood disorder ‘major depression’ is a significant contributor to disability in society. One of the most significant determinants of an individual’s risk of depression is their experience of adversities during childhood. Evidence is beginning to accumulate for a gene x environment relationship between childhood environment, including adversities, and genotype for the *DRD4*-exIII-VNTR. The presence of a 7rpt allele for this polymorphism has been linked to increased sensitivity of externalising behaviours, pro-social behaviour and altruism to childhood environment. A recent study has found that the sensitivity of an individual’s behavioural activation system – a cortical circuit that controls motivation and reaction to reward – is protected from adversities in childhood by this 7rpt allele. In this paper, a known negative correlation between the behavioural activation system and depression led to the hypothesis that *DRD4* may also play a protective role against childhood adversities in terms of the risk of depressive symptoms. However, in a representative sample of the population ($n = 1,630$) aged 20-24, *DRD4* and childhood adversity were not found to interact in the formation of depressive symptoms ($\beta=0.069$, $p=0.381$).

Introduction

Major depression is a mood disorder that is fast becoming a major issue in public health. The World Health Organization (WHO) rates depression as the fourth leading cause of disability worldwide, predicting it will become the number two cause – behind only obesity and diabetes-related disorders – by 2025 (Sapolsky, 2009). Depression is characterised by psychological symptoms, including anhedonia (inability to feel pleasure) (Beevers & Meyer, 2002; Sapolsky, 2009) and lowered motivation towards reward (Pinto-Meza et al., 2006), neuroticism, negative affectivity and guilt (Roseman & Rodgers, 2006; Sapolsky, 2009),

along with physical symptoms such as psychomotor retardation and vegetative symptoms. All symptoms tend to occur in rhythmic patterns (Hasler et al., 2010; Sapolsky, 2009).

A well-established determinant of an individual's risk of major depression is the experience of adversity in childhood, including neglect, abuse, conflict and tension within a household along with parental alcohol and drug abuse or mental ill health (Rosenman & Rodgers, 2004). Childhood adversities (CA) make a significant contribution to a society's mental health burden in general (Scott, Varghese and McGrath, 2010) via an association with the first onset (Green et al., 2010) and persistence (McLaughlin et al., 2010) of mental illness, particularly mood disorders. Although no links have been found between particular types of CA and specific mental illnesses (Green et al., 2010; Kessler, Davis & Kendler, 1997), CA have been shown to increase risk of depression (Korkeila et al., 2005; Korkeila et al., 2010) and its onset during adolescence (Hazel et al., 2008). Variation in the strength of this predictive relationship across individuals raises the question of whether a gene x environment relationship may be involved.

The study of gene x environment (GxE) interactions is undergoing a change in the way phenotypes are approached and measured. A bias towards investigation of negative environmental factors and negative individual outcomes has favoured the advance of the diathesis-stress model of GxE interactions, where particular genotypes increase the vulnerability of individuals to negative events (Belsky et al., 2009; Belsky, Bakermans-Kranenburg & van Ijzendoorn, 2007). Recent research has suggested that the differential-susceptibility model proposed by Belsky (1997) may be more accurate. Proponents of this model argue that during human evolution, positive selection would have favoured the production of offspring that differed in their reactivity to the environment. Although the majority of environments would have been moderate (where extremes in behaviour would have been disadvantageous), challenging environments that required more extreme behaviours would have arisen regularly enough that it would be necessary for survival to produce offspring with varying reactivity (Belsky et al., 2007; Belsky et al., 2009; Boyce & Ellis, 2005). A proposed example of the consequences of this adaptation in the modern world is the interaction of childhood environment with individual genotypes for the dopamine receptor D4 (*DRD4*).

Dopamine in the brain acts in a neuromodulative manner; rather than mediating short-term action potentials, it changes neuronal structure and function over the long-term (Rondou, Haegerman & Van Craenenbroeck, 2010). In this way, dopamine is involved with motor output, endocrine function, attention, memory and learning. The current study focuses on the consequences of dopamine's role in motivation and reward response (Rondou et al., 2010). Dopamine acts via specific receptors such as *DRD4*, a member of the D2 family of dopamine

receptors which is involved in the modulation of adenylyl cyclase, and thus the catalysation of cAMP production, via coupling to G proteins (Rondou et al., 2010). The significance of *DRD4* to GxE interactions stems from the existence of a variable number of tandem repeats (VNTR) polymorphism in exon three of the *DRD4* gene – the *DRD4*-exIII-VNTR genotype. Globally, the most common allele of this polymorphism is the 4-repeat (4rpt) allele (64% prevalent), followed by the 7rpt (21%) and 2rpt (8%) alleles, though these figures differ across populations (Chang et al., 1996). Evolutionary studies indicate the 7rpt allele is younger than the 4rpt allele, having increased rapidly in frequency due to strong positive selection despite the association of the allele with lower *DRD4* expression, lower G-coupling potential and reduced second messenger generation (Ebstein et al., 2006; Rondou et al., 2010).

Recent research suggests the 7rpt allele conveys differential susceptibility to CA in the form of parenting style. The level of externalising behaviours – opposition, overaction, aggression and attention (Bakermans-Kranenburg et al., 2008; Propper et al., 2007) – shown by toddlers with different *DRD4*-exIII-VNTR alleles appears to vary with maternal sensitivity. Children with one or more 7rpt alleles (+7rpt) showed greater behavioural responses to maternal sensitivity than children without a 7rpt allele (-7rpt) *with the same exposure to maternal sensitivity* (Bakermans-Kranenburg & van Ijzendoorn, 2006; Bakermans-Kranenburg & van Ijzendoorn, 2007). Specifically, +7rpt children with insensitive mothers showed more externalising behaviours than -7rpt children, while +7rpt children with sensitive mothers showed less externalising behaviours than -7rpt children. The same pattern of results has been observed for interaction of sensation-seeking in toddlers with parenting quality (Sheese et al., 2007). Furthermore, when maternal sensitivity in parenting was improved using a specially-designed intervention program, +7rpt children showed the largest reduction in externalising behaviours, especially when their mothers showed the greatest improvements in sensitivity (Bakermans-Kranenburg et al., 2008). Similar findings have emerged recently, linking parenting, the 7rpt allele and positive, beneficial behaviours. The security of a toddler's attachment to his or her mother was found to affect altruistic behaviour – more secure children behaving more altruistically, and less secure children behaving less altruistically – but *only* in the presence of the 7rpt allele; in its absence, attachment and altruism showed no interaction (Bakermans-Kranenburg & van Ijzendoorn, 2011). Likewise, parenting was found to influence 'prosocial behaviour', but only in +7rpt children (Knafo, Israel & Ebstein, 2011). Thus there is mounting, correlating evidence that the 7rpt allele is a differential-susceptibility allele, increasing the *reactivity* of individuals possessing it to the quality of parenting they receive. This theory is further supported by the absence of main effects between the *DRD4* gene and any of the behaviours investigated. Absence of such main effects is required for genes to fit the differential-susceptibility model

(Belsky et al., 2007; Belsky et al., 2009). If, by making individuals more reactive to childhood adversities, the *DRD4* 7rpt allele can influence the development and display of dopamine-related traits such as externalisation and sensation seeking, it follows that the 7rpt allele could create variation in the relationship between CA and risk of major depression. Indeed, a possible connection has already been found between a dopamine-related personality measure with strong links to major depression – the behavioural activation scale – and the *DRD4*-exIII-VNTR x CA interaction.

The Behavioural Activation System (BAS) and Behavioural Inhibition System (BIS) were described by Gray (1972; 1981) as a means of providing a biological basis of personality, and from that, behaviour. In their simplest forms, BIS and BAS are cortical circuits which stably and consistently determine how an individual will respond to cues of punishment and reward respectively (Gray, 1972; Gray, 1981; Carver & White, 1994). The BAS in particular controls and produces positive feelings when reward occurs, as well as the motivation to move towards rewarding goals (Campbell-Sills, Liverant & Brown, 2004; Kasch et al., 2002), thus underlying learning, emotion and motivation (Campbell-Sills et al., 2004). The strength of an individual's BAS is most commonly measured using Carver and White's (1994) BAS scale (a corresponding, intersecting scale exists for BIS). This scale has been directly designed to predict an individual's responses to events with an attached element of reward, scoring them within three dimensions determined and confirmed by factor analysis - drive, fun-seeking and reward responsiveness (Carver & White, 1994; Jorm et al., 1999). Direct testing and experimental use has shown that this design successfully produces a measure of personality rather than mood (Campbell-Sills et al., 2004; Gomez & Gomez, 2002; Jorm et al., 1999). This is an important distinction, given that personality is a much more stable and reliable predictor of behaviour than mood (Campbell-Sills et al., 2004; Gomez & Gomez, 2002; Jorm et al., 1999). BAS scores nonetheless correlate with measures of positive affect (Carver & White, 1994; Campbell-Sills et al., 2004). This relationship, plus correlations with positive processing of emotional stimuli and symptoms of anhedonia (Beevers & Meyer, 2002; Campbell-Sills et al., 2004; Gomez & Gomez, 2002) could mediate what appears to be a strong relationship between BAS scores and depression.

Depressed individuals have consistently been found to have lower BAS scores than non-depressed controls (Kasch et al., 2002; Campbell-Sills et al., 2004; Pinto-Meza et al., 2006). Furthermore, these BAS scores remain stable over diagnosis; entering remission from an episode of major depression does not alter an individual's BAS score (Kasch et al., 2002; Campbell-Sills et al., 2004; Pinto-Meza et al., 2006). In fact, BAS scores predict the progression of a depressive episode over a six-month period (McFarland et al., 2006). However, BAS scores have not yet been compared before and after the first onset of major depression.

There is thus no indication yet of whether a low BAS score is a predictor of major depression, or a 'scar' signifying a profound change in personality caused by onset of depression (Kasch et al., 2002; Pinto-Meza et al., 2006). Despite this knowledge gap, it is clear that a strong, stable relationship exists between BAS and major depression.

Given a recent finding based on data from the Pathways Through Life (PATH) study that the presence of the *DRD4* 7rpt allele results in higher BAS scores across individuals who have experienced the same level of CA (Das et al., 2011), the relationship between BAS and depression provides a possible pathway for explaining variation in the effect of CA on depressive risk. In short, it appears a GxE interaction between *DRD4*-exIII-VNTR genotype and CA may moderate depressive risk via moderation of BAS. Investigating this pathway will involve examining each of the interactions involved, as well as determining whether *DRD4*-exIII-VNTR genotype x CA may moderate depressive risk without the intermediate of BAS. This investigation used multiple linear regressions within the PATH dataset to answer three key questions. First, can the protection of BAS from CA by the *DRD4* 7rpt allele be confirmed? Second, can the relationship between BAS and depression be confirmed within the PATH dataset? Finally, is there an interaction between *DRD4*-exIII-VNTR genotype, CA and depression, and if so is this independent of BAS, or is BAS a critical mediator?

Methods

Participants

The sample was taken from the PATH Through Life Project: a longitudinal study of three groups (20-24, 40-44 and 60-64 at baseline) of individuals randomly chosen from the electoral roll of Canberra and Queanbeyan, aimed at investigating mental health and ageing through surveys every four years for 20 years (Anstey et al., 2011). Participants contributed buccal epithelial cells for genotyping and were surveyed on many variables including experience of childhood adversities (included only in the first wave of the survey), personality, health and access to services (Anstey et al., 2011). This investigation used data from the first wave (Wave 1) of surveys in the +20 age cohort, comprised of 2,404 individuals aged 20-24. Only individuals reporting to be of European descent and with a particular *DRD4*-exIII-VNTR genotype (see below) were used in the investigation; individuals with missing values for any variables of interest were also excluded from the investigation. Final sample size was $n = 1,630$.

Measures

Depression was measured using the Goldberg Depression Scale (Goldberg et al., 1988), a two-part survey designed to quickly assess the occurrence of depressive symptoms in the past month. Scores range between 0 and 9; these were used as a continuous measure of depressive symptoms, without categorisation (Butterworth, Rodgers and Windsor, 2009).

CA were measured using a questionnaire designed by Rosenman and Rodgers (2004). This questionnaire measures experience of 17 different adversities – including neglect, abuse, conflict and tension within a household along with parental alcohol and drug abuse or mental ill health – up to the age of 16. Responses were summed, without weighting any items, to create a continuous variable. Evidence associating particular adversities with risk of mental illness, specifically depression, is as yet inconclusive (Green et al., 2010; McLaughlin et al., 2010); analysis was conducted using the CA score as a whole, without grouping any adversities (Das et al., 2011).

Experience of stressful life events (SLE) within the past six months was measured using the 12-item List of Threatening Experiences (Brugha et al., 1985). Sensitivity of the behavioural activation system was measured using the three BAS subscales designed by Carver and White (1994). Each subscale was used as an individual, continuous variable. The PATH dataset contains 10 different alleles and 25 different genotypes for the *DRD4*-exIII-VNTR polymorphism. Functional status has only been determined for the 4rpt and 7rpt alleles; incorporation of other, rare alleles without known functional properties into phenotypic analysis has been shown to confound results (Das et al., 2011). For this reason, only individuals with 4/4, 4/7 and 7/7 genotypes were included in the analysis.

Statistical Analysis

Data analysis was performed using SPSS18 (Chicago: SPSS Inc.). Multiple linear regressions were performed controlling for age, gender and total years of education in all models. Given strong evidence for correlation between experience of SLE and depression (Korkeila et al., 2005; Korkeila et al., 2010), individual experience of SLE within the last six months was also controlled for in all models. Regression models were generated by setting outcome variables, then entering covariates, followed by predictors and then, if applicable, an interaction term. For each model, R^2 values and change in R^2 values from previous steps were noted, along with beta and p values. The first round of regressions was performed using the BAS subscales - Drive, Fun seeking and Reward response - as outcome variables with each subscale tested in separate

models. The predictors were *DRD4*-exIII-VNTR genotype, number of CA experienced and an interaction variable for *DRD4*-exIII-VNTR genotype and CA. *DRD4*-exIII-VNTR genotype was entered into the models as a binary categorical predictor; the 4/4 genotype was classified as -7 and the 4/7 and 7/7 genotypes were pooled into a +7 category, due to the rarity of the 7/7 genotype (Das et al., 2011). Although CA were observed in a range of 0-14, few individuals reported more than 5 adversities; scores equal to or greater than 5 were pooled to create a scale from 0 to 5 where 0 = no adversities and 5 = five or more adversities. A second round of regressions tested whether the BAS subscales were significant predictors of depression. Each BAS subscore was tested as a predictor for depression within its own regression. A third round of regressions then investigated whether *DRD4*-exIII-VNTR genotype, number of CA experienced and an interaction variable for *DRD4* x CA significantly predicted depressive symptoms.

Results

Sociodemographic characteristics of this sample are reported in Table 1. Sociodemographic variables, number of CA and SLE, and mean Goldberg scores were not significantly different between 7+ and 7- groups. Hardy Weinberg Equilibrium could not be directly confirmed within the dataset used but Das et al. (2011) report that the distribution of genotypes within the PATH dataset is not significantly different from Hardy Weinberg Equilibrium.

Regression models (using the same controls) were generated for possible correlation between depressive symptoms (as outcome) and BAS scores, revealing a significant association (Table 2). Greater scores for depressive symptoms were negatively associated with lower scores for all three BAS subscales.

A series of linear regressions (controlled for age, total years of education, gender and number of SLE experienced in the past six months) were used to investigate whether BAS scores were significantly predicted by *DRD4*-exIII-VNTR genotype, number of CA experienced and an interaction term for the gene x environment relationship between *DRD4*-exIII-VNTR genotype and CA. Genotype showed no significant prediction of BAS scores. However both CA and the interaction term predicted one or more of the BAS subscores (Table 3). Lower scores on the BAS Reward subscale were correlated with a larger number of reported CA. The interaction term was negatively correlated with both BAS Drive and Reward subscores. In contrast to the result of Das et al. (2011), this suggests that the presence of the 7rpt allele is sensitising to the effects of CA on BAS, rather than protective.

Table 1. Demographic characteristics, adversities and depression measures of individuals with 7+ and 7- *DRD4*-exonIII-VNTR genotypes (Mean \pm s.d. for continuous variables and frequency for categorical variables shown).

		DRD4-exonIII-VNTR genotype		t/ χ^2	df	p
		7- (n = 985)	7+ (n = 645)			
sex				0.276	1	0.599
	Male	471 (59.8%)	317 (40.2%)			
	Female	514 (61.0%)	328 (39.0%)			
age		22.55 \pm 1.5	22.59 \pm 1.5	0.445	1628	0.657
education (years)		14.61 \pm 1.6	14.48 \pm 1.6	-1.624	1621	0.105
CA				7.141	5	0.210
	0	416 (59.1%)	288 (40.9%)			
	1	220 (58.4%)	157 (41.6%)			
	2	120 (65.9%)	62 (34.1%)			
	3	75 (65.2%)	40 (34.8%)			
	4	60 (67.4%)	29 (32.6%)			
	≥ 5	85 (57.0%)	64 (43.0%)			
SLE				8.598	5	0.126
	0	265 (60.6%)	172 (39.4%)			
	1	239 (56.9%)	181 (43.1%)			
	2	212 (64.8%)	115 (35.2%)			
	3	107 (58.2%)	77 (41.8%)			
	4	56 (56.0%)	44 (44.0%)			
	≥ 5	97 (66.9%)	48 (33.1%)			
Goldberg		2.98 \pm 2.4	2.86 \pm 2.4	-0.978	1619	0.328

t tests were performed for continuous variables and χ^2 tests for categorical variables

CA childhood adversity

SLE stressful life events experienced in past six months

Goldberg Goldberg Depression Scale

Table 2. Multiple linear regression models with each Behavioural Activation System subscore predicting depression

Predictors	β	p	R ² (change)
BAS			
drive	-0.127	0.000	0.166 (0.015)
reward response	-0.075	0.000	0.153 (0.015)
fun seeking	-0.072	0.000	0.153 (0.005)

All models controlled for age, gender, total years of education and number of stressful life events experienced in the past six months

p < 0.05 shown in bold

BAS Behavioural Activation System

Table 3. Multiple linear regression models for interactive effect of *DRD4*-exIII-VNTR genotype and childhood adversities on the Behavioural Activation System

Predictors	BAS-drive			BAS-fun seeking			BAS-reward		
	β	p	R ² (change)	β	p	R ² (change)	β	p	R ² (change)
<i>DRD4</i> -exIII-VNTR	-0.018	0.477	0.015 (0.000)	0.017	0.487	0.035 (0.000)	-0.033	0.186	0.007 (0.000)
CA	-0.032	0.135	0.015 (0.000)	-0.023	0.274	0.040 (0.000)	-0.045	0.035	0.012 (0.001)
CA x <i>DRD4</i>	-0.201	0.022	0.018 (0.003)	-0.074	0.395	0.036 (-0.001)	-0.179	0.041	0.010 (0.002)

All models controlled for gender, age, total years of education and the number of stressful life events experienced in the last six months

p < 0.05 shown in bold

CA childhood adversity

BAS behavioural activation system

The final regression model used *DRD4*-exIII-VNTR genotype, number of CA experienced and the *DRD4*-exIII-VNTR genotype x CA interaction variable as predictors for depressive symptoms. While CA showed significant associations with depressive symptoms, *DRD4*-exonIII-VNTR genotype and the *DRD4*-exIII-VNTR genotype x CA interaction variable did not (Table 4). A significant main effect was found between CA and depressive symptoms, with larger numbers of reported CA predicting higher levels of depressive symptoms; however, no significant main effect was found between depressive symptoms and genotype for *DRD4*-exIII-VNTR. There was then no significant interaction of the *DRD4*-exIII-VNTR x CA interaction term with depressive symptoms. This strongly suggests that *DRD4*-exIII-VNTR genotype does not moderate the effect of CA on risk of depressive symptoms in the same way it moderates the impact of CA on BAS scores.

Table 4. Multiple linear regression models with *DRD4*-exIII-VNTR genotype, childhood adversities and an interaction variable predicting depression

Predictors	β	p	R ² (change)
<i>DRD4</i> -exIII-VNTR	0.019	0.404	0.174 (-0.001)
CA	0.191	0.000	0.179 (0.033)
CA x <i>DRD4</i>	0.069	0.381	0.210 (0.000)

All models controlled for age, gender, total years of education and number of stressful life events experienced in the past six months

p < 0.05 shown in bold

CA childhood adversity

Discussion

This investigation has confirmed the previous finding of a relationship between individual sensitivity of the behavioural activation system and depression, but has not confirmed a previously found relationship between the BAS, experience of CA and genotype for the *DRD4*-exonIII-VNTR polymorphism. It also failed to find an interaction between CA, *DRD4*-exIII-VNTR genotype and depression. These results have interesting implications and suggest directions for future research.

The findings of this investigation confirm the existence of a negative correlation between individual BAS scores and depression (Kasch et al., 2002; Campbell-Sills et al., 2004; Pinto-Meza et al., 2006). Given that the BAS has a biological basis - i.e. it is associated with particular brain centres, the development and operation of which will affect behavioural activation - this association has the potential to assist elucidation of the biological basis of depression, including its genetic links. Before this can occur, the nature of the BAS-depression relationship needs to be determined. Not only could the PATH dataset be used to confirm the stability of BAS scores over depression states (Kasch et al., 2002; Campbell-Sills et al., 2004; Pinto-Meza et al., 2006), it contains longitudinal data that could be used to investigate whether BAS scores change or remain constant over the first onset of depression. The question of whether low BAS scores are a 'scar' of depression or a contributing cause (Kasch et al., 2002) is an important one - can depression permanently alter personality, or does our personality predispose us to depression? Tackling this question will help direct further research into what mediates the BAS-depression relationship. Anhedonia and rhythmic patterns are both symptoms of depression (Sapolsky, 2009); both have also been suggested as links to BAS. Beevers and Meyer (2008) found that a significant association of BAS with positive experiences, which were significantly associated with positive expectations, mediated a significant negative association between BAS and anhedonic symptoms of depression. A relationship between morningness-eveningness (individual patterns in alertness and activity over a day) and depression also appears to correlate with BAS via positive affect; a daily rhythm in behavioural activation, and thus in positive affect, has been suggested as an explanation (Hasler et al., 2010).

This investigation also confirms that within the PATH dataset, CA and *DRD4*-exIII-VNTR genotype interact to affect BAS Drive and Reward subscores. However the interaction found here is *negative*. Thus instead of supporting the theory proposed by Das et al., (2011) of a protective role for *DRD4*-exIII-VNTR genotype in mediating a main effect between CA and these BAS subscores, it suggests a sensitising role, or possibly a differential susceptibility role like the one *DRD4*-exIII-VNTR genotype appears to play between childhood

environment and externalising behaviours, altruism and prosocial behaviour. The explanation for this conflict may be two variations in method between this investigation and that of Das et al. (2011). First, the baseline group used was different; while this investigation used data only from wave 1 of the +20 group, Das et al. (2011) used +20 data up to and including wave 3. The first onset of depression is known to often occur in early adulthood (Hazel et al., 2008), so it is possible that personality changes occurred within the PATH sample between waves 1,2 and 3 of the 20+ group. Second, the coding of the *DRD4*-exIII-VNTR genotype variable and thus the *DRD4*-exIII-VNTR genotype x CA interaction variable was conducted differently between these two investigations (Das, personal communication); this has statistical implications that could also explain the differing results. The exact reasons behind the conflict are worth investigating; it is likely however that given a few adjustments in method, the analysis conducted in this investigation would confirm the finding of Das et al. (2011). The task for future research will then be the explanation of this relationship, which will first involve demonstrating the same interaction within other datasets. Determining the psychological and biological basis of this relationship could then be complicated by the contrast between the role *DRD4*-exIII-VNTR genotype plays between CA and BAS, compared to its role between CA and other forms of behaviour. Previous studies have found the presence of the 7rpt allele appears to increase an individual's susceptibility to both positive and negative environments, in the form of parenting, resulting in respectively more positive or negative outcomes in terms of externalising and prosocial behaviour (Bakermans-Kranenburg and van Ijzendoorn, 2006; Bakermans-Kranenburg and van Ijzendoorn, 2007; Bakermans-Kranenburg et al., 2008; Bakermans-Kranenburg and van Ijzendoorn, 2011; Knafo et al., 2011). In this case however, the 7rpt allele is protective against increasingly negative environments; the 'complementary' role in a differential-susceptibility context would be to decrease the positive affects of increasingly positive environments on behaviour, an unlikely occurrence. How can the same allele play a differential-susceptibility *and* protective role in mediating the effects of very similar stressors on behavioural traits closely linked via their connections to motivation, reward and thus dopamine (Rondou et al., 2010)?

Despite confirmation of correlations between BAS and depressive symptoms and between a *DRD4*-exIII-VNTR genotype x CA interaction and BAS (even with possible conflict over the nature of those interactions), no correlation between the *DRD4*-exIII-VNTR genotype x CA interaction and depression was found, even when BAS subscores were not controlled for. To some degree, this is expected. The *DRD4* allele has not been linked to depression before. The polymorphism most discussed in relation to gene x environment moderation of depression is the serotonin transporter polymorphism 5 - HTTLPR (Chipman et al., 2007). However, there are a number of relationships that are difficult

to explain in the absence of a *DRD4*-exIII-VNTR genotype x CA interaction link to depression. As discussed earlier, the *DRD4*-exIII-VNTR genotype x CA interaction appears to moderate those BAS subscores most closely linked to depression via positive affect and anhedonia - drive and reward. Furthermore, the investigation that first found the protective effect of *DRD4*-exIII-VNTR genotype on BAS from CA also found that the presence of the 7rpt allele protected individuals from a decrease in levels of resilience after experiencing CA (Das et al., 2011). Resilience levels are known to be one of the many determinants for risk of mental illness, particularly depression (Das et al., 2011). Finally, the connection between dopamine and depression via anhedonia, reward response and motivation (discussed in Introduction) cannot be ignored (Rondou et al., 2010; Sapolsky, 2009).

Limitations and Confounds

It is possible that the different findings of this investigation compared to the previous investigation by Das et al. (2011) could be due to its design. The most common limitation for analysis based on self-questionnaire data is the problem of biased recall (Korkeila et al., 2005; Korkeila et al., 2010; Rosenman and Rodgers, 2004). A recent investigation into the relationship between the reasons by which individuals with depressive symptoms and those around them understand their illness, and the 'objective' causes behind those depressive symptoms, suggests that self-report questionnaires may not accurately capture individual risk factors for depression. Kendler, Myers and Halberstadt (2011) found that individuals who had experienced SLE that made their illness 'understandable' to themselves and others were just as likely to have clinical (other illnesses), environmental (e.g. child abuse), genetic or personality factors that 'explained' their depression as individuals with depression who lacked experience of recent trauma. In other words, external stressors are not sole explanations for depressive symptoms, but individuals with depression and those around them may treat these events as such. This raises the question of whether individuals may fail to record other possible causes for their depression in self-questionnaires, which would disguise the underlying cause for a perhaps substantial portion of depression cases, confounding the analysis of investigations such as this one. Given that the results of Kendler et al. (2011) are correct, equally as confounding is why stressful life events are still found to be such strong predictors of depression. Perhaps those individuals with reasons for their illness are more likely to report their symptoms, and individuals without reasons more likely to feel their symptoms are unjustifiable and unexplainable, and fail to report them. Controlling for SLE when including CA in an analysis is common practice due to their demonstrated link to depression independently and additively with CA (Hazel et al., 2008; Korkeila et al., 2005; Korkeila et al., 2010). Yet in the situation discussed above this may remove from analysis both variability caused by factors other than

SLE, and those individuals most likely to report depressive symptoms, leaving a sample size that is too small to capture gene x environment interactions with mental illness.

Even if the reporting of SLE did not bias the reporting and analysis of other causes for depressive symptoms, SLE still present other potential limitations. First, attempting to analyse the effects of solely CA on depression presents the challenge of controlling not only for a main effect between SLE and depression, but also a complex interactive effect of CA and SLE; CA may lead to SLE due to sensitisation to trauma and predisposition to adult risk factors (Korkeila et al., 2005; Korkeila et al., 2010). Second, the PATH dataset only contains records of SLE experienced by participants in the last six months before the survey occurred, an interval that has been suggested as too short both to capture all SLE which may be contributing to depressive symptoms and for SLE to begin to affect occurrence of depressive symptoms (Chipman et al., 2007).

The strong comorbidity of depression with other mental illnesses (Kessler et al., 1997) could also have confounded these findings. Given that the first onset of depression is often during adolescence (Hazel et al., 2008) the use of the +20 age group from the PATH dataset should have helped ensure that individuals experiencing depressive symptoms had not yet developed symptoms of other mental illnesses. However, this age bracket does not exclude individuals who may be experiencing depressive symptoms comorbid to mental illness that onset in early adolescence or childhood, such as Attention Deficit Hyperactive Disorder (ADHD).

Comorbidity of ADHD with depression may explain the failure of this investigation to find an association between the *DRD4*-exIII-VNTR genotype x CA interaction and depression. Symptoms of depression have been found to be comorbid with ADHD in individuals between 18 and 44 years of age (Kessler et al., 2006), and several studies, including meta-analyses, have found a small but significant association between ADHD and the *DRD4* 7rpt allele (Faraone et al., 1999; Faraone et al., 2000; Muglia et al., 2000). A possible explanation may be that *DRD4*-exIII-VNTR genotype mediates the effect of CA only in depression occurring comorbid to ADHD and thus that the age group analysed was too young to contain enough individuals with symptoms of comorbid depression and ADHD. A further explanation could be that the *DRD4*-exIII-VNTR genotype x CA interaction does not associate directly with depression at all but associates with ADHD instead, and through comorbidity to ADHD, with other mental illnesses.

The final limitations on this investigation are those inherent in the PATH Through Life dataset. There are significant advantages in using this dataset. First, the use of random selection from the electoral roll for participant recruitment

provides a more community-based, unbiased sample than would be obtained if individuals were recruited via hospitals, GPs and other institutions. Second, the inclusion of Goldberg's Depression Scale in the surveys administered to PATH participants also provides data on *sub-clinical* levels of depression, allowing analysis of the full spectrum of depressive symptoms and how genes and the environment interact to influence that spectrum. However, as the symptoms of depression and other mental illnesses recorded in the PATH dataset are not clinically diagnosed (instead measured using questionnaires) this makes them, and any results based on them, less reliable than if these symptoms had been clinically diagnosed.

Conclusion

No interaction between CA, *DRD4*-exIII-VNTR genotype and depression was found in this study, and a relationship previously found between BAS, CA and *DRD4*-exonIII-VNTR genotype was not confirmed. However, this investigation contributes to observations of a relationship between an individual's BAS score and depression.

Acknowledgements

This study was approved by the ethics committee of the Australian National University. All participants gave informed written consent to be included in the PATH study. The author is grateful to Simon Easteal and Debjani Das for their supervision of this investigation and to Susan Tan for her work in providing the genotype data required for the investigation. The author thanks Dr Moyra Mortby and Professor Mauricio Arcos-Burgos for critical review of the manuscript.

References

- Anstey KJ, Christensen H, Butterworth P, et al.: Cohort Profile: The PATH through life project. *International journal of epidemiology*, 2011.
- Bakermans-Kranenburg MJ, van Ijzendoorn MH: Gene-environment interaction of the dopamine D4 receptor (*DRD4*) and observed maternal insensitivity predicting externalizing behavior in preschoolers. *Developmental Psychobiology* 48:406-409, 2006.

- Bakermans-Kranenburg MJ, Van IMH, Pijlman FT, et al.: Experimental evidence for differential susceptibility: dopamine D4 receptor polymorphism (DRD4 VNTR) moderates intervention effects on toddlers' externalizing behavior in a randomized controlled trial. *Developmental Psychobiology* 44:293-300, 2008.
- Bakermans-Kranenburg MJ, van Ijzendoorn MH: Differential susceptibility to rearing environment depending on dopamine-related genes: new evidence and a meta-analysis. *Developmental Psychobiology* 23:39-52, 2011.
- Beevers CG, Meyer B: Lack of positive experiences and positive expectancies mediate the relationship between BAS responsiveness and depression. *Cognition and Emotion* 16:549 - 564, 2002.
- Belsky J: Variation in susceptibility to environmental influence: An evolutionary argument. *Psychological Inquiry* 8 182 - 186, 1997.
- Belsky J, Bakermans-Kranenburg MJ, van Ijzendoorn MH: For better and for worse: Differential susceptibility to environmental influences. *Current Directions in Psychological Science* 16:300 - 304, 2007.
- Belsky J, Jonassaint C, Pluess M, et al.: Vulnerability genes or plasticity genes? *Molecular Psychiatry* 14:746-754, 2009.
- Boyce WT, Ellis BJ: Biological sensitivity to context: I. An evolutionary-developmental theory of the origins and functions of stress reactivity. *Development and Psychopathology* 17:271-301, 2005.
- Brugha T, Bebbington P, Tennant C, et al.: The List of Threatening Experiences: a subset of 12 life event categories with considerable long-term contextual threat. *Psychological Medicine* 15:189-194, 1985.
- Butterworth P, Rodgers B, Windsor TD: Financial hardship, socio-economic position and depression: results from the PATH Through Life Survey. *Social Science and Medicine* 69:229-237, 2009.
- Campbell-Sills L, Liverant GI, Brown TA: Psychometric evaluation of the behavioral inhibition/behavioral activation scales in a large sample of outpatients with anxiety and mood disorders. *Psychol Assess* 16:244-254, 2004.
- Carver CS, White TL: Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment. *Journal of Personality and Social Psychology* 67:319-333, 1994.
- Chang FM, Kidd JR, Livak KJ, et al.: The world-wide distribution of allele frequencies at the human dopamine D4 receptor locus. *Human Genetics* 98:91-101, 1996.

- Chipman P, Jorm AF, Prior M, et al.: No interaction between the serotonin transporter polymorphism (5-HTTLPR) and childhood adversity or recent stressful life events on symptoms of depression: results from two community surveys. *American Journal of Medical Genetics B Neuropsychiatric Genetics* 144B:561-565, 2007.
- Das D, Cherbuin N, Tan X, et al.: DRD4-exonIII-VNTR moderates the effect of childhood adversities on emotional resilience in young-adults. *PLoS One* 6:e20177, 2011.
- Ebstein RP: The molecular genetic architecture of human personality: beyond self-report questionnaires. *Molecular Psychiatry* 11:427-445, 2006.
- Gomez R, Corr PJ: Attention-Deficit/Hyperactivity Disorder symptoms: Associations with Gray's and Tellegen's models of personality. *Personality and Individual Differences* 49:902-906, 2010.
- Green JG, McLaughlin KA, Berglund PA, et al.: Childhood adversities and adult psychiatric disorders in the national comorbidity survey replication I: associations with first onset of DSM-IV disorders. *Archives of General Psychiatry* 67:113-123, 2010.
- Hasler BP, Allen JJB, Sbarra DA, et al.: Morningness-eveningness and depression: preliminary evidence for the role of the behavioral activation system and positive affect. *Psychiatry Research* 176:166-173, 2010.
- Hazel NA, Hammen C, Brennan PA, et al.: Early childhood adversity and adolescent depression: the mediating role of continued stress. *Psychological Medicine* 38:581-589, 2008.
- Jorm AF, Christensen H, Henderson AS, et al.: Using the BIS/BAS scales to measure behavioural inhibition and behavioural activation: Factor structure, validity and norms in a large community sample. *Personality and Individual Differences* 26, 1999.
- Kasch KL, Rottenberg J, Arnow BA, et al.: Behavioral activation and inhibition systems and the severity and course of depression. *Journal of Abnormal Psychology* 111:589-597, 2002a.
- Kasch KL, Rottenberg J, Arnow BA, et al.: Behavioral activation and inhibition systems and the severity and course of depression. *J Abnorm Psychol* 111:589-597, 2002b.
- Kendler KS, Myers J, Halberstadt LJ: Do reasons for major depression act as causes? *Molecular Psychiatry* 16:626-633, 2011.

- Kessler RC, Davis CG, Kendler KS: Childhood adversity and adult psychiatric disorder in the US National Comorbidity Survey. *Psychological Medicine* 27:1101-1119, 1997.
- Kessler RC, Adler L, Barkley R, et al.: The prevalence and correlates of adult ADHD in the United States: results from the National Comorbidity Survey Replication. *The American Journal of Psychiatry* 163:716-723, 2006.
- Knafo A, Israel S, Ebstein RP: Heritability of children's prosocial behavior and differential susceptibility to parenting by variation in the dopamine receptor D4 gene. *Development and Psychopathology* 23:53-67, 2011.
- Korkeila J, Vahtera J, Nabi H, et al.: Childhood adversities, adulthood life events and depression. *Journal of Affective Disorders* 127:130-138, 2010.
- Korkeila K, Korkeila J, Vahtera J, et al.: Childhood adversities, adult risk factors and depressiveness: a population study. *Social Psychiatry and Psychiatric Epidemiology* 40:700-706, 2005.
- McFarland BR, Shankman SA, Tenke CE, et al.: Behavioral activation system deficits predict the six-month course of depression. *Journal of Affective Disorders* 91:229-234, 2006.
- McLaughlin KA, Green JG, Gruber MJ, et al.: Childhood adversities and adult psychiatric disorders in the national comorbidity survey replication II: associations with persistence of DSM-IV disorders. *Archives of General Psychiatry* 67:124-132, 2010.
- Muglia P, Jain U, Macciardi F, et al.: Adult attention deficit hyperactivity disorder and the dopamine D4 receptor gene. *American Journal of Medical Genetics* 96:273-277, 2000.
- Pinto-Meza A, Caseras X, Soler J, et al.: Behavioural inhibition and behavioural activation systems in current and recovered major depression participants. *Personality and Individual differences* 40, 2006.
- Propper C, Willoughby M, Halpern CT, et al.: Parenting quality, DRD4, and the prediction of externalizing and internalizing behaviors in early childhood. *Developmental Psychobiology* 49:619-632, 2007.
- Rondou P, Haegeman G, Van Craenenbroeck K: The dopamine D4 receptor: biochemical and signalling properties. *Cell and Molecular Life Sciences* 67:1971-1986, 2010.
- Rosenman S, Rodgers B: Childhood adversity in an Australian population. *Social Psychiatry and Psychiatric Epidemiology* 39:695-702, 2004.

Rosenman S, Rodgers B: Childhood adversity and adult personality. Australian New Zealand Journal of Psychiatry 40:482-490, 2006.

Scott J, Varghese D, McGrath J: As the twig is bent, the tree inclines: adult mental health consequences of childhood adversity. Archives of General Psychiatry 67:111-112, 2010.

Sheese BE, Voelker PM, Rothbart MK, et al.: Parenting quality interacts with genetic variation in dopamine receptor D4 to influence temperament in early childhood. Developmental Psychopathology 19:1039-1046, 2007.

Change at the Top: Succession in the Chinese Communist Party

Brendan Forde

Abstract

Faced with the challenge of leadership change, the Chinese Communist Party (CCP) has sought and established an institutionalised process of succession. The People's Republic of China (PRC) is an authoritarian regime; leadership change presents specific problems in the management of succession at the elite levels of the political process. The two line leadership succession mechanism is the means by which the CCP has attempted to provide certainty and stability in leadership succession. It is a normative institutionalised process, regulating elite behaviour and ensuring certainty in succession. The Party has learnt from substantial past challenges to evolve into an organisation which recognises the need to prevent social upheaval. The CCP has evolved from an organisation with leadership based on extra-institution and charismatic leadership, to an organisation which engages in planned succession and orderly processes in elite politics. The mechanism enables observers (both domestic and international) to know in advance who next will lead China. The mechanism also sets fixed terms for the incumbent leadership, providing the system with clearly signposted periods indicating when the succession process is to begin. The cult of the charismatic leader able to select their successors has given way to a stable, institutionalised and predictable process. The two line leadership succession mechanism is an indicator of the changes taking place in Chinese politics today.

Introduction

The year 2012 will be an important year for China. For only the second time in the history of the Chinese Communist Party (CCP) and the People's Republic of China (PRC) a semi-institutionalised whole scale renewal of political leadership will begin. The present Party-state leadership will voluntarily step aside and a new generation of leaders will take office. President Hu Jintao will retire from all positions and Vice-President Xi Jinping will assume office as the new leader of China. Over a period of twelve months the incumbent generation will divest itself of all formal offices while the successor generation will assume control

over the Party-state. This article examines the institutional procedures which have been developed by the CCP to facilitate and manage a stable and successful transition of leadership. With the rise of the PRC as a major power it is more important than ever to better understand the key institutions which contribute to the stable governance of the nation.

Since taking power in 1949 the CCP has evolved from a revolutionary movement to a party of government and administration.¹ The leaders of the CCP today are markedly different from their predecessors in a few crucial respects. Mao Zedong and Deng Xiaoping wielded significant extra-institutional power and influence, the source of their authority and political legitimacy stemming largely from their own charismatic presence.² Jiang Zemin and Hu Jintao, on the other hand have not enjoyed the same level of charisma as Mao or Deng. As David Bachman writes of Mao

In short, Mao built the system that rules China today... Through both spontaneous and manufactured means, Mao carried a charismatic aura about his person. His will to power was unstoppable and he was absolutely ruthless in securing his unconstrained power and freedom of action.³

Mao's successors, while still powerful, could not command the same level of charismatic authority:

1 Samuel P. Huntington has written about three broad stages through which a revolutionary party transforms into an established ruling party: "In the initial transformation phase, the party destroys the traditional sources of authority. In the second phase, it consolidates its authority as an organisation against the charismatic appeals of the founding leader. In the third, adaptive phase, the party deals with legal-rational challenges to its authority, which are, in large part, the product of its earlier successes". Samuel P. Huntington, "Social and Institutional Dynamics of One-Party Systems" in Samuel P. Huntington and Clement H. Moore (eds.), *Authoritarian Politics in Modern Society: The Dynamics of Established One-Party Systems*, (New York: Basic Books, 1970), pp., 32-33.

2 The term charisma is used here in the Weberian sense, that is, applied "... to a certain quality of an individual personality by virtue of which he is set apart from ordinary men and treated as endowed with supernatural, superhuman, or at least specifically exceptional powers or qualities". The critical feature of this source of power is: "Charismatic authority is thus specifically outside the realm of everyday routine and the profane sphere. In this respect it is sharply opposed both to rational, and particularly bureaucratic, authority and to traditional authority whether in its patriarchal, patrimonial, or any other form... Bureaucratic authority is specifically rational in the sense of being bound to intellectually analysable rules; while charismatic authority is specifically irrational in the sense of being foreign to all rules." This theory is essentially a sociological interpretation of charisma and emphasises both the "exceptional characteristics of the individual invested with charisma and the social conditions fostering the emergence and recognition of charismatic leaders". Max Weber, *The Theory of Social and Economic Organisation*, (New York: Oxford University Press, 1947). The charismatic authority of Mao and Deng was significantly different- Mao's charisma was clearly derived from his role in the foundation of the CCP and PRC. As the leader of the revolution he could rely upon his charismatic authority to circumvent and supersede the authority and institutions of the state. Deng's charisma was less discernibly strong but it was significant enough for him to wield significant extra-institutional authority during his time as paramount leader. The political legitimacy of both Mao and Deng came largely from their charisma.

3 David Bachman, "The Limits on Leadership in China", *Asian Survey*, Vol. 32, No. 11, (Nov. 1992), p. 1046.

In contrast, Deng Xiaoping's political resources and background suggest that he has had significantly less power than Mao. Deng played an important role in the communist movement prior to 1949, but he was not one of the top ten or so leaders of the CCP when it came to power.⁴

While in the past the CCP was dominated by charismatic personalities who were able to select their own successors, the leaders of today cannot rely on that same ability. The Party now governs through collective leadership. Past and current leaders are no longer able to anoint a chosen successor for the next generation. This has been achieved through semi-institutionalised processes. Matters of succession without regulation will typically trigger a power struggle between the different figures vying for the senior position. This is particularly the case in the context of a succession taking place free from a transition.

The two line leadership succession mechanism is the subject of this paper. As the means by which the CCP engages and manages leadership change, it is not only an important exemplar of the institutional trend in Chinese politics but also an important indicator of the conscious attempts made by the CCP leadership to ensure the continuing viability of the Party as the dominant political organisation in Chinese society. It is the strongest and most coherent attempt made by an authoritarian regime to institutionalise not only the transition and succession of leadership but also the exercise of power. The mechanism has created new rules for political exchanges; it has restrained the contest for power among the individuals in the highest echelons of the CCP. Taking place over the course of twelve months, the mechanism ensures the stable and binding transition of leadership. Each senior leader of the PRC occupies three key offices: President of the PRC, General Secretary of the CCP and Chairman of the Central Military Commission. Through these three offices the leader is the head of state, Party and the military. This authority is not limitless; the President is constitutionally bound to serve for two five year terms only and all senior Party leaders are compelled to retire after they turn seventy years old. Clearly identifying and designating a successor is a pressing task for the CCP. A successor will come from among the political elite and will be identified and elevated at the beginning of the incumbent's second term. The successor will be designated as Vice President of the PRC, Vice Chairman of the CMC, First Secretary of the CCP Secretariat and President of the CCP Central Party School. The appointment of the successor to these key posts has three purposes: firstly, by making him⁵ the deputy to the incumbent the relationship between the two is sufficiently regulated and demarcated. Secondly, the successor is able to gain

4 Ibid., p.1049.

5 The masculine personal pronouns "him" and "he" are used as elite politics in the PRC remains dominated by patriarchy. A few women have risen to prominent positions within the regime, but none of them were considered as serious contenders to become senior leader (despite their clear abilities).

key experience and legitimacy in the highest levels of government. Thirdly, by publically identifying and elevating a successor the Party sends a message to the other elite players that he (the successor) has been selected and political conflict on this matter must cease.⁶ The mechanism itself is centred on the nine member Politburo Standing Committee (PBSC).⁷ The members of the PBSC are the nine most important individuals in the Chinese state. The senior officers of the government and Party simultaneously hold positions on the PBSC; indeed, the source of their authority comes largely from their membership of the PBSC.⁸

Institutions — The Locus of Succession

The two line leadership succession mechanism is a political institution. Equally institutionalised succession and transition processes in the CCP are the product of past and present evolution in norms and practice. While an institution can be a concrete organisation it can also constitute rules, norms and other more ephemeral aspects of political activity. Institutions are frequently invoked in political science, being applied to formal bodies like parliaments and amorphous entities like social clans, as well as other components of the socio-political universe also being described as institutions.⁹ The term institution applies to a diverse grouping of entities but the utility of an institution can be found not in what an institution is but in what it does. A good institution is an effective institution.¹⁰ They can range from a statutory provision to a collection of

6 The origins of two lines of leadership within the CCP can be traced back to the 1950's when Mao Zedong distinguished between his own position and that of the General Secretary: "The Politburo is the 'court of political planning,' and authority is concentrated in the Politburo Standing Committee and the Secretariat. As chairman, I am the commander; as general secretary, Deng Xiaoping is the deputy commander". "Deng Xiaoping chengwei dang de di'er dai lingdao hexin" [Deng Xiaoping's designation as the party leaderships second generation core] in Guo Dehong, Zhang Zhanbin and Zhang Shujun (eds.), *Dang he guojia zhongda juice de licheng* [The course of important policy decisions in our party and county]. Vol. 8. (Beijing: Hongqi chubanshe, 1997). pp. 365-366. This same quote appears in Chen Mingxian, Cui Yanming, "Mao Zedong du Deng Xiaoping de ruogan lunshu" ["Mao Zedong's certain discussions on Deng Xiaoping"], *Zhonggong dangshi ziliao* [Materials on Party history] No. 58, (June 1996).

7 The PBSC is, according to Nathan and Gilley: "On paper just a Party organ, the PBSC makes all important decisions on national policy concerning the economy, foreign affairs, defence, science and technology, welfare, and culture- policy in every sphere of life. It can deal with any issue it wants to. No other organ of the Party or government has the power to contradict its decisions." Andrew J. Nathan and Bruce Gilley (eds.), *China's New Rulers: The Secret Files*, (London: Granata, 2002), p. 8. The actual size of the Politburo Standing Committee has expanded over the past two decades. But while its size has changed the PBSC's only constant is that the membership is made up of an odd number of members to guard against the possibility of a deadlocked vote. The nine members of the PBSC are selected from among the twenty members of the Politburo who are in turn elected by the three hundred and seventy members of the Central Committee. Ibid., pp. 7-8.

8 Ibid. p. 9.

9 B. Guy Peters, *Institutional Theory in Political Science: The 'New Institutionalism'*, (London: Continuum, 2005), P. 29. Peters argues that: "An institution is anything from a formal structure to very amorphous entities". Ibid., p. 29.

10 Ibid., p. 125.

normative customs and unwritten conventions.¹¹ Institutions are ephemeral in that they constitute interests and cause things to happen, even though they are socially constructed and not material in a physical sense.¹²

The analysis of institutions, and institutionalism, is as Johan P. Olsen asserts, a specific way of interpreting political institutions.¹³ As Ronald L. Jepperson has argued, institutions provide a framework to explain the presence of authoritative rules and binding organisation.¹⁴ An institution, according to Olsen, can be conceived as an enduring collection of prescribed behavioural rules and organised practices, embedded in structures and processes.¹⁵ An institution is not necessarily a formal structure; it can be understood as a collection of norms, rules, understandings and routines.¹⁶ In turn, these interrelated rules and routines define appropriate political activity in terms of relations between roles and situations.¹⁷ There are competing accounts of the role of institutions. However, this paper agrees that:

Institutions are comprised of regulative, normative and cultural-cognitive elements that, together with associated activities and resources, provide stability and meaning in social life.¹⁸

Institutions require a broader organisational context within which to operate and they arise due to historical and political events in each country.¹⁹ This is certainly the case with the two line leadership succession mechanism with the mechanism standing as an institution to the organisation of the CCP.²⁰ One of the

11 No sufficient all encompassing and conclusive definition of a political institution exists, as the term refers to an area of great diversity. As Schmidt writes: "Institutions may be real in the sense that they constitute interests and cause things to happen, even though they are socially constructed and thus not material in a 'put your hand or rest your eyes on it' sense". Vivien A. Schmidt, "Discursive Institutionalism: The Explanatory Power of Ideas and Discourse", *Annual Review of Political Science*, (2008), p. 318.

12 Ibid., p. 318.

13 Johan P. Olsen, *Governing Through Institution Building: Institutional Theory and Recent Experiments in Democratic Organizations*, (Oxford: Oxford University Press, 2010), p. 7.

14 Ronald L. Jepperson, "Institutions, Institutional Effects, and Institutionalism", Walter W. Powell and Paul J. Di Maggio (eds.), *The New Institutionalism in Organisational Analysis*, (Chicago: The University of Chicago Press, 1991), p. 143.

15 Olsen, op. cit, p. 36.

16 Peters, op. cit., p. 26.

17 Ibid. p. 29.

18 W. Richard Scott, *Institutions and Organisations: Ideas and Interests*, (Los Angeles: Sage, 2008), p. 48.

19 Marco Orrù, Nicole Woolsey Biggart, and Gary G. Hamilton, "Organisational Isomorphism in East Asia", Walter W. Powell and Paul J. DiMaggio (eds.), *The New Institutionalism in Organizational Analysis*, (Chicago: The University of Chicago Press, 1991), p. 366.

20 Defining a political party as an organisation and not an institution is not contested, although this is most likely due more to terminological ambiguity, than to more specific clauses. An example of this contestation comes from Peters : "Political parties are one of the dominant players in the political arena and like any organisations can be conceptualised as institutions. Many of them do have the persistence that one expects of an institution...". Peters, op. cit., p. 125. Persistence alone does not make an institution, and while political parties differ dramatically, the CCP is clearly a highly organised entity with strong institutional features. By this reckoning, the CCP is an organisation with institutional elements. Peters seems to agree with this definition: "Political parties may differ, however, in the degree of institutionalisation of their structures and

most important elements of an institution is that it is a structural feature of the polity.²¹ The extension and expansion of the role of institutions is both a process and a property of organisational arrangements implying that an organisational identity has been established and accepted as legitimate.²² This involves clarity and agreement on rules governing behaviour including the allocation of formal authority.²³ By providing a framework of rules, along with attendant formalisation of practice, uncertainty and conflict over roles are significantly diminished.²⁴ An institution so conceived is a normative institution.

While normative institutions establish a framework within which to bind political behaviour, to categorise normative institutions as being exclusively a structure for constraint would be misleading.²⁵ All institutions simultaneously empower and control participants, acting as vehicles for activity within certain constraints.²⁶ Normative institutions can be understood in terms of “what is good or bad about what is” in light of “what one ought to do”.²⁷ This comes from the consensus which arises out of the rules of behaviour and the common justification and expectations which arise out of those rules.²⁸ The utility of theories involving institutional constraints comes from the applicability and adaptability of outcomes across different cultures and societies.²⁹

Succession or Transition?

The two line leadership succession mechanism is a semi-institutionalised process broadly conforming to the characteristics of a normative institution. Arranging succession which will maintain political stability in an authoritarian regime such as the PRC is difficult, as Myron Rush writes:

in the extent to which they attempt to utilise rules to control the behaviour of their members. At one extreme might be communist, fascist and other strongly ideological parties that attempt to mould the behaviour of their members through formalised rules as well as through ideologies that could internalise those controlling values”. Ibid. p. 124.

21 Ibid., p. 18. Peters writes: “That structure may be formal (a legislature, an agency in the public bureaucracy or a legal framework) or it may be informal (a network of interacting organisations, or a set of shared norms). As such an institution transcends individuals to involve groups of individuals in some sort of patterned interactions that are predictable, based upon specified relationships among the actors”. Ibid. p. 18.

22 Olsen, op. cit., p. 127.

23 Ibid., p. 127.

24 Ibid.

25 Jepperson, op. cit., p. 146.

26 Ibid. p. 146.

27 Schmidt, op. cit. p. 306.

28 Olsen, op. cit., p. 127.

29 Andrew J. Nathan and Kellee S. Tsai, “Factionalism: A New Institutional Restatement”, *The China Journal* No. 34, (Jul. 1995), p. 161

Communist rulers, on the whole, have gone to remarkable lengths in efforts to arrange their succession. Usually they have been reluctant to call attention to these efforts, for they indicate the temporal limits of their own rule.³⁰

The danger here lies in the lack of an institutionalised process to govern the succession. Without a clearly enunciated timeframe for the succession process and without clearly defined mechanisms which compel the incumbent to stand aside, a successor could instigate action to assume leadership, and the incumbent could become insecure expecting a leadership takeover.³¹ Such circumstances do not create effective and stable government. This non-institutionalised succession arrangement conforms to much of the succession experience of the PRC.³² The CCP has attempted to address this by creating a mechanism which both provides a clearly outlined process for succession while impelling the incumbent to retire.

Before proceeding it is important to define the precise characteristics of political succession and transition (the danger exists that the terms may be used interchangeably). Rush argues that:

Political succession is the transfer of sovereign power from a ruler or government to a successor. Such rotation is made inevitable by man's mortality, but it does not always wait on the death of leaders. Since changed circumstances cannot always be met by change in the leaders themselves, they may be required by the constitution or compelled by force to leave office during their own lifetime.³³

Paul 't Hart and John Uhr place succession and transition in a more practical context than Rush when they describe transition as:

...change in the party or coalition that holds government. Transitions imply that multiple ministers or political appointees are rotating at the same time, and that all or many of the newcomers experience a shift from campaigning, waging opposition or holding non-political offices to running executive government...³⁴

They hold that succession denotes:

30 Myron Rush, *How Communist Party States Change their Rulers*, (Ithaca: Cornell University Press, 1974).

31 Ibid.

32 The case of Mao Zedong and Lin Biao immediately springs to mind.

33 Myron Rush. *Political Succession in the USSR*. (New York: Columbia University Press, 1967). p. 1.

34 Paul 't Hart and John Uhr. "Power Transitions and Leadership Successions in Government" in Paul 't Hart and John Uhr (eds.). *How Power Changes Hands: Transition and Succession in Government*. (New York: Palgrave Macmillan, 2011). p. 2.

...personnel changes in individual leadership positions within government (or political parties). The most dramatic succession of all is that between holders of the head of government position.³⁵

The definition of succession can be applied to the analysis of leadership succession in elite Chinese politics; it is indeed a definition which has universal application. However, the definition of transition requires modification to render it more useful to this study. While succession refers to a change *within* the leadership of the governing organisation, the term transition denotes the change *of* the governing organisation. This particular categorisation is inapplicable to the context of the PRC as a change in the governing organisation would lead to displacement of the CCP as the ruling Party and thus the fall of the regime. When expanded to encompass changes among the broader political groupings within the CCP the definition of transition becomes applicable to the study of leadership change in the PRC. Leadership transitions in the PRC occur on an intra-Party basis, that is, while the governing party may stay the same the *generation*³⁶ of leaders holding office changes. The concept of political generations, in this context, is peculiar to the CCP. Five generations have led the PRC, each with a senior leader. While Mao Zedong was the senior leader of the First Generation, Xi Jinping is the senior leader of the Fifth.³⁷ The relationship between succession and transition requires clarification. It would be erroneous to assign a causal relationship between transitions and successions. As t' Hart and Uhr write: "Each transition entails a number of successions, but not every succession necessarily comes about as part of a transition."³⁸ Extra-transitional successions are generally unplanned and arise from the premature death or

35 Ibid. p. 5.

36 The CCP divides its members into different generational categories based upon when the individual became members and their age. This particular definition of members was first identified by A. Doak Barnett. A. Doak Barnett, *Cadres, Bureaucracy and Political Power in Communist China*, (New York: Columbia University Press, 1967).

37 The concept of political generations in the Chinese context requires further specification. As Cheng Li writes: "The term 'political generations' is frequently used but not carefully defined". Cheng Li, "Jiang Zemin's Successors: The Rise of the Fourth Generation of Leaders in the PRC", *The China Quarterly*, No. 161 (Mar., 2000), p. 4. A careful definition of the term comes from Michael Yahuda who has explored this very subject: "The term 'political generation' should not be equated with the concept of biological generation as between father and son... It is the contention here that the differences in historical experiences and the reactions to those experiences as between different age groups are of greater significance than what might be called purely biological considerations". Michael Yahuda, "Political Generations in China", *The China Quarterly*, No. 8, (Dec., 1978), p. 795. Both Li and Yahuda seem to draw from the work of Karl Mannheim on political generations. Mannheim distinguishes between a generation as demographic category and as an experiential category. Mannheim also argues that generations cannot be considered as monolithic entities. Based on a variety of factors, each generation holds a diversity of views. Karl Mannheim, *Essays on Sociology of Knowledge*, (London: Routledge and Keegan, 1952). Li further refines the definition when he writes: "The term 'political generations' that many sinologists have used in their studies may be more accurately identified as 'political elite generations'". Li, "Jiang Zemin's Successors", op. cit. p. 5. This is an important distinction which any conceptualisation of organised leadership change in the PRC must remain cognisant of. This study deals with the political affairs of the elite and the means by which the elite seek to protect and further their monopoly over power.

38 t' Hart and Uhr, op. cit..

removal of a leader. Such unplanned successions can be a source of instability for authoritarian regimes like the PRC. By creating clear distinctions between the different generations and strongly compelling the incumbent leaders to step aside, the mechanism avoids a situation whereby senior figures from previous generations can continue to exercise disproportionate influence from retirement.

From Ambiguity to Certainty

The exercise of disproportionate power from retirement by a few key figures informed and impelled the development of processes to initiate and manage leadership change. The context for the emergence of such processes can be found during the period immediately after the end of the Cultural Revolution.³⁹ Hua Guofeng, Mao's anointed heir and successor, was removed from power by Deng Xiaoping and his supporters. After the end of the Cultural Revolution in 1976 many members of the elite who had been purged or removed from power during the course of the Cultural Revolution, including Deng Xiaoping, were restored to positions of authority. Since the foundation of the regime, the PRC and CCP had only one leader, Mao Zedong, and he left office only through death. While Hua could not command a level of support and authority commensurate with Mao, his status as the chosen successor vested him with some authority and legitimacy. Hua had been elevated to power during the closing days of the Cultural Revolution replacing Zhou Enlai as the Premier of the PRC after the latter's death in 1976. As Vice Chairman he was Mao's successor. Much emphasis was placed on his status as Mao's personally anointed successor, as evidenced by the note which Mao wrote to Hua in his dying days.⁴⁰ Hua's status as Mao's successor proved to be both a benefit and a political liability. The recently restored members of the political elite were reluctant to serve under a figure representative of the circumstances which had removed them from power in the first place. To counteract the various limitations to action the restored elite chose a different path to challenge Hua. Rather than challenge him openly, Hua was gradually divested of his offices,⁴¹ while the position of Chairman was totally abolished.⁴² Deng had mobilised the restored elite and had risen to the

39 The Cultural Revolution, initiated by Mao in 1966 (and ended with his death in 1976), displaced many members of the pre-1966 elite and destabilised the entire country.

40 The most famous quote from the hand written note reads: "...with you in charge, I am at ease". Reprinted in John Gardner, *Chinese Politics and the Succession to Mao*, (London: The Macmillan Press, 1982).

41 Hua held several offices simultaneously: Chairman of the CCP, Chairman of the CCP Central Military Commission, Premier of the PRC, Minister of Public Security and First Secretary of Hunan Province. David S. Goodman, "China: The Politics of Succession", *The World Today* No. 4, (April, 1977).

42 Lowell Dittmer, "Patterns of Elite Strife and Succession in Chinese Politics", *The China Quarterly*, No. 123 (Sep., 1990).

position of the dominant figure in the Chinese party-state.⁴³ However, Deng did not assume a senior role in the Party or government. He became Chairman of the CMC and for a time served as a Vice Premier. Despite not serving as the formal head of the party-state, Deng enjoyed disproportionate influence over the political process and became the acknowledged paramount.⁴⁴ Without a formal, unitary executive office to clearly mark the leader of the party-state, Deng and the other members of the elite were free to influence and control the political process. Those figures who did serve as the formal leaders of parts of the party-state (such as General Secretary Hu Yaobang, and his successor Zhao Ziyang) found that they were functionally answerable to a group of retired leaders. As the members of the restored elite were of an advanced age, China had become, in the words of Parris H. Chang, a “gerontocracy”.⁴⁵

While the dissolution of the office of Chairman was conceived as an attempt to achieve, as Kenneth Lieberthal has described it, “functional differentiation” between the offices of Party and state, the real effect was “functional ambiguity”.⁴⁶ With some figures being able to dictate from retirement, it was not clear who was really in charge. This ambiguity most directly affected the General Secretary Hu Yaobang, Deng’s anointed successor. Hu found his actions increasingly constrained by the interference of the retired leaders, including Deng. Coupled with this was the destabilising factionalism which was gripping the Party, with many of the retired figures standing opposed to Hu and his reform programme.⁴⁷ Hu reportedly confronted Deng and complained that he could not execute his position while Deng remained involved in politics: “Be an

43 Fewsmith writes that the most important factor assisting Deng was “... the revolutionary legitimacy Deng possessed by virtue of his long participation in and major contributions to the victory of CCP and the administration of the PRC prior to the Cultural Revolution. Nevertheless, despite such revolutionary legitimacy, Deng did not challenge Hua Guofeng in intra-party meetings and then articulate an agenda but rather the other way around, underscoring the importance of issues in legitimating leadership.” Joseph Fewsmith, *Elite Politics in Contemporary China*. (Armonk NY: ME Sharpe, 2001).

44 Dittmer, op cit. p. 408

45 Chang writes: “Thus, under Deng, a leadership system of gerontocracy emerged in which the elders ultimately exercised greater influence than the younger leaders. Long Marchers who had seized power in 1949, and who had been purged in Mao’s Cultural Revolution and later politically rehabilitated, were still ultimately running the country in the 1980s. The Chinese leadership system remained highly personalised and not institutionalised, and the power of a leader largely depended on his past, personal qualities and *guanxi* (networks of personal connections) and much less on his official position. This was why the general secretary of the Party and the premier, who were theoretically the ranking Party and government officials, had to take orders from the old guard.” Parris H. Chang. “Changing of the Guard”. *The China Journal*. No. 45 (January, 2001).

46 Kenneth Lieberthal, “China’s Political Reforms: A Net Assessment”, *Annals of the American Academy of Political and Social Sciences*, Vol. 476, China in Transition (Nov., 1984).

47 The factions were broadly organised along the lines of differing attitudes to reform. The reformists (including Hu Yaobang and Zhao Ziyang) wanted to extend the scope of economic reform, while the conservatives (including Chen Yun) wanted to limit the scope. These two groupings were sharply divided by age, with the retired leaders making up the leadership of the conservative faction. Deng’s position existed between these camps, pushing and shielding the reformists while a peer of the conservatives, by virtue of his age.

example. I cannot work efficiently while you are still in power.”⁴⁸ While Hu was formally the head of the CCP, in truth: “...the party general secretary was not the real leader but was more of a clerk who had to please several elderly bosses; nor did he have secure tenure....”⁴⁹ Hu’s plea to Deng to retire contributed to his eventual removal in 1987. Hu was replaced by Premier Zhao Ziyang. Perhaps Deng recognised the mistakes of his relationship with Hu, as he vested Zhao with greater authority. Two lines of leadership between Deng and Zhao on economic planning and policy making were already clear. In 1986 Deng received a delegation from Yugoslavia and informed them that, with regards to economic policy making, that he set the direction of policy while Zhao carried it out in detail.⁵⁰ Two lines also became apparent in military affairs, with Zhao being appointed as a senior Vice Chairman of the CMC.⁵¹ The fundamental role of Deng as an extra-institutional leader remained unchanged. During Soviet leader Mikhail Gorbachev’s visit to China in 1989 Zhao informed him in a meeting that while Deng had formally retired from all Party offices (he was still Chairman of the CMC), his wisdom and experience were invaluable resources for the CCP and on all important questions and decisions. Deng would remain firmly in charge.⁵² This comment (which aggrieved relations between Zhao and Deng) confirmed that Deng continued to wield significant authority from retirement.

Along with the factional conflict among the elite, Chinese society was changing significantly. In the midst of the expansion of economic reforms, protests in favour of the extension of political reforms increased. These protests were driven by university students and culminated in the occupation of Tiananmen Square in early 1989. On the evening on May 27 eight leaders of the restored elite gathered at Deng Xiaoping’s residence in Beijing.⁵³ Apart from Deng himself,

48 Pang Pang, *The Death of Hu Yaobang*, (Honolulu: University of Hawaii, 1989).

49 Chang, op. cit.

50 “Deng Xiaoping he Zhao Ziyang de guanxi” [“The relationship between Deng Xiaoping and Zhao Ziyang”], *Duwowei xinwen wang* [DW Internet News], 08/01/2007.

51 Yan Kong writes: “The party CMC created after the 13th National Congress dropped Yu Qiuli, Zhang Aiping and Yang Dezhi [senior generals]. In their place, the commission recruited party chief Zhao Ziyang as the first vice-chairman... The state CMC formed at the 7th National People’s Congress in 1988 introduced the newly appointed chiefs of the three general headquarters...The first vice-chairman’s seat was specifically created for Zhao Ziyang, apparently to pave the way for a smooth transfer of power from Deng to Zhao, the latter not have [sic.] any personal connections...with the military”. Yan Kong, “Institutional Developments in China’s Central Military Commission”, *Jane’s Intelligence Review*, Vol. 5, No. 4 (1993).

52 Andrew J. Nathan and Perry Link (eds.), *The Tiananmen Papers*, (London: Little Brown and Company, 2001).

53 Almost to make a point about his role as an extra-institutional figure Deng refused to live in the leadership compound in the Zhongnanhai. As Fewsmith writes: “Outside observers have long referred to Deng Xiaoping as China’s ‘paramount leader’, but Zhao’s memoir makes clear precisely how preeminent he was. Deng worked at home and summoned others to meet with him there [these were official meetings, and minutes were taken]. In the whole volume [of Zhao’s memoirs], there is only one instance in which Deng travelled to Zhongnanhai, and that was to preside over a formal Politburo meeting. Deng may have been subject to the pressure of other senior leaders, but there is not an obvious instance of Deng yielding against his own preference to the will of others. Deng may have been influenced by others, but he made up his own mind”. Joseph Fewsmith, “What Zhao Ziyang Tells Us about Elite Politics in the 1980’s”, *China Leadership Monitor* No. 30, (Fall, 2009), p. 3.

Chen Yun, Li Xiannian, Peng Zhen, Deng Yingchao, Yang Shangkun, Wang Zhen and Bo Yibo attended. The assembled group constituted the core of the second generation of leaders and the leadership of the conservative faction. Absent from this meeting was Premier Li Peng, who had been a major factional opponent of Zhao and a vocal critic of his conciliatory attitude to the protestors. With Li's absence no formal leader of the Party or state was in attendance. Although an informal gathering, the consequences of the meeting were significant.⁵⁴ During the meeting Deng announced that Shanghai Party Secretary Jiang Zemin would be proposed to be elevated to replace Zhao Ziyang as General Secretary (who had already been removed). The role of Deng is clear: no one opposed his proposal to elevate Jiang. This decision was made outside of formal party processes.

The Tiananmen crisis damaged the CCP's legitimacy and credibility. The lessons of the period were well learned by Deng and the CCP. Deng resigned as Chairman of the CMC, elevating Jiang to the position. Jiang added to his positions the Presidency of the PRC in 1992. Elevating Jiang to the Presidency was an interesting move. The President of the PRC is an office endowed with significant legitimacy, both at home and abroad even though it is a largely ceremonial post. Jiang could legitimately command authority over the Party, state and military. With the designation of a single leadership figure the ambiguity of differentiated authority was removed. After 1992 Deng intervened less frequently in the political process. Apart from addressing the matters of functional ambiguity arising from the dissolution of the office of Chairman, the CCP also endeavoured to maintain a stable atmosphere among the elite, with an emphasis on struggle and conflict at times of transition. As Fewsmith writes:

It is now more difficult to engage in a winner-take-all contest for political power in a post-Tiananmen atmosphere in which the likely outcome is not that one side will win but that all will loose.⁵⁵

Eventually, Deng's generation of leaders gave way to Jiang's, but not through a planned transition. By the time of Deng's death in 1997 most of the members of the restored elite had died or were dying.⁵⁶ Before his death, Deng had installed Hu Jintao as a successor to Jiang thus ensuring his own influence over events into the future:

54 The transcript of the meeting appears, verbatim, in *The Tiananmen Papers*. Nathan and Link, op. cit.

55 Joseph Fewsmith, "The New Shape of Elite Politics", *The China Journal*, No. 45 (Jan. 2001). Rod Wye adds: "A number of key lessons were taken to heart from this post-mortem examination [of Tiananmen]. Never again was leadership disunity or serious disagreement within the leadership to be permitted to go on public display and allow the leadership to be seen as anything but united and unanimous. Competition between leaders would have to take place behind closed doors. Public disunity within the leadership was seen as one of the crucial factors that encouraged and enabled the sense of chaos and political paralysis in 1989." Rod Wye. "China's Leadership Transition" in David Shambaugh (ed.). *Charting China's Future: Domestic and International Challenges*. (New York: Routledge, 2011).

56 Fewsmith writes: "In the 1990's, the actuarial tables finally caught up with the revolutionary generation that had dominated politics for half a century". Fewsmith, "The New Shape of Elite Politics", op. cit., p. 83.

Deng Xiaoping not only designated Jiang Zemin as his successor but was also able to name Hu Jintao as Jiang's successor. But as the political system moves into the future there will be no ghost of the past deciding the leadership; it will have to be decided among a group of elites of relatively equal standing.⁵⁷

The influence of Deng's "ghost" will not be felt in a substantive manner during the next transition of leadership. When examining the role of Deng in this process, it would be erroneous to conclude that it was his intention to construct an institutionalised mechanism to ensure leadership transition and succession. Deng was more concerned with who held the office rather than how long they held the office.⁵⁸

Jiang's tenure came to an end in 2002 at the 16th CCP Party Congress. Despite the speculation that he would retain power, Jiang and his fellow leaders resigned their political offices. This was unprecedented in the history of the PRC: never before had a leadership transition occurred while the incumbents were alive and in sound health.⁵⁹ Hu Jintao had been designated as the successor to Jiang, and had assumed the offices of Vice President of the PRC, Vice Chairman of the CMC, First Secretary of the Party Secretary and President of the CCP Central Party School. Hu was clearly designated as the successor to Jiang. Two lines of leadership became apparent between Jiang and Hu, particularly in military policy.⁶⁰ Establishing two lines of leadership is crucial to providing experience and legitimacy to the successors. This particular aspect of the succession has been recognised as important and essential by the CCP.⁶¹ Hu replaced Jiang as General Secretary at the 16th Congress and as President a year later at the First Plenary Session of the 10th National People's Congress in 2003. It was not until later that Jiang resigned from the office of Chairman of the CMC. This transition

57 Joseph Fewsmith, "Conclusion: China's Next Three Decades", in Joseph Fewsmith (ed.), *China Today, China Tomorrow: Domestic Policies, Economy and Society* (Lanham, Maryland: Rowman and Littlefield, 2010).

58 Datong Sun and Kaiqi Fang, "Weihe Dang he Guojia changuan liyi de genben baozheng- lun Deng Xiaoping zai xuanba jiebanren wenti shang de lishi gongxian" ["The Fundamental Guarantee to Safeguard the Long Term Interests of the Party and Nation- in Deng Xiaoping's historic contribution to the selection of his successor"], *Jundui zhenggong yanjiu*, [Theoretical Studies on PLA Political Works], No. 4, pp. 18-20.

59 Fewsmith, "The New Shape of Elite Politics", op. cit.

60 See James Mulvenon, "The Crucible of Tragedy: SARS, the Ming 361 Accident, Chinese Party-Army Relations", *China Leadership Monitor* No. 8, (Fall 2003) and James Mulvenon, "The Mystery of the Missing Godfather: Civil-Military Relations and the Shenzhou-5 Manned Space Mission", *China Leadership Monitor* No. 9, (Winter 2004). Two lines have similarly become apparent with Hu and Xi, with the latter taking an active role in military affairs. "Xi Jinping yuanhe ling Meiguo 'jinzhang'" ["Why Xi Jinping makes America 'nervous'"], *Duowei xinwen wang* [DW Internet News], 25/08/2011.

61 An example of this recognition comes from a 1999 meeting between Jiang and Lee Kwan Yew, former Prime Minister and Minister Mentor of Singapore. In the course of their reported conversation, Jiang appeared to deliberately identify himself with Lee as a member of the "older generation of politicians", and that the older generation of leaders had a responsibility to "allow the new generation of leaders to arise as quickly as possible". The most telling part of the exchange is that Lee had initiated a leadership succession a few years before. "Jiang Zemin huijian Li Guangyao" ["Jiang Zemin meets Lee Kwan Yew"], *Xinhua she* [Xinhua News Agency], 27/09/99.

was the most institutionalised in the history of the PRC, yet it was still not free of outside interference. Hu Jintao had been identified and elevated as a successor to Jiang by Deng. By selecting and elevating Hu, Deng limited the struggle over the leadership after Jiang.

With no extra-institutional figure⁶² providing directions from behind the scenes today, how was Xi Jinping selected as the successor to Hu Jintao? This brings to light a significant question arising out of the two line leadership succession mechanism: namely, while it makes clear how the succession occurs, the mechanism does not define how the successors are selected. This is due to the self-imposed secrecy which envelops the CCP on most matters, particularly on leaders, leadership and succession. As Susan Shirk has written:

Understanding how Chinese politics work involves a lot of guesswork. To maintain their façade of unanimity, the Chinese Communist Party and the government keep their internal deliberations secret.⁶³

Li Junru, Vice President of the CCP Central Party School has commented that the CCP has established a democratic mechanism to resolve the “problem of leaders picking successors”.⁶⁴ Li argues that the process of selecting successors within the CCP has become a collective decision among the elite.⁶⁵ Li’s choice of words is telling. By referring to the “problem of leaders picking successors”, Li’s comments most likely reflect the conclusions reached by the Party in the years after the death of Deng. Li’s comments elicit many questions regarding the nature of this democratic mechanism and frustratingly, the answers are not immediately clear. Yet a senior figure in the CCP has acknowledged that some semblance of a democratic process exists to facilitate the selection of the successors.

Conclusion

The two line leadership succession mechanism has been fully implemented once, under circumstances not free from interference. The transition leading into 2012 has so far conformed to the principles and procedures already established. Hu Jintao will undoubtedly step aside and Xi Jinping will assume the role of China’s

62 Deng died in 1997, and no contemporary figure can match his political stature or influence.

63 Susan L. Shirk. *China: Fragile Superpower*. (New York: Oxford University Press, 2007). Frederick C. Teiwes concurs: “It is also necessary to reiterate the difficulty and tentativeness of the exercise. Simply put, to a very large extent current elite politics takes place in a black box, making key developments opaque to the outside observer and conclusions speculative. Nevertheless, some patterns are worth exploring”. Frederick C. Teiwes. “Normal Politics with Chinese Characteristics”. *The China Journal* No. 45 (Jan 2001).

64 “Zhonggong jiang minzhu jue ding er buzai geren qinding jiebanren” [“Democratic Decision of the CCP: no longer personally chosen successor”], *Zhongguo Pinglun Xinwenbao* [China Review News], 22/03/2007.

65 Ibid.

senior leader. Can the model survive the next transition, and the one after that? As transitions occur every decade, it is difficult to project its future success. The model provides some semblance of order to an otherwise incomprehensible process. The two line leadership succession mechanism raises some important points about the state of elite Chinese politics today.

While, like any political system, the political process in China is subject to the push and pull of individual figures and shifting personal allegiances, it is clear that institutions and processes play an increasingly important role. Political players are subjecting themselves to greater regulation, as they have concluded that stability and certainty are more important than complete freedom of action, which can culminate in instability and violence. With such processes at play in the elite, political institutionalisation at other levels is likely to be pursued. It is too early to speculate, but it is clear that if one crucial aspect of the process has been successfully institutionalised, other aspects surely will be in the future.

The implications are clear; greater institutionalisation in one part of the system (particularly at the top) will lead to institutionalisation in other parts. With some certainty on the question of leadership change, the world's most populous and, arguably most powerful authoritarian state has adapted its leadership processes to ensure a stable succession. The two line leadership succession mechanism is an evolving institution designed to enhance the security and development of the CCP and to assist the emergence of China as a world power in the twenty-first century.

Native Tears: Conflict on the Colonial Frontier and *R v Kilmeister (No 2)*

Haydn Marsh

Abstract

It is undisputed that the Myall Creek massacre of 1838, which saw the brutal murder of 28 Aboriginal Australians in the harsh conditions of colonial NSW, continues to be one of the darkest days in Australian history. As such it is appropriate in the light of modern considerations of reconciliation that the causes behind the events which took place at Myall Creek, and the consequences of the litigation which followed, be critically examined from both a legal and historical perspective. This essay seeks to explore why the litigation surrounding the Myall Creek massacre caused such disruption in the context of the frontier conditions of colonial NSW. It also seeks to examine the appropriateness of the actions of the colonial authorities, and the extent to which the atrocities which occurred following the completion of the trial of *R v Kilmeister (No 2)* can be attributed to the colonial Government. In making this examination this essay will consider both legal and historical sources, and demonstrate that the conflict between the law recognising Aboriginal Australians as subjects of the crown and therefore afforded protections of the state, and the sentiments of frontier colonists, caused an inconsistent application of the law, and ultimately resulted in further lawlessness on the colonial frontier with horrific consequences for Aboriginal Australians.

Introduction

Through an examination of the legal and historical environment surrounding the Myall Creek massacre this essay will argue that there was a conflict present in colonial New South Wales (NSW) between the enforced formal law which enshrined the recognition of Aboriginal Australians as subjects of the Crown, and the real conditions of the colonial frontier where considerations of law were subjugated to considerations of survival and emerging behavioural norms. This conflict, as evident through the litigation surrounding the Myall Creek massacre; the range of public opinion as expressed by the colonial newspapers; the massacre at Waterloo Creek; and the discretionary actions of Governor

Gipps, resulted in an inconsistent application of the law surrounding Aboriginal Australians in colonial NSW. Through the eyes of frontier colonists it was this inconsistent enforcement and application of the law that led to feelings of abandonment, leaving them to take the law into their own hands resulting in the indiscriminate murder of numerous Aboriginal Australians. This essay will seek to explore the role that the inconsistent application of law on the frontier played in the injustices subsequently committed against Aboriginal Australians and the extent to which the colonial NSW Government's actions can be attributed to these injustices.

Subjects of the Crown vs Sport of the Colonists

In 1787 then NSW Governor Arthur Phillip received instructions as to how relations with the native population of Australia were to be conducted. The Governor was required to ensure that the colony “conciliate” the affections of the Aborigines and “live in amity and kindness with them”.¹ Further the Governor was required to ‘punish those subjects who “wantonly” destroy the Aborigines.’²

Fifty years further on, this aspiration to protect the native populations of NSW was still being pursued by the colonial authorities. In the important and much cited 1836 case of *R. v Jack Congo Murrell*³ the NSW Supreme Court had to decide whether the native ‘Murrell’, who had killed a fellow Aboriginal man, was to be subject to British law.⁴ Ultimately ‘Murrell’ was not convicted on the basis of a lack of evidence, however this did not preclude the court from finding that Aboriginal Australians were indeed subject to, and afforded the protection of, British law.⁵ This finding was significant as it meant not only that Aboriginal Australians could be found liable for killing a fellow Aborigine, but as they were subjects of British law, they could also be found guilty of crimes against colonists, and importantly colonists would be liable for crimes committed against them.⁶ It was this last listed effect of the decision in *Murrell* which would be the subject of controversy in the context of the litigation surrounding the Myall Creek massacre.

Although the decision in *Murrell* could be said to have clearly established the law in the colony with respect to the legal status of Aboriginal Australians,

1 Alex Castles, *An Australian Legal History* (Law Book Company, 1982) 520, quoting ‘Instructions to Arthur Phillip Esq.’ 1(1) Historical Records of Australia – Governors Despatches, 25 April 1787.

2 Ibid.

3 *R v Jack Congo Murrell* (1836) 1 Legge 72.

4 Bruce Kercher, *An Unruly Child: A History of Law in Australia* (Allen & Unwin, 1995) 9.

5 Ibid, 10.

6 Ibid, 9.

there still remained a considerable divide between the practical enforcement of this law, particularly concerning the protection of natives against colonists. Travelling colonial settler W.H. Breton clearly described the attitude of frontier colonists towards 'blacks' in a section of his book entitled 'Frontier Retaliation':

In case of any serious affray with the blacks, it really would appear to be the most judicious plan, to make upon them at once, a strong impression; for if only one or two be killed, the sole effect is to instigate them to revenge their companions, whereby a series of murders on both sides is the consequence! ...they should not be permitted to harrass [sic] the settlers with impunity: we have taken possession of their country, and are determined to keep it; if, therefore, they destroy the settlers or their property they must expect that the law of retaliation will be put in force, and that reprisals will be committed upon themselves. ...they [Aborigines] have been wantonly butchered; and some of the Christian whites consider it a past time to go out and shoot them.⁷

This extract shows clearly the attitude of frontier settlers immediately preceding the *Murrell* decision. Rather than treating the indigenous population as equals under British law, Breton recalls how Aboriginal Australians were 'wantonly' shot for sport, and how even himself as an educated man considered it appropriate for the settlers to be enforcing a 'law of retaliation'. Whilst this account predates the *Murrell* decision by up to 6 years (Breton compiled his account over 4 years from 1830-4)⁸ it is very unlikely that any significant change manifested in the settlers behaviour or attitude towards the Aborigines during this interlude. One could even argue that the events at Myall Creek themselves demonstrate the accuracy of Breton's account of the frontier settler's attitudes towards the native populace.

These examinations of the *Murrell* decision, and Breton's travel journal demonstrate the significant conflict present in colonial NSW between the law as determined by the authorities, and the behavioural norms of frontier settlers who felt genuinely justified in enforcing a 'law of retaliation' in lieu of adequate state protection.

Conflict in *R v Kilmeister (No 1)*

It was from this environment of disparate conceptions of law and justice that the turmoil of the Myall Creek massacre manifested. Governor Gipps is recorded as

⁷ William Henry Breton, *Excursions in New South Wales, Western Australia, and Van Diemen's Land* (Richard Bentley, 1835) 176-7.

⁸ Ibid.

having first heard of the events at Myall Creek at the end of June 1838, almost twenty days after the massacre had taken place.⁹ Upon hearing the news Gipps is said to have gone 'through a terrible anguish of the heart and mind'¹⁰ and after consulting with the Attorney-General John Plunkett, ordered an investigation of the events.¹¹ After several weeks the mounted police returned with evidence, and eleven of the twelve men accused of murder. The first trial ensued soon after with all eleven men being tried specifically for the murder of an Aboriginal man called 'Daddy'.¹² Despite what was considered to be conclusive and damning evidence, the accused were acquitted at first instance based seemingly upon the inability of an Aboriginal witness to give evidence.¹³

At the same time, while colonial authorities had been pursuing the conviction of the accused men for murder, the sentiment of colonial settlers was being strenuously raised in objection. Following Gipps order of investigation and in the lead up to the first trial the 'squatter's newspaper, the *Sydney Herald*' had been persistently advocating the injustice of prosecuting the accused men.¹⁴ The *Herald's* particular focus had been on criticising the government for their failure to protect 'whites against blacks' whilst pursuing the prosecution of the eleven accused men.¹⁵ The advocacy of the *Herald* continued to strengthen in the lead up to the first trial as evident in this extract from 14 September 1838:

The government, it is evident, will not, or cannot protect the whites from the aggression of the blacks – it behoves the former, therefore to protect themselves; and this they can most effectively do in the jury-box, by determining not to convict persons on charges originating in collisions with the blacks...¹⁶

It can be seen from this extract that the *Herald* was actively encouraging prospective members of the jury not to convict settlers of crimes committed against Aboriginal Australians, so to ensure their own legal protection. This extract clearly demonstrates the conflict present between the law being applied by the colonial authorities and the sentiments of the settlers. However, tensions only rose as the litigation progressed.

9 Brian Harrison, *The Myall Creek massacre and Its significance in the controversy over the Aborigines during Australia's early squatting period* (BA thesis, University of New England, 1966) 23.

10 Manning Clarke, *History of Australia* (Melbourne University Press, 1973) vol 3, 144.

11 John Gipps, *Every Inch a Governor* (Hobson's Bay Publishing, 1996) 69-70.

12 *R v Kilmeister (No 1)* [1838] NSWSupC 105.

13 Gipps, above n 11, 70, citing 'Gipps to Glenelg' 1(19) *Historical Records of Australia – Governors Despatches*, 20 December 1938.

14 Kercher, above n 4, 13.

15 Ibid.

16 'Continued depredations committed by the blacks', *The Sydney Herald* (online), 14 September 1838, 2 <<http://trove.nla.gov.au/ndp/del/page/1525196?zoomLevel=2>>.

A Considered Review

Following the acquittal of the eleven men, Governor Gipps and Attorney-General Plunkett immediately moved for a retrial of seven of the accused men, this time in relation to the killing of a child christened 'Charley'.¹⁷ The Attorney-General and the Governor were committed to ensuring that justice was seen through, and this time they were joined by Justice William Burton who made the leading judgement in the *Murrell* decision, and was renowned for his strict reliance upon and fidelity to English laws.¹⁸ Burton J's conduct during the trial was consistent with his decision in *Murrell* and according to renowned Australian legal historian Kercher 'he left the jury in little doubt that he felt the defendants were guilty.'¹⁹ In making his final instructions to the jury before they considered their verdict, Burton J emotively redescribed the facts of the case:

This massacre was committed upon a poor defenceless [sic] tribe of blacks, dragged away from their fires at which they were seated, resting secure in the protection of one of the prisoners; unsuspecting harm, they were surrounded by a body of horsemen, twelve or thirteen in number, from whom they fled to the hut, which proved the mesh of destruction. In that hut, the prisoners, unmoved by the tears, groans, and sighs, bound them with cords, fathers, mothers, and children, indiscriminately, and carried them away to a short distance, when the scene of slaughter commenced, and stopped not, until all were extirminated [sic].²⁰

In this instance the jury followed the path laid out by Burton J and returned a verdict of guilty.²¹ Several days later the court returned, and Burton J with tears in his eyes in front of a crowded gallery, sentenced the seven men to death.²²

The Peak of Political Courage

Following the trial there was an immense outcry of public dissatisfaction with the decision and the sentence. In the month following the trial the Crown brought a case against two Sydney publicans who had been accused of

¹⁷ Kercher, above n 4, 14.

¹⁸ See Roger Milliss, *Waterloo Creek: The Australia Day Massacre of 1838, George Gipps and The British Conquest of New South Wales* (University of New South Wales Press, 1994) 529-539; Clarke, above n 10, 147-148; Kercher, above n 4, 87; Bruce Kercher, 'Many Laws, Many Legalities' (2003) 21 *Law and History Review*, 621, 622.

¹⁹ Kercher, above n 4, 14.

²⁰ *R v Kilmeister (No 2)* [1838] NSWSupC 110.

²¹ Castles, above n 1, 523.

²² Kercher, above n 4, 14; Milliss, above n 18, 545-546.

publically threatening the foreman of the jury in *R v Kilmeister (No2)*. The case itself reported that the foreman 'in consequence of the verdict he had returned, had been abused and insulted'.²³

In addition the *Herald's* response was predictably severe, as they attempted to place pressure upon Governor Gipps to exercise his power of clemency to have the convicted men avoid the noose. On the 10th of December 1838 the editors of the paper published sentiment that regardless of the convicted men's innocence or guilt, their execution would be 'nothing short of legal murder' and if carried out would 'incite an actual war of extermination' against the natives.²⁴ As such the settlers, through the *Herald*, were practically threatening the Governor: that should he choose not to extend clemency, the frontier colonists would actively ensure the enforcement of their own law of retaliation.

Gipps however, in what has been described as the 'peak in his political courage'²⁵ did not extend mercy to the convicted men,²⁶ and on 18 December the men fell to their deaths after having admitted their guilt to a prison guard, but stating that as it had been done so many times before they did not realise they were committing a crime.²⁷

Despite having worked so hard in pursuing the conviction of the seven men for the Myall Creek massacre, and having established an applicable precedent, the colonial government then proceeded to step away from this policy. The investigation of a considerably larger massacre at the hands of colonial mounted police during the term of interim governor Snogdon, mere months before the events at Myall Creek, had at first been pursued by Governor Gipps.²⁸ Upon Myall Creek surfacing, the investigations of the Waterloo Creek massacre were put on hold, to be continued upon completion of the litigation.²⁹ When this time came Governor Gipps did at first pursue the issue,³⁰ however within 24 months the potential prosecution of the men responsible for the murder of up to 300 Indigenous Australians had been left to fade into obscurity.³¹ In a Governors dispatch to Baron Glenelg, Gipps remarked on an appropriate distinction being present between the two massacres, despite there having been possibly ten

23 *R. v. Douglass* [1838] NSWSupC 112.

24 Milliss, above n 18, 552, quoting 'Will the executive government cause the sentence to be carried into actual execution?', *The Sydney Herald* (online), 10 December 1838, 2 <<http://trove.nla.gov.au/ndp/del/page/1525350?zoomLevel=1>>.

25 Kercher, above n 4, 14.

26 Milliss, above n 18, 555-6.

27 Roger Therry, *Reminiscences of thirty years' residence in New South Wales and Victoria* (Sydney University Press, first published 1863, 1974 ed) 283.

28 Gipps, above n 11, 68-9; see also Milliss, above n 18.

29 Milliss, above n 18, 318.

30 *Ibid*, 599-601.

31 *Ibid*; Kercher, above n 4, 15.

times the amount of people killed.³² Gipps found that it would not be tenable to prosecute the volunteer men of the mounted police, who were at the time acting under instruction from acting Governor Snogdon and Major Nunn, despite there being no clear legal authority to legitimise their actions, and the presence of a clear precedence arising out of *R v Kilmeister (No 2)*.³³

In addition to this reversal, the prosecution of the remaining four men who had been arrested for the events at Myall Creek was never ultimately brought to trial. The given reasoning behind this administrative decision was that evidence was required from an indigenous man who was present at the massacre, but due to his inability to validly give an oath he could not be brought before the court.³⁴ On reflection this reasoning however seems incongruous with the result of *R v Kilmeister (No 2)*, where seven men were successfully convicted on what would be exactly the same evidence, even in the absence of this witness.

From these two examples it is evident that following the execution of the seven convicted men, the colonial government started bowing under the pressure of the frontier colonists in relation to enforcing the precedence established by *R v Kilmeister (No 2)*. This inconsistent application of the law regarding Aboriginal Australians would have acted to build considerable uncertainty for the colonial settlers, adding to feelings of helplessness and insecurity which were already rife on the frontier.

Native Tears – The Cost of Conflict and the Role of the Colonial Government

In the years following the conclusion of *R v Kilmeister (No 2)* there was great unrest in the colony, particularly on the frontiers where settlers had adopted the advice of the *Herald* and had taken the law into their own hands, ‘inciting an actual war of extermination’.³⁵ Notable Australian historian Manning Clark in his *A History of Australia* lamentably comments on this period of ‘payback killings’ writing that:

“[the executions] only served to make the blacks so outrageous that great numbers of them fell victim in 1839 to the vindictive spirits kindled in the hearts of white men.”³⁶

32 Kercher, above n 4, 15; Gipps, above n 11, 68-69; Milliss, above n 18.

33 Kercher, above n 4, 15; Milliss, above n 18; Castles, above n 1, 522-3.

34 Milliss, above n 18, 605-9; Kercher, above n 4, 14-5.

35 ‘Will the executive government cause the sentence to be carried into actual execution?’, *The Sydney Herald* (online), 10 December 1838, 2 <<http://trove.nla.gov.au/ndp/del/page/1525350?zoomLevel=1>>.

36 Clark, above n 10, 149.

The subsequent indiscriminate killing of Aboriginal Australians, coined by Clark as the 'payback killings' necessarily leads to a consideration of the events which took place, particularly an examination of the appropriateness of the actions of the colonial authorities, considering the ultimate consequences. This examination is particularly relevant in light of the identified conflict present in colonial NSW, and the inconsistent application of the law preceding and immediately following the conclusion of *R v Kilmeister (No 2)*.

The question as to whether the killing of countless Aboriginal Australians in colonial NSW could have been avoided through a more thorough and consistent application of the law as established in *R v Kilmeister (No 2)* is relevant. However it should be noted that a more thorough application of the law would have depended heavily upon there being adequate resources to undertake such an exercise. This would somewhat preclude the validity of this criticism, although it should be noted that in the two examples given above, the scarcity of resources was not cited as a relevant concern. Indeed for the prosecution of the remaining men accused of committing the Myall Creek massacre, commencing action against the men would have required the use of very limited resources considering that all the arguments and evidence had already been used to secure the conviction of the first seven men. As such it is viable to suggest that a more consistent and thorough application and enforcement of the law may have mitigated the extent of the payback killings. Although it must also be considered that a stronger approach, may in turn have provoked a stronger reaction, and therefore an argument that the authorities failed in not enforcing the law more consistently and thoroughly is limited.

A further question can be raised as to the appropriateness of the colonial authority's decision to pursue the offenders of the Myall Creek massacre with the vigour in which they did. This query is particularly relevant given the limited resources at the hands of colonial authorities, and the clear frontier sentiment present, as would have been abundantly evident through media such as the *Herald*. Given these restraints it may be that it would ultimately have been best for the Indigenous populace of the colony if no action had been taken. However such a decision not to pursue the case could easily have been criticised considering the morally 'depraved'³⁷ actions of the convicted men. Also further inaction on the part of the colonial authorities in relation to the killing of Aboriginal Australians, could have been interpreted by frontier colonists as an official mandate to continue as they were. For these reasons, it is not valid to suggest that the colonial authorities erred in pursuing the conviction of seven of the men responsible for the massacre.

37 *R. v. Kilmeister and others (No.2)* [1838] NSWSupC 110.

Given therefore the flaws present in advocating for both inaction and increased action on the part of the colonial authorities, it would seem that their actions were in the complicated context, not altogether inappropriate. Although in light of the horrific consequences of the events surrounding the Myall Creek massacre, this author would seek to suggest that more could have been done to mitigate the outrage which affected the frontier colonists and spurred the onset of payback killings. In particular if clemency had been extended to the convicted men, and their sentence downgraded, this may have lessened the feelings of hopelessness experienced by frontier colonists, who were not being adequately protected by the government. This would also not have altered the establishment of the strong precedent set by *R v Kilmeister (No 2)* against the indiscriminate killing of Aboriginal Australians. The position may also have been further enhanced if the voice adopted by colonial authorities had been more moderate and considered.

On 22 November 1938 *The Australian* published a conversation recorded between Governor Gipps and a wealthy grazier:

Settler: I have called upon your Excellency for the purpose of representing the dreadful state of the southern districts in consequence of the repeated aggressions of the aborigines.

Sir George: What do you require? The aborigines are subject to the laws of the country, which I apprehend are sufficient to protect every one, both whites and blacks.

Settler: It is impossible to apprehend the natives; and when they are apprehended they cannot be tried for their offences, inasmuch as no person can interpret their language. An armed force is the only remedy that can effectually protect our interests.

Sir George: It is a question of great difficulty. It cannot be expected that every person who wanders into the interior and herds is to be protected by an armed force. The government cannot interfere, Sir, in the way you require.

Settler: Then, your Excellency, although I for one shall regret the result, still, for our own protection, and for the protection of the lives of our servants, and flocks and herds, we must take the law into our own hands.

Sir George: Very well, Sir, you can do as you like; but you will remember that if either you or your servants commit any murders upon

the aborigines, or if you abet them in doing so, and either you or they are tried for it and are found guilty, so sure as my name is GEORGE GIPPS, So sure shall you or they be hanged!³⁸

It is clear from the emphasis added by the article that Governor Gipps had adopted a confrontational tone in this discussion, and appeared to be disregarding the practical impasse which the settler appeared to be in. Were the authorities to have adopted a more understanding and constructive tone on this matter to be used in examples such as the one given, it may be that the feelings of hopelessness held by the colonists would have been somewhat avoided and the payback killings somewhat mitigated.

Conclusion

From an examination of relevant case law, including *R v Kilmeister (No 2)*, and historical documents and newspapers, it is clear that there was a substantial conflict in colonial NSW between the law recognising Aboriginal Australians as subjects of the crown afforded the appropriate protections, and the sentiments of frontier colonists concerned for their welfare and property. This conflict acted to aggravate the litigation surrounding the Myall Creek massacre, and as a result pressured colonial authorities into applying the precedence established by *R v Kilmeister (No 2)* in an inconsistent manner. The conflict and inconsistency surrounding the law and its application, as well as the inability of the government to adequately protect all of its subjects living on the frontiers, led to feelings of anger and helplessness forcing the colonists to take the law into their own hands and instigating the payback killings against Aboriginal Australians.

This essay does not seek to suggest that the jury reached the wrong verdict in the case of *R v Kilmeister (No2)*, nor that the colonial authorities erred in pursuing the conviction of the men responsible for the massacre. Such a conclusion would be morally reprehensible considering the nature of the atrocities committed at Myall Creek in 1838. Indeed it has been found that the actions of the authorities in pursuing the case were not inappropriate considering the complex environment at the time. Where this essay does level criticism is towards the tone and approach adopted by the authorities, particularly Governor Gipps, over the course of the litigation. If greater consideration were given towards the possible consequences of not awarding clemency, or adopting a combative tone in a public sphere, the payback killings following the executions may have been somewhat mitigated.

38 'The Black Association' *The Australian* (online), 22 November 1838, 2 <<http://trove.nla.gov.au/ndp/del/page/4298598>>.

It is in the causal cost of these shortcomings that the true significance of the events which occurred at Myall Creek are visible, for the narrative told transcends the single disciplines of law and history, and there is, at the heart of it, a tragedy of which greater consideration and contemplation is needed in the context modern Australia, reconciliation, and the law.

Bibliography

Articles, Books, Reports

- Bennett, J.M., Alex C. Castles, *A Source Book of Australian Legal History* (Law Book Company, 1979)
- Breton, William Henry, *Excursions in New South Wales, Western Australia, and Van Diemen's Land* (Richard Bentley, 1835)
- Castles, Alex C., *Annotated Bibliography of Printed Materials on Australian Law 1788-1900* (Law Book Company, 1994)
- Castles, Alex, *An Australian Legal History* (Law Book Company, 1982)
- Castles, Alex C., 'Reception and Status of English Law in Australia' (1963-66) 2 *Adelaide Law Review*, 1
- Clark, Manning, *History of Australia* (Melbourne University Press, 1973) vol 3
- Connors, Libby, 'Sentencing on a Colonial Frontier: Judge Therry's Decision at Moreton Bay' (2008) 12 *Legal History*, 81
- Gipps, John, *Every Inch a Governor* (Hobson's Bay Publishing, 1996)
- Harring, Sidney L., 'Killing Time: A History of Aboriginal Resistance in Colonial Australia' (1994) 26 *The Ottawa Law Review*, 385
- Harris, Mark, 'Mapping Australian Postcolonial Landscapes: From Resistance to Reconciliation' (2003) 7 *Law Text Culture*, 91
- Kercher, Bruce, 'Alex Castles on the Reception of English Law' (2003) 7 *Australian Journal of Legal History*, 37
- Kercher, Bruce, 'Many Laws, Many Legalities' (2003) 21 *Law and History Review*, 621
- Kercher, Bruce, 'Establishment, Freedom of Speech and the Church of England: Pew Disputes in Early Nineteenth-Century New South Wales' (2000) 6 *Australian Journal of Legal History*, 135

Kercher, Bruce, 'Homer in the Australian ALPS: Attitudes to Law since 1788' (1995) 1 Australian Journal of Legal History, 1

Kercher, Bruce, *An Unruly Child: A History of Law in Australia* (Allen & Unwin, 1995)

McCulloch, S.C., *George Gipps* (Oxford University Press, 1966)

Milliss, Roger, *Waterloo Creek: The Australia Day Massacre of 1838, George Gipps and The British Conquest of New South Wales* (University of New South Wales Press, 1994)

Moloney, J.N., *An Architect of Freedom: John Hubert Plunkett in New South Wales 1832-1869* (Australian National University Press, 1973)

Salter, Brent, 'Early interactions between indigenous people and settlers in Australia's first criminal court' (2009) 83 Australian Law Journal, 56

Therry, Roger, *Reminiscences of thirty years' residence in New South Wales and Victoria* (Sydney University Press, first published 1863, 1974 ed)

Cases

MacDonald v Levy [1833] NSWSupC 47

R. v. Douglass [1838] NSWSupC 112

R v Elliot [1834] NSWSupC 11

R v Jack Congo Murrell (1836) 1 Legge 72

R v Kilmeister (No 1) [1838] NSWSupC 105

R. v. Kilmeister (No.2) [1838] NSWSupC 110

Legislation

Australian Courts Act 1834 (Imp.)

Bushranging Acts 1832 (N.S.W.)

Other

'Continued depredations committed by the blacks', *The Sydney Herald* (online), 14 September 1838, 2 <<http://trove.nla.gov.au/ndp/del/page/1525196?zoomLevel=2>>

'Gipps to Glenelg' 1(19) *Historical Records of Australia – Governors Despatches*, 20 December 1938

'Instructions to Arthur Phillip Esq.' 1(1) *Historical Records of Australia – Governors Despatches*, 25 April 1787

'The Black Association' *The Australian* (online), 22 November 1838, 2 <<http://trove.nla.gov.au/ndp/del/page/4298598>>

'Will the executive government cause the sentence to be carried into actual execution?', *The Sydney Herald* (online), 10 December 1838, 2 <<http://trove.nla.gov.au/ndp/del/page/1525350?zoomLevel=1>>

Bodies, Bare Life and Dehumanisation in the My Lai Massacre

Rebecca Russell

Abstract

Since the end of the Vietnam War, the conflict has held a troubled place within the Australian, American and Vietnamese public memory, due to the allegations of misconduct by troops of these militaries. The 1968 My Lai Massacre is the largest isolated war crime performed by Western forces, and yet is an event that has lacked serious analysis from anthropologists. By analysing the events of that day as recounted by the participants and the underlying cultural constructs of the American military through the framework presented in Agamben's *Homo Sacer*, a greater appreciation of the cultural factors that contributed to the My Lai Massacre can be reached. The Massacre is here understood as an attempt by the soldiers to make sense of the war landscape, by enacting destruction on the bodies of civilians to echo and reaffirm the damage on the Vietnamese states. By understanding the Massacre and the events that followed, steps can be taken to ensure that it is not repeated in contemporary and future wars.

'This was a moment of evil... we would never live the same'¹

The name of My Lai has become shorthand for the worst excesses of soldiers' behaviour within war, and the failures of the United States military to not only prevent, but also effectively address, such wartime atrocities. The four hours of the morning of 16 March 1968 in the village of Son My,² in which hundreds of South Vietnamese civilians were assaulted, raped and murdered by members of the Task Force Barker consisting of 'B 'Bravo' and C 'Charlie' Companies, have become one of the most studied, discussed and contested events in recent history (Oliver, 2006: 2-3). The crimes of that morning have left an indelible stain on the memory of the Vietnam War (1962-1975). As with other crimes

1 Heinemann, 1984: 184.

2 The confusion over the name of the village reveals the difficulty with which the American troops had understanding the Vietnamese. The Massacre occurred in the hamlets of Son My (Xom Lang) and My Khe in the Tu Cong village, Tinh Khe commune, Son Tinh district in the Quang Ngai province (Oliver, 2006: viii).

committed by militaries, the My Lai Massacre has been dismissed by supporters of the soldiers as the inevitable cost of the type of war in Vietnam (Oliver, 2006: 9), while others viewed it as the inevitable result of the militarisation of young men (Enloe, 2004). The military hierarchy and the Nixon administration presented it as an isolated event (Oliver, 2006: 9). I argue that the explanations forwarded previously are inadequate for understanding the dehumanising acts of soldiers against each other and civilians during wars. Rather than viewing war crimes as isolated acts that occur as a result of a perfect storm of conditions and individuals, I argue that a consideration of such acts of a continuum of war crimes offers a richer analysis, as a legacy of brutality and dehumanisation can then be considered. Such a legacy results from cross-cultural flows between belligerents and institutions, founded upon the national myths, histories and constructs of nationhood. By understanding how the conceptual tools that allow soldiers to commit war crimes are constructed, communicated and renegotiated in these broader social and temporal contexts, we are able to more fully understand how these crimes are perpetrated or avoided by combat troops in a war zone. While there are numerous examples of war crimes performed by 'Western' forces during modern conflicts, this article will focus on the My Lai Massacre: the most controversial, well known and well documented war crime to occur during the Vietnam War. It is an ideal site for the investigation of competing cultural norms, history and identity due to its relatively recent occurrence, the nature of the warfare and the lasting impact it has had upon the collective consciousness and imagination in Australia, the United States and Vietnam. Although circumstances and factors may change, the experiences of this War can influence how we understand soldiers and may go some way to the elimination of these atrocities in the present and the future.

The twentieth and twenty first centuries have witnessed an unprecedented capacity of states, militaries and militias to inflict devastating damage on infrastructure, the environment and enemy peoples (Bourke, 1999: 6). The creation of chemical, biological and nuclear weapons of mass destruction, and the greater involvement of civilian populations in armed movements have resulted in a military landscape that appears radically different to that of the early part of the twentieth century. Nonetheless, wars have not changed their complicated relationship to those who take part in them, giving rise to highly complex positive and negative experiences ranging from friendship and creative expression, to death and destruction (Bourke, 1999: 1-2). There is no singular war experience as every participant fights their own war, yet common elements can be identified in the causes and conduct of conflict. In addition to wars of political control over territories, conflicts post-WWII have increasingly seen the incorporation of resource and identity politics as causes for the legitimate use of force. For the West, major wars have traditionally been fought conventionally, involving large regular armies on clearly demarcated battlefields, such as the

First and Second World Wars (Kilcullen, 2010: ix-x). However, since the Vietnam War, guerrilla and counter-insurgency conflicts have become the regular pattern of warfare (Kilcullen, 2010: ix-x). Kaldor termed the post-WWII conflicts as 'new wars', in which 'territory is captured through political control of population rather than through military advance, and battles are to be avoided as far as possible' (2006: 8). For Kaldor, the process of globalisation is one of the key elements in the 'new war' paradigm, as there are transnational flows of people, arms and information, in addition to the destabilisation of the notion of the nation-state (2006: 4-5). While the physical body has always been important to war, the site of this importance has shifted. Instead of the nation-state only being held in the bodies of soldiers, it is now held in the bodies of the citizens of the state, who have become the state on the basis of identity politics (2006: 7-8). In contrast with previous conflicts, some 60-80% of all conflict casualties are now civilians, a reflection of the new state of combat culture and political and military realities (Giles and Hyndman, 2004: 5).³ The proliferation of small arms and utilisation of terror methods has eroded the distinction between soldier and civilian, as it is now easier for civilians to engage in combat without being members of a regular military. This identification of the bodies of civilians as the state means that to attack the nation-state most effectively, the bodies of civilians are legitimate targets for violence. The military and political cultures contribute to the ability of military and political regimes to hold the imagination, loyalty or fear of the population, and thus control the access to resources and land that are essential to determining the victor. The narratives which inform these beliefs often do not apply to these new wars, leaving combatants confused and disoriented, trying to position themselves and their actions as righteous, while often receiving messages that these wars are not 'true' wars, or lack the honour of those that had come before.

In order for combatants to engage with an enemy, and cause injury, death and destruction, service-personnel need to be able to view those that they are fighting as a foreign 'other', whose culture, values and very existence are alien to their own, thus enabling and justifying their destruction (Lifton, 1972: 42-43). Within the landscape of new wars, actors move in fluid and dynamic ways, often changing allegiances or acting in ways to secure their own allegiances and survival. Contrasted with their predecessors, service-personnel post-WWII contend with a civilian population that they are unsure of: even small children and women, previously 'protected' from active engagement in fighting in conventional wars, may now be recognised as sympathisers or combatants (Kilcullen, 2010: 40). Indeed, the 'enemy' itself no longer holds an easily

³ While this number has been questioned, the statistics from the Vietnam War indicate the swing towards high civilian casualties. Civilian casualties are estimated to be over 1,100,000 including some 300,000 dead; while in contrast, the Australian Defence Force lost 521 out of 3,500 casualties (Ham, 2008: 400 and Australian War Memorial, n.d.a).

identifiable body, as they may be members of the state, but also foreigners engaging in combat for the cause (Kilcullen, 2010: 30), and lack the uniform, structure and equipment that identify regular military personnel. As such, postmodern wars are difficult to fight, and even more difficult to win as the opposition retains home ground advantage over the local environment, culture and language (Kilcullen, 2010: 11-12). It is this aspect of uncertainty about who is the 'enemy' that has led to events such as the My Lai Massacre, as troops are faced with social constructs that they have no understanding of, in a population they can perceive to be entirely hostile. The othering processes of military doctrine, while always deadly, have taken on new aspects, as service-personnel struggle to place themselves in the new frontier of organised, legitimated violence.

I argue here that war crimes are not isolated acts; rather, they are a product of the othering processes that have their roots in the constructions of 'hostile' and 'friendly' bodies. These bodies are constructed on social, political and national levels, informing the constructions of and responses to the 'enemy' by individual soldiers, often in retaliation for the acts committed by the other side. These constructions are particular to nations, and so I do not present a universal explanation for war crimes. Wars are products of their environment, and fought and won by the troops who bring their ideological and cultural backgrounds into the battle.

'My nation thought my body belonged to it'⁴

In *Homo Sacer: Sovereign Power and Bare Life* (1998), Giorgio Agamben discusses the operation of power by state sovereignty and the crisis of the modern. Key to his conceptualisation of these issues is *zoë* and *bios*, two terms borrowed from classical Greek political thought. *Zoë* is 'the simplest fact of living common to all living beings', while *bios* is 'the form or way of living proper to an individual or group' (Agamben, 1998: 1). Bare life is the evolution of *zoë* within the frame of sovereign power, and is that which is outright the rights of citizenship, but inside what is included in citizenship (Dennis and Warin, 2010: 52). Unlike bare life, *bios* retains its power as that of privileged life, subject to biopower but also enjoying its protection. Through this exercise of sovereign power, bare life is separated from *bios*, becoming life 'that can be killed, but not sacrificed' (Dennis and Warin, 2010: 52). These categories are deployed through three principles which are central to Agamben's work. The first is the ban, the 'original political relation' in which the ban or state of exception is a zone of indistinction between 'outside and inside, exclusion and inclusion' (Laclau, 2007: 12). It is

⁴ Hans, 2004: 245.

this ban, which allows the sovereign to control those who are constitutive of it, that then gives rise to the second thesis, where 'the fundamental activity of sovereign power is the production of bare life and originary political elements and as threshold of articulation between nature and culture, between *zoë* and *bios*' (Laclau, 2007: 12). The distinction between the above kinds of life, and the sovereign power to designate and then control people on the basis of this difference gives rise to the final thesis, in which 'the camp', rather than 'the city' has become the 'fundamental biopolitical paradigm of the West' (Laclau, 2007: 12).

Agamben's work allows us to appreciate the justification for targeting civilian bodies in war. As new enemies are created through the shifting landscape of postmodern wars, new populations are available to be included or excluded from *bios* and placed within a framework of acceptable and legitimate death. To recognise the 'other' as possessing *bios* is to recognise them as fully human, and thus unavailable for killing: to designate them as only possessing bare life means they are dehumanised and minimised, and able to be killed in the pursuit of the goals of the state. Soldiers may be sacrificed for the nation-state during a war, and indeed, war is dependent upon this sacrifice of young men and women in the name of their nation-state. The citizens of other states within a conflict zone have bare life, and so are available for killing by the soldiers of their enemy. The deaths of soldiers are seen differently, due to the function of the soldier to be available for death, while still retaining the *bios* of the citizen. Formulated in this way, the deaths of civilians are no longer considered a crime, as those who hold only bare life are outside of the state, although their bodies represent and hold the state to those around them. Agamben's interest in the crisis of the modern, and the value applied to different categories of life within the state allow for an understanding of militaries do this in order to operate most effectively to combat their enemy within a war zone.

'Induction, then destruction'⁵

The Vietnam War has retained an important place within the collective imaginations of Australians, Americans and the Vietnamese. With unprecedented ability to capture, transmit and broadcast film and photographs, journalism defined the War for Australians and Americans and served a key role in ending the conflict. At the same time, the War has been depicted in a variety of popular culture, including protest songs, memoirs, film and fiction.⁶ Due to the long duration of the War, and the impact of social movements, including civil rights, feminism, anti-communism and counter-culture, no culture product can be

5 Starr, [1970] 1998: 292.

6 Notable examples include *Fortunate Son* (1969), *Born on the Fourth of July* (1976), *Apocalypse Now* (1979) and *Paco's Story* (1984).

representative of the War, although they have been absorbed and represented as such. By understanding the Vietnam War through these products, a conversation around the place of and responsibility to the ghosts of the dead and the survivors can be avoided.⁷

Australia's involvement in the Vietnam War lasted from 24 May 1961, until April 25, 1975 (Caulfield, 2007: 64-65 and Ham, 2007: 598).⁸ It began with the deployment of a group of 30 military advisers following the end of French colonialism, in an attempt to stop the growing influence of Communism in South-East Asia (Caulfield, 2007: 64-65). The commitment of troops escalated quickly, and in 1965 both President Lyndon Johnson and PM Robert Menzies had sent soldiers (Caulfield, 2007: 146). These troops faced two different Vietnamese forces: the North Vietnamese Army (NVA), a conventional army, and the National Front for the Liberation of South Vietnam (NFL or NLF), or the Viet Cong (VC) the guerrilla force in the South (Caulfield, 2007: 76-77).⁹ While a military failure, the Tet Offensive over the cease-fire period of the Lunar New Year in 1968 convinced much of the Australian and American publics that it was unwinnable, leading to mass public protests and widespread dodging of the conscription draft (Caulfield, 2007: 365-376). Faced with the unpopular War that seemed to have no clear end, Australia and the United States began to plan their withdrawal (Ham, 2007: 551). Active duty soldiers were pulled out, giving way to the NVA (Ham, 2007: 551-552). Australia's official involvement ended in 1973, leaving behind military advisers and the embassy security detail (Ham, 2007: 552). The United States began the process of 'Vietnamisation', pushing the Southern forces forward to cover their retreat (Ekberg, Forman, Nyhammer, Maievskij, Rossdale, 1972: 104). On April 25, 1975 the Australian personnel pulled out of Saigon (Ham, 2007: 598), followed by the Americans on the 30th (Ham, 2007: 603). With the fall of Saigon, the Vietnam War was finally over. The legacy of the War, however, was only just beginning to be written.

7 In *The Remnants of Auschwitz*, Agamben considers the place of the 'survivor' through the figure of the *Muselmann* (Muslim) in the Holocaust. Taking this idea from the meaning of the word Muslim, which is 'one who submits to God', the *Muselmann* submitted to the conditions of the camp having given up the hope to survive an unchanged person. In their submission the *Muselmann* 'marked the moving threshold in which man passed into non-man' (Agamben, 1999: 47). Those who submitted were not the survivors, but rather the real and only witnesses: the extreme nature of the situation means that only the dead can bear witness. Survivors can claim only to testify in their stead. Those who are going to be able to bear witness in the future, the true witnesses, are those who straddle the threshold between inhuman and human: *homo sacer*, the walking dead and finally the actual dead.

8 For a more comprehensive overview of the involvement of Australia in the Vietnam War see Ham, 2007; Caulfield, 2007 and Australian War Memorial, n.d.b.

9 The nickname Viet Cong was given by Southern President Ngo Dinh Diem, shortened from Vietnamese Communists (Caulfield, 2007: 77). Intended to denigrate them, it was proudly claimed by its members (Caulfield, 2007: 77).

'The devil's butcher shop'¹⁰

At around 7 a.m. on the morning of March 16, 1968, an artillery barrage battered the village of My Lai (Cotkin, 2010: 42). About 20 minutes later, nine helicopters carrying three American infantry platoons landed near a rice paddy (Cotkin, 2010: 42). The men, members of Task Force Barker (Oliver, 2006: 1) were expecting a fight with battle hardened NVA and VC members (Cotkin, 2010: 42). In a briefing the previous evening, C Company's commanding officer Captain Ernest Medina had asserted that there would only be VC in the village, as the civilians would be at the market in the morning (Cotkin, 2010: 42). Afterwards, the members of the unit had different recollections of his speech, with interpretations varying from destruction of property to the deaths of all inhabitants (Cotkin, 2010: 42 & 96). Entering the village, the men encountered no enemy forces or resistance of any kind (Cotkin, 2010: 78), instead finding hundreds of civilians, including old men and young children (Oliver, 2006: 1). By lunchtime, the people of My Lai and My Khe had been murdered, raped, tortured and mutilated, as their homes and crops were burned, wells poisoned, and animals killed (Bourke, 1999: 172). Lieutenant William Calley, the only soldier to be tried and sentenced for the killings, was found during the trial to have led much of the killing, pressuring other men to kill (O'Brien, 1998: 669-670). The only intervention came from Warrant Officer Hugh Thompson and his helicopter crew (Barnett, 2010: 207). Thompson and his crew rescued a number of civilians, and reported the actions of Task Force Barker to superiors on base (Barnett, 2010: 207-208). These superiors were 'apprised of possible mass killings of non-combatants, but all either failed to act or acted deliberately to conceal the crime' (Barnett, 2010: 209). After his discharge, unit photographer Ron Haeberle sold his personal photographs taken on the day to *Life* magazine, leading to widespread outrage about the Massacre (Oliver, 2006: 21). In 1970, Lieutenant General William R. Peers led an investigation into the incident, verifying the killings, and confirming that the military leadership had failed from Lt. Calley to the highest ranks of the US military, none of whom had acted to prevent, or then address the illegal actions against the civilians (Barnett, 2010: 209). The Peers Commission led to the 1970 trials of 14 commissioned officers involved in the massacre, although 13 of the men had their charges dismissed, leaving Calley as the only participant to be charged, tried and sentenced (Barnett, 2010: 211). Under public pressure, Calley's sentence of life at hard labour was reduced until he was finally freed by Presidential order in 1975 (Bourke, 1999: 173).

The public reception within the United States to the My Lai Massacre was mixed. The publication of Haeberle's photographs was used to boost the burgeoning anti-War movement (Oliver, 2006: 101). For members of the public, however,

10 Cotkin, 2010: 78.

the actions of Task Force Barker were understandable. Calley had become a folk hero, representative of all those young men who were returning from the War physically and mentally injured (Barnett, 2010: 227). While awaiting trial, he received 'marriage proposals, was deluged with friendly invitations and valuable gifts... and asked to sign autographs' (Barnett, 2010: 205). People expressed sympathy for Calley and the other killers, suggesting that the blame for My Lai belonged with the American military and state more than with the men who had committed the killings (Barnett, 2010: 227).

'What are we fighting for?'¹¹

The Peers Commission revealed systematic failures in dealing with the My Lai Massacre. What it did not reveal however, was why these acts had occurred, or the numerous smaller acts of wartime atrocities that had been committed in the name of the American nation-state. While American perpetration of war crimes was shocking, it could be excused: Calley's supporters blamed the military, not him, for the Massacre. The responsibility of the individuals, and the responsibility of the American nation-state were absent from the discussion.

Within conflicts, the distinction between bare life and *bios* had previously been applied to the population of the opposing state: soldiers could be killed, or sacrificed, in the name of the state, while civilians were not to be killed, and if they were, their deaths held a different, more tragic meaning to that of the soldier's. During the Vietnam War, VC militia relied heavily on the participation and support of civilian men, women and children, who would supply intelligence, materials and often participate in attacks. For the men of Task Force Barker, this was a challenging landscape. The soldiers found themselves moving within a challenging landscape akin to that of the men in Roger Casement's Putumayo Report in Taussig's *Culture of Terror-Space of Death* (1984). They were in a self-constructed space of death where 'the social imagination had populated its metamorphosing images of evil and the underworld' (Taussig, 1984: 468). The reality of the Vietnamese possessing individual physical bodies and *bios* was ignored. As a mysterious population with alien bodies, the Vietnamese were distanced from the American and Australian soldiers through culture, ethnicity, politics and language. In Taussig's formulation, 'the victimiser needs the victim for the purpose of making truth, objectifying the victimiser's fantasies in the discourse of the other' (1984: 469). The Vietnamese civilians were less important through their physical reality than the purposes served by their social and

11 McDonald, [1965] 1998: 286.

political aspects. Justifying the murders of children and women through their potential to act as combatants, the men of Task Force Barker became like the men in the Casement Report:

They saw everywhere attacks by Indians, conspiracies, uprisings, treachery etc.; and in order to save themselves from these fancied perils... they killed, and after work was over, these stories and the imagination they sustained were potent political forces without the work of conquest... could not have been accomplished (Taussig, 1984: 492).

Stories of the War circulated amongst the troops on the ground, and filtered back to those in training in the US. Arriving in Vietnam, troops found themselves trapped in a landscape of thick jungles, inscrutable locals and a military hierarchy that depended on one's ability to dehumanise their enemy. In these circumstances, the My Lai Massacre serves to reinforce the ability of civilians in Vietnam to act as combatants, while also reinforcing their lack of value within the War. Bravo and Charlie Companies acted as agents of the political body that they had come from, primed by a military that could not accept the *bios* of others. Both Companies were made up mainly of conscripted troops (Barnett, 2010: 222). Unwilling or unable to seek an exemption from service, they had gone to Vietnam carrying national myths of power and righteousness of the American state (Hellman, 1997: 177). The men of Charlie Company had formed extraordinarily close bonds whilst training in Hawaii, which enabled them to ensure the difficult conditions in the jungle, however deaths of unit members had left them angry and confused (Bourke, 1999: 203-204). Participants are reported to have referred to this during the Massacre, shouting 'that's for Bill Weber', 'VC bastards, you dirty VC bastards' and 'cry, you gook bastards, cry like you made us cry' as they killed (Lifton, 1973: 51-52). Even the killing of the smallest infants was justified: 'they'll grow up [to help the VC]' (Lifton, 1973: 56). In the absence of an enemy they could touch, the soldiers at My Lai and throughout Vietnam instead attacked the civilians who represented the Communists. Through their bodies, the civilians no longer had the *bios* expected during peace. The circumstances of the War, the conditioning of the men and their confusion about the combat status of the civilians allowed some of the men of Task Force Barker to distance themselves from the pain and fear of the civilians, and conceive of them as simply possessing bare life. While their deaths would send a strong message to the Communists, the status of the civilians meant that the killings were not murder.

The Peers Commission and the court-martial of Calley reveal the denial of *bios* by the killers that day. During one questioning exchange, Calley discussed the indiscriminate targeting in the village:

Q. What were they firing at?

A. At the enemy, sir.

Q. At people?

A. At the enemy, sir.

Q. They weren't human beings?

A. Yes, sir.

Q. They were human beings?

A. Yes, sir.

...

Q. What do you mean, you weren't discriminating?

A. I didn't discriminate between individuals in the village, sir. They were all the enemy, they were all to be destroyed (O'Brien, [1994] 1998: 667).

They had distanced themselves deliberately from the humanity of the Vietnamese in order to make sense of the War landscape, in which any one had the ability to kill them. This denial of *bios* was not only limited to the men on the ground. The actions of the military hierarchy to cover up the acts of the men indicate the disregard for the serious nature of the crimes, and the carelessness with which Vietnamese civilians were treated. It was only under public pressure that the fourteen men were placed on trial, and the continued apathy of the American military to this crime meant that only Calley was punished.¹² Letters to Calley and surveys of the American and Australian public expressed that many thought they would act in the same manner if placed in the same position (Bourke, 1999: 194–196). The denial of *bios* was not only engaged in by the troops in Vietnam, but also the society from which they came. Instead of condemning the Massacre, and the participants, some Americans gave their implicit consent to the acts. A characterisation of Calley as being as much of a victim of the War as the people of Vietnam denied the violence and terror that had been experienced by the civilians in their final moments, and denied their right to be heard and respected. In the decades after the War, this image of the wounded, betrayed veteran would come to dominate the American memory of Vietnam, through informal products like films or the official places of remembrance, including the Vietnam Memorial in Washington D.C. (Burke, 2007: 172). Through this process of claiming the traumatised veteran, the nation was able to change the narrative of Vietnam from one of neo-imperialist ambitions to the exploitation

¹² Encouragingly, the war crimes performed by American soldiers in the Afghan War have been taken more seriously. At the time of writing, 5 American soldiers are on trial for the 2010 murders and mutilation of 3 Afghan men, and face heavy sentences if convicted (BBC News, 2011).

of the weak by the corrupt and powerful (Weaver, 2010: 9). This cynical process of using 'one trauma story to suppress another' has stalled the investigation and processing of American war crimes in Vietnam (Weaver, 2010: 11). Denied their *bios* in life, the victims of the My Lai Massacre continue to be relegated to the status of bare life: killed but not sacrificed, immortalised yet forgotten.

The My Lai Massacre exposed the undercurrents of cultural and political processes that enable soldiers to kill in war. The categories of *bios* and bare life divide human life by its value: that which has the full rights and citizenship of membership of a sovereign state and is accordingly precious, and that which has the barest existence, and can be killed with impunity. The shift from conventional to irregular conflicts has coincided with the nation-state being held in the bodies of the population instead of within symbolic vessels, bringing civilians into the sphere of war in an unprecedented way. To attack the state and the enemy in Vietnam was often to attack the civilians, who shared their bodies with that of enemy forces. The murky landscape of the War combined with insufficient instruction from the hierarchy left the soldiers struggling to make sense of their place in the War. In the absence of an enemy that could be killed, the soldiers attacked the civilians who represented them, and whose lives had little value. The military hierarchy and the American public ignored and consented to the Massacre through their actions, and have reclaimed the bodies of their own wounded veterans to renegotiate the narrative of the Vietnam War, a privilege of *bios*. The story of the My Lai Massacre is one of privilege: that of those with *bios* to determine the fate of those with bare life.

References

- Agamben, Giorgio (1998). *Homo Sacer: Sovereign Power and Bare Life*. Daniel Heller-Roazen (trans.). Stanford University Press: Stanford, California.
- (1999). *Remnants of Auschwitz: the Witness and the Archive*. Daniel Heller-Roazen (trans.) Zone Books: New York.
- Australian War Memorial (n.d.a) 'Encyclopedia. Australian casualties in the Vietnam War, 1962–72' <http://www.awm.gov.au/encyclopedia/vietnam/statistics.asp> No Publication Date. [Accessed 1 November 2011]
- (n.d.b) 'Vietnam War 1962-1975' <http://www.awm.gov.au/atwar/vietnam.asp> No Publication Date. [Accessed 8 November 2011]
- Barnett, Louise (2010). *Atrocity and American Military Justice in Southeast Asia. Trial by Army*. Routledge: New York.

BBC News (2011) 'Calvin Gibbs admits taking fingers off Afghans' bodies' <http://www.bbc.co.uk/news/world-us-canada-15529751> Publication date: 31 October 2011. [Accessed 5 November 2011]

Bourke, Joanna (1999). *An Intimate History of Killing. Face-to-Face Killing in Twentieth-Century Warfare*. Granta Books: London.

Burke, Anthony (2007). *Beyond Security, Ethics and Violence. War Against the Other*. Routledge: London.

Caulfield, Michael (2007). *The Vietnam Years. From the Jungle to the Australian Suburbs*. Hachette Australia: Australia.

Cotkin, George (2010). *Morality's Muddy Waters. Ethical Quandaries in Modern America*. University of Pennsylvania Press: Philadelphia.

Dennis, Simone and Megan Warin (2010). 'Honeyed tongues and hostile intimacy: Engaging trauma across migrant worlds' In *Emotion, Space and Society*. Vol. 3 (2010). pp. 50-55.

Ekberg, Sven; Dorothy Forman; Justin Nyhammer; Victor Maievskij; Martin Rossdale (1972). 'Vietnamese Policy and Pacification Programs' In Frank Browning and Dorothy Forman (1972). *The Wasted Nations. Report of the International Commission of Enquiry into United States Crimes in Indochina, June 20-25, 1971*. Harper and Row, Publishers: USA. pp. 104-114.

Enloe, Cynthia (2004). *The Curious Feminist*. University of California Press: Berkeley.

Ham, Paul (2008). *Vietnam. The Australian War*. Harper Collins: Australia.

Hans, Asha (2004) 'Escaping Conflict. Afghan Women in Transit' In Wenona Giles and Jennifer Hyndman (eds.) (2004). *Sites of Violence: Gender and Conflict Zones*. University of California Press: Berkeley. pp. 232-248.

Heinemann, Larry (1986). *Paco's Story*. Vintage Contemporaries: USA.

Hellman, John (1997). 'The Vietnam Film and American Memory' In Martin Evans and Ken Lunn (eds.) (1977). *War and Memory in the Twentieth Century*. Berg: Oxford. pp. 177-188.

Horne, Donald [1964] (1998). *The Lucky Country*. Penguin Group: Victoria.

Kaldor, Mary (2006). *New and Old Wars 2nd Edition. Organised Violence in a Global Era*. Stanford University Press: Stanford.

Kilcullen, David (2010) *Counterinsurgency*. Scribe: Melbourne.

- Laclau, Ernesto (2007). 'Bare Life or Social Indeterminacy?' In Matthew Calarco and Steven DeCaroli (eds.) (2007) *Giorgio Agamben. Sovereignty and Life*. Stanford University Press: Stanford, California. pp. 11-22.
- Lifton, Robert Jay (1973). *Home From the War. Vietnam Veterans: Neither Victims nor Executioners*. Simon and Schuster: New York.
- McDonald, 'Country' Joe [1965]. 'I-Feel-Like-I'm-Fixin'-to-Die Rag' In Stewart O'Nan (ed.) (1998). *The Vietnam Reader. The Definitive Collection of American Fiction and Nonfiction on the War*. Anchor Books: New York. pp. 286-287.
- O'Brien, Tim [1994]. 'In the Lake of the Woods' In Stewart O'Nan (ed.) (1998). *The Vietnam Reader. The Definitive Collection of American Fiction and Nonfiction on the War*. Anchor Books: New York. pp. 662-371.
- Oliver, Kendrick (2006). *The My Lai Massacre in American History and Memory*. Manchester University Press: Manchester and New York.
- Springsteen, Bruce [1984]. 'Born In The USA' In Stewart O'Nan (ed.) (1998). *The Vietnam Reader. The Definitive Collection of American Fiction and Nonfiction on the War*. Anchor Books: New York. pp.
- Starr, Edwin [1970]. 'War' In Stewart O'Nan (ed.) (1998). *The Vietnam Reader. The Definitive Collection of American Fiction and Nonfiction on the War*. Anchor Books: New York. pp. 292-293.
- Taussig, Michael (1984). 'Culture of Terror- Space of Death. Roger Casement's Putumayo Report and the Explanation of Torture'. In *Comparative Studies in Society and History*. Vol. 26, No. 3 (Jul., 1984). pp. 467-497.
- Weaver, Gina Marie (2010). *Ideologies of Forgetting. Rape in the Vietnam War*. State University of New York Press: USA.

The Exact Velocity in Low-redshift Stationary Radio Sources from its Apparent Longitudinal and Transverse Velocity

Wing Tang

Abstract

While the term Apparent Transverse Velocity (ATV) is popularly used to explain some super-luminal (faster-than-light) apparent motions in distant astronomical objects, we ask whether the Apparent Longitudinal (radial) Velocity (ALV), which has never been mentioned in astronomical literature hitherto, can be embedded and meaningfully considered. In this paper we promote the idea of ALV; combining ALV and ATV theoretically allows us to determine precisely the exact velocity of the observable jets from the very low-redshift sources which are stationary relative to the Earth's observer. The measurement and calculation of ALV are also proposed and discussed.

Introduction

Many active galactic nuclei (AGN), and even microquasars nowadays, contain the compact sources of radio emission with components that appear to move apart in successive very long baseline interferometry (VLBI) images. The ATV of the separation of some components exceeds the speed of light (c); such motion and sources are called superluminal. This phenomenon has become common ever since the VBLI technique was invented. It is interesting to note that the radiation from these sources is widely believed to be a result of the accretion of mass into the supermassive black hole located at the centre of them. Figure 1 shows how the radio-loud AGN looks like, and Figure 2 compares the quasars and microquasars.

However the existence of black holes inside the AGN remains yet to be confirmed, the observed superluminal motion might appear to contradict

special relativity because it violates causality. They have no such contradiction, yet detecting such motion even supports the theory that quasars, BL Lac objects and radio galaxies may just be the same, known as active galaxies viewed from different perspectives (Biretta, Sparks, & Macchetto 1999). In 1966, Martin Rees predicted such motion before the observation was made. Nowadays, the popular explanation for superluminal motion is the visual result of light travel-time effects resulting from the finiteness of c (Shu 1982). In details, the AGN contain a nearly straight, expanding jet of plasma moving relativistically (still below the speed of light (c)). The superluminal radio sources are modelled by the radiating blobs that move at the relativistic speed v away from the AGN core. If the jet points close to the line of sight, contraction of the apparent timescale between the blobs at different times can give rise to superluminal motion - the apparent transverse velocity that is greater than c . Such apparent timescale contraction can be visualized in Figure 3 and be later explained.

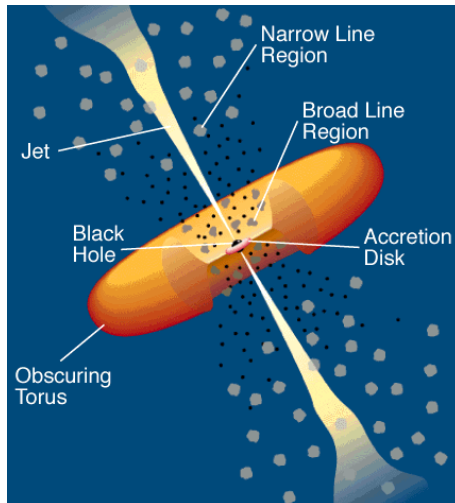


Figure 1. Radio-Loud AGN Model

From: Urry, C.M., & Padovani, P. (2003). Radio-Loud AGN Model. Retrieved 1st November, 2011, from NASA's HEASARC: Education & Public Information <http://heasarc.nasa.gov/docs/object%20s/agn/agn%20model.html>

But knowing the ATV is not precise enough. Since the exact velocity of astronomical objects (relative to the source) is at least of theoretical importance, and might help us understand physics of the accretion-powered jets and the black hole itself, we desire a way of accurately calibrating them; but a quick look at the astronomical literature tells us that the exact speed and the angle to the line of sight are not so accurately determined (Shu 1982). Therefore, we aim to provide another (maybe better) way to determine the exact speed v .

In our paper, we study the low-redshift radio sources whose AGN core is almost stationary relative to us. The reason for this is its simplicity, and studying the nearby microquasars is important for the study of relativistic jets. We know that

the jets are formed near the compact region, and the timescales near the compact region increase with the mass of the compact region. Hence microquasars might take only one day to go through all the variations in the quasars that take centuries, which means that we can see a more complete evolution of the relativistic jet system.

We first introduce and derive the ATV $v_{app,t}$, and give the standard determination of v . Then we introduce the ALV $v_{app,l}$ from the head-on movement into the non-head-on movement. Later we talk about how to make use of our theory with current observational methods to obtain v . The condition “low-redshift stationary radio sources” may not be physical and general, since most superluminal motions are observed in highredshift radio sources that the AGN core probably moves at nearly the speed of light (Chodorowski 2005). But one such simplified case can be a good starting point to consider how $v_{app,l}$ complements to determine v , and can be embedded in our literature.

In future, we would follow Michal J. Chodorowski’s approach to generalize all such considerations for all arbitrary z and $v \in [0, c]$ so that the theory can be entirely physical and generalized to various astronomical radio sources that move relativistically relative to us (Chodorowski 2005).

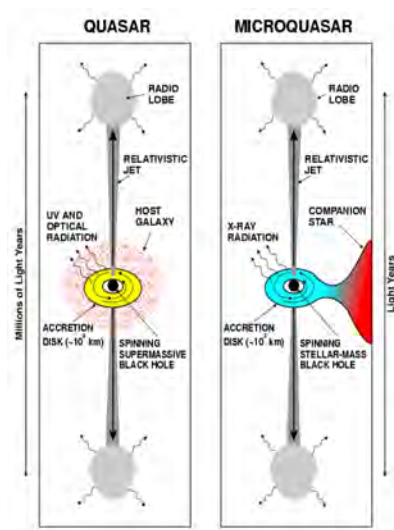


Figure 2. A diagram illustrating current ideas about quasars and microquasars

From: Mirabel, I.F., & Rodriguez, L.F. (1998), Nature, 392, 673. Retrieved 1st November, 2011, from http://www.nature.com/nature/journal/v392/n6677/fig_tab/392673a0_F1.html

ATV

In astronomical literature, the superluminal motions are widely explained using the term ATV. The derivation can leave us a hint of how to define and derive the ALV $v_{app,l}$, later. In this section, we can also see the deficiency of the current standard method of determining v .

The Derivation of ATV

Figure 3 shows the schematic diagram of how we visually perceive the movement of an object. We consider the object (imagined as the radio source) moving with a velocity v from P_1 to P_2 in a time Δt in the observer's frame; so, the length $l = v\Delta t$.

Suppose the object is continuously emitting/reflecting light so that their entire body is visible. Let photons be emitted from P_1 and P_2 at times t_1 and t_2 , respectively, with the time difference

$$\Delta t = t_2 - t_1$$

Although the AGN core is at redshift z (1, we assume D) l for the entire observing time duration T . So the lines of sight, L_1 and L_2 , from P_1 and P_2 respectively, can be approximately parallel. The times at which these photons are received by the observer are given by:

$$t_1^{rec} = t_1 + \frac{D + v\Delta t \cos \theta}{c}$$

$$t_2^{rec} = t_2 + \frac{D}{c} = t_1 + \Delta t + \frac{D}{c}$$

The apparent time interval is

$$\Delta t^{rec} = t_2^{rec} - t_1^{rec} = \Delta t \left(1 - \frac{v}{c} \cos \theta \right)$$

The actual transverse distance moved by the object is

$$l_{\perp} = v\Delta t \sin \theta$$

Hence the ATV $V_{app,t}$ of the object is given by

$$v_{app,t} = \frac{l_{\perp}}{\Delta t^{rec}} = \frac{v \sin \theta}{1 - \frac{v}{c} \cos \theta}$$

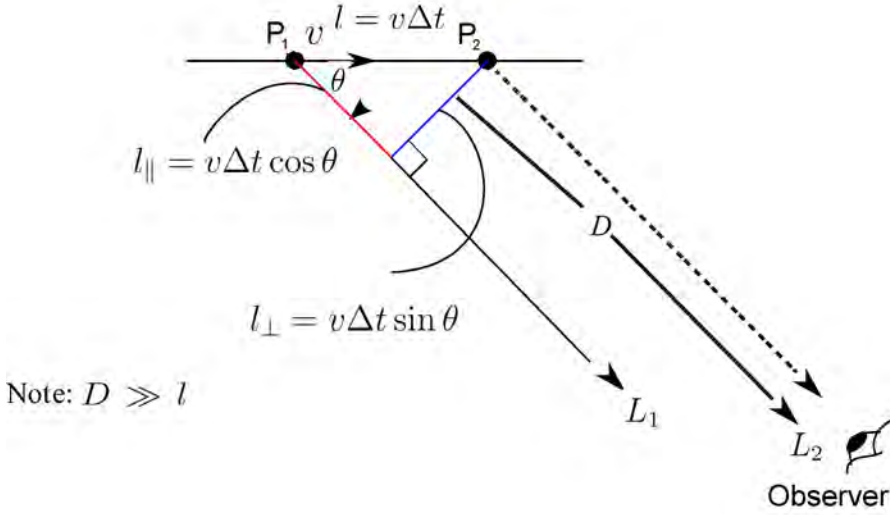


Figure 3. The apparent transverse movement seen by the ground observer

With $\beta = v/c$ and $\beta_{app,t} = v_{app,t}/c$, the ATV can be equivalently written as $\beta_{app,t}$:

$$\beta_{app,t} = \frac{\beta \sin \theta}{1 - \beta \cos \theta}$$

Superluminal Motions and Determination of β and θ

The value of $\beta_{app,t}$ can be obtained in observation as shown in Figure 4. In reality, the measurement of angle θ is never simple; therefore, β cannot be simply obtained by only Eq. (7). Our current idea of finding θ and β is first determine the angle for which the apparent velocity is a maximum:

$$\frac{d\beta_{app,t}}{d\theta} = \frac{\beta (\cos \theta - \beta)}{(1 - \beta \cos \theta)^2}$$

It is assumed that $\beta < 1$. For the approaching source, the angle θ satisfies $0 \leq \theta \leq \pi/2$. Hence.

1. $\beta_{app,t}/d\theta > 0$ happens if $\theta < \cos^{-1} \beta$;
2. $\beta_{app,t}/d\theta < 0$ happens if $\theta > \cos^{-1} \beta$.

If the object is in uniform motion from the angle $\theta = 0$ to $\pi/2$, then the object is first seen to be accelerating towards us until $\cos \theta = \beta$, but decelerating afterwards. Hence $\beta_{app,t}$ reaches a maximum when $\cos \theta = \beta$ and so we have

$$\beta_{app,t;\max} = \frac{\beta \sin \theta}{1 - \beta \cos \theta} = \frac{\beta \sqrt{1 - \beta^2}}{1 - \beta^2} = \frac{\beta}{\sqrt{1 - \beta^2}} = \Gamma \beta$$

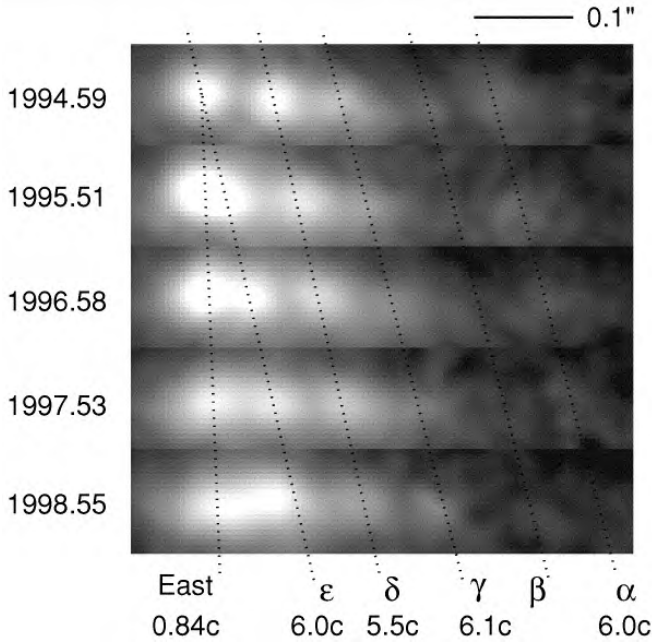


Figure 4. Sequence of F342W ($\gamma = 342$ nm) images showing evolution of some components in one region of the M87 jet between 1994 and 1998. The dotted lines are to identify and track features between epochs and are labeled with component names and speeds derived

From: Biretta, Sparks, & Macchetto (1999). ApJ, 520, 621. Retrieved 1st November 2011, from IOP Science, <http://iopscience.iop.org/0004-637X/520/2/621/39787.fig2.html>

If $\Gamma \gg 1$, then $\beta \approx 1$ and so $\beta_{app,t;\max} \gg 1$, i.e. the maximum ATV can be much greater than the speed of light. This explains the possibility of superluminal motions. For example, when $\Theta = \pi/4$ and $\beta = 0.9$ and $\cos \pi/4 = 1/\sqrt{2} \neq 0.9$, we have $\beta_{app,t} = 1.75 > 1$.

Now using Eq. (9), we can obtain the lower bound of β without the knowledge of Θ :

$$\frac{\beta}{\sqrt{1-\beta^2}} = \beta_{app,t;\max} \geq \beta_{app,t}$$

$$\Rightarrow \beta \geq \frac{\beta_{app,t}}{\sqrt{1+\beta_{app,t}^2}}$$

The equality holds if and only if $\beta_{app,t}$ reaches the maximum over $[0, \pi/2]$. By plotting the variation of $\beta_{app,t}$, we can spot the maximum $\beta_{app,t;\max}$ and then obtain the value β by Eq. (10). Using $\cos \Theta = \beta$ with the determined β , we can obtain the actual angle Θ when the maximum occurs.

Introduction to ALV

Although seeking the maximum $\beta_{app,t;\max}$ it can work well to obtain the values of Θ and β , the maximum $\beta_{app,t;\max}$ (for some distant astronomical objects moving close to the line of sight) may not be reached in our human lifespan because the proper motion (the angular movement) of distant objects is so small; moreover, the actual motion is usually non-uniform; if the apparent time interval is taken to be too long, the speed we obtain is not representative at all and might make us miss out important information about the dynamics of the jet.

To obtain the actual speed v and β , we consider if it is possible to obtain the angle Θ using any simple idea. A naive idea, known from secondary school trigonometry, is if we can have the knowledge of the apparent velocity u that is perpendicular to the ATV, then we can determine the angle using

$$u \tan \Theta = v_{app,t}$$

Since u is, in turn, along our line of sight, u can be defined as the “apparent longitudinal velocity (ALV)” which acts in a complementary role with ATV. In principle, it should be the actual radial distance of the object divided by the apparent time interval at both ends of which the signals are received by the observer. The existence of this term has arisen without any meaning. To be concrete, we consider the following idealized case - the head-on movement.

Head-on Movement

Suppose we have a continuously light-emitting/reflecting object which is actually a non-point source. We can determine the radial velocity of the object by observing the change in the angular size of itself or some of its components. If two identical ping-pong balls are placed at distances of 1 metre and 2 metres respectively, then the farther object subtends approximately half the angle of the nearer object. Now we see that an object heading towards us is getting bigger and bigger in angular size because it is getting nearer, while an object receding from us is getting smaller and smaller in angular size because it is farther away.

Imagine when all the component particles in the jet move with the same velocity, the component’s angular size changes linearly as it moves radially at a constant rate, if the physical size of the component does not change much. This rate of relative change in the angular size is equal to the relative change in distance. Nowadays the very long baseline array (VLBA) is used to measure the distance of the radio galaxy and the jet component, hence the radial velocities can be found (Dravins et al. 1999). This method is called “changing angular extent” in space astrometry which has been applied to Hipparcos data (Madsen, Lindegeren, & Dravins 1999).

In Figure 5 the object is just 1-light-second away from the observer (us), moving with $v = c/2$ towards us at $t = 0$. The object first emits/reflects the red light.

At $t = 1\text{s}$, by the definition of 1-light-second, the red light emitted at $t = 0$ has reached us. We perceive the angular size of the object at $t = 0$, but the source is moving mid-way at our own time.

Now we take $t = 1.5\text{s}$. We perceive the angular size of the object at $t = 1\text{s}$, since the blue light emitted exactly at 1s should travel half-of-1-light-second from the midway of the separation between the object and us at $t = 0$.

As an ignorant observer, we find the ALV - the actual distance $0.5cs$ told by the angular-size difference divided by the apparent time interval 0.5s - is indeed equal to c . So we expect if we choose $v > c/2$, we will have the ALV higher than c .

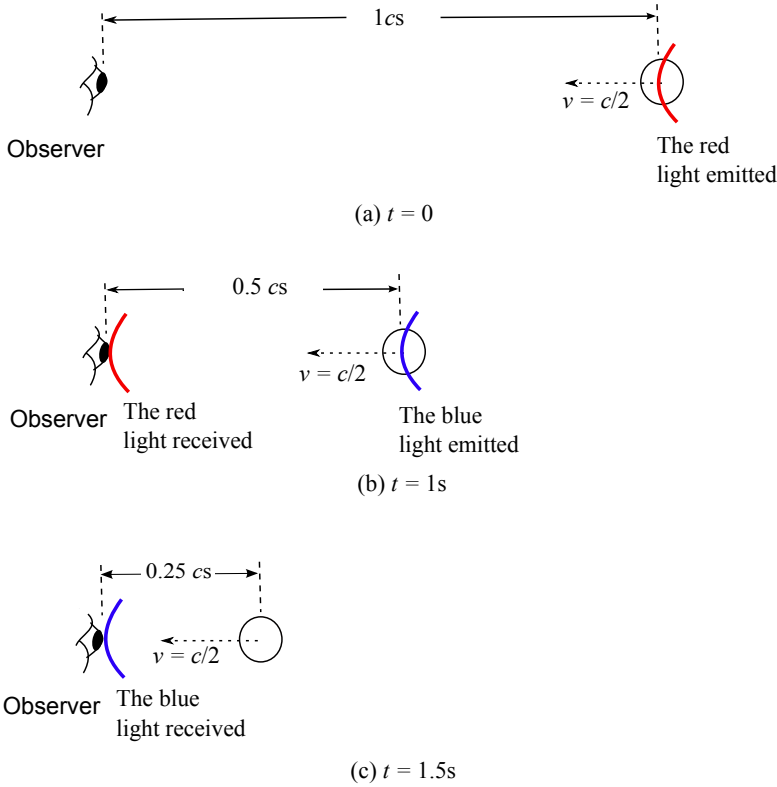


Figure 5. The apparent longitudinal movement seen by the observer

Non-head-on Movement

Astronomical objects may not always go along our line of sight. They can approach, or recede from, us at the angle θ from our line of sight as shown by Figure 3. If we focus on the red line along the line of sight L_1 in Figure 3, it is the same actual distance as that in head-on movement; the apparent time interval in Eq. (4) is exactly the same as that in head-on movement. Hence the ALV $v_{app,l}$ is given by

$$v_{app,l} = \frac{l_{\parallel}}{\Delta t^{rec}} = \frac{v \cos \theta}{1 - \frac{v}{c} \cos \theta}$$

Equivalently, if $\beta_{app,l} := v_{app,l}/c$, we can write

$$\beta_{app,l} = \frac{\beta \cos \theta}{1 - \beta \cos \theta}$$

To ensure this exactly coincides with the result in head-on movement, we substitute $\theta = 0$ and $\beta = 1/2$; we see $\beta_{app,l} = 1$, i.e. $v_{app,l} = c$. Eq. (13) also allows us to write Eq. (11) so that the angle θ can be determined. On the other hand, we observe that the actual radial velocity v_r can be written as

$$\beta_r := \frac{v_r}{c} = \beta \cos \theta$$

and be purely determined by the measured quantity $\beta_{app,l}$:

$$\beta_r = \beta \cos \theta = \frac{\beta_{app,l}}{1 + \beta_{app,l}}$$

We now square Eq. (13) and Eq. (7) individually and sum them up. We will find

$$\beta_{app,l}^2 + \beta_{app,l}^2 = \frac{\beta^2}{(1 - \beta \cos \theta)^2}$$

Combining this with Eq. (15), we have the exact speed

$$\beta = \frac{\sqrt{\beta_{app,l}^2 + \beta_{app,l}^2}}{1 + \beta_{app,l}}$$

with, if $\beta \neq 0$,

$$\theta = \arccos\left(\frac{v_r}{v}\right) = \arccos\left(\frac{\beta_{app,l}}{\sqrt{\beta_{app,l}^2 + \beta_{app,l}^2}}\right)$$

Note that in our measurement we would obtain β_r , and hence we can indeed find out $\beta_{app,l}$ via Eq. (15) and substitute this $\beta_{app,l}$ into Eq. (17a)-(17b).

Observational Techniques Fitting our Theory

In the previous section, a theoretical footing of how to calculate the exact velocity is obtained; however, some observational problems have to be addressed and considered.

Problems with Measurement of ALV Through its Angular Size

We mentioned the measurement of relative change in the angular-size of the distant object can tell us the ALV. In fact, the relative change in the angular size of the distant object is microscopically small - the device nowadays cannot detect such change. So it is never feasible to obtain the knowledge of ALV through the angular size change.

For the close enough source, we might have to answer how close it has to be in order to make the analysis and measurement valid. Here we leave the quantitative answer for readers to investigate, yet we want to say that such expectation is theoretically possible. For the measurement of the radial velocities, the VLBI techniques must be used. Since the angular size is extremely small, we can use the “skinny triangle approximation” regime throughout the lifetime of the relativistic clouds.

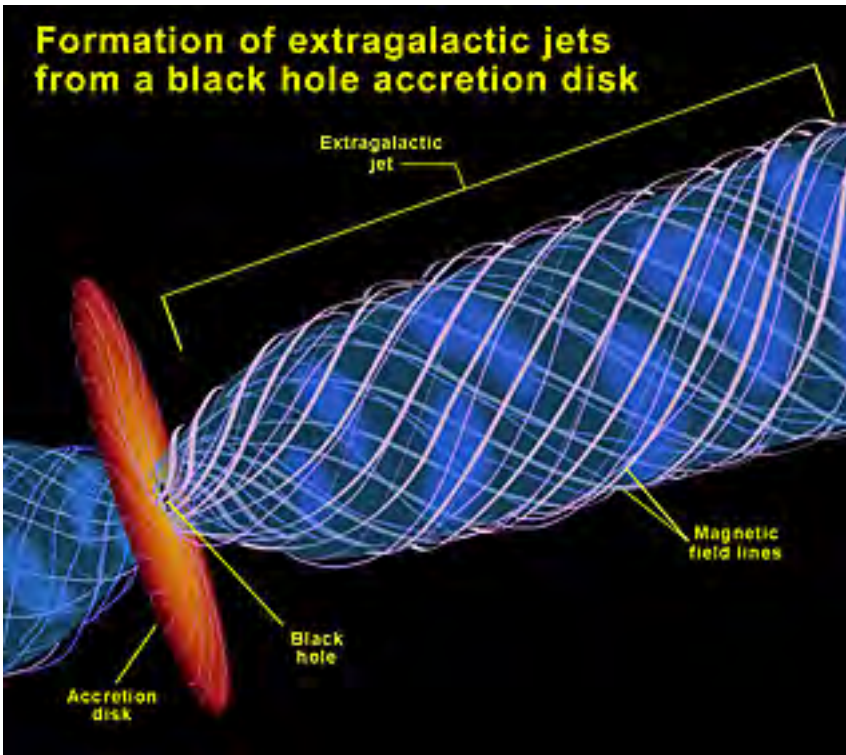


Figure 6. The imagination of a jet formation. A jet, shaped by strong, twisting field lines, blasts upwards from the accretion disk around the black hole

From: NASA/ESA and Ann Feild (1999). Formation of Extragalactic Jets from a Black Hole Accretion Disk. Retrieved 1st November 2011, from ESA/Hubble, <http://www.spacetelescope.org/images/opo9943e/>

However this measurement is possible, we have to face the following physical problem: the relativistic jets and clouds themselves actually evolve during their lifetimes as they expand and are diverted by their interactions with magnetic fields and ambient, nonrelativistic plasma in the vicinity of the AGN or microquasars as displayed by Figure 6. The evolutionary effects would be confused with the angularsize- change effects, which makes our measurement results unreliable.

The Standard Method: Doppler Shift in the Spectrum of the Jets

To detect the apparent speed of objects does not necessarily require the angular-size change. One standard way to measure the actual radial velocity β_r of the objects is the Doppler shift in their spectrum. This would have to be based on the knowledge of the chemical compositions of the objects. In fact, in most of the currently known superluminal sources there are synchrotron jets from Quasars which have no visible spectral lines. But, nearby radio sources such as SS 433 sitting in our Milky Way Galaxy have shown that they have the visible atomic emission lines from the jets with the very significant Doppler shift in both optical and X-ray spectral lines. So the jet velocities can still be derived using the relativistic Doppler effect (Margon 1984).

Suppose we know the Doppler shift in their spectrum. We have had the knowledge of the source frequency ν_s and that of the observed frequency ν_o . The relativistic Doppler effect tells us that

$$\nu_o = \frac{\nu_s}{\gamma(1 - \beta \cos \theta)}$$

where $\gamma = 1/\sqrt{1-\beta^2}$. Squaring both sides and rearranging the terms, we have

$$(1 - \beta \cos \theta)^2 = (1 - \beta^2) \frac{\nu_s^2}{\nu_o^2} = (1 - \beta^2 \sin^2 \theta - \beta^2 \cos^2 \theta) \frac{\nu_s^2}{\nu_o^2}$$

Eliminating $\beta \sin \theta$ by plugging Eq. (7) into Eq. (19), we obtain

$$(1 - \beta \cos \theta)^2 = \left(1 - \beta_{app}^2 (1 - \beta \cos \theta)^2 - \beta^2 \cos^2 \theta\right) \frac{\nu_s^2}{\nu_o^2}$$

The rearrangement yields

$$\left(1 + \beta_{app,l}^2 \frac{v_s^2}{v_o^2}\right) (1 - \beta \cos \theta)^2 = (1 - \beta^2 \cos^2 \theta) \frac{v_s^2}{v_o^2}$$

Cancellation by $1 - \beta \cos \theta$ (not zero for non-zero masses) on both sides results in

$$\left(1 + \beta_{app,l}^2 \frac{v_s^2}{v_o^2}\right) (1 - \beta \cos \theta) = (1 + \beta \cos \theta) \frac{v_s^2}{v_o^2}$$

The rearrangement yields

$$\beta_r = \beta \cos \theta = \frac{1 + (\beta_{app,l}^2 - 1) \frac{v_s^2}{v_o^2}}{1 + (\beta_{app,l}^2 + 1) \frac{v_s^2}{v_o^2}}$$

in which all the factors on the RHS can be observationally obtained. Now, with $\beta_r = \beta \cos \theta$, eliminating $\beta_{app,l}$ by plugging Eq.(13) into Eq. (16) yields

$$\begin{aligned} \beta^2 &= (1 - \beta_r)^2 \left[\beta_{app,l}^2 + \frac{\beta_r^2}{(1 - \beta_r)^2} \right] \\ &= \beta_r^2 + \beta_{app,l}^2 (1 - \beta_r)^2 \\ &= \frac{\left[1 + (\beta_{app,l}^2 - 1) \frac{v_s^2}{v_o^2} \right]^2 + 4 \frac{v_s^4}{v_o^4} \beta_{app,l}^2}{\left[1 + (\beta_{app,l}^2 + 1) \frac{v_s^2}{v_o^2} \right]^2} \end{aligned}$$

Hence the exact speed of the object is given by

$$\beta = \frac{\sqrt{\left[1 + (\beta_{app,l}^2 - 1) \frac{v_s^2}{v_o^2} \right]^2 + 4 \frac{v_s^4}{v_o^4} \beta_{app,l}^2}}{1 + (\beta_{app,l}^2 + 1) \frac{v_s^2}{v_o^2}}$$

with, if $\beta \neq 0$,

$$\begin{aligned}\theta &= \arccos\left(\frac{\beta_r}{\beta}\right) \\ &= \arccos\left(\frac{1 + (\beta_{app,t}^2 - 1) \frac{v_x^2}{v_o^2}}{\sqrt{\left[1 + (\beta_{app,t}^2 - 1) \frac{v_x^2}{v_o^2}\right]^2 + 4 \frac{v_x^4}{v_o^4} \beta_{app,t}^2}}\right)\end{aligned}$$

This is the result for relativistic Doppler effect.

Conclusion

With the concept of ALV $v_{app,l}$, we can determine the exact speed v as well as the angle q if both $\beta_{app,l}$ and $\beta_{app,t}$ are measured. However, all these results can only be guaranteed to hold for the radio sources which are at very low redshift $z \ll 1$ and stationary relative to the Earth's observer, and θ that can be generalized from $[0, \pi/2]$ to $[0, \pi]$. In order to generalize for all z and $\beta \in [0, 1]$, we are suggested to follow Michal J. Chodorowski's treatment in his paper (Chodorowski 2005).

On the other hand, the principle of relativistic Doppler effect enables us to find the actual radial speed v_r , and thus determine v and θ , if the sources have the doppler-shifted effects. But the exact velocities of all jet sources might not be obtained via Doppler-shifted lines because the sources might not have such lines. Instead of considering just the Doppler effects or spectroscopic methods, we can consider further astrometric methods that might enable us to measure the radial velocity. The accuracies will increase with future space astrometry missions.

The relative change in the angular size of the jet might be confused with the evolutionary effects, so the changing angular extent is an infeasible method of measurement. An alternative measurement method, or a new astrometric method, is needed to obtain the exact velocity of the jet or the component. Yet it is important to note that if the jet is replaced by the stellar object which has the fixed size and is nearby, then the relative change in the angular size can ensure us to find the radial velocity of the object, as we can have the distance to the stellar object via parallaxes. So the astrometric radial velocity measurement is not confined to just jets, but extended to the stellar objects that are nearby.

Acknowledgements

The topic presented here is based on ideas that were inspired by discussions in ASTR 4004/4005 Astrophysical Gas Dynamics class, which I took in 2010 as my third year research project. I feel tremendously indebted to Prof. Geoffrey Bicknell for his invaluable advice and patient supervision. Without his positive guidance and support I would not have understood as well the contemporary problem in Relativistic Jets and HzRG's.

I also thank PhD students and academics at the Research School of Astronomy & Astrophysics who presented a lecture series to summer students in 2010. In particular, I appreciate the the opportunity to have been on the field trip to explore some of the premier radio and optical astronomy sites and telescopes in Australia. The trip was crucial to furthering my understanding of this research project. I also thank Graeme Blackman for kindly giving us a ride to Mount Stromlo every day.

Last but not least, I wish to thank Dr Paul Francis and the anonymous reviewer for their valuable comments and subsequent assistance in improving this manuscript.

References

- Biretta, J. A., Sparks, W. B., Macchetto, F. 1999, ApJ, 520, 621
- Chodorowski, M.J. 2005, AmJPh, 73, 639
- Dravins D., Gullberg D., Lindegren L., Madsen S. 1999, ASPC, 185, 41
- Madsen, S., Lindegren, L., Dravins, D. 1999, ASPC, 185, 77
- Margon, B. 1984, ARAA, 22, 507
- Mirabel, I.F., Rodriguez, L.F. 1998, Nature, 392, 673
- Shu, F.H. 1982, *The Physical Universe: An Introduction to Astronomy*, Univ. Science Books, Mill Valley, CA, p.313

Remembering Australian Prisoners of War: Memory and Mourning at the Changi Chapel Memorial

Davina French

‘Their bodies are buried in peace; but their name liveth for evermore’

Ecclesiasticus 44:14

Abstract

The Changi Chapel was constructed by Australian servicemen in the World War II prisoner of war (POW) camp at Changi in Singapore. At the end of the war it was dismantled and shipped to Australia, where it now stands in the grounds of the Royal Military College, Duntroon. In 1988 it was dedicated as the National Prisoner of War Memorial. Despite the centrality of Changi and the Thai-Burma Railway in Australian collective memory, and the role of the POW experience in bolstering the narrative of ‘mateship’ that underpins national identity, the Chapel has not gained the prominence in public discourse of its larger neighbour, the Australian War Memorial. In this paper the current uses and meaning of the Chapel are examined. Its role in public ritual is contrasted with unique evidence of its meaning for personal commemoration, drawn from an informal Visitors’ Book at the site. Through analysis of this evidence and comparison with other relevant sites, the Chapel is shown to be primarily a site of personal remembrance, which is often an enactment of mourning. The naming of the dead emerges as a key to understanding the nature of this kind of war remembrance.

The ‘war memory boom’ of the past two decades is now a commonplace in historical and political analysis.¹ It has been accounted for by factors ranging from State-driven attempts to redefine national identity in the post-Cold War era to concerns that the war-time generations would pass without their stories being heard.² Jay Winter also argues for a new ‘market’ for memory among consumers with more education, income and leisure-time than previous generations.³ In

1 For example, Duncan Bell, ed. *Memory, Trauma and World Politics*, (Basingstoke, Hampshire: Palgrave Macmillan, 2006); Jay Winter, *War Remembrance*, (New Haven: Yale University Press, 2006); T.G. Ashplant, G. Dawson and M. Roper, eds. *The Politics of War: Memory and Commemoration*, (London: Routledge, 2000).

2 Joan Beaumont, ‘Prisoners of War in Australian National Memory’ in *Prisoners of War, Prisoners of Peace*, eds. B. Moore and B. Hatley-Broad (Oxford: Berg, 2005), 192.

3 Jay Winter, ‘Notes on the Memory Boom: War, Remembrance and the Uses of the Past’, in *Memory, Trauma and World Politics*, ed. Duncan Bell (Basingstoke, Hampshire: Palgrave Macmillan, 2006) 68.

the Australian public sphere this has resulted in increased attendance on Anzac and Remembrance Day, a rash of new monuments and a burgeoning industry providing tours of significant battlefield sites.⁴

Historians and popular authors alike have ridden this wave of public interest. As well as books offering new histories of Australia's involvement in the wars of the twentieth century, studies of war commemoration have been prominent.⁵ These often draw upon the notion of 'sites of memory'; locations where memories of an event are recalled, selected and shaped into a shared understanding of the past. Such sites include original locations, such as battlefields, but also war memorials and museums.⁶

War memorials and battlefield cemeteries have received particular attention since they can serve two functions: supporting the personal commemoration and mourning of veterans and their families, and providing a location for national collective remembrance. Winter suggests that personal commemoration is associated with early post-war years, when these sites provide 'a framework for and legitimisation of individual and family grief.'⁷ He sketches a pattern in which, as time passes and the pain of bereavement subsides, collective uses take over and serve increasingly nationalistic ends.⁸ When Bruce Scates described modern uses of World War I battlefields and cemeteries he also saw a combination of the personal and the collective. He observed pilgrims of the 1990s still seeking the graves of their grandfathers and touching their names in a ritual of mourning that Winter locates in the 1920s.⁹ Alongside them, however, Scates saw a generation of Australian youth, educated in the values of the 'Anzac Legend', who stop off on the backpacker trail to learn 'what it means to be Australian'.¹⁰ In Scates' survey, individual mourning was joined, rather than replaced, by collective rituals of national pride.

4 Preface in Marilyn Lake and Henry Reynolds, eds. *What's Wrong with Anzac? The Militarisation of Australian History*, (Sydney: University of New South Wales Press, 2010), vii. Subsequent to the publication of Lake and Reynold's book, a new memorial to Australia's National Servicemen was dedicated at AWM on 8 Sept. 2010.

5 For example, in the Australian context, Ken Inglis, *Sacred Places: War Memorials in the Australian Landscape*. (Melbourne: Miegunyah Press, 1998); Liz Reed, *Bigger than Gallipoli: War, History, and Memory in Australia*. (Perth: University of Western Australia Press, 2004); Bruce Scates, *Return to Gallipoli: Walking the Battlefields of the Great War*, (Cambridge: Cambridge University Press, 2006).

6 Pierre Nora, 'Between Memory and History: Les Lieux de Mémoire', *Representations* 26 (1989): 12.

7 Jay Winter, *Sites of Memory, Sites of Mourning: The Great War in European Cultural History*, (Cambridge: Cambridge University Press, 1995) 93.

8 *Ibid.*, 98.

9 Scates, *Return to Gallipoli*, 107-108; Winter, *Sites of Memory*, 115.

10 Scates, *Return to Gallipoli*, preface. The Anzac Legend dates from the World War I dispatches and *Official History* of C.E.W. Bean. He described the Australian soldier, later to be known as the 'digger', as courageous and resourceful, with a dry wit and a healthy disregard for authority. The Legend however is more than the men; it has come to encompass the spirit and values of a nation, especially focused on toughness in adversity and the bond between fellow Australians known as 'mateship'. Perhaps most critically, it is about ordinary

This paper focuses upon a unique site of memory from World War II, seeking evidence for these dual forms of remembrance in the context of a later conflict. World War II seldom rivals Gallipoli in national memory, but the Pacific campaigns have recently gained traction, for example through re-envisioning the period following the Fall of Singapore as the 'Battle for Australia'.¹¹ The Kokoda Track has become a focal point for pilgrimage and for politicians seeking to redirect national identity away from Britain and Europe. Hank Nelson refers to these political efforts to refocus attention onto the Pacific region as attempts to 'bring the legend home'.¹² Nelson also observed that 'the values that Australians might aspire to hold' run 'from Eureka to Gallipoli to Changi and Kokoda'; Changi has become another watchword in the inventory of nation-defining military episodes.¹³ This is at first surprising - even in comparison with Gallipoli, the suffering of Prisoners of War (POWs) held by the Japanese is a challenging narrative for reflection on Australian nationhood. But, as Joan Beaumont points out, the fact that almost half of those who died in the Pacific campaign died in Japanese captivity renders their stories salient.¹⁴ Their experiences as POWs, and the ways in which they are remembered, have therefore become subjects of considerable study.¹⁵ One further facet of POW remembrance is considered here through examining Australia's first National Prisoner of War Memorial.

When Singapore fell to Japan in February 1942 over 45,000 Allied servicemen were taken prisoner and held at Changi barracks in Singapore and more than 132,000 personnel from six nations were captured by the war's end. Many were sent to locations such as the Thai-Burma Railway, but those who survived returned to Changi.¹⁶ In May 1944 they were moved to Changi Prison, a civilian prison complex much too small for them, where they remained until liberation fifteen months later. During this time food and medical supplies were much reduced and their physical health deteriorated markedly, although at no stage

men, 'other ranks', rather than the warrior-heroes of classical legend, and has progressively incorporated into its narrative a belief that Britain, as much as Turkey, Germany or Japan, was implicated in Australia's military defeats.

11 As recently as 2008 Australia gained a new 'day', with 'Battle for Australia Day' being marked on the first Wednesday of September each year, Alan Griffin, *Battle for Australia Day to be marked across Australia*, Media Release, Aug. 31 2008. http://minister.dva.gov.au/media_releases/2008/08_aug/VA085.pdf (accessed October 12 2010). Even before this however, the extent to which the battle was really one to prevent the invasion of the Australian homeland was hotly contested, see for example Peter Stanley, *Invading Australia: Japan and the Battle for Australia, 1942* (Camberwell, Vic.: Viking, 2008).

12 Hank Nelson, 'Gallipoli, Kokoda and the Making of National Identity', *Journal of Australian Studies* 21 (1997): 164.

13 Hank Nelson, 'Kokoda: The Track from History to Politics' *The Journal of Pacific History*, 38 (2003): 110.

14 Beaumont, 'Prisoners of War in Australian National Memory', 186.

15 For example, Kevin Blackburn, 'Changi: A Place of Personal Pilgrimages and Collective Histories' *Australian Historical Studies* 112 (1999): 153-73; Annette Hamilton, 'Skeletons of Empire: Australians and the Thai-Burma Railway', in *Memory and History in Twentieth-Century Australia*, eds. Kate Darian-Smith and Paula Hamilton, (Oxford: Oxford University Press, 1994), 92-112.

16 Of the 22,000 Australians captured, around 13,000 worked on the Thai-Burma railway and more than 8,000 (more than one third) did not survive; 'Appendices' in Hank Nelson and Gavan McCormack, eds. *The Burma-Thailand Railway: Memory and History*, (Sydney: Allen and Unwin, 1993) 160-162.

were death rates comparable to those on the Railway.¹⁷ Since almost all POWs spent time at Changi, its name has become 'an evocative summary' of the experiences of all prisoners of the Japanese.¹⁸ In this light, it is perhaps not surprising that a relic of Changi should make its way to Australia to serve as a focus for remembrance.



The Chapel at Changi Gaol, painted by a POW in 1945¹⁹

The Changi Chapel was built as 'Our Lady of Christians Roman Catholic Chapel' by POWs in the grounds of the prison, at the request of Army Chaplain Father Lionel Marsden. It was one of thirteen chapels at the prison and evolved from a simple palm-thatched structure to its present design during the final fifteen months of the POWs' captivity.²⁰ Many of its features, such as the altar and front railings, are decorative as well as functional; its design and construction still attest to the care and commitment of its original builders. It originally bore

17 R.P.W. Havers, *Reassessing the Japanese Prisoner of War Experience: the Changi POW Camp, Singapore, 1942-5*, (London: Routledge Curzon, 2003) 10-11, 137, 154, 171.

18 Hank Nelson, 'Beyond Slogans: Assessing the Experiences and the History of Australian Prisoners of War of the Japanese', in *Forgotten captives in Japanese Occupied Asia*, eds. Karl Hack and Kevin Blackburn. (Oxford : Routledge, 2008), 31.

19 Richard Cochran, *Roman Catholic Chapel, Changi Prison*, 1945, Australian War Memorial item no. ART28914. All efforts were made to identify the owner of copyright for this image, however none was identified; fair use is claimed for not-for-profit educational & scholarship purposes.

20 Australian Construction Authority, *Report on the Reconstruction of Changi Chapel as a National Prisoner of War Memorial*, 12. Canberra, 1989. Australian War Memorial Records Collection, PR91/041; Steve Hart, *Duntroon: its Heritage and Sacred Legacy*. (Canberra: Defence Publishing Service, 2009), 38.

the dedication 'in memory of our deceased comrades...over whose remains there was no Christian symbol'; it was from the beginning a memorial as well as a place for Roman Catholic worship.²¹

Following the Japanese surrender, Corporal Max Lee, working with the Commonwealth War Graves Commission, gained permission to dismantle the Chapel and have it shipped to Australia for display at the Australian War Memorial (AWM).²² The crates were stored until 1985, when it was offered to the Army Museum on the grounds that it was too large for the AWM.²³ Recent commentators have suggested that this surface reading of the contemporary documents may be naive, and that the search for an alternative to the AWM may rather reflect tension between POW memory and traditional 'Anzac' values.²⁴

The Army History Unit determined that the Chapel was too significant to be consigned to one of its own museums and consulted the veterans associations.²⁵ With the support of the Returned Services League and the Ex-POWs Association it was reconstructed at the Royal Military College (RMC), Duntroon as a National Memorial to Australian POWs. Corporal Lee's meticulous notes and photographs, along with his involvement in the reconstruction, have ensured that the reconstructed Chapel is almost identical to the original. In bureaucratic terms, it is now the responsibility of the National Capital Authority and is treated as one of the set of memorials otherwise located on Anzac Parade.²⁶

As a war memorial, the Chapel is unique. In the aftermath of World War I most commemorative sites were carefully designed monuments; more than ninety per cent bore an honour roll.²⁷ For Winter, it is a fundamental component of these memorials that they honour the dead by naming them,²⁸ although Australian memorials often differ from European ones by also naming those who returned.²⁹

21 Father Lionel Marsden, 'Australia's Lost Division', *The Catholic Weekly*, November 15 1945, 21. This article was tabled at a meeting of the National POW Memorial Trust Committee, but not archived with the minutes, ARMCD, Changi Chapel Box 1, Minutes of the National POW Memorial Trust September 17 1987, item 14.

22 'Changi Chapel to go into Museum' in *The Telegraph*, Brisbane, 1st July 1946. ARMCD, Changi Chapel Box 1, CE/R985/1/18/1, folio 10.

23 Minutes of the Changi POW Chapel Project Committee, 11th February 1987. ARMCD, Changi Chapel Box 1, CE/R985/1/18/1, folio 18.

24 Lachlan Grant, 'What makes a 'National' War Memorial? The Case of the Australian Ex-POWs Memorial', *Public History Review* 12 (2006): 93.

25 Brigadier M.P. Blake, 'Letter to the Commandant, Royal Military College, Duntroon', December 5 1985. ARMCD, Changi Chapel Box 2, letter originally referenced A85 - 36972.

26 For example, in response to a request to place individual regimental plaques in the Chapel the Trustees note that 'It appears that none of the other National Memorials on ANZAC Parade have ... individual memorials attached to them.' Agenda Paper for a Special General Meeting of the National POW Memorial Trust - 12 June 1991, item 6. ARMCD, Changi Chapel Box 1, Minutes of the National POW Memorial Trust, originally referenced A88-36250.

27 Inglis, *Sacred Places*, 144, 180.

28 Winter, *Sites of Memory*, 98.

29 Inglis, *Sacred Places*, 181.

Following World War II, more functional memorials, such as halls, parks and swimming pools, were commonly selected, but the names of the fallen were also added to the earlier monuments,³⁰ a permanent indictment that the Great War did not 'end all wars'.

These stone memorials are still an important focus for national and local commemoration, as witnessed by the increased attendance at Anzac Day services and the erection of new memorials discussed above. But Australians also now travel the globe to visit historic battlefield sites, such as the Kokoda Track and the Gallipoli peninsula. These incorporate their own cemeteries and memorials, which also provide the focus for collective rituals such as the Anzac Day dawn service. Observers have argued that the authenticity of these landscapes lends particular poignancy to the individual reflections that take place there.³¹

The Changi Chapel echoes both kinds of commemorative site: the monument and the battlefield; but it is not quite either. It is a National Prisoner of War Memorial, but it bears no honour roll. This is likely due to its grouping with the memorials on Anzac Parade; none bears the names of those it commemorates.³² Nevertheless, all of the others are within a short walk of the Roll of Honour at the AWM itself, and like the cemeteries of the Western Front, the AWM bears the dedication 'Their name liveth for evermore'.

Most of the memorials on Anzac Parade are rich in symbolism, and their messages have become more complex with each new addition. By contrast, if the Chapel has meaning, it is derived through authenticity; nothing has been added to the original building of 'scrap wood and metal'³³ beyond two brass plaques. One provides a brief history of the Chapel and describes it as 'an act of enduring faith in the midst of extreme adversity'. The other lists the conflicts in which Australian POWs were taken, and records, in typically democratic fashion, that it was unveiled by 'a former prisoner of war'. Its untouched quality resembles a historic site, although its relocation to Canberra has led some to question its authenticity.³⁴ Its very simplicity may, however, provide new insight into the ways in which Australians interact with their memories at this and other significant sites of war commemoration.

30 Inglis, *Sacred Places*, 352.

31 For example, Scates, *Return to Gallipoli*, 189, quotes a visitor observing the young backpackers clambering over the ridges of Lone Pine and thinking that 'they could so easily have been the Anzac troops of 1915'.

32 The Vietnam Forces National Memorial does, in fact, contain the names of those who died, but they are written on a scroll that is sealed into the stone, where they cannot be seen or touched.

33 Inglis, *Sacred Places*, 370.

34 Blackburn, 'Changi', 163.



The Chapel in its new location at RMC Duntroon.

The first public use of the Changi Chapel was its dedication on Victory in the Pacific (VP) Day (August 15th), 1988; in this it already drew upon established World War II memory. The dedication plaque was unveiled by Sir Edward (Weary) Dunlop, a surgeon in Changi, and the lesson read by Mrs. Vivian Statham (née Bullwinkel), the only survivor of a Japanese massacre of prisoners on Bangka Island, off Sumatra, in 1942. In the Australian narrative these two names are more closely linked with Japanese captivity than any others. Sir Edward's speech also made links to the broader narrative of Anzac by urging those present to 'create a national spirit which will be worthy of the selflessness and sacrifice which is enshrined in the Chapel.'³⁵ The signs from this initial service were that the Chapel would take its place within the established Anzac framework.

The Chapel has seldom received public or media attention since that opening ceremony. Blackburn refers to visits by Singaporean politicians in the 1990s but they are only recorded in Singaporean sources,³⁶ and the Duntroon Archives record only four additional services in 22 years. In 1989 a mass was celebrated to honour the Chapel's original builders, who had been located too late for them to attend the dedication ceremony.³⁷ In February 1995 a two-day ceremony

³⁵ Sir Edward Dunlop, 'Transcript of Speech at the Dedication of Changi Chapel as a National Memorial Remembering Prisoners of War', August 15 1988, ARMCD, Changi Chapel Box 2.

³⁶ Blackburn, 'Changi', 163, referenced to the *Straits Times*.

³⁷ Karen Hobson, 'ACT Reunion with a Changi Chapel', *Canberra Times*, March 18 1989, ARMCD, Changi Chapel Box 2.

commemorated the anniversary of the Fall of Singapore as part of the larger *Australia Remembers* celebrations. It began with a service at the Chapel, but was followed the next day by a much larger ceremony at the AWM addressed by the Prime Minister Paul Keating. Twelve hundred ex-POWs and their families attended; these numbers could not possibly have been accommodated at the Chapel site.³⁸ The speeches were short, but dense with the language of mateship and suffering; the Chapel was not mentioned.³⁹

Two further services were held at the Chapel, one on Remembrance Day 1991 to remember Nurse POWs, and another on VP Day 2003 honouring the Army Chaplains who provided spiritual support to Australian troops during their captivity.⁴⁰ Since no further adornments were permitted on the Chapel, the associated plaques are located in the grounds. The Committee of Trustees has since received several further requests to place commemorative markers in or around the Chapel, for example regimental plaques, dedications to particular saints and requests to scatter veterans' ashes; all have been refused.⁴¹ While other services may have taken place at the Chapel, it is perhaps ironic that the only one to leave a trace in the *Canberra Times* is a service for Vietnam veterans in 2002⁴² — no Australian POWs were taken in Vietnam.⁴³ The evidence is sparse, but supports Blackburn's assertion that the site has not become a focus for collective remembrance of Australia's POWs.⁴⁴

If public ritual leaves incomplete evidence, private remembrance is even more ephemeral. It is impossible to estimate how many visitors have stopped at the Chapel, whether they arrived in groups or alone, or how they remembered Australia's POWs. A formal book of remembrance has never been provided, so the reflections of a generation of visitors are lost.⁴⁵ In the last two years however, fragments of memory have remained at the site. In May 2008 an Army Cadet Officer visiting from Western Australia was moved to leave his name. He was apparently carrying an A6-sized spiral bound notebook, the first eight pages

38 *Australia Remembers* was a year-long event intended to mark the 50th anniversary of the end of WW2. Attendance figure from Con Sciacca, Minister for Veterans Affairs, *Australia Remembers the POW Story*, Press Release, February 15 1995. Australian War Memorial, Souvenirs Collection 7, file 2/4/1, item 000884.

39 For example, Max Jagger (Federal President of the Ex-POW Association) used the term 'mate' or 'mateship' five times in a 600 word address. Australian War Memorial, Souvenirs Collection 7, file 2/4/1, item 000882.

40 Orders of service for these services available at ARMCD, Changi Chapel Box 2.

41 Agenda Paper for a Special General Meeting of the National POW Memorial Trust - 12 June 1991. ARMCD, Changi Chapel Box 1, Minutes of the National POW Memorial Trust, originally referenced A88-36250.

42 Roderick Campbell, 'Vietnam vets come to terms with service', *Canberra Times*, October 7 2002, <http://www.canberratimes.com.au/news/local/news/general/vietnam-vets-come-to-terms-with-service/514550.aspx?storypage=0> (accessed September 20 2010).

43 Beaumont, 'Prisoners of War in Australian National Memory', 186.

44 Blackburn, 'Changi', 163.

45 Although Scates discusses entries in the visitors' books at Gallipoli and on the Western Front, he also notes that the Commonwealth War Graves Commission routinely destroys these books, so it seems that these memories are always fleeting, *Return to Gallipoli*, xxi.

of which recorded the negative numbers of photographs taken on trips around Australia; he added his name and left the book inside the box that contained information leaflets about the Chapel.

In the intervening twenty-seven months around 100 entries were added, half of which are limited to names and dates.⁴⁶ Some of these record visits by schools and groups of ex-servicemen, who often accompany their entry with the epitaph 'Lest We Forget'. But the remaining authors needed no such reminder; they have left overwhelmingly personal statements, rich with family memories. Eighty percent of these substantive entries name the soldier they are remembering; some give vivid details of places and events. These families seem proud, almost compelled, to leave enough information to identify the man they seek to honour. Examples given here are often edited since some are more than seventy words in length.⁴⁷

Visited today in memory of my father [], returned prisoner of war, Changi. So very proud of my father's achievements and ability to overcome what he endured.

This is in memory of an uncle [] who was imprisoned in a room not more than 6' x 6' with at least 6 men. He came back home to his family but struggled to settle in to normal life.

Visitors remember not only the POW experience, but the lifetimes of men who survived their captivity. Some overcame their experiences, but those who could not are also remembered.

Nelson has noted that a limitation of the Chapel as a National Prisoner of War Memorial is its close association with Japanese captivity, which may exclude or diminish other POW memories.⁴⁸ Most entries do mention Changi or the Thai-Burma Railway, but one family remembered a father imprisoned in Germany while others remember 'the families of those who died in Vietnam' and 'the soldiers of today's army'. For some visitors this opportunity appears to provoke broader reflections on the cost of war.

When 'peace' was announced at the prison, the first thing my father did was walk to this chapel to thank God for his survival.

A number of entries make a direct link to the Chapel; they often express the hope that 'their' POW found some comfort there. Others, however, are far removed;

46 This research was undertaken in August 2010, with the last entry dated July 8 2010.

47 Visitors' Book, Changi Chapel, 2008-2010, facsimiles available on request. Despite the foregoing, I have chosen to omit names to preserve the privacy of those who left their memories; quotations contain empty square brackets where a name is omitted. In this informal setting grammar and punctuation are not always observed but I have not 'corrected' the quotes since the writer's meaning is generally clear.

48 Nelson, 'Beyond Slogans', 36.

a family from Nambucca Heads remembered a son who trained at Duntroon and died on service in Germany in 1994. What characterises the large majority of entries is their deeply personal nature; families sign off with their love or address the deceased directly: 'You lived for those you loved, and those you loved will always remember'.

Some entries directly invoke the language of Anzac, echoing its dominant themes of mateship and sacrifice, for example 'Thank you [] and all your mates who died so we can enjoy freedom'. There are only eleven entries that remember POWs collectively, that is, without naming a relative or friend, and five of these use the terms 'sacrifice', 'suffering' or 'endurance'. But of the forty or more 'named' entries, only seven use terms commonly associated with public Anzac remembrance, and then they speak of bravery as often as sacrifice.

The Visitors' Book suggests that the Chapel has a particular role in helping families to remember their loved ones, rather than as a site for collective ritual. There have been few formal ceremonies held there, and when major national events have occurred, the Chapel site has been overshadowed by the main War Memorial. Furthermore, there is no evidence of entries clustering around significant dates such as Anzac or Remembrance Day. It does not appear that individuals or groups include the Chapel in an itinerary that starts with the dawn service or are prompted by media reminders that a significant anniversary is approaching.

This pattern of use differs somewhat from Scates' observations at Gallipoli, and diverges from what Winter might expect almost 70 years after the Fall of Singapore. Most messages are personal and individuated and some are resonant with mourning; at least six of the entries that remember a Changi survivor also mention his more recent passing. These often give a date of his death but there is no evidence that the visit was timed for such an anniversary. Winter describes mourners at war memorials as going 'beyond the limitations of place and time'.⁴⁹ Scates also noted that pilgrimage sites became a 'place outside time' where his informants experienced deeper connections to the past than they had been expecting.⁵⁰ The timing of the visits is at least suggestive of the idea that the very personal experiences recorded in the Changi Chapel Visitors' Book also took some writers by surprise. They were not, however, lost for words and did not fall back upon the anonymous language of the Anzac Legend; instead they have created their own roll of honour, a book of personal tributes to loved ones whose experiences have shaped their family narratives.

In this respect, the location of the Memorial at RMC, Duntroon may also be significant. The Chapel is not the only site of remembrance in the college

49 Winter, *Sites of Memory*, 113.

50 Scates, *Return to Gallipoli*, for example 121.

grounds; there are also several honour rolls and an extensive memorial space commemorating Duntroon graduates who have died in service. It is possible that some of the Chapel visitors who remembered a serviceman who was not a POW, or who died in a more recent conflict, had already found his name at these memorials. For them, the visit to Duntroon may have been something of a pilgrimage.

The uses of Changi Chapel can be further understood by drawing comparisons with other relevant sites, for example the original site of captivity in Singapore and the new Australian POW memorial in Ballarat. Blackburn's analysis of the original Changi prison site provides striking parallels with the evidence presented here. He described, in 1999, the meanings and uses of a site essentially created for the purpose of 'pilgrimage'. Other than the name, little of the original site was accessible to visitors - the chapel was a replica constructed outside the prison walls since the prison had resumed its penal function. There was also an interpretative museum, but Blackburn did not mention an honour roll. The messages left by visitors to the site were however strikingly similar to those found at Duntroon, and Blackburn also noted that 'many family members will make a pilgrimage to Changi a few years after their ex-POW family member has died.'⁵¹ A number of the entries in the Duntroon Visitors' Book also suggest that the visit there was prompted by experiences at the Singapore site. One visitor even noted that 'After visiting Changi in Singapore I felt until I had been here to Duntroon to see the Chapel, my journey was not complete'.

The Ballarat memorial is a recent addition to Australia's commemorative sites; it was completed in 2004 and is a triumph of memorial symbolism.⁵² In the Australian tradition it names all 37,000 servicemen who became POWs across all wars, whether or not they returned. Its opening ceremony drew a crowd of 10,000 including 1,300 ex-POWs,⁵³ challenging the idea that this group of veterans is now too physically or psychologically fragile to attend such events. Grant quotes the Federal Member of Parliament for Ballarat suggesting that

'in time our memorial will naturally progress to become a national memorial - a transition that will not seek to take away the significance of the Changi Chapel ... but in my view will naturally occur as people ... make the pilgrimage to the memorial here in Ballarat seeking names of people they have loved.'⁵⁴

51 Blackburn, *Changi*, 167.

52 Lachlan Grant, 'Monument and Ceremony: The Australian Ex-Prisoners of War Memorial and the Anzac Legend', in *Forgotten captives in Japanese Occupied Asia*, eds. Karl Hack and Kevin Blackburn, (Oxford: Routledge, 2008), 41-56.

53 Ibid., 54, Note 3.

54 Quoted in Grant, 'What makes a 'National' War Memorial?' 95, my emphasis.

In 2008 the Ballarat Memorial was finally granted 'National status'; it was the first memorial outside Canberra to be so named and this required a change in Federal legislation. It followed an 'election commitment' in support of that same Member of Parliament, whose electorate was marginal in the 2007 Federal election.⁵⁵ Grant describes a visit to the memorial by a Changi survivor who brought with him a list of fifty names to find; the significance of the honour roll at this site has clearly not been overlooked by commentators.⁵⁶ Evidence from both sites suggests that, whatever ambivalence may have been apparent in the 1980s, POW remembrance is now both politically and emotionally powerful.

This examination of the Changi Chapel memorial provides a number of insights into the nature of Australian war remembrance. Ken Inglis has argued that in recent years the Anzac Legend has been stripped of its associations with fighting prowess, and has acquired "the vocabulary of sacrifice and victimhood".⁵⁷ The experience of POWs in the Pacific theatre therefore epitomises the way that Australia now remembers its military past. This is also highlighted by the fact that the POW commemorations discussed earlier were used to launch the entire *Australia Remembers* year,⁵⁸ and by the passions aroused by the recent redevelopment of the Changi Prison.⁵⁹ The theme of the new narrative is, however, the supportive role of 'mates' and of medical personnel. Mateship is now a key theme for political uses of Anzac,⁶⁰ and Sir Edward Dunlop is strongly represented in the grounds and exhibits of the AWM along with Simpson and his donkey.⁶¹ The role of Christian faith in this narrative is less clear; Inglis has described the Australian War Memorial as 'a temple of civil religion' and suggested that even non-denominational Christianity may be in tension with Anzac remembrance.⁶² The Changi Chapel's transition from a Roman Catholic place of worship to a non-denominational chapel, situated within the largely secular practice of remembering Australia's servicemen and women, may retain some of this tension.

55 Dominic Brine, 'Ballarat ex-PoW memorial gets national status', ABC local Radio, Ballarat, September 30 2008. <http://www.abc.net.au/local/stories/2008/09/30/2378198.htm> (accessed September 21 2010); Alan Griffin, Minister for Veterans' Affairs, *Ballarat Ex-POW Memorial First to Benefit from New Legislation*, Media Release, March 19 2008. http://minister.dva.gov.au/media_releases/2008/03_mar/VA024.pdf (accessed September 21 2010).

56 Lachlan Grant, 'Monument and Ceremony', 52.

57 Ken Inglis, "They Shall Not Grow Old", *The Age*, Melbourne, April 30th 2005, 8.

58 Sciacca, *Australia Remembers the POW Story*.

59 Joan Beaumont, 'Contested Trans-national Heritage: The Demolition of Changi Prison, Singapore', *International Journal of Heritage Studies*, 15 (2009): 288.

60 For example Prime Minister Keating referred to 'the bonds of mateship' when eulogizing the Unknown Soldier in November 1993, <http://www.awm.gov.au/commemoration/keating.asp> (accessed October 15 2010) and Nelson, 'Beyond Slogans', 32 quotes from Prime Minister Howard on Anzac Day 1998 valorizing the 'mateship, courage and compassion' of the Australian POWs.

61 Simpson was a stretcher bearer in WW1.

62 Inglis, *Sacred Places*, 459, 462.

In broader terms the Chapel and its Visitors' Book provoke further enquiry into the role of naming in war remembrance. This brief survey of sites of Australian war commemoration suggests that the naming of the dead remains integral to their memory. Further evidence for this might be drawn from the history of the Chapel itself. Its original builder remembers hanging plaques naming four of his 'mates' who had died in captivity, but by 1946 they were gone, along with evidence of any other naming.⁶³ The form of the Vietnam Memorial on Anzac Parade is also informative here; the names of the dead from that campaign are both present and invisible, inscribed on scrolls sealed into the stones, perhaps reflecting tension between AWM policy and the wishes of veterans.

The need of the living to name the dead is central to Winter's reading of war remembrance. It still appears to be as fundamental for the bereaved of World War II, Vietnam and even twenty-first century Manhattan⁶⁴ as it was for his interpretation of World War I memorials. It may not, however, pass as quickly or completely as his analysis suggests. The Changi Chapel Visitors' Book demonstrates that those who seek to remember loved ones may render their names in many forms, and for many years. Touching a stone inscription or leaving a paper poppy are the common forms observed at the larger memorials and cemeteries, but in this intimate space where individuals must often be alone with their memories, they remember the POWs by recording their lives and achievements.

Analysis of their entries reveals a very private act for so public a space. This may reflect the nature of the site; it was described as a 'special and sacred place' by one of the visitors, and as 'serene but sombre' by another recent observer.⁶⁵ Although its isolation from Anzac Parade may be an important factor in its relative lack of prominence, the quiet, tree-fringed site offers an atmosphere of peace that would be hard to replicate in the busier spaces of the War Memorial proper. This analysis also provides a reminder, however, that collective war memory in Australia is still contested space. The weight of evidence now suggests that the POW experience itself is not in tension with the contemporary construction of Anzac,⁶⁶ but the Chapel's focus on faith and on the experience of a particular group of prisoners may have led to it being side-lined as a site for national, secular ritual. Beaumont has argued that war memorials become active sites of memory only when they are 'invested with a sacred quality by virtue of their association with battle' or when 'visitors can invest them with sacred

63 Hobson, 'ACT Reunion'.

64 The names of those who died on September 11 2001 have been read aloud at the site of the World Trade Centre every year on that date, and are now inscribed on a bronze memorial at ground zero.

65 Changi Chapel Visitors' Book, September 20 2008; Hart, *Duntroon*, 38.

66 Beaumont, 'Prisoners of War in Australian National Memory', 186.

meaning through their private participation'.⁶⁷ The Changi Chapel appears to have retained its association with its original location, and both benefits from and contributes to the heritage of RMC, Duntroon. The evidence of the Visitors' Book also strongly attests to the meaningful participation of those who visit. Although the Changi Chapel has not been the scene of public ritual, it provides a unique opportunity to observe a different pattern of remembering, akin in some respects to Scates' Gallipoli pilgrimage, at a site of memory within Australia itself.

Acknowledgements

The author wishes to thank Ross Howarth for providing access to the Archives of the Royal Military College, Duntroon and for his assistance with several aspects of this research. I am also grateful to Joan Beaumont, Frank Bongiorno, Mark Dawson and Tristan Moss for their advice and encouragement during various stages of writing this paper.

⁶⁷ Joan Beaumont, 'Australian Memory and the US Wartime Alliance: The Australian–American memorial and the Battle of the Coral Sea', *War & Society* 22 (May 2004): 86.