



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

Research Commons

<http://researchcommons.waikato.ac.nz/>

Research Commons at the University of Waikato

Copyright Statement:

The digital copy of this thesis is protected by the Copyright Act 1994 (New Zealand).

The thesis may be consulted by you, provided you comply with the provisions of the Act and the following conditions of use:

- Any use you make of these documents or images must be for research or private study purposes only, and you may not make them available to any other person.
- Authors control the copyright of their thesis. You will recognise the author's right to be identified as the author of the thesis, and due acknowledgement will be made to the author where appropriate.
- You will obtain the author's permission before publishing any material from the thesis.

**WORKING ACROSS CULTURES IN INDIGENOUS SCIENCE
EDUCATION**

A thesis
submitted in fulfilment
of the requirements for the degree
of
Doctor of Philosophy

at

The University of Waikato

by

MICHAEL GEORGE MICHIE

The University of Waikato

2011



ABSTRACT

The research in this thesis considers the ability of westerners, primarily teachers, to work cross-culturally with indigenous students in four of the settler states, Australia, New Zealand, Canada and the USA. It looks particularly at identity learning as a way in which westerners enhance their understanding and attitudes to another culture. Identity learning, and culture shock as an associated process, is examined in relation to the ideas of border crossing and culture brokerage.

A number of issues were raised, some through the literature, which became foci for the research. Examination of border crossing indicated that some westerners were successful as cross-cultural communicators but did not suggest why. Discussions of cultural borders gave rise to their critique as being essentialised but failed to suggest how this was to be overcome. Anthropological models did not give any characterisation to the role of culture broker, although the ethnohistory literature gave some insight. The influence of culture shock on westerners working in indigenous communities in the settler states was not particularly understood nor its relationship to identity learning explored.

A qualitative methodology is used involving a series of interviews with eight participants who were considered to be experienced in cross-cultural communication with a background in education. From the interviews a series of narratives were written which revealed their experiences and understandings particularly about their border crossings, culture brokerage and opinions regarding teaching indigenous students and teaching them science. These narratives became the major source of data for analysis.

This research shows that many westerners who are successful working in cross-cultural settings value the culture of their indigenous hosts. This is the consequence of enhanced identity learning and can be the result of culture shock. Not all westerners learn to value the other culture and may either leave the community or stay for some other reason. Border crossers are able to think beyond the limitations of an essentialised 'we and they' dichotomy and locate themselves in other ways relative to the border. Culture brokerage is a strategy

that individuals choose to use, sometimes on the behalf of a government or institution. The characteristics of an effective culture broker are those of a border crosser and this establishes a nexus between border crossing and culture brokerage.

Suggestions regarding preparation to teach in indigenous communities reflect the enhancement of identity learning and promotion of border crossing. Preservice training should include experience practicum teaching with indigenous students. Effective teaching of indigenous students could be supported by hiring experienced teachers and extending their stays. All teachers who go to work in indigenous communities need to be aware of culture shock and its possible impact and mechanisms for minimising its impact need to be established through mentoring programs. The context of the students needs to be taken into account by consideration of their culture and appropriate interpretation of the curriculum and implementation of teaching strategies. Teachers need to acknowledge that they are in positions of power but need to negotiate that respectfully with their indigenous students. As teachers of science they need to have a more inclusive idea of the nature of science so they can facilitate the border crossings of their indigenous students.

ACKNOWLEDGMENTS

I would like to acknowledge my wife, Louise, and my children, Rhys and Camilla, who have allowed me to undertake this journey. I know that they didn't expect to take so long. I thank Louise for her forbearance at all times and for minding the fort when I have been on campus in New Zealand. I also acknowledge my father, George Michie, who died late in 2009; my mother and he always encouraged my love of learning.

I wish to acknowledge Associate Professor Bronwen Cowie who has been my chief supervisor through a long journey; she has given good advice throughout and I thank her for that. I thank her also for staying with me for the duration. I thank Professor Clive McGee for his patient advice after becoming a supervisor late in the process. I express my thanks to Associate Professor Liz McKinley and Professor Russell Bishop who also provided sound advice while they were my supervisors.

I would like to express my thanks to the research participants who exposed themselves by expressing their thoughts through this research.

I want to thank the directors and members of staff of the Centre for Science and Technology Education Research (University of Waikato) who supported my research there.

I would like to thank colleagues in the Australasian Science Education Research Association, the Charles Darwin University and elsewhere who have engaged with me in discussions about the research. My thanks go to friends like Paul Bubb, Mick Uibo, Brian Lewthwaite and Birut Zemits who also joined in the conversation.

ACKNOWLEDGMENTS

In the spirit of reconciliation towards indigenous people, I would like to
acknowledge

The Waikato people,
as the traditional owners of the lands in the Waikato district of Aotearoa New
Zealand

The people of the Larrakia Nation,
as the traditional owners of the lands around Darwin, Australia, where I live

and indigenous peoples worldwide.

ETHICAL CONSIDERATIONS AND RESEARCH CONSENT

Readers of this thesis will become aware that the data used in it were supplied by a group of participants who have allowed themselves to be identified for the purpose of the research. This issue is discussed in some detail in Chapter 3. They have signed an informed consent agreement with the author to allow this to happen for the research reported in this thesis, but not necessarily beyond it.

Researchers who make use of this thesis are asked to refrain from any action which would identify any of the participants. It is suggested that any researchers who use any direct quotations by the participants should make use of assumed names rather than actual names and take steps to prevent the speakers from being identified.

TABLE OF CONTENTS

Abstract	ii
Acknowledgments	iv
Ethical consideration and research consent	vi
Table of contents	vii
List of figures	xii
Location map	xiii
Protocols	xiv
Glossary of terms from indigenous languages	xv
Chapter 1 Introduction	1
1.1 Overview of my position	2
1.1.1 <i>Researcher-as-participant: “Who are you? Where do you come from?”</i>	3
1.2 Outline of the research	5
1.3 Significance of the research	5
1.4 Structure of the thesis	7
Chapter 2 Literature review	9
2.1 Culture and the cultural borders	10
2.1.1 <i>What is culture?</i>	10
2.1.2 <i>Borders and border crossing</i>	14
2.1.3 <i>Borderlands, contact zone and the cultural interface</i>	17
2.2 Identity learning and border crossing	20
2.2.1 <i>Culture shock and identity learning</i>	20
2.2.2 <i>Impacts on westerners living in indigenous communities</i>	26
2.2.3 <i>Responses to culture shock: Courses of action</i>	29
2.2.4 <i>Effective teachers of indigenous students</i>	37
2.2.5 <i>Cross-culturalists and effective and access-enhancing teachers</i>	42
2.2.6 <i>Culture shock and the border crossing metaphor</i>	43

2.3	Culture brokers	47
	2.3.1 <i>Culture brokers as change agents</i>	48
	2.3.2 <i>Culture brokerage models</i>	49
	2.3.3 <i>Characteristics of a culture broker</i>	53
	2.3.4 <i>Redefining the culture broker in education</i>	55
	2.3.5 <i>The culture broker idea in science education and Culture studies in science education (CSSE)</i>	58
	2.3.6 <i>Criticism of ‘teachers as culture brokers’</i>	61
	2.3.7 <i>Concluding remarks</i>	62
2.4	The nexus between border crossing and culture brokerage	63
 Chapter 3: Using narrative inquiry		67
3.1	Qualitative research	68
3.2	Interviewing	69
	3.2.1 <i>Ethical considerations</i>	71
3.3	Postmodern thought and narratives	72
	3.3.1 <i>Life histories and critical events</i>	73
3.4	Verification in qualitative research	74
	3.4.1 <i>Postmodernist alternatives</i>	75
3.5	Design for this research	77
	3.5.1 <i>Data collection through interviews</i>	78
	3.5.2 <i>Narrative inquiry</i>	79
	3.5.3 <i>Verification</i>	81
	3.4.3 <i>Data presentation</i>	82
 Chapter 4 Narratives as cameos		84
4.1	Structure of the narratives and the cameos	84
4.2	The participants	85
4.3	The cameos	91
	GLEN AIKENHEAD: <i>Walking the walk</i>	91
	MILES BARKER: <i>Mauria ko oku painga, waiho ko oku wheruu</i>	95
	CELIA HAIG-BROWN: <i>I choose to work in this world of borders</i>	98
	JAMES RITCHIE: <i>On becoming bicultural</i>	101

MICHAEL CHRISTIE: Fortuitous happenstance	104
MARK LINKSON: Wanting to make a difference	107
DAVID PARISH: <i>Towards tomorrow</i>	110
LEONIE JONES: An unintended journey	114
Chapter 5 Early influences: Crossing borders and beyond	118
5.1 Personal influences: early experiences and learning about the other	118
5.1.1 <i>Initial social influences</i>	118
5.1.2 <i>Influence of multiculturalism</i>	122
5.1.3 <i>Religion and social justice</i>	123
5.1.4 <i>Concluding remarks</i>	125
5.2 Professional influences: early teaching experiences	125
5.2.1 <i>Preservice teacher training</i>	126
5.2.2 <i>Indigenous community schools</i>	127
5.2.3 <i>Mainstream schools</i>	133
5.2.4 <i>Working at the tertiary level</i>	135
5.2.5 <i>Concluding remarks</i>	138
5.3 Border crossing and beyond	140
5.3.1 <i>Border workers</i>	141
5.3.2 <i>Being bicultural and border working</i>	144
5.3.3 <i>Beyond borders</i>	147
5.3.4 <i>Concluding remarks</i>	148
5.4 Conclusion	149
Chapter 6 Understanding culture brokers	151
6.1 Perceptions of culture brokerage	152
6.2 Purposes of culture brokering	157
6.3 Individual and intrinsic qualities of culture brokers	161
6.3.1 <i>An understanding of the other culture</i>	162
6.3.2 <i>An understanding that the other culture has alternative perspectives and that these have intrinsic value</i>	167
6.3.3 <i>Show respect for the other – earn trust of the other</i>	169
6.3.4 <i>Sensitive to possible conflicts between the cultures and able to develop strategies to deal with conflicts</i>	170
6.3.5 <i>Being a reflective practitioner</i>	171
6.4 Power relations in culture brokering	172

6.5	Criticism of culture brokering	176
6.6	Conclusion	178
Chapter 7 Teachers working across cultures		178
7.1	Teachers in cross-cultural settings	180
	7.1.1 <i>Preservice training</i>	180
	7.1.2 <i>Teachers living and teaching in indigenous communities</i>	181
	7.1.3 <i>Teachers working with indigenous students in urban and regional schools</i>	203
	7.1.4 <i>Concluding remarks</i>	203
7.2	Teachers and power	204
	7.2.1 <i>Concluding remarks</i>	206
7.3	Teachers and science education	206
	7.3.1 <i>The power of science</i>	206
	7.3.2 <i>The place of indigenous knowledge in the curriculum</i>	208
	7.3.3 <i>Teachers as culture brokers teaching science</i>	211
	7.3.4 <i>Concluding remarks</i>	213
7.4	Conclusion	213
Chapter 8 Summary, conclusions and implications		215
8.1	Early cross-cultural influences: crossing borders and beyond	217
8.2	Understanding culture brokerage	219
8.3	Teachers in cross-cultural settings	220
8.4	Conclusion: <i>What are the aspects of identity of those who work across cultures in science education?</i>	222
8.5	Limitations of the research	223
8.6	Implications	224
	8.6.1 <i>Begging the question: Is it possible to be a culture broker without being a border crosser?</i>	226
8.7	Original research outcomes	227
8.8	Future research	229

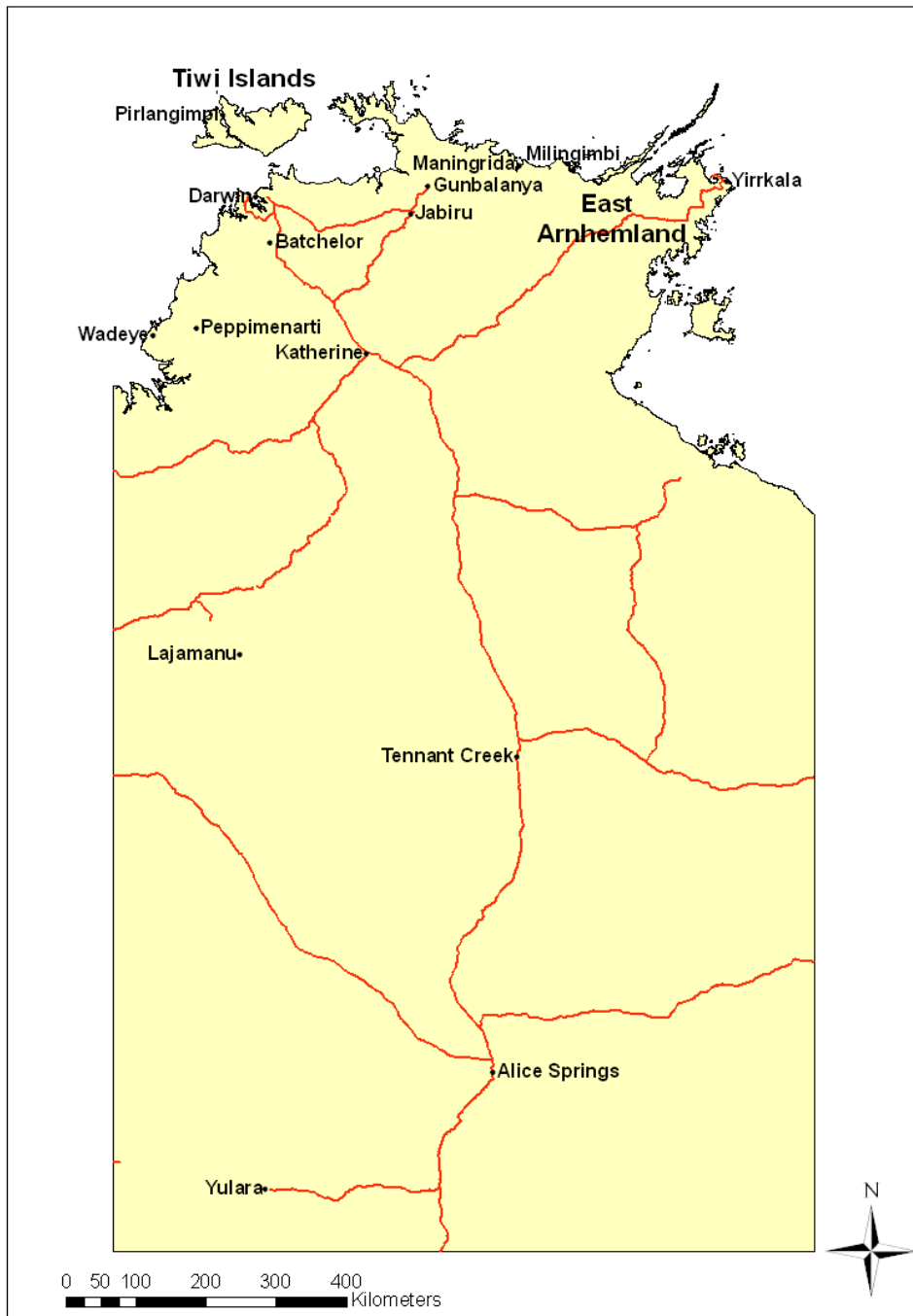
References	231
Appendices	252
Appendix 1 Participant consent documentation	253
Appendix 2 Full narrative for Glen Aikenhead	257
Appendix 3 Mercenaries, missionaries and misfits	267

LIST OF FIGURES

Figure i. The Northern Territory of Australia, showing the main centres and locations mentioned in the thesis. Only the major roads are shown.	xiii
Figure 2.1. Movements between different worlds result in different types of crossings (after Costa, 1995, Phelan <i>et al</i> , 1991)	16
Figure 2.2. Typology of teachers of indigenous students (Kleinfeld, 1975)	39
Figure 2.3. The culture brokerage model proposed by Jezewski (1989)	52
Figure 2.4. The influence of teacher as culture broker on various student categories (from Aikenhead & Otsuji, 2000)	60

LOCATION MAP

Figure i. The Northern Territory of Australia, showing the main centres and locations mentioned in the thesis. Only major roads are shown. (Map courtesy Donna Lewis)



PROTOCOLS

In writing this thesis and referring to the indigenous peoples particularly from the four settler nations (Australia, New Zealand, Canada and the United States) I have followed the following set of protocols.

- When I use the term ‘indigenous peoples’ I am referring to indigenous peoples in general, not the indigenous people of any particular nation or area, and I use lower case. The same applies when I refer to indigenous students in general.
- When I refer to the indigenous people of Australia, I used the following terms: Indigenous Australians, Australian Aborigines, Torres Strait Islanders, always beginning the titles with capital letters. Indigenous Australians refers to both Australian Aborigines and Torres Strait Islanders.
- I refer to the indigenous people of Aotearoa New Zealand as Maori; the indigenous peoples of Canada as First Nations people; and the indigenous peoples of the United States of America as Native Americans. I use Inuit for the people from the Arctic regions, usually prefixed with a national identifier. Again I always begin the titles with capital letters. Occasionally Canadian First Nations peoples are referred to as “Aborigines” or “Aboriginals” and I modify the title only if there is cause for confusion.
- When referring to specific tribal or language group names from any location, I begin the titles with capital letters.
- However, I follow the original author’s lead when using a title in a quote.
- I refer to aboriginal education and indigenous education interchangeably and in lower case.
- I generally refer to non-aboriginal or non-indigenous people as westerners, referring to the influence of western culture or worldview on them, rather than as a racial group (i.e. as white).
- I chose not to use macrons in Maori spellings as some electronic forms of this work may not have them in the range of fonts.

GLOSSARY OF TERMS FROM INDIGENOUS LANGUAGES

Balanda (Australia: Yolngu): a term for white person, derived from Hollander.
Originally from Northeast Arnhemland, it is commonly used throughout the Top End of the NT.

Hangarau (New Zealand: Maori): technology

Hapu (New Zealand: Maori): sub-tribe

Iwi (New Zealand: Maori): tribe

Marae (New Zealand: Maori): ceremonial meeting house

Matauranga (New Zealand: Maori): knowledge

Pakeha (New Zealand: Maori): originally meaning foreigner, it is used to describe New Zealanders of western origin

Pangarau (New Zealand: Maori): mathematics

Powhiri (New Zealand: Maori): ceremonial rituals of welcome and introduction

Putaiiao (New Zealand: Maori): science

Te reo Maori (New Zealand: Maori): the Maori language

Waiata (New Zealand: Maori): song

Whanau (New Zealand: Maori): extended family

Yapa (Australia: Central Australia): Aboriginal person

CHAPTER 1: INTRODUCTION

This thesis is about the group of teachers who teach indigenous students in four western settler countries, namely Australia, New Zealand, Canada and the USA¹. In particular it examines teachers who work in indigenous communities as well as those who teach indigenous students in mainstream settings. The research question is: *What are the aspects of identity of those who work across cultures in science education?* The research question focuses on issues of identity of teachers, about the identity of those who are successful as teachers of indigenous students and those who are less successful. It looks particularly at teaching science, taking into account a belief that science is another culture.

As a personal task, what I wanted to learn through doing the research was to find out why some people seem to have more success than others (including me) at working cross-culturally. There is a broader setting for the study than this: there has been a crisis in indigenous education particularly in these four countries. Much of the emphasis in the research has been on the students and pedagogy but there has been only a limited emphasis on the teachers. So a second aspect of the research is to look at what makes an effective teacher of indigenous students, both those who teach in community schools and those in regional and urban schools. The outcome might be of value to the universities where teachers undergo their training, to educational authorities who subsequently employ the teachers and ultimately to the indigenous students and the communities where they live. Thirdly, I was aware that the idea of ‘teachers as culture brokers’ had been used in science education and I wondered how effectively this could be practiced within indigenous education.

Not only does this research focus on the teacher rather than the students, it focuses on the variability of teachers involved in indigenous education rather than a stereotypical ‘teacher’. In the research I ask, “Who are the effective teachers of indigenous students and what are their qualities?” The response to this is related to the answer to the research question itself.

¹ A definition of the term ‘indigenous people’ is that they are the traditional inhabitants of their lands prior to colonisation by foreigners (Burger, 1990). The settler countries are those which have been relatively recently colonised and have indigenous as well as migrant-descendent populations.

This is an international study, in two ways. It makes use of the international literature regarding teachers of indigenous students, particularly from four settler countries. Secondly the research data were collected from interviews with a group of participants from three of those countries, Australia, New Zealand and Canada. These people cover a range of experience in cross-cultural situations, primarily in education. They have worked at all levels of education, some within educational authorities and others in universities; some are highly regarded as experts in their fields and most have some research literature which was also accessed. All the participants are westerners. I once contemplated including non-western participants (including indigenous people) but I came to consider that some of the issues of identity that might be raised by non-westerners would be too complex to deal within this thesis by me as a westerner.

1.1 Overview of my position

Back in 2002 I was working in an Aboriginal community² north of Darwin, in the Northern Territory (NT) of Australia. After a long career as a science teacher and science education curriculum officer, this was my first engagement with an Aboriginal community and its school of any extended duration. At the same time I was considering my original topic about teachers as culture brokers in indigenous science education and I was trying to enact culture brokerage in the real world. At the end of six months I left the community feeling that I had not particularly achieved anything except enhancing my own state of despondency. The two situations were obviously related as I thought I had a reasonable theoretical knowledge of culture brokerage, so what was it that allowed some people to work in cross-cultural situations seemingly so comfortably? Did it really have anything to do with culture brokerage? And how was this going to be of any use in understanding about teachers as culture brokers? What was the relationship between culture brokerage and border crossing? The research reported here sets out to find responses to these questions and more which arose over time.

² I use the term 'indigenous community' to refer to any residential area primarily of indigenous people, usually of less than 4000 residents and often much smaller who generally speak their indigenous languages.

1.1.1 Researcher-as-participant: “Who are you? Where do you come from?”³

Below I describe some of my experiences working with Indigenous Australian students, particularly during the six-month period I was working as the teaching principal in an Aboriginal community.

MM: *My name is Michael Michie and I identify my origins as Celtic, of both Scottish (2nd generation) and Irish (4/5th generation) heritage. From a middle class background, I was raised a Catholic and after attending schools established by Irish Catholic teaching orders, I have found it easy to identify with social justice issues.*

During a teaching career which has spanned over 40 years, I have taught students from many cultural backgrounds, including Aboriginal students. Since 1976 I have lived and worked in Darwin, in the Northern Territory of Australia. Over the past fifteen years or so I have become more interested in social justice issues such as gender equity, environmental education and Indigenous education.

At the beginning of 2002 I was offered the position as the teaching principal at an Aboriginal community on the Tiwi islands north of Darwin. I accepted this position, thinking that it would give me an opportunity to not only live in an Aboriginal community, as well as to see informally whether there was a role mediating between the Aboriginal community and the white population (i.e. a culture broker), who took on the role and what qualities they had. Particularly, I was interested to see to what extent I had to take that role.

My experiences over such a short period of time (six months) are difficult to interpret; like many cross-cultural experiences there was a period of elation at being in this novel situation, followed by a negative period (‘culture shock’).

Finally, coming through this make-or-break period with a decision to leave has implications of failure which I am only starting to resolve. My perception of myself as a culture broker is strongly influenced by these negative images.

One incident gave me some insight into the ways people could work as culture brokers, without having to label them (or they themselves) with the title. Realising that I wasn’t participating within the community, I went to the local social club with the intention of trying to break through the barriers which I felt I had surrounded myself with. A large group of Aboriginal men usually gathered around the dartboard and pool table where I had previously declined offers to play these games on the grounds

³ These are the first two questions you’re likely to be asked when visiting an Aboriginal community, particularly by children in the school.

of being unskilled. I was encouraged to join in with the group but on this occasion stayed more or less on the periphery and watched.

On the next occasion a week later, I followed the same routine and was asked if I wanted to play darts. I agreed to play, put up my money and proceeded to justify why I hadn't played before. On this occasion there was a man present who had spoken to me regarding employment at the school some time previously, and he started to introduce me to some of the other men and talking about the range of things happening in the community.

I was aware through my experience and reading that as a teacher I was also to be a culture broker of sorts. In reflection, there were various ways in which I was expecting myself to be a culture broker

- *on a personal level as a member of the community*
- *between myself and my students, also at a personal level*
- *through my pedagogy, by planning, teaching and assessing in ways which were inclusive and culturally appropriate*
- *between the curriculum and my students, as it was mostly a curriculum based on western concepts.*

At school, my class (years 5-7) had become fairly much enculturated into the western style of education. Although located on an island, the community had fairly good access to Darwin by plane (up to four flights daily at the time) and television, so there was a strong western influence. Some of my attempts at including local culture and knowledge were met with rebuffs, including "you can't teach me how to be Aboriginal" (I didn't think I was) and "it's too hot to be outside".

I found myself becoming increasingly uncomfortable in both my job and living in the community, so I left after a semester in the school. I had been on a contract for the semester and chose not to renew it. I found the loneliness of living away from my family and a feeling of isolation from the community were major factors, although I was experiencing difficulties both in my classroom and my relationship to the other teachers.

Previously I had spent several years working as a science curriculum officer and I was aware of the need to develop curriculum documents and materials inclusive of Indigenous students, as about 35% of students in the Northern Territory are Indigenous (Michie, 1998). In investigating this, I began looking at the research, to Aikenhead's 1996 paper and the idea of 'teacher as culture broker'. However I've also heard the term 'culture broker' used by other people working with Indigenous people.

I have become further interested in culture studies of science and science education and resolved to look further at the role of teacher as culture broker, particularly in science education.⁴

⁴ This reflection was originally written in 2004 and is largely unmodified.

This vignette outlines my experience and the reason I decided to undertake this research.

1.2 Outline of the research

My research is based around interviewing a group of people whom I felt had been successful in working cross-culturally frequently in indigenous communities and demonstrated some knowledge about it. I undertook a series of interviews as conversations with eight westerners about their perceptions of undertaking border work between western and indigenous people. Each interview was a taped conversation with a participant based around a series of questions about their experience as cross-cultural workers. Each of the participants was chosen because they had specific experiences in which I was interested and as a group they have had a range of experiences which provide a wider picture of how to approach the cross-cultural enterprise successfully.

I also make use of a range of secondary sources to supplement the voices of the participants. I make use of their contributions to the literature about cross-cultural work and indigenous education. There is also a significant literature about the experiences of other people who have worked cross-culturally, often in isolated indigenous communities, and much of it is about teachers rather than other community workers.

The context of this research is within science and science education. I am still a science educator with 40-plus years experience and my first encounter with the ideas of border crossing and culture brokerage was in the context of science education. I consider that the ideas are more highly developed in the science education literature than in any other subject area. For me, the notion that western science is a culture in itself is a constant consideration in regard to both teaching indigenous science to western students as much as teaching western science to indigenous students.

1.3 Significance of the research

The nexus between the two ideas of border crossing and culture brokerage is considered in terms of cross-cultural science education. Aikenhead (1997) brings

the two ideas together in teaching First Nations students. Some teachers are apparently effective teachers of indigenous students (Kleinfeld, 1975) yet other teachers have deficit views of their students (Shields, Bishop & Mazawi, 2005). How does this come about?

Geijsel and Meijers (2005) propose a model of identity learning with both cognitive and affective inputs regarding a new professional situation. These can result in an individual either having a positive response leading to identity learning, or a negative response which reinforces previously-held beliefs. I use this identity learning model to examine border crossing as a professional learning experience for people teaching in indigenous communities. I use this to hypothesise that those people who have a positive response become border crossers whereas those who have a negative response are not border crossers. I extend this to teachers in mainstream situations and suggest that effective teachers are also border crossers.

In examining cultural brokerage I realised that it is a role that an individual takes on rather than relating to identity. I used the anthropology and ethnohistory literature to trace the two ideas to their origins, the border crosser to 'marginal man' and the culture broker to 'change agent' and 'middleman'. To resolve the differences, I suggest how the border crosser can be considered a cultural hybrid working in the third space between two cultures which I call the 'border world' or 'cultural interface' (Haig-Brown, 1992; Nakata, 2007), and redefine the culture broker in education as having attributes of change agent, mediator and negotiator.

This work is significantly different to the preceding literature. It uses a model of identity learning (Geijsel & Meijers, 2005) as a theoretical underpinning to border crossing and culture shock, to explain enhanced and static identity learning. The model also allows positive correlation between effective teachers and border crossers. A taxonomy of cross-cultural positions is established, including both positive and negative responses to culture shock: border flee-ers and border liners are negative responses, border crossers, border workers and border mergers are positive ones. In considering border crossing and culture brokerage, it distinguishes between them, considers their origins, and establishes a nexus

between them by concluding that an effective culture broker would be a border crosser.

1.4 Structure of the thesis

In the next chapter (chapter 2) I examine the literature concerned with four areas of significance to this thesis. In section 2.1 I look at culture and how it is defined, ideas about science being another culture and issues about the inclusion in science of indigenous knowledge. I then consider the idea of borders and border crossing. Following this, I examine (section 2.2) the literature about westerners, particularly teachers, working in cross-cultural situations with indigenous people. I also look at identity learning, particularly through the impact of culture shock. In section 2.3 I examine culture brokers to understand both the social position and the characteristics of the culture broker. I also consider the role of culture brokers suggested for educational settings, particularly in science education where it has been suggested that teachers take on the role as culture brokers. Then in section 2.4 I examine the relationship between culture brokerage and border crossing.

In chapter 3 I focus on the methodology which I have used in researching for and reporting in this thesis. I examine some of the aspects of qualitative research, in the areas of interviewing and writing narratives. In chapter 4 I introduce the participants in the research, indicating what each of their roles was. Then I present a series of eight cameos which I have prepared from the narratives of each participant.

Chapters 5, 6 and 7 are the chapters in which I present and discuss the data. Each chapter serves a different purpose. In chapter 5 I look at the participants' early life and careers for evidence of their cross-cultural experiences, to determine how they experienced their own border crossings and how they may have varied since then. Then in chapter 6 I consider their understanding of the nature and role of a culture broker. Finally in chapter 7 I examine how they think teachers could be enabled to be border crossers and take on culture brokerage. In each chapter the data are provided primarily as extracts from the participants' interviews, sometimes augmented by extracts from their writings. The discussion takes into account other narratives, including my own reflections.

In chapter 8, I consider the array of conclusions and suggestions gleaned from the preceding three chapters and synthesise the major findings and recommendations of the research.

CHAPTER 2. LITERATURE REVIEW

The literature review reflects the multidisciplinary and international nature of this research. Source areas for the literature include anthropology, sociology, cultural studies, ethnohistory and applied anthropology. The applied anthropology covers primarily health and educational anthropology. As science education is a focal area, some of the literature is from cultural studies in science education (CSSE), itself located between science education and educational anthropology. As its name suggests, the CSSE literature engages in research in socio-cultural aspects of science education. The thesis research also draws on an extensive international literature on indigenous education and some literature on multicultural education.

This chapter starts (section 2.1) with a short review of culture, the concept which underpins this thesis. As the context of the thesis is science education I also examine the place of culture in education and the idea that science is another culture. In exploring culture, I come to realise that I have to take a modernist or an 'essentialist' perspective that recognises the possibility of incompatibilities between cultures and leads to borders being erected between cultures. The literature provides a theoretical basis for border crossing and ideas about location in the borderlands, contact zone or cultural interface between western and indigenous cultures.

In the next section (section 2.2) I look at border crossing as a metaphorical way of moving between cultures and link this to the identity learning model of Geijsel and Meijers (2005). Elsewhere in the literature it is suggested that westerners who go to live in indigenous communities suffer from varying degrees of culture shock. In experiencing culture shock, individuals revert to an essentialised understanding of culture as a phase of the culture encounter, a 'we-and-they' model which incorporates a cultural border. I conclude by identifying border crossers as individuals who are able to cross the border from which point they may exhibit more integrated cultural identities.

On the other hand, in section 2.3 I describe culture brokerage as a strategy for working cross-culturally. A review of the literature shows that culture brokering and border crossing are essentially different; culture brokerage can be traced back to an intermediary role whereas border crossing is related to the 'marginal man'

(sic), originally someone caught between two cultures and nowadays seen in terms of cultural hybridity. Then I consider (section 2.4) whether an individual can be both a border crosser and a culture broker because in the literature there is hardly any exploration of the nexus between the two.

2.1 Culture and cultural borders

In this section I explore some ideas about culture (section 2.1.1) which inform the understandings in the thesis. I also examine the definition of culture borders from a cultural essentialist perspective. The literature provides a theoretical basis for border crossing (section 2.1.2) as well as ideas about location in the borderlands or contact zone or cultural interface between western and indigenous cultures (section 2.1.3).

2.1.1 What is culture?

Culture has been defined by a number of authors, although some of them presume its definition. Geertz (1973) defines culture as

an historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by which men [sic] communicate, perpetuate, and develop their knowledge about and attitudes towards life (p.89).

Goodenough (1976) considers that culture is made up of the concepts, beliefs, and principles of action and organisation that could be attributed to a society. Phelan, Davidson and Cao (1991) conceptualise culture as the norms, values, beliefs, expectations and conventional actions of a group. Aikenhead (1996, 1997) provides a simplified version: “an ordered system of meaning and symbols, in terms of which social interaction takes place” (Aikenhead, 1996, p.8). In this thesis culture describes the social environment in which an individual is raised and lives and includes a range of concepts and beliefs that is accepted by individuals as defining their group identity.

Culture is often seen as traditions which are handed down across generations, including knowledge, belief, art, morals, law and customs (Erickson, 2004). Culture as tradition is often seen as being static and is sometimes used to define a particular cultural group according to historical criteria rather than modern social

contexts. This interpretation of culture is often associated with indigenous peoples and can be used for political reasons to essentialise them by either inclusion or exclusion. On the other hand western societies may view themselves hegemonically as being civilised rather than being cultures. Culture as cultivation evokes the idea of high culture, with institutions such museums, art galleries, opera and symphony hall. However there is also low or popular culture, again with its own institutions (Erickson, 2004).

A number of writers consider there are issues with the nature of culture and identity, some of which are integral to this thesis. Sen (2006) points out that culture is not the only determinant of people's lives and identities as other determining factors include class, gender and race interact with culture. Similarly, McConaghy (2000) rejects culture particularly as the determinant in indigenous education. She critiques culture as the defining ideology in indigenous education and she describes four approaches, all of which rely on the modernist philosophy of a cultural binary (i.e. White/Other): pastoral welfarism, based on indigenous incapacity; assimilationism, remaking themselves in the image of the white; cultural relativism, sensitive to difference and inclusive of cross-cultural expertise and of culturally relevant/responsive pedagogy; and radicalism, inverting colonial power.

Culture is not a homogenous attribute within a social group, nor is it static; it is both heterogeneous and evolving (Sen, 2006). Goodenough (1976) points out that within a culture (the macro-culture) there are many micro-cultures or subcultures in which any individual has certain role-expectations resulting from different social relationships and situations, so that the individual has to discern which is the appropriate behaviour. According to Goodenough, human beings live in a multi-cultural world and develop multi-cultural competence at the macro and micro levels. 'Propriospect' was coined by Goodenough to describe each individual's unique version of culture through their experiences but it has had limited use (Chang, 1999; Goodenough, 1981; Wolcott, 1991). Aikenhead (1996) points out that in any culture there are likely to be many subcultures either mutually exclusive or overlapping, and are often treated as cultures in themselves rather than subcultures. Some overlaps can be between cultural groups, such as the rugby subculture which is inclusive of Maori and Pakeha in New Zealand as

well as other disparate cultural groups internationally. Such overlapping subcultures have also been termed ‘competing identities’ (Sen, 2006) or ‘layers of identity’ (Pearson, 2009).

In this thesis I also consider the link between culture and education, as I am particularly interested in the education of indigenous children and science education. As Bruner (1996) suggests,

A system of education must help those growing up in a culture find an identity within that culture. Without it, they stumble in their efforts after meaning. (p.42)

Bruner (1996) talks of a psycho-cultural approach to education, in which there is an “interaction between the powers of individual minds and the means by which the culture aids or thwarts their realization” (p.13). He suggests that systems of education tend to cultivate the beliefs and skills of their host culture according to its world view, without offending some interests who might consider too broad an approach breaches cultural taboos. A major outcome of education is the reproduction of the culture (Bourdieu & Passeron, 1990) and this can happen in formal, informal and invisible (hidden) ways. Goodenough (1981) considers that “culture is learned and forms a body of tradition in any society” (p.49), and Vickers (1989) suggests that “members of a culture usually learn and express their culture unconsciously – it is something they have grown up with, a matter of habit” (p.198). Erickson (2004) suggests similarly that as we learn and use culture it becomes habitual and thus invisible to us. However there are issues with teaching a western curriculum to indigenous students which I will consider throughout the thesis.

I am also contextualising the thesis in the area of science education. There are several reasons for this. Firstly, I have been a science educator now for over forty years and in a variety of roles – teacher, resource developer, curriculum writer, consultant and researcher. Secondly, science has often been viewed as another culture. C.P. Snow used the idea in the Rede Lecture at Cambridge University in 1956 entitled ‘The two cultures’ (Snow, 1969), in which he distinguishes between the cultures of scientists and ‘literary intellectuals’. He argued that:

the scientific culture really is a culture, not only in an intellectual but also in an anthropological sense. ... there are common attitudes, common standards and patterns of behaviour, common approaches and assumptions. (p.9)

Science can be seen as a tradition, tracing its history back to the Greek and Arabic philosophers, the Renaissance and the Enlightenment (Warraq, 2007). Science can be viewed as both a culture of information bits and a symbol system (Erickson, 2004) in the ways in which science knowledge is produced, monitored and modified through the various scientific methodologies (McComas, 1996). The methodologies of science have had a hegemonic influence on other forms of intellectual pursuit, particularly the social sciences, where:

Underpinning all of what is taught at universities is the belief in the concept of science as the all-embracing method of gaining an understanding of the world. (Smith, 1999, p.65).

Thirdly, the area of science education which I have been engaged in for at least the past fifteen years, cultural studies in science education (CSSE), includes examining the interface between western science, indigenous knowledge and indigenous students. Some of Aikenhead's early work in this area (Aikenhead, 1996, 1997), particularly on border crossing and cultural brokerage, stimulated my early interest in the field⁵ and motivated me to undertake the research for this thesis.

Related to the ideas about culture is the notion that individuals move both physically and metaphorically between cultures. This thesis is about people who work cross-culturally and deals with the concept of borders and border crossing between cultures (and subcultures) and culture brokerage. Specifically it is about moving between western and indigenous cultures and between western science and indigenous knowledge, and the ideas of border crossing and culture brokerage.

⁵ In 1994 I became Principal Education Officer Science for the NT Department of Education. At the time the department was engaged in a Commonwealth-funded project to develop science materials for Indigenous students. Although it was not my direct responsibility, I took an interest in the project. A question I asked early on was, "What are they doing overseas?" This led me to investigate and from then on I have maintained an interest in the area.

2.1.2 Borders and border crossing

In this section I outline some of the perceptions of borders and difficulties that people have crossing them. From a modernist perception, borders are framed in the language of universals and oppositions (Giroux, 1992). The notion of borders relies on culturalism or cultural essentialism. Culturalism relies on the primacy of consideration of a cultural identity, “grounded specifically on the assumption of two immutable and oppositional cultures” (McConaghy, 2000, p.8), with associated notions of western hegemony. Chang (1999) considers that the essentialist view makes a number of assumptions regarding culture which are necessary for the existence of cultural borders:

- A culture is a bounded system which is separate and distinguishable from others and which is often viewed as a social unit (nation, state, tribe or community)
- Each culture is homogeneous and may be considered as an idealised form
- A culture is shared by members of a society.

These ideas relate back to the early work of anthropologists, particularly with groups which were then physically isolated, but the modern use of cultural essentialism is often for some political purpose.

Borders are not only used to define what is inside, they also define what is on the outside (Massey, 1994). The post-modernist perspective challenges the hegemonic modernist notion that Eurocentric culture is superior to other cultures and assists those previously described as ‘Other’ in modernism to reclaim their histories and voices (Giroux, 1992). It allows for new ways of knowing and the production of new knowledge, providing an opportunity for traditional knowledges (although not new) to be considered alongside their western equivalent without the threat of being incorporated.

A third way of looking at borders is through the perspective of postcolonialism. It is the interpretation of postcolonialism as ‘beyond’ colonialism by Bhabha (1994) and McKinley (2007) which is used here. As McKinley (2007) suggests, in this view boundaries or borders have become blurred and “takes us beyond the “them and us” ... position commonly found in colonial discourse” (p.201).

There are a number of terminologies used in the literature, including cultural borders, boundaries, barriers, rifts and borderlands, based in the geographical ideas of borders and boundaries. Yuval-Davis (2004) considers borders as surrounding nations, not necessarily the same as the boundaries around ethnic communities who may live near the borders. She suggests that the borders may be attributed different meanings by people on either side. Erickson (2004) distinguishes between ‘cultural boundary’ and ‘cultural border’, suggesting that a cultural boundary refers to the presence of some sort of cultural difference, while a cultural border is a social construct of political origin and involves the exercise of power, and he prefers to use the term ‘boundary crossing’. On the other hand Aikenhead (2006) considers ‘border crossing’ to be a politically neutral phrase, meaning a capacity to think differently in various cultures, with a similar meaning as Erickson’s ‘boundary crossing’.

Another perspective on borders relates to the reaction of individuals to them. Pillsbury and Shields (1999) suggest that it is not the borders *per se* which are problematic but rather the construction of them as barriers where “the inflexibility and tenacity with which they are created and asserted that creates problems” (p.412), seemingly a culturalist perspective. They suggest that a sense of community can exist when the borders between difference are not considered as barriers between *we* and *they*. Geijssel and Meijers (2005) consider that at such a boundary each individual has the potential for increased cognitive and affective growth. However, they also suggest that the outcome of such a boundary incident is more likely to be negative because the individual experiences conflict and negative emotions. This is because the individual “encounters a situation in which one is *unable to function adequately because one cannot fully identify with the new situation and its exigencies*” (Geijssel & Meijers, 2005, p.424, their emphasis). The implications of borders becoming barriers when individuals fail to identify with the Other (the *they* of Pillsbury & Shields, 1999) is significant in the discussion of culture shock and considered in more detail in section 2.3 below. The ‘fall-back’ to a culturalist or cultural essentialist perspective will be examined in the context of culture shock.

In much of the border crossing literature (Aikenhead, 1996, 1997; Malcolm, 2007; Phelan *et al*, 1991) there is a commentary which describes borders and border

crossings of different levels of potential difficulty. Phelan *et al* (1991) set out to distinguish the various subcultures that are part of the life of students, the interactions between them and how these affect students' engagement with learning. I suggest this is also applicable to adults. They also consider the nature of boundaries between these subcultures and how students move from one to another. They distinguish four distinctive patterns as students migrate between subcultures, shown in Fig. 2.1, in which the movement between different types of worlds (subcultures) results in different types of crossings.

Figure 2.1. Movements between different worlds result in different types of crossings (after Costa, 1995, Phelan *et al*, 1991)

Movement between	Type of crossing
congruent worlds	smooth transitions
different worlds	boundary crossings managed
different worlds/difficult transitions ⁶	boundary crossings hazardous
borders impenetrable	boundary crossings insurmountable

Costa (1995) and Aikenhead (1996) both use the boundary/border crossing metaphors similar to Phelan *et al* (1991) when dealing with the borders between the student's world and the subculture of science that they may cross when they are learning science. Some border crossings are seen as everyday events (Aikenhead, 1996, 1997; Malcolm, 2007) which fit the smooth transitions of the typology. I do not doubt this but I have chosen to confine the discussion to the western/indigenous border rather than a myriad of other possibilities. Malcolm (2007) criticises border crossing as an essentialising process in which borders are constructed as being sharp; as noted above, this view is accepted here as a starting point and in the thesis I examine how individuals can move away from the essentialist position (or not).

⁶ This alternative terminology was introduced by Costa (1995).

There are a number of implications about border crossing, particularly for teachers. One is that teachers are able to recognise where and when the borders exist for their students and another is that they know how to make a border crossing. This can be overcome by using what Giroux (1992) calls 'border pedagogy'. This is among the challenges he saw from a postcolonial perspective "calling for new ideas, pedagogical strategies and social movements capable of constructing a politics of difference" (Giroux, 1992, p.21). Existing borders are challenged and redefined. Students become border crossers to understand otherness in its own terms and create borderlands where they fashion new identities.

2.1.3 *Borderlands, contact zone and the cultural interface*

...not only are borders being challenged, crossed, and refigured, but borderlands are being created in which the very production and acquisition of knowledge is being used by students to rewrite their own histories, identities, and learning possibilities. (Giroux, 1992, p.30)

There are a number of ways used to describe metaphorically the border region where two cultures meet. 'Borderlands' is used by Anzaldua (1987) to describe the place where she as a *mestiza*, a Mexican woman of mixed heritage, was able "to be an Indian in Mexican culture, to be Mexican from an Anglo point of view... to juggle cultures" (Anzaldua, 1987, p.79). Anzaldua points out that it is a pluralistic position, a synthesis that is greater than the sum of its parts, creating a new *mestiza* consciousness. Such a position would be described by anthropologists as a 'marginal [wo]man' (Park, 1928; Stonequist, 1937) and in recent times as 'hybrid' by cultural theorists (Bhabha, 1994; Webber, 2008),

Haig-Brown has used the terms 'border world' (1990) and later 'borderlands' (1992) in describing her relationship with First Nations Canadians, and describes working there as being a border worker. In Haig-Brown (1990) she suggests that three categories of people are border workers; indigenous people, particularly in the settler states, are located there; non-indigenous people who visit the border for a variety of reasons; and non-indigenous people who choose to remain in the border world. She also sees that when working with indigenous people, being invited into the borderlands is an important part of becoming a border worker. However it is not the only way and there is need for acceptance by the indigenous people as well (Haig-Brown & Archibald, 1996).

Educators, including teachers, are among the groups of cross-cultural workers who may find themselves in cultural borderlands of one type or another (Haig-Brown, 1992), between themselves and their students, their students and other student subcultures, or on a larger scale between their own culture and a different culture (e.g. in indigenous education). However I disagree with Haig-Brown's proposal above that all non-indigenous people who visit the borderlands for a variety of purposes are necessarily border workers and I justify this in section 2.2.

Pratt (2008) uses the term 'contact zone' which she defines as the social space "where disparate cultures meet, clash and grapple with each other" (p.7). She sees the contact zone as a place where transculturation – "how subordinated or marginal groups select and invent from materials transmitted to them by a dominant or metropolitan culture" (p.7) – takes place. Somerville and Perkins (2003) identify the contact zone more as a contact space where all their team members work and meet and hybrid knowledges are produced.

Nakata (2004, 2007) makes use of the metaphor of a cultural interface to locate Torres Strait Islanders and other indigenous peoples, rather than consider it as the intersection of two cultural domains, western and indigenous. Nakata, who identifies himself as a Torres Strait Islander, describes the cultural interface from an indigenous perspective as the discursive space where:

traditional forms and ways of knowing, or the residue of those, that we bring from the pre-contact historical trajectory inform how we think and act and so do Western ways, and for many of us a blend of both has become our lifeworld. (Nakata, 2004, p.27)

In this way Nakata's cultural interface is much like Haig-Brown's borderlands.

Furthermore, the idea of blending or hybridity is a recurring theme in Yolngu⁷ philosophy of knowledge from Northeast Arnhemland (Marika, 1999; Watson-Verran, 1992; Yunupingu, 1991, 1994, 1999). In the analogy of the mixing of fresh and salt water in a pool, the fresh water represents the Yolngu knowledge, the salt the western⁸. Although the result is brackish water, it represents a mixture

⁷ The Yolngu are Indigenous Australians from Northeast Arnhemland in the Northern Territory of Australia.

⁸ Webber (2008) describes a similar Maori imagery, of a river flowing and the water moving back and forth from one side to the other.

or a blend of the two. The basic identities of the people who access the knowledge – whether they are Yolngu or westerners – are unchanged, as suggested in this statement by Marika, a Yolngu woman and educator.

Water is often taken to represent knowledge in Yolngu philosophy. What we see happening in the school is a process of knowledge production where we have two different cultures. Balanda⁹ and Yolngu working together. Both cultures need to be presented in a way where each one is preserved and respected. (Marika, 1999, pp.112-113)

Mandawuy Yunupingu considers the need for balance or harmony as being a necessary outcome of the mixing of Yolngu and western knowledges.

But for us the sight and smell of brackish water expresses a profound foundation of useful knowledge—balance. For Yolngu Aboriginal people brackish water is a source of inspiration. (Yunupingu, 1994, pp.8-9)

Comments such as these reinforce the notion that indigenous people are more comfortable being at the cultural interface and melding western and indigenous ideas.

My understanding of the cultural interface as a westerner differs from the perspective of an indigenous person. Whereas western culture is virtually ‘in the face’ of most indigenous peoples particularly in settler societies, westerners have the luxury of determining their proximity to the cultural interface by either avoiding indigenous cultures or if participating at the border somehow managing the extent to which they will blend the two. Haig-Brown (1990) suggests a number of ways in which non-indigenous people find themselves at the border or visit the border world – self-selection, desperation, happenstance and invitation. Among the self-selectors she identifies missionaries¹⁰, romantics and scientists, while those who come in desperation are misfits in their own world. Some arrive by chance such as the teachers who happen to have indigenous students in their class. I suggest that locating westerners in the border world is more complex than Haig-Brown (1990) describes, as I show in section 2.2.

⁹ Balanda is the Yolngu name for westerners, derived from ‘Hollander’ as the Dutch were the first westerners the Yolngu met.

¹⁰ Haig-Brown (1990) includes among the missionaries those “touting a variety of panaceas” (p.232) as well as operatives from organised religion, an understanding similar to Christie’s (1995) modernist missionaries (appendix 3).

James Ritchie (1992), a westerner, also considers himself to be at the cultural interface with Maori and indicates some of the implications of him being in that position. “In the Maori world I am an outsider, a visitor, and always will be” (p.51). He identifies with ‘the other’; “I now feel no urge to argue for a common identity, for if I do I only emphasis ‘otherness’” (p.51).

2.2 Identity learning and border crossing

In the next section (section 2.2.1) I look at border crossing as a metaphorical way of moving between cultures and link this to the identity learning model of Geijsel and Meijers (2005). It is suggested in the literature that westerners who go to live in communities suffer from varying degrees of culture shock. I use the literature to explore individuals’ responses to culture shock using Geijsel and Meijer’s model. In experiencing culture shock (sections 2.2.2 and 2.2.3), I suggest that individuals revert to an essentialised understanding of culture as a stage of the culture encounter incorporating a cultural border. I identify in particular a group whom I call cross-culturalists who respond positively to living in the community and teaching the children. As the majority of teachers do not teach indigenous students in community schools but rather in mainstream schools in urban or regional settings, I examine the literature on effective teaching in cross-cultural contexts (section 2.2.4). It provides evidence that in the mainstream warm demanding teachers are most effective in teaching indigenous students. I look at parallels between cross-culturalists and effective teachers whom I categorise as border crossers and border workers (section 2.2.5). I conclude (section 2.2.6) by identifying border crossers as individuals who are able to cross the border from which point they may exhibit more integrated cultural identities. Other individuals do not cross the border and maintain or even reinforce an essentialised cultural identity.

2.2.1 Identity learning and culture shock

In this section I introduce Geijsel and Meijers’ (2005) theory of identity learning as the underlying theory used in this thesis. Then I am going to use it to explain the nature of positive and negative responses to culture shock as examples of identity learning.

Identity learning

Geijsel and Meijers (2005) understand identity as “the ever-changing configuration of interpretations that individuals attach to themselves, as related to the activities they participate in” (p.423). They argue that learning by teachers is both a process of social construction and of individual sense-making. Identity as a learning process is constructed culturally with intellectual and emotional inputs, and the emotional input can be more significant than currently considered in other identity-forming learning processes. Geijsel and Meijers (2005) suggest that identity learning starts when an individual has a boundary experience where they reach a limit of their self-concept. Although Geijsel and Meijers suggest that sometimes this can be an enhancing experience with associated development and growth, they also suggest that it is more likely to be “an experience of conflict, shortcoming or inability, and of uncertainty, which is coupled with negative emotions” (p.424). The outcomes are not only cognitive, such as not having the required knowledge and skills, but also emotional, as the current identity configuration does not fit the situation. According to Geijsel and Meijers (2005), resolution of the conflict requires two interactive types of inputs:

1. *discursive meaning giving*, looking for concepts that give “an explanation that is logically and emotionally satisfactory for all who are involved ... [resulting in] ... mutual understanding and shared values” (p.425). This is mainly cognitive learning preceding emotional learning.
2. *intuitive sense giving*, a reflective process of making sense on a personal emotional level for the individual so that they are motivated and able to act. Put another way, the experience needs to make sense in their life story.

However the two inputs proceed at different paces and time and space need to be allowed for personal sense-making.

There are two possible outcomes regarding identity construction (Geijsel & Meijers, 2005). In the first, identity is enhanced when new elements are given a place and are related to previous experience. On the other hand, the new ideas cannot be related to previous experience and are not personalised, so they do not become part of the identity configuration.

Culture shock and intercultural literacy

Culture shock applies to any social situation where an individual has to adjust to an unfamiliar social system where previous learning informing identity no longer applies (Pedersen, 1995), and is particularly used where they go into a different culture. Although some earlier researchers saw culture shock as an illness, more recently it has been considered to be more about learning and personal growth (Adler, 1975; Heyward, 2002; Pedersen, 1995), caused by difficulty in justifying the reality of community life in contrast with the visitors' previously-held conceptions.

Pedersen (1995) conceptualises culture shock as being a learning process, conceding that the stress a sojourner¹¹ can go through might cause disease-type symptoms. His model of culture shock incorporates five stages:

1. Honeymoon stage (detachment): feelings of fascination, adventure and excitement about the other culture are followed by disappointment, inadequacy, alienation and self-blame. Interpretations are similar to a tourist, insulated in their own culture.
2. Disintegration (self-blame): the intrusion of the host culture in unexpected and often uncontrollable ways leads to a sense of confusion and disorientation. The sojourner becomes withdrawn and depressed, often avoiding contact with the host culture and embarrassed at being so different to the host culture.
3. Reintegration (hostility): the anger previously directed inwardly at being inadequate is now directed outwardly, and particularly at people in the host culture, who become "the scapegoats for all real or imagined inadequacies" (Pedersen, 1995, p.134).
4. Autonomy (synthesis): the sojourner becomes more self-assured and increasing warm in relations with others. They are increasingly culturally competent and relax and enjoy the host culture, often to overestimating

¹¹ Sojourners are distinguished from migrants and refugees on the one hand, and tourists on the other, depending on the length of their stay and their motives for geographic movement (Weissman & Furnham, 1987, p.313).

their competence and considering themselves as 'expert' on the host culture.

5. Interdependence (bicultural identity): being "equally comfortable, settled, accepted, and fluent in both the new and old cultures" (p.245). Petersen describes this as being "a state of dynamic tension" where new perspectives can be formulated, rather than seeing it as an endpoint.

Petersen sees the third, reintegration stage as being the point at which the sojourner either regresses or progresses. He suggests that rejection of the host culture leads to the sojourner's regression to the more superficial honeymoon phase rather than progression to the fourth stage where the conflict is resolved. He also sees that identity is being modified through cognitive and emotional experiences with the new culture.

Heyward (2002) uses the term 'intercultural literacy' rather than culture shock although he indicates that his model is derived from previous culture shock models and aspires to the same outcome, intercultural literacy. He suggests that without intercultural literacy, sojourners "living and working in international settings risk misunderstandings and intercultural blunders that can be extremely costly to both individuals and organizations" (p.11). I suggest in this thesis that this sentiment applies also to people working cross-culturally with indigenous people. Heyward develops a multidimensional framework for the development of intercultural literacy with five stages:

1. Monocultural level 1: Limited awareness – unconsciously incompetent
2. Monocultural level 2: Naive awareness – unconsciously incompetent
3. Monocultural level 3: Engagement-distancing – consciously incompetent
4. Cross-cultural level: Emerging intercultural literacy – consciously competent
5. Intercultural level: Bicultural or transcultural – unconsciously competent

He suggests that the final stage, intercultural literacy, may not be achievable by all sojourners and he refers to culture shock itself only as an event in monoculture level 3.

Heyward uses six characteristics to develop his framework for intercultural literacy: understandings, competencies, attitudes, participation, language proficiencies and identities. These characteristics are similar to the bicultural competencies developed by LaFromboise, Coleman and Gerton (1993). Heyward considers aspects of each of the characteristics across the stages, some of which are of value in this thesis. For instance, for the participation characteristic he considers that at monocultural level 1 there is no particular awareness of the other culture, at monocultural levels 2 and 3 he uses the term 'living alongside', whereas at the cross-cultural level he uses 'living with' and the intercultural level, 'living in'.

Petersen's (1995) and Heyward's (2002) models have several similarities as well as differences but overall they are fairly compatible, as both models relate to personal growth. Heyward's monocultural level 1 does not have an equivalent in Petersen's model as it is pre-stage 1. Heyward's monocultural level 2 is equivalent to Petersen's stage 1 – both authors use the term 'honeymoon phase' to describe it – and Heyward's monocultural stage 3 describes both stages 2 and 3 of Petersen. Heyward's crosscultural and intercultural levels are more-or-less equivalent to Petersen's stages 4 and 5. An important similarity is that both authors consider that the sojourner may not necessarily reach the final stage and both consider that it is at the third stage that further development may not proceed. Heyward's monocultural level 3 is identified by characteristics which are shared with the disintegration stage in Petersen's culture shock model and the subsequent cultural antagonism (stages 2 and 3). Whereas Heyward (2002) suggests that an individual may remain at this level, consciously culturally incompetent and 'living alongside' rather than 'living with' the host culture, Petersen (1995) considers they revert to his stage 1.

It is probable that by this stage most sojourners have reverted to, if they had ever passed, an essentialist modernist perspective of culture, accentuating the '*we-and-they*' dichotomy suggested by Pillsbury and Shields (1999). Moving beyond this phase may lead to a more-inclusive understanding of culture. On the other hand, if there is no further development then individuals will remain as cultural essentialists and maintain their western cultural hegemony.

Heyward and Petersen discuss changes in the sojourner's identity as part of the learning process. Heyward (2002) suggests at monocultural levels 1 and 2 that cultural identity is firstly unformed then characterised by stereotypic comparisons with other cultures, similar to the '*we-and-they*' notion of Pillsbury and Shields (1999). Heyward's model continues with culture shock affecting people during the monocultural level 3, particularly causing them to re-examine their identities. If the sojourner passes this level, Heyward (2002) suggests they become aware of multiple cultural identities at the crosscultural level and consciously shift between them at the intercultural level. On the other hand, Petersen (1995) considers that at the reintegration level, "The rejection of host culture patterns becomes the foundation for a new identity based on cognitive and emotional experiences with the new culture" (p.134). Geijsel and Meijers (2005) consider that identity learning takes place where there is identity enhancement, which is consistent with Heyward (2002).

There are two possible outcomes of identity learning (Geijsel & Meijers, 2005) which I suggest here explain the two responses to culture shock.

- In the first, identity is enhanced when new elements are given a place and are related to previous experience (Geijsel & Meijers, 2005). In this option, the response to culture shock is positive, matches the individual's life experience and they can move on to Heyward's (2002) cross-cultural level of emerging cultural competence or Petersen's (1995) autonomous stage.
- On the other hand, the new ideas cannot be related to previous experience and are not personalised, so they do not become part of the identity configuration (Geijsel & Meijers, 2005). In this option the individual's response to culture shock is negative, their ideas and attitudes remain static and they remain at Heyward's (2002) monocultural level 3 or seemingly Petersen's (1995) stage 1.

Pillsbury and Shields (1999) also consider that what they called 'precipitating events' could lead to the creation of either more flexible or more rigid boundaries, in much the same way as described above in Geijsel and Meijers' model. All of the models discussed suggest that a positive response leads to identity learning

whereas the consequence of a negative response is for the individual's identity to remain static.

2.2.2 Impacts on westerners living in indigenous communities

Next I am going to use examples from the literature to demonstrate how positive responses to culture shock by people, mainly teachers, living and working in indigenous communities can lead to them becoming border crossers.

There is evidence that generally westerners who go to live in indigenous communities, including teachers, suffer from culture shock or some adjustment to the other culture¹². This is similar to when people go overseas to work for an extended time (Heyward, 2002; Loman, 2005; Pedersen, 1995; Richards, 1996; Ryan, 2008) and it seems to be most severe when the perceived difference between the cultures is considerable. On the other hand, Trudgen (2000) suggests culture shock is scarcely acknowledged in the domestic situation, especially with relation to indigenous communities, but its description in international settings, particularly regarding teachers, also seems to be limited in the literature. It is not my intention to analyse culture shock but rather to document insights the literature provides into its impact on westerners living in indigenous communities and its effect on schooling. The literature I am using is skewed towards teachers but actually it seems to be limited in scope for other groups or individuals.

Moskowitz and Whitmore (1997) listed a number of professional and personal challenges facing teachers new to the Northern Territory (Australia). Some of these challenges are common to all non-indigenous newcomers and are caused by "physical and cultural isolation and multicultural living" (p.51), while others are explicitly linked with teaching. The newcomers are often isolated from their natural support group of family and friends. They may be living in a community with different social mores (culture) where the people may also speak a different language. The accommodation which is provided is variable and they may have to share with strangers (but usually not the indigenous residents). New teachers

¹² This literature includes Bell *et al*, 2004; Brody, 1975; Chudleigh, 1969; Clarke, 2000; Crawford, 1989; Green, 1983; Harper, 2000; Henwood, 1969; Heslop, 2003; Hickling-Hudson & Ahlquist, 2003, 2004; Mahan & Smith, 1979; Mahar, 2004; McAlpine & Crago, 1995; Mitchell, 1969; Moskowitz & Whitmore, 1997; Stonebanks, 2008; Taylor, 1995; Trudgen, 2000; Wyatt, 1978-79; Zapf, 1993.

spend a lot of time developing lesson plans and teaching materials, teaching and in meetings with other school staff. They may have unrealistic expectations of their students, as well as inadequate and inappropriate classroom management skills. Their students probably grew up speaking another language, so their command of English is not good, and often the teacher has not had any training in teaching English as a second language.

These challenges are in common with other regions in the settler states, particularly northern Canada (Brody, 1975; Harper, 2000; Stonebanks, 2008; Taylor, 1995; Wolcott, 1967) and reservation schools in the USA (Kincheloe & Staley, 1983). Some of the challenges are confirmed by the principal of the school in Queensland visited by Hickling-Hudson and Ahlquist (2003, 2004):

“In their first six months here, the new teachers are in shock. There is culture shock; they are in the desert, it’s hot, dry, dusty, they are isolated away from their own culture in a strange community, plus the fact that they are still learning to teach – most are first year out. It’s not until maybe the second year that they settle down to teach.” (Principal, in Hickling-Hudson & Ahlquist, 2004, p.69)

Similarly Loman (2005), who went to Papua New Guinea with no prior experience as a teacher, considers that she suffered in two ways. Culture shock combined with crises in classroom management made it impossible for her to focus on her teaching until after several months. McAlpine and Crago (1995) also describe the experiences of ‘Nellie’ in her first year as a teacher in a small Canadian Aboriginal community. Her experiences are described in terms which although not using culture shock *per se* as a mechanism, are recognisably similar. ‘Nellie’ referred to her early positive time as ‘the honeymoon period’, the term also used by Petersen (1995) and Heyward (2002). Furthermore, Stonebanks (2008) describes his experiences in a northern Canadian community in terms of culture shock, structuring it on Pedersen’s five-stage model (1995).

Green (1983) considers that he and his family suffered from culture shock shortly after their arrival in an Australian Aboriginal community in 1966. Sickness, delays to their supplies and luggage, and “missing the familiar cues of city life” (Green, 1983, p.46) are given as reasons. Similar circumstances are reported by Gallagher and Gallagher (2004).

Green (1983) also bemoans his ineffectual teaching, even though he had four years of experience teaching in mainstream schools:

What was wrong with my teaching? I was more than puzzled – I was frustrated and dismayed. Had I arrived at Warburton direct from college, the children’s failure to respond – and I saw it then as the children’s failure – would have totally crushed my confidence. ... I was losing. I was getting nowhere and becoming both culturally and psychologically disorientated. (Green, 1983, p.42)

For teachers in particular, the impacts come from both the community and the classroom, as well as missing the necessities of urban life and maybe family. As an experienced teacher, Green was able to reflect on what he was doing: “... to analyse my failures; ... apply teaching strategies that were more appropriate to children in a desert school” (Green, 1983, p.43). This signals that culture shock can impact on experienced teachers as much as on inexperienced ones.

When westerners initially go to indigenous communities their early contact with the indigenous culture may be a naive awareness or honeymoon period, where they are aware of the different nature of the other culture. Considered from Heyward’s perspective of learning and personal development (Heyward, 2002), they are learning new things about the people and the community. Once the euphoria wears off and the honeymoon period ends after a few weeks, the individual becomes aware of the cultural differences and they start to see different aspects of the indigenous culture, and the realisation that there is some sort of conflict between their previously-held beliefs and their new learning. It is this conflict that constitutes culture shock. This time can be described as a ‘make-or-break’ period when the newcomer can decide on a course of action.

In particular, physical conditions in some communities can lead teachers, especially younger teachers, to feel as if they are on the defensive (Moskowitz & Whitmore, 1997). Green (1983)¹³ describes the presence of two- metre-high mesh fences topped with barbed wire as “developing a siege mentality” and ultimately causing “the physical and mental stress that such an environment imposes” (p.123). Structures such as these have been installed because facilities such as

¹³ Green (1983) describes two separate sets of experiences, firstly as a teacher in Warburton in 1966, then later as a teacher education lecturer whose travels took him into many other remote indigenous communities.

schools and teachers' housing are vandalised, particularly during vacations (Folds, 1987; Green, 1983; Heslop, 2003; Shaw, 2009) and the incursions of intruders at night (Green, 1983; Jordan, 2005). It has been suggested that these facilities are often not regarded by community members as belonging to them or under their control (Folds, 1987; Wax, Wax & Dumont, 1964). Negative images created by these situations contribute to the overall feeling of culture shock that is experienced.

My own experience of culture shock when working in the community on Melville Island caught me unawares. I had worked with Aboriginal people in the past although I had not lived in a community for any length of time. After living there for five or six weeks I found the tensions building and I started to wonder whether I should be there at all. It was not just the community, I was having troubles at work, both in the classroom and as the principal. Being both teacher and principal was a major problem and I was also missing family, friends and the normalcy of life back in Darwin, similar to Green (1983). At one stage I went as far as writing a letter of resignation which eventually I never submitted but I choose not to renew my contract. Subsequently reading the literature allowed me to identify with other people's experiences.

One aspect I did not anticipate was how I would relate to the Aboriginal people in the community. I had worked with Aboriginal people for a number of years and written about aboriginal education from what I considered a postmodern or even postcolonial perspective. Yet I experienced feelings much as Pedersen (1995) describes as the disintegration and reintegration stages as I went through the culture shock experience. I started to think of the locals in terms of the 'we and they' of the modernist dichotomy. Although I chose not to stay, by the time I left I was becoming more relaxed with the host culture, apparently moving into the autonomy stage and away from the "we and they" dichotomy but not reaching the interdependent stage as an endpoint (Pedersen, 1995).

2.2.3 Responses to culture shock: Courses of action

The literature on westerners working in indigenous communities indicates that they generally experience some form of culture shock (not always identified as such) early during their community experience but there are differences in their

medium to long term experience. In this section I am going to look at how people respond to culture shock by considering the courses of action they take. Personal narratives about culture shock are limited; negative responses tend to be personal and not documented, whereas positive responses to moving to a new culture often do not necessarily mention the notion of culture shock. I have used the literature to devise four categories which are characterised by the people's courses of action.

1. The cross-cultural group. People in the cross-cultural group respond to the culture shock in a positive way. They indicate a need to understand the culture of their indigenous hosts in more depth and so they develop deeper understandings and a greater respect for the other culture. They are making the transition to becoming culturally competent and are engaged in border crossing. As Heslop (2003) suggests:

Non-Aboriginal teachers should be mindful of the complexity of Aboriginal society and respectful of the opportunities given by community members to establish relationships. (Heslop, 2003, p.231)

This is the time at which they start making forays into the other culture. They may start to learn the local language spoken in the community and take part in the social activities (Chudleigh, 1969; Heyward, 2002; Mitchell, 1969; Taylor, 1995) such as joining sporting teams (Harper, 2000). Tompkins (1998) suggests that these people have a good sense of themselves which enabled them “to reach out, to ask questions, to check out situations, and to start to explore the community and the culture and find its differences and richness” (p.103), so that they found living and teaching in the community rewarding. A number of cases have been referred to above in section 2.2.2. These people are ‘living with’ rather than ‘living alongside’ the community and eventually they may be ‘living in’ the community (Heyward, 2002). They become integrated with the indigenous culture through the removal of social barriers, usually a slow process, while still retaining their own cultural identity (Cooper & Cooper, 1990). Kincheloe and Staley (1983) suggest that the “successful reservation teachers have become aware of the traditions and how they make an impact on the educational setting” (p.19).

Members of this group understand that their earlier perceptions of their roles in the community may have been patronising and placed the indigenous people in a

subordinate power position. For example Jordan (2005) reflects on her changing perceptions in her first six months after a newcomer arrives:

I had changed. Now I thought that our good intentions were patronising, and that our underlying assumptions about Aboriginal people reinforced their passive position and our right to make decisions on their behalf. ... Speaking to Jodie [the newcomer] reminded me that in my first six months, my illusions had disappeared as I had struggled to make sense of the reality of community life. (Jordan, 2005, p.149)

Green (1983) became a cross-culturalist through a significant event, what some would call an epiphany and others a critical incident (Sikes, Measor & Woods, 1985; Tripp, 1994). He took his students swimming at a flooded billabong, a significant event in itself in a desert community, which created a situation where:

It was a sharing of experiences that recognised the knowledge that each of us brought to a new situation, and I wondered how I could apply this principle to my classroom teaching. (Green, 1983, p.50)

Here is recognition that the children's culture had something of value which was later utilised appropriately in his classroom. After this, Green was invited to observe some special men's ceremonies, a recognition of his acceptance into the community.

2. *The expatriate group.* The expatriate group find life in the indigenous community is incompatible with their belief systems (Brody, 1975; Heyward, 2002) but decide often for ulterior reasons to stay in the community. They may isolate themselves from the community except when they do their jobs, and they may leave the community on weekends and usually do so at holiday times (Brody, 1975; Green, 1983; Hickling-Hudson & Ahlquist, 2004; Taylor, 1995). They often form or become part of a western community within the indigenous community, an expatriate community 'living alongside' (to use Heyward's term) the indigenous one within their own country. They are encapsulated within their own 'cultural bubble' (Cooper & Cooper, 1990) and Brody (1975) found the 'White sub-community' in northern Canada to be quite structured, with unwritten rules for the behaviour of the Whites/westerners and strong potential for ostracism (being 'bushed') for breaking the rules.

On the other hand, Hughes (2007) suggests that some ineffectual teachers choose to remain in community schools where their poor teaching practices can go unobserved, and perhaps they move on to another community once their poor teaching has been detected.

The expatriate group often live in a western enclave in much the same way as some sojourners often do when working overseas, reflecting qualities attributed to many international expatriates in the literature. Richards (1996) examines the behaviour of expatriate workers in international situations and one of his respondents who had worked in Ghana and Nigeria identifies two types of expatriate response. He describes one group which operated in a fortress or enclave mentality, referred to host country citizens as ‘them’, had no local citizens as real friends and socialised with like-minded expatriates¹⁴. Ryan (2008) describes expatriate behaviours in Port Moresby as demanding “exclusive and guarded enclaves [which] contribute to obvious segregation between the haves and have nots” (p.11). Ryan considers that there was neither a real relationship between the expatriates and the Papua New Guineans nor a sense of ongoing obligation, responsibility or renewal, and these are consistent with neocolonial attitudes. These attributes are shared by members of the expatriate group living and working in indigenous communities in their own countries; there is a sense of irony in using the term ‘expatriate’ to describe groups of westerners living in their own countries.

Members of the expatriate group often have ulterior or mercenary motives for teaching or working in indigenous communities. Working in remote communities often attracts financial benefits including allowances, subsidised accommodation and the possibility of extra tutoring which, when combined with not being able to spend their wages, offers a situation that facilitates saving (Harper, 2000; Heslop, 2003; Hickling-Hudson & Ahlquist, 2004; Taylor, 1995). Teachers can use periods of service in community schools to facilitate a more favourable placement subsequently (Martinez, 1994; Taylor, 1995) and often principals find

¹⁴ A second group consists of those who tried to take part in the local culture “to learn about other lifeways that would have made their stays in those countries far more pleasant and interesting” (p.566). Richards (1996) suggests that this response is less likely to occur because it is more difficult. Using my classification I suggest that this group is the same as the cross-cultural group.

themselves taking their first principalship in a community school for the same reason (Heslop, 2003; Hickling-Hudson & Ahlquist, 2004).

Other than working in the community school, most of the expatriate group's interactions are with each other (Folds, 1987; Hickling-Hudson & Ahlquist, 2004; Jordan, 2005; Martinez, 1994; Taylor, 1995). In the Aboriginal community they visited in Queensland, Hickling-Hudson and Ahlquist (2004) observed that:

The teachers socialised among themselves, made few or no friends at a level of equality in the community, did not socialise with the local adults, and left the community every Friday to spend the weekend in the nearest urban centre, four or five hours drive distant. They were clearly outsiders who, feeling isolated, strange and uncomfortable, had no intention of staying. (p.69)

Often young, inexperienced teachers are attracted to this group as it offers them professional as well as social support. Taylor (1995) identifies a white group who formed a supper club where the participants "had a chance to maintain their universe – they could reminisce about home and the way things 'should be'" (p.229).

Members of this group do their work, probably without consideration of the culture of their clients and are often critical of them because of the perceived differences. They do not consider the values in the indigenous culture apart from the superficial, and their work is based on assimilationist practices. Often they express beliefs that the indigenous cultures are dying out (Green, 1983; Hickling-Hudson & Ahlquist, 2004) which conform to their assimilationist attitudes.

Group members typically have negative views of their indigenous hosts – stereotypical, prejudicial and discriminatory (Heyward, 2002; Tompkins, 1998). Martinez (1994) refers to 'Brian' making denigrating comments about the Aboriginal people. Brody (1975) suggests that the criticism comes about because the westerners hold a stereotypical view of the identity of the indigenous people as the 'noble savage' but what the westerners observe does not match the stereotype. Wolcott (1967) includes extracts from letters from past teachers which are negative towards the native community and students. Tompkins (1998) suggests that they also resent other white workers who did not socialise with them, levelling the accusation that they had 'gone native' or were 'bushed'. Stonebanks

(2008) refers to a colleague who made comments about the resident Cree and referred to them paternalistically as “*nos enfants*” (French, meaning “our children”, p.111). Stonebanks and his wife also chose to no longer go to dinner with some of the other western teachers because of racist comments that were made at a dinner they attended; this can be seen as them breaking away from a group of expatriate teachers.

Expatriate teachers disapprove of fraternisation between themselves and the indigenous community (Martinez, 1994) although there is evidence that this is the case for the wider community or at least for educational authorities. Taylor (1995) recalls that when he was teaching in one reserve school (in Canada), the superintendent suggested he was getting too involved with the community and questioned his friendships with indigenous individuals and families. Goulet (2001) describes an instance where advice was given by the superintendent not to mix with the indigenous people being given to a group of teachers, including paradoxically to ‘Roxanne’, an indigenous Dene¹⁵ woman working in her home community. Recent reports from Canada now recommend that teachers should reach out to and have open relationships with the Aboriginal community (Bell *et al*, 2004; McBride & McKee, 2001).

Another feature of teachers in the expatriate group is their negative attitudes toward their indigenous students as well as the community and they often complain about what’s happening, usually to other like-minded people¹⁶. Hickling-Hudson and Ahlquist (2003, 2004) report on negative comments and attitudes of some more experienced teachers in the school, and they also report on the lack of an Aboriginal focus in the curriculum and in how the school was decorated.

3. The short-term stayers. For a small minority the impact of the culture shock experience causes them to leave shortly after their arrival or in some cases, to retreat into a world of their own. For some, the impact of culture shock is so

¹⁵ The Dene people are First Nations people from the North West Territories of Canada.

¹⁶ The third, reintegration phase of Pederson’s model of culture shock (1995) is exemplified by anger directed at the host community. I suggest that the expatriate group do not develop beyond this phase of culture shock and their negative attitudes towards their hosts are a modification of an earlier anger at the community.

severe that the individuals cannot live in the host culture (Oberg, n.d.; Pedersen, 1995). Heslop (2003) considers that some teachers became so frustrated they left the community “with low regard for their [own] teaching skills and holding negative attitudes towards Aboriginal people” (p.210). Georgina (in Daniels, 2007) suggests that “the experience of living in a community can be so confronting that the average stay of teachers is ... six weeks” (paragraph 6). Collins and Lea (1999) also find the duration for many teachers to be short but there appears to be no official statistics.

As many of the teachers going to indigenous communities were also in their first year of teaching, leaving the community may affect their feelings of competence as teachers and they may be lost from the profession (Heslop, 2003). Green (1983) suggests that if he had been a neophyte teacher rather than having several years of experience, his confidence would have been totally crushed (above); even so, he found his first weeks in the community school difficult. A positive experience with his students gave him the confidence to stay on.

Some short-term stayers display some characteristics of the ‘escapists’, a term used by Cooper & Cooper (1990) and Taylor (1995), who either escape by leaving the community or by retreating into the confines of their own world. This is a group of people for whom the reality of the community is too contradictory to their world view. Their usual course of action is to leave the community because they cannot reconcile between their old ideas and the new environment.

4. The nonconformist group. At the other extreme, there is a small group of people who may try to assimilate into the indigenous culture. Such an action may be premeditated by the westerner but it may not be acceptable to the indigenous hosts (Waldrip, Timothy & Wilikai, 2007). Some may come because of desperation (Haig-Brown, 1990), whom she describes as misfits in their own world. On the other hand Price and Price (1998) feel that ‘misfits’, some of whom would fit into this group, were accepted at least by some Aboriginal people although they did not explain why. Schwimmer (1958) considers as ‘dissenters’ the group of European who lived among the Maori. The nonconformists may be considered to be inclusive of the transculturites (Hallowell, 1963), the beachcombers or *Pakeha*

*Maori*¹⁷ (Bentley, 1999; Milcairns, 2006; Nicholson, 2006) as they are not strong in their own culture and perhaps believe that ‘white man got no culture’¹⁸. The nonconformists have not developed any cross-cultural competence but are probably incompetent in their own culture as well.

It is important to distinguish this group from those people who have extended careers in indigenous communities and who are cross-culturalists. ‘Misfits’ is one of the categories examined in appendix 3¹⁹ and Townley (2001) explains the term ‘misfits’ as a self-ascribed label used by some professionals with extensive experience and influence and status in Aboriginal communities, but they are not nonconformists. Inter-marriage with an indigenous person does not necessarily imply that a person automatically becomes a nonconformist but rather doing so can result in establishing influence and status. There is also concern expressed about westerners being in a community for an extended period of time and ‘going native’ as if one implied the other (Harper, 2000, 2004). In reality the concern would seem to be about the Canadian north ‘getting into one’s blood’ and then not being able to resettle in the urban south, a feature of reverse culture shock mentioned above (as stage 5, Heyward, 2002). Tompkins (1998) identifies that ‘going native’ is used also as a pejorative by teachers who excluded themselves from the community (i.e. expatriates) regarding others who have better relationships with the indigenous people (i.e. cross-culturalists).

Summary

So far I have focused on the experiences of people who have worked in indigenous communities with the idea of using their experiences as a sort of a benchmark. From the literature regarding western teachers (and others) living and working in these communities, I have suggested that they all suffer from culture shock to some degree during the initial period of their stay and that there are a

¹⁷ *Pakeha Maori* is the term given to a group of westerners, mostly men, who moved into Maori society during the early days of colonial New Zealand (Bentley, 1999).

¹⁸ Stanner (1979) is titled *White man got no dreaming*, which seems to parallel this trope occasionally heard in Australia and sometimes used by westerners. Its origin seems to be uncertain.

¹⁹ Mercenaries, missionaries and misfits. In appendix 3 I refer to an alternative classification of workers in indigenous communities. I do this for three reasons, firstly as it is mentioned in some of the literature being examined in this chapter (e.g. Jordan, 2005; Price & Price, 1998), secondly because of overlaps with some of the terms used in this section, and thirdly because the terminology is used by some of the participants.

number of possible outcomes for the cross-culturalists, the expatriates, the short-term stayers, and the nonconformists.

Of these four groups it is the cross-culturalists who become part of the indigenous community, living with the indigenous people and taking part in their social and cultural activities. They understand that there is something of value about the other culture and as they develop a deeper understanding of the indigenous culture they also develop respect for it and the people. Those who are teachers develop an understanding of the needs of their students both within their community and within the world at large and they strive to help fulfil those needs. It is this group that I continue to focus on in the following section.

2.2.4 Effective teachers of indigenous students

I now examine how the experiences of westerner teachers working in cross-cultural situations in urban and regional schools may parallel those teaching in indigenous communities. Haig-Brown (1990) considers many westerners first visit the border world by “happenstance”.

The teacher or professor accepts a job and just happens to have First Nations students in her class. (Haig-Brown, 1990, p.232)

I suggest that teachers in urban and regional situations are less likely to experience culture shock or if they do, it would be to a lesser degree. The consequences of culture shock in mainstream situations are less likely to be recognised. I examine another group, effective teachers, who are described in the literature working both in indigenous communities and indigenous students in mainstream schools.

The exploration of effective teachers of indigenous students seems to have been initiated by Kleinfeld (1975), who considers that there are two main characteristics which discriminate the effective teacher from the ineffective one. The first of these is “the effective teacher’s ability to create a climate of emotional warmth that dissipates the students’ fears in the classroom and fulfils their expectations of highly personalized relationships” (Kleinfeld, 1975, p.318). Kleinfeld observed about forty teachers teaching Alaskan Indian and Inuit students, undertook some videoing, as well as interviewing them. Her criteria of effectiveness relate to pupil growth such as classroom attentiveness and amount of

academic work performed (rather than achievement tests). She contrasts personal warmth with professional distance, which is often considered as the appropriate mode of teachers relating to students but often interpreted by indigenous students as disinterest in or even hostility towards them.

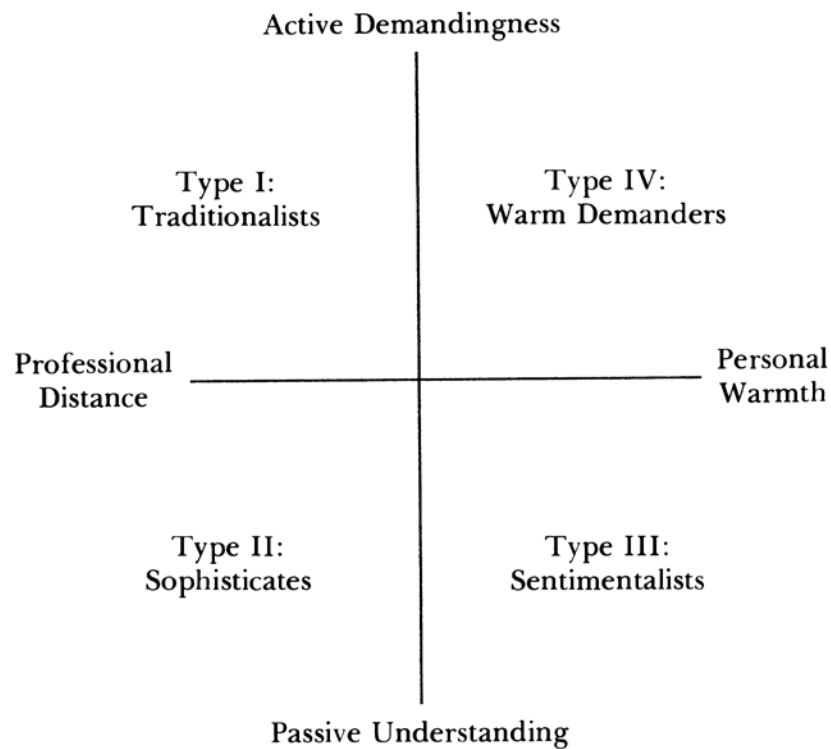
The second characteristic of effective teachers is active demandingness, where teachers demand high levels of academic work, compared with passive understanding. According to Kleinfeld (1975), this demandingness is initiated only once personal rapport has been established and involves “articulating cultural assumptions underlying the learning tasks in Western classrooms” (p.328).

Kleinfeld (1975) uses these two characteristics to create a typology of teachers (Fig. 2.2), identifying four teacher types which she characterised using classroom-based ethnographies.

1. The *traditionalists* concentrate on the academic subject matter and ignore the interpersonal dimension of the classroom.
2. The *sophisticates* prefer discussions where “students can discover intellectual concepts for themselves” (p.331), but they maintain “sophisticated reserve”.
3. The *sentimentalists* “tend to be warm, kindly people who find it difficult to make demands on any students” (p.334)
4. The *warm demanders* achieve a warm relationship with their students who are concerned with what their students learn and use the relationship with the students to further learning.

Of the four types, Kleinfeld considers that warm demanders are the most effective teachers of indigenous students with both urban and community students.

Figure 2.2. Typology of teachers of indigenous students (Kleinfeld, 1975)



Fanshawe (1976, 1989, 1999) has taken an ongoing look at the personal characteristics of an effective teacher of Australian Indigenous students. In Fanshawe (1989) he looks at student perspectives on teacher effectiveness. He collected data on a number of effectiveness measures from both urban Aboriginal and non-aboriginal secondary students, quantified the data to suit Kleinfeld's two characteristics and plotted them as if the chart was a graph with two orthogonal co-ordinates. The effectiveness measures were students' liking for their subjects, amount of work done, self-perceived ability, teacher preference and the amount of learning. He found there was no significant difference between the warm demanders and the sentimentalists for either student group or between the groups. In other words, the students appreciated the 'warm' aspect of the teachers rather than their 'demandingness'.

Goulet (2001) describes the effective teaching of two women working with Aboriginal students in northern Canada, one of whom is Dene ('Roxanne') and the other a westerner ('Janet'). 'Roxanne' taught in both Dene and English languages, often translating between the two. 'Janet' used community knowledge

as well as culturally relevant materials. According to Goulet, both teachers conveyed a deep sense of caring for their students, emphasised the need to get to know and accept each student as an individual. They built up warm human relationships with their students and used an indirect, nonconfrontational approach to classroom management.

Bishop and Berryman (2006) interviewed a group of secondary teachers in New Zealand to determine what was considered effective teaching of Maori secondary students. In the majority of responses teachers pathologise Maori students' experiences and explain their lack of educational achievement in deficit terms (Shields *et al*, 2005). However there were some positive responses such as building positive relationships with Maori students, acknowledging them as being Maori by including their culture in the classroom and including their input into how and what they learned. A minority of teachers believed that the teacher-student relationships were of prime importance, that:

when positive caring and learning relationships were built into their classrooms, improved student behaviour resulted along with engagement and involvement in learning for all students, and especially for Maori students (Bishop & Berryman, 2006, p.251)

In the research on effective teachers done with Maori secondary students, showing respect for students and their culture is seen as an important part of developing positive relations (Bishop *et al*, 2003; Macfarlane, 2007) and expecting students to modify their behaviour (Macfarlane, 2007).

Shields *et al* (2005) use the term 'empathic education' to describe "a desirable state of affairs in education" (p.137). They define empathetic education as "a pedagogical approach that takes into consideration the interests, aspirations, and attitudes of the learner as fundamental to learning and understanding" (p.137). It means taking into account the cultural connectedness of the students as well as their cognitive development and is similar to being a 'warm demanding' or effective teacher.

Respect is one aspect of effective teaching which appears in some of the earlier research (e.g. Wax *et al*, 1964). They identify a few successful teachers who "differed from the less successful teachers in that they respect their students"

(p.75). These teachers were also strict disciplinarians, were fair and did not embarrass their students while emphasising the students' academic work. Kleinfeld (1975) feels there was insufficient detail in Wax *et al* (1964) to use in building a case around respect as a characteristic of effective teaching, suggesting that there may be different views about how respect may be shown by Native Americans and Inuit and by westerners (Wax & Thomas, 1961). Eckermann (1987) includes respect in a set of guidelines, as a component of demanding: "mutual respect, caring and support not only between staff and students, but also between students" (p.64). Prater *et al* (1995) survey a group of Navajo students regarding effective teachers and find that the students preferred being treated with respect and taught responsibly. Both Goulet (2001) and Tompkins (1998) suggest that effective teachers make allowances in their teaching for students dealing with personal problems "in a respectful, sensitive way" (Goulet, 2001, p.76). Shields *et al* (2005) consider that for teachers the development of relationships with students was important and that they should model respect and caring:

Starting with the students is empowering; it is motivating. Starting with the subject matter, with technique, with tricks, does nothing to overcome the prejudices and pathologies that have developed over such a long period of time ... (Shields *et al*, 2005, p.51)

This is similar to the approach identified by Kleinfeld (1976) of warm demanding teachers who establish their relationship with the students first at the beginning of the school year.

Wilson (2001) discusses the trauma experienced by Sioux students as they transferred from an elementary school located on a reserve to a western-oriented high school in a nearby town. Among her observations in the elementary school she notes that teachers treated students with respect as well as making contact with all students during class. Their expectations were high and the students thrived. In contrast, the high school teachers made no or only limited contact with the Sioux students in their classrooms and had low expectations of the students; however the low expectations were as a result of deficit thinking and stereotyping rather than actual experiences. This would seem to resonate with the trope that primary teachers teach students, secondary teachers teach their subject.

By comparison, teachers at a First Nations high school in Canada realised that respectful treatment of their students was essential (Haig-Brown, Hodgson-Smith, Regnier & Archibald, 1997). When interviewed, one teacher suggests:

“What makes success for me ... is if I can get a student long enough to get a relationship. That I know them and understand them, that’s the purpose of being in there all day, rather than one hour coming to teach Phys Ed, Math or Science. You get to know them better then they trust me.” (T1:6, in Haig-Brown *et al*, 1997, p.147)

The success of the staff at this school was put down to patience, perseverance and commitment.

An alternative to respect *per se* has been the idea of teacher caring (Berger, 2007) based on the ideas of Noddings (1996). As Berger suggests for Qallunaat [western] teachers in Nunavut,

The teacher who cares is one who desires the well-being of students and acts in ways that promote it. (Berger, 2007, p. 1).

Maintaining high standards is still considered to be important and being caring is considered to be something teachers work towards. Lewthwaite and McMillan (2010) find that Inuit students appreciate the caring nature of their teachers. In interviews some of the students identify that caring teachers create positive learning environments in their classrooms. Lewthwaite and McMillan consider that caring about their students’ educational success is a characteristic of effective teachers, one which is “manifest in actions” (Lewthwaite & McMillan, 2010, p.168).

Throughout this examination of the literature on effective teaching there has been the notion of emotional warmth and perhaps even respect and caring for the student and their culture. This is seen as a precursor to a high level of expectation of the student academically.

2.2.5 Cross-culturalists and effective and access-enhancing teachers

In this section I want to consider the nexus between cross-culturalist and effective teachers. From my reading of cross-culturalists and effective teachers of indigenous students above, there are a number of shared attributes. Both are

strong within their own culture but have an interest in the other culture as well. They understand that they need to consider their students' culture in their teaching although it is not always clear whether or how they integrate their students' knowledge.

As teachers, cross-culturalists develop an understanding of the needs of their students both within their community and within the world at large and they strive to fulfil those needs. Effective teachers are warm towards their students, attuned socially and culturally to them. The place of respect as a cultural attribute appears to be ambivalent: often it is considered as respect for the students' culture but not as much as respect for the students themselves. This is not unusual as there have been limited calls for teachers to demonstrate respect towards western students. Effective teachers are also demanding in their expectations of their students' levels of achievement (Kleinfeld, 1975). On the other hand there is no presumption of demandingness from cross-cultural teachers and Fanshawe (1989) suggests that indigenous students do not necessarily relate to demandingness. Although the teacher effectiveness literature has not been applied particularly to community schools, the characteristics of cross-culturalists and effective teachers overlap to suggest that cross-culturalist teachers are effective teachers.

Hanrahan (2006) develops the idea of the access-enhancing teacher from observations in mainstream science classes and I believe it can be applied in indigenous classes as well. The characteristics of access-enhanced teachers basically revolve around being student-centred rather than subject- or teacher-centred, and so they have much in common with the characteristics of effective teachers. Thus an effective teacher of science for indigenous students would take into account their students' culture and prior knowledge, involve the students in deciding what and how they should be learning²⁰.

2.2.6 Culture shock and the border crossing metaphor

In section 2.1 I looked at the metaphor of border crossing and suggested that there is strong evidence that people who work at the border zone or cultural interface and who see the value of the other culture often become border crossers. Some

²⁰ Similarly, Kleinfeld's traditionalist teacher and Hanrahan's access-limiting teacher also share negative characteristics such as distancing from students.

also become border workers. In the earlier parts of section 2.2 I have looked at the ways in which teachers respond to working at the interface, particularly how they respond to culture shock. This influences how they perform as effective teachers of indigenous students.

In the previous two sections (2.2.4 and 2.2.5) I have examined the characteristics of effective teachers and access-enhancing teachers. There are no stories of experience here but I suggest that models such as Geijsel and Meijers (2005) and Pillsbury and Shields (1999) provide a link between the culture shock experiences of teachers in indigenous communities and the experiences of effective and access-enhancing teachers. Both models consider that some kind of critical event leads to flexible border crossings.

Culture shock can be seen as having an impact on an individual's identity (Geijsel & Meijers, 2005; Heyward, 2002; Pillsbury & Shields, 1999). For instance, Heyward (2002) considers that prior to a culture shock experience, individuals have unformed or stereotypical notions of culture. I consider that these would be consistent with the '*we-and-they*' or '*us-other*' binaries related to the modernist perspective. As noted in the Geijsel and Meijer's model (2005), a positive response would typically lead to enhanced cultural identity. I suggest that subsequently there would also be an associated change away from the modernist dichotomy towards a postmodernist or postcolonialist perspective.

Similarly there has been some criticism of border crossing being based on an essentialist (i.e. modernist) perspective (Malcolm, 2007). Certainly it would seem that the expatriate group maintain a modernist perspective as their behaviours (discussed in section 2.2.5) indicate a dichotomy between indigenous people and them. Border crossing implies enhanced identity learning suggesting movement away from the modernist perspective.

Here I want to make use of the border crossing metaphor and extend it to bring some of these ideas together. I interpret the literature to suggest that there are at least four, perhaps five, groups that can be identified by the characteristics which have been discussed previously. I refer to the four groups as border flee-ers,

border liners, border crossers and border workers; I propose there is a fifth group, border mergers, with limited evidence from the literature.

Border flee-ers. In section 2.2.3 I described a group of short-term stayers who have a negative response to culture shock and identity learning, and choose to either leave or become isolated within a community. In terms of the border they are fleeing from the border, intent upon locating themselves away from the cultural interface.

Border liners. I suggested in section 2.2.3 on culture shock that some westerners form a group I call the expatriate group who choose not to engage with the indigenous communities in which they work but rather form enclaves of westerners in which they associate with like-minded people. In Kleinfeld's classification of effective teachers (section 2.3.5) they would be classed as traditionalists, actively demanding but maintaining their professional distance, or perhaps also as sophisticates, not as demanding but also unable to interact with their students at a personal level. According to the Geijsel and Meijers' model (2005) they demonstrate no identity enhancement to the boundary events. In Heyward's (2002) model of intercultural literacy, they remain monocultural and do not make the transition to become cross-cultural, let alone intercultural (or bicultural). In some ways their behaviours are similar to those displayed by many expatriates working overseas who remain monocultural, distance themselves from their hosts and display stereotypical and chauvinistic attitudes.

In general these people may be strong in their own western culture, some may have assimilationist views and some consider that the indigenous culture is dying out but generally they have only superficial and deficit understandings of the other culture. There are a number of reasons advanced as to why people have been willing to occupy this border line position. Pillsbury and Shields (1999) consider loyalty to and overidentification with their own group and perceptions of correct social posture cause individuals to erect barriers at borders. Often they are mercenary reasons – financial or for advancement within the teaching profession.

I refer to this as the border line position relative to the cultural interface. The incumbents are westerners who work alongside (rather than with) indigenous people without crossing the border (Heyward, 2002).

Border crossers. Border crossers include the cross-cultural workers (section 2.2.3) who have a positive response to the culture shock event and want to find out more about the indigenous culture. They (as well as members of the next two groups) have had identity learning enhancement to the boundary events (Geijsel & Meijers, 2005). Border crossers include as effective teachers the warm demanders who display personal warmth towards their students (section 2.2.4). They see value in the indigenous culture and attempt to reconcile the two cultures, usually to promote an understanding of the western culture by the indigenous people. They start by crossing borders more-or-less on a needs basis, making forays across the border.

Border workers. These people use their understandings of both cultures to assist the indigenous people; they have undergone enhanced identity learning (Geijsel & Meijers, 2005). Border workers chose, like Haig-Brown (1992), to remain metaphorically in the border world. They work as allies to the indigenous people, giving advice, and are invited by them to take part in the project rather than setting the agenda.

The transition from border crosser to border worker seems to suggest a number of changes. As border workers they take into account the wishes of the indigenous community and they have the support of the community they are working with, although this is not necessarily formal but may be tacit approval by the community. Using Heyward's terminology (2002), border crossers would be living with, and possibly living in, the community, although in some cases this may be metaphorically rather than a physical reality.

It would seem from the literature that teachers of indigenous students in indigenous and mainstream schools who are border crossers and border workers are also effective teachers. This means primarily that the teachers are warm toward their students, that they demonstrate understanding and respect for their

students' culture. The literature suggests that they should also be demanding on their students academically.

Border mergers. Although there is little in the literature to support this situation at this time, I propose it to include those people who have moved beyond border crossing and find the notion of borders to be untenable or impractical, such as postculturalists (McConaghy, 2000).

2.3 Culture brokers²¹

When people of different languages, cultures, and identities meet and deal with each other, they develop special channels of communication and role networks. (Clifton, 1989, p.35)

In this section (section 2.3) I consider the role of culture broker, and compare it with the border crosser, then in section 2.4 I examine the nexus between the two. I undertake an examination of the literature on culture brokers primarily from three primary sources, anthropology (including sociology), ethnohistory and applied anthropology, to try to understand the characteristics of culture brokers and this led me to a number of conclusions regarding the nature of the literature:

- The anthropological literature is full of 'stick figures' and is concerned with who were the culture brokers, what could they do, who let them do it and the terminology that could be used, but without any characterisation to put any flesh on the bones. This literature provides the language, sometimes confused, through which the culture broker role is described.
- The ethnohistory literature is more informative, with some stories of real people who were considered to be successful culture brokers (and a few who were not), and the literature gives more substance to the characterisation.
- The applied anthropology literature, which includes health and educational anthropology, suggests ways in which culture brokers could work in

²¹ As both terms 'culture broker' and 'cultural broker' have been used interchangeably, I will use culture broker except where the original authors have used cultural broker. This follows the usage made by Aikenhead, compares with other uses such as stock broker, and mirrors Krugly-Smolenska's (1995) preference in describing culture studies in science education.

various cross-cultural situations and how they could be trained. Overall it suggests that culture brokerage is another strategy for achieving cross-cultural communication, without much in-depth understanding of a personal effect.

Culture brokers were originally defined in the anthropology literature as change agents, firstly between layers in society but more recently in cross-cultural relationships. That culture brokers have a number of characteristics in common is derived particularly from the ethnohistory literature, particularly that they are interested in other cultures, are curious about the other side of the cultural divide and demonstrate a belief that those cultures offered something of value. These aspects are examined in detail below.

2.3.1 Culture brokers as change agents

The idea of the culture or cultural broker has its origins in the work done by anthropologists from the 1920s onwards (Hinderaker, 2002). Some of the first studies dealing with innovation or change within societies (e.g. Adams, 1951; Barnett, 1941; Linton, 1936) identify culture brokerage, although at that time the personnel involved had been called 'innovators' or 'change agents' (Press, 1969). Culture brokering is generally seen to be about advocating change and the anthropological literature describes them as advocates of cultural change (Press, 1969; Rodman & Counts, 1982; Weidman, 1983).

In many of the early studies (Fallers, 1955; Geertz, 1960; Wolf, 1956) the role of culture broker was seen to be already occupied by someone in authority within a community and it was presumed that this new role was one they could and would undertake. The term 'broker' is first used by Wolf (1956) primarily in an entrepreneurial role as economic and political brokers, and Geertz (1960) first calls them 'cultural brokers'. Adams (1970) distinguishes cultural brokers from power brokers, seeing cultural brokers (using teachers as an example) as implementing upper level decisions by acting at a lower level, a top-down model, although their success depends on their own skill and personal influence, not on the power that they wield. Adams also characterises the cultural brokerage system

as static because the broker does not change their position within the structure by virtue of their activities as a broker.

As anthropologists widely relied on native people as informants to interpret cultural phenomena as well as language, someone an anthropologist might find helpful as an informant or an assistant could be characterised as an intermediary (Clifton, 1989; Rodman & Counts, 1982). This is not necessarily acknowledged by anthropologists themselves although some of the ethnohistories are of indigenous people taking on the cultural broker role.

2.3.2 Culture brokerage models

A simple model of cultural brokerage revolves around the idea of a patron and can be dated back hundreds of years to hierarchical feudal systems (Kenny, 1960; Silverman, 1965). This arrangement had only started breaking down in parts of Europe since World War II. This model involves a patron acting as intermediary for their client by going to their patron at the next level. Paine (1971) introduces the patron – broker – client model in which he suggests that the patron and client are the two end-members, and between them are located two ‘intermediary’ or ‘middleman’ (sic) roles, the go-between and the culture broker²². Of these intermediary roles, he describes that of go-between takes place without any manipulation or alteration, whereas that of the cultural broker has implications of either commercial gain or political interference or both. Paine identifies the broker as being engaged in managing of the patron’s values but not responsible for or initiating them. The broker is seen to be in an alliance with the patron and gains from the alliance, mostly in terms of prestige. On the other hand, if the broker is unsuccessful, they suffer again in terms of prestige.

Paine’s (1971) definition of the go-between is more akin to the cultural mediator. Mediation is about promoting dialogue between two groups and the mediator is considered to be an intermediary position with implications of balance between the two sides, particularly in the psychological literature which describes the process of mediating between cultures and the competencies of the mediator

²² Much of the terminology used in describing the cross-cultural positions and roles in the literature is expressed in the masculine as used at that time. I have attempted to use gender-neutral language although I occasionally need to resort to the original terms.

(Bochner, 1981; McLeod, 1981; Taft, 1981). Schwimmer (1958) describes the 'equalitarian mediator' who cannot impose their will by force but firstly has to gain acceptance for themselves, then for their idea; this seems to be similar to what is now described as a 'cultural mediator'. Although the use of culture broker and cultural mediator throughout the literature sometimes appears to imply uncritically their equivalence, this should not be the case. I look at this in more detail in section 2.3.4 where I suggest that although these are two different roles, some individuals can undertake both.

Whereas originally a culture broker was considered to be an intermediary between two layers within a society (Fallers, 1955; Geertz, 1960; Wolf, 1956), Paine (1971) extends the role to one between societies, to facilitate cross-cultural communications as well. Using his model, Paine (1971) situates the idea of patronage in a cross-cultural context and replaces the patron with western institutions such as the government, business enterprises and the churches which act as what I term 'institutional patrons', exerting power over their clients through an intermediary who is also the institution's employee. In discussing an intermediary in this context, Paine considers that the employees act as cultural brokers in their dealings with native peoples in the Canadian Arctic. Dunning (1959) suggests that employees in these situations often assume the role of cultural broker and may implement it beyond their authority, an observation supported by Paine (1971)²³.

Dunning (1959) describes westerners in cultural broker positions as 'marginal men' but Paine (1971) suggests it is an intermediary position. At times in the literature 'middleman' (intermediary) and 'marginal man' been used interchangeably but this is incorrect. My understanding is that 'middleman' and 'marginal man' describe two different aspects although an individual can be both.

- The 'middleman' or intermediary works between two or more groups as seen above and the intermediary positions are roles which an individual can undertake.

²³ Meuwese (2003) suggests that some middlemen (sic) were never sincerely interested in bringing the two cultures together but only accommodated to native customs and practices in order to further their own goals and those of their employers (cf. Dunning, 1959; Paine, 1971).

- On the other hand, marginality is an identity issue, of how an individual identifies themselves (or perhaps is identified by others) relative to two seemingly incongruent cultures.

The marginal person was considered as having fallen between the two and belonging to neither culture (Bochner, 1981; Park, 1928; Stonequist, 1937). The ‘marginal man’ was originally used to describe people who find themselves between two cultures through migration or intermarriage or offspring of inter-racial relationships (Park, 1928), and transculturites are a marginal subgroup there by adoption, kidnapping or adaptation (Hallowell, 1963), including beachcombers and *Pakeha Maori* (Bentley, 1999; Milcairns, 2006; Nicholson, 2006). The confusion between the two terms ‘middleman’ and ‘marginal man’ arises from an assumption made by early researchers (Park, 1928; Stonequist, 1937) that marginal people would be best suited to be cultural mediators, a situation not proven equivocally by the research (Bochner, 1981).

The roles of patron and client seem to have disappeared from the recent culture brokerage literature, perhaps to create a more informal atmosphere or perhaps because the language sounds archaic; I find the terms useful and continue to use them. Many of the instances considered in the literature portray the culture broker as an agent for what I described above as ‘institutional patrons’, working in a top-down situation for the institution as suggested by Adams (1970) and Paine (1971), with seemingly little interest on requests from the client. Perhaps the potential for intermediaries to work in a bottom-up way needs to be viewed in terms of cultural mediators.

Herzog (1972) extends the role of cultural broker into applied anthropology and considers the role in education as an attempt to:

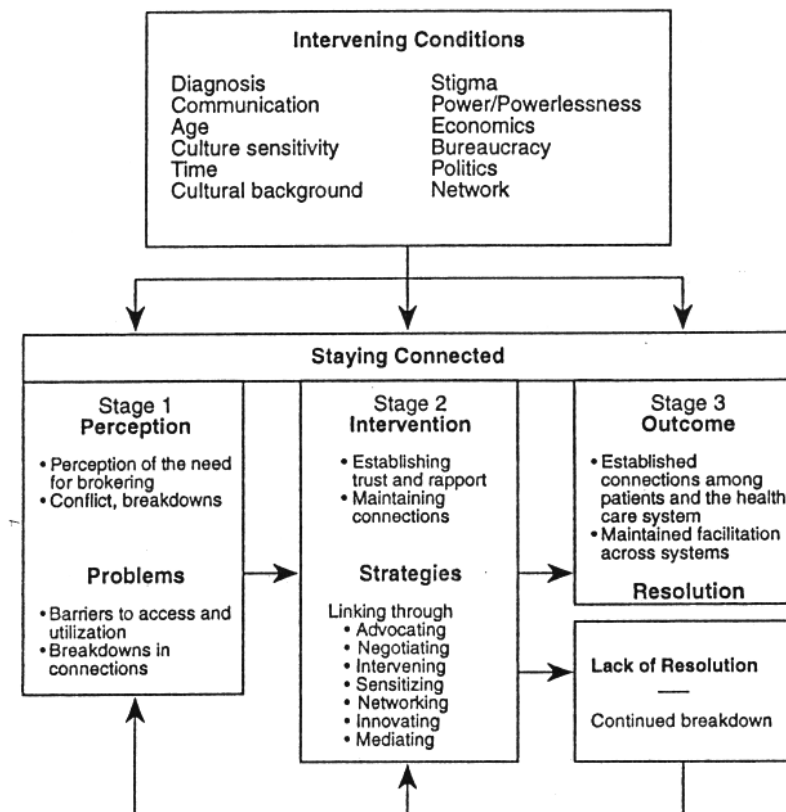
articulate, explain, and develop, *to each other*, the goals, life styles and concerns of all groups within and affecting the community; and with the groups, to synthesize mutually satisfactory goal statements and programs of action. (Herzog, 1972, p.9, his emphasis)

He suggests that it was not arbitration, as there was no power to impose solutions, nor mediation, because the broker could also suggest possible solutions. However this seems to be a narrow interpretation of mediation. One implication from

Herzog's work is that the role of culture broker can be filled by a professional or paraprofessional, not necessarily by a trained anthropologist, and this idea has been applied to health care as well as education.

Jezewski's intervention model (Jezewski, 1989, 1995) involves feedback systems and was designed for health workers and caregivers working in a multicultural environment (Fig. 2.3). It is primarily concerned with the intermediary roles which could be taken primarily by health care professionals and paraprofessionals, and describes the role of the culture broker primarily as conflict resolver as well as innovator and mediator.

Figure 2.3. The culture brokerage model proposed by Jezewski (1989)



Jezewski (1989, 1995) provides a pragmatic model of culture brokerage which might be useful for short-term individualised interventions found in health care. The model is oriented towards supporting the practice of western medicine and it is primarily a strategy to achieve this rather than to develop an understanding of the patient's culture. Training programs relating to the model have been devised and assessed (Jezewski & Sotnik, 2001; Moffat & Tung, 2004). What is absent in

Jezewski's model in terms of this thesis is that little emphasis is given to experience-based cross-cultural development.

2.3.3 Characteristics of a culture broker

It is through ethnohistory, the study of the history of cultural groups and particularly those undergoing change through the impact of colonisation, that some individuals have been identified as culture brokers more or less by the way they operated between two cultures. Their biographies often identify characteristics such as being of mixed race or married to an 'Indian'. Less frequently personal qualities such as their interest in the other culture of individuals is described. It has been in anthologies (e.g. Clifton, 1989; Karttunen, 1994; Szasz, 2001) rather than individual stories that these characteristics have been identified across groups of cultural brokers. A limitation of many ethnohistories is that they are written essentially as historical biographies (Hinderaker, 2002) rather than for their characterisation. They tend to focus on historical rather than present-day characters but they feature people from a range of enterprises and give an insight into the personal qualities of culture brokers.

Szasz (2001) gives some insight into the characteristics of cultural brokers. She considers that the cultural brokers examined in her anthology came into the roles more or less by accident and there were influential factors such as internal networks, mixed cultural heritage and gender which predetermined what they would become. Szasz suggests that the people in her anthology have three main characteristics in common; openness to others, a desire for power and unique experiences.

1. *Openness to others.* All the border people were curious about the other side of the cultural divide and demonstrated a belief that those cultures offered something of value, certainly a different level of involvement than Rodham and Counts' (1982) "being less afraid than their peers" (p.4). Recognition of those cultures might also have implied that they were of intrinsic worth. Intermediaries who succeeded in this border world also demonstrated that they were trustworthy and that it required determination.

I suggest that the descriptor of 'being curious about the other side' may be interpreted as saying that some cultural brokers were also border crossers and perhaps many of these would have been border workers. In many of the cases described in the anthologies (Clifton, 1989; Karttunen, 1994; Szasz, 2001), the culture brokers had already had some sort of border crossing which could be an event or critical incident or it may have been as part of their upbringing. Many can be considered as border workers in the sense of Haig-Brown (1992) in the borderlands or being located at Nakata's (2007) cultural interface. Many of the stories are about indigenous people as cultural brokers. For the non-indigenous subjects it is more how they position themselves at the cultural interface, particularly as a result of critical incidents, and whether they choose to remain in that position.

2. *A desire for power.* Those who succeeded in meeting these demands were locked into a position that offered rewards but often countered those rewards by immeasurable difficulties. Often intermediaries found themselves in awkward, sometimes life-threatening positions. According to Szasz (2001), one of the strongest motives for brokering was the sense of power that it offered. Beyond the anticipation of material rewards and the pleasure gained from power, cultural intermediaries also derived personal satisfaction.

Paine (1971) considers that cultural brokers gain prestige from their patrons and Dunning (1959) and Paine (1971) both comment on how some cultural brokers misuse the power available to them when representing their institutional patrons. Meuwese (2003) suggests that some mediators were never sincerely interested in bringing the two cultures together but only accommodated to native customs and practices in order to further their own goals and those of their employers.

3. *Unique experiences.* Each of the people discussed in Szasz's book followed a different path to become cultural brokers depending on their historical and cultural circumstances. Importantly, the examples in the book come from both western and Native American cultures, rather just from the indigenous side as they had been portrayed by many of the anthropologists.

These unique experiences can also be seen in other anthologies about culture brokers (e.g. Clifton, 1989; Karttunen, 1994).

2.3.4 Redefining the culture broker in education

I mentioned above that according to the anthropology literature there was a difference between culture brokers and culture mediators but in education in particular there has been a merging of the two roles with subsequent redefinition of culture broker. This has been in a number of cross-cultural contexts, of western teachers working with African-American, Hispanic and Native American/First Nations students (Bartolome, 2002; Diamond & Moore, 1995; Diaz & Flores, 1990; Flores, Cousins & Diaz, 1991; Gay, 1993, 2000; Gentemann & Whitehead, 1983; Stairs, 1991, 1994, 1995; Wyatt, 1978/79). Other writers have looked at the role of culture brokers in various situations (Bassey, 1996: multicultural education; Cooper, Denner & Lopez, 1999: Mexican-American students; Gorman, 1999: Canadian Native students; Harris, 1999: multicultural education; Haynes, 2000: ESL); in each of these cases the term 'culture broker' has been used, more-or-less, uncritically²⁴.

The teachers are still change agents (culture brokers), working on behalf of institutional patrons (educational authorities or schools), but this is mitigated by their consideration of their students as clients, for whom they work as cultural mediators and negotiators. Thus Gay (1993) defines a culture broker as:

A cultural broker is one who thoroughly understands different cultural systems, is able to interpret cultural systems from one frame of reference to another, *can mediate cultural incompatibilities*, and knows how to build bridges or establish linkages across cultures that facilitate the instructional process (Gay, 1993, italics added).

The section in italics stresses the mediation aspect of an intermediary rather than simply the change agent aspect. Gay suggests that there are several skills necessary for teachers to become cultural brokers. These are acquiring cultural knowledge, becoming change agents and translating knowledge into practice.

Wyatt (1978/79) recommends the synthesis of the learning styles of the school and the native community (in this case, a Canadian First Nations community in

²⁴ A similar situation occurs in some of the health care literature about culture brokering.

British Columbia). Drawing upon Herzog's work (1972), Wyatt (1978/79) synthesises the role of a culture broker as being based on three premises which sound more like cultural mediation:

1. acceptance of both parties as being equals
2. development projects should draw on the resources of both groups
3. having the skills to synthesise solutions, not merely to mediate between or encourage the two parties to devise solutions.

Wyatt suggests that only native teachers have the background necessary to be effective cultural brokers because they could achieve a balance between school and community styles of learning. This may have been the case in her particular situation but other writers have shown that culture brokers can come from either cultural group (Paine, 1971).

Stairs (1991) considers that the movement from cultural inclusion to a cultural base in the conceptualisation and implementation of Native education, where there had been the progressive incorporation of schools into the Native culture, would benefit further from the presence of cultural brokers. She feels that the future directions included emerging oral and written linguistic forms, in both Native languages and English as cultural bridges, and developing Native educator roles as culture brokers between Native and Euro-Canadian ways of knowing. Stairs also sees a role for culture brokering for incorporation of certain indigenous ways of learning into mainstream formal education.

I suggest in closing that genuine two-way brokerage between Native culture and formal schooling validates Native ways of learning, responds to urgent mainstream needs, and is our collective path to success in Native education. (Stairs, 1991, p.291)

Stairs (1994) indicates that she has moved on from this earlier culture broker idea to one of teachers as cultural negotiators.

Understanding culture is dramatically different to *knowing culture* ... move students beyond the initial multicultural *what* of culture ... to construct a cultural negotiation model, the *how* of contextualization and the *why* of intention and meaning... (Stairs, 1994, p. 232, her emphasis)

The idea of understanding culture fits in with the idea of border crossing to a greater extent than simply knowing culture.

Erickson (1986) suggests that because all teaching could be seen as involving intercultural communication, that

... the teacher can be seen as a translator and as an intercultural broker. It is the teacher's responsibility to operate in such a bridging²⁵ role on behalf of all students... That role of bridging, or intercultural mediation, is a complex one. (p.123)

He points out that science is an area in which this approach could be taken.

Culture brokerage is also considered in other areas of education, including African-American education. Gentemann and Whitehead (1983) consider a two-way perspective of the culture broker and suggest that a culture broker is more than just an interpreter, although they consider knowledge of language (even an understanding of Standard and non-standard forms of English for someone working with African Americans) to be one of the cultural symbols the broker must possess. They see that the culture broker is important as a role model for those in the ethnic community who aspire to participate in mainstream activities.

What has been happening in the education literature is a melding of ideas, starting with the culture broker as a change agent and including being a mediator and for some a negotiator (like Stairs, 1994). This is not the same as the confusion between culture broker and mediator noted earlier in section 2.3.2. It has two principal components:

- a change agent component, where the teacher takes into account the difference in culture in how and what they teach; this is mostly a cognitive approach
- a mediator component, where the teacher acts at a personal level with and on behalf of their students; this is primarily the affective side of their teaching.

²⁵ In a number of cases the 'bridge' metaphor has been used to describe the role of a culture broker (Erickson, 1986; Gay, 1993). This metaphor resonates with the idea of border crossing. It will be considered in more detail in section 2.4 where the nexus between border crossing and culture brokerage is examined.

If this merged role is to be acknowledged, it would appear that the terminology may need to be changed. On the other hand the term ‘culture broker’ seems to have become established as the favoured term used in education.

2.3.5 The culture broker in science education and Cultural studies in science education (CSSE)

Aikenhead (1996) introduces the role of ‘teacher as culture broker’ to science education in the first of a series of papers (Aikenhead, 1996, 1997, 2001a, b, c; Aikenhead & Jegede, 1999; Aikenhead & Otsuji, 2000; Jegede & Aikenhead, 1999) and bases his interpretation of culture brokerage on Stairs (1995).

Aikenhead (1996) incorporates culture brokerage with the idea of border crossing from Giroux (1992) and Pomeroy (1994). Aikenhead (1996) examines the degree of difficulty that students may have in crossing the border between their life-world subcultures and the subculture of school science. He links culture brokers with some other ideas in culture studies in science education, particularly border crossing (building on the work of Phelan *et al* [1991] and Costa [1995]) and collateral learning (Jegede, 1995). Phelan *et al* (1991) identify four types of border crossings (Fig. 2.2) and Aikenhead combines these with Costa’s (1995) five categories of students to identify the potential for border crossing as well as identifying the role of the teacher in each situation. In Aikenhead (1997) he extends the concept of border crossing to include the perspective of indigenous students (in this case, First Nations students in North America) learning western science through school science.

Aikenhead (2006) points out several facets of how a ‘teacher as culture broker’ should operate, particularly when working with indigenous students, including:

- they acknowledge that a border exists and motivate students to cross it by developing a relationship with them, by understanding the specific history of the students’ culture and by holding high expectations for them
- they employ the language of both the students’ culture and the culture of western science

- they explicitly keep track of which culture comprises the context of the moment and they help students resolve cultural conflicts that may arise
- they reframe the acquisition of relevant western science as an appropriation of western culture for utilitarian purposes rather than as the correct way of knowing about the world
- they make the ontology of the western coloniser explicit in their classrooms thereby providing students more freedom to appropriate parts of western science without embracing western ways of valuing nature, an appropriation Aikenhead calls 'autonomous acculturation'.

It appears that Aikenhead uses a model of culture broker primarily as a change agent, not necessarily as a mediator. However it is difficult when reading Aikenhead's work to determine the characteristics of a culture broker because they are not explicitly stated. For Aikenhead, being a culture broker is another teaching strategy or role, a pragmatic action similar to the approach in Jezewski (1989, 1995).

Aikenhead links border crossing and teachers as culture brokers with Jegede's (1995) ideas about collateral learning (Aikenhead & Jegede, 1999; Jegede & Aikenhead, 1999). He uses Lugones' metaphor (1987) of the needs of travellers between cultures, in distinguishing the potential roles of teachers as culture brokers in the same way as travellers sometimes only need a travel agent but at other times need a travel guide. Aikenhead and Otsuji (2000) see the role of a teacher as being a culture broker for all students although not necessarily for potential scientists, and that the result of cross-cultural science teaching would be to facilitate the students' border crossings (Fig. 2.4).

Figure 2.4. The influence of teacher as culture broker on various student categories (from Aikenhead & Otsuji, 2000)

Border crossing	Student categories	Role of teacher	New border crossing
Smooth	Potential scientists	Coaching apprentices	Smooth
Adventurous	'I want to know' students	Apprenticeship – tour guide culture broker	Managed
Managed	Other smart kids	Travel agent culture broker	Smooth
Hazardous	'I don't know' students	Tour guide culture broker	Managed
Impossible	Outsiders	Tour guide culture broker	Hazardous or managed

Since publication of his early papers (Aikenhead, 1996, 1997) they have been referred to widely in the CSSE literature. Various authors highlight border crossing as a way of promoting cross-cultural science teaching, as well as in Aikenhead's own work in developing *Rekindling traditions* (Aikenhead, 2000, 2001a). Barker and Hawera (2003) report on the development of primary school teaching resources using a strategy similar to that suggested by Aikenhead (1997)²⁶. Two accounts based on the Maori science curriculum (NZ Ministry of Education, 1996), the *Taha Puutaiao* or science content and the *Taha Maori*, a Maori legend, proverb or song, are linked together to explain a western scientific concept. The source of the content in a western curriculum would be seen as the biological or earth sciences. Teachers were able to reflect (over time) on their own ability to move from the world of family and friends to the world of school science, using Costa's (1995) original scale.

Among their conclusions, Barker and Hawera (2003) see that the approach had made the cultural links explicit: "the task encouraged the teachers, personally, to bring their own cultural heritage to the domain of science schooling, and to conceive the latter in cultural terms" (p.12). Aikenhead's early work introduced me to the concept of culture broker which I used in a number of papers (e.g. Michie, 1998, 2004; Michie, Anlezark & Uibo, 1998; Michie & Linkson, 1999, 2000). When Linkson and I collaborated in writing a handbook for science teachers of indigenous students (NTDE, 2000), it was developed around border

²⁶ Aikenhead (1997, p.28) describes a technique of dividing the page or blackboard into two and labelling them 'my idea' on the left and 'subculture of science' on the right.

crossing and the 'teacher as culture broker' idea. Chigeza (2007) describes the need for indigenous students learning western science to make smooth transitions or border crossings into western science.

At the same time as Aikenhead has been using culture brokerage, Hodson (1999, 2001, 2002) uses the idea of 'teacher as anthropologist'. According to Hodson (2001), Medvitz (1997) argues "that science could be learned in much the same way as an anthropologist learns another culture". Hodson recognises that the concepts, procedures and language of science as cultural artefacts are susceptible to systematic study. He expresses some concern that science education should illustrate the interactions of science with other human agencies, its impacts on the physical and social environment, and its use and sometimes misuse for ideological purposes. Gitari (2003) refers to Hodson's work in her examination of the integration of indigenous knowledge and skills into the Kenyan science curriculum. However, 'teacher as anthropologist' is not the same as 'teacher as culture broker'. Aikenhead (1997) suggests that in the same way as cultural anthropologists do not necessarily accept the cultural ways of their subjects, teachers as anthropologists are raiding science for items which may be of interest to their students, a process he terms 'autonomous acculturation'.

More recently, Ryan (2008) has referred to use of cultural mediators in the development of science education curriculum. Seen from her postcolonial perspective, cultural mediators are conciliators bringing together people and their stories, a reference for the necessity to include traditional knowledges rather than their exclusion from neo-colonial curriculum development. Ryan also sees that cultural mediators "understand the need for healing, restoring, and making amends for past neo-colonial activities" (p.20). To do this science educators need to be challenged and open to new ideas and ways of doing and thinking.

2.3.6 Criticism of 'teacher as culture broker'

Criticism of the idea of 'teacher as culture broker' has come from the perspective of postcolonial theory, particularly looking at the power relationships between teacher and student (McKinley, 2001; McKinley & Stewart, 2009). One of their criticisms is that western science teachers only need to learn how to deal with

pedagogical aspects of cross-cultural differences, rather than dealing with the teachers' views of their students' abilities as learners or the validity of their knowledge. A second criticism is that if western teachers can learn to become culture brokers, then seemingly there may be no role for indigenous people in the educational enterprise.

Carter's criticism (2004) that 'teachers as culture brokers' focuses on implementing the western science curriculum is probably well-founded because there are still few instances in the literature of the inclusion of indigenous science as part of school science (e.g. Aikenhead, 2001a; Michie, 2002, 2005); more often than not such inclusion would fit a 'teacher as anthropologist' style as examples fitting a western science profile (Ninnes, 2000).

The notion of teaching western science implies that the teacher is working to a western curriculum, including western knowledge and concepts at the expense of traditional, indigenous or local science. However the role of culture broker has been seen by some authors to enable the retention of local knowledge for indigenous students (e.g. Aikenhead, 2001a; Chigeza, 2007; Linkson, 1998; Michie & Linkson, 1999; NTDE, 2000). The culture broker may also make indigenous knowledge available to western students (e.g. Michie, 2005; Michie, Anlezark & Uibo, 1998).

2.3.7 Concluding remarks

Culture brokers were initially seen in anthropology as change agents working between different strata of a society. Over time, both the role and context have changed and the idea is seen to apply between societies. Paine's (1971) middleman model can be used to demonstrate the evolution of the culture broker idea.

- In it there were two intermediary positions between the patron and the client; these were the cultural broker and the go-between. The cultural broker was the change agent, the go-between a mediator; however modern trends, particularly in education, have seen a melding of the two roles. A teacher can be seen as a culture broker, enacting change (i.e. students'

learning), while at the same time mediating or negotiating with their students about how this is to occur in their classroom.

- Secondly, Paine saw that cultural brokerage was useful in cross-cultural situations; this applies also in education and has been considered particularly in indigenous education. It has been seen to be significant in science education where science can be considered as a different culture to that of the student.
- Thirdly, Paine realised that the broker could in fact be an employee working on behalf of an institution rather than an individual patron; I identify them by using the term ‘institutional patron’. In education the ‘institutional patron’ can be the ministry of education, the local educational authority or the school or some combination of them.

In enacting the role of ‘teacher as culture broker’, a teacher needs to be working at the cognitive and the affective levels, capable of merging what is often portrayed as the dichotomy between subject and student. This role combines the two aspects of being an intermediary, culture broker and mediator.

The ethnohistory literature characterises the culture broker as having an interest in the other culture and openness to others, and teachers can acknowledge this by being inclusive of the other culture in their teaching. A desire for power is identified also in the literature, but is better interpreted for teachers as exercising their power responsibly.

2.4 The nexus between border crossing and culture brokerage

In section 2.2 I looked at the characteristics of westerners who work with indigenous people. Using the border crossing metaphor I suggested they can be categorised into one of four or five groups depending on their experiences. In section 2.3 I describe the idea of culture brokerage and how the literature has described the role of the culture broker in a number of settings. Here firstly I want to make the distinction between border crossing and culture brokerage.

- Border crossing is the ability of people to move metaphorically between cultures. They may identify themselves or be identified as border crossers primarily because of their interest in and understanding of the other culture.

They can be aligned with one of five groups because of the nature of their experiences with the other group, in some cases their initial experiences and for others their long-term experiences.

Using the identity learning model of Geijsel and Meijers (2005) it can be shown that a border crosser enhances their identity learning as a response to exposure to another culture, in both cognitive and affective ways. I suggested in section 2.2 that this might happen as a response to culture shock when first living in an indigenous community. However some people do not respond positively to or do not wish to engage with the other culture, so they do not respond to identity enhancement nor undergo a border crossing. In section 2.2 I distinguished a spectrum of five border crossing positions based on the literature; the first two, border flee-ers and border liners represent failure at border crossing; the next two, border crossers and border workers, represent two different levels of engagement, the former as forays and the latter as longer-term commitment; the fifth position, border mergers, I suggest as a response to cross-culturalists who come to believe that cultural borders do not exist for them.

- Culture brokerage is a strategy which an individual can be used to promote cross-cultural understanding. They adopt the role of culture broker to achieve a particular cross-cultural outcome.

Secondly, I expand on two ideas that were originally addressed in the anthropology literature, the marginal person and the intermediary, which I believe are the basis for the two positions, border crosser and culture broker respectively. In section 2.3.1 above, as I discussed the terminology used in anthropology I suggested that the marginal person and the intermediary describe two different aspects which may coincide in an individual. I suggested there that marginality is an identity issue, of how an individual identifies themselves whereas the intermediary positions are roles which a person can choose to undertake. Also I suggested there that the confusion between the two arises from an assumption made by early researchers that marginal people would be best suited to be intermediaries and thus they conflated the two ideas.

- The border crosser can be traced back to the ‘marginal man’; the marginal person was considered to be of mixed or hybrid heritage whereas a border crosser can be considered to be potentially of hybrid culture.

The term ‘hybrid’ originated as a biological term for the offspring of two animals or plants of different species but it has also been used for offspring of human parents of different races as a synonym for intermarriage or miscegenation (McKinley, 2003; Webber, 2008) and pejorative terms such as ‘half-caste’. Park (1928) uses hybrid in terms of culture where somebody who came under the influence of two differing cultures resolves them as a cultural hybrid. Hybridity has been used more recently by Bhabha (1994) in the context of both race and culture and he uses the term ‘third space’ to describe metaphorically the merging of the two cultures. Webber (2008) uses Bhabha’s terminology when describing the hybrid nature of the dual heritages of many Maori/Pakeha in New Zealand, regarding the third space as liberating and opening new ways of thinking about New Zealand culture. Goodenough (1971) and Wolcott (1991) use ‘propriospect’, a similar idea to hybrid but with limited uptake, used to describe how each individual’s unique version of culture is aggregated through their experiences.

- The culture broker is one of the two main intermediary positions or roles identified in the anthropology literature but the distinction between the two, culture broker and cultural mediator or go-between, is poorly defined and often merges in the one individual.

Culture brokers need to see some value in the other culture which is a characteristic of a border crosser. Szasz (2001) sees that cultural brokers are interested in the other culture and consider it offers something of value, seemingly identifying them as border crossers. She also sees cultural brokers as having a desire for power and there is evidence that cultural brokerage has been used exploitatively (e.g. Dunning, 1959; Meuwese, 2003). The situation would seem to be contradictory and depends on whom the brokerage is done for, the patron, the broker or the client. However there is a perception in education that both aspects of the intermediary position can be involved, with the teacher as culture broker implementing the curriculum and also being a mediator for the needs of their students.

In the next chapter I examine the narrative inquiry methodology as a way of collecting data in this research. The data from interviews with the eight participants were converted into a series of narratives or stories (chapter 4) and examined using some of the ideas considered in this chapter, particularly using the identity learning model of Geijsel and Meijers (2005).

CHAPTER 3: USING NARRATIVE INQUIRY

... the answer to the question, Why narrative? is, Because experience. (Clandinin & Connelly, 2000, p.50)

Life experiences and background are obviously key ingredients of the person that we are, of our sense of self. To the degree that we invest our 'self' in our teaching, experience and background therefore shape our practice. (Goodson, 2008, p.11)

In this thesis narratives of experience are encountered in both the literature review (chapter 2) and the participants' stories (chapter 4) and are used to lead to a better understanding of cross-cultural work.

In carrying out this research I sought to find out why some people seem to be able to work cross-culturally and it seemed natural that I would ask a group of successful practitioners how this happened for them. In this chapter I examine the strengths of qualitative research methodology in this project. In describing the methodology in this thesis, I firstly look at the theoretical aspects (sections 3.1 to 3.4), then how I have engaged with the theory in practice in this research (section 3.5).

In section 3.1 I focus particularly on the richness of description which qualitative research avails me as a researcher. Then in section 3.2 I consider interviewing as a technique for acquiring qualitative data and I discuss the ethical constraints placed on me as a researcher in collecting data. I continue in section 3.3 to look at the use of narrative in postmodern theory which values multiple narratives of human experience. I consider narrative analysis as a methodology, based on people's experiences, alongside other analytical tools which are useful in understanding narratives. I present life histories as a way of focusing on the stream of events from the participants' lives and the use of critical event analysis to examine those events as a means to understand what led the participants to becoming cross-cultural workers. Then in section 3.4 I look at some of the theoretical aspects of both traditional and postmodernist qualitative research.

Finally, in section 3.5 I consider the methodology used in this study, including some of the processes and theories regarding qualitative research, interviewing

and narrative. I consider some of the ethical issues addressed because the participants in this research are identifiable.

3.1 Qualitative research

A comment by Denzin and Lincoln (2000) that qualitative researchers “seek answers to questions that stress *how* social experience is created and given meaning” (p.8, their emphasis) influenced my decision to use a qualitative research methodology to find out why other people seemed to be able to work cross-culturally. Denzin and Lincoln (2000) also portray the qualitative researcher as a *bricoleur* or quilt maker. They describe the qualitative researcher-as-quilter as one who “stitches, edits, and puts slices of reality together” (p.5). This is translated as enabling the researcher to form one perspective from multiple ones.

Polkinghorne (1995) contrasts the approaches in quantitative and qualitative research and suggests that whereas in quantitative research the researcher preselects the categories to be considered, the qualitative researcher begins with a more general topic and discovers the categories by examining the data for common themes and ideas. These are then analysed to identify “the relationships that hold between and among the established categories” (Polkinghorne, 1995, p.10).

Denzin and Lincoln (2000) consider that quantitative and qualitative research differ in five significant ways. Rather than take the positivist approach of quantitative research, qualitative research is in the postpositivist tradition through which reality is only approximated rather than apprehended. Postmodernism, in which the concept of “master narrative” is rejected for “a plurality of voices and narratives” (Giroux, 1992, p.120) particularly by critical postmodernists, is seen by many qualitative researchers as a way of telling stories about society.

Qualitative researchers consider they see the world more-or-less for what it is rather than the quantitative researcher’s abstract world. The outcomes, qualitative researchers believe, are rich, valuable descriptions of the social world.

Furthermore, Johnson and Onwuegbuzie (2004) suggest there are a number of strengths in qualitative research, including:

- The data are based on the participant's own categories of meaning (which the researcher has to elicit).
- Qualitative research is valuable for describing a limited number of cases in depth, provides individual information regarding each case and allows cross-case comparisons and analysis.
- It provides understanding of participants' personal experiences of phenomena, i.e. the insider's viewpoint.
- The researcher can understand how participants can interpret 'constructs', including the terminologies used.
- The researcher is able to respond to changes that occur during the conduct of the study which may shift the focus of the study as a result.

Qualitative data can be collected in short answer format and in numerical format such as a Likert scale but the most characteristic form is in narrative form (Polkinghorne, 1995). Qualitative researchers believe they "can get closer to the actor's perspective through detailed interviewing" (Denzin & Lincoln, 2000, p.10) and interviewing is used frequently for data collection (Fontana & Frey, 2000; Kvale, 1996). It was because I wanted to get close to people's understanding of cross-cultural work through their experiences (Clandinin & Connelly, 2000) that I chose to use interviews as my main form of data collection.

3.2 Interviewing

Interviewing is a form of qualitative data collection which involves asking questions and getting answers, through which people try to understand fellow human beings. Fontana and Frey (2000) suggest that the most common form of interviewing is the individual, face-to-face verbal interchange although not all interviews in "the interview society" are necessarily for research purposes or have similar ethical considerations.

There are several forms an interview can take including structured, semi-structured or unstructured. In the structured interview the interviewer asks each respondent the same series of questions, which the interviewer then records and encodes. Open-ended questions are infrequent, all respondents receive the same

set of questions in the same sequence and the interviewer may not even relate to the topic being investigated. The interviewer is often seen as being ‘neutral’ (Fontana & Frey, 2000). On the other hand, unstructured interviewing, particularly open-ended in-depth or ethnographical interviewing, can provide a greater breadth of data than other types (Fontana & Frey, 2000) and attempts to understand rather than categorise as in structured interviews. Generally in semi-structured interviews the interviewer is not limited to the series of questions but uses them as a series of focus questions.

Kvale (1996) describes interviews as conversations and indicates three types of uses, everyday interactions, professional interchange and philosophical dialogue. Although he suggests that a research interview falls into the category of professional interchange, philosophical dialogues promote conversations and the co-construction of knowledge. Kvale (1996) suggests using a semi-structured interview conducted around guiding questions that focus on particular themes. Guiding questions can be developed as starting points to generate follow-up, probing and interpreting questions (Kvale, 1996; Petrie, 2005). These questions may reflect the themes or sub-plots of the research. However Petrie (2005) considers that the way in which assumptions shape the development of the interview schedule can shift the interview process from an open-ended semi-structured one towards a more structured interview.

‘Yarning’ is a way of data collection which has been used as a way of including and valuing Indigenous Australians in research. It involves sharing of stories, a familiar traditional situation (Dunbar *et al*, 2002; Gilchrist *et al*, 2002; Purcell, 2002). Power (2004) uses yarning as a strategy in investigating the operation of an Indigenous Australian preschool. She adopts yarning as “informal conversational exchange rather than formal interviews” as she finds the formal interview approach “had raised anxiety levels and resistance” (p.41). Yarning is akin to conversation and chat which have been used in research with indigenous people (Bishop, 1996; Haig-Brown, 1992; Te Hennepe, 1993) and is best represented as narrative. Bishop (1996, 1997) uses collaborative research storying in a way that amalgamates the western qualitative methodology of ethnography/narrative with Maori traditions (including storytelling and *whanau*, *hapu* and *iwi*), as a form of

Kaupapa Maori research²⁷. Bishop (1996) points out the importance of the formal interview as conversation, the informal interview as chat and the need for collaboration between researcher and researched in constructing the final story.

3.2.1 Ethical considerations

Traditionally there are three ethical concerns in undertaking interviews in qualitative research: informed consent, right to privacy and protection from harm (Fortuna & Frey, 2005; Kvale, 1996).

Informed consent is informing participants about the purpose of the investigation, its design and the potential risks and benefits from participation. It includes receiving voluntary consent to use material from a participant after they have been informed truthfully regarding the nature of the research. Informed consent can be withdrawn by the participant at any time, a right to which they are informed from the beginning.

The right to privacy or confidentiality is designed to protect the identity of the participant, so that normally they cannot be identified in the research report or ongoing presentations. This may be done by changing names of participants, institutions and locations, or by encoding these data. If they may be identifiable, participants need to agree about the level to which they are identified, in writing (Kvale, 1996).

Protection from harm or beneficence includes preventing any physical, emotional or other kind of harm. Kvale (1996) suggests that the personal nature of the interview may lead some participants to disclose information they may later regret and that researchers need to be sensitive to the depths to which they probe.

Usually a researcher in an institution makes a submission to an ethics committee associated with their institution and in the submission they identify how they intend to address these three concerns.

²⁷ *Kaupapa Maori*, meaning the Maori agenda, articulates the desire for Maori self-determination in a variety of ways (Bishop, 1996; Smith, 1999). It articulates the desire for self-determination in research by indigenous peoples worldwide (e.g. Battiste & Henderson, 2000; Quartermaine, 2003) in preserving their culture – including language, knowledge and worldview.

3.3 Postmodern thought and narratives

Postmodern theory represents one philosophy behind knowledge production resulting from the qualitative interview (Kvale, 1996). As noted earlier (section 2.1.2), postmodernism rejects the notion of a universal truth or ‘master narrative’ and instead promotes a plurality of discourses (Giroux, 1992). This new knowledge can be collected through interviewing as narratives or stories, “with the collective stories contributing to uphold the values of the community” (Kvale, 1996, p.43).

Narrative data in their basic form are described as ‘prosaic discourse’ by Polkinghorne (1995), “text that consists of complete sentences linked in a coherent and integrated statement” (p.6). Narratives can be considered as stories (Clandinin & Connelly, 2000; Connelly & Clandinin, 1990; Polkinghorne, 1995) when the events and actions are organised by a plot. However Polkinghorne (1995) cautions regarding the possibility of misrepresentation in using the ‘story’ terminology as fiction rather than nonfiction. Connelly and Clandinin (1990) discuss the role of narrative inquiry in qualitative research on practicing teachers. They consider that listening to teachers and other learners and their life stories both in and out of the classroom can lead to writing “narratives of what it means to educate and be educated” (p.12). There is a need for collaboration, joining with their participants to produce collaborative stories which merge the experiences of the participants and the researchers.

An important part of this type of research is the inclusion of the participants in constructing the final narrative: “When both researchers and practitioners tell stories of the research relationship, they have the possibility of being stories of empowerment.” (Connelly & Clandinin, 1990, p.4). In storied narratives, the subject matter of the story is human action or human experience which is unique to each human being; storied narrative “preserves the complexity of human action with its interrelationship of temporal sequence, human motivation, chance happenings, and changing interpersonal and environmental contexts” (Polkinghorne, 1995, p.7).

Polkinghorne (1995) suggests that there are two approaches to narrative inquiry, narrative analysis and analysis of narrative. In narrative analysis, the data

elements are configured into a story “that unites and gives meaning to the data as contributors to a goal or purpose” (Polkinghorne, 1995, p.15). Sources for the data can include interviews and the writings of participants, which reveal the uniqueness of the individual case. The outcome is a story which explains how and why an individual acted in a particular way. Polkinghorne refers to analysis of narrative as ‘paradigmatic analysis’ as it relates to the themes or sub-plots guiding the research. Analysis of narratives can start with a series of stories to look for common ideas across them, developing the concepts from the data instead of imposing outside theoretical concepts, and relationships between categories. The outcome is the development of general knowledge about a collection of stories. However, as Polkinghorne (1995) warns, this kind of knowledge “underplays the unique and particular aspects of each story” (p.15).

3.3.1 Life histories and critical events

Teachers’ life history is a genre which explores teachers’ life-worlds in their “political and social contexts and historical patterns and parameters” (Goodson, 2008, p.vii). Life histories are one way of understanding how people see the evolution of their careers, especially in teaching (Goodson, 2001, 2008; Goodson & Sikes, 2001; Middleton, 1993; Sikes *et al*, 1985). Life histories are adapted from life stories, the stories told usually in interviews, through analysis and interpretation by the researcher (Goodson, 2001, 2008). Goodson (2008) considers that listening to the teacher’s voice is of prime concern when teachers talk about their work and that the data they supply should only be dispensed with when it is proven to be irrelevant or redundant. Life histories of teachers are generally portrayed as narratives, often as auto/biographies and stories (e.g. Ashton-Warner, 1963; Harrison, Allan, Phillip & Reid, 2004; McCourt, 2005; Nelson, 1989).

The analysis of life histories (Goodson, 2001, 2008; Goodson & Sikes, 2001; Middleton, 1993; Sikes *et al*, 1985) is primarily at the individual level and incorporates some of the analytical framework of critical event analysis (Sikes *et al*, 1985; Tripp, 1994; Webster & Mertova, 2007). This interpretative technique is used to identify the critical incident or event which projects a person into a different career path from that held formerly. Critical incidents are considered by Webster and Mertova (2007) to be changes arising from conflict between a

person's worldview and a new experience. These incidents are change experiences which can be positive or negative, in the same way in which the culture shock experience can be positive or negative. Woods (1993) considers that critical incidents are "unplanned, unanticipated and uncontrolled" (p.357), seemingly relating to the nature of a teacher's career (Sikes *et al*, 1985). Sikes *et al* (1985) suggest there is a typology of critical incidents which can affect teachers' careers:

- Extrinsic: causes are external to the individual, such as social change or policy innovation.
- Intrinsic: occurring within the natural progression of a career, such as promotions and transfers.
- Personal: projecting an individual into a different career path.

However, Geijsel and Meijers (2005) and Pillsbury and Shields (1999) both consider that critical events, which they term 'boundary experiences' and 'precipitating thoughts or events' respectively, could result in either creating more flexible or more rigid boundaries.

Personal critical events appear to have the potential to bring about changes that relate to teachers' identity and are generally less predictable. There appears to be a link between critical incidents and the concept of identity learning (Geijsel & Meijers, 2005) which I discussed earlier in section 2.3.1 in the context of culture shock. Both critical incident and identity learning are described as conflicts between previously held views and a new experience, in which the incident may have positive or negative outcomes. Accordingly, identity learning can take place as a positive response to a critical incident whereas a negative response can lead to reinforcement of previously held views.

3.4 Verification in qualitative research

Verification or 'confirming the truth' has always been part of qualitative research (Kvale, 1996) and much of the early research on verification was done to appease the perception of quantitative researchers that qualitative research was not as objective as quantitative research. However postmodern theorists reject the idea of a universal truth so that many qualitative researchers (e.g. in Denzin & Lincoln,

2000) have more recently sought to define their own ways of approaching this aspect of their research. The traditional approach involves the concepts of generalisability, reliability and validity (Kvale, 1996).

In a positivist approach, *generalisability* leads to universal laws of human behaviour but in a postmodern approach this is considered unwarranted. However generalisability has the potential to demonstrate, particularly through case studies, what could be, so that the research becomes transformative (Kvale, 1996). The idea of *reliability* in qualitative research is couched in terms of replication (Cohen, Manion & Morrison, 2000) or consistency (Kvale, 1996). Although replication is considered essential in quantitative research and may be possible in qualitative research, it is generally unlikely where the research is focusing on individual's personal experiences.

Validity is more closely associated with knowledge and truth, particularly concerning positivist notions of truth through the quantification of results (Kvale, 1996). This is generally not an option with qualitative research. Kvale suggests that validation is not only a step in itself in undertaking qualitative research but also needs to be incorporated in all stages of the research, "on the quality of craftsmanship during investigation, continually checking, questioning, and theoretically interpreting the findings" (p.241). Triangulation is a technique which has been used to validate traditional or positivist qualitative research. In triangulation the researcher uses data from a variety of sources to validate findings (Richardson, 2000).

However many researchers consider that these are no longer suitable in postpositivist approaches to qualitative research and they have considered a range of alternatives.

3.4.1 Postmodernist alternatives

There are a number of alternative techniques which have been used by postmodernist theorists to make sense of their work while maintaining the plurality of discourses.

Richardson (2000) uses *crystallisation* rather than triangulation as a way of visualising validity in postmodern research; the metaphor refers to the multiple

facets of the crystal as an analytical device. Examining the various stories is similar to looking at the different facets of the crystal, as they tell more about the same idea but from different angles and gives them more dimensions, unlike triangulation which fixes the stories only in same dimensions. A number of stories around the same theme can offer different facets of the theme (or crystal).

Voice refers to how researchers allow their informants to be heard directly, allowing participants to speak for themselves in the texts that the researcher creates (Lincoln & Guba, 2000). Voice also includes that of the researcher, allowing them to be located within the text although realising that the authoritarian nature of the researcher's voice is neither absent nor hidden. In writing a narrative there is a problem of maintaining a balance between the researcher expressing their voice and telling of the participants' storied experiences (Clandinin & Connelly, 2000).

Reflexivity is where a researcher takes on the role of both inquirer and respondent in the process of researching, "the process of reflecting critically on the self as researcher" (Lincoln & Guba, 2000, p.183). Reflexivity affects the choice of research problem and those who are engaged with in the research, as well as the self in the research setting. However solipsism, regarding the self as the object of real knowledge, and narcissism, overstating the value of one's own contribution, need to be avoided in considering both voice and reflexivity (Clandinin & Connelly, 2000; Richardson, 2000).

In describing and interpreting the experience of other people there are two related issues termed 'the crisis of legitimation' and 'the crisis of representation' (Lincoln & Denzin, 2000) and with them the overarching power relationships between researcher and participant. The crisis of legitimation relates to the authority of the text, the claim that "any text makes to being accurate, true, and complete" (Lincoln & Denzin, 2000, p.1051). This means that the text is faithful to the context and individuals it claims to represent, and addresses the interests of those studied as well as the researcher. The crisis of representation asks about those who have been omitted from the research and whether they should be included. Often it may be considered that the researcher has misused their power to silence members of their community. Brenner (2006) considers that "interviewers must

often bridge power differentials between themselves and informants that are based on age, race, social class, language, and gender” (p.368).

3.5 Design for this research

The research undertaken in this thesis revolves around the experiences of a group of eight people whom I considered had worked successfully in cross-cultural settings with indigenous people. The selection of the participants is somewhat eclectic: originally they were to have some cross-cultural experience in science education and research and some of them do have this. Over time and as I read further, I came across names of people who had reflected on their cross-cultural experiences both personally and academically; three participants were selected in this way. There also appeared to be a need for ‘hands-on’ experience in indigenous communities as well as later leadership experience which could be provided by other participants. Several of the participants had worked in indigenous communities early in their careers and three had subsequently worked in them at a later stage as principals. Some of the participants fit more than one criterion. There was also a practical aspect that they needed to be accessible to be interviewed. Details regarding the inclusion of each participant are given below (section 4.2).

I anticipated that the participants would relate their stories as ‘rich text’ and this seemed to imply that a qualitative methodology would be the most effective way of collecting and analysing the data. The richness of human experience (Clandinin & Connelly, 2000) can be retained through qualitative research involving interviewing and the production of narratives.

Throughout this thesis I refer to the group of eight people as participants rather than interviewees, informants or other terminologies. This acknowledges their roles in actively engaging with the researcher in the meaning-making process of the research (Hampton, 1995; Stonebanks, 2008), their collaboration with the researcher (Bishop, 1996), their involvement in conversations (Bishop, 1996) or yarning (Power, 2004) with the researcher. This methodology is consistent with methodologies considered appropriate for research with indigenous peoples and I expect that this approach will facilitate access to the research by indigenous peoples.

3.5.1 Data collection through interviews

The data collection for this research was undertaken primarily through individual interviews with each of eight participants by the researcher and was augmented by referring to the participants' writings. The interviews were based around a series of semi-structured questions which are reproduced in appendix 1. The questions were prepared as a result of my own experience and reading the literature. They were prepared primarily to consider the participants' understanding of culture brokerage: how they came to be cross-cultural workers, what did they do and how did it influence their work. The questions were originally devised to be submitted to the ethics committee in 2003 and were basically left unchanged during the interview stage.

Prior to the interview each participant was sent a copy of the Participant consent documentation (Appendix 1). This 4-page document included a letter of introduction, information about the project, a list of questions which could be asked, and a copy of the participant consent form. Generally these were e-mailed to the participants beforehand; in one case they were posted.

Each of the participants was engaged in an interview of about one hour's duration. The interviews were recorded on audiotape, transcribed by the researcher and returned to the participant by e-mail shortly after the interview for comment. The version returned by each participant is the version referred to as excerpts in the data chapters.

The questions used in the interviews relate to the three main themes or sub-plots to be researched and around which the data chapters are organised:

- Childhood and early career experiences relating to the initial border crossing (chapter 5)
- Experiences as cross-cultural workers, particularly their understanding of the role of culture broker (chapter 6)
- Advice regarding teachers in cross-cultural settings (chapter 7).

The ethics committee accepted that in this thesis the participants would be identified, particularly as I wanted to be able to use their research literature as a

secondary source. This was detailed in the information sent to each participant as part of the informed consent procedure. A copy of the research consent form is provided in appendix 1. I addressed the three concerns regarding informed consent identified by Fortuna and Frey (2005) in the following ways:

1. Each of the participants acknowledged informed consent by signing the research consent form which they received with a covering letter prior to the start of the interview.
2. They were aware when signing the research consent form that they were signing away their right to privacy, however in doing so it was acknowledged that they could withdraw from the research at any time.
3. To protect them from harm, the research consent is assumed to extend only to the production of this thesis. They will not appear in any ongoing publications by the author without their further consent and researchers using the thesis as a secondary source have been asked to refrain from identifying the participants (see Ethical considerations and research consent, p. iv).

The proposal was submitted to the ethics committee of the School of Education of the University of Waikato, which approved the proposal during 2003.

3.5.2 Narrative inquiry

In chapter 4 there are eight stories of cross-cultural experience which describe the unique experiences of each of the participants. The stories have been developed from the interviews with the participants. The structure of the interviews provides the time range and criteria around which the plot is developed and clarifies the meaning events have as contributors to the story (Polkinghorne, 1995). These were synthesised into the three main ideas or sub-plots which are examined in the data chapters (chapters 5-7). However it should be noted that these are not the only stories to be considered in this thesis. As well, there are the stories told by numerous others which have informed some of the literature examined in chapter 2, particularly section 2.3, about their experiences working cross-culturally.

Both the narrative analysis and the analysis of narrative approaches (Polkinghorne, 1995) are used in the treatment of the data in this thesis. Narrative analysis led to the creation of the stories for each participant. In part, some of the data consists of a life history where the participant discusses their childhood experiences as well as their early career experiences with indigenous people. The participants' voices are heard particularly through the extensive interview extracts used. However, the stories have been subsequently edited to cameos – sketches or portraits – of the participants for inclusion in the thesis (chapter 4), in particular relocating much of the interview and literature data which gave life to the stories and reassigning it to the data chapters. This was because it was considered to be of more value in the subsequent paradigmatic analysis of narratives. The narrative story for Glen Aikenhead is included as appendix 2 to complement the cameo.

In the analysis of the narratives, common concepts are developed from across the participants' data derived from the stories are compared with each other and other research literature. The participants' responses are within the context of their experience and they “describe when events occurred and the effect the events had on subsequent happenings” (Polkinghorne, 1995, p.12).

In this thesis, life histories of the participants are incorporated into the first half of chapter 5 and the analyses can be found there. The individual experiences of the participants are then subjected to paradigmatic analysis (Polkinghorne, 1995) consistent with notions of border crossing in the remainder of the chapter. The analysis in chapters 6 and 7 is more in keeping with analysis of narratives (Polkinghorne, 1995) although the participants often refer to events within the context of their life histories.

I have used the idea of critical incidents in analysing the participants' early careers (chapter 5), making some use the typology of critical incidents of Sikes *et al* (1985; see section 3.3.1 above). However I found the distinction between ‘event’ and ‘incident’ not to be of particular value. The participants identified defining moments in their careers, many of which are unplanned – ‘happenstance’ and ‘epiphany’ were expressions used by some of the participants – but for some, the defining moments take place over extended periods and are more subtle than to be described as an incident or an event.

3.5.3 Verification

I want to address some possible issues about the way in which semi-structured interviews were carried out, and in some ways this can also be seen as addressing issues such as validity in considering the responses. I positioned myself as researcher in this area as a person of some experience within the field and I was able to talk with the participants as an insider and as an equal. I have also worked in an indigenous community and I had a personal involvement in wanting to understand how others had resolved a situation I had found problematic.

As noted in the previous section, the voice of the participants was given high priority by the extensive use of quotations from the interviews throughout the narratives and thus into the data chapters. This was augmented by the use of quotations from the participants' literature, not simply as an attempt to triangulate or validate the interview data, but to further illustrate the 'facet' (Richardson, 2000) or idea under discussion. Similarly, other authors are referred to or quoted from to enhance the ideas being explored.

In this research I have attempted to minimise any issues relating to abuses of power either by the researcher or the participants (Brenner, 2006). In general the conduct of the interviews was considered to be unproblematic although the participants often talked beyond the brokerage metaphor. The difference in age between the participants and researcher was not significant and our experiences are similar. Several of the participants I had known for some time and had worked with at some stage. I had had the opportunity of talking with the other participants before doing the interview itself; in only one case I interviewed a person whom I had not met previously and in that case we had a chance to talk over lunch before doing the interview. As noted above, I had worked with a number of the participants; in none of these cases was I in a direct line of management above any of them and in fact I had been in a subservient position to two of them. I had also retired and only one of the participants still worked for the same authority. Some of the participants were keen to participate as they considered the research may be of value in their own work.

In terms of representation, there are two main groups of people who are not represented in the data but who are significant in the story being developed in the

thesis. The first are members of the groups of people who go into indigenous communities but who are not identified as cross-culturalists, and the second are the indigenous people.

Firstly, in section 2.3.3 above I identified four groups of people whom I considered, after examining the literature, could be found working in indigenous communities. I identified these as cross-culturalists (as positive workers) and expatriates, short-term stayers and nonconformists (as negative positions). Of the latter three, the expatriates are seen from a particularly negative perspective through the literature which is generally written by another party, not by the members of the group; what is heard from them is mostly anecdotal and unlikely to be written, although there are a few comments recorded in Jordan (2005). As I was interested more in people who had positive experiences and who were likely to be border crossers, I concentrated my interviews on them.

Indigenous people were not included in the research as it focuses on westerners working across cultures. There does not appear to have been any attempt elsewhere to research the opinions of indigenous people on this topic.

Occasionally there are comments made by indigenous people elsewhere in the literature (e.g. Bishop & Berryman, 2006; Hickling-Hudson & Ahlquist, 2004) and in reports (e.g. Collins & Lea, 1999) which I have included in the thesis.

I also did not include younger workers and those of another non-European ethnicity as participants. I considered that the younger workers would lack the range of experiences of an older person but their voices can be heard in some reference material used (e.g. Annabella, 2007-08; Clark, 2007; Clarke, 2000; Jordan, 2005; Shaw, 2009). There is a lack of similar material from other ethnic groups and although there are many researchers who have written from this perspective on cross-cultural science education, they did not fit the criteria to which I finally found myself working.

3.5.4 Data presentation

The interviews have been used as a primary source of data presented in a series of narratives which have been edited subsequently to cameos of each of the participants. The cameos are presented in chapter 4. The data extracts from the

narratives have been incorporated into the next three chapters where they are presented within the context of the three themes or sub-plots.

- Chapter 5: Early cross-cultural influences: Border crossing and beyond
- Chapter 6: Understanding culture brokerage
- Chapter 7: Teachers in cross-cultural settings

CHAPTER 4: NARRATIVES AS CAMEOS

There is no truth, only stories. (Zuni proverb²⁸)

In section 4.1 I examine the structure of the narratives and subsequently of the cameos which have been used in this thesis. Then in section 4.2 I give a short introduction to each of the eight participants, examining some of relevant experiences I anticipated they would bring to the study. Finally, I present the eight cameos (section 4.3).

4.1 Structure of the narratives and cameos

The structure of the original narratives and the cameos incorporates the themes or sub-plots of the three data chapters (chapters 5 to 7). The subheadings listed here are nominal and not necessarily used throughout the cameos. An introduction to each participant was originally part of the narrative but they have been collected together and can now be found in section 4.2. Each introduction includes a biographical note and the reason why the person was included in the study.

Early influences. Early influences include childhood and early professional experiences. Analysis techniques utilised here include life history and critical event analyses. The early influences examined in particular are:

- Childhood experiences include the influences of family and experiences with indigenous people before and during the years of schooling.
- Early professional experiences can include preservice training and professional experiences which relate particularly to working with indigenous students

The border crossing events for each participant were identified and each participant's status across a spectrum of cross-cultural positions may be established.

Culture brokerage. In this section there is a discussion of the participant's understanding of the role of the culture broker within their cross-cultural

²⁸ The Zuni are a Native American tribe located in the south-west of the USA.

experiences. It includes comments that they have made regarding the nature of the power relationships they have experienced in their cross-cultural work. Analysis of these experiences also includes life history and critical event analyses.

- *Understanding of role of culture broker* deals with the participant's understanding of the role of a culture broker.
- *Cross-cultural experiences* relates to actual experiences which the participant suggested in the interview relate to them taking on a specific role as a culture broker or cross-cultural worker. This may articulate with their early professional experiences.
- *Power relationships* deals with the participant's understanding of the nature of their privileged position.

Cross-cultural teaching. This section is developed around the participant's particular experiences and their comments during the interview are related to specific themes relating to their expertise.

- Teacher awareness and professional development requirements
- Teachers and power
- Teaching western science

Synthesis. A final comment at the end of each narrative.

4.2 The participants

The participants in this research are all westerners who come from three of the settler countries – Australia, New Zealand and Canada. Several are science educators or have been at some stage of their careers. All of them have had experience teaching in schools and they have done postgraduate studies. Three have been principals in indigenous community schools. Some of them have taught and researched at universities. Six are male and two are female.

The following are short biographies of each of the participants as well as the reasons why I have included them in the research. The abbreviations are used to identify their quotations used in chapters 5 to 7.

GLEN AIKENHEAD (GA)

Glen Aikenhead has been a professor in education at the University of Saskatchewan in Canada since 1971 and is now an emeritus professor there. Glen's papers dating back to 1996 have been very influential in the area of culture studies in science education. Aikenhead (1996) is the first of the papers on border crossing and science teachers as culture brokers and it has stimulated much of the work done in this current research.

I chose to interview Glen for a number of reasons. He has been the primary researcher and writer about science teachers as culture brokers. He extended this work to deal with indigenous students, including implementation of a project called *Rekindling traditions*. Alongside these activities, he has continued to research the nexus between western and indigenous science and science education. I interviewed Glen in Vancouver in April 2004.

MILES BARKER (MB)

Miles Barker is a Pakeha New Zealander who has been a teacher, science educator and researcher for over forty years in Aotearoa New Zealand, for the last fifteen of them at the School of Education of the University of Waikato. In April 2005 he retired from the University although he still holds an honorary lectureship within the School of Education.

Prior to meeting Miles I had been given a copy of his paper outlining his work with the *Rumaki* class at the School of Education (Barker & Hawera, 2003), where he outlines the culture brokerage in the course as well as the collaborative nature of his work with a Maori colleague. I interviewed Miles at the university in March 2005 just after he retired.

CELIA HAIG-BROWN (CHB)

Celia Haig-Brown is now a professor in the Faculty of Education at the University of York in Toronto, Canada, after spending much of her earlier days living, working and studying in British Columbia. She has researched and written extensively about her relations with the First Nations peoples of Canada over the past twenty years, as well as in women's studies. Her papers on choosing border

work (Haig-Brown, 1990, 1992) influenced my thinking about working cross-culturally, and a subsequent paper with Jo-Ann Archibald also influenced my thinking (Haig-Brown & Archibald, 1996). I found her statement,

As a nonnative person, I *chose* to work in this world of borders. Now I find my time in the border world has transformed all my work in education.” (Celia Haig-Brown, in Haig-Brown & Archibald, 1996),

a very empowering one for somebody working in indigenous education.

I had been reading Celia’s research literature and considered that she was a person that I should talk to as part of my project, but how to get to Toronto? In a case of true serendipity, it turned out that she was on study leave at the University of Waikato at the same time as I was there and I interviewed her in March 2005.

JAMES RITCHIE (JR)

James Ritchie is well known in Aotearoa New Zealand as a commentator on Maori affairs and development. He has had a long association with the University of Waikato where he is an emeritus professor, having been the foundation professor of psychology and deputy director of the Centre for Maori Studies and Research. He is also known for his research on child-rearing in New Zealand. In 1992 his book, *Becoming bicultural*, was published, in which he uses his own experiences with Maori over 40 years to assist Pakeha to understand the implications of Maori life and development.

I read *Becoming bicultural* and became aware of the nature of Jim’s work as a cross-cultural worker. Although he had not worked in the science or education areas, I felt that a person of his background and commitment should not be omitted. I interviewed him at the University of Waikato in July 2005. (James Ritchie passed away in September 2009.)

MICHAEL CHRISTIE (MC)

Originally from New Zealand, Michael Christie trained as a teacher at Hamilton Teachers College and taught in Frankton (Hamilton, NZ) for a year before going to Milngimbi, an Aboriginal community on the north coast of the Northern Territory of Australia in 1972. Having worked there and at Yirrkala as a teacher-

linguist, Michael is now a professor in the School of Education at Charles Darwin University, Darwin.

Michael is known in science education circles for his paper, “Aboriginal science for the ecologically sustainable future” (Christie, 1991). His research interests revolve around Indigenous knowledge systems (particularly of the Yolngu of northeast Arnhemland) and he is presently looking at digital methodologies for accessing and storing traditional knowledge.

I heard Michael give this paper at CONASTA²⁹ in 1990 but it was several years later when I was involved in an environmental education project that I made contact with him. In 1999 we were also involved in a local mini-conference associated with Glen Aikenhead’s online workshop on “Culture studies in science education: Students’ indigenous cultures versus the culture of science”. Since then we have discussed aspects of my research on several occasions and I have become more aware of his range of interests, most particularly his work with indigenous people. I interviewed him in Darwin in February 2005.

MARK LINKSON (ML)

After training to be a teacher as a mature-aged student in South Australia Mark Linkson moved to the NT in 1989 to work in the Indigenous community of Wadeye as a primary teacher. He then worked as an adult educator in the RATE³⁰ program for Batchelor College³¹ for a number of years before taking up an office-based position with the NT Department of Education in Darwin, as the writer for the ICCAS and IESIP³² science materials. In 2000, he moved to the Torres Strait, where he worked in three island schools, part of the time as a principal. In mid-2002 he moved to Cairns where he was developing materials for and working with RATEP teacher trainees with TAFE Queensland. Since then he has worked

²⁹ Conference of the Australian Science Teachers Association

³⁰ RATE or RATEP – Remote Aboriginal Teacher Education Program

³¹ Batchelor College, now the Batchelor Institute of Indigenous Tertiary Education, is an Australian tertiary institution for Indigenous students in both higher and vocational education, including preservice teacher training. It is located about 90 km south of Darwin.

³² ICCAS and IESIP: Implementing the Common Curriculum in Aboriginal Schools and Indigenous Education Schools Implementation Program were two consecutive curriculum resource development programs operated by the NT Department of Education in the 1990s.

in schools in Ethiopia and the United Arab Emirates, and has returned to his position in Cairns.

I first met Mark when he applied for the position writing the ICCAS primary science materials and I have worked with him on a number of projects since then. I chose to interview Mark because he has a range of cross-cultural experiences and some of his work has been within the science education field. I interviewed him during a visit he made to Darwin in September 2004.

DAVID PARISH (DP)

David Parish trained as a teacher in Armidale, NSW and taught for several years in NSW, then in Queensland, before moving to the Northern Territory. In the NT he taught at Milingimbi before coming to Darwin, where he worked at Kormilda College, becoming principal there in 1981. During 1987 he took up an office-based position with the NT Department of Education as an assistant superintendent where, amongst other duties, he continued working with teachers located in community schools. In 1998 he retired from the Education Department and set up business as a consultant, occasionally working on indigenous projects. He also helped develop some induction materials for teachers moving to Aboriginal community schools, for the Top End Group School. David returned to teaching, as the principal of the Lajamanu School from 2001 until retiring again in the middle of 2004.

I have known David for most of the time I have lived in Darwin, originally meeting him when he was the assistant principal at Kormilda College. I also worked with him for some years from mid-1987, when he was assistant superintendent. Part of the reason for speaking with him was because of his experiences which run through several phases of aboriginal education policy, from assimilation, bilingual education, and self-determination until the present time. I interviewed him in Darwin in November 2004.

LEONIE JONES (LJ)

Leonie Jones trained in general primary teaching at the Canberra College of Advanced Education (now the University of Canberra), and included units on ESL and aboriginal education. She taught in primary schools in the Australian Capital

Territory (ACT) for 2 years before coming to the NT in 1977. She lived with her family and worked in Maningrida, a coastal community east of Darwin, before coming to Darwin in 1986 and she has had a number of teaching and office-based positions since then. She has taught in several Darwin primary schools as well as filling office-based positions involved with aboriginal education.

She was appointed to her present position as Top End Group School principal in 2001, and in 2002 she had been responsible for the school where I had been the teaching principal. In this role she dealt with many younger teachers as well as more experienced ones. She also has a background in cross-cultural professional development. I interviewed her in Darwin in February 2005.

4.3 The cameos

GLEN AIKENHEAD: Walking the walk³³

Early influences

In Glen's career there is no notion of a critical incident which precipitated a border crossing, it would seem from his family history that he was predisposed to become a border worker and took on this work when the opportunity came along. For Glen, the diversity caused by the large-scale, post-World War 2 immigration from Europe was an influence while growing up in early multicultural Canada, both in his family and school life. There was also evidence of his grandfather's interaction with First Nations people that had been passed down as part of his family's history.

Starting teaching

With his appointment to the University of Saskatchewan in 1971, Glen became involved in its teaching programs in education. Prior to this Glen had taught in schools in Canada and overseas. In the mid-1980s Glen was asked to teach a science methods course to First Nations students in a centre north of Saskatoon. He took on this new teaching assignment quite willing to make changes to his mainstream courses but found that he did not need to make any substantial changes because of the influence from a period when there was emphasis on gender studies in science education research.

At that time there was not much written about the interaction between indigenous people and western science, although, in retrospect, Glen realised that he had read Maddock's paper on science as a cultural enterprise (Maddock, 1981).

He continued to teach this course for five or six years, making improvements both to it and the mainstream course. He considered that there were benefits for all students through this approach, similar to the anecdotal reports from the gender in science research that changes to be inclusive of girls also often benefited boys.

³³ A copy of the complete narrative for Glen Aikenhead can be found as appendix 2.

Culture brokerage and culture brokers

Glen does not particularly identify himself as a border worker, more as a culture broker, and he uses culture brokerage strategies as part of his work. However it is hard to imagine that he would consistently engage in this kind of research if he was not a border worker in the sense I described in section 2.3.7.

Understanding culture brokerage

As the person who has written much about culture brokers in science education, Glen had a clear idea of what a culture broker was, and described it in terms of two different cultures. He perceived the role as an insider role, particularly from the perception of a western teacher teaching western science to non-science and First Nations students.

The idea of assisting people in some way came through strongly in the interviews and Glen's response is probably the most direct and focuses more on a mediating role. During the interview Glen gave two instances where he considered he had acted as a culture broker in helping to establish good communications between people.

Culture brokerage in science education

Glen sees culture brokerage as a pragmatic strategy, one suited to science teachers, but there is no expectation that they will be border crossers. His expectation is that the teachers realise that some of their students need to cross borders and the teachers will assist them. The model of a teacher as culture broker that Glen has chosen to use is one he considered to be useful for science teachers and the way they thought.

Although he spoke of the role of a culture broker relative to the border crossing in this way, Glen did not particularly suggest how someone became a culture broker. In Aikenhead (2006) he suggests that a humanist teacher would consider that science was another culture and they have undergone their own border crossing.

His work with indigenous students, for instance in *Rekindling traditions*, is to assist them to cross borders into western science. Aikenhead (1997) suggests that

knowledge be treated by dividing it into western scientific and indigenous knowledge and suggests a strategy in which the two sets of knowledge are compartmentalised.

Glen also considered the input of indigenous academics when deciding how to approach his materials for Aboriginal students. The influence of the indigenous authors was particularly relevant in developing the *Rekindling traditions* project. Glen has also undertaken research projects with a number of non-western educators as part of his ongoing research in CSSE.

Power relations in culture brokering

Concerning the issue of power in culture brokering, Glen acknowledged that he was in a privileged position as a cross-cultural worker. He understood that many westerners would exploit the inequality of the power relationship as they had done historically although he suggested that in some cases this would be done unconsciously. He pointed out the possibility of people wishing to accomplish something without losing control.

Cross-cultural teaching

Teachers as culture brokers teaching science

In Aikenhead (1996, 1997), Glen suggests that students, including indigenous students, may need assistance to cross the borders between their cultural knowledge and school science. One way to facilitate this is for science teachers to take on the role of a culture broker. In the interview, he considered that being a culture broker was an appropriate role for a science teacher because science teachers would see that there were two cultures in more of a mechanistic way (from a modernist perspective).

Glen felt that it was important for a culture broker to be up-front with their students. He saw the role of the culture broker as facilitating border crossings for students. He had previously seen border crossing and the role for a culture broker as being appropriate for movement between different types of subcultures (Jegade & Aikenhead, 1999; Aikenhead & Otsuji, 2000).

Glen considered that often border crossing was something which people did without having to think about it first. However this is mostly the case when such crossings are smooth but when they are not smooth then there is a need for assistance or maybe the crossing is not attempted. In reflecting on *Rekindling traditions*, Glen considered that the border crossings had been made explicit but not obviously so. Partly this was because the teachers in the development team did not see things in the same way as Glen but they already had strategies which they used to communicate with their students. He did not go into any detail as to what these other strategies might be; some may have been equivalent to ‘teacher as culture broker’, or ‘teacher as anthropologist’ perhaps.

A dilemma of identity: When might an insider be considered an outsider?

In the interview Glen talked about two Canadian First Nations people who took part in his *Rekindling Traditions* project and the troubles they had with identity. Indigenous researchers have also reported themselves being treated as outsiders when researching in indigenous situations (Brayboy & Deyhle, 2000; Haig-Brown & Archibald, 1996).

MILES BARKER: *Mauria ko oku painga, waiho ko oku wheruu*³⁴

Early experiences

During his early childhood Miles lived in the King Country of New Zealand where many Maori also lived, but does not remember any interaction with them from that time, a situation noted by other Pakeha of a similar age (e.g. Middleton, 1992, 1993). Miles' family moved to Hamilton and he entered high school there in 1957 where he also noted little interaction.

From high school in Hamilton, Miles went to university in Auckland where he studied science and education. One of the most significant events was meeting his future wife Elizabeth whose family had had extensive experiences with Maori and had adopted Maori children. The association with his wife's family seems to have had a considerable influence regarding his understanding of Maori culture. While at university he also undertook an introductory course in Maori language (*te reo Maori*), and through these experiences became a border crosser.

Starting teaching

Miles' career took him into science education and like most science education researchers he spent his apprenticeship in mainstream high schools but at this stage in his life there was little indigenous influence.

The next phase of his career would take him into tertiary education. Having completed his doctorate at the University of Waikato in 1986, he went to the then Hamilton Teachers College where he was to lecture in science education. This brought with it an opportunity to work with a Maori colleague in the indigenous *Rumaki* program. In participating in this domain he found he had to take on the role of a culture broker.

Moving to the teachers college was in itself a critical incident but taking on the *Rumaki* class is also significant. While the majority of Miles' teaching and research remained based around western science education, what he experienced

³⁴ A *whakatouki* (Maori proverb) meaning "Take what is good in this and leave the rest behind", quoted in Barker & Hawera, 2003.

in the *Rumaki* program did have a long-term influence on how Miles saw his other teaching.

Understanding about culture brokers

Miles considered that when he worked as a culture broker he was between the two groups as some kind of middleman but working as an insider for western science. Their role is “to facilitate a meeting of minds”, so the broker is not advocating assimilation of the two cultures.

He also suggested that being a culture broker was a part-time affair, something you only did when it was expedient or necessary in the line of work relations. Culture brokerage is an occasional event (a “foray”).

Miles also suggested that the role of culture broker could be one that promotes sustainability of cultural components: Through these comments Miles is emphasising the value of the other culture which I suggest is the quintessential characteristic of a border crosser.

Individual and intrinsic qualities of culture brokers

Miles had been teaching the *Rumaki* class for several years and understood that there were different ways of seeing the world represented in his classroom. Although it was not part of his classroom practice, he began to explore the various epistemologies.

Although statements of this type can be interpreted as relativism, an acceptance that the two knowledge systems are equally valid (a situation criticised by Matthews, 1994), for Miles this is not the case. It is clear that Miles does not see himself as a relativist but nor does he see himself as an apologist for western science.

Criticism of culture brokering

Miles saw the culture brokering role as something personal rather than a public one, as well as only being done when required. This statement is consistent with an earlier one he made about making forays across the cultural interface. It also

points out an inconsistency with the terminology relating to the term 'broker' where it is seems to be considered by some as a full-time occupation.

Teachers as culture brokers

From the interview it is apparent that Miles sees himself as an occasional culture broker, even if it is with some degree of humility. Although Aikenhead's notion was originally in terms of western teachers working as culture brokers when teaching about western science to indigenous students, Miles' Maori student teachers are in a similar predicament when they talk about western science with indigenous students.

We discussed the possibility of including Maori knowledge in the western curriculum, seeing he was advocating two ways of learning through the *Rumaki* group. He suggested that it should be included to be studied as part of the Nature of science, rather than just as snippets in the curriculum.

CELIA HAIG-BROWN: “I *choose* to work in this world of borders”³⁵

Early influences

Although Celia had some experiences being with indigenous children in her early life, the influence of her parents, particularly her father, seems to have been foremost on her mind. The basis of this attitude seems to be social justice. She also has family ties with indigenous people, as her brother has been in relationships with First Nations women, so she has indigenous nieces and nephews.

Celia was also the only respondent who acknowledged attending school with indigenous students.

Mainstream schools and university

Celia’s first teaching placement was in mainstream schools with significant numbers of indigenous students. She commented that by showing care to the indigenous students, they responded positively.

The next phase of her career would take her into tertiary education. After teaching in Kamloops for about five years, Celia was persuaded to take a co-ordinating position in the NITEP in Kamloops. This change in Celia’s career can be seen as another critical incident (Sikes *et al*, 1985; Tripp, 1994) and it led also to her undertaking graduate studies and research in indigenous education.

Culture brokerage

Celia explained some issues she had with the idea of culture brokerage but she was strong with the idea that she was a border worker. She considered that she worked in border worlds but not as a border crosser.

She discussed her positioning as undertaking what she calls “border work”, working at the border between First Nations peoples and the Canadian settler society. For her this had been a matter of her choice. Celia explained this meant that other western border workers choose, like her, to live in border worlds. Celia could see that many, perhaps most, westerners avoided the border world. The

³⁵ Haig-Brown & Archibald (1996), p.250; Celia’s emphasis

range of behaviours westerners display towards indigenous peoples could help to explain their positioning relative to the interface.

Celia was not comfortable with the idea of culture broker. She commented on negative analogies with stock broker. In the interview she explained some of her reasoning for considering herself to be a border worker rather than a border crosser. She also considered herself to be a border worker rather than a culture broker but she did identify occasions where she had acted or could act as a culture broker. This was particularly when teaching western teachers about their relations with First Nations people. Her understanding of the role of culture broker was to help inform westerners about indigenous ways.

Celia demonstrates the flexibility of the border worker position. As a western culture worker she would normally be promoting the western world view (an insider), whereas as a border worker she can work both ways and present the indigenous view as an outsider. Being able to work both ways seems to mark a transition from border crosser to border worker.

Celia's work with indigenous people

Early in her career working with First Nations people, Celia felt there were areas of their politics she should not be involved with. However to work effectively as a border worker, she needed to have an understanding of the politics, while not necessarily playing a part in or interfering with them. She realised that there were limitations on how much she was able to do as part of her collaboration with indigenous people. She considered it is important to be invited to take part when working with indigenous people or at least to seek their approval. This is supported by other narratives.

In Haig-Brown and Archibald (1996) the two authors reflect on their collaboration in research of First Nations people to understand each other's perspective and the role that power and respect between the two authors plays in their collaboration.

Celia's work as a border worker is based on assisting as an ally and working collaboratively with First Nations people. She advocates the need for understanding cultural protocols and differences. The emphasis is not on

identifying the protocols *per se* but implementing them in her work and being aware of cultural differences.

JAMES RITCHIE: On becoming bicultural

Early days

James Ritchie grew up in pre-World War 2 Wellington, New Zealand, the son of Australian migrants. He suggested that at that time there was little evidence of Maori in the urban region. His decision to become involved with Maori was one he made in his late teens. He started to socialise with Maori while at university and was involved with them through Ngati Poneke, the Maori community centre in Wellington. The activities he describes during that time, such as involvement with the youth club and the dance troop and meeting highly-placed Maori leaders, suggest that it was when James made his original border crossing.

Early professional experiences

James suggests that he started teaching as a way of working with indigenous people. In 1950 he went to teach with the Maori School Service, in the village of Rangitukia on the East Coast of the North Island. Warned by his white headmaster not to get involved with the indigenous people, he did exactly the contrary. This was a period of his life where he was a learner and Maori were his teachers. Three Maori men and a woman took on the roles as his mentors into Maori language and culture. He considered it a highly significant period of his life with long-term implications. Except for a short period in the 1960s he has maintained the involvement.

James started his research at university because he was interested in cross-cultural psychology and he described himself as an ethnopsychologist. Much of his work has been with the Maori people, particularly Tainui, since his appointment to the University of Waikato in 1965. At the University he was to be a broker for the Maori leadership and after seven years the university set up the Centre for Maori Studies. James was responsible for the first appointments to this centre.

Culture brokerage

James took the perspective of positioning the broker in a middleman position between cultures, although he knew of culture brokerage from an entrepreneurial perspective. He saw brokering as interpreting one culture to the other as a two-

way process. Sometimes he worked with the indigenous people in developing skills.

James admitted that there were times when he made use of his Maori knowledge in trying to assist them, often in formal settings such as the Waitangi Tribunal. He also understood that there were limitations to his knowledge about Maori, as well as his potential to represent them. He indicated that there were other times when he had been told that he was not to speak. At other times he saw himself negotiating with westerners on behalf of Maori people, particularly in his work at the University of Waikato to establish the Centre for Maori Studies and Research.

Although he had used the term 'culture broker', near the end of the interview James started to query what his role had been. He considered it was necessary to reflect and assess what it was the cross-cultural worker was doing.

Being bicultural

James sees himself as being bicultural, an issue of identity, and here I use his experience to theorise how border crossing and biculturalism relate to each other.

James made the point a couple of times that in his role as a culture broker he saw the need to be strong in his own western culture as well. He was not giving up his own cultural identity as a Pakeha. He was not becoming Maori or a Pakeha Maori but he was becoming bicultural and he identified strongly as a westerner understanding the basis of his culture. He was emphatic that he remains a westerner working with and for Maori at their behest. According to James, for a person to be an effective culture broker they need to be trusted particularly by their clients.

James spoke of some of the projects he had been involved in with Maori, particularly his early work the Murupara community in his doctoral research and later with Tainui which dated more or less from his appointment to the University of Waikato.

As well, James has an understanding of *te reo Maori*, the Maori language. The issue of language fluency has not been an issue in the discussion of culture

brokering. Access to the language promotes greater understanding regarding the knowledge aspects; James became more reflective of his position.

James also understood the privileged position he was in and that he needed to be humble when working particularly in cross-cultural settings.

On teaching and science

James's comments on teaching science reflected some of the ideas regarding *Science for all* and tensions currently being experienced in science education even though he is not a science educator. He also realised that there was a need to produce career scientists and that there was need for another approach to achieve that. He realised that this idea could be seen as supporting elitism but he considered that there were different forms of elitism and dissociated himself from power elites. James also implicated power as part of the teaching process.

MICHAEL CHRISTIE: Fortuitous happenstance

Early times

Growing up in New Zealand, Michael was brought up with Maori people in close proximity. He went to Hamilton Teachers College and taught for one year at Frankton, before going to teach at Milingimbi (NT). He moved to the tropics for what might be considered 'mercenary' reasons: for the warm climate and better pay than he was getting in New Zealand. A chance experience, "a happenstance", where he contracted hepatitis and was confined to bed gave him an opportunity to learn the local language.

The next year Michael was appointed teacher-linguist when the school adopted a bilingual program. This was part of the Whitlam government policy changes towards self-determination. Being a teacher-linguist put Michael in a position where he could interact with members of the community more and often in a more informal way than if he had remained a classroom teacher. Learning the language is obviously an 'in' to community life, but a more developed knowledge of the language gives more access to an understanding of the culture and knowledge. Michael had started the process of integration with the Aboriginal community which can be interpreted as demonstrating that he was a border crosser and was becoming bicultural.

At the university his research interests have developed as a result of learning the Yolngu language, through developing an understanding of the metalanguage and epistemology. His work also promotes the learning of Yolngu culture by westerners.

Culture brokerage

Michael's position as a cross-cultural worker is rather elusive in the interview. He was uncomfortable with both the ideas of culture broker and border crossing. He considered that brokerage implied the commodification of culture and knowledge, as well as setting up incommensurabilities or borders between cultures. He described his understanding that borders are social constructions.

Michael now considered himself to be a postculturalist for whom even the border worker/border world position was also meaningless as he considered that such borders were nonexistent. Michael was also concerned with what he saw as the commercial possibilities of culture brokerage.

Some of his earlier writings seem to indicate that he had worked more-or-less as a culture broker. In Christie (1985) he appraises the area of aboriginal education from the perspective of a practitioner which could be interpreted as a 'teacher as culture broker'. His experiences since then have changed his self-perception.

Teaching and indigenous education

Michael had a strong opinion about young teachers going out into community schools. He emphasised the community's right to accept or reject the teacher through a probation period.

Michael commented on the centralised nature of curriculum development which led to Aboriginal students being taught from the same western curriculum as other mainstream schools. He commented on how the centralised curriculum failed to take into account the context of the students. He suggested that curriculum is involved with reproduction of the inequalities in society. Michael considered that in a healthy Aboriginal learning context, elders should be able to exert their power and influence to help Aboriginal students develop their identity. He suggested that the nature of the curriculum should be to develop an understanding of self. By defining curriculum together, it would not bring schools into conflict with the community.

He suggested that aboriginal education had been organised in ways which most suited westerners. He discussed a group of western educators he described as "modernist missionaries".

Michael took me to task when I suggested that there should be a western experience of indigenous knowledge. This was consistent with his conception of knowledge as being an integrated whole rather than compartmentalised. He went on to discuss Germaine Greer's *Whitefella jump up* (Greer, 2003) as an example of where Indigenous knowledge would be beneficial to the whole Australian

community. He considered that there was a need to be inclusive not only of indigenous knowledge but also taking account of indigenous ways of knowledge production.

MARK LINKSON: Wanting to make a difference

Early influences

Mark's family background was strong in terms of social justice and he continues the family tradition through his participation in the teachers' union.

The Young Christian Workers (YCW) was the institution which had a major influence on Mark as a young man, rather than Catholicism itself. One event which was to have a lasting effect on Mark was when he watched a documentary with his YCW mates on the overthrow of Chile's Allende government through the connivance of the USA and its CIA.

Starting teaching

Mark was a mature-aged student when he had trained as a primary teacher in Adelaide. After working there off-and-on, he took a job in 1989 at Wadeye (Port Keats)³⁶, an Indigenous community school in the NT run by the Catholic Education Office (Linkson, 1999). Mark saw something of value in the other culture and the people, a feature of a border crossing which he apparently made while at Wadeye. He identified the formative nature of his time there in becoming a border crosser.

Culture brokerage

Mark acknowledged that he was introduced to the idea of culture brokerage through reading Glen Aikenhead's early work.

Mark considered that there needed to be a depth of understanding of a culture before someone could be an effective culture broker but that it was an affective rather than a cognitive thing.

He went on to speak about his experiences with and becoming a culture broker, giving a perspective on culture brokerage which also relates to insiders and outsiders.

³⁶ Wadeye is the Indigenous name for the community and has been adopted rather than the colonial Port Keats, but both names tend to be used interchangeably as Mark does.

- In the first instance, he acknowledged that for him to learn about the other, he needed to have an informant, a culture broker from the other culture. When teachers go to remote indigenous communities there is a need for them to find mentors within the community with whom they work often side-by-side.
- It would be possible to become a culture broker on the other side of the cultural interface.

Mark has a relativistic view of culture focusing on the similarities rather than on differences.

Border workers

Border workers have to learn about the relationships and patterns of interrelationships between people in the community. Part of the understanding of another culture is an awareness of different customs and protocols, and border workers become aware of these, particularly the more obvious ones.

Mark considered that western ways of viewing the world were neither the only ways nor necessarily the best. Understanding that people in different cultures have alternative ways of making sense of the world was seen as essential for a border worker.

In a number of the comments which Mark makes about indigenous knowledge there is always an element of respect. He considered the need to be sensitive in his approach to indigenous culture and knowledge. Silence was one factor identified as being significant by Mark.

Acting as a culture broker

Mark had worked in a number of positions in indigenous education and he saw himself as a culture broker in these. He saw that there was a need for him to take on a specific role as a culture broker to achieve particular outcomes. On a visit back to Wadeye with some students, Mark found himself acting as a culture broker between two groups of Indigenous Australians. He also commented on how his knowledge of the Murrinh-patha language used at Wadeye, though

limited, had been of use to him on this occasion. Part of Mark's agenda was to help the Aboriginal people to understand western institutions.

He referred disparagingly to handbooks written for people going to communities. For him, it is through the lived experience, rather than the vicarious, that people learn to live in indigenous communities.

Cross-cultural teaching

Mark was aware of the possibility of different interpretations of knowledge, particularly of science knowledge as he, among others, had documented some alternative conceptions. He understood that particularly for indigenous people living in their communities, the indigenous explanations were rational explanations of their world. This context was the one around which their culture revolved. He considered the idea of compartmentalisation to be a way of trying to avoid potential conflict between their indigenous and western worlds.

He understood that cultural sensitivity was a necessary element for cross-cultural teaching. An issue that he identified relates to the role of the dominant culture in deciding what was to be taught in schools.

Mark saw those who use and abuse power in working in Indigenous communities as being part of human nature. He criticised them as "control freaks" with their unwillingness to give up power. There is a mismatch here regarding the status of westerners in indigenous communities which affects mainly governance, education and health, of who is responsible for the community decision making.

Mark made a comment about the role of women in education and how there were few men both in schools and in the training courses. Mark felt that Indigenous men could find having too many women at the school, and in particular having a white female principal, intimidating.

He also noted here the translation effort which he experienced working with Aboriginal people in the Northern Territory who often have English as a second (or subsequent) language.

DAVID PARISH: Towards tomorrow³⁷

Early influences

David's early life and career shows few signs of him becoming a border crosser. Religion was an aspect of his parents' lives; his father had trained for the Anglican ministry and became a lay preacher, and there was interest in the Aboriginal missions. Milingimbi, the NT community that David went to in 1971, was still a missionary station at that time but he did not go there as a missionary. The mission was to withdraw from there shortly after he arrived.

David had taught in a one-teacher school in rural NSW for his first years of teaching and had come across Aboriginal students in his classes, but this was not a factor leading him to move to the NT.

Culture brokerage

David had not heard of the term 'culture broker' before the interview and tried to create some meaning for it. He portrayed the culture broker as an insider who sees alignment between cultures rather than between individuals. David saw that some of the instances he described could be explained in terms of culture brokerage and that they had involved individuals from different cultural backgrounds. However he saw the purpose of brokerage more from the position of policies of western institutions such as government being enacted in particular schools.

It is only when he started teaching at Milingimbi and worked closely with an Aboriginal assistant teacher that he started to understand the difference between the two cultures. Many of his actions since then could be seen as culture brokerage as specific actions in response to particular cross-cultural needs. However the immensity of some of the actions (e.g. becoming a pilot so he could visit communities) and his continued involvement with indigenous people, identify him as a border worker.

While at Milingimbi David became involved in organising the school library with one of the Indigenous assistant teachers. They became engaged in some

³⁷ *Towards tomorrow* is the motto of Kormilda College, the boarding school for Aboriginal students in Darwin where David worked from 1973 until 1987, finally as principal.

discussions regarding indigenous knowledge. This could be considered as a critical event which reveals that David was coming to understand there are other ways of thinking about the world and realising that there was something of value in the other culture, was becoming a border crosser.

He also became aware of the different relationships between Aboriginal people when he found himself in a situation where he asked his assistant teacher to intervene in an argument with the assistant teacher's brother which was inconsistent with local protocols. Most westerners are likely to break local protocols early in their cross-cultural experiences but border crossers become aware of the protocols and choose to abide by them, as David did.

David mentioned the role that his family had in easing him into the community. He felt it was mostly the influences of the spouse and children who were not necessarily seen as an extension of the school. This was confirmed by a similar experience many years later at Lajamanu. The school and the teachers are identified as alien in indigenous communities whereas partners and families are not treated necessarily in the same way.

When he had become principal of Kormilda College in Darwin, David found a unique solution to the problem of communicating with the parents of his boarding-school students by gaining a pilot's license. Besides being a practical response to a problem, this approach showed that David was also aware to the nature of his relationship with Aboriginal people as a border worker, not just in a single community but in multiple communities. He continued to fly on visits to communities when he worked in office-based positions.

Later, as principal at Lajamanu, David set up a committee at the school which followed traditional cultural lines even though it was in a western institution. The skin groups were each represented and the group functioned in a culturally appropriate way as defined by the people in Lajamanu.

David also saw that there were problems with misunderstanding about how western institutions worked. Frequently the community was passing on information about how it operated but there was nothing seen to be flowing the opposite way. He could also see flaws in the role of culture broker that implied

that Aboriginal people could not do things for themselves or they were too important to do them themselves, leaving these jobs to westerners.

Issues of cross-cultural teaching

Culture shock and cross-cultural workers

The need for cross-cultural training and the inevitability of culture shock was brought up by David when teachers first go into communities to live and teach there. He realised that culture shock is an affective rather than cognitive issue.

David suggested that for teachers having some experience in teaching before they went to indigenous communities was a good thing. However often the experienced teachers were not teaching in culturally-appropriate ways. Neither did they consider the school's curriculum to be culturally inappropriate to the individual students' needs.

Even for experienced teachers there can be difficulties. While he was principal at Lajamanu David had to deal with a teacher who had taught in Africa who was showing signs of culture shock. There is a presumption that because someone can work in one community they can work elsewhere and that these situations are basically the same. He saw mentoring by indigenous people as a useful way of resolving such situations and facilitating informal cross-cultural training.

The outsider nature of government schools

David commented on the outsider nature of schools in their overall perception within communities. Curriculum is typically organised outside of the school, so that community schools are obliged to teach the same western curriculum as other mainstream schools. He considered that this led to many people in the community failing to realise that the school was, or could be, part of the community.

David pointed out that the community usually had some say in who was the principal because there was a community representative on the selection committee. On the other hand the community basically had no say in the selection of the other teachers. Although they could decide who stayed in the community,

this was often based on the person's relationship with the community, not their ability as a teacher.

David commented on teachers who came to the communities and took on a political stance regarding the 'fate' of Aboriginal culture, considering that as they ingratiated themselves with the community it made it harder particularly for the western authorities to deal with some potential social problems. He noted in a case which he experienced as a principal, the community was unwilling to take any action against the person because he was in some way associated with the school (he was the partner of one of the teachers). It was not until the community was directly involved that they took action to expel the person.

LEONIE JONES: An unintended journey

Early experiences

Leonie had not intended to go into indigenous education: although she had undertaken some coursework in it, her journey was to commence when she went to Maningrida (NT) with her husband, perhaps not so much sharing his vision but wanting to be with him.

Leonie was the only participant in this research who had any training in indigenous education and particularly English as a second language (ESL) teaching; this is a consequence of the times as her career began relatively recently.

Leonie had limited practical experience of Indigenous people until she went to Maningrida. Even though she had some training in indigenous education she was to find that theory and practice were somewhat divergent. However she had already had some experience teaching in a mainstream school. By the time she arrived at Maningrida some of the commonwealth government policies of self-determination were being implemented although there was still a mindset of western dominance.

Leonie lived at Maningrida for six years. Here she interacted with the community but much of her early experience was with other westerners rather than being mentored by the locals. Initially she associated mainly with other white teachers who were also a source of information but gradually she made friends with some Indigenous people in the Aboriginal community and became more integrated into the local culture.

She became more involved and the people acknowledged her by accepting her into the family structure. Having established a friendship that led her to being considered a sister, Leonie indicates that the people at Maningrida took time to decide on these relationships (perhaps as an indication of trust for the person). “Pick[ing] up a lot of knowledge” is also a significant step to realisation that there was something of value in the other culture. These are signs that she had become a border crosser.

Culture broker

Leonie's attempt to understand culture brokering is couched in terms of teaching. Her understanding is that the culture broker is an insider from a western perspective.

She considered that understanding western culture and being able to use English were ways of empowering Indigenous people. While she considered that understanding their Indigenous culture was important, Leonie did not see that it was the role of the school to maintain it.

Leonie understood that the current push for democratic institutions in Aboriginal communities would create a tension with the customs of the people. In the past many western institutions, including missions and schools, have been forced onto indigenous peoples without any consideration of their culture.

Quite often, although maybe not as frequently in recent times, newcomers to Aboriginal communities are incorporated into the family structure. Leonie was surprised to find out she had been adopted as her teaching assistant's sister. This practice comes from the traditional way of ensuring that visitors are appropriately positioned in the community. An Indigenous visitor would understand their place and the obligations involved, which are not often understood by western visitors.

Leonie understood from her studies that the Indigenous culture was different and that she would be teaching western ideas. The curriculum was dominated by western knowledge (she used the expression "white is right" to describe it) but it would seem to be significant that in becoming an effective cross-cultural worker there needs to be an understanding that there are other ways of understanding the world.

Knowing yourself and your own culture and being able to reflect on these are both important in being able to work as a border crosser. Leonie considered that both may develop as a person matures.

Leonie had persevered at Maningrida where she and her husband were able to put some of their knowledge into action, as well as sharing it with other members of staff. Other western members of staff could act as mentors but often this would be

seen as an imposition (whereas expecting an assistant teacher to take on the role seemingly would not be an imposition). Leonie noted that early in their time in Maningrida her husband and she learned a lot about teaching and the community (including some language) from other members of the non-native staff, primarily the linguist.

Leonie talked about some western people they had met on the plane to Maningrida and who lived behind them there. They became the Leonie's earliest source of knowledge about the community and so the experience and knowledge of the community was passed down by non-aboriginal people rather than by the local Aborigines.

Cross-cultural teaching

Leonie was slightly ambivalent about the nature of the education the students were getting, whether it is a western-dominated school or whether local culture should be included.

Experience of teachers

Leonie had some useful comments to make on the types of teachers who should be employed. She listed a number of criteria but noted teaching experience in particular and having a sense of self.

Leonie suggested that having some experience in teaching before they went to indigenous communities was a good thing. She considered that experienced people were more likely to have a better understanding of their own culture and were more likely to reflect on their role in the community. She felt that this made it difficult for young teachers going out to live and work in communities.

Leonie also commented on 'loose cannons' who take on the Aboriginal cause but are only in the community for a short time, teachers who came to the communities and became overly-concerned with community politics. For Leonie, speaking as a principal, it was in part the short-term nature of this engagement with the political side of life in communities which concerned her.

There is a sense that there is a loss of corporate knowledge, particularly with frequent turnover of principals. Leonie's current role is group principal for a number of mostly Aboriginal community schools in the Top End of the Northern Territory and one of her tasks is to try to keep some of that corporate knowledge intact.

Losing culture

Leonie spoke about the notion that the students were going to lose their culture which still prevailed in some teachers' minds. She commented on the mindset of many western teachers that 'white is right', although government policy had changed to self-determination in between their initial experiences of aboriginal education.

CHAPTER 5. EARLY CROSS-CULTURAL INFLUENCES: CROSSING BORDERS AND BEYOND

The interview data alluded to in chapter 4 show that all participants had located themselves at the cultural interface. In this chapter I explore how the participants, a group of westerners, came to be in this position and I seek evidence in the interview data that they have made border crossings. In the interviews they had been asked about the personal influences in intercultural relations on them when they were younger. They were also asked about incidents in their early professional lives that led to them working in cross-culturally.

It is their responses to those questions which are examined in sections 5.1 and 5.2 respectively and I hypothesise that these incidents influenced participants to positive identity learning and made them able to undertake border crossings. Then in section 5.3 I examine the stories of some of the participants to confirm their status as border workers or beyond during their professional lives.

5.1 Personal influences: early experiences and learning about the other

From the interviews there appeared to be three influences on the participants which brought them into contact with the indigenous peoples in the countries where they lived. These were the influences from their family, the impact of governmental policies such as multiculturalism, and religion and concern for social justice. These experiences were varied in this small sample. It depended on the age of the participants and on the proximity of indigenous peoples to where they were raised. Formal education had not generally been an influence on their relationship with indigenous peoples.

5.1.1 Initial social influences

Childhood experiences of western children living with and befriending indigenous children appear to be rare in the literature, although there are a couple of stories among the ethnohistory anthologies (e.g. Charlie Day in Gidley, 2001; Ruth Heathcock in Hughes, 2005) but the detail is thin. The story of Charlie Day (Gidley, 2001), who lived at the turn of the 20th century, is a rare example of a westerner who grew up speaking Navajo as well as English, playing with Navajo

children on the reservation and attending ceremonies with them. Day then continued to live with them into his adult life.

Unlike Day, few of the participants had any early socialisation with indigenous peoples when they were young, and for those who did their experience is primarily mitigated through their families. For Celia Haig-Brown, both her father, a well-known Canadian author and conservationist, and mother had been influences on her during her upbringing.

CHB: I grew up in a family who had a tremendous respect for First Nations people. (Haig-Brown, interview, line 80)

Through his [her father's] work and my mother's work with us as children, we first of all came to appreciate interrelationships and the importance and significance of land in everyone's life: land, rivers, air, when I say land I mean the broad sense. And also a direct understanding of this land having been used by First Nations people, the land we were living on having been used by First Nations people. ... I didn't know enough as a child to say, "Hum, how come we've got it and they don't?" But that was the beginning of understanding those complex relations. (Haig-Brown, interview, lines 98-108)

The basis of this attitude seems to be social justice. Haig-Brown was the only participant who acknowledged having some kind of role model and attending school with indigenous students.

CHB: I went to school with lots of First Nations kids, not for the first three years but when the Indian Act³⁸ changed, then First Nations kids were actually allowed to come to our school, our school. (Haig-Brown, interview, 112-114, her emphasis, said with chagrin)

It is possible that some of the other participants went to school with indigenous students but the situations were not as readily identifiable as that of Haig-Brown.

James Ritchie grew up in pre-World War 2 Wellington, New Zealand, the son of Australian migrants. He suggested that at that time there was little evidence of Maori in the urban region.

Nothing in my background or childhood specifically prepared me for working in the Maori world. My parents knew no Maori people. None lived in our neighbourhood. So far as I recall, not one Maori child attended my kindergarten or primary school. (Ritchie, 1992, p. 13)

³⁸ The Canadian Indian Act was first enacted in 1952.

At this time there were relatively few Maori living in the large urban centres of New Zealand and the major Maori migration from their homelands to the urban areas was to commence in the 1950s (Ritchie, 1992).

JR: There were at least a couple of other people who were part of my parents' circle of association but the fact that they were Maori was not conspicuous or if it was mentioned at all, it was highly circumscribed. (Ritchie, interview, lines 90-92)

For Ritchie, the decision to become involved with Maori was one he made himself in his late teens (Ritchie, 1992).

JR: So I just started to, at a very superficial social and personal level, a day-to-day level, get to know Maori people. (Ritchie, interview, lines 97-98)

He started to socialise with Maori while at university and was involved with them through Ngati Poneke, the Maori community centre in Wellington. This period of time is covered in the first chapter of *Becoming bicultural* (Ritchie, 1992) and the activities he describes during that time – involvement with the Ngati Poneke youth club and dance troop and meeting highly-placed Maori leaders – suggest that it was when he made his original border crossing.

Alternatively, during his early years Miles Barker lived in the King Country of New Zealand where many Maori also lived, but he does not remember any interaction with them from that time. This is a situation noted by other Pakeha of a similar age (Middleton, 1992, 1993). Barker and his parents moved to Hamilton and he entered high school in 1957.

MB: I went to Hamilton Boys' High School which was a real Pakeha school. There were a few Maori there and we were vaguely aware of Maori people in *marae* around Hamilton. But there was very little Maori presence in Hamilton city and therefore in my life through the fifties and the sixties. (Barker, interview, lines 83-87)

From high school in Hamilton, Barker went to university in Auckland where one of the most significant events was meeting his future wife Elizabeth whose family had had extensive experiences with Maori and who had a considerable influence regarding his understanding of Maori culture.

MB: Although my wife is Pakeha, and her mother and father are too, mother and father lived right away down on the East Coast and lived in Maori

communities in the 1930s and '40s and '50s, and later in Opotiki, and worked on a commercial basis with Maori commercial enterprises. Elizabeth's father speaks extraordinarily idiomatic and wonderful Maori language. He is a source of *matauranga*, a source of wisdom, really for thousands of people throughout New Zealand, and I was pretty lucky to marry into this family ... (Barker, interview, lines 60-65)

The association with his wife's family had a considerable influence regarding Barker's understanding of Maori culture. While at university he also undertook an introductory course in Maori language, and through these experiences became a border crosser.

Two other participants acknowledged being related to indigenous people, Haig-Brown through her brother's marriages and Ritchie has Maori relatives through the marriages of his children.

For Glen Aikenhead, respect for indigenous people was part of his family's lore that had been passed down from his grandfather.

GA: He had been in western Canada on a surveying team, back in the 1860s when there were no farms. It was the Wild West, the Canadian west. I've read his diary and I was quite surprised to learn about the respect and admiration he had for the Indians. I think they [the survey team] survived successfully because they had some help from the Aboriginal people. (Aikenhead, interview, lines 23-27)

Glen has subsequently augmented this vicarious experience with his own experiences, particularly with Canadian First Nations people.

Growing up in New Zealand, Michael Christie was brought up with Maori people in close proximity:

MC: I lived in a place where there were a lot of Maoris, yes. And we were certainly brought up with a lot of respect for Maori culture and Maori people, and certainly were brought up with an expectation that they had a viable culture that was usefully productive in the fabric of New Zealand life. (Michael Christie, interview, lines 104-107)

Michael taught at Frankton in his first year, a suburb of Hamilton with a Maori population. The next year he moved to Milingimbi on the northern coast of the Northern Territory of Australia.

There was virtually no mention by the Australian-born participants (Parish, Jones, and Linkson) of Aboriginal people in their early lives. Linkson referred to coming across Aborigines in Adelaide but without any interaction before going to Wadeye. Most urban Aborigines in Australia lived on the periphery of towns and in schools they were often streamed into the lower grades. Many assimilated into the white Australian community or adopted alternative identities, often identifying with Italians, Greeks and other southern Europeans with whom they shared common features, particularly dark skin and hair (Morgan, 1987), a process referred to by Ogbu and Simons (1998) as ‘passing’. The facelessness of Aborigines in urban areas is not remarkable; until the 1967 referendum Indigenous Australians were non-people, not considered citizens, not included in the national census, and controlled by a plethora of state, not federal, laws³⁹. My own experience is similar, limited to knowing where Aboriginal people lived (on the edge of town) and going to a school where because classes were streamed, with Aboriginal students tending to be in the lower grades. As for personal contact, there was none and none was suggested.

5.1.2 *Influence of multiculturalism*

In the period immediately after World War 2, immigration from Europe increased to Canada, Australia and New Zealand; later this was to lead to the formulation of government multicultural policies. Only Glen Aikenhead remarked on this diversity as another influence while growing up in early multicultural Canada, both in his family and school life.

GA: I grew up in a family who celebrated diversity and so I was taught well that diversity was to be expected. ... the outcome is that it was always intriguing to me to have schoolmates who couldn’t speak English at first. Somehow this opened the world to me that there were other ways of talking about the world that I hadn’t known about because someone was using a different language. (Aikenhead, interview, lines 31-36)

Multiculturalism was an influence on post-war New Zealand and Australian culture as well. Such incidents were fairly tentative in my family. When we moved to Wollongong in 1963 the school which I attended had a high diversity of

³⁹ Government policy in Australia until the referendum in 1967 was for Indigenous people to become assimilated into the mainstream society, or perhaps to quietly die out.

students, recent migrants from Europe. Starting university in 1965 I became aware of students from Asia and Africa studying there, sponsored on development plans, but these relationships did not develop beyond awareness. In Australia multiculturalism was yet to become government policy (in Australia its introduction is associated with Minister Al Grasby and the Whitlam federal government, 1972-75), although there had been extensive migration particularly from Europe since the end of World War 2⁴⁰.

5.1.3 Religion and concern for social justice

The mainstream churches, particularly in Australia, operated missions in many of the Aboriginal communities into the 1970s, and often having a presence there beyond then. As well as that involvement, the ‘plight of indigenous people’ has often been tied to social justice as an issue which has been supported by the mainstream churches.

For David Parish, religion was an aspect of his parents’ lives rather than his own; to what level it influenced him we did not explore.

DP: My father trained for the Anglican ministry, never ever joined the ministry but he was a lay preacher. My mother told me before we ever came to the Territory, about giving money to the missions. This was the CMS missions, being Anglican, and she used to talk about this place called Oenpelli [Gunbalanya] that I’d never even heard of and eventually I found it on a map. Then I realised it was in the Northern Territory. Some years later I visited there. (Parish, interview, lines 262-267)

Some of my experiences were similar: for many years at home there were always magazines produced by missionary religious orders. In the late 1960s my elder sister chose to become a lay missionary on the Tiwi Islands off Darwin where she stayed for a year. This was my family’s first major contact with Aboriginal culture, to my knowledge.

Milingimbi, the community that Parish went to in 1971, was still a mission station at that time but he did not go there as a missionary. The running of the school had

⁴⁰ The Whitlam government also made efforts to implement the mandate that the Australian people had given parliament through the 1967 referendum on the Aboriginal franchise and initiated some changes that took place in NT schools for which the federal government had responsibility.

been passed over to the federal government which then was supplying teachers and the mission was to withdraw from Milingimbi shortly after (Wearing, 2007).

Mark Linkson's family background was strong in terms of social justice and he continues the tradition through his participation in the teachers' union.

ML: My grandfather was a great one for looking after underprivileged people in Adelaide in the 1920s and 30s. His house in Clarence Park was always full of people that he was helping out, having around for lunch on the weekends and dinners. He was a great churchgoer. My dad was always a strong unionist but never loud about it. He was involved in his union for 25 years at the official level. (Linkson, interview, lines 39-43)

The Young Christian Workers (YCW) was the institution which had a major influence on Linkson as a young man, rather than Catholicism itself.

ML: I was a Catholic, a non-practicing Catholic, who'd done a lot in the early 80s with workers' rights, Young Christian Workers. So I've always had an interest in social justice issues. That was why I became a teacher actually, because of my interest in social justice issues. (Linkson, interview, lines 8-11)

One event which was to have a lasting effect on Linkson was when he watched a documentary with his YCW mates on the overthrow of Chile's Allende government through the connivance of the USA and its CIA.

ML: And I guess, as a 19- or 20-year old, that woke me up to the fact that the world can be very unfair and the world can be monstrously disgusting and awful ... (It really formed me, those few years and of course ending up in a place in the late '80s with Indigenous people who live pretty shabby lives at times in isolated areas, you can't help to want make a difference. Take a small action. (Linkson, interview, lines 74-81)

The contrast in these responses of Parish and Linkson could be due to the difference in ages of the two participants, reflecting different policies in both government and churches at those years.

In appendix 3 I discuss the inauthentic classification of cross-cultural workers as missionaries, mercenaries or misfits (Townley, 2001), although some proponents of social justice probably display similar qualities which would qualify them as 'missionaries'.

5.1.4 *Concluding remarks*

It is difficult to attribute early influences, particularly of family, on any of the participants in becoming border crossers or culture brokers. Celia Haig-Brown had some direct influence from her father, the only sense in which a role model was referred to (Goodson, 2008). On the other hand James Ritchie had started to socialise with Maori in Wellington while in his late teens with little influence from his parents. Miles Barker did not have any particular early direct influence from his family but developed a personal identity through his academic experience and connections to the family he married into. Some of the other participants have marginal experiences but it is difficult to see them as critical or precipitating events (Pillsbury & Shields, 1999; Sikes *et al*, 1985).

Rather, there is evidence of positive initial experiences which are developed more fully in due course, particularly in the participants' professional lives. In the sense of the identity model of Geijsel and Meijers (2005), these positive experiences are likely to be indicators that subsequent encounters would also be positive. However such a finding would have to be considered as tentative.

5.2 **Professional influences: early teaching experiences**

In this section I examine how the participants adjusted into their professional lives and in particular the events they identified as significant in becoming cross-cultural workers. I do this primarily through the lens of teachers' life research (particularly Sykes *et al*, 1985), examining initial teacher training, mainstream school and later tertiary practice, then considering them as positive identity learning experiences (Geijsel & Meijers, 2005) and finally as border crossers.

Glen Aikenhead had used the idea of border crossing in his previous work (Aikenhead, 1996, 1997). Although he considered that science education students could have trouble with border crossings, similar to Phelan *et al* (1993), he suggested that it was mostly a fairly routine event.

GA: The point I was going to make is that even border crossing is something that we naturally do ... Border crossing is a way of understanding how we deal with different social situations everyday; it's how we switch around. It's intuitive in that sense, we do it all the time. (Aikenhead, interview, lines 189-194)

At issue is that some border crossings, even those attempted by adults, remain hazardous and even impossible (Aikenhead & Otsuji, 2000; Phelan *et al*, 1993). What underlies some problematic border crossing experienced by teachers going into indigenous communities is that the two cultures remain incommensurable to them. A border crossing between these different worldviews is no longer intuitive; rather it is hazardous or impossible as it threatens their established identity.

Here I intend to look at the professional experiences of the participants to see how they relate to border crossing. I look firstly at their preservice teacher training then at three sectors of education: community schools, mainstream schools and tertiary education.

5.2.1 Preservice teacher training

Little could be said by most of the participants about their preparation for teaching in indigenous schools because the majority of them did not anticipate teaching in cross-cultural situations. In most cases cross-cultural type courses did not exist at the time. Only Leonie Jones indicated that she had had some preservice teacher training in indigenous education and ESL teaching because she had trained more recently than the other participants.

LJ: One of the things was that I had done some training in ESL before I came up and a lot of people hadn't in those days. And I'd also done Aboriginal studies, two units at Canberra Uni, which were run by Alan Fiddock ... But they were people who'd been in the [Northern] Territory so with that background there was already a notion in my head of the intrinsic value of Aboriginal culture. (Jones, interview, lines 50-54)

Jones also had two years teaching experience in a mainstream primary school. Even with this background she was to find that theory and practice were somewhat divergent. She persevered at Maningrida where her husband and she were able to put some of their knowledge into action, as well as sharing it with other members of staff.

The lack of preparedness of the teachers for living in an indigenous community as well as for teaching in an indigenous school is a common theme in the literature (Harper, 2000; Hickling-Hudson & Ahlquist, 2004; Taylor, 1995). In these reports teachers describe limited exposure to appropriate strategies for teaching

indigenous students in their training. Educational authorities offered limited professional development beforehand, often only an orientation program lasting a few days and augmented by written material.

Mark Linkson referred disparagingly to handbooks written for people going to communities, yet for many of them such books would be the only resource:

ML: I'm sure that I would have read those little gummy little things, what to do or what not to do in a black community, where you always get given a list of do's and don'ts. But those little lists of do's and don'ts don't mean a thing until you go and live there. (Linkson, interview, lines 138-140)

Despite Linkson's remarks, there have been various handbooks published giving advice on cross-cultural communication and living and teaching in indigenous communities (e.g. Crawford, 1989; Groom, 1995; Metge & Kinloch, 1978). Often they are considered to be too general and non-specific for a particular community. Rather, it is through the lived experience, rather than the vicarious, that people appear to learn to live in indigenous communities. This is reflected in the comment by one of Harper's interviewees, "But really, there's no way to prepare for this. No way." (Harper, 2000, p.154).

5.2.2 Indigenous community schools

Many of the participants had their earlier teaching experiences in community schools. Ritchie had eighteen months experience living and teaching in a Maori community on the east coast of New Zealand and Christie, Jones, Linkson and Parish all lived in Indigenous communities in the Northern Territory and taught in their schools.

Only one of the participants, James Ritchie, suggested that he started teaching particularly because he wanted to work with indigenous people (Ritchie, 1992). Although he had been offered a plum position in Wellington, in 1950 he went to teach with the Maori School Service, in the village of Rangitukia on the East Coast of the North Island (Ritchie, 1992). Warned by his white headmaster not to get involved with the people, he did exactly the contrary. Such advice seems to have been general at the time; by the 1990s some educational administrators were rethinking the roles of teachers and administrators in indigenous communities (McBride & McKee, 2001; Taylor, 1995). According to Ritchie (1992) this was a

period of his life where he was a learner and Maori were his teachers with three Maori men and a women taking on the roles as his mentors. It was a short stay of less than two years: he returned to Wellington in 1951 to study anthropology at university but he considered it a highly significant period of his life.

... the people there drew from me an investment so great that there is part of me that will always respond, culturally and in their tribal terms, whenever I meet somebody from those villages at any tribal gathering. ... It is as though I gave away a bit of myself that will always live there. (Ritchie, 1992, p.101)

Except for a short period in the 1960s (Ritchie, 1992), he has maintained the involvement. The investment is not one-sided, considering Ritchie had four mentors who made a conscious decision to be and stay involved.

Similarly, Howard (2006), a white American multicultural educator, considers the investment made in him by African American and Hispanic colleagues early in his career.

I was invited into the community and given incredible opportunities to grow beyond the limits of my White ignorance. I didn't know how conscious my Black and Hispanic colleagues were in their efforts, but it was as if they had decided together, "Here's a White guy we can perhaps educate. Let's allow him in and see how much he can take. Then we can help him move over to the real work he has to do." (p.17)

Other participants acknowledged the role of indigenous people in providing support, as sources of cultural knowledge and as mentors during their initial years in communities (see below). However they do not describe this effort in terms of being an investment made by their indigenous hosts.

Michael Christie and David Parish ended up teaching at Milingimbi at the same time in the early 1970s. Both moved to the tropics for what might be considered 'mercenary' reasons, Christie for the warmth and better pay than he was getting in New Zealand, Parish for medical reasons concerning a family member. As described in the previous chapter, Christie's "happenstance", where he contracted hepatitis and was confined to bed gave him an opportunity to learn the local language and influenced his experience in crossing cultures.

MC: And so I just got out Beulah Lowe's conversation course and the tapes and the notes, and just learned them off by heart ... And so by the time I was

back on my feet again, I had basic conversational ability. (Christie, interview, lines 168-171)

This can be interpreted as a personal critical incidence (Sikes *et al*, 1985) or a precipitating event (Pillsbury & Shields, 1999). The following year Christie was appointed teacher-linguist when the school adopted a bilingual program, part of the Whitlam government changes. This can be interpreted as another critical incident, in this case as a result of an extrinsic policy innovation (Sikes *et al*, 1985).

MC: And then becoming a teacher-linguist which seemed to be a very attractive idea to me. ... People work as the teacher-linguist and because they never get the conversational ability, they do quite well as teacher-linguists but won't actually ever allow the text they're working with to support their fluency. (Christie, interview, lines 174-180)

Being a teacher-linguist put Christie in a position where he could interact with members of the community more and often in a more informal way than if he had remained a classroom teacher.

MC: And I spent a lot of time out with Aboriginal families hunting and there wasn't a lot of white people in those days and there was a lot of fishing to be done. (Christie, interview, lines 171-173)

The teacher-linguist position was probably a novelty at the time from a western perspective although the community had experienced working with missionary linguists such as Beulah Lowe (Wearing, 2007) and it was to lead to bilingual schooling. By being involved with Aboriginal families in their everyday life, Christie had started the process of his integration with the Aboriginal community (Taylor, 1995), all part of the border crossing process.

David Parish had taught previously in a one-teacher school in rural NSW during his first few years of teaching and had Aboriginal students in his classes.

DP: I had run a one-teacher school and I had about a dozen kids then along came four Aboriginal kids. This is in New South Wales, with all of the baggage that many mixed race kids have. I saw that as a real challenge, an interesting challenge. (Parish, interview, lines 253-256)

However, teaching Indigenous students had not particularly been a factor for him to move to the NT.

At this time (late 1960s) in Australia there had been little research done on the education of Indigenous Australians. Despite the referendum of 1967, government policies still advocated assimilation of Indigenous Australians into the mainstream. So, when Parish went to Milingimbi School in 1971 it was still the time when policies were more about assimilation (McConaghy, 2000).

DP: My role as I saw it was to deliver to the students in my class as much as I could give them to help them come to grips with what they needed to be effective workers within the society that they chose, be it at Milingimbi or if they chose to leave. G....., who was the assistant teacher with whom I worked most closely, I felt he saw part of his role as helping me and my family understand how Milingimbi worked. (Parish, interview, lines 61-65)

In his second year at Milingimbi Parish became involved in organising the school library with one of the Indigenous assistant teachers. They became engaged in some discussions regarding indigenous knowledge.

DP: So myself and one of the assistant teachers spent a tremendous amount of time [together]. During the discussions it became quite obvious that there was a depth of knowledge, of capacity, of understanding that I just didn't have because I was a foreigner. (Parish, interview, lines 45-47)

This could be considered as a personal critical event (Sikes *et al*, 1985) or a precipitating event (Pillsbury & Shields, 1999) which reveals that Parish was coming to understand there are other ways of thinking about the world and realising that there was something of value in the other culture (Szasz, 2001). He was becoming a border crosser. Even so, the use of the word 'foreigner' has implications regarding some people's relationship with the other culture, similar to my use of 'expatriate' in section 2.2.2.

At the time that Parish was at Milingimbi he had his young family with him and he considered the role that his family had in easing him into the community. He felt it was mostly the influences of his spouse and children who were not necessarily seen as an extension of the school

DP: They were the brokers of culture both ways. They were taken under the wing of various people in the community and they brought their friends home. (Parish, interview, lines 206-207)

A similar experience was noted by the Thompsons (in Nelson, 1989), who had been teachers at the Peppimenarti community in the NT.

... most of the time their white-haired children, tumbling after their teacher-parents, were their casual bridge to the Peppimenarti people. The children were picked up, carried round, given Aboriginal names and fitted into a web of relationships. (Nelson, 1989, p.187)

Similarly the Gallaghers were “adopted into various clans ... and made very aware of the obligations entailed by our membership of the clan” (Gallagher & Gallagher, 2004, p.55). The Aborigines needed to establish kin relationships with westerners who however did not necessarily understand the reciprocal nature of the arrangement.

Relationships of other kinds influenced other people’ moves into indigenous communities. Leonie Jones had not intended to go into indigenous education, although she had undertaken some coursework in it. Her journey was to commence when she went to Maningrida (NT) with her husband, perhaps not so much sharing his vision but wanting to be with him:

LJ: Because I met a person who became my husband who had always had a sense of purpose for working in indigenous education and particularly in the Northern Territory. (Jones, interview, lines 365-366)

She is the only participant who had some training in indigenous education but the reality was to prove different to the academic.

LJ: I had a bit of information, textbook knowledge about Aboriginal culture. I think it most probably helped but it didn’t right to begin with, it was like, “This isn’t anything like I studied in uni. It’s completely different.” (Jones, interview, lines 143-145)

By the time Leonie and her husband arrived at Maningrida in 1977 some of the Australian government policies of self-determination were being implemented although there was still a mindset of western dominance as reflected below.

LJ: When I started teaching in Maningrida, it was 1977 ... there was still a mindset of cultural dominance in terms of white Anglo western culture. But there was also this realisation that Aboriginal people weren’t empty vessels and that they were coming to school with their own set of beliefs and values and cultural mores and all that sort of stuff. But I think in terms of the school, it was still predominantly a place where western Anglo culture was the predominant culture and the buildings and the set-up and all the structures and processes were very much the case. ... So kids coming in there, coming from the home in the morning and going to

school was physically, quite a big cultural thing. (Jones, interview, lines 14-26)

In terms of critical incidents, this was a nexus of intrinsic (moving to Maningrida) and extrinsic (government policy) critical incidents (Sikes *et al*, 1985). Jones lived at Maningrida for a number of years. In the early days she mainly associated with other white teachers who were also a source of information in the early days but gradually she made friends with some people in the Aboriginal community and became more integrated into their lives (Taylor, 1995).

LJ: [A.....] lived next door to us for six years, so in that time I got to know her very well. We became quite good friends and I don't know when it was, at some stage I found out through her that she'd actually decided that I was her sister. ... So that happens, I suppose, within the first year. I can't even remember, it's just a gradual thing.

So A..... and I were just good friends and through her that I picked up a lot of knowledge. I also had a couple of years where I had two assistant teachers, I had A..... and another one. The assistant teachers were also where you connect into the community. (Jones, interview, lines 193-203)

Having established a friendship that lead her to being considered a sister would also seem to be an indicator of the critical nature of the relationship although it is difficult to see this as a critical or precipitating event (Pillsbury & Shields, 1999; Sikes *et al*, 1985). Jones indicates that the people at Maningrida took time to decide on these relationships, perhaps as an indication of trust for the person and "pick[ing] up a lot of knowledge" are also a significant steps to realisation that there was something of value in the other culture.

Unlike Jones, Mark Linkson was a mature-aged student when he had trained as a primary teacher in Adelaide. In 1989 he took a job at Wadeye (Port Keats), an Indigenous community school in the NT run by the Catholic Education Office. He reflected on his relationship with the community.

ML: Port Keats accepted me and so of course that became a very formative phase of my life, living six years in an indigenous community in the Northern Territory. And I really enjoyed the place, I loved the people. ... I found them to be very passionate, very loving, very angry people at various times. (Linkson, interview, lines 24-28)

There are two readings of the word 'accepted' here. The first is the simple act of accepting Linkson's application. The second revolves around his identification of

the formative nature of his time there. This was the critical event which propelled him into indigenous education.

ML: As a teacher I suppose a lot of my cross-cultural experiences were – it just happened by the way, you don't go looking for it. You're living and working in a remote indigenous community in the Territory. To be successful you have to learn the skills of cross-cultural communication. It's not possible otherwise to work there, you'd go mad if you didn't start to feel comfortable, if you didn't start to understand and appreciate the mystery of the cultures that you're working with. It was, um, yeah that's how I got started. (Linkson, interview, lines 31-36)

Linkson did not describe a particular event but rather his gradual acceptance by the Aboriginal people at Wadeye. He also saw something of value in the other culture and the people, consistent with making a border crossing while at Wadeye. Here Linkson also expressed an opinion about a situation similar to the border line position which I constructed: as I see it, border liners do not go mad, rather they fail to appreciate the resident culture around them.

5.2.3 Mainstream schools

Many westerners have their first experience of teaching indigenous students through mainstream schools, usually schools in urban or regional areas which have a mixed indigenous and non-indigenous population. Haig-Brown (1990) suggests this is by "happenstance".

The teacher or professor accepts a job and just happens to have First Nations students in her class. (p.232)

Celia Haig-Brown's and Miles Barker's first teaching placements were in mainstream secondary schools which had significant numbers of indigenous students. Their reactions were different.

Haig-Brown had gone through her undergraduate years with an avowed intention of not becoming a teacher. After graduation she worked for a year as a lab technician and elsewhere, until becoming a teacher aide. Describing this work as "great", she decided to go back to do her teacher training and went teaching.

CHB: I went to Kamloops, got a job there and started teaching in a junior secondary, and there were lots of First Nations kids in there. Well, for whatever reasons, I made connections. I just thought they were really great

kids and some of them were, some of them weren't. ... The minute that you as a white teacher start to act like you care about what these kids are doing, they respond beautifully. I had a lovely time. ... And I just made connections, I worked well. (Haig-Brown, interview, lines 129-140)

Showing care resonates with Kleinfeld's idea (Kleinfeld, 1976) of being warm towards indigenous students. For Haig-Brown the experience of teaching First Nations students built on her previous social experience (section 5.1), another of a succession of critical incidents (Sikes *et al*, 1985).

Barker's career took him into science education and like most science education researchers, he spent his apprenticeship in schools but at this stage in his life there was little indigenous influence.

MB: Then I taught at Hamilton Boys High School for my first job, same school [as he attended], three years. Wasn't much Maori presence there at all. Then I went to Te Puke High School in the Bay of Plenty, which was probably about thirty percent Maori students. At that stage of my life I was just too ignorant, I didn't really understand those Maori students. The school itself didn't have a strong Maori ethos at all – this was in the seventies and the early eighties. (Barker, interview, lines 94-98)

There were no critical professional cross-cultural incidents reported by Barker during this time. This reflects particularly on a time where teachers were expected to separate their professional and private lives. It is significant that Barker comments on his ignorance at the time, indicating he has reflected on the situation that existed.

The situation for each person was different and personal. For Haig-Brown the experience of teaching First Nations students built on her previous social experiences but this does not seem to be the case for Barker. For both of them the next phase of their careers would take them into tertiary education. For Haig-Brown this would be a continuation of her work with indigenous students, for Barker an opportunity arose to work with an indigenous colleague in the indigenous *Rumaki* program.

Christie, Parish, Jones and Linkson all had short-term experiences of teaching in mainstream schools at the beginning of their careers but all moved to community schools within the first few years of their careers. Their experience with indigenous students was also limited. Christie's first year of teaching was at

Frankton in Hamilton, where there were Maori students. Parish taught in a one-teacher school in rural NSW (not a mainstream school) for his first years of teaching and had had Aboriginal students in his classes. There were parallels in my own experience.

There were a number of Aboriginal students at the first school where I taught. Two were brothers, one of whom could 'pass' as a westerner (Ogbu & Simons, 1998) so there seemed to be some unconscious effort by the staff to ensure that he would assimilate. When I went to Darwin in 1976, there were Aboriginal students in most of my classes as well as a multicultural spread. The advice for teaching Aboriginal students was 'to do your best'. There had been little research done at that time but what was available was probably directed towards those teaching in the bush. At the time there were two groups of Aboriginal students at the school, one group who were urban Aboriginals many of whom were descended from the local Larrakia. The other group was mainly students who attended a local boarding school whom it was thought might benefit from a more academic education.

5.2.4 Working at the tertiary level

Some of the participants worked at universities and talked about their earlier times in these positions working with indigenous people and particularly students. With his appointment to the University of Saskatchewan in 1971, Glen Aikenhead became involved in its teaching programs in education. During the 1970s these programs included courses for Canadian First Nations students, some of which were taught separately from the mainstream courses, a similar approach taken elsewhere in the world (e.g. in Australia and New Zealand). In the mid-1980s Aikenhead was asked to teach a science methods course to First Nations students in a centre north of Saskatoon.

GA: I took this very seriously, reading to better understand the potential problems that Aboriginal people might have with learning science. (Aikenhead, interview, lines 46-48)

At that time there was not much written on the topic, although in retrospect Aikenhead realised that he had read Maddock's paper on science as a cultural enterprise (Maddock, 1981). He took on this teaching assignment quite willing to

make changes to his mainstream courses but found that he did not need to make any substantial changes.

GA: ... as I explored it I came to the conclusion that I wasn't going to have to change too much because the methods courses I had been delivering, if you like, were to women, mostly women in the elementary program who have been traditionally marginalised; and I had been working in that area, the girls in science, ... And in trying to see what I should do differently for Aboriginal students, I came to the realisation that women and Aboriginal students had this commonality: they were marginalised from traditional science. (Aikenhead, interview, lines 56-63)

These understandings were to have ongoing repercussions and this could rate as a precipitating event or critical incident (Pillsbury & Shields, 1999; Sikes *et al*, 1985). Aikenhead continued to teach this course for five or six years, making improvements both to it and the mainstream course:

GA: As I improved the course for the Aboriginal students, I incorporated those changes in the sections of the course for non-Aboriginal students and found out that was a good thing. (Aikenhead, interview, lines 66-68)

Later in his career Aikenhead was involved in developing secondary-level teaching materials in science, technology and society (*Logical reasoning in science and technology*; Aikenhead, 1991) and indigenous education (*Rekindling traditions*; Aikenhead, 2000).

Along similar lines, James Ritchie started his research at university because he was interested in cross-cultural psychology and he described himself as an ethnopsychologist, but not doing psychological research across nations and cultures.

JR: I was interested in how do people in this culture make psychological sense out of what's going on. I was interested in something more within the culture than some sort of tricks about being able to work between the cultures, but inevitably I came to work between cultures. (Ritchie, interview, lines 7-9)

Changes of career are seen by Sikes *et al* (1985) as critical incidents; in Ritchie's case the critical incidents confirm his engagement with Maori. Much of his work is with the Maori people, particularly Tainui, and this has been the case since his appointment to the University of Waikato. There he was to be a broker for the Maori leadership in that:

JR: You have the [leadership] saying, “Yes, we want this university now to become our university and we want it to listen to us and do what we want done”. So I became a broker in that sense, that I had to interpret to this university what Maori people wanted of it. (Ritchie, interview, lines 295-297)

After seven years the university set up the Centre for Maori Studies and Ritchie was responsible for the first appointments to it. Most of his work with indigenous people was at the research and policy levels, not as a teacher⁴¹, as he was originally trained.

Celia Haig-Brown had another career change. After teaching secondary school in Kamloops for about five years, she was persuaded to take a position in the Native Indian Teacher Education Program (NITEP) in Kamloops, a co-ordinating position.

CHB: That began my full immersion in First Nations education. This was a program offered by the University of British Columbia. They had four centres around the province. Students spent two years in the centre and two years on campus and came out with a Bachelor of Education degree.

This was 1976, so it was a time when not very many First Nations people were in university and it actually became a kind of an entrée into university. ... So I supervised student teachers, taught the student teacher seminar... But it was great, I learned a lot. (Haig-Brown, interview, lines 162-175)

This change in Haig-Brown’s career can be seen as another critical incident (Sikes *et al*, 1985; Tripp, 1994) and it led also to her undertaking graduate studies and conducting research in indigenous education.

In another change of career, Miles Barker moved from teaching at high school and having completed his doctorate went to the then Hamilton Teachers College⁴² where he was to lecture in science education.

MB: It wasn’t really until I came here to the Waikato campus I think that it all began to come together, and in particular when I moved from having finished my PhD to the then Hamilton Teachers College and then particularly when I began to take the *Rumaki* group, it all came together. And all these strands in my life that I’ve mentioned, all sort of seamed themselves together and I had about fifteen years, sixteen or seventeen

⁴¹ Late in 2008 I heard Jim Ritchie speak at a symposium on the Kingitanga at the University of Waikato, still engaged as a border worker.

⁴² Now the Faculty of Education at the University of Waikato.

actually, of just wonderful growth and learning about being a New Zealander which I wouldn't give away for anything. (Barker, interview, lines 101-106)

His enthusiasm grew from when he was first approached to teach the *Rumaki* group in about 1988. The *Rumaki* group is made up of preservice teachers who were training to teach in Maori language immersion classes primarily, Maori/English bilingual schools (*whanau* teachers) or mainstream primary schools. Students are expected to be familiar with both the English- and Maori-language curriculum documents for all seven learning areas (Barker, 2004a, b).

MB: Ngarewa Hawera and I had [worked] over about ten years or more with ... a group of preservice Maori teacher trainees who are wanting to be teachers but to deliver the curriculum in *te reo Maori*, in Maori language. ... She's [Ngarewa] worked with them on *hangarau* and *pangarau*, which are the equivalents of technology and mathematics, and I worked with them on *Putaiiao*, which is the science. So that's the context in which we've been working. (Barker, interview, lines 37-44)

Barker has recently reflected on his work with the *Rumaki* group in a number of publications (Barker, 2004a, b; Barker & Hawera, 2003) in which he portrayed himself as a culture broker similar to the role described by Aikenhead (1996, 1997).

For Barker, moving to the teachers college was in itself a critical incident but taking on the *Rumaki* class, although significant, does not necessarily qualify as a critical incident; the majority of Barker's teaching and research remained based around western science education. However it did have a long-term influence on how Barker saw his other teaching, he surmised that the Nature of science would seem to be an appropriate place in the science courses to look at indigenous knowledge.

After teaching at Yirrkala and completing his doctorate, Michael Christie moved into tertiary education, coming to the university in Darwin originally teaching Yolngu language and culture, later moving to the School of Education.

MC: ... what I have been interested theoretically has changed over the years but still there through an interest in the ways in which an intimate knowledge of language and the way in which it's used, uncovers completely different perspectives on the world, which allows us to rethink the sort of historical

and cultural contingency of our own conditions. (Christie, interview, lines 157-161)

Here is an indication that his research interests have developed as a result of learning the Yolngu language through understanding the metalanguage and epistemology. It marks a big shift from making the language accessible to westerners so they could better teach about western culture.

In contrast, Mark Linkson has moved back and forth into the tertiary sector as a teacher educator both with Batchelor College and later the Far North Queensland TAFE College.

ML: In my role as a RATEP teacher I tend to be bringing the western curriculum, all aspects of it, all eight KLAs and all the nonsense that goes on behind that. Scaffolding it is the word we like to use in ESL circles⁴³. Introducing it, scaffolding it, making it clear, demystifying the jargon, making it relevant – culturally relevant – to my Indigenous client groups who range from the top of Torres Strait – English second language, Creole-speaking, Island people right down to Toowoomba where the students are basically urban with English as their first language and very much removed from traditional languages and cultures. And my role is to make clear to them just what it is we expect of our teachers in terms of how you teach and what you need to know. (Linkson, interview, lines 248-255)

The emphasis is on giving the indigenous students access to the western curriculum and pedagogy. Incorporating a culturally relevant perspective is a secondary aspect.

The remaining participants in this research did not work at the tertiary level although they undertook graduate studies, Parish in aboriginal education (Parish, 1990).

⁴³ RATEP is the Remote Aboriginal Teacher Education Program. KLA is Key Learning Area: the Australian schools' curriculum is divided into eight learning areas of which science is one. ESL is English as a Second Language.

5.2.5 Concluding remarks

For many of these participants their time in the community schools was significant in them being involved primarily with the indigenous people in a significant way and lead to their careers in indigenous education (except in the formal sense, for Ritchie). Some of the participants could identify a critical or precipitating event which defined their becoming cross-cultural workers but rather for all of them there were accumulated experiences they had with indigenous peoples. All of them acknowledged that there was something of value in the other culture; for some this was knowledge but for others it was personal. The people who had lived closer to indigenous people in communities have had more personal relationships and some identify individuals with whom these interactions took place.

The events also represent affective as well as cognitive interactions, an important factor in terms of Geijsel and Meijers' model of identity learning (2005). They represent positive boundary experiences resulting in identity learning and exemplify unique border crossing events. In looking at the border crossing 'incidents', most are not simply incidents, rather they come about through extended interactions with indigenous people. I suggest that these usually occurred early in their professional lives and take a variety of forms, that there is often no one incident but a series of events, and that the events are unique to each participant.

There is also a sense for each of the participants, although not always stated directly, that they are strong in their own culture. Szasz (2001) identifies being strong in one's own culture and taking an interest in the other culture as key ideas of culture brokers in the ethnohistory literature. I suggested in section 2.4 that these reflect the qualities of a person becoming interculturally literate (Heyward, 2002) and are qualities demonstrated by border crossers.

5.3 Border crossing and beyond

In this section I want to consider how some of the participants have moved beyond border crossing and identified themselves as cross-cultural workers. In section 5.2 I identified some of the incidents which triggered the border crossings

of each of the participants. Here I am going to examine some of the participants' sustained involvement in cross-cultural work. This is not to say that the other participants are not border workers; they may be border workers but the data from the interviews explored other aspects of their cross-cultural lives.

5.3.1 Border workers

I now want to look at the border worker position because I perceive the border crosser position is potentially transitory. I suggest that the border worker position is a more permanent position that a border crosser may come to occupy.

Celia Haig-Brown was strong with the idea that she was a border worker and worked in border worlds but not as a border crosser. This makes sense if being a border worker is seen as a progression from being a border crosser. She has discussed her positioning as undertaking what she calls 'border work' or working at the border between First Nations peoples and the Canadian settler society (Haig-Brown, 1992). For her, this had been a matter of choice:

As a nonnative person, I *chose* to work in this world of borders. (Haig-Brown in Haig-Brown & Archibald, 1996, p. 250, her emphasis)

In the interview she explained some of her reasoning for considering herself to be a border worker.

CHB: I think you know I've used the term border worker and I find that that works for me. I don't talk about border crossings and I know Peter McLaren does. I'm not sure that border crossings are really possible and I say that for a number of reasons.

First of all, for the indigenous communities of Canada with which I work, there's no border that you can cross and be in that community and be outside of the colonial context. It's not possible to do that. ... So, my argument is that First Nations people, indigenous peoples everywhere, everywhere in Canada, let me confine myself a little bit, live in border worlds. (Haig-Brown, interview, lines 36-43)

This is a similar situation in Australia as discussed by Nakata (2004, 2007) regarding the cultural interface where he remarks that indigenous people are constantly at the interface. For Haig-Brown this meant that other western border workers chose, like her, to live in border worlds.

CHB: But for people who try for whatever reasons, like I do, to go and do that work, then we get to live in border worlds, because you get some sense of knowing, you get a really deep knowing of what those colonial relations are about ... So I would say border worker is a better word for me. And this is a border worker, not on a border, not crossing a border, but in a border world. (Haig-Brown, interview, lines 59-64)

Haig-Brown also realised that there were limitations on how much she was able to do as part of her collaboration with indigenous people.

CHB: Yeah, I think that is the really difficult part, how to be useful without taking over anything. (Haig-Brown, interview, line 234)

Haig-Brown saw herself assisting, as an ally to the indigenous people.

CHB: But that was the place that I had to learn how to negotiate, being an ally, being there to be supportive in whatever way and getting out of the way at the proper time. Never being a spokesperson but always being an ally. (Haig-Brown, interview, lines 199-201)

Haig-Brown exemplifies being an ally in some of her writing, particularly through the discussions in Haig-Brown and Archibald (1996). Tompkins (2002) makes the point that even in the role of ally westerners bring power and privilege to the relationship.

In my own work in trying to become an ‘ally’, whether working in a respectful way alongside fellow Inuit or Mi’kmaw educators ... I am reminded of the enormous power and privilege I bring to any relationship. (Tompkins, 2002, p.413)

Tompkins has referred to the necessity of working “in a respectful way” in the same manner suggested by participants.

Haig-Brown (1992) suggests that all First Nations people are border workers. She considers that although westerners can visit the border and some chose to remain there, they were all border workers. Westerners could choose to position themselves away from the borderlands, trying to ignore the borderlands completely.

CHB: I say the average white Canadian citizen who hasn’t ever spent any time hanging out in a First Nation’s context, they somehow escape being in a border world. They don’t escape colonial relations, they may be oblivious to them but they do escape living in a border world because they’re absolutely unconscious and – I often think of it as a studied

unconsciousness – but unconscious of whose land they're on and the existence of indigenous people in those lands from time immemorial. So they don't live in border worlds. (Haig-Brown, interview, lines 53-58)

The position of the westerner is in contrast to the indigenous person regarding the border world or the cultural interface, that indigenous people are constantly at the interface (Haig-Brown, 1992; Nakata, 2004, 2007). However, I disagree with Haig-Brown that all westerners who visit the border world are thereby border workers. There appears to be the possibility for visiting westerners to position themselves in a variety of ways relative to the border world or the cultural interface (section 2.2.6) and that they may choose to vary their position over time. Other westerners seemingly have the ability to position themselves relative to the interface. This could help to explain the range of behaviours westerners display towards indigenous peoples.

More recently, in Haig-Brown (2008) she suggests that being a border crosser is a temporary state and border work is permanent.

When we [non-Aboriginal people] really begin to take Indigenous thought seriously in our theory and our practices, we move to inhabit border worlds. (p.14)

This she suggests is a life-changing process, sounding like identity learning (Geijsel & Meijers, 2005), where westerners recognise they are in a border world.

Similarly, as an educator Mark Linkson had considered the need to be sensitive in his approach to indigenous culture and knowledge. He suggested that his attitude developed:

ML: By being sensitive to the cultural, Indigenous world view and knowledges that are around even if I don't know much about them, and not foregrounding western knowledge at the expense of black knowledge, Aboriginal knowledge, Islander knowledge. And being aware that there are other ways of knowing and understanding. (Linkson, interview, lines 275-278)

In a number of the comments which Linkson made about indigenous knowledge there was always an element of respect. Linkson also commented on how his limited knowledge of the Murrinh-patha language had been of use to him when visiting the community about ten years later with a group of his students.

ML: ... I already had the network and the understanding and the knowledge and even the language, in my head – which amazed the hell out of me, how much language popped out of my head last week, which I'd totally forgotten. (Linkson, interview, lines 343-345)

Linkson's experiences are some of the most varied of all the participants and include small communities which have traditional lifestyles, and urban groups, people whose language skills range from mainly their own language with limited English to others who only using English. There is a degree of flexibility in Linkson's work which suggests that it would be appropriate to describe him as a border worker, if not bicultural.

5.3.2 *Being bicultural and border working*

I want to consider how being bicultural shares some of the attributes of being a border worker and is also an identity issue. James Ritchie in particular identifies himself as being bicultural and in *Becoming bicultural* (Ritchie, 1992) he is not only being autobiographical but suggests to others how they should act when working with Maori.

In the interview Ritchie made the point a couple of times that he saw the need to be strong in his own culture as well and that he was not giving up his western cultural identity.

JR: You need to respect your own position in your own culture. (Ritchie, interview, line 370)

In response to a question whether he saw himself as a cross-cultural worker ever becoming a Pakeha Maori, a marginal position associated with colonial New Zealand (Bentley, 1999), Ritchie replied:

JR: I think some people thought that. No, I wasn't rejecting being Pakeha, and in that sense, yes, in that sense, I was a cultural broker, because... Essentially I was Pakeha and I knew who I was, I knew what my background was and I knew who William Shakespeare was and why he was important. (Ritchie, interview, lines 108-109)

This key idea of culture brokers being strong in their own culture is also identified in the ethnohistory literature (e.g. Szasz, 2001) and again is part of being a border crosser. Ritchie could not become Maori and as he was bicultural, he identified strongly as a westerner understanding the basis of his culture, not as a marginal

man (Park, 1928; Stonequist, 1937). The hybrid nature of biculturalism has its origins in the hybridity of the 'marginal man' (section 2.5) but biculturalism is a cultural hybridity.

In his work with Maori, Ritchie considered his position as:

In the Maori world I am an outsider, a visitor, and always will be. ... I now feel no urge to argue for a common identity, for if I do I only emphasise 'otherness'. (Ritchie, 1992, p. 51)

Ritchie is emphatic that he remains a westerner working with and for Maori at their behest.

I cannot define what all this has meant. There has been a yielding up, a limitation of personal freedom – of my own choice, not imposed by Tainui. There are times when Tainui clearly tell me not to speak or not to act, and I have learned to respect that. But they do so rarely.

I have had to learn to stand up to forthright, direct criticism and not take offence; to enter into the emotional life of the tribe, not only its policy and strategy discussions; to stay behind when the visitors have left and the real purposes emerge. (Ritchie, 1992, p. 49).

This is a similar position to the one ascribed by Haig-Brown to herself in the previous examples as a border worker and ally. For the border worker there is a commitment to the other which proscribes how they function, taking into account the protocols and without taking over (cf. Haig-Brown, lines 199-201, above).

Some of these ideas were repeated by Ritchie in the interview:

JR: ... it's never been a problem for me to work on the other culture because Maori people have been enormously generous and kind to me in giving me stuff and telling me when I've made my mistakes. (Ritchie, interview, lines 372-375)

These ideas compare favourably with Haig-Brown's idea of being a border worker. Although he had used the term 'culture broker', near the end of the interview Ritchie started to query the terminology for what his role had been.

JR: Let me say finally that my experience has been in this broker role... I suppose it's simpler to call it that, I don't know quite what I want to call it. My experience has always been in the end, positive. As I said before, there've been awkward moments, but that's because I went in with a

cautious, respectful but positive viewpoint. (Ritchie, interview, lines 539-542)

Ritchie (1992) considered he was working at the cultural interface – Haig-Brown’s border world – where he works for both sides and when he works for Maori it is with their acknowledgment.

Language and border working

The issue of language fluency has not been an issue in the discussion of border crossing. Interpreting language and interpreting cultures have generally been seen in the literature as independent concepts rather than interdependent ones. Ritchie was able to give some insight into the advantages of knowing the language of the other.

JR: I knew enough language to know what I didn’t know and that left me in a position where I could appreciate where my knowledge stopped and my ignorance began and I could start to ask people, “Why are they doing this. What’s the problem here? What is the opposition about?” (Ritchie, interview, lines 335-338)

There is an implication here that access to the language promotes greater understanding regarding the knowledge aspects and Ritchie became more reflective of his position.

Christie shares Ritchie’s ability to work in another language and his depth of knowledge of the Yolngu language gives him access to the meta-language (Trudgen, 2000) and epistemology.

MC: ... what I have been interested theoretically has changed over the years but still there through an interest in the ways in which an intimate knowledge of language and the way in which it’s used, uncovers completely different perspectives on the world, which allows us to rethink the sort of historical and cultural contingency of our own conditions. (Christie, interview, lines 157-161)

Unlike Ritchie, he has used his understanding of the language more as a key for understanding knowledge and the nature of knowledge rather than acting in some form of mediating or advocacy position.

Some of the research on cultural mediation suggests that knowledge of language is a precursor, or more likely a co-requisite, to understanding the culture (Bochner, 1981). In his work on intercultural literacy Heyward (2002) suggests that second language acquisition is a necessity for cultural competence and to be acknowledged as bicultural. This may be the case in working in another country but is not always a possibility when working with indigenous peoples from varying language groups, which is the case with Haig-Brown and Linkson.

5.3.3 *Beyond borders*

Michael Christie's position as a cross-cultural worker is rather elusive in the interview. Judging from his history of involvement with Indigenous Australians, particularly with the Yolngu people from Northeast Arnhemland, he has made a border crossing. However in the interview he was uncomfortable with both the ideas of culture broker and border crossing. He considered that brokerage implied the commodification of culture and knowledge, as well as setting up incommensurabilities or borders between cultures.

MC: ... cultural boundaries are an effect of who we are at particular places and moments, rather than a determinant. And because of that, there seems to be something essentialist about the notion of people being on either side of a cultural boundary, as if the boundary pre-existed the two peoples' interaction somehow, rather than being an effect of them. (Christie, interview, lines 19-24)

Some of his earlier writings (e.g. Christie, 1985) indicate that he had been a border crosser and maybe was a border worker.

Christie considered the postculturalist position expressed by McConaghy (2000) was close to the way in which he was currently thinking.

MC: ... I suspect that that postculturalist position is one that is very useful to, and relies on the ways in which white people involved in indigenous education use culturalist assumptions to perpetuate their sense of value and importance and indispensability. (Christie, interview, lines 30-32)

It would seem that at the time of the interview Christie considered himself to be a postculturalist for whom even the border worker/border world position was also meaningless as he considered that borders were nonexistent. McKinley (2005) considers that when the blurring of borders or boundaries goes beyond the 'we

and they' dichotomy, the new position can be interpreted as being postcolonial, similar to an interpretation by Bhabha (1994). I consider Christie to be a border merger or border 'blurrer' for whom the concept of cultural borders is nonexistent. In both postcolonialism and postculturalism the cultural binary no longer exists (McConaghy, 2000).

5.3.4 Concluding remarks

The four participants described herein, Celia Haig-Brown, Mark Linkson, James Ritchie and Michael Christie, have well-developed skills as cross-cultural workers. Haig-Brown and Ritchie perceived themselves as working at the cultural interface. Factors which identify a border worker include their choice to continue to work in the border world, their respect for and commitment to the indigenous people and their work as allies with the indigenous people.

These qualities are similar to those who identify themselves as bicultural (Heyward, 2002; LaFromboise *et al*, 1993), although the issue of being bilingual is not resolved. Ritchie has worked with Maori and Christie mainly with Yolngu and they have well-developed skills in these languages. Haig-Brown and Linkson have worked with a number of indigenous groups (tribes or language groups) with a variety of languages, rather than with single-language groups like Ritchie and Christie, although Linkson remembered a limited amount of Murrinh-patha language from Wadeye.

Christie has moved on from the border worker/bicultural position to one where he considered that the notion of cultural borders is counterproductive. He aligned himself with the theoretical position as a postcolonialist primarily by blurring the cultural dichotomy and as a postculturalist by abandoning culture as a critical factor.

Applying the theory of Geisel and Meijers' model of identity learning (2005) does not address the sustained interaction of border workers directly. However, sustained interaction would imply that the intuitive sense-giving and discursive meaning-giving phases would continue to develop and interact. Also cognitive understandings and affective interactions continue to develop so that a mature

sense of identity results. This seems to be the case particularly with Haig-Brown, Ritchie and Christie. Perhaps Christie's postculturalist position represents the acme of identity learning where notions of borders and cultures cease to exist.

5.4 Conclusion

From analysis of the participants' interviews, there appeared to be limited influence on people becoming cross-cultural workers during their early lives. For the majority the cross-cultural events which they discussed were in the earlier, but not necessarily the earliest, years of their careers. For some the events came from fortuitous or accidental opportunities where they found themselves living and teaching in indigenous communities, leading to a realisation that the culture which surrounded them and the indigenous people were of value both personally and professionally. Others found that even later in their careers, similar values existed when they interacted with indigenous people and their world. In general they did not identify single critical events which caused them to become cross-cultural workers but rather accumulated personal experiences.

The narratives are the life histories of how the participants of interest originally found themselves located at the cultural interface. Each story is unique and results in the participant's unique positioning at the cultural interface. For some of the participants their internal networks seem to have created situations where they were selected to undertake the cross-cultural projects (Aikenhead, Barker) whereas for others there was a decision which they took, often without any background knowledge of the conditions under which they would be living and working. Perhaps they were flexible in adapting to the new situations. Neither cultural heritage nor gender seems to have been an issue; although the participants are predominantly male, the two females have also established their own careers at the cultural interface.

For each participant it has been possible to show a pattern of events that led to their border crossing, often through their interactions with indigenous colleagues or members of the community. This chapter has identified that the participants came into the role more or less by accident and demonstrates the unique

experiences each of them have had. Personal satisfaction rather than the attainment of power seemingly justifies the participants' involvement.

For westerners, then, there appears to be the possibility for them to position themselves in a variety of ways relative to the border world or the cultural interface and that they may choose to vary their position over time. I have identified three enhanced positions which are occupied by westerners undertaking cross-cultural work:

- Border crossers: those who cross the metaphoric border, who show an interest in the culture and aspirations of indigenous people, showing them and their culture a degree of respect
- Border workers: choose to continue to work in the border world as allies with the indigenous people, demonstrating respect for and commitment to the indigenous people. I suggest that being bicultural is a subset of being a border worker as it includes the ability to be bilingual.
- Border mergers: having crossed the border, these people no longer consider there is a cultural dichotomy. Rather they find the two cultures so familiar that they merge the two.

There are a number of similarities with the cultural brokers examined in the ethnohistorical literature. Szasz (2001) considers that all of the cultural brokers in her book came into the roles more or less by accident and that each of them had unique experiences; this appears to be the case with the participants. As well, she considers that they saw value in what was in the other culture and this is also the case for the participants. What this value is also varies between the participants. I suggest that these are in fact the characteristics of border crossers and in the next chapter I look at how the participants as border crossers take on roles as culture brokers.

CHAPTER 6. UNDERSTANDING CULTURE BROKERAGE

In chapter 2, I examined the two ideas of border crossing and culture brokerage primarily from the literature and I indicated that the two ideas differ – border crossing is about identity whereas being a culture broker was a role that a person could undertake. I also argued that the border crosser is related to the ‘marginal man’ whereas the culture broker relates to the ‘middleman’ position, ideas with their origins in anthropology. In chapter 5 I indicated that the participants in this research had experienced border crossings as a consequence of working cross-culturally and either they located themselves, or could be located, within a spectrum of border crossing positions.

My purpose in this chapter is to explore the participants’ ideas about being culture brokers, and their experiences in that domain. These are organised into five areas relating to understanding the role of the culture broker. The areas are derived with reference to specific questions in the interviews, the literature, particularly the ethnohistory literature, and the participants’ extended responses in the interviews.

The first area is about participants’ perspectives about the role of culture broker and how that relates to the image of culture brokers in the literature as well as their own identities as border workers (section 6.1). Here I examine four key ideas: culture brokers recognise that there are two different cultures and they are curious about the other culture; they recognise that the other culture has something of value, particularly knowledge, ideas and language; they operate where there are perceived incommensurabilities between cultures; and they operate in either direction although they would normally operate as an insider.

The second area is about the purposes of culture brokering (section 6.2) and I examine why people become culture brokers and what they think they can achieve by doing it. Then in the third area I consider the intrinsic qualities of a culture broker, looking at what personal qualities are needed for a culture broker to be successful (section 6.3). I also consider whether it is possible to be a culture broker without having these qualities.

Next I examine the power relations involved in culture brokerage in section 6.4, and finally, in the last area (section 6.5) I consider criticism of culture brokerage

by examining some of the negative responses in the interviews to issues dealing with culture brokers and cultural borders.

6.1. Perceptions of culture brokerage

The first area on culture brokerage that I examined through the interviews was the participants' understanding of what a culture broker was. The discussion uses the terms 'insider' and 'outsider'. 'Insider' refers to an individual working cross-culturally who identifies with their own original culture. The terms relate to the modernist dichotomy between the 'we' and the 'they' of Pillsbury and Shields (1999) and the insider identifies with the 'we'. This means they are outsiders with respect to the host culture. In the following commentaries I use the terms 'insider' and 'outsider' with respect to the participants' western culture.

As the person who had introduced and written most about culture brokers in science education, Glen Aikenhead had a clear idea of what a culture broker was, although he described it primarily in terms of 'teacher as culture broker'. He perceived the role as an insider role, particularly from the perception of a western teacher teaching western science to First Nations students.

GA: I describe it as someone who understands that there are two cultures. The two cultures are always different and ... the culture broker assumes there is a border crossing and that they articulate this border crossing to students in some appropriate way... (Aikenhead, interview, lines 2-5)

Aikenhead's description mirrored what he had written previously (Aikenhead, 1996) which was to resolve the problem he saw with students dealing with conflicts between the subcultures of home, friends, school and school science, which for some students were difficult, hazardous or impossible (Phelan *et al*, 1991; Costa, 1995). The source of the problem is conceptualised as some sort of border or boundary between them which needed to be crossed and the role of a culture broker could be seen in terms of a travel agent or tour guide facilitating a border crossing (Aikenhead, 1996; Lugones, 1987). The model of a culture broker that Aikenhead has chosen to use is one he considered to be a pragmatic one.

GA: And I thought, "That's fine, but in this case I'm working with science teachers and they do seem to see the world in mechanistic ways". ... I think this metaphor of culture broker is one that will have resonance with teachers. (Aikenhead, interview, lines 141-145)

He saw that being a culture broker was a pragmatic way to bring outsiders into the world of western science. This is evident from some of his publications (Aikenhead, 1996, 1997; Aikenhead & Otsuji, 2000; Jegede & Aikenhead, 1999), where he develops a hierarchy which relates the type of culture brokerage to the difficulty of the border crossing. He portrays teachers metaphorically as possible tour guides, travel agents and culture brokers, depending on the level of difficulty of the border crossing.

Miles Barker also considered that when he worked as a culture broker he was between the two groups as some kind of middleman but working as an insider for western science.

MB: In some way I was standing between a group of people who are deeply and consciously Maori and a community of scientists and science educators, and somehow I had to facilitate a meeting of minds. I had to get them, perhaps not apprehending each other but certainly helping Maori people to explore, engage with the world of science and the world of science education. (Barker, interview, 10-14)

Here the imagery is of a culture broker positioned between two different cultural groups, although not necessarily perceiving a border and maybe subconsciously straddling it. Their role is “to facilitate a meeting of minds” as Barker put it, so the broker is not advocating assimilation of the two cultures. However in this position he was assisting in a one-way exploration or engagement; here he was an insider for the culture of western science wanting outsiders to explore it. Barker also suggested that being a culture broker was a part-time affair, something you only did when it was expedient or necessary.

MB: But I think in an intensely practical way, what I’m really saying is, it’s legitimate to leave your home pad and make a foray out across the border into the world of something, like science. It’s legitimate to take what is good, what is helpful, what is supportive, what will help you grow as a person in the deepest sense, *leave that which will undermine you and come back across the borderland*. (Barker, interview, lines 124-128, his emphasis)

Barker uses the term ‘borderland’ in much the same way that Haig-Brown uses border worlds; there is a sense in this quotation that culture brokerage is an occasional event (a foray), whereas being in the borderland is to be working in a permanent site.

On the other hand David Parish had not heard of the term 'culture broker' before the interview and tried to create some meaning of it.

DP: ... I'm presuming you're talking about the role of somebody who isn't part of a culture, who is attempting to change it so there's a closer alignment between that culture and the other person's actual culture. (Parish, interview, lines 4-7)

There are three features of this to be commented on. Firstly, it portrays the culture broker as an insider. Secondly the alignment is seen to be between cultures rather than of individuals. The third is that the culture broker is attempting to cause change. As the interview progressed Parish saw that some of the instances he described could be explained in terms of culture brokerage and that they had involved individuals from different cultural backgrounds.

Leonie Jones' original understanding of culture brokering was similar to Parish's and again it is couched in terms of teaching.

LJ: I think it's the notion of a [western] teacher goes into a school and is not only giving out their own culture but also enabling, being a conduit for the Aboriginal kids to learn. (Jones, interview, lines 2-5)

Her situation is similar to that of Parish; again the culture broker is an insider although she viewed the interaction as between people.

Each of these four people (Aikenhead, Barker, Parish and Jones) had considered their work as culture brokers from the perspective of insiders, bringing people to an understanding of their western ideas.

In contrast Haig-Brown saw herself primarily as a border worker but there appeared to be at least some situations in which she agreed that she worked as a culture broker, particularly when teaching western teachers about their relations with First Nations people.

CHB: ... the other work I've had to do ... is to nurture the white people into the place where they can actually understand some of the strengths of the First Nations students bring into their classrooms. That's really hard work, they don't really get it. ... That's the most interesting part for me. And if there's any brokering going on, maybe that's where the brokering happens when I go to my people and say, "You talk too much. You're blind to many of the attributes that the students have brought here." I don't say it quite that directly but it gets close. (Haig-Brown, interview, lines 256-263)

There seems to be an attitude of change implicit in her definition here of culture brokering which is not present when she talked about being a border worker, that border working was about getting to understand about the border world. However, in working here as a culture broker she is working as an outsider for the First Nations people as patron with white people as clients.

James Ritchie took a similar perspective to Barker in positioning the broker in between cultures, although he knew of culture brokerage from the entrepreneurial perspective.

JR: ... in the sense that a broker is a person who stands between cultures interpreting one to the other, I'm happy with that as a definition although it all depends on whether people want to be brokered. (Ritchie, interview, lines 53-55)

The constraint, "it all depends on whether people want to be brokered", is very important and has implications in terms of power and culture brokering. In other definitions it seems to be implicit that brokerage is a positive action, whereas there is the suggestion here that there can in fact be resistance to it. Another important point raised by Ritchie is that he saw brokering as interpreting one culture to the other as a two-way process. Sometimes he worked with the indigenous people:

JR: I got in, I gave the people some tools they could use. ... So I was kind of supporting a structure which would then itself handle the brokerage. I didn't have to do it. (Ritchie, interview, 236-241)

At other times he saw himself working for the indigenous people, for instance in getting the university authorities to understand what the Maori people wanted.

JR: So I became a broker in that sense, that I had to interpret to this university what Maori people wanted of it. (Ritchie, interview, lines 296-297)

In the interview Ritchie spoke of some of the projects he had been involved in with Maori, particularly his early work the Murupara community and later with Tainui which dated more or less from his appointment to the University of Waikato. All these reflected his capacity to be a culture broker both as an insider and an outsider.

Finally, Mark Linkson acknowledged that he was introduced to the idea of culture brokerage through reading Aikenhead's work. He went on to speak about his experiences with and being a culture broker, giving a perspective on culture brokerage which also relates to insiders and outsiders. Linkson had worked in a number of positions in indigenous education and he saw himself as a culture broker in these. The first of these refers to his curriculum resource development for the NT Department of Education.

ML: But I always see this as a two way street, in that any of this material that I worked on, especially in the Territory, was for whitefellas really. To me the client group was young white teachers who had no bloody idea what they're doing in a remote community school and needed to be told how best to teach those kids. So I was culture broking for them. ... I was preparing material for whitefellas so they could best teach black kids, because the blackfellas don't need to be told how to best teach black kids. So I was culture broking for them. (Linkson, interview, lines 262-269)

He also described his work in a more recent position in terms of culture brokerage where he worked as an insider, where his clients were indigenous teacher education students.

ML: And my role is to make clear to them just what it is we expect of our teachers in terms of how you teach and what you need to know. Understanding of curriculums, understanding of teaching strategies, understanding of academic writing. So that's where I'm brokering at the moment, between the western curriculum and the various backgrounds of my client groups up and down the length and breadth of Queensland. (Linkson, interview, lines 354-259)

On a visit back to Wadeye with some of his preservice teacher education students just before doing the interview, Linkson found himself acting as a culture broker between two groups of Indigenous Australians.

ML: So I was in the position where I was culture broking between remote Aboriginal culture, Murrinh-patha culture in Port Keats with semi-urban/rural Murri culture of Queensland. I was the person standing in between, and I'm not indigenous. However I had a huge role to play and I know that by the end of the week my students were thanking me profusely for my efforts in introducing them to that community and the people there. (Linkson, interview, lines 337-341)

In this situation Linkson found himself acting as an outsider of both groups of which he had some understanding.

In summary, there are a number of modes of action identified here in which the culture broker is seen to act. Acting as an insider can be seen as the first level and because it focuses on culture brokers brokering their own culture, it suggests that they may not need to have been border crossers. Haig-Brown and Ritchie discussed two-way brokerage, Haig-Brown focusing on her ability to act as a culture broker for the indigenous people whereas Ritchie saw himself as being able to work both ways. Linkson commented on brokerage between two groups where he was actually an outsider of both.

Another aspect of culture brokering is that some of the participants make use of it as a strategy in 'we and they' situations. Although they may perceive the world from postmodernist or postcolonialist perspectives, the participants understand that this is not necessarily the case for their patrons and clients, so they resort to a modernist perspective to achieve their outcomes.

6.2. Purposes of culture brokering

The purposes of culture brokerage are to assist other people to understand another culture and to be able to negotiate cultural borders; to clarify communication between cultures, not necessarily in terms of language but in terms of meaning; and to promote sustainability of cultural understandings.

The idea of assisting people in some way came through consistently in the interviews however there were a number of ways of assisting. There was an interesting combination of the personal and the institutional in the responses. Some of the responses reflect Paine's (1971) institutional patronage model of culture brokerage, whereas other responses talk about what the individual wanted to achieve.

Glen Aikenhead's response is probably the simplest and focuses more on a mediating role.

GA: Somebody helping these two people get along. (Aikenhead, interview, line 201)

This response is certainly the case in terms of the modern use of the term 'mediator' in law and business (e.g. Herman, 2006) more as an intermediary

between two contesting groups, although the term had been more akin to culture brokering (Bochner, 1981; Schwimmer, 1958; Weidman, 1983). Aikenhead also considered that being a culture broker was a pragmatic way of facilitating border crossing by others, particularly to bring outsiders into the world of western science (Aikenhead, interview, lines 364-365: section 6.1).

Aikenhead also gave two instances where he had acted as a culture broker in helping to establish good communications between people. In the first, which had taken some years before, he had acted as an intermediary between two groups of English speakers, one group from the United Kingdom and the other from North America.

GA: So my job was to literally butt in, to make the communication much more eloquent, I guess. It was never about words, it was about the experiences, the formal ways things are organised that had a totally different meaning, things like that. So looking back on it (I had forgotten about this until this interview), that's classic culture broking. It's not translating a language, that's why the word "translation" was humorous, but there was no other word we knew how to use. (Aikenhead, interview, lines 439-444)

Even though they were ostensibly speaking the same language, having a culture broker with knowledge of both cultures in this case facilitated the meeting. In the second instance, which took place a day or two before I interviewed him, Aikenhead mediated between two academics for both of whom English was a second language, to help them understand a point one was making during a conference presentation.

GA: "I'm sorry I don't understand your language ... but I'm supposing you're using English in a different way than he's using English." And as you say that, as in the case yesterday, the conclusion was, "You're talking about the same thing". (Aikenhead, interview, lines 434-437)

In both cases Aikenhead saw himself as a culture broker trying to clarify the meanings between two groups or people; rather he was acting as a cultural mediator.

Other respondents considered that the assistance they could give was in developing skills. James Ritchie suggested that:

JR: I got in, I gave the people some tools they could use. ... So I was kind of supporting a structure which would then itself handle the brokerage. I

didn't have to do it. Actually all my experience has been like that. (Ritchie, interview, lines 238-244)

He admitted that there were times when he made use of his Maori knowledge in trying to assist them, often in formal setting such as the Waitangi Tribunal.

JR: I have learned not to brag about my Maori knowledge but there are times when I have to reveal it. And those difficult times are the times when in order to progress some cause or other, I have knowingly exceeded the bounds of knowledge of the people of whom I am speaking and sometimes that's alright, sometimes I'm forgiven. Other times, no. "It's that Pakeha on about our culture again". (Ritchie, interview, lines 508-513)

Ritchie's intervention sometimes led to conflicts of interest between various groups, particularly over traditional land ownership, where he was unaware of all sides. He did indicate that there were times when he had been told that he was not to speak.

There are times when Tainui clearly tell me not to speak or not to act, and I have learned to respect that. (Ritchie, 1992, p.49)

The implication here is that the culture broker works on behalf of somebody else and is responsible to them, rather than motivated by their self-interest.

Leonie Jones saw that understanding western culture and being able to use English was a way assisting them Indigenous people and of empowering them.

LJ: ... what we are doing is helping them to take on board English and western culture, as a way of empowering them. (Jones, interview, lines 30-31)

She saw the role of culture broker as purposefully informing about the western culture, although she was ambivalent about the place of Aboriginal culture in the curriculum.

LJ: I think we need to be mindful of maintaining Aboriginal language and culture but I do think whitefellas are there for a reason, that is to share their culture, to teach their language, to give Aboriginal people a window into mainstream. (Jones, interview, lines 88-90)

There are implications here of Paine's institutional patronage model (1971), focusing on the patron's values rather than the clients' needs.

Apart from an individual role, David Parish saw the purpose of culture brokerage more from the position of western institutions such as government and in particular schools and his initial comment resonates with Paine's institutional model (1971).

DP: I would be coming from the dominant side attempting to modify in some way the cultural understandings of those people who are part of the indigenous society. (Parish, interview, lines 8-10)

However he was aware that he had been the recipient of indigenous knowledge through an indigenous culture broker. He also saw that there were problems with misunderstanding about how western institutions worked, that frequently the community was passing on information about how it operated but there was nothing flowing the opposite way.

DP: And in many respects there was a one way transmission of culture – it was coming from the Warlpiri, from the Indigenous people to the non-indigenous people. ... And we suddenly realised that there are tremendous gaps in their knowledge and understanding of how our society worked. So we then had to take lots of opportunities as they presented themselves to talk about things like coming to work, things like delivering a program which has a consecutive nature about it. And all this was interrelated with the cultural knowledge that was coming the other way. And I'd like to feel that over a period of time there were better understandings on both sides. (Parish, interview, lines 132-141)

Parish could see that acting as a culture broker was necessary to assist the community come to understand what role western culture takes. Part of Mark Linkson's agenda was to help the Aboriginal people to understand similarly western institutions.

ML: I would say I've become more aware of how Indigenous people can misinterpret western institutions, and misinterpret western ways of communication. In that respect I can maybe assist Indigenous peoples to better understand what the whitefellas are on about. (Linkson, interview, lines 259-262)

Lack of understanding and misunderstandings of western institutions by Australian Aborigines have been extensively identified by Trudgen (2000). Galarrwuy Yunupingu (1997) has also identified misconceptions by westerners of indigenous institutions, including attempts to misappropriate some of them (e.g. by referring to law by the diminutive, lore).

Miles Barker suggested that the role of culture broker could be one that promotes sustainability of cultural components:

MB: The culture broker promotes choices in the future by facilitating the augmentation (not just the simultaneous gaining and losing) of the cultural and linguistic repertoires of today's people. ... The cultural hybridisations which can result (not unlike genetic intermingling) ensure that this process is not merely an act of museum-style preservation, but that it is organic and creative and futures focussed. (Barker, interview, lines 310-314)

Through these comments Barker was emphasising the value of the other culture which I suggest is a quintessential characteristic of a border crosser and a cultural hybrid. He was commenting also on the dynamic nature of culture (Sen, 2006).

In general, the purpose of culture brokering as suggested by the participants would appear to be to facilitate communication. It could be to clarify the communication between two groups, to reduce potential misunderstandings between them and to promote positive attitudes towards the other culture and people.

6.3 Individual and intrinsic qualities of culture brokers

The literature on culture brokers is limited in its discussion of the personal qualities of culture brokers. In Szasz's ethnohistory literature (2001) they are seen to share several common personality traits. People who act as cultural brokers are curious about the other culture and are receptive to understanding it. They acknowledge the other culture offers something of value. They are determined to succeed in their role and they demonstrate to the other cultural group that they are trustworthy. Jezewski (1989, 1995) identifies cultural sensitivity – an awareness by one person of the difference in values, beliefs and behaviours of another and how their needs may be different – as a contingency which might affect the brokering process rather than as a characteristic of the broker. She also included establishing trust and rapport as interventions in her culture brokering model.

The intrinsic qualities which were identified from the interviews with the participants fell into five categories. Firstly, culture brokers come to understand the other culture, particularly of the customs and protocols, relationships and status, and at times, the language. Secondly, there is recognition that the other culture has alternative perspectives or ways of knowing or making sense of the

world (world view). This results in different knowledge and epistemology that have intrinsic value. Thirdly, moving from the cognitive to the affective domain, culture brokers show how respect for the other leads to earning their trust. Fourthly, by being sensitive to possible conflicts between the cultures leads to them being able to develop strategies to deal with the conflict. Finally, a culture broker should be a reflective practitioner and practise self-evaluation.

6.3.1 *Having an understanding of the other culture*

This is orientated towards the cognitive attributes of another culture. Celia Haig-Brown's work as a border worker is based on working collaboratively with First Nations people where she advocates strongly the need for understanding cultural protocol.

The bicultural dimension of our work across differences is never easy: cultural protocol and ethical behaviours must be central ... Only when a researcher takes the time to learn and honour cultural protocol can people begin to talk together. (Haig-Brown, 2001, p.21)

Mark Linkson considered how the level of understanding a culture needed to be effective.

ML: You don't have to understand the indigenous culture of the person that you're working with particularly much—it certainly helps to have a certain depth in it. All you have to have in your heart is the acceptance that their ways of doing and understanding and living are no better and no worse than western ways. (Linkson, interview, lines 290-294)

Considering that culture may be defined as how people fill their needs and wants, Linkson has a relativistic view of culture focusing on the similarities rather than on exoticism (in the sense of Said, 1995). Obviously the longer one remains surrounded by another culture there is the potential to understand it deeper. To do this the culture broker needs to focus on similarities with their own culture rather than deficit thinking and pathologising practices (Shields *et al*, 2005) which is often the case with border line cultural workers.

Leonie Jones understood that the push for democratic institutions in Aboriginal communities would create a tension with the customs of the people.

LJ: Once again we come from a very western viewpoint of democracy as being the best way of people being represented in fairness and people

having a chance to make decisions in their life. That cuts right across a lot of Indigenous ways of doing it and that's quite frustrating because you think, democracy's right for everybody, isn't it? But who's to say it is? Western people do. (Jones, interview, lines 299-303)

In the past many western institutions, including missions and schools, have been forced onto indigenous peoples without any consideration of their culture. This was seen from a Melanesian perspective as:

“The white man didn't want us to learn about his ways but only about his religion.” (Karsoon, in Waldrip & Taylor, 1999, p.297)

In response to the need to respect culture David Parish set up a committee at his school at Lajamanu when he was principal that followed traditional cultural lines even though it was in a western institution.

DP: ... we got the senior man from each of those four [skin groups] to become essentially an advisory group to the principal. And we met regularly and talked about the sorts of things that were having an impact on the school. And concurrently, they would meet amongst themselves and other Aboriginal staff about things that could be done to help make the school more effective as they saw it. (Parish, interview, lines 128-132)

The skin groups were each represented and the group functioned in a culturally appropriate way; Parish had acted also appropriately as a cultural broker, as long as he listened to what the committee had to say.

As James Ritchie said, “and listening is always important” (interview, line 334). Celia Haig-Brown also recollected a discussion about listening with a First Nations colleague.

CHB: He was talking about the difference between white people and First Nations people, and he said, “You know, the thing about white people is, they're either so busy talking or thinking about what they're going to say next, they never listen to anybody.” (Haig-Brown, interview, lines 218-221)

Even Native American researchers comment that they needed “to keep their mouths shut and listen deeply” (Brayboy & Deyhle, 2000, p.167) as they undertook their research with Native Americans. Philips (1993) indicates that whereas white middle-class Americans break up silences by responding using ‘mmm humms’ and ‘yesses’ to what the speaker said, silence and other non-verbal forms of communication are used by American Indian students and may not be

recognised as such by western teachers. Silence was also one feature identified as being significant by Linkson.

ML: They've got their culture which says silence is a good thing. Silence shows that you're thinking and you're paying attention, but also they have that translation effort to go through if they're talking to a non-indigenous English first language person, if you can't come at their language at all. (Linkson, interview, lines 131-134)

Linkson also notes here the translation effort which he would have experienced working with Aboriginal people in the Northern Territory who often have English as a second (or subsequent) language. With other indigenous groups this situation may not be the case but the cultural protocols still remain. Macfarlane (2004, 2007) and Bishop and Berryman (2006) encourage teachers of Maori students to be alert to cultural connectedness. Other scenarios have been illustrated from time to time where modes of behaviour have differed between cultures, such as students not making eye contact when being spoken to (Aikenhead, 1997; Harris, 1980; Lea, 2008). McKinley (2001) suggests that this particular behaviour is more likely a response to the exercise of power and has been interpreted another way by westerners⁴⁴. Often it is these examples of cultural differences which are identified in materials regarding living in indigenous communities rather than suggesting ways of encouraging cultural connectedness.

Individual culture brokers have to learn about the relationships and patterns of interrelationships between people in the community. Linkson (1999) discusses some examples where the pattern of family responsibilities differs in an Aboriginal community; one of the stories focuses on the role of uncles and aunties in disciplining their nephews and nieces. Similar situations are outlined in Lea (2008). David Parish spoke of an incident where he had asked his assistant teacher to intervene in a dispute.

DP: I had a disagreement on one occasion with his eldest brother and I actually asked him to help me resolve it, which was just totally wrong and clear evidence to him of my lack of knowledge and understanding. We had some interesting discussions that followed on from that. (Parish, interview, lines 69-72).

⁴⁴ Paul Gallagher states that, "Contrary to what we had been taught at university, you were able to look the children directly in the eye, and they certainly did that to you." (Gallagher & Gallagher, 2004, p.55)

It was a cultural lesson he was never to forget. Quite often, although maybe not as frequently these days, newcomers to Aboriginal communities are incorporated into the family structure. Leonie Jones was surprised to find out she had been adopted as her teaching assistant's sister.

LJ: We became quite good friends and I don't know when it was, at some stage I found out through her that she'd actually decided that I was her sister. Because Maningrida is not like some other places, like Milingimbi where you hop off the plane and they've already designated a family for you. Maningrida was never like that – they had a good long look at you and then, whoever you were getting close to, the relationship would eventually be evolved and then you'd be told this is your skin group. (Jones, interview, lines 194-199)

This practice comes from the traditional way of ensuring that visitors are appropriately positioned in the community; an indigenous visitor would understand their place and the obligations involved which are rarely understood or considered by western visitors. As Jones says, different communities choose to handle the relationships with westerners in different ways.

Also, the status of indigenous peoples needs to be taken into account when seeking cross-cultural understanding. James Ritchie described a situation where a Maori man was negotiating in a meeting to have a proposal agreed to by some Maori people, where status became significant.

JR: The more he went along the more it became not an issue about the issue but an issue about the status of the people in relation to him. Status is really important in tribal societies, it's always important. (Ritchie, interview, lines 384-387)

In Maori societies there are distinctive protocols such as when attending a *powhiri* at a *marae*, and there are protocols within other indigenous groups which, while they may not appear to be so formal, still need to be heeded as much as possible if a person wants to communicate well across cultures.

The issue of speaking the language of the other party has not been an issue in the discussion of culture brokering. In the early anthropology literature it is considered that people of mixed heritage could be culture brokers as it presumes that they will also have skills in translating between the two languages involved. In the literature on mediators there is also a presumption that the mediator has

some language or communication skills (McLeod, 1981; Taft, 1981). Ritchie was able to give some insight into the advantages of knowing the language of the other.

JR: I knew enough language to know what I didn't know and that left me in a position where I could appreciate where my knowledge stopped and my ignorance began and I could start to ask people, "Why are they doing this. What's the problem here? What is the opposition about?" (Ritchie, interview, lines 335-338)

There is an implication here that access to the language promotes greater understanding regarding the knowledge aspects; Ritchie became more reflective of his position. Heyward (2002) considers that the competent bicultural person is also likely to be bilingual. However the assumption that knowing the language would make someone a culture broker would seem to be a false supposition.

Michael Christie's fluency with the Yolngu language came about because he was involved in other activities with Aboriginal people such as fishing and hunting. He considered this engagement was not necessarily possible when just functioning as a teacher-linguist rather than focusing on conversational ability.

MC: People work as the teacher-linguist and because they never get the conversational ability, they do quite well as teacher-linguists but won't ever allow the text they're working with to support their fluency. (Christie, interview, lines 177-180)

Most other participants had limited second language skills; sometimes this was a reflection on the degree of interaction with non-English speakers. Linkson spoke of remembering the Murrinh-patha language from when he had worked at Wadeye but he had worked in a number of different communities since with different language groups, and in some situations with mixed groups for whom Australian or Aboriginal English or perhaps a Kriol was the *lingua franca*.

In summary, having an understanding of the other culture included having knowledge of the customs and protocols, relationships and status, and maybe the language, mostly cognitive attributes.

6.3.2 *An understanding that the other culture has alternative perspectives and that these have intrinsic value*

Understanding that people in different cultures have alternative ways of making sense of the world represents a deeper understanding of the other culture. Mark Linkson considered that western ways of viewing the world were not the only ways (nor necessarily the best).

ML: But I learned a very long time ago to be sensitive and to accept there are other ways of knowing how the world works and understanding how it works, and structuring life. I don't accept that the western way is the only way and I don't accept that it's the best way; it's just one way. (Linkson, interview, lines 287-290)

Celia Haig-Brown expressed a similar idea in the context of culture brokerage.

CHB: And if I was doing culture brokering, it was that, it was to say, "Here's one way, here's an indigenous way." I would talk about indigenous ways of knowing, indigenous ways of making sense of the world. (Haig-Brown, interview, lines 333-335)

Haig-Brown was actually demonstrating the flexibility of the border worker position; as a western culture worker she would normally be promoting the western world view (an insider), whereas as a border worker she can work both ways and present the indigenous view as an outsider.

David Parish had been engaged in a project setting up a library at Milingimbi in his second year and was working with one of the assistant teachers. They became engaged in some discussions regarding indigenous knowledge which led Parish to realise its potential depth (Parish, interview, lines 46-47, section 5.2.2).

However this was at a time when the curriculum was dominated by western knowledge (both Jones and Parish used the expression 'white is right' to describe it, without necessarily endorsing it) but it would seem to be significant that in becoming a cultural worker there needs to be an understanding that there are other ways of thinking about the world. Leonie Jones understood from her studies that the indigenous culture was different and that she would be teaching western ideas.

LJ: So I guess I would hope that I was trying to teach by saying, "This is your culture and your language, but now we are going to step inside the head of a whitefella westerner". (Jones, interview, lines 54-56)

Later in her career Jones was to be influenced by Stephen Harris and his ideas of two-way learning and cultural domain separation (Harris, 1980) and this response appears to suggest that later influence.

Miles Barker had been teaching the *Rumaki* class for several years and understood that there were different ways of seeing the world involved in his classroom.

Although it was not part of his classroom practice, he began to explore the different epistemologies.

MB: [At the School of Education] we've started to ask ourselves fundamental questions about what is the purpose of each of these stories. How are they different? What similarities do they have? Are they in conflict or are they in some way congruent? Under what circumstances would one story be relevant and the other story be relevant? Do we even have to choose between the two stories? And I suppose from this kind of discussion, looking at the characteristics of the two stories, I suppose what we're really doing is looking at the characteristics of *taha putaiao*, the characteristics of science, and the characteristics of *matauranga Maori*, the characteristics of Maori knowledge, and going quite deeply, really, into the epistemology. (Barker, interview, lines 152-160)

Statements of this type could be interpreted as relativism, accepting that the two knowledge systems are equally valid (Matthews, 1994). For Barker this is not the case.

MB: There are different groups of people with different mental models of how they see the world. If I put it like that some people might accuse me of being a scientific relativist. I don't see myself as a scientific relativist at all. I see the glories of soundly-based, wonderfully elucidated scientific knowledge as one of the most wonderful features of the world we live in. And I think I've made that clear to everyone. I'm certainly not opposed to scientific knowledge in the slightest. (Barker, interview, lines 245-250)

Harding (1998) also rejects epistemological relativism. She considers that western science is a localised knowledge system, as are other ethnosciences, but rejects the notion that they are equally defensible. Her standpoint approach is "different cultures' knowledge systems have different resources and limitations for producing knowledge" (p.19).

In summary, understanding that the other culture has alternative perspectives or ways of knowing or making sense of the world (world view), which results in different knowledge and epistemology, and that these have intrinsic value. These

are primarily cognitive attributes but they can be described as being ‘deeper’ or metacognitive.

6.3.3 *Show respect for the other – earn trust of the other*

Showing respect, cultural sensitivity and humility and earning trust seem to be the two sides of the same coin and is a move away from simply understanding to valuing, from the cognitive to the affective. Showing respect also involves a broker being strong in their own culture as well as understanding that for people in another culture to show mutual respect and then trust, is not necessarily part of their perception of the broker’s position in a western organisation. In his interview, James Ritchie said that as a broker there was a need for him to be strong in his own culture. He identified strongly as a westerner understanding the basis of his culture, not as a marginal man (Park, 1928; Stonequist, 1937).

To gain the trust of the other is a complex process. According to Ritchie, for a person to be an effective culture broker they need to be trusted particularly by their clients.

JR: So one of the things that a cultural broker has to be always aware of is that there’s a very basic kind of trust involved and if you go too fast or if you’re too pushy or if you don’t listen – and listening is awfully important – you just won’t get the trust and you won’t get ahead. (Ritchie, interview, lines 332-335)

Earning trust is apparently a medium- to long-term project, probably more than is possible in the short-term situations envisaged by Jezewski (1995) in her culture brokerage model. Later in the interview Ritchie suggested:

JR: Part of the respect that’s involved here is an open encounter ... to allow the people the opportunity to criticise you or to give you a fairly honest appraisal of who you are, of what you’re doing and what effect you’re having. (Ritchie, interview, lines 375-377)

Openness in dealing with indigenous people is one aspect of showing respect and it would appear to be essential for a border worker, whereas a culture broker may not consider the need for openness as a prime aim.

There are two levels at which respect works, at the individual level and respect for cultural integrity (Haig-Brown & Archibald 1996; Kirkness & Barnhardt, 1991).

This is well illustrated by Jo-Ann Archibald, a Canadian First Nations person, giving an example of having to develop mutual respect with an Elder who took on the role of teacher:

Our relation as teacher and learner had to be based on respect for each other and respect for the traditional cultural ways of teaching and learning. I further realized that reciprocity was essential for us working together. (Haig-Brown & Archibald, 1995, p.254)

Culture brokers have an interest in the other culture (Szasz, 2001) but this interest needs to develop into respect for the other's cultural integrity, the cultural knowledge, traditions and core values (Kirkness & Barnhardt, 1991).

6.3.4 Sensitive to possible conflicts between the cultures and able to develop strategies to deal with conflicts

Another intrinsic quality is sensitivity regarding cultural conflict. Cultural workers, particularly teachers, need to be aware of the likelihood that there is going to be some sort of clash or conflict between the two cultures. Glen Aikenhead saw it was possible with students in western schools and understood that strategies were needed to reduce the impact.

GA: And that as a culture broker you are mindful that there might be cultural conflicts that arise so you are vigilant or sensitive to potential conflicts that arise with the students. And lastly that you have some strategies to help students deal with those conflicts. (Aikenhead, interview, lines 8-10)

He suggested that some of these strategies could incorporate Jegede's (1995) ideas of collateral learning.

Mark Linkson was also aware of the possible conflicts arising from different interpretations of knowledge, particularly of science knowledge as he, among others, had documented some alternative conceptions (Linkson, 1999).

ML: By being sensitive to the cultural, Indigenous world view and knowledges that are around even if I don't know much about them, and not foregrounding western knowledge at the expense of black knowledge, Aboriginal knowledge, [Torres Strait] Islander knowledge. And being aware that there are other ways of knowing and understanding. (Linkson, interview, lines 275-278)

He understood that particularly for indigenous people living in their communities, the indigenous explanations were rational explanations of their world about which their culture revolved.

ML: It's about having cultural sensitivity when you're teaching. It's about not doing the imperialist shit of saying, "This is how it is. This is the western way. This is the real way. This is how the world works. Don't worry about your crazy blackfella ideas. This is actually how it works." Not having that kind of attitude and you see that around still. (Linkson, interview, lines 280-283)

In Linkson (1999) he considers the idea of compartmentalisation as a way of trying to avoid potential conflict, similar to Harris (1988). Aikenhead (1997) also suggests that knowledge be treated by dividing it into western scientific and indigenous knowledge. Aikenhead also considered the input of indigenous academics when deciding how to approach his materials for Aboriginal students.

GA: It is always substantiated by, "This is what Madeleine MacIvor [1995] argued for. This is what Ebor Hampton [1995] claimed was absolutely essential." So I have taken on and totally accepted my Aboriginal colleagues' points of view, which are not always consistent and they disagree amongst themselves. I make choices but the choices that I make I find are compatible with my way of thinking; but they're not, "Oh, these Aboriginal scholars have got it wrong. They should really see the truth and see it my way." (Aikenhead, interview, lines 404-409)

Aikenhead was consciously deferring to his Aboriginal colleagues as a source of understanding in his work as a way of overcoming conflict between epistemologies.

6.3.5 *Being a reflective practitioner*

The final intrinsic quality for a broker is the need to be a reflective practitioner. A number of the participants suggested this quality. Brokers needed to reflect on the work they were doing and this related to the idea of being strong in the broker's own culture. James Ritchie considered it was necessary to assess what it was the cross-cultural worker was doing.

JR: ... this position requires you to ask yourself "Do I really understand what's happening here?" ... "What's gone wrong here?" – to at least confront the fact that there was some barrier in understanding, or in relationship, or in provision of supplies or whatever. (Ritchie, interview, lines 339-348)

Ritchie had also made comments, recorded above, where he was able to make use of his knowledge of language to work out why his approaches on behalf of his Maori hosts were not succeeding. Through his reflective practice, he understood that there were limitations to his knowledge, as well as his potential to represent them. Considering this aspect, Leonie Jones expressed the view that knowing yourself and self-assessment were valuable traits in a cross-cultural worker.

LJ: You've got to know yourself and you've got to know your culture. I think one of the things about when you are teaching western culture you have to have the ability to reflect on what is western culture. I think a lot of people when they do go into a place like this haven't quite understood. Particularly young people. (Jones, interview, lines 332-335)

Knowing yourself and your own culture and being able to reflect on this are both important in being able to work in a cross-cultural setting. Jones considered that both probably develop as a person matures.

6.4 Power relations in culture brokering

The issue of power in culture brokering was not one which was addressed in all of the interviews and in some cases it was other aspects of power which were discussed, such as teachers and power and the power of science.

Glen Aikenhead acknowledged that he was in a privileged position as a cross-cultural worker.

GA: And being a non-Aboriginal person working in the Aboriginal area, right from the very beginning ... I understand what a privileged position I'm in because of being white, male, middle-class and in science – it's the check, check, check in terms of who has the social privilege and cultural capital. I also am very aware that what one can do things that would be seen as exerting power without that being the intention. (Aikenhead, interview, lines 395-400)

James Ritchie also understood the privileged position he was in and that he needed to be humble when working particularly in cross-cultural settings.

JR: Often when I'm talking like this with someone like you, I don't sound like a very humble person and in a sense I'm not, because I know what I know. And I have been the recipient of a very expensive education which puts me in a very privileged position. But in myself, I have to be constantly reminding myself to be humble about that... I have learned not to brag

about my Maori knowledge but there are times when I have to reveal it. (Ritchie, interview, lines 500-509)

Being humble is acknowledging lower status in the power relationship. So there is a basic understanding that westerners are in a privileged position because they are part of the dominant white society (Tompkins, 2002).

Aikenhead understood that many westerners would exploit the inequality of the power relationship as they had done historically (Downing, 1988). He suggested that in many cases this would be unconsciously.

GA: Definitely there would be some people that would exploit them, for all different types of reasons. I dare say that most of those people that would exploit them would be doing so unconsciously. Just as we were talking about personalities here, there are people you know and people that I know in my circle of acquaintances, they have to be in control, they're power mad. They don't feel comfortable unless they have this sense of being in control. Control freaks. (Aikenhead, interview, lines 383-388)

This can be offset by being a reflective practitioner (above, section 6.3), more a quality of the border worker. Aikenhead pointed out the possibility of people wishing to accomplish something without reflecting on what they were doing; such would be the case of the border line worker.

GA: On the other hand ... I think about the natural predispositions of certain people who feel like they're in control, they're the person who people can feel good about because something has to be accomplished and so they go ahead and do something for the sake of doing it rather than sitting back and reflecting on, "Is it the best thing to do?" And they would be seen, I think, as exerting power. But again it's for all sorts of different reasons. (Aikenhead, interview, lines 389-394)

Leonie Jones suggested some people can take an almost chauvinistic attitude towards their culture which then relates to their behaviour in the classroom.

LJ: Most people do think that their culture is pretty good. I guess they should because that's the way you do things, it's you and it's just the way you go about things. When it gets to the stage of, "Yep, I'm really comfortable with my culture, I'm pretty pleased", then it becomes pride, "I'm proud of my culture". Then that becomes, "Well, really the way we do things is so much better", then that becomes, "Everybody else does everything in an inferior way". I think that, even though it's not spoken in that way, I think there is that notion of superiority when it's possible, and I think, in classrooms... And the power thing is, because, while you get a lot of good people going in with the right attitude, the fact that they are whitefellas,

and they speak English and they're the teacher, they are in a power position and you can't get away from that. (Jones, interview, lines 480-488)

Such notions of superiority are still about (Hickling-Hudson & Ahlquist, 2003, 2004; Jordan, 2005) and are probably features of the expatriate or border line workers identified in section 2.2.6.

Often the border line worker is guided by achieving project outcomes despite, and usually without consulting, the indigenous people. Downing (1988) documents many projects which were initiated for Aboriginal people in Central Australia both in the assimilation and the early self-determination periods⁴⁵, most of which became bogged down because they did not fulfil Aboriginal needs or defied Aboriginal protocols.

Mark Linkson saw the use and abuse of power as being part of human nature. His comments reflect some of Aikenhead's ideas of "control freaks" and their unwillingness to give up power.

ML: Why do some people enjoy being in positions of power? Unreasonably using their power? I don't know, just human nature. Yet other people can just let it go. Something I learned a long time ago in indigenous education was that whitefellas needed to let go. I used to say it when I was at Port Keats, I used to say, "Let's let the blackfellas run the school. Why don't we let them run the school? We make such a huge mess of it, then we leave. They have to live here."

It's just human nature for some whitefellas to want to retain power. It's so nice. ... You see it all over Australia. Bloody power freaks, white power freaks, running black schools. They're bloody well everywhere. Seen a few in Queensland. What they need is people like the principal at Port Keats, Jan, they need more people like her in remote Australia, people that can appreciate the culture and give Indigenous people the chance to make their own mistakes. Because they've got to do a better job than us, they're not going anywhere, whereas we always leave. (Linkson, interview, lines 410-422)

Linkson was referring to the recent aboriginalisation of the principal's position at the school at Wadeye. There is a mismatch here regarding the status of westerners in indigenous communities which affects mainly governance, education and health, of who is responsible for the community decision making. Jordan (2005)

⁴⁵ The Whitlam Labor Government of 1972-75 initiated policies addressing Aboriginal self-determination as a result of the 1968 referendum on the status of Aborigines in Australia.

cites some incidents of westerners making decisions for the locals. As McKinley (2001) points out, although in a slightly different context, westerners are likely to read this as being able to remain in communities to manage these institutions rather than passing that responsibility to the indigenous people.

However, there are alternative actions which can be taken and Leonie Jones gave an example from Yirrkala (NT) where the local Yolngu had greater control over their education (Marika, 1999).

LJ: There are ways where you can dilute that, by making sure the Aboriginal staff do have an active role in what they say. ... There are certain places where I think the Indigenous people have certainly taken on lots. I think Yirrkala is a place where from what I saw from the outside, the Indigenous people there have taken on a lot more of the control and power, and really said, "We'll take from whitefellas what we want and no more, and we will control them as they come in and out". (Jones, interview, lines 503-506)

Management practices at Murrupurtiyanuwu School on the Tiwi Islands were also changing to be more in line with Aboriginal practices (Puruntatameri, 1996).

In Haig-Brown and Archibald (1996) the two authors create a tension between power (Haig-Brown) and responsibility and respect (Archibald). Haig-Brown argues:

Through our discussions, my commitment to power seems so rough compared with Jo-Ann's [Archibald] gentle but strong insistence on respect. ... I have little respect for those whose work I resist, my respect is for those whose voices must inform the halls of academe, who help contribute to the development of a more equitable world and fight against an exclusionary status quo. (Haig-Brown, in Haig-Brown & Archibald, 1996, p.264)

For border workers there appears to be a necessity to put aside their privilege (power) when they are dealing with indigenous people, as Ritchie's suggests about becoming humble, and to show respect for the indigenous people whom they are working with. Border liners never consider the need to put aside their power as they see very little of value in indigenous cultures and they exert their power without considering respect. Border crossers are making the transition between the two positions and as such are beginning to experience the balancing act between power and respect.

6.5. Criticism of culture brokering

In the previous sections a number of factors that contribute to effective brokering have been covered. However there are criticisms of the idea of cultural brokerage and four are highlighted here. There were participants who are concerned with its entrepreneurial links and analogies with stock brokerage. The basic rationale of culture brokerage being between two incommensurable cultures was disputed. There was consideration that the broker is doing something which could be done by the client. Finally, culture brokerage was seen as a personal approach rather than a public one.

Two of the participants made comments which showed they were not comfortable with the idea of culture broker as entrepreneur. Celia Haig-Brown commented about analogies with the stock broker.

CHB: I can't get outside the word stock broker, it comes front and centre to me. Then I think, "What does a stock broker do?" Well, they do things in exchange for money and quite often there's something a little iffy about what it is that they are doing. So culture broker is not a word I would use for the work that I do. (Haig-Brown, interview, 8-12)

Haig-Brown considered herself to be a border worker rather than a culture broker but she did identify occasions where she had or could act as a culture broker.

Michael Christie also had problems with the concept of culture broker. His first objection aligns with Haig-Brown's concern about the commercial possibilities of the brokerage notion.

MC: I guess the other thing that worried me a little bit about this was the sense of having some sort of capitalist or exchange sort of philosophy behind it. ... So I was a bit reluctant to think in terms of the commodification of culture, that brokerage seemed to imply. (Christie, interview, lines 10-13)

Analogies with stock brokering are easy to make. Jezewski (1995) compared culture brokering and stock brokering in terms of professional development and came to the conclusion that the business aspect encouraged much higher levels of financial support than in culture brokerage. Meuwese (2003) indicates that among his 16th century Dutch mediators there was a group whose aims were to satisfy their own commercial goals. In the anthropology literature there is discussion of the alignment of the culture brokers with their patrons, and benefits in terms of

power and prestige, as well as the downside if their brokerage is unsuccessful (Paine, 1971; Press, 1969; Rodman & Counts, 1982).

Christie's second reason was his discomfort with the idea of commensurability or not between cultures and whether there was any value in the idea.

MC: I think I was pretty uncomfortable with the idea because it seems to me to imply either some sort of a commensurability between two cultures or some sort of an incommensurability between two cultures and I'm not sure whether either of those positions is a useful path to take. (Christie, interview, lines 6-10)

He commented on McConaghy's idea of postculturalism (2000), where she considers that borders between cultures are social constructions and subsequently the emphasis on them in indigenous education is unproductive, leading to notions of culture as *de facto* racism. On the other hand, Glen Aikenhead considered that science teachers saw the world in "mechanistic ways" (line 142), meaning more from a modernist perspective, so that borders would be part of the way they saw the world. The modernist perspective has been accepted as a basic starting point in this thesis, particularly with respect to border crossing (sections 2.1.2, 2.2.6).

David Parish could also see flaws in the culture broker role and after discussing a couple of issues he encountered at Lajamanu, he continued to discuss the role of culture brokering.

DP: To me this is where the brokering of culture becomes really quite confusing, because if you take what I'm talking about, the implication is that... well, there are two implications. Implication 1: Indigenous people are so incapable that they can't do it and white people have to do it for them. Or the other is: Indigenous people are so important that they don't have to do anything; white people will do it for them. To me neither is correct. Indigenous people deserve to be treated as thinking adults or students who are quite capable of doing things that they're taught how to do. (Parish, interview, lines 179-185)

Jordan (2005) also came across Indigenous people who were unwilling to take on employment, preferring to have westerners doing the tasks. These ideas resonate with McKinley's observation (2001) that if white people can learn the appropriate cultural rules to become culture brokers, then the result may be that indigenous people need not be hired and issues of racism need not be addressed. However it could be suggested that the Indigenous people have been criticised by westerners

before for being non-productive and do not wish to expose themselves to this indignity again.

Miles Barker saw the role of culture broker as something personal rather than a public one, as well as only being done when required.

MB: Yes. If I saw myself being a culture broker on a wider context, I think I'd see that as a little pretentious. I don't go around brokering culture deliberately between groups all over the place. It seems to me to be a fairly private exercise that needs to be done when it really needs to be done.
(Barker, interview, lines 26-29)

This statement is consistent with an earlier one about making forays across the cultural interface. It also points out an inconsistency with the terminology relating to the term 'broker'. As noted above some participants considered that there were similarities with terms such as 'stock broker' which can be a full-time occupation as well as being perceived as exploitative. Culture brokers on the other hand use these skills as part of their professional and personal lives. There have been attempts to train people to be effective culture brokers (Jezewski & Sotnik, 2001; Moffat & Tung, 2004) and being a culture broker is seen as a skill worth having.

6.6 Conclusion

The idea of the culture broker being a role that one takes on as it is required comes through strongly in the interviews. Almost all the participants identified with the role and illustrated times when they had acted as culture brokers even though at the time they would not have labelled their actions as such. They saw it as a way of achieving specific outcomes cross-culturally. Most of them saw it from an insider perspective, working from their western perspective, but others were able to see it from an outsider perspective informing westerners about the indigenous culture, so they work 'two-way' or 'both-way'. Linkson gave an example where he acted as a culture broker between two groups, neither of which he was a member.

The participants saw the primary purpose of culture brokerage as being to facilitate communication, to clarify the communications between two cultural groups, to reduce potential misunderstandings between them and to promote positive attitudes towards them.

Working through the interviews it was possible to identify a number of characteristics of culture brokers which verified those identified previously in the ethnohistory literature. These characteristics are:

- An understanding of the other culture, particularly of the customs and protocols, relationships and status, and maybe the language
- An understanding that the other culture has alternative perspectives or ways of knowing/making sense of the world (world view), which results in different knowledge and epistemology, and that these have intrinsic value
- An ability to show respect for the other culture and people in order to earn their trust
- Sensitivity to possible conflicts between the cultures and an ability to develop strategies to deal with conflicts
- Being a reflective practitioner.

In examining the idea of power in culture brokering I identified that particularly that the more experienced border workers realised that they were in positions of power and that they needed to be respectful and humble in their dealings with their hosts. This was in contrast to Szasz (2001) who considers cultural brokers wanted the sense of power and material rewards it offered beside personal satisfaction.

Finally, there were valid criticisms of culture brokering raised in this chapter, including the entrepreneurial aspect. However, there seems to be little to warrant expunging it from the toolkit of cross-cultural skills other than avoiding its misuse.

CHAPTER 7: TEACHERS IN CROSS-CULTURAL SETTINGS

In this chapter I am going to look at the responses made by the participants to a series of questions regarding teachers in cross-cultural settings. This chapter depends more on the diversity of the participants' experiences and their comments tend to be confined to particular topics.

The questions in the interviews dealt with how the participants considered teachers should behave in cross-cultural settings and the types of experiences they needed to become effective teachers and border crossers (section 7.1). Some ideas are applicable to teachers both in indigenous communities and in urban and regional schools. Then I look at aspects of teachers and power (section 7.2) and I also consider the participants' responses about what cross-cultural teachers need to be aware of when they teach western science (section 7.3).

7.1 Preparing for and teaching indigenous students

In this section I examine what the participants had to say about the kinds of preservice and inservice training teachers need to function both in indigenous community schools and in the communities themselves, and the qualities needed in teachers who choose to work there. I also include suggestions about how teachers should conduct themselves both professionally and personally in the community. Then I will consider teachers of indigenous students in larger centres and in urban schools.

7.1.1 Preservice teacher training

Only Leonie Jones indicated that she had had some preservice teacher training in indigenous education and ESL teaching (Jones, interview, lines 50-54: section 5.2.1). Even with this background she was to find that theory ("textbook knowledge") and practice were somewhat divergent (Jones, interview, lines 143-145: section 5.2.2). Little could be said by the other participants about their preparation for teaching in indigenous schools because as seen in chapter 5, the majority of them did not anticipate teaching in that situation and those types of courses did not exist at the time.

There are a number of other themes regarding teacher preparation in the literature which were not mentioned by the participants. These themes are often couched in terms of multicultural rather than indigenous education.

- Commentaries about the inadequacy of teacher preparation (e.g. Harper, 2000; Henwood, 1969; Heslop, 2003; Hickling-Hudson & Ahlquist, 2004).
- Texts which reflect a variety of approaches to prepare new teachers to teach indigenous students⁴⁶.
- Programs examining white privilege where there is a perceived need for preservice teachers to explore their personal attitudes and understandings (Cochran-Smith, 1995; Cockrell *et al*, 1999; Hickling-Hudson, 2005; King, 1991; Solomon *et al*, 2005; Tatum, 1994).
- Attempts to expose undergraduates to living in Aboriginal communities for short periods of time and undertaking teaching practicum there. (Heslop, 2003; Hickling-Hudson & Ahlquist, 2003; Mahan & Smith, 1978, 1979; Osborne, 2003; Partington, 1997; Stachowski & Mahan, 1998).
- Inservice and preservice cultural immersion programs (Chinn, 2006; Mahan & Rains, 1990).

7.1.2 Teachers living and teaching in indigenous communities

In section 2.2.2 I suggested that there was a limited literature regarding westerners teaching in indigenous schools and living in their communities⁴⁷. It is difficult to distinguish in the literature between what happens in the community and what happens in its school because the two issues are so closely linked. I also suggested in section 2.2 that culture shock can have a long-term impact on teachers new to indigenous communities, on whether or not they become effective cross-cultural workers.

⁴⁶ Australian examples include Beresford & Partington (2003), Hodge & O'Carroll (2006) and Phillips & Lampert (2005).

⁴⁷ For example Annabella, 2007-08; Clark, 2007; Clarke, 2000; Green, 1983; Harper, 2000; Henwood, 1969; Heslop, 2003; Hickling-Hudson & Ahlquist, 2003, 2004; Loman, 2005; Mahan & Smith, 1979; McAlpine & Crago, 1995; Moskowitz & Whitmore, 1997; Shaw, 2009; Stonebanks, 2008; Taylor, 1995.

The idea of culture shock was not addressed by most participants; however David Parish suggested that it is inevitable when teachers first go into communities to teach.

DP: ... they, as happens to so many of us, do go through a period of culture shock. And the culture shock is inevitable, I believe. But it's also based on the dominance of their own personal world view and their belief that because you happen to be a member of the Australian dominant society, you've got it all. You know where you're at. And suddenly you go into an environment where you don't know where it's at. (Parish, interview, lines 278-282)

Besides acknowledging he may have had a culture shock experience himself, Parish noted that a main influence in culture shock was the influence of "their own personal world view", similar to what comes through in the literature (Geijsel & Meijers, 2005; Heyward, 2002; Petersen, 1995). Leonie Jones used a similar expression, "closed mindset":

LJ: And if you go in with a very closed mindset, I think that's when you're going to have some culture shock. (Jones, interview, lines 339-340)

It would seem that an open mindset allows for a quicker adaptation to the new cultural environment. These two participants, both of whom had lived in indigenous communities early in their careers and then later as principals, can be interpreted as seeing culture shock as a conflict with the sufferer's pre-existing beliefs (Heyward, 2002; Pedersen, 1995) or as negative reinforcement in the identity learning model (Geijsel & Meijers, 2005), leading to expatriate-type behaviours as discussed in section 2.2. The principal in the community visited by Hickling-Hudson and Ahlquist (2004) spoke about newly-arrived teachers having culture shock for the first six months and other writers have suggested a similar time frame (e.g. Green, 1983; Taylor, 1995). This is an important consideration because, when combined with the short duration that many teachers stay (often two years or less, Hickling-Hudson & Ahlquist, 2004), it reduces their overall effective teaching time in the community.

Even for experienced teachers there can be difficulties settling in. As principal at Lajamanu, David Parish had to deal with a teacher who had taught in southern Africa who appeared to be suffering from culture shock.

DP: And after six weeks at Lajamanu she was throwing her hands up in horror because the Indigenous Australian people were so different from the Africans with whom she had been working... She found it almost impossible to reconcile. (Parish, interview, lines 302-304)

Other experienced teachers had difficulties when they started teaching in indigenous schools (Green, 1983), and Shaw (2009) suggests that older teachers find it harder to adapt to teaching Indigenous students. There is also an assumption that because someone can teach one group of indigenous people in one location they can teach others elsewhere, or that these situations are basically the same. Annabella (2007-08) mentions that she experienced ‘bush blues’ when she went to work in another community at the beginning of her second year of teaching. This expression seems to be a pseudonym for culture shock in this context, suggesting that culture shock is probably experienced more widely than reported and can have repeated impacts.

Yet the impact of culture shock on teachers and others going to indigenous communities has been noted for at least 40 years (Crawford, 1989; Dowling in Chudleigh, 1969; Mitchell, 1969; Trudgen, 2000) and suggestions have been made of ways of lessening its impact: “there is a need for an awareness of its existence and willing acceptance that it is no respecter of persons” (Mitchell, 1969, p.64).

Parish’s problem was resolved by creating a mentoring situation between the teacher and one of the indigenous staff.

DP: We addressed it by setting up a mentoring where one of the indigenous staff became this person’s close friend. Of course, we created a friendship, but it did help. (Parish, interview, lines 306-308)

Mentoring was perceived as a practical solution to cross-cultural adaptation, as seen in one of the following sections.

Induction courses and cross-cultural awareness

Several of the participants had lived and worked in indigenous communities so they were able to talk about the nature of working there in cross-cultural terms. David Parish commented on how his staff considered they needed cross-cultural training.

DP: Every person who I had dealings with who went to a remote community said, “We need cross-cultural understanding. *That’s* what we need.” When you actually talk to people and said to them, “What do you mean by cross-cultural understanding?”, the reality was they had no understanding what they meant ... (Parish, interview, lines 274-277, his emphasis)

Preparing westerners to live in indigenous communities seems to be at best an *ad hoc* process. Some teachers focus on pedagogy and curriculum and consider their teacher training courses to be inadequate for these purposes. Educational authorities usually provide some induction courses but these are often considered inadequate (Linkson, interview, lines 138-140: section 5.2.1) and usually focus on administrative issues such as arranging transport and ordering supplies rather than the social and educational task at hand.

From our conversations with teachers, we learnt that although the State Department of Education had provided them with a two-day seminar, which oriented them towards the school and the community, this introduction in hindsight was completely inadequate to prepare them for their task. (Hickling-Hudson & Ahlquist, 2004, p.3)

The focus of present orientation courses tends to be on the cognitive aspects rather than the affective; the Geijsel and Meijer model (2005) indicates that the affective aspect needs to be addressed as well to enhance identity learning.

Leonie Jones had supervised and presented a mandatory cross-cultural program for the NT Department of Education for three years and she made some suggestions about how she thought a more intensive program should operate. Although this program differed from an induction program, the processes she discussed are possibilities that could be applied in a school.

LJ: The one day introduction is most probably a good beginning, and then you need to have at the school level, you need to have another level which is saying, this is the generic stuff. ... there really needs to be, “Okay, you’re here at this place, and these are the traditional owners of this country here and this is the general [things].” Introduce some things like, this is the general kinship, but just do the localised thing.

And then I think there needs to be an opportunity, whether it’s three months or six months [later], for people to come back in a neutral forum to just let out all the experiences they’ve had, all the frustrations and experiences... (Jones, interview, lines 442-456)

Reflecting on their experiences would give participants at the recall meetings an opportunity to consider the emotional aspects of their experiences. This would be consistent with the identity learning model (Geijsel & Meijers, 2005). Jones described another process which had been used in the past to create awareness, 'learning together' sessions.

LJ: I think, in the olden days but it's still done in some schools, some of the two-way schools, they used to have what they called "learning together sessions". They were [held] once a fortnight or however often and it was a two-way thing where one week it would be a non-indigenous people who would be sharing something, and the next week it would be the Indigenous people who would talk about a particular issue. (Jones, interview, lines 466-470)

In Pillsbury and Shields (1999) there is the idea that switching perspectives could permit a tentative movement towards understanding the other's point of view and the learning together sessions would give some insight of the other's perspective. This could be of value for new teachers who had associated originally with the expatriates and need a chance to reflect on their position. However, it seems a harsh reality that there is not any way of preparing people for the life in a community; it is a situation which has to be lived. As one of Harper's respondents said, "But really, there's no way to prepare for this. No way." (Harper, 2000, p.154).

Mentoring

David Parish pointed out that using mentors was a strategy that had been used at Easterntown, a pseudonym for one of his research sites (Parish, 1990). Mentors were chosen from the community and matched to the new teachers.

DP: They used to have identified people from within the community who were cultural mentors for new staff. And that was actually created within the community. (Parish, interview, lines 310-311)

The most obvious group to select a mentor from are the assistant teachers (also called Aboriginal Education Workers or Indigenous Education Workers) who are usually from the same community or language group. Their roles vary but usually it is primarily considered to be an educational role, helping the western teachers instruct their indigenous students. Often they take on a role of educating the teacher about the community but this is more at the personal level than written

into their job description. Jones and Parish both talked about their earlier interactions with assistant teachers helping them to settle into their respective communities (see section 5.2.2). However other people have written disparagingly about assistant teachers (Folds, 1987) and certainly not in terms of them being cross-cultural workers.

It might be suggested that the principal or other members of staff could act as mentors. Because community schools are relatively small schools, often the principal is new in the role as well; this was the case with the principal described in Hickling-Hudson and Ahlquist (2004). In most cases principals are probably more involved with issues relating to the administration of the school rather than the community, and would consider the relationship between the teacher and community not directly part of their responsibility, a view which would not be shared by the community leaders. It would also create a conflict for the principal between being a hierarchical manager and educational leader or an egalitarian mentor.

Other members of staff could act as mentors but often this would be seen as an imposition (whereas expecting an assistant teacher to take on the role apparently would not be an imposition). Leonie Jones noted that her husband and she learned a lot about teaching and the community (including some language) from other members of the non-indigenous staff, primarily the linguist.

LJ: I missed the orientation but a lot of it was done through other teachers and other non-indigenous people. A lot of that settling-in was information and support that was carried through by people who'd been there for a while. So I guess it was an ongoing thing there. (Jones, interview, lines 117-120)

Jones talked about some westerners her husband and she had met on their first flight to Maningrida and who lived behind them there. They became the Jones's earliest source of knowledge about the community and so much of the experience and knowledge of the community was passed down by non-aboriginal people rather than by the local Aborigines.

LJ: And they had been there three years. So they were people who provided us with a lot of knowledge. Eventually then you just build up your knowledge by talking with [western] people who'd been there for a while and picking

it up. There was a little bit of formal stuff through the linguist but most of it was informal. (Jones, interview, lines 164-167)

This system seemed to be self-perpetuating; the Joneses in subsequent years became the source of knowledge, and so it goes.

LJ: The next year when we really were experts, because a lot of the old hands had left and [after] we'd been there for a year or two and it was, like, we knew everything, because there was always a high turnover of staff. (Jones, interview, lines 168-170)

This situation is problematic for a number of reasons. Firstly it places the power over information about the community in the hands of non-aboriginal people. Secondly, there is the possibility that the informant may be an expatriate worker and may pass on information which is stereotypical and disparaging of the community rather than informative and inclusive. The literature (section 2.2.3) indicates that often the discussion in the conversations of the expatriate group about Aboriginal people in the community tends to be derogatory. Pedersen (1996) uses the 'old hands' terminology and suggests that they have reached the fourth autonomous stage of culture shock where they may overestimate their degree of adjustment and consider themselves as experts on the host culture, rather than reaching the final interdependence stage when this might be the case.

Alternatively, Jones acknowledged the impact of her Aboriginal assistant teachers in helping her understand what was going on around her.

LJ: The assistant teachers were also where you connect into the community. (Jones, interview, lines 202-203)

Parish reported a similar experience (Parish, interview, lines 45-47, section 5.2.2). However it is apparent that this situation where members of the community become informants needs time to develop and the other western teachers are likely to be the first source of information.

Mark Linkson theorised about his experiences which led him to becoming a border worker. In the first instance, he acknowledged that for him to learn about the other, he needed to have an informant or mentor from the other culture.

ML: I think you've got to have an informant that you work with closely, you've got to have someone who is part of that culture because I'm not part of that

culture, that Indigenous Australian culture. (Linkson, interview, lines 226-228)

What Linkson is pointing out is that there are other cases, such as teachers going to remote indigenous communities, where there is a need for them to be mentored by members of the indigenous community with whom they work often side-by-side.

ML: ... you'd be kidding yourself, ... if you think you could be a culture broker without someone from that culture having a role somewhere in the process. (Linkson, interview, lines 226-238)

He saw mentoring as a case of culture brokerage, from the other side. Ritchie (1992) also makes a similar claim that westerners engaged in cross-cultural work need to have a guide or mentor. Although Haig-Brown (1992) and Nakata (2004, 2007) considered that indigenous people were border workers, it would seem that there are occasions where they too need to act more specifically as culture brokers.

Heslop (2003) suggests that the role of mentor could be taken on by experienced teachers not necessarily in the school and even from outside the community, and that the young teacher could make use of a range of modern technologies to remain in touch with their mentor. The possibility of an assistant teacher or someone else in the community either formally or informally assisting new teachers adapt to the community is only mentioned by Parish and Jones and it has not been part of the job description of the assistant teachers.

Experienced versus neophyte teachers

Leonie Jones listed a number of attributes she would look for in a teacher going out to teach in an Aboriginal community.

LJ: If I was to pick a perfect person to go out to these places, I mean, not that there's a generic one, I'd say I think that they needed to have started their career teaching their own culture and getting fairly well grounded in the basics of teaching. So I'd say someone who's taught at least two or three years in an urban setting or a country setting, their own cultural setting. I think a person who has travelled overseas, particularly to countries that don't speak English, countries that have a very different value system, maybe a third world-type country, if you want to use that term, where they experience being a minority and just having their world view stretched, that's useful. Obviously it would be good if they've taught or done some

work in indigenous ed., and I also think it helps to have done some ESL...
(Jones, interview, lines 401-409)

The idea of experience comes through strongly in this statement, not only experience in teaching but also in a diversity of cultures. Apart from Ritchie, each of the teachers who worked in indigenous communities had had some experience teaching in the mainstream before they went to work there. Jones considered that experienced people were more likely to have a better understanding of their own culture and were more likely to reflect on their role in the community.

Hickling-Hudson and Ahlquist (2004) interview two experienced teachers who also expressed the view that more experienced teachers were needed. However in this case the researchers found that even the experienced teachers were not teaching in culturally-appropriate ways nor did they consider the school's curriculum to be culturally inappropriate. Green (1983) experiences some problems when he goes to teach in a community. Shaw (2009) suggests that older experienced teachers may find coming to teach in remote communities more difficult than they expect, although MacLean (2002) taught apparently successfully for three years in Nunavut (Canada) after her first retirement.

David Parish also suggested that having some experience in teaching before they went to indigenous communities was a good thing.

DP: But with young people [as teachers], my belief is that communities don't want them. They like the enthusiasm that young people bring but they would much prefer to see slightly wiser heads. If people are being recruited into remote schools and they haven't had at least a few years of experience, the communities know that that leads to some challenges that they can do without. (Parish, interview, lines 211-214)

On the other hand educational authorities have sent neophyte teachers to indigenous communities and other remote centres. Often this is the only way in which these schools can be staffed and a couple of years of 'country service' is then rewarded by appointments to more appealing urban schools⁴⁸. Heslop (2003) also considers that younger teachers were enthusiastic and committed but most took twelve months to teach with any confidence and many only stayed for two

⁴⁸ Brian Lewthwaite (pers. comm.) suggested that in Canada, first appointments to First Nations' community schools are seen as inferior by neophyte teachers and are avoided.

years. When Hickling-Hudson and Ahlquist (2004) interviewed the principal at their study school, he made much the same observation.

“In their first six months here, the new teachers are in shock. There is culture shock; they are in the desert, it’s hot, dry, dusty, they are isolated away from their own culture in a strange community, plus the fact that they are still learning how to teach – most are first year out. It’s not until maybe the second year that they settle down to teach. They then wind down and leave.” (Principal, in Hickling-Hudson & Ahlquist, 2004, p.69)

Henwood (1969) considers that she would have been a more effective teacher if she had had time to mature both in her personal identity and as a teacher. She was 18 years old when she was sent to a one-teacher Aboriginal school on the north coast of New South Wales.

Leonie Jones felt that it was difficult for young teachers going out to live and work in communities.

LJ: There are still younger people going out into communities. Still are but not to the same extent. You have to have a real sense of who you are. If you’ve grown up in a particular circumstance where you never really thought about the fact people do think and believe differently from yourself, hey, your way is not the best way, that there’s a whole range of different ways of doing and seeing the world. (Jones, interview, lines 335-340)

The comments, “slightly wiser heads” (DP) and “a real sense of who you are” (LJ), are about identity; Parish and Jones are suggesting that a mature approach is preferred, although Geijsel and Meijers (2005) suggest maturity does not necessarily lead to a positive uptake in identity learning but may lead to negative reinforcement.

Osborne (2003) makes the observation that although only a few preservice teachers express an interest in teaching Indigenous students, many more of them end up in that situation for their first appointment. It used to be quite common for newly-trained teachers in parts of Australia to be appointed to one-teacher or remote rural schools straight after graduation until the 1980s (Nelson, 1989): David Parish had this type of initial experience. These days teachers are not ‘sent’

to isolated schools for their first appointments⁴⁹ but often these are the only positions that are available for neophyte teachers.

On the other hand the short duration of some teachers' stay might be interpreted that they are self-regulating for inappropriate teachers, some staying for a term or less (Georgina, in Daniels, 2007; Shaw, 2009). Although some teachers were on short-term contracts, others leave the community because they cannot reconcile between their old ideas and the new environment (characteristics of the group I called 'short-term stayers' in section 2.2.3). Heslop (2003) considers that these teachers became so frustrated they left the community "with low regard for their teaching skills and holding negative attitudes towards Aboriginal people" (p.210).

Michael Christie had a differing opinion about young people going out into community schools, putting more emphasis on the community's right to accept or reject the teacher.

MC: I don't think they should necessarily have any experiences before they go but I think they should be put on a few months trial. I think that the community needs in some way to be able to have some say in as to who's employed. I don't think they need anything before they start but they need to be looked after properly when they're there and they need to be given lots of options and the community needs to say whether they want them or not. (Christie, interview, lines 225-230)

David Parish pointed out that the community usually has a say in who appointed as the principal because there was a community representative on the selection committee.

DP: The principal is selected from within, the community has a strong say in who the principal is but not any of the rest of the teachers. So the perception is that it's all done outside. (Parish, interview, lines 354-356)

The community basically had no say in the selection of the other teachers and although they could decide who stayed in the community, this was often based on the person's relationship with the community, not their ability as a teacher.

⁴⁹ When Parish was at teachers college students undergoing preservice training were bonded to an educational authority and at the end of their training they were appointed to schools at the authority's discretion. The authority often found this was the only way it could staff isolated schools.

There has been a presumption throughout this section that all teachers are suitable to teach in indigenous communities. Such a state has been addressed in some of the earlier literature: “People with unsuitable personalities should not be sent to jobs in Aboriginal areas...” (Downing, in Chudleigh, 1969, p.114). The survey of the literature (section 2.2.3) also indicated that some groups of teachers, particularly what I termed ‘expatriate teachers’, are not suited to work in indigenous communities. However the demand on the educational authorities to have teachers in indigenous classrooms seems to outweigh the need to determine a teacher’s suitability. This also relates to the induction process, which is too short and focused on other aspects to allow the educational authorities to make any judgements regarding a teacher’s suitability.

Teacher turnover

Teacher turnover in indigenous schools is sometimes rapid, occasionally predictable as ‘two year tourists’ (Clark, 2007; Daniels, 2007; Hickling-Hudson & Ahlquist, 2004; Shaw, 2009; Turner, 2001). In the interviews none of the participants expressed any opinion about how long teachers should stay in communities. One consequence of the frequent turnover is the lack of continuity for students in the community, particularly for indigenous students for whom a sustained positive relationship with the teacher is highly desirable. Another consequence is that there is some hesitation among the Aboriginal community to reach out to new people, knowing that the process will be repeated again and again (Clark, 2007). The reasons for teacher turnover are varied. Sometimes it is simply because the teacher is on a short contract which is not extended, while others chose to not extend their contracts. Some find the stress of teaching indigenous students too great and choose to leave (Heslop, 2003; Shaw, 2009). Others with growing families find they have to consider the educational needs of their own children and have to leave, for example:

We did not want to leave, but the educational opportunities for the children were limited. Our eldest daughter had started secondary school and was working solely through distance education and was not enjoying it. (Gallagher & Gallagher, 2004, p.56)

Some teachers, like David Parish, had opportunities to continue teaching Aboriginal students in urban settings when they moved away from the communities.

Leonie Jones considered there is a sense that there is a loss of corporate knowledge, particularly with frequent turnover of principals. Her role at the time was principal for a group of mostly Aboriginal community schools in the Top End of the Northern Territory and one of her tasks was to try to keep some of the corporate knowledge intact.

LJ: There isn't that corporate memory happening. In a couple of years you can have a complete overhaul. And because we're stable here, reasonably stable, it means that there is that knowledge base. So when people come, we pass on that knowledge. ... So we're able to tell people who to talk to and that sort of stuff, general information about what goes on. (Jones, interview, lines 179-184)

Hickling-Hudson and Ahlquist (2003, 2004) see similar long-term issues resulting from the frequent turnover of principals and staff. Programs initiated by one principal may be discontinued by a subsequent one. A long-term vision for the school cannot be expected with frequent changes of principal, let alone staff.

It is difficult for school and community leaders to promote stability, continuity, vital curricular reform and revision, a vision of the future, and a sense of growth and development, with teachers who come for two or three years and then leave. (Hickling-Hudson & Ahlquist, 2004)

There is a sense of instability in the constant movement of teachers through community schools which appears to affect students' learning.

'Loose cannons'

A suggestion from the research on westerners who live in communities is that they take part in community activities, particularly sport, but generally it is recommended that visitors do not become involved in community politics (Green, 1983; Harper, 2000; Shaw, 2008; Taylor, 1995). The term 'loose cannons' refers to teachers (and other westerners) whose motivations to work in communities can be seen as politically or ideologically suspect or different to the status quo of government policy. Leonie Jones commented on teachers who came to the

communities and took on a political stance regarding the fate of Aboriginal culture.

LJ: I did have a little bit of a thought that there were teachers who went up to these places feeling once they got there, “Oh, this is their culture and these schools shouldn’t be doing anything to destroy their culture. So therefore our role is to support and maintain and help perpetuate Indigenous language and culture.” (Jones, interview, lines 84-87)

These people tend to impose themselves on the indigenous community rather than being invited to help. Mahan and Smith (1978) identify three groups of westerners as dysfunctional: the ‘Anglo missionaries coming to save’ Indians; those guilt-ridden about previous mistreatment of Indians; and those with a romanticised view of Indian life. Whether these people were of any help to their indigenous hosts in the long run is a moot point. For Jones, speaking as a principal, it was in part the short-term nature of this engagement with the political side of life in communities which concerned her.

LJ: I just don’t like it when teachers go out to schools and become the champion for Aboriginal people. Because they leave in one or two years, and it’s really Aboriginal people who need to be supported but they (the teachers) shouldn’t be the ones pushing the agenda, that’s for Aboriginal people. (Jones, interview, lines 107-111)

However, in most large communities they could expect to get a good reception from some members who would take them in as allies. David Parish was concerned with the ‘loose cannons’ as well, considering that as they ingratiated themselves with the community it made it harder particularly for the western authorities to deal with potential problems.

DP: ... you do get people who think they know everything. They tend, from my experience, to be the ones that have the constant flow of visitors from the community, the ones that are forever giving out cups of tea or slices of bread, and doing all those things to ingratiate themselves in many respects to people within the community. And it gets to the stage that when decisions have to be made, that person would never have to be disadvantaged by a decision by the local people because the decision will always fall in their favour. (Parish, interview, lines 193-199)

It is difficult to put these people into any of the groups which have been discussed formerly in section 2.2. It would seem easiest to classify them as nonconformists or misfits but they are not necessarily alienated from the western culture.

Parish noted in a case which he experienced as a principal, the community was unwilling to take any action against the person because he was indirectly associated with the school (he was the partner of one of the teachers). It was not until the community became directly involved that they took action to expel the person. Likewise, principals and teachers have been removed from communities, particularly for inappropriate conduct (Collins & Lea, 1999). However there is anecdotal evidence of some of them being removed for more political reasons. Lea (2008) describes the circumstance in which a principal had to leave an NT community, for not paying part of the school's tuckshop takings to the community council.

Losing culture

The notion that the students were going to lose their culture prevails in some teachers' minds as well as on members of the community. Both Leonie Jones and David Parish commented on the mindset of some western teachers of 'white is right', although government policy had changed to self-determination in between their initial experiences of aboriginal education.

LJ: I know at the time there were teachers who would have most probably have thought, "Look, they're going to lose their culture and language invariably, so let's just get on with it and make sure they learn properly all this stuff about..." It's not that they didn't value Aboriginal culture but there were some times, I think, an underlying attitude of "white is right" in those days. (Jones, interview, lines 63-66)

Dishearteningly, there was at least one teacher in the study by Hickling-Hudson and Ahlquist (2004) who still thought that Aboriginal students were going to lose their culture over twenty years later. There seems to be an implication that if this is the case then there is no reason for not accelerating the process. This is despite a period of nearly thirty years during which self-determination rather than assimilation was supposed to be the guiding policy in indigenous affairs in Australia. The loss of culture is considered by Harris (1990) and he suggests that a possible solution was cognitive segregation, with western knowledge being taught by western teachers and Aboriginal knowledge in the traditional way.

Mark Linkson understood that cultural sensitivity was a necessary element for cross-cultural teaching.

ML: It's about having cultural sensitivity when you're teaching. It's about not doing the imperialist shit of saying, "This is how it is. This is the western way. This is the real way. This is how the world works. Don't worry about your crazy blackfella ideas. This is actually how it works." Not having that kind of attitude, and you see that around still. It's still about. You still hear stories. (Linkson, interview, lines 280-284)

This was also one of the themes in Linkson (1999). In section 6.3.1 I suggested that cultural sensitivity was an important attribute of border crossers and culture brokers which border line workers probably did not take into consideration. Cultural sensitivity is one of the strategies used in Jezewski's cultural brokerage model (1995).

Curriculum, pedagogy and indigenous knowledge

The other issue that Mark Linkson identified (above) relates to the role of the dominant culture in deciding what was to be taught in schools. Curriculum development in each of the settler countries is highly centralised and reasserts whose knowledge has legitimacy (Blades, 1997; Sleeter & Stillman, 2005). This has become more the case with the emphasis on national standards and international league tables (Lee & Lukyx, 2006). In New Zealand the development of Maori curriculum documents took place within the framework of the pre-existing western-style curriculum. In the case of the science curriculum (*Putaiiao*, NZ Ministry of Education, 1993), some variation in the organisation of the document was permitted but there was no essentially Maori content (McKinley, 1996). Curriculum development itself is generally centralised at the national, state or provincial level and assumes a more-or-less homogeneous client group. It is only at the regional and school levels that the interpretation of the curriculum might permit an indigenous perspective.

Centralised curriculum is perceived to have many advantages, particularly by bureaucrats and politicians. Students throughout the jurisdiction are expected to be learning the same content at the same year level, and teachers can be expected to be teaching much the same throughout the region. Standardised testing can be applied throughout the jurisdiction. Outcomes-based education can give teachers some flexibility in determining the particular content appropriate to the context of their location and clientele. In Michie (1998) I suggest that science outcomes,

particularly at the early childhood levels, are general enough to include indigenous knowledge and allow assessment of students according to their own cultural context, which I demonstrated in NTDE (2000).

There are several implications of perceived impositions from outside which were discussed by participants. David Parish commented on the outsider nature of schools in their overall perception within communities.

DP: There is this perception [that] ... it's all foreign. Curriculum's organised there [outside], staff are recruited from there. ... So the perception is that it's all done outside. (Parish, interview, lines 353-356)

He considered that this led to many people in the community failing to realise that the school was, or could become, part of the community⁵⁰. Curriculum is typically organised outside of the school, so that community schools are obliged to teach the same western curriculum as other mainstream schools. Michael Christie commented on how the centralised curriculum development failed to take into account the context of the students.

MC: In terms of the content, it seems to me not to matter a lot about what the content [to be taught] is. However I am shocked and disappointed at the way in which authorities assume that becoming utterly familiar with who you are in the context of where you live isn't the key focus of all curricula. (Christie, interview, lines 235-238)

Christie's view correlates with other opinions that curriculum which does not take into account the context of minority students is oppressive and hegemonic.

Shields *et al* (2005) consider similarly that the community from which children come should be the focus of schools, and thus curriculum.

Their first community is their home – their family and extended family relationships – a community whose influence is critically important, but one which ... is consistently marginalized within the current structures of schooling. (p.128)

Similarly, Ryan (2008) considers that the curriculum development that took part in Papua New Guinea ignored the national priorities and produced a 'globalised' curriculum with little consultation with local curriculum developers in what she

⁵⁰ Other areas of concern include the security of teachers and school buildings, including houses, which are not perceived as belonging to the community (Folds, 1987; Green, 1983; Heslop, 2003; Shaw, 2009; Wax *et al*, 1964).

describes as a neo-colonial action. Christie suggested that the external curriculum is involved with reproduction of the inequalities in society.

MC: I'm thinking that all curriculum needs to be located much more in the lives and everyday experiences of kids and school. And it's surprising how difficult it is to do that. And it's clear that the reason it's difficult to do that is because formal education is there actually, ultimately, to reproduce the inequalities that are at work in society and to prepare the masses for some sort of docility, if you use that sort of old sociological analysis. I think we need to face that and think of things we can do about that. (Christie, interview, lines 320-325)

Previously Christie (1995) comments on the way in which aboriginal education had been organised in ways which most suited westerners. He discusses a group of western educators he described as "modernist missionaries".

Not only do white theorists, administrators and teacher have the upper hand in deciding the paths that education will take, but they continue to organise education in such a way that Aboriginal educators can really only participate on white terms. (Christie, 1995, p.31)

Goddard and Foster (2002) find that despite the school district being under First Nations control, some schools they visited in Alberta chose to use the provincial (western) curriculum and English as the language of instruction. Hickling-Hudson and Ahlquist (2003) report that the curriculum at the community school they visited "revolved around the dominant culture knowledge and experiences of the 'Anglo' teachers" (p.22), in what they described as 'the colonising school'. Teachers interviewed by Hickling-Hudson and Ahlquist (2004) in the Indigenous community school did not see that they lacked in the area of cultural sensitivity but rather in pedagogical techniques. Only one of the teachers they interviewed had done any courses in cultural diversity, the content of which he had found unsatisfactory in retrospect.

Christie discussed some ideas about teachers and teaching which resonate with those regarding critical pedagogies.

MC: We need to take much more of a practical view to, that even though we would like as critical pedagogues to democratise the practices in the classroom, it's still the fact that teachers are there in a position of authority. ... I think that teachers have got the responsibility to ensure that the practical skills of literacy and numeracy etc are well provided for in the classroom and thoughtfully taught. (Christie, interview, lines 200-207)

Shields *et al* (2005) consider that there is a need for liberatory or critical pedagogies to enhance the teaching and learning of indigenous students and Osborne (2001) considers culturally responsive and relevant pedagogies invaluable for teaching indigenous students and identifies strategies to achieve them.

The idea of indigenous pedagogies was not considered by any of the participants during this free-ranging stage of the interviews. Harris (1980) identifies traditional learning styles at Milingimbi (NT) and there have been discussions for and against their incorporation into classroom practice (Aboriginal Teachers, 1991; Christie, 1985; Hughes, More & Williams, 2004; McConaghy, 2000; Nicholls, Crowley & Watt, 1998). It has also had recognition of indigenous learning styles in the other settler states (Battiste, 2002; Benham & Cooper, 2000; Hemara, 2000; Pewewardy, 2002).

Indigenous teachers

The training of indigenous people to be teachers is considered to be one way of promoting stability in community schools in all of the settler countries. The rhetoric is that by training indigenous locals there would be teachers who are part of the community and know the local language. Programs to train native teachers were initiated in the settler countries in the 1970s and 1980s. Celia Haig-Brown worked in the Native Indian Teacher Education Program (NITEP) in Canada during those early days, as did Glen Aikenhead. Because the courses were offered in centres near where the students lived, they did not have to move to the main university campus until they had become accustomed to university life. Many but not all went on to be teachers.

CHB: So that would allow them to get the degree and see about teaching but I know two of my students went on to be lawyers. And a lot of that happens... People would get their Bachelor of Education but they'd go home and they'd be wanted as the educational co-ordinator or the this or the that or the other thing, so they often didn't stay in classrooms. (Haig-Brown, interview, lines 293-297)

A similar pattern seems to have prevailed in Australia; a number of Indigenous teachers have graduated from the Bachelor Institute and some of them undertook advanced courses and have become principals of community schools. However,

there are many who completed their training but are no longer working in schools. Like the Canadian students, many have seen the range of possibilities of working in other areas. For example, Mandawuy Yunupingu, a Yolngu man from Yirrkala (NT), became a teacher there and was promoted to principal at the school. After initiating some changes at the school, he left it and has been the lead singer and tours with Yothu Yindi, an internationally-acclaimed rock band. Only a few people would find themselves in positions of such personal status. Mark Linkson met up with one of the others on a visit to Wadeye.

ML: But I know that there are three or four other trained Batchelor graduates in the community. One of them is working as a parole officer in the community, he left the school soon after I did. (Linkson, interview, lines 446-448)

None of the four Batchelor graduates living in the community where I taught were working as teachers at the school at the time. Leonie Jones suggested there were two reasons for this situation. The first was that they saw the power in the community was outside of the classroom.

LJ: ... the blokes [men] I think have seen that there's power elsewhere and I think a lot of those people have got the skills based on what was their teacher training. They won't go near a classroom, though. They want to have some input into how they think education should or shouldn't run... (Jones, interview, lines 617-620)

The second reason devolves around the constancy of attendance which can interfere with the priorities of the community including ceremonies. Other jobs in the community do not involve the degree of constancy required in schools.

LJ: I think the other thing is that teaching is a job that is very constant. It's not a job like being in a town or even a council office where, you miss a couple of days, your in-tray's filled up, people have missed a few phone calls but by a day or two you'll pick up. If you're not there [at school] just about every day you put this load on the rest [of the staff] and there's that pressure constantly. You've basically got to be there... (Jones, interview, lines 609-615)

Having indigenous teachers is often seen as problematic by non-indigenous principals. David Parish described the situation as he saw it at Lajamanu where he had two Indigenous teachers who were teaching in the bilingual program.

DP: There are only two trained Aboriginal teachers at Lajamanu ... and both of them were on the books. ... Both of them had classes and both of them had frequent absences which of course had to be covered. Both were helped quite significantly by other members of staff in a mentoring role. Both female. ... Both from the same family which meant that if there was a cultural challenge, sorry business or whatever, it affected both of them. (Parish, interview, lines 381-387)

Jones considered that there was a lot of pressure put on indigenous people to take on many of the jobs in the communities.

LJ: ... there's a danger of extending so many areas where we push Indigenous people into these positions and they are very difficult situations in which they burn out and become quite ineffective and you revert back to a situation where you've got nearly all white teachers. (Jones, interview, lines 586-589)

It would appear that it is dealing with cultural situations which underlies much of the angst regarding Indigenous teachers. The angst is particularly suffered by the western principal and teachers who are trying to function according to a western system⁵¹, rather than as Christie (1995) suggests, "what should by now be an uncontested zone of Aboriginal control in Aboriginal communities" (p.32). Malin (1994) suggests that some Aboriginal teachers felt they had to suppress their own cultural identity and behave as if from the majority culture; this is described as "white teachers with black faces" (Nungumajbarr, 1991, p.38).

Family relationships between the teacher and students may also underlie the problems, particularly with respect to avoidance relationships, assessment and discipline. Downing (1988) identifies problems in community stores for Indigenous employees who according to traditional family obligations were humbugged by relatives to give away stock (or even cash) as gifts rather than charge them. If the employees did not do so, they may be accused by family members of behaving like white people⁵². Downing (1988) also describes how gatherings of Indigenous people initiated by westerners can also break cultural protocols of avoidance relations. These protocols need to be considered in the context of the classroom where students are brought together in a class where some of them should be avoiding each other, especially as they grow older

⁵¹ Some independent Indigenous schools organise their students according to family or language groups.

⁵² This is apparently a common put-down used by Aboriginal people (Pearson, 2009).

(Trudgen, 2000). Often the students are related in some way to the Indigenous teacher who has particular and differing responsibilities to each student, besides being their teacher.

Mark Linkson made a comment about the role of women in education and how there were few men both in schools and in the training courses.

ML: Oh, absolutely, and we talked about it at [place], where everybody on the staff is female, black, apart from [person] who's the co-principal. It's because teaching, culturally, is all about mothering, it's all about nurturing, it's all about those qualities that women do best. It just doesn't appeal to the men because the qualities that are required are not qualities that men easily displayed or that they're not easily comfortable with. (Linkson, interview, lines 425-429)

Parish (1990) also found that much of what happened at school was considered women's business. Linkson felt that Indigenous men could find having too many women at the school, and in particular having a female principal and especially a western female principal, intimidating.

ML: And the fact that there are so many women in the school for a start always prohibits – and that's white women too – inhibits black men from coming through the ranks. There were lots of blokes at the school when I was there, local fellows at [place], ... because of course they're not going to work for a white woman who berates them publicly like she used to, because of course she had absolutely no cultural sensitivity in her body. And that's another reason why there are hardly any men around. (Linkson, interview, lines 430-435)

Jones considered that setting up different administrative structures was one way of defusing such problems.

LJ: I think there are other ways to enable Aboriginal people to have control and power within a school context, in terms of setting up structures and setting up leadership teams in which you might have paraprofessional people on board in a leadership team where the local Aboriginal people do have a say on how the school is run. But they don't go through the normal process that we go through to become a principal. (Jones, interview, lines 597-601)

A successful group leadership had been installed at a school on the Tiwi Islands which had a more traditional Aboriginal structure (Puruntatameri, 1996).

7.1.3 Teachers working with indigenous students in urban and regional schools

However many teachers do not have the experience of community life to allow them to develop into border workers. Celia Haig-Brown (1990) considers many westerners first visit the border world by “happenstance” because as teachers they happen to have indigenous students in their classes.

There were no comments from the participants specifically regarding teaching in urban and regional schools; however the literature on effective teaching makes a number of suggestions which are compatible with the data from teachers in community schools (section 2.2.4).

7.1.4 Concluding remarks

A number of comments were made by a subgroup of the participants who had recent experience in indigenous communities and schools, regarding the professional needs of teachers to function there effectively. In some cases these could be addressed by the preservice agencies whereas others would be the responsibility of the school or the educational authority.

- Preservice training could be enhanced to more effectively prepare new teachers, with more practical applications rather than simply “textbook knowledge”.
- Newly arrived westerners in the community are likely to suffer from culture shock. An awareness beforehand of its possible impact and mentoring both by indigenous and non-indigenous members of the community could lessen the effect.
- Hiring experienced teachers and extending their stays would seem to create more stable situations for students in schools.
- Considering the students’ culture and contextualising the curriculum, and implementing teaching strategies which are appropriate for indigenous learners
- Supporting the employment and mentoring of indigenous teachers.

Some of these ideas are equally applicable to teachers working in urban schools. Many of the ideas, if enacted, would enhance a positive frame of mind for western teachers and could lead to positive identity learning experiences (Geijsel & Meijers, 2005), which I have suggested results in border crossings.

7.2 Teachers and power

Shields *et al* (2005) suggest that deficit thinking in indigenous education results from long-term power imbalances requiring examination by educators of their own cultural assumptions. Some of the participants considered teachers and power and these perceptions were from a variety of perspectives. The ideas were expressed in general terms rather than western teacher/indigenous student. However there are some issues which can relate to aspects of indigenous education.

Celia Haig-Brown saw the power of teachers as being a relationship between the teacher and the student, independent of whether the student was indigenous or non-indigenous.

CHB: Of course there are power relations, and you know and I know, if you've ever seen a good teacher in the classroom, teachers don't have power, they are engaged in a web of power relations and they're allowed to have power by the students or whoever have been temporarily have been convinced to give it over. But it's a relation, it's not as if the teacher holds power. (Haig-Brown, interview, lines 358-361)

She understood that the teaching and learning process needed to be negotiated between teacher and students.

CHB: The only way that schools work is because the students get to a place where they agree to let the teacher do what the teacher does. And how that happens and what kind of cause or means or whatever, that is another story. At any moment that teacher cannot forcibly keep those kids doing anything, it has to be negotiated. (Haig-Brown, interview, lines 368-372)

A number of researchers have considered that resistance to learning results from a lack of connection between teacher and student. For indigenous students the most apparent form of resistance is absenteeism (Folds, 1987; Gray & Partington, 2003); other behaviours include passive classroom behaviours, 'silence' and disruptive behaviours (Folds, 1987; Partington, 1997; Shaw, 2009). Sometimes it

results in fear and discomfort experienced by teachers from confrontational students (Deyhle, 1995). Often these behaviours are used in deficit-style analyses of indigenous education (Shields *et al*, 2005).

Michael Christie considered that in a healthy Aboriginal learning context, elders should be able to exert their power and influence to help Aboriginal students develop their identity.

MC: ... an Aboriginal pedagogy seems to depend on the right of older people and elders to actually have the first say and the last say and to somehow supervise the way in which identities are formed. And I think that comes out of an Aboriginal philosophy which is rather deterministic in a sense, that you are who you are as an effect of ancestral language and ancestral behaviour. So you actually are trying to find your true identity rather than you're trying to become the person that you want to be. (Christie, interview, lines 256-261)

In an earlier comment Christie had suggested that the nature of the curriculum should be to develop an understanding of self (Christie, interview, lines 235-238; section 7.1.2). He suggested that since the curriculum did not have this focus, it brought schools into conflict with the community.

MC: There's definitely something going wrong where you have got schools which are at work somehow in competition with the community elders, and with the grandmothers of the kids who are there. Definitely, that's one of the colonising effects of formal education. And the kids have got choices about who to believe, really. And there's not enough work being done to bring those two into some sort of congruence. (Christie, interview, lines 266-270)

This is not so much the power of the teacher but rather the power of the educational authority implemented through the schools (Christie, 1995) and portrays teachers as institutional culture brokers.

James Ritchie considered that teachers should be aware that they are in schools to teach children rather than simply their subject.

JR: Whether it's appropriate or not, you've got to be aware of the power differential and that's part of, should be part of, a teacher's general training in human sensitivity. Because you're not teaching science, you're teaching people and so you've got to be aware of the fact that power is part of the situation whether you like it or not. (Ritchie, interview, lines 484-487)

Ritchie considered the basis of the power imbalance was that the teacher knew something and the students did not. He also understood that personally he was in a position of privilege, of power. Glen Aikenhead had made a similar comment regarding being in a position of power (Aikenhead, interview, lines 395-400: section 6.4), although he did suggest that some people exert their power unintentionally.

Ritchie suggested that he needed to offset his position of privilege by being humble. He had discussed the idea of being humble previously when speaking about working as a culture broker (Ritchie, interview, lines 500-509: section 6.4). This needs to be seen in the light of having respect for the other culture and as a consequence of becoming a bicultural person.

7.2.1 Concluding remarks

Teachers of indigenous students need to recognise that although they are in positions of power, they are able to decide how they intend to wield it. To wield power authoritatively is likely to lead to conflict and resistance. On the other hand, by acknowledging that power exists and respecting the indigenous students and their culture, teachers are behaving as border crossers.

7.3 Teachers and science education

In this section I am going to look at the ideas expressed by some of the participants regarding science and science education, particularly how they relate to teaching indigenous students. Science and science education are important as contexts for this thesis.

7.3.1 The power of science

From a modernist perspective western science views indigenous knowledge as the other, treating it as being outside the science realm and devaluing it, unless it is something of value which is then ‘consumed’ by science but loses its connectedness (Harding, 1998; Loomba, 1998). For indigenous students, the devaluing of their people’s knowledge can create conflicts regarding the status of their own culture (Aikenhead, 1997; Baker, 1998; Waldrup & Taylor, 1999). Harding (1998, 2008) has suggested that western science should be treated as a

localised knowledge system like other ethnosciences and that there can be multiple sciences particularly in a postcolonial world.

Celia Haig-Brown considered that western science had power because of the way in which its knowledge was gathered.

CHB: Except that you can't, or you probably can to a degree, because western science has its power because it is definitive. That's where it comes from, that's where its power comes from, a pretty tight set of conditions, rules and regulations. (Haig-Brown, interview, lines 349-351)

The dominance of scientific methodologies is also reflected in the social sciences (Smith, 1999) and in quantitative research methodologies (Denzin & Lincoln, 2000).

James Ritchie considered that there were other issues relating to the way in which science was viewed as almost omniscient and without fault.

JR: You've got to acquaint yourself with the fact that science has not always been an unqualified good, that there have been misuses of science and you need to learn something about social science of science and the humanity of science, as well as the technology of science. Or else one thinks of science as a set of pretty furniture to put in your mind, a place where you live on your own. (Ritchie, interview, lines 495-499)

Similar reservations about the benefits of science have been expressed by researchers in the studies of science (Harding, 2008).

Ritchie considered that there were two perspectives in teaching in science, one of which might be called 'science for all'.

JR: I suppose you could think that over into the science area and say, "Are you trying to teach science to everybody or are you trying to produce good scientists?" And you may need to make a distinction there. Because if you're teaching science to everybody then you may use cultural metaphors, you may use bits of cultural language, you may do lots of things to try and get your idea across because that's what a teacher has to do. (Ritchie, interview, lines 470-474)

The idea of 'science for all' had become the underpinning philosophy for much of the development of science curriculum in Australia and elsewhere in the latter part of the 20th century (Fensham, Corrigan & Malcolm, 1989).

Science can be seen as a separate culture and this means that teaching science could be seen as border crossing for many students, particularly indigenous students. Aikenhead (1996, 1997) describes teaching many students science (including indigenous students) as border crossing between their worlds and the culture of school science, performed by teachers taking on the role of culture brokers.

Ritchie also considered that there needed to be elites in society and that one of those elites was the group of professional scientists who needed to be competent in the world of western science. However, he did not see that elites necessarily meant they had to be power elites.

JR: But if you're looking to produce people who are going to excel in the world of science then you have to respect the dominant view of science itself. ... I don't believe in elites as power elites but I certainly believe in elites, in aesthetic terms and in intellectual terms. (Ritchie, interview, lines 474-476, 478-479)

This kind of elitism differs from scientism, the belief held by some elite scientists that western science is the only or fundamental way of knowing and should have *a priori* status in the intellectual world (Cobern, 1996; Ogawa, 1999). Such elites construct science in such a way that they exclude other ways of knowing, particularly ethnoscience (Harding, 1998).

7.3.2 *The place of indigenous knowledge in the curriculum*

Next I consider the nexus between western science and indigenous knowledge and particularly how an indigenous perspective could be incorporated into school science. In his interview Michael Christie took me to task when I suggested that there should be a western experience of indigenous knowledge.

MC: That's a difficult one because you're making indigenous knowledge sound like some sort of discrete body of content. (Christie, interview, 304-305)

This was consistent with Christie's conception of knowledge as being an integrated whole rather than compartmentalised. However for many western people knowledge is compartmentalised, there is a dichotomy between western science and indigenous knowledge and they have not had the kinds of experience that Christie has had. However he went on to discuss Germaine Greer's *Whitefella*

jump up (Greer, 2003) as an example of where Indigenous knowledge would be beneficial to the whole Australian community.

MC: It's an interesting statement because I think she's [Greer] quite right, even though nobody seems to agree with her, that there is something about the way in which Aboriginal people are Australian, that we as Australian, as white Australians, really need to actively appropriate somehow, despite the fact that it will make most Aboriginal people quite angry. But it has nothing to do with any essentialised Aboriginality, it's to do with place, and to do with a sense of history, and to do with a sense of kinship, and to do with a whole lot of things which are utterly human... (Christie, interview, lines 305-312)

I interpreted that he was suggesting an understanding of the Australian environment from an Indigenous perspective incorporating traditional ecological knowledge rather than solely from a western scientific perspective which has its roots elsewhere. For Christie, such an understanding would be a seamless amalgam of western scientific and Indigenous knowledges, perhaps an Australian ecological knowledge or a localised science (Harding, 1998, 2008). However there was the potential for western science to be predatory upon the indigenous knowledge and appropriate it (Harding, 1998; Loomba, 1998).

The issue of cultural appropriation was further discussed in other interviews. In his work with the *Rumaki* students Miles Barker had devised ways of dealing with the two different cultural ideas but not comparing the two lots of knowledge. However there were ways of looking at the epistemologies.

MB: But we never use the word epistemology and the whole thing remains essentially practical, a practical exercise really at its very most simplest in 'horses for courses'. How and when and where does a human operate in this cultural field or that cultural field? And the students, as well as turning in the lesson plans and so on, they have to answer questions to explore these epistemological bases. (Barker, interview, lines 160-164)

Barker considered that comparing the content of the two knowledge systems was counterproductive. From a Maori perspective:

MB: While hammering out questions like "Is Maori knowledge science?", I've avoided that approach throughout and resolutely, because the very question seems to be putting Maori knowledge up to the test, whether it's going to pass or fail. It doesn't seem to be problematising science knowledge. On this approach it seems to me that science knowledge is the baseline, it's the given, and we test the Maori knowledge for its adequacy

or its inadequacy. I don't like that approach at all. That approach to me seems to be directly lead to, at the end of the day, to having to choose, and Maori people will say very sensibly, if that's what I have to do to learn science, I'm not having a bar of your science because ... I need to be me. (Barker, interview, lines 166-174)

In general indigenous peoples (including Maori) identify with their own knowledge systems and similarly one could expect westerners to identify with their western knowledge system. When indigenous people acknowledge western science it is usually considered to be at the loss of their own cultural knowledge (Aikenhead, 1997; Baker, 1998; Waldrup & Taylor, 1999) but this does not have to be the case.

Michael Christie considered that there was a need to be inclusive not only of indigenous knowledge but also taking account of indigenous ways of knowledge production.

MC: And I think that there are epistemological issues at work in the classroom to which most teachers are blind. And I think that Aboriginal theories of knowledge production and their relation to language place an identity worth exploring and there's no reason why they shouldn't be as relevant to white kids in a white Australian classroom as they are to Aboriginal kids. (Christie, interview, lines 207-211)

Epistemology is an area of indigenous knowledge of which most westerners are probably least aware (Christie, 1985; Trudgen, 2000) and awareness would develop only by having border crossing experiences similar to those related in section 5.2. I had asked Miles Barker whether he had considered including Maori knowledge in his mainstream western science courses. In his response he saw that it could fit in the Nature of science strand.

MB: What I've often thought [while] teaching the *Rumaki*, why aren't I using this approach with my mainstream classes? Why are we not actually interrogating different models of knowledge on a much more deeper, a more extended, rigorous basis? It would be a great thing to do. It's called the Nature of science. It's a whole strand in most national curricula. (Barker, interview, lines 257-261)

However he also acknowledged that he had not done so, suggesting that he had probably wanted to get through the science content. He continued:

MB: I see as the salvation of this area really, not so much slipping little bits of Maori into the Pakeha [western] curriculum but actually taking the Nature

of science strand seriously and doing much more with it. (Barker, interview, lines 264-266)

He added a caveat which related to the way in which indigenous knowledge had been presented.

MB: I certainly don't think that a more kind of wishy-washy, uninterrogated, vague espousal of things Maori simply because they are Maori by Pakeha teachers is going to do anybody any good. (Barker, interview, lines 270-272)

Typically the representation of indigenous knowledge in science texts has been fragmented, often treated in a stereotypical and pejorative manner, and presents indigenous science focusing only on content. This representation has been critiqued elsewhere (Michie, 2005; Ninnes, 2000; Ninnes & Burnett, 2001).

7.3.3 Teachers as culture brokers teaching science

Aikenhead (1996, 1997) suggests that students, including indigenous students, may need assistance to cross the borders between their cultural knowledge and school science. One way to facilitate this is for science teachers to take on the role of a culture broker. In my investigation of the role of culture broker in section 2.3, I suggested that to be an effective culture broker, a teacher (or any cross-cultural worker) needs to be a border crosser themselves. This is reinforced in the conclusion to chapter 5. I suggest that for science teachers in mainstream schools, their border crossing may simply be a consideration of the place of indigenous knowledge in teaching and learning science. In section 2.2.5 I also suggested that the group of science teachers called access-enhancing teachers by Hanrahan (2006) have similar characteristics to culturally effective teachers and these are shared with cross-culturalists and border crossers. Aikenhead (2006) suggests how a teacher as culture broker would operate, particularly when teaching indigenous students (section 2.3.5).

In the interview, Glen Aikenhead considered that being a culture broker was an appropriate role for a science teacher.

GA: I'm working with science teachers and they do seem to see the world in mechanistic ways. ... I think this metaphor of culture broker is one that will

have resonance with [science] teachers. (Aikenhead, interview, lines 141-145)

One of those mechanistic ways was that science teachers would see the two cultures. Aikenhead felt that it was important for a culture broker to be up-front with their students.

GA: The first thing I mentioned [about being a culture broker] ... was the point that you must realise there's the two cultures and you make that conscious for your students. (Aikenhead, interview, lines 169-171)

Aikenhead saw the role of the culture broker as facilitating border crossings for students. He had previously seen border crossing and the role for a culture broker as being appropriate for movement between different types of subcultures (Jegade & Aikenhead, 1999; Aikenhead & Otsuji, 2000).

Aikenhead considered that often border crossing was something which people did without having to think about it first.

GA: The point I was going to make is that even border crossing is something that we naturally do ... Border crossing is a way of understanding how we deal with different social situations everyday; it's how we switch around. It's intuitive in that sense, we do it all the time. It's not intuitive in the sense that we're making it explicit as a topic to cogitate on. (Aikenhead, interview, lines 189-194)

However this is the case when such crossings are smooth and there is no perception of borders but when they are not smooth then there is a need for assistance or maybe the crossing is not attempted.

In reflecting on the development of *Rekindling traditions*, Aikenhead considered that the border crossings had been made explicit but not obviously so.

GA: I think you would find the border crossing to be explicit in those materials. But you would have to know about border crossings to find where they are explicit. They're not that explicit. (Aikenhead, interview, lines 211-212)

Part of this was because the teachers in the development team did not see things in the same way as Aikenhead but they already had strategies which they used to communicate with their students.

GA: So my sense was that the six teachers involved, who were very competent teachers ... didn't buy into border crossing to the extent that I would have

thought they would, but they had other ways of making students feel comfortable – at ease in this other culture. ... Making border crossings explicit for the students wasn't part of their old ways but they were still going to work well. If you were watching the teachers, you would not have seen the border crossings. They wouldn't probably describe themselves as culture brokers, they would have used other expressions which, as I said, came from the success of their past teaching. (Aikenhead, interview, lines 225-235)

He did not go into any detail as to what these other strategies might be; some may have been equivalent to 'teacher as culture broker', or perhaps 'teacher as anthropologist'. Being explicit about the appropriate border crossings was a way of modelling the approach for teachers in Aikenhead's work. Mark Linkson described his approach in preparing materials as him being the culture broker for western teachers who "needed to be told how best to teach those kids" (Linkson, interview, line 265). In this way he would also be modelling the border crossing but in a different way to Aikenhead.

7.3.4 Concluding remarks

Teachers in indigenous science education need to have a more inclusive idea of what science is, of how it and particularly school science could be inclusive of indigenous knowledges. In their classroom practice teachers need to be aware that their students may be undertaking a border crossing and so the teachers need to function in a way to facilitate border crossings. One way of achieving this is by taking on the role of a teacher as culture broker.

7.4 Conclusion

In this chapter the participants made a number of suggestions regarding teachers in cross-cultural settings. The earlier comments in section 7.1 are with regard to teachers in general working primarily in indigenous communities. Comments by the participants regarding power and teachers (section 7.2) indicate that teachers need to put aside their positions of power to take on a more-inclusive position which respects their students and their culture. In section 7.3 the participants considered aspects of teaching science to indigenous students; in much the same way as teachers need to be border crossers between their western culture and the indigenous ones, they also need to be border crossers between western science and

indigenous knowledges. They also need to consider how they approach this as teachers and be ready to take on the role of teacher as culture broker.

CHAPTER 8: CONCLUSIONS AND SOME IMPLICATIONS

I had a personal aim in undertaking this research, to find out why some individuals seem to find it easy to work with indigenous people whereas other individuals do not. In chapter 1 I situated myself in an experience I had working in an Aboriginal community and outlined some of the difficulties I had there. When I looked at the literature about individuals who had worked in similar situations, I found similar experiences had been reported, although there did seem to be another side, a group composed of individuals who were willing to work in indigenous communities but not willing to become part of them. How could this be? Why would an extended stay not lead all sojourners to become members of the community? Such questions remained unanswered as I considered the nature of culture brokerage and seemingly chased my tail.

A breakthrough came about and it had three features. The first feature became apparent when I looked at the literature on westerners in indigenous communities through the lens of culture shock. Here was a mechanism which firstly explained the anxieties I had experienced in my sojourn to the Aboriginal community. It also helped explain the diversity of individuals whom I had been encountering for a number of years working in similar places. I chose to re-examine the literature using culture shock models which showed that the impact of culture shock could either promote a positive or a negative response towards the indigenous community and particularly towards indigenous students. Then I realised that these effects could be explained in terms of the identity learning model of Geijsel and Meijers (2005) which incorporated both cognitive and affective learning, as well as leading to identity enhancement or not.

The second feature was that I realised the thesis should be primarily about border crossing rather than culture brokerage. Again there was a link with culture shock and identity learning, a realisation that those individuals who had a positive response to culture shock had been able to cross the border between the western and the indigenous cultures and their identity had been enhanced. Those individuals who had a negative experience of culture shock did not cross the border. Border crossing may sound like it is based on an essentialist perspective of culture and it is; I suggest that border crossing depends on having a modernist

perspective of culture and that the culture shock experience can take an individual back to a 'we and they' duality perspective. As a result of the culture shock experience, the individuals with a positive experience could enhance their identity learning and view of culture, while those with a negative response retain their essentialist perspective and maintain attachment to their previous identity.

The third feature was that I realised the difference between border crossing and culture brokering. I went back to the anthropology literature to the terms 'marginal man' and 'middleman' (sic) and also to some of the models of culture brokering. I realised that the border crosser was related to the 'marginal man', not in this case identifying a mixture of origins but a mixture of cultures, a cultural hybrid with a hybridised identity. On the other hand being a culture broker was filling a cross-cultural role. The nexus between the two, I suggested, was that to be an effective culture broker, an individual needed to be a border crosser. Also, it appeared to me that as well as being culture brokers or change agents, teachers could be cultural mediators for their students, filling two distinct but related intermediary roles.

With these three features in mind I started to re-examine the data from the participants' interviews. In the previous three chapters I have examined and analysed the responses of the participants to the three main themes of the research. They had provided responses to my interview questions which I had turned into narratives (chapter 4), weaving together their responses with their writings. These were then analysed with regard to the wider literature through the lens of the Geijssel and Meijers (2005) identity learning model.

In this chapter I am going to consider how the data and analysis from chapters 5 to 7 provide an answer to the research question, "What are the aspects of identity of those who work across cultures in science education?" In the first three sections of this chapter (sections 8.1 to 8.3) I summarise the discussion from the three data chapters and detail some of the conclusions I reach there.

I suggest at several points in the thesis that border crossing results from identity learning. I used the evidence from chapter 5 to establish this and show that this experience can lead to further engagement as border working, becoming bicultural and border merging. I have summarised this in section 8.1. On the other hand I

suggest that being a culture broker is a role that an individual can take on and in chapter 6 I examined how the participants considered culture brokering. I summarise their views in section 8.2. In chapter 7 I examined the suggestions made by participants regarding the nature of teaching indigenous students, particularly science education. This I summarise in section 8.3.

In section 8.4 I detail the main findings in relation to the research question: *What are the aspects of identity of those who work across cultures in indigenous science education?* Next in section 8.5 I examine some limitations of the research and in section 8.6 some implications for cross-cultural teaching. Then in section 8.7 I identify some of the new knowledge gained from my research and I suggest some future research directions (section 8.8).

8.1 Early cross-cultural influences: crossing borders and beyond

In chapter 5 I looked at the experiences of the participants in this research to understand how they had become successful cross-cultural workers. This examination started with their family and continued with their early professional experiences, particularly when they were engaged with indigenous people. On the basis of their self-reported evidence I suggest that all of the participants have undergone border crossing. For some the precursor experiences of their border crossing can be seen in their childhood and their personal lives; for all of them working in the border world has been a feature of their professional lives. Although the identity shift implicit in border crossing is a personal change, it affects how they perform in their professional lives and who they are.

Evidence from the participants' early experiences indicates that there are three phases which can lead to border crossing:

- Positive influences, through families, school experiences and other informal experiences, including religion
- Actions which anticipate border crossings but need to be followed by a situation where the participant commits themselves, such as locating themselves in an indigenous community. There is a need to come onto physical contact with indigenous people.

- A situation where the participant commits themselves to work cross-culturally. This may be an identifiable event (a critical incident) but is more likely to result from a series of cross-cultural incidents.

The data suggest that for most of the participants their interest in indigenous peoples leading to them becoming border crossers took place within the context of their professional lives. All of the participants had a border crossing in terms of there being borders between cultures, not necessarily how they describe it themselves. Some were able to suggest a situation – a critical event – which they identified as significant. For others the border crossing was not as easily identified. The experiences of each participant were different, which points to the unique nature of their cross-cultural work.

According to the identity learning model (Geijsel & Meijers, 2005) an individual who has identity learning enhancement continues to develop both the cognitive and emotional aspects of their identity. The participants all continued to engage with indigenous people and this commitment would seem to indicate that they have moved beyond simply border crossing. Two positions which were described by participants were the border worker and the biculturalist. Both of these positions were described in terms of a commitment to working with the indigenous people as collaborators or allies. Both involved a deeper knowledge about the indigenous people and respect for them and their culture. Although being bicultural has implications of also being bilingual (not necessarily shared with being a border worker), being bilingual is not the same as being the same as being bicultural, as being bilingual is primarily cognitive in scope.

As individuals become more involved in border working it would seem that they move from an essentialist idea of culture to a shared or inclusive one, to a postmodernist or postcolonialist perspective. One participant's reflections on his experience would suggest that it is possible to put aside culture as being divisive and adopt a postculturalist perspective, a position I described as being a border merger. The border merger position is an enhanced identity position where a person in this position works across borders as if they did not exist.

8.2 Understanding cultural brokerage

In Chapter 6 I looked at the role of the culture broker as distinct from being a border crosser. As I have suggested before, acting as a culture broker is to assume a role or adopt a strategy rather than undergo identity learning such as being a border crosser or worker. In chapter 5 I established that the participants have all undergone border crossings and so their perspectives on culture brokerage are through the lens of a border crosser or a more evolved position.

Participants who saw themselves in the role of culture broker revolved around the idea of an intermediary working between two groups or individuals. Most of the participants saw the broker as an insider, whereas a few saw it as something they did only sometimes or only as an outsider. The primary purpose of a culture broker was seen as a role to assist others to understand about aspects of the western culture, assisting them to make border crossings between their own culture and the western one. Other purposes were to clarify communication between two groups and taking on an advocacy role; these perceptions are more in line with being cultural mediators.

The intrinsic qualities for culture brokers which the participants identified in the data fall into five categories:

1. Having an understanding of the other culture, particularly of the customs and protocols, relationships and status, and maybe the language
2. Understanding that the other culture has alternative perspectives or ways of knowing or making sense of the world (world view), which results in the creation of different knowledge and epistemology, and that these have intrinsic value
3. Showing respect for the indigenous people leading to earning their trust
4. Being sensitive to possible conflicts between the cultures and able to develop strategies to deal with conflicts
5. Being a reflective practitioner and undertaking self-evaluation

These qualities would be considered to be the qualities of a border crosser as they are both cognitive and affective in scope and reflect enhancement of identity learning (Geijsel & Meijers, 2005). The literature generally does not address the

qualities of a culture broker; where it does, it suggests simply that they are interested in the other culture (Szasz, 2001).

The participants understood that they occupied positions of power which they could abuse easily in a cross-cultural situation. In Szasz (2001) there was an expectation that culture brokers would use their power for themselves which is at odds with ideas of the participants and suggests that the term culture broker may be inappropriate in the educational setting.

Being a culture broker was not seen as a full-time job by the participants and brokerage was seen as a role they mostly used in their professional capacity for a particular purpose. There was a concern expressed that culture brokerage could be perceived as permission to exclude the indigenous people from the cross-cultural enterprise, leaving it as a field for westerners.

8.3 Teachers in cross-cultural settings

Chapter 7 is primarily about what the participants saw was needed to produce an effective cross-cultural teacher.

Participants considered experienced teachers are viewed more positively in communities because they should have already developed their teaching skills. However experienced teachers may suffer from culture shock in much the same way as neophyte teachers. Participants saw that culture shock is inevitable when teachers first go to communities to teach and that experience in another culture is not necessarily going to prevent further culture shock.

Participants considered present induction courses to be of low value as often they did not address the nature of cross-cultural work. They saw that professional development involving local indigenous people would be of more value and able to focus on local issues. They also suggested recall meetings to be valuable after an extended period in the community. As well they considered it could be problematic that much of the knowledge about indigenous communities is often passed on by westerners to westerners. Participants suggested that community mentors were an effective way of mentoring newcomer westerners, particularly if successful mentoring alliances could be developed. They considered that

politically-motivated teachers were often 'loose cannons' and may cause discontent in the community.

Participants considered that assimilationist perspectives still exist among western teachers in schools attended by indigenous students. They felt that many aspects of schooling are outside the control of the indigenous community, including staffing, curriculum and pedagogy, as well as the buildings of the school and staff. Conflicts of interest exist for indigenous people between working in the school or elsewhere in the community and participants saw teacher training as an entry to working in other community-based jobs. Some of these jobs can give access to more power in the community and beyond it. It was suggested that teaching is seen by some indigenous people as nurturing and thus a more feminine profession.

In the interviews it was suggested that teachers in cross-cultural settings may be deceiving themselves if they think they have power because of their position; rather they may need to negotiate the power relations within the classroom, otherwise they are likely to experience resistance from their students. Participants felt that teachers need to examine their position in the community in terms of respect and humility, as well as needing to consider the needs of the community and ways of including the community, particularly its elders, in the organisation of the school and what is being taught.

Participants felt that science needs to be engaged with as a human activity rather than considered as a universal truth. This included examining its status (power), uses and misuses, and the implications of elitism and scientism amongst its practitioners. Participants suggested that making the ideas explicit through teaching resource materials was seen as effective, creating situations which other teachers could follow. They considered that school science could examine indigenous science as a local science through studies of the Nature of science and this could lead to the development of local sciences within the western science framework. Participants saw border crossings for students could be facilitated in science teaching resource materials by making the crossings more explicit. This would help model behaviours similar to 'teacher as culture broker'.

8.4 Conclusion: *What are the aspects of identity of those who work across cultures in indigenous science education?*

Border crossing can enhance the personal and professional identity of western teachers of indigenous students in science. Some teachers learn that the indigenous culture is different, is of value and respect it. They learn more about the local indigenous knowledge and can apply it in the classroom. They also learn more about the indigenous people, particularly their students, and learn to treat them with warmth which may develop into respect for the indigenous people as individuals. In this thesis border crossers are identified in a number of ways, as border crossers, cross-culturalists, effective teachers and access-enhancing teachers. Border crossing influences both the cognitive and affective domains and it is through learning in these two complementary domains which leads to identity learning enhancement (Geijsel & Meijers, 2005). For other teachers, going to live and work in an indigenous community can be a border crossing experience which is often difficult, if not hazardous or impossible.

Culture shock is used to explain these individuals' reactions to the experience, whether they are successful in crossing the border or not. The response to culture shock can be seen as an example of identity learning, using Geijsel and Meijers' (2005) model. The model suggests that identity learning enhancement takes place as a response to both cognitive and affective changes in the individual's environment. It can also be used to explain a lack of identity enhancement as a response to culture shock which affects those who have difficult, hazardous and impossible experiences.

Western border crossers may locate themselves metaphorically within the cultural borderlands or interface for varying periods of time. They may make forays into the borderlands at one stage in their lives, and then find themselves away from the borderlands. Some border crossers choose to work permanently in the borderlands and become border workers or even border mergers. On the other hand other westerners choose to locate themselves away from the borderlands altogether.

Border crossers can make use of a number of strategies or roles to assist them in their work and acting as a culture broker is one of these strategies. As culture brokers they act to bring about change but do so in culturally-sensitive ways. In

cross-cultural settings they often work on behalf of outside institutions. Culture brokers can also work as cultural mediators, trying to bring about understanding between the two groups. To do this effectively culture brokers need to have the qualities described for a border crosser.

Preparing teachers (or other westerners) for cross-cultural work needs to enhance their identity. Preservice teacher training courses need to include an affective component which not only challenges teachers' identities but which allows them to experience indigenous people in both formal and informal situations. Engaging in teaching practicums in indigenous communities would seem to be an appropriate strategy for preservice teachers. Orientation recalls, ongoing professional development and mentorships are other strategies which could have positive outcomes. Teachers need to be encouraged to engage with the community and their students, to facilitate mutual respect. They need to be made aware of the probable impact of culture shock when they go to live in a community and be given access to solutions leading to positive outcomes.

Teachers should realise that they need to negotiate the power relations in their classroom rather than expect or exploit it because of their position. Teachers of science need to be aware that science can be viewed as another culture and many of their students, particularly indigenous students, need to be guided across cultural borders. This may match the teacher's own border crossing. The science they learn should be a local science which incorporates local knowledge as well as the western scientific version. Students should be aware that there are two versions and understand how this comes about. Teaching resources should encourage teachers to take on strategies such as 'teacher as culture broker' and model the behaviours. As culture brokers, teachers should be able to facilitate the learning of western knowledge as well as mediating understanding of both cultures between them and their students.

8.5 Limitations of the research

Not necessarily a limitation of the research is the low number of participants; a small group was chosen because it was considered that they would give variety in their responses and not be lost in the noise of a larger amount of data. The

emphasis in the research is on the uniqueness of each participant's experience rather than focusing on commonalities.

One of the participant interviews was with a Japanese scholar but subsequently I chose to omit this narrative because I chose to focus on western participants from the three settler countries, Canada, New Zealand and Australia, because of the similarities of history and educational policies, particularly towards their indigenous peoples. This also led to me not including indigenous participants who may have had backgrounds in science education. I considered that the identity learning in these cases may be more complex and distract from what I learned from the final group of participants.

My decision to use the cameos rather than full narratives diverged from a methodology which had been originally considered (similar to that of Bishop, 1996). There was a greater degree of overlap in the narratives than anticipated and it became easier to deal with similar issues together as themes rather than to repeat them through discussion in a number of narratives. In Bishop's work he focuses on separate projects.

The duration of the research, in particular the time between the interviews and the final write-up, and the 'tyranny of distance' with participants in three countries (at some stages, four), caused me to become aware that I was prolonging their engagement in the research and subsequently I had to choose not to ask them to reengage in the research conversation.

8.6 Implications

This research has revealed a number of implications which are involved with teaching cross-culturally.

Pre-service training

Pre-service teacher training needs to focus on both cognitive and affective learning about indigenous people and schooling, to start developing in the trainees a teacher identity. Formal and informal experiences with indigenous people, particularly experience teaching indigenous students, need to be built into the preservice teacher training program. Part of the teacher training could be to

anticipate the effects of culture shock, so that by being prepared the trainees can reduce its impact. Opportunities to undertake teaching practicums in indigenous communities need to be promoted and supported.

Neophyte versus experienced teachers

Evidence indicates that new teachers in indigenous community schools have difficulty adapting to teaching and to the new community and this can impact particularly on the first six months of their stay. Neophyte teachers need to have their first experiences in larger, mainstream schools where they can be effectively mentored, then relocate to community schools as experienced teachers.

Promoting effective teachers

Effective teachers are warm in their relationships with their students and demanding of good quality in the students' work, and students respond positively to the relationship with their teacher. However preservice teachers have been encouraged to develop 'professional distance' from their students. Preservice and inservice professional development in indigenous education needs to focus on teachers developing warm demanding relationships.

Extending the duration

The research suggests that indigenous students first need to develop a positive relationship with their teacher before they become effective learners. An obstacle to this is the short duration that some teachers stay in the community, so that students have become disinclined to become involved. Extended durations would mean that students have a longer effective learning period, particularly when new teachers lose effective teaching time while settling in. Education authorities need to consider how they can promote extended stays.

Orientation and mentoring

Orientation for new teachers going into communities needs to focus on the indigenous culture in general and some specifics of the community where the teacher is going. The orientation should also discuss culture shock, its symptoms and set up strategies to engage with it. This could include implementing mentoring with effective teachers.

Recall meetings either in or outside the community should be implemented to allow for discussion between teachers. School-based meetings should include teachers and indigenous assistants.

Teaching science to indigenous students

Science needs to be taught in ways which reflect an acceptance of it as another culture. The science curriculum and school program could be based more around local science to give students an appropriate context for their learning. Teaching resource materials could be developed to model appropriate cross-cultural teaching strategies (such as culture brokering).

8.6.1 *Begging the question: Is it possible to be a culture broker without being a border crosser?*

I have suggested that the some of the qualities identified as those of a culture broker are in fact the characteristics of border crossers and workers. The descriptions of the qualities given above are by a group of people whom I have suggested have already 'crossed the border'. Several of them have recounted incidents when they have had to act specifically as culture brokers. This leads to begging the question: Is it possible to be a culture broker without first being a border crosser?

In section 6.1 I looked at the ideas of some of the participants who suggested that their activities as culture brokers were as insiders, using the role to impart western knowledge to members of another culture. This would seem to be the case with the group of teachers I described in section 2.2.6 as expatriate or border line, who do not take into account the culture of their students. Considering the discussion in this section on the qualities as those that a potential culture broker would acquire, it would seem a syllogism that if culture is not a consideration then one could not be a culture broker.

The anthropology literature does not facilitate a response to the question: much of what is written is about what can be a culture broker and the interchange between brokers and patrons and brokers and clients. What is seen in some cases as cross-cultural is not so much a communication of ideas but the imposition of a dominant culture on a subservient one (Dunning, 1959), a power dynamic which is not part

of what is argued here. Much of what takes place is at the cognitive level and there is seemingly no discussion of what takes place at the affective level.

The literature on applied anthropology appears to have a more human approach. In Jezewski's culture brokerage model (Jezewski, 1989, 1995) she suggests that cultural sensitivity and cultural background can be intervening conditions. Her model is feedback-based and depends on a series of strategies to achieve short-term outcomes. These strategies may be appropriate for short-term health situations but are less so for longer-term situations.

One of the facets of Aikenhead's 'teacher as culture broker' is that teachers should acknowledge that a border exists and motivate students to cross it (Aikenhead, 2006). However there is no suggestion as to how this happens and the teachers need to understand that as 'potential scientists' (Costa, 1995) when they themselves were students, they probably did not have any problem with a border crossing between school science and western science. As well, the advice is only valuable to a humanist or access-enhancing teacher; a canonical or 'pipeline' teacher⁵³ is unlikely to accept the premises that science is a culture or that students may have problems crossing borders. Canonical teachers would probably express the situation using the language of deficit ability, a situation seen as access-limiting (Hanrahan, 2006).

It would seem that it is possible to be a culture broker without being a border crosser but it is difficult to see any value in the relationship particularly for the client; rather it would be another case of hegemonic imposition.

8.7 Original research outcomes

The place of early experiences in becoming a border crosser

The participants indicated that three types of early experiences could lead to border crossing:

- Early influences, through families, school experiences and other informal experiences supportive of indigenous people

⁵³ Aikenhead (2006) describes a nucleus of teachers who are committed to the traditional canonical or 'pipeline' ideology in teaching science.

- Coming onto physical contact through working with indigenous people
- A critical event or a series of events which enhance the individual's identity towards indigenous people, after which they commit themselves to work cross-culturally.

Expanded range of qualities of a culture broker

Until this research the qualities of a culture broker had been limited to: an interest in the other culture; interest in using the power associated with culture brokerage (or perhaps more likely, the power associated with the patron); and the unique nature of the culture brokerage (Szasz, 2001).

The participants listed five categories of intrinsic qualities for culture brokers (section 8.2). They included both cognitive and affective interactions with the indigenous culture. The qualities listed were those associated with a border crosser and I concluded that a border crosser would actually make an effective culture broker. The participants also warned about the misuse of power in cross-cultural relations.

Relationship between identity learning and border crossing

This link is established using the Geijsel and Meijers' model (2005) of identity learning. I suggest that a culture shock event can lead to an enhancement of an individual's identity, both in terms of cognitive and emotional domains. These lead to intercultural literacy or learning in terms of culture shock models (Heyward, 2002; Pedersen, 1995).

A classification of border crossing situations, including non-crossing of the borderlands

I set up a classification of border crossing situations whereas in the literature only two had been identified. 'Border crossing' was used generally any situation where metaphorically there had been cross-cultural interaction. Haig-Brown (1992) uses 'border worker' inclusively to describe all individuals who worker at the border, whether they were successful or unsuccessful. My classification distinguishes between those who are successful and those who are not, as well as discriminating the degree of involvement.

The categories I identified are:

1. *Border flee-ers*. A group of short-term stayers who have a negative response to culture shock and identity learning, and choose to either leave or become isolated within a community.
2. *Border liners*. A group who also have a negative response to culture shock and identity learning but continue to work in indigenous communities without engaging with them. They form enclaves of westerners in which they associate with like-minded people.
3. *Border crossers*. Members of this group see value in the indigenous culture and attempt to reconcile differences between the two cultures. They start by crossing borders more-or-less on a needs basis, making forays across the border.
4. *Border workers*. This group chose to remain metaphorically in the border world. They work as allies to the indigenous people, giving advice, and are invited by them to take part in the project rather than setting the agenda. This group also includes people who identify as *biculturalists*.
5. *Border mergers*. A group including those people who find the notion of borders to be untenable.

The nexus between effective teaching and border crossing

I was able to show how culture shock affected individuals working in indigenous communities and could lead to enhanced identity learning. However, other teachers worked with indigenous students in mainstream settings and did not have culture shock as a cause for their identity learning. The literature on effective learning identifies 'warm demanders' (Kleinfeld, 1975) in particular as having warm relationships and being attuned both socially and culturally with their students. These qualities result from identity learning similarly to culture shock and lead to border crossing.

8.8 Future research

There are a number of research possibilities which arise from this research, some of which were implied earlier. The idea that indigenous people were located at the border or the border zone implies that they are border crossers but this is not

particularly evident and could be researched, as could individuals working as culture brokers. My involvement in this study also exposed me to a number of indigenous science education researchers and made me wonder about how they considered themselves as border crossers both between their indigenous and western culture as well as between their indigenous culture and the culture of western science.

I consider that there is much more to be gained from looking further at effective cross-cultural teachers from a number of perspectives – the teachers (by looking at their life stories and experiences), school administrators, parents and the students. I also consider that there is something to be learned from looking at long-term partnerships between indigenous and non-indigenous people, particularly those westerners who have married into indigenous families. I suggest that a qualitative methodology similar to the one used here would be appropriate. Narrative case studies could be constructed from interviews (conversations or yarning) with those who are involved.

REFERENCES

- Aboriginal Teachers. (1991). *Aboriginal pedagogy: Aboriginal teachers speak out*. Geelong, Vic.: Deakin University Press.
- Adams, R N. (1951). Personnel in culture change: A test of a hypothesis. *Social Forces*, 30(2), 185-189.
- Adams, R.N. (1970). Brokers and career mobility systems in the structure of complex societies. *Southwestern Journal of Anthropology*, 26(4), 315-327.
- Adler, P.S. (1975). The transitional experience: An alternative view of culture shock. *Journal of Humanistic Psychology*, 15(4), 13-23.
- Aikenhead, G.S. (1991). *Logical reasoning in science and technology, Student Textbook*. Toronto: John Wiley & Sons of Canada.
- Aikenhead, G.S. (1996). Science education: Border crossing into the subculture of science. *Studies in Science Education*, 27, 1-52.
- Aikenhead, G.S. (1997). Toward a First Nations cross-cultural science and technology curriculum. *Science Education*, 81(2), 217-238.
- Aikenhead, G.S. (2000). Teacher guide to Rekindling Traditions: Cross-cultural science and technology units. Retrieved 20 April 2010 from <http://www.usask.ca/education/ccstu/>.
- Aikenhead, G.S. (2001a). Integrating western and Aboriginal sciences: Cross-cultural science teaching. *Research in Science Education*, 31(3), 337-355.
- Aikenhead, G.S. (2001b). Students' ease in crossing cultural borders into school science. *Science Education*, 85, 180-188.
- Aikenhead, G.S. (2001c). Worldviews, students, science teachers, school science: Where to next? *Studies in Science Education*, 36, 135-141.
- Aikenhead, G.S. (2006). *Science education for everyday life: Evidence-based practice*. New York: Teachers College Press.
- Aikenhead, G.S., & Jegede, O.J. (1999). Cross-cultural science education: A cognitive explanation of a cultural phenomenon. *Journal of Research in Science Teaching*, 36(3), 269-287.
- Aikenhead, G.S., & Otsuji, H. (2000). Japanese and Canadian science teachers' views on science and culture. *Journal of Science Teacher Education*, 11, 277-299.
- Annabella. (2007-08). Annabella trips. Internet blog (pseudonym). Accessed 02 July 2009.
- Anzaldúa, G. (1987). *Borderlands: the new mestiza = La frontera*. San Francisco: Spinsters/Aunt Lute Book Company.
- Ashton-Warner, S. (1963). *Teacher*. Ringwood, Vic.: Penguin Books.

- Baker, D.A. (1998). A study on the effect of culture on the learning of science in non-western countries. Unpublished doctoral dissertation, Curtin University of Technology, Perth, Australia.
- Barker, M. (2004a). Indigenous cultures and the culture of science: The dilemma of being and knowing. In R. Januik & E. Samonek-Micuik (Eds.), *Proceedings of the 11th International Organisation for Science and Technology Education symposium* (pp.65-66). Lublin, Poland: Maria Curie-Sklodowska University Press.
- Barker, M. (2004b). Indigenous cultures and the culture of science: The dilemma of being and knowing. Paper presented at the 11th International Organisation for Science and Technology Education symposium, Lublin, Poland, 25-30 July 2004.
- Barker, M., & Hawera, N. (2003). Two world views, one science lesson: Maaori teachers reflect on cultural border crossing. Paper presented at the 4th annual New Zealand Science Education Research symposium Christchurch, 21-22 November 2003.
- Barnett, H.G. (1941). Personal conflicts and cultural change. *Social Forces*, 20(2), 160-171.
- Bartolomé, L.I. (2002). Creating an equal playing field: Teachers as advocates, border crossers, and cultural brokers. In Zeynep F. Beykont (Ed.), *The power of culture: Teaching across language difference* (pp. 167-191). Cambridge, MA: Harvard Educational Publishing Group.
- Bassey, M.O. (1996). Teachers as cultural brokers in the midst of diversity. *Educational Foundations*, 10(2), 37-52.
- Battiste, M. (2002). Indigenous knowledge and pedagogy in First Nations education: A literature review with recommendations. Prepared for the National Working Group on Education and the Minister for Indian Affairs, Indian and Northern Affairs, Canada (INAC), Ottawa, ON.
- Battiste, M., & Henderson, J.Y. (2000). *Protecting Indigenous knowledge and heritage*. Saskatoon, Saskatchewan: Purich Publishing.
- Bell, D., Anderson, K., Fortin, T., Ottoman, J., Rose, S., Simard, L., & Spencer, K. (2004) *Sharing our success: Ten case studies in Aboriginal schooling*. Kelowna, BC: Society for the Advancement of Excellence in Education. Retrieved 15 November 2006 from <http://www.sae.ca/pdfs/021.pdf>.
- Benham, M., & Cooper, J. (2000). *Indigenous education models for contemporary practice: In our mother's voice*. Mahwah, NJ. Lawrence Erlbaum Associates
- Bentley, T. (1999). *Pakeha Maori: The extraordinary story of the Europeans who lived as Maori in early New Zealand*. Auckland: Penguin.
- Beresford, Q., & Partington, G. (Eds.). (2003). *Reform and resistance in aboriginal education: The Australian experience*. Perth: University of Western Australia Press.

- Berger, P. (2007). Some thoughts on Qallunaat teacher caring in Nunavut. *Journal of Teaching and Learning*, 4(2), 1-12.
- Bhabha, H.K. (1994). *The location of culture*. Oxford: Routledge.
- Bishop, R. (1996). *Collaborative research stories: Whakawhanaungatanga*. Palmerston North, NZ: Dunmore Press.
- Bishop, R. (1997). Maori people's concerns about research into their lives. *History of Education Review*, 26, 25-41.
- Bishop, R., & Berryman, M. (2006). *Culture speaks: Cultural relationships and classroom learning*. Wellington, NZ: Huia Publishers.
- Bishop, R., Berryman, M., Tiakiwai, S.-J., & Richardson, C. (2003). *Te Kotahitanga: The experiences of year 9 and 10 Maori students in mainstream classrooms*. Wellington: Maori Education Research, NZ Ministry of Education.
- Blades, D. (1997). *Procedures of power and curriculum change: Foucault and the quest for possibilities in science education*. New York: Peter Lang.
- Bochner, S. (1981). The social psychology of cultural mediation. In S. Bochner (Ed.), *The mediating person: Bridges between cultures* (pp. 6-36). Cambridge, MS: Schenkman Publishing Company.
- Bourdieu, P., & Passeron, J.-C. (1990). *Reproduction in education, society and culture*. London: Sage Publications.
- Brayboy, B.McK., & Deyhle, D. (2000). Insider-outsider: Researchers in American Indian communities. *Theory into Practice*, 39(3), 163-169.
- Brenner, M.E. (2006). Interviewing in educational research. In J.L. Green, G. Camilli & P.B. Elmore (Eds.) *Handbook of complementary methods in educational research* (pp. 357-370). Washington: American Educational Research Association.
- Brody, H. (1975). *The people's land: Eskimos and Whites in the Eastern Arctic*. Ringwood, Vic.: Penguin Books Australia.
- Bruner, J. (1996). *The culture of education*. Cambridge, MA: Harvard University Press.
- Burbank, V. (2006). From bedtime to on time: Why many Aboriginal people don't especially like participating in western institutions. *Anthropological Forum*, 16(1), 3-20.
- Burger, J. (1990). *The Gaia atlas of First Peoples: A future for the indigenous world*. Melbourne: Penguin Books Australia.
- Carter, L. (2004). Thinking differently about cultural diversity: Using postcolonial theory to (re)read science education. *Science Education*, 88(6), 819-836.

- Chang, H. (1999). Re-examining the rhetoric of the “cultural broker”. *Electronic Magazine of Multicultural Education*, 1(1). Retrieved 26 April 2010 from <http://www.eastern.edu/publications/emme/1999winter/chang.html>.
- Chigeza, P. (2007). Indigenous students in school science. *Teaching Science*, 53(2), 10-15.
- Chinn, P.W.U. (2006). Preparing science teachers for culturally diverse students: Developing cultural literacy through cultural immersion, cultural translators and communities of practice. *Cultural Studies of Science Education*, 1(2), 367-402.
- Christie, M.J. (1985). *Aboriginal perspectives on experience and learning: the role of language in Aboriginal education*. Geelong, Vic.: Deakin University Press.
- Christie, M. (1991). Aboriginal science for the ecologically sustainable future. *Australian Science Teachers Journal*, 37(1), 26-31.
- Christie, M.J. (1995). Darkness into light: missionaries, modernists and Aboriginal education. *Aboriginal Child at School*, 23(3), 28-34.
- Chudleigh, B. (1969). The Aboriginal community and the school In T. Roper (Ed.), *Aboriginal education: The teacher's role* (pp.106-117). Melbourne: ABSCHOL/National Union of Australian University Students.
- Clandinin, J., & Connelly, M. (2000). *Narrative inquiry*. San Francisco: Jossey Bass.
- Clark, F. (2007). Clouds over the desert. *The Big Picture*, 294, 10-20.
- Clarke, M. (2000). Direction and support for new non-aboriginal teachers in remote Aboriginal community schools in the Northern Territory. *Australian Journal of Indigenous Education*, 28(2), 1-8.
- Clifton, J.A. (1989). Alternate identities and cultural frontiers. In J.A. Clifton (Ed.), *Being and becoming Indian: Biographical studies of North American frontiers* (pp.1-37). Chicago: Dorsey Press.
- Cobern, W.W. (1996). Worldview theory and conceptual change in science education. *Science Education*, 80(5), 579-610.
- Cochran-Smith, M. (1995). Uncertain allies: Understanding the boundaries of race and teaching. *Harvard Educational Review*, 65(4), 541-570.
- Cockrell, K.S., Placier, P.L., Cockrell, D.H., & Middleton, J.N. (1999). Coming to terms with “diversity” and “multiculturalism” in teacher education: Learning about our students, changing our practice. *Teaching and Teacher Education*, 15, 351-366.
- Cohen, L., Manion, L., & Morrison, K. (2000). *Research methods in education* (5th Ed.). London: RoutledgeFalmer.

- Collins, R. & Lea, T. (1999). *Learning lessons: An independent review of Indigenous education in the Northern Territory*. Darwin: Northern Territory Department of Education.
- Connelly, F.M., & Clandinin, D.J. (1990). Stories of experience and narrative enquiry. *Educational Researcher*, 19(5), 2-15.
- Cooper, C.R., Denner, J., & Lopez, E.M. (1999). Cultural brokers: Helping Latino children on pathways toward success. *Future of Children*, 9(2), 51-57.
- Cooper, R., & Cooper, N. (1990). *Culture shock! Thailand*. Portland, OR: Times Edition Pty. Ltd.
- Costa, V.B. (1995). When science is “another world”: Relationships between worlds of family, friends, school, and science. *Science Education*, 79(3), 313-333.
- Crawford, F. (1989). *Jalinardi ways: Whitefellas working in Aboriginal communities*. Perth: Curtin University of Technology.
- Daniels, A. (2007). Journey to Gapuwiyak (Camp dogs: Day 2 Gapuwiyak). Retrieved 28 November 2007 from <http://www.abc.net.au/darwin/stories/s2095838.htm>.
- Denzin, N., & Lincoln, Y. (2000). *Handbook of qualitative research*. Thousand Oaks: Sage Publications.
- Deyhle, D. (1995). Navajo youth and Anglo racism: Cultural integrity and resistance. *Harvard Educational Review*, 65(3), 403-444.
- Diamond, B.J., & Moore, M.A. (1995). *Multicultural literacy: Mirroring the reality of the classroom*. New York: Longman.
- Diaz, E., & Flores, B. (1990, March). The sociocultural construction of literacy: Teacher as cultural mediator. Paper presented at Claremont Reading Conference, Claremont, CA.
- Downing, J. (1988). *Ngurra Walytja, country of my spirit*. Darwin, NT: Australian National University North Australia Research Unit.
- Dunbar, T., Franks, C., Brown, A., Brands, J. White, E., Ragg, L. Duffy, M., & Walton, S. (2002). Research partnerships: Yarning about research with Indigenous peoples. Casuarina, NT: Cooperative Research Centre for Aboriginal and Tropical Health.
- Dunning, R.W. (1959). Ethnic relations and the marginal man in Canada. *Human Organization*, 18(3), 117-122.
- Eckermann, A-K. (1987). Learning styles, classroom management, teacher characteristics and rural-urban Aboriginal people: some thoughts. *Discourse*, 7(2), 55-68.
- Erickson, F. (1986). Culture difference and science education. *The Urban Review*, 18(2), 117-124,

- Erickson, F. (2004). Culture in society and on educational practices. In J.A. Banks and C.A. Banks (Eds.), *Multicultural education: Issues and perspectives* (5th ed.) (pp.31-60). Hoboken, NJ: Wiley.
- Fallers, L. (1955). The predicament of the modern African chief: An instance from Uganda. *American Anthropologist*, 57(2), 290-305.
- Fanshawe, J.P. (1976). Possible characteristics of an effective teacher of adolescent Aborigines? *Aboriginal Child at School*, 4(2), 3-23.
- Fanshawe, J.P. (1989). Personal characteristics of effective teachers of adolescent Aborigines. *Aboriginal Child at School*, 17(4), 35-48.
- Fanshawe, J.P. (1999). Warm demandingness, and what else? A reassessment of what it takes to be an effective teacher of Aboriginal and Torres Strait Island children. *Australian Journal of Indigenous Education*, 27(2), 41-46.
- Fensham, P.J., Corrigan, D.J., & Malcolm, C. (1989). *Science for everybody? A summary of research findings*. Canberra: Curriculum Development Centre.
- Flores, B., Cousin, P.T., & Diaz, E. (1991). Transforming deficit myths about learning, language, and culture. *Language Arts*, 68, 369-379.
- Folds, R. (1987). *Whitefella school: Education and Aboriginal resistance*. Sydney: Allen & Unwin Australia.
- Fontana, A., & Frey, J.H. (2000). The interview: From neutral stance to political involvement. In N.K. Denzin & Y.S. Lincoln (Eds.), *The Sage handbook of qualitative research* (2nd ed.) (pp.645-672). Thousand Oaks, CA: Sage Publications.
- Gallagher, P., & Gallagher, B. (2004). Ballanders. In L. Harrison, R. Allan, J. Phillip, & J. Reid, (Eds.), *Into the whirly wind: Stories of 'first year out' teaching* (pp.53-56). Bathurst, NSW: Charles Sturt University.
- Gay, G. (1993). Building cultural bridges. *Education and Urban Society*, 25(3), 285-299.
- Gay, G. (2000). *Culturally responsive teaching: Theory, research and practice*. New York: Teachers College Press.
- Geertz, C. (1960). The Javanese *Kijaji*: The changing role of a cultural broker. *Comparative Studies in Society and History*, 2(2), 228-249.
- Geertz, C. (1973). *The interpretation of cultures*. New York: Basic Books.
- Geijsel, F., & Meijers, F. (2005). Identity learning: The core process of educational change. *Educational Studies*, 31(4), 419-430.
- Gentemann, K.M., & Whitehead, T.L. (1983). The cultural broker concept in bicultural education. *Journal of Negro Education*, 52(2), 118-129.
- Gidley, M. (2001). Three cultural brokers in the context of Edward S. Curtis's *The North American Indian*. In M.C. Szasz (Ed.), *Between Indian and White*

- worlds: The cultural broker* (2nd edition) (pp.197-215). Norman, OK: Red River Press.
- Gilchrist, D., Schultz, D., Woods, B., Milnes, G., Milnes, P., & Truscott, K. (2002). Yarning about yarning. Paper presented at the 4th Indigenous Researchers Forum, Curtin University, Perth WA.
- Giroux, H. (1992). *Border crossings: Cultural workers and the politics of education*. New York: Routledge.
- Gitari, W. (2003). An inquiry into the integration of indigenous knowledges and skills in the Kenyan secondary science curriculum: A case of human health knowledge. *Canadian Journal of Science, Mathematics and Technology Education*, 3(2), 195-212.
- Goddard, J.T., & Foster, R.Y. (2002). Adapting to diversity: Where cultures collide — educational issues in Northern Alberta. *Canadian Journal of Education*, 27(1), 1–20.
- Goodenough, W.H. (1976). Multiculturalism as the normal human experience. *Anthropology & Education Quarterly*, 7(4), 4-7.
- Goodenough, W.H. (1981). *Culture, language and society*. Menlo Park, CA: Benjamin/Cummings Publishing Co.
- Goodson, I. (2001). The story of life history: Origins of the life history method in sociology. *Identity: an International Journal of Theory and Research*, 1(2), 129-142.
- Goodson, I. (2008). *Investigating the teacher's life and work*. Rotterdam: Sense Publishers.
- Goodson, I, & Sikes, P. (2001). *Life history research in educational settings: Learning from lives*. Buckingham: Open University Press.
- Gorman, W. (1999). Canadian Native students and inequitable learning. *Canadian Social Studies*, 33(4), 114-116.
- Goulet, L. (2001). Two teachers of Aboriginal students: Effective practice in sociohistorical realities. *Canadian Journal of Native Education*, 25(1), 68-82.
- Gray, J., & Partington, G. (2003). Attendance and non-attendance at school. In Q. Beresford & G. Partington (Eds.), *Reform and resistance in aboriginal education: The Australian experience* (pp.133-163). Perth: University of Western Australia Press.
- Green, N. (1983). *Desert school*. Fremantle: Fremantle Arts Centre Press.
- Greer, G. (2003). *Whitefella jump up*. Melbourne: Quarterly Essay.
- Groom, H. (1995). *Working purposefully with Aboriginal students*. Tuggerah, NSW: Social Science Press.

- Haig-Brown, C. (1990). Border work. In W.H. New (Ed.), *Native writers and Canadian writing* (pp.229-241). Vancouver: University of British Columbia Press.
- Haig-Brown, C. (1992). Choosing border work. *Canadian Journal of Native Education*, 19(1), 96-116.
- Haig-Brown, C. (2001). Continuing collaborative knowledge production: Knowing when, where, how and why. *Journal of Intercultural Studies*, 22(1), 19-32.
- Haig-Brown, Celia. (2008). Taking indigenous thought seriously: A rant on globalisation with some cautionary notes. *Journal of the Canadian Association for Curriculum Studies*, 6(2), 8-24.
- Haig-Brown, C., & Archibald, J. (1996). Transforming First Nation's research with respect and power. *Qualitative Studies in Education*, 9(2), 245-267.
- Haig-Brown, C., Hodgson-Smith, K.L., Regnier, R., & Archibald, J. (1997). *Making the spirit dance within: Joe Duquette High School and an Aboriginal community*. Toronto: James Lorimer & Co.
- Hallowell, I. (1963). American Indians, white and black: The phenomenon of transculturation. *Current Anthropology*, 4(5), 519-531.
- Hampton, E. (1995). Towards a redefinition of Indian education. In M. Battiste & J. Barman (Eds.), *First Nations education in Canada: The circle unfolds* (pp. 5-46). Vancouver, Canada: University of British Columbia Press.
- Hanrahan, M.U. (2006). Highlighting hybridity: A critical discourse analysis of teacher talk in science classrooms. *Science Education*, 90(1), 8-43.
- Harding, S. (1998). *Is science multicultural? Postcolonialisms, feminisms, and epistemologies*. Bloomington, IA: Indiana University Press.
- Harding, S. (2008). *Sciences from below: Feminisms, postcolonialities, and modernities*. Durham: Duke University Press.
- Harper, H. (2000). "There is no way to prepare for this": Teaching in First Nations schools in Northern Ontario – issues and concerns. *Canadian Journal of Native Education*, 24(2), 144-157.
- Harper, H. (2004). Nomads, pilgrims, tourists: Women teachers in the Canadian north. *Gender and Education*, 16(2), 209-224.
- Harris, H.L. (1999). School counsellors and administrators: Collaboratively promoting cultural diversity. *NASSP Bulletin*, January 1999, 54-61.
- Harris, S. (1980). *Culture and learning: Tradition and education in Northeast Arnhem Land*. Darwin: Northern Territory Department of Education.
- Harris, S. (1988). Cultural boundaries, culture maintenance-in-change, and two-way aboriginal schools. *Aboriginal Child at School*, 17(5), 3-19.

- Harris, S. (1990). *Two-way Aboriginal schooling: Education and cultural survival*. Canberra: Aboriginal Studies Press.
- Harrison, L., Allan, R., Phillip, J., & Reid, J. (Eds.). (2004). *Into the whirly wind: Stories of 'first year out' teaching*. Bathurst, NSW: Charles Sturt University.
- Haynes, J. (2000). ESL teacher as cultural broker. Retrieved 8 October 2002 from <http://www.everythingsl.net/in-services/crosscultural.php?ty=print>.
- Hemara, W. (2000). *Maori pedagogies: A view from the literature*. Wellington: New Zealand Council for Educational Research.
- Henwood, B. (1969). First appointment – an Aboriginal school. In T. Roper (Ed.), *Aboriginal education: The teacher's role* (pp.168-179). Melbourne: ABSCHOL/National Union of Australian University Students.
- Herman, M. (2006). *The Blackwell handbook of mediation: Bridging theory, research, and practice*. Malden, MA: Blackwell Publishing.
- Herzog, J.D. (1972). The anthropologist as broker in community education: A case study and some general propositions. *Council on Anthropology and Education Newsletter*, 3(3), 9-14.
- Heslop, J. (2003). Living and teaching in Aboriginal communities. In Q. Beresford & G. Partington (Eds.), *Reform and resistance in Aboriginal education: The Australian experience* (pp.208-237). Perth: University of Western Australia Press.
- Heyward, M. (2002). From international to intercultural: Redefining the international school for a globalized world. *Journal of Research in International Education*, 1(1), 9-32.
- Hickling-Hudson, A. (2005). 'White', 'ethnic' and 'indigenous': Pre-service teachers reflect on discourses of ethnicity in Australian culture. *Policy Futures in Education*, 3(4), 340-358.
- Hickling-Hudson, A., & Ahlquist, R. (2003). Whose culture? The colonising school and the miseducation of Indigenous children: Implications for schooling in Australia. *Journal of Postcolonial Education*, 2(2), 15-35.
- Hickling-Hudson, A., & Ahlquist, R. (2004). Teachers as "two-year tourists" in an Australian state school for Aboriginal students: Dilemmas of curriculum, agency and teacher preparation. *Journal of Postcolonial Education*, 3(1), 67-88.
- Hinderaker, E. (2002). Translation and cultural brokerage. In P.J. Deloria & N. Salisbury (Eds.), *A companion to American Indian history* (pp. 357-375). Malden, MA: Blackwell Publishing.
- Hodge, B., & O'Carroll, J. (2006). *Borderwork in multicultural Australia*. Sydney: Allen & Unwin.

- Hodson, D. (1999). Going beyond cultural pluralism: Science education for sociopolitical action. *Science Education*, 83, 775-796.
- Hodson, D. (2001). Inclusion without assimilation: Science education from an anthropological and metacognitive perspective. *Canadian Journal of Science, Mathematics and Technology Education*, 1(2).
- Hodson, D. (2002). A new metaphor for teaching: Science teacher as anthropologist. Paper presented at the 10th IOSTE conference, Brazil.
- Howard, G.R. (2006). *We can't teach what we don't know: White teachers, multiracial schools* (2nd edition). New York: Teachers College Press.
- Hughes, H. (2007). *Lands of shame: Aboriginal and Torres Strait Islander 'homelands' in transition*. Sydney: Centre for Independent Studies Limited.
- Hughes, K. (2005). 'Same bodies, different skin': Ruth Heathcock. In A. Cole, V. Haskins & F. Paisley (Eds.), *Uncommon ground: White women in Aboriginal history*, pp. 83-106. Canberra: Aboriginal Studies Press.
- Hughes, P, More, A.J., & Williams, M. (2004). *Aboriginal ways of learning*. Adelaide: University of South Australia.
- Jegade, O.J. (1995). Collateral learning and the eco-cultural paradigm in science and mathematics education in Africa. *Studies in Science Education*, 25, 97-137.
- Jegade, O.J., & Aikenhead, G.S. (1999). Transcending cultural borders: Implications for science teaching. *Journal for Science and Technology Education*, 17, 45-66.
- Jezewski, M.A. (1989). Using a grounded theory method to develop a model of culture brokering in a migrant farmer health care setting. Unpublished doctoral dissertation, State University of New York at Buffalo, New York, USA.
- Jezewski, M.A. (1995). Evolution of a grounded theory: Conflict resolution through culture brokering. *Advances in Nursing Science*, 17(3), 14-30.
- Jezewski, M.A., & Sotnik, P. (2001). *The rehabilitation service provider as culture broker: Providing culturally competent services to foreign born persons*. Buffalo, NY: Center for International Rehabilitation Research Information and Exchange.
- Johnson, R.B., & Onwuegbuzie, A.J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14-26.
- Jordan, M.E. (2005). *Balanda: My year in Arnhem Land*. Sydney: Allen & Unwin.
- Karttunen, F. (1994). *Between worlds: Interpreters, guides, and survivors*. New Brunswick, NJ: Rutgers University Press.
- Kenny, M. (1960). Patterns of patronage in Spain. *Anthropological Quarterly*, 33(1), 14-23.

- Kincheloe, J., & Staley, G. (1983). Teaching on a rural reservation: An authentic learning experience. *Momentum*, 14(1), 18-19.
- King, J.E. (1991). Dysconscious racism: Ideology, identity, and the miseducation of teachers. *Journal of Negro Education*, 60(2), 133-146.
- Kirkness, V.J., & Barnhardt, R. (1991). First Nations and higher education: The four Rs—respect, relevance, reciprocity, responsibility. *Journal of American Indian Education*, 30(3). Retrieved 2 January 2007 from <http://jaie.asu.edu/v30/V30S3fir.htm>.
- Kleinfeld, J. (1975). Effective teachers of Eskimo and Indian students. *School Review*, 83, 301-344.
- Kowal, E. (2006). The proximate advocate: Improving indigenous health on the postcolonial frontier. Unpublished doctoral dissertation, University of Melbourne, Melbourne, Australia.
- Krugly-Smolka, E. (1995). Cultural influences in science education. *International Journal of Science Education*, 17(1), 45-58.
- Kvale, S. (1996). *InterViews: An introduction to qualitative research interviewing*. Thousand Oaks, CA: Sage Publications.
- LaFromboise, T., Coleman, H.L.K., & Gerton, J. (1993). Psychological impact of biculturalism: Evidence and theory. *Psychological Bulletin*, 114(3), 395-412.
- Lea, T. (2008). *Bureaucrats and bleeding hearts: Indigenous health in northern Australia*. Sydney: University of NSW Press.
- Lee, O., & Luykx, A.. (2006). *Science education and student diversity: Synthesis and research agenda*. New York: Cambridge University Press.
- Lewthwaite, B.E., & McMillan, B. (2010). “She bothers me; but that’s because she cares.” Inuit student perceptions of success and social and interactive processes influencing success. *Canadian Journal of Education*, 33(1), 140-175.
- Lincoln, Y.S., & Guba, E.G. (2000). Paradigmatic controversies, contradictions, and emerging confluencies. In N.K. Denzin & Y.S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed.) (pp.163-188). Thousand Oaks, CA: Sage Publications.
- Linkson, M. (1998). Cultural and political issues in writing a unit of western science appropriate for primary aged Indigenous students living in remote areas of the Northern Territory. *Science Teachers Association of the NT Journal*, 18, 90-100.
- Linkson, M. (1999). Some issues in providing culturally appropriate science curriculum support for Indigenous students. *Australian Science Teachers Journal*, 45(1), 41-48.
- Linton, R. (1936). *The study of man*. New York: Appleton-Century Co.

- Loman, L. (2005). My cultural awakening in the classroom. In K. Tobin, R. Elmesky, & G. Seiler, (Eds.). *Improving urban science education: New roles for teachers, students, and researchers* (pp 261-277). Lanham, MD: Rowman & Littlefield Publishers.
- Loomba, A. (1998). *Colonialism/Postcolonialism*. New York. Routledge
- Lugones, M. (1987). Playfulness, “world”-travelling, and loving perception. *Hypatia*, 2(2), 3–19.
- Macfarlane, A.H. (2004). *Kia hiwa ra! Listen to culture—Maori students’ pleas to educators*. Wellington, NZ: New Zealand Council for Educational Research.
- Macfarlane, A. (2007). *Discipline, democracy and diversity: Working with students with behaviour difficulties*. Wellington, NZ: New Zealand Council for Educational Research.
- MacIvor, M. (1995). Redefining science education for aboriginal students. In M. Battiste & J. Barman (Eds.), *First Nations education in Canada: The circle unfolds* (pp. 73-98). Vancouver: University of British Columbia Press.
- MacLean, C. (2002). Adjusting to a new reality: Teaching in Canada’s north. *Education Canada*, 42(2), 24-27.
- Maddock, M.N. (1981). Science education: An anthropological viewpoint. *Studies in Science Education*, 8, 1-26.
- Mahan, J.M., & Rains, F.V. (1990). Inservice teachers expand their cultural knowledge and approaches through practica in American Indian communities. *Journal of American Indian Education*, 29(2), 11-24.
- Mahan, J.M., & Smith, M.F. (1978). Non-Indians in Indian schools. *Journal of American Indian Education*, 17(2), 1-6.
- Mahan, J.M., & Smith, M.F. (1979). Major questions about preservice teachers to Indian communities. *Journal of American Indian Education*, 18(2), 1-5.
- Mahar, K. (2004). In brief... some emails. In L. Harrison, R. Allan, J. Phillip, & J. Reid, (Eds.), *Into the whirly wind: Stories of ‘first year out’ teaching* (p.57). Bathurst, NSW: Charles Sturt University.
- Malcolm, C. (2007). The value of science in African cultures. In D. Corrigan, J. Dillon & R. Gunstone (Eds.), *The re-emergence of values in science education* (pp. 61-76). Rotterdam: Sense Publishers.
- Malin, M. (1994). What is a good teacher? Anglo and Aboriginal Australian views. *Peabody Journal of Education*, 69(2), 94-114.
- Marika, R. (1999). Milthun Latju Wanga Romgu Yolngu: Valuing Yolngu knowledge in the education system. *Ngoonjook, a Journal of Australian Indigenous Issues*, 13, 107-120.

- Martinez, K. (1994). Problems of ethnic and cultural differences between teachers and students: A story of a beginning teacher of Australian Aboriginal children. *Journal of Education for Teaching*, 20(2), 161-178.
- Massey, D. (1994). *Space, place and gender*. Cambridge: Polity Press.
- Matthews, M. (1994). *Science teaching: The role of history and philosophy of science*. New York: Routledge.
- McAlpine, L., & Crago, M. (1995). The induction year experience in a cross-cultural setting. *Teaching and Teacher Education*, 11(4), 403-415.
- McBride, S.R., & McKee, W. (2001). Over representation of Aboriginal students reported with behavioural disorders. A report to the Ministry of Education, British Columbia: Aboriginal Education Branch and Special Programs Branch. Retrieved 20 April 2010 from: http://www.bced.gov.bc.ca/abed/abed_over.pdf
- McComas, W.F. (1996). Ten myths of science: Reexamining what we think we know about the nature of science. *School Science and Mathematics*, 96(1), 10-16.
- McCourt, F. (2005). *Teacher man: A memoir*. London: Fourth Estate.
- McConaghy, C. (2000). *Rethinking indigenous education: Culturalism, colonialism and the politics of knowing*. Flaxton, Qld: Post Pressed.
- McKinley, E. (1996). Towards an indigenous science curriculum. *Research in Science Education*, 26(2), 155-169.
- McKinley, E. (2001). Cultural diversity: Masking power with innocence. *Science Education*, 85(1), 74-76.
- McKinley, E. (2003). Brown bodies, white coats: Postcolonialism, Maori women, and science. Unpublished doctoral dissertation, University of Waikato, Hamilton, New Zealand.
- McKinley, E. (2007). Postcolonialism, indigenous students, and science education. In S.K. Abell & N.G. Lederman (Eds.), *Handbook of research on science education* (pp. 199-226). Mahwah, NJ: Lawrence Erlbaum.
- McKinley, E., & Stewart, G. (2009). Falling into place. Indigenous science education research in the Pacific. In S.M. Ritchie (Ed.), *The world of science education: Handbook of research in Australasia* (pp.49-68). Rotterdam and Taipei: Sense Publishers.
- McLeod, B. (1981). The mediating person and cultural identity. In S. Bochner (Ed.), *The mediating person: Bridges between cultures* (pp. 37-52). Cambridge, MS: Schenkman Publishing Company.
- Medvitz, A.G. (1997). Science, schools and culture: the complexity of reform in science education. In K. Calhoun, R. Panwarm, & S. Shrum (Eds.), International Organization for Science and Technology Education (IOSTE)

8th symposium proceedings: Vol 2—Policy (pp. 158–163). Edmonton: University of Alberta.

- Metge, J., & Kinloch, P. (1978). *Talking past each other!? Problems of cross cultural communication*. Wellington: Victoria University Press.
- Meuwese, M. (2003). For the peace and well-being of the country': Intercultural mediators and Dutch-Indian relations in New Netherland and Dutch Brazil, 1600-1664. Unpublished doctoral dissertation, University of Notre Dame, Indiana, USA.
- Michie, M. (1998). Crossing borders: Understanding differing worldviews of science through the Northern Territory science curriculum. In J.E. Goodell (Ed.), Proceedings of the Australasian Joint Regional Conference of GASAT and IOSTE, pp. 441-448.
- Michie, M. (2002). Why indigenous science should be included in the school science curriculum. *Australian Science Teachers' Journal*, 48(2), 36-40.
- Michie, M. (2004). Teaching science to Indigenous students: Teacher as culture broker or is it something else? Paper presented at the annual meeting of the National Association for Research in Science Teaching held in Vancouver, Canada, 1-3 April 2004.
- Michie, M. (2005). Writing about Australian indigenous science for a junior secondary textbook: Some considerations. Paper presented at the 36th annual conference of the Australasian Science Education Research Association, Hamilton, New Zealand, 8-10 July 2005.
- Michie, M., & Linkson, M. (1999). Interfacing Western science and Indigenous knowledge: A Northern Territory perspective. *Science and Mathematics Education Papers 1999*, 265-286.
- Michie, M., & Linkson, M. (2000). Providing teacher support materials for curriculum developments incorporating intercultural understandings in teaching science. Paper presented at the 31st Conference of the Australasian Science Education Research Association, Perth.
- Michie, M., Anlezark, J., & Uibo, D. (1998). Beyond bush tucker: Implementing Indigenous perspectives through the science curriculum. *Science Teachers Association of the NT Journal*, 18, 101-110.
- Middleton, S. (1992). Developing a radical pedagogy: Autobiography of a New Zealand sociologist of women's education. In I. Goodson (Ed.), *Studying teachers' lives* (pp.18-50). New York: Teachers College Press.
- Middleton, S. (1993). *Educating feminists: Life histories and pedagogy*. New York: Teachers College Press.
- Milcaims, S.W. (2006). *Native strangers: Beachcombers, renegades and castaways in the South Seas*. Auckland: Penguin Books.

- Mitchell, I. (1969). Cooking damper in an electric oven – primary education. In T. Roper (Ed.), *Aboriginal education: The teacher's role* (pp.61-74). Melbourne: ABSCHOL/National Union of Australian University Students.
- Moffat, J., & Tung, J.-Y. (2004). Evaluating the effectiveness of culture brokering training to enhance cultural competence of independent living center staff. *Journal of Vocational Rehabilitation, 20*, 59-69.
- Morgan, S. (1987). *My place*. Fremantle, WA: Fremantle Arts Centre Press.
- Moskowitz, J., & Whitmore, W. (1997). Strangers in their own country: Teachers in the Northern Territory of Australia. In J. Moskowitz & M. Stephens (Eds.), *From students of teaching to teachers of students: Teacher induction around the Pacific Rim*. Washington, DC: APEC Education Forum/US Dept. of Education.
- Nakata, M. (2004). Indigenous knowledge and the cultural interface: Underlying issues at the intersection of knowledge and information systems. In A. Hickling-Hudson, J. Matthews, & A. Woods (Eds.). *Disrupting preconceptions: Postcolonialism and education* (pp. 19-38). Flaxton, Qld.: Post Pressed.
- Nakata, M. (2007). *Disciplining the savages, savaging the disciplines*. Canberra: Aboriginal Studies Press.
- Nelson, H. (1989). *With its hat about its ears*. Sydney: Australian Broadcasting Corporation.
- Nicholls, C., Crowley, V., & Watt, R. (1998). Black and White educational theorizing: An evaluation of the impact of 'Aboriginal learning styles' theory on Australian Aboriginal education *Ngoonjook, A Journal of Australian Indigenous Issues, 15*, 32-60.
- Nicholson, J. (2006). *White chief: The colourful life and times of Judge F.E. Maning of the Hokianga*. Auckland: Penguin.
- Ninnes, P. (2000). Representations of Indigenous knowledges in science textbooks in Canada and Australia. *International Journal of Science Education, 22*(6), 603-617.
- Ninnes, P., & Burnett, G. (2001). Postcolonial theory and science education: Textbooks, curriculum and cultural diversity in Aotearoa New Zealand. *New Zealand Journal of Educational Studies, 36*(1), 25-39.
- Noddings, N. (1996). The caring professional. In S. Gordon, P. Brenner & N. Noddings (Eds.), *Caregiving: Readings in knowledge, practice, ethics and politics* (pp.160-172). Philadelphia, PA: University of Pennsylvania Press.
- NTDE. (2000). *Intercultural understandings in teaching science: A handbook for teachers*. Darwin: Northern Territory Department of Education.
- Nunggumajbarr, E. (1991). Remembered curriculum. *Ngoonjook: Batchelor Journal of Aboriginal Education, 5*, 3-39.

- NZ Ministry of Education. (1996). Putaiao (Maori science curriculum). Wellington: NZ Ministry of Education.
- Oberg, L. (n.d.). Culture shock and the problem of adjustment to new cultural environments. Retrieved 2 January 2008 from http://www.worldwide.edd/travel_planner/culture_shock.html
- Ogawa, M. (1999). Science as the culture of scientists: How to cope with scientism? Retrieved 1 February 1999 from <http://www.ouhk.edu.hk/cridal/misc/narst99.htm>
- Ogbu, J.U., & Simons, H.D. (1998). Voluntary and involuntary minorities: A cultural-ecological theory of school performance with some implications for education. *Anthropology and Education Quarterly*, 29(2), 155-188.
- Osborne, B. (2003). Preparing preservice teachers' minds, hearts and actions for teaching in remote indigenous contexts. *Australian Journal of Indigenous Education*, 31, 17-24.
- Osborne, B. (Ed.). (2001). *Teaching, diversity and democracy*. Melbourne, Vic: Common Ground.
- Paine, R. (1971). *Patrons and brokers in the East Arctic*. Institute of Social and Economic Research, Memorial University of Newfoundland, Social and Economic Papers, No. 2.
- Parish, D.F. (1990). *Minj Kabirridi*: School non-attendance in two traditionally oriented Aboriginal communities in the Northern Territory. Unpublished master's thesis, University of New England, Armidale, Australia.
- Park, R.E. (1928). Human migration and the marginal man. *American Journal of Sociology*, 33(6), 881-893.
- Partington, G. (1997). Practice teaching in remote Aboriginal communities: The need for adaptation to the social and cultural context. *Australian Journal of Teacher Education*, 22(1), 51-66.
- Pearson, N. (2009). *Up from the Mission: Selected writings*. Melbourne: Black Inc.
- Pedersen, P. (1995). *The five stages of culture shock: Critical incidents around the world*. Westport, CT: Greenwood Press.
- Petrie, K. (2005). Coming unstuck as an interviewer. *Waikato Journal of Education*, 11, 107-120.
- Pewewardy, C. (2002). Learning styles of American Indian/Alaskan Native students: A review of the literature and implications for practice. *Journal of American Indian Education*, 41(3), 22-56.
- Phelan, P., Davidson, A.L., & Cao, H.T. (1991). Students' multiple worlds: Negotiating the boundaries of family, peer, and school cultures. *Anthropology and Education Quarterly*, 22(3), 224-250.

- Philips, S.U. (1993). *The invisible culture: Communication in classroom and community on the Warm Springs Indian Reservation*. Prospect Heights, IL: Waveland Press.
- Phillips, J., & Lampert, J. (2005). *Introductory indigenous studies in education: The importance of knowing*. Frenchs Forest, NSW: Pearson Prentice Hall.
- Pillsbury, G., & Shields, C.M. (1999). Shared journeys and border crossings: When *They* become *We*. *Journal for a Just and Caring Education*, 5(4), 410-429.
- Polkinghorne, D.E. (1995). Narrative configuration in qualitative analysis. In J.A. Hatch & R. Wisniewski (Eds.), *Life history and narrative* (pp. 5- 23). London: RoutledgeFalmer.
- Pomeroy, D. (1994). Science education and cultural diversity: Mapping the field. *Studies in Science Education*, 24, 49-73.
- Power, K. (2004). Yarning: A responsive research methodology. *Australian Research in Early Childhood*, 11(1), 37-46.
- Prater, G., Rezzonico, A., Pyron, R., Chischille, J., Arthur, V., & Yellowhair, B. (1995). Effective teachers: Perceptions of Native American students in rural areas. In *Reaching to the future: Boldly facing challenges in rural communities*. Conference Proceedings of the American Council on Rural Special Education, Las Vegas, Nevada, March 1995, pp. 358-361.
- Pratt, M.L. (2008). *Imperial eyes: Travel writing and transculturation* (2nd ed.). London: Routledge.
- Press, I. (1969). Ambiguity and innovation: Implications for the genesis of the culture broker. *American Anthropologist*, 71(2), 205-217.
- Price, B., & Price, D. (1998). Unheard voices. *Journal of Australian Indigenous Issues*, 1(2), 15-23.
- Purcell, L. (2002). *Black chicks talking*. Sydney: Hodder.
- Puruntatameri, T. (1996). Group leadership towards Aboriginalisation or localisation at Murrupurtiyanuwu. *Australian Journal of Indigenous Education*, 24(2), 24-25.
- Quartermaine, L. (2003). Indigenous research: What's it about? Keynote address, Indigenous Researchers' Forum, Canberra 2003.
- Richards, D. (1996). Strangers in a strange land: Expatriate paranoia and the dynamics of exclusion. *International Journal of Human Resources Management*, 7(2), 553-571.
- Richardson, L. (2000). Writing: A method of inquiry. In N.K. Denzin & Y.S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed.) (pp.923-948). Thousand Oaks, CA: Sage Publications.
- Ritchie, J. (1992). *Becoming bicultural*. Wellington: Huia Publishers.

- Rodman, W.L., & Counts, D. (1982). Introduction. In W.L. Rodman & D. Counts (Eds.), *Middlemen and brokers in Oceania*. (pp. 1-33). Ann Arbor: University of Michigan Press.
- Ryan, A. (2008). Indigenous knowledge in the science curriculum: Avoiding neo-colonialism. *Cultural Studies of Science Education*, 3(3), 663–683.
- Said, E.W. (1995). *Orientalism*. London: Penguin.
- Schwimmer, E.G. (1958). The mediator. *Journal of the Polynesian Society*, 67, 335-350.
- Sen, A. (2006). *Identity and violence: The illusion of destiny*. London: Penguin Books.
- Shaw, P. (2009). *Seven seasons in Aurukun: My unforgettable time at a remote Aboriginal school*. Sydney: Allen & Unwin.
- Shields, C.M., Bishop, R., & Mazawi, A.E. (2005). *Pathologizing practices: The impact of deficit thinking on education*. New York: Peter Lang.
- Sikes, P.J., Measor, L., & Woods, P. (1985). *Teacher careers: Crises and continuities*. London: Falmer Press.
- Silverman, C. (2005). Misfits, mercenaries and missionaries: Foreign aid workers face post-traumatic stress. *New Canadian Magazine*, Spring 2005, 10-13.
- Silverman, S.F. (1965). Patronage and community-nation relationships in Central Italy. *Ethnology*, 4(2), 172-189.
- Sleeter, C., & Stillman, J. (2005). Standardizing knowledge in a multicultural society. *Curriculum Inquiry*, 35(1), 27-46.
- Smith, L.T. (1999). *Decolonizing methodologies: Research and indigenous peoples*. London & New York: Zed Books/Dunedin, NZ: University of Otago Press.
- Snow, C.P. (1969). *The two cultures & A second look*. Cambridge: Cambridge University Press.
- Solomon, R.P., Portelli, J.P., Daniel, B.-J., & Campbell, A. (2005). The discourse of denial: How white teacher candidates construct race, racism and 'white privilege'. *Race, Ethnicity and Education*, 8(2), 147-169.
- Somerville, M., & Perkins, T. (2003). Border work in the contact zone: Thinking Indigenous/non-indigenous collaboration spatially. *Journal of Intercultural Studies*, 24(5), 253-266.
- Stachowski, L.L., & Mahan, J.M. (1998). Cross-cultural field placements: Student teachers learning from schools and communities. *Theory into Practice*, 37(2), 155-162.
- Stairs, A. (1991). Learning processes and teaching roles in Native education: Cultural base and cultural brokerage. *Canadian Modern Language Review*, 47(2), 280-294.

- Stairs, A. (1994). The cultural negotiation of indigenous education: Between microethnography and model-building. *Peabody Journal of Education*, 69(2), 154-171.
- Stairs, A. (1995). Learning processes and teaching roles in Native education: Cultural base and cultural brokerage. In M. Battiste and J. Barman (Eds.), *First Nations education in Canada: The circle unfolds* (pp.139-153). Vancouver, BC: University of British Columbia Press.
- Stanner, W.E.H. (1979). *White man got no dreaming: Essays 1938-1973*. Canberra: Australian National University Press.
- Stonebanks, C.D. (2008). *James Bay Cree students and higher education: Issues of identity and culture*. Rotterdam and Taipei: Sense Publishers.
- Stonequist, E.V. (1937). *The marginal man: A study in personality and culture conflict*. New York: Russell & Russell.
- Szasz, M.C. (2001). *Between Indian and White worlds: The cultural broker* (2nd edition). Norman, OK: Red River Press.
- Taft, R. (1981). The role and personality of the mediator. In S. Bochner (Ed.), *The mediating person: Bridges between cultures* (pp. 53-95). Cambridge, MS: Schenkman Publishing Company.
- Tatum, B.D. (1994). Teaching white students about racism: The search for white allies and the restoration of hope. *Teachers College Record*, 95(4), 462-476.
- Taylor, J. (1995). Non-native teachers teaching in native communities. In M. Battiste and J. Barman (Eds.), *First Nations education in Canada: The circle unfolds* (pp. 224-242). Vancouver: University of British Columbia Press.
- Te Hennepe, S. (1993). Issues of respect: Reflections of First Nations students' experiences in post-secondary anthropology classrooms. *Canadian Journal of Native Education*, 20(1), 193-260.
- Tompkins, J. (1998). *Teaching in a cold and windy place: Change in an Inuit school*. Toronto: University of Toronto Press.
- Tompkins, J. (2002). Learning to see what they can't: Decolonizing perspectives on indigenous education in the racial context of rural Nova Scotia. *McGill Journal of Education*, 37(3), 405-422.
- Townley, G. (2001). *Missionaries, mercenaries and misfits*. Unpublished doctoral dissertation, University of Western Australia, Perth, Australia.
- Tripp, D. (1994). Teachers' lives, critical incidents, and professional practice. *Qualitative Studies in Education*, 7(1), 65-76.
- Trudgen, R. (2000). *Why warriors lie down and die*. Darwin, NT: Aboriginal Resources and Development Services Inc.

- Turner, B. (2001). Different culture, different environment, different school: What can all teachers learn from the Belyuen experience. Discussion paper for “Experiencing Change, Exchanging Experiences” virtual conference, 25 June – 13 July 2001. Retrieve 27 May 2003 from <http://www.cybertext.net.au/tipd/papers/week2/printable/turner%20-%20printable.htm>.
- Vickers, A. (1989). *Bali: A paradise created*. Melbourne: Penguin Books Australia.
- Waldrip, B.G., & Taylor, P.C. (1999). Permeability of students' worldviews to their school views in a non-Western developing country. *Journal of Research in Science Education*, 36(3), 289-303.
- Waldrip, B.G., Timothy, J.T., & Wilikai, W. (2007). Pedagogical principles in negotiating cultural conflict: A Melanesian example. *International Journal of Science Education*, 29(1), 101-122.
- Warraq, I. (2007). *Defending the west: A critique of Edward Said's Orientalism*. Amherst, NY: Prometheus Books.
- Watson-Verran, H. (1992). “We’ve heard that you teach maths through kinship?” Department of History and Philosophy of Science, University of Melbourne.
- Wax, M.L., Wax, R.H., & Dumont, R.V. (1964). Formal education in an American Indian community. *Social Problems*, 2(4), supplement.
- Wax, R.H., & Thomas, R.K. (1961). American Indians and white people. *Phylon*, 22, 305-317.
- Wearing, B. (2007). *Beulah Lowe and the Yolngu people*. Glenning Valley, NSW: The author.
- Webber, M. (2008). *Walking the space between: Identity and Maori/Pakeha*. Wellington: New Zealand Council for Educational Research Press.
- Webster, L., & Mertova, P. (2007). *Using narrative inquiry as a research method. An introduction to using critical event narrative analysis in research on teaching and learning*. Abington, UK: Routledge.
- Weidman, H.H. (1983). The mediating person: Bridges between cultures. *American Anthropologist*, 85(2), 445-447.
- Weissman, D. & Fumham, A. (1987). The expectations and experiences of a sojourning temporary resident abroad: A preliminary study. *Human Relations*, 40(5), 313-26.
- Wilson, P. (2001). Trauma of Sioux high school students. *Anthropology and Education Quarterly*, 22, 367-383.
- Wolcott, H.F. (1967). *A Kwakiutl village and school*. Prospect Hills, IL: Waveland Press Inc.

- Wolcott, H.F. (1991). Propriospect and the acquisition of culture. *Anthropology and Education Quarterly*, 22(3), 251-273
- Wolf, E.R. (1956). Aspects of group relations in a complex society: Mexico. *American Anthropologist*, 58, 1065-1078.
- Woods, P. (1993). Critical events in education. *British Journal of Sociology of Education*, 14(4), 355-371.
- Wyatt, J.D. (1978-79). Native involvement in curriculum development: The native teacher as cultural broker. *Interchange*, 9(1), 17-28.
- Yunupingu, G. (1997). From the bark petition to native title. In G. Yunupingu (Ed.), *Our land is our life: Land rights—past, present and future* (pp. 1-17). Brisbane: Queensland University Press.
- Yunupingu, M (B.). (1991). A plan for Ganma research. In Aboriginal Teachers, *Aboriginal pedagogy: Aboriginal teachers speak out* (pp. 98-106). Geelong, Vic.: Deakin University Press.
- Yunupingu, M. (1994). Yothu yindi: Finding balance. *Race & Class*, 35(4), 113-120.
- Yunupingu, M. (1999). Double power. In P. Wignell (Ed.), *Double power: English literacy and Indigenous education* (pp. 1-4). Melbourne: National Languages and Literacy Institute of Australia.
- Yuval-Davis, N. (2004). Borders, boundaries, and the politics of belonging. In S. May, T. Madood & J. Squires (Eds.), *Ethnicity, nationalism and minority rights* (pp.214-230). Cambridge: Cambridge University Press.
- Zapf, M.K. (1993). Remote practice and culture shock: Social workers moving to isolated northern regions. *Social Work*, 38(6), 694-704.

APPENDICES

Appendix 1. Participant consent documentation	253
Appendix 2. Full narrative for Glen Aikenhead	257
Appendix 3. Missionaries, mercenaries and misfits	267

APPENDIX 1: PARTICIPANT CONSENT DOCUMENTATION

The University of Waikato
**Centre for Science and Technology Education Research and the School of
Education**
Participant Consent Form

Michael Michie
321 Trower Road
Nakara NT 0810
Australia
mmichie@ozemail.com.au

Dear <Prospective Participant>

I am currently undertaking research for my PhD at the Centre for Science and Technology Education Research (CSTER) at the University of Waikato, New Zealand, on the role of “teacher as culture broker” in indigenous science education. The role of culture broker as a facilitator of cross-cultural border crossings has gained some credence in education in recent times but it has not been established as a practice in indigenous science education.

Based on your published work /my knowledge of your work in this area, I would like you to take part in this research by participating in an interview with me regarding your work in indigenous education /your work as a culture broker, so that I can develop a better appreciation of your idea of the nature of the process. I anticipate that the interview will take at least an hour and possibly up to two hours. Soon after the interview I will provide you with a transcript of the interview, which I would like you to review, revise and return to me.

I am also inviting you to participate in writing a collaborative narrative of your work. This is a biographical account of your work, derived from the interview and previously published materials. We will discuss this in some detail during the interview and establish a time whether you wish to take part in this aspect of the research. I will prepare a first draft after you return the transcript and I will give you an opportunity to make any changes you wish. You will have control of the degree to which the collaboration will take place. Whatever your choice, you will receive a copy of the final narrative and an opportunity for revision. An agreed version of the narrative will appear in the thesis.

Included with this letter is the participant consent form for you to please sign and return to me. Also included is an information sheet regarding the research I am undertaking, including some of the questions which will make up part of the interview. If you require further information, please do not hesitate to contact me.

Yours faithfully

Michael Michie

Information on Michael Michie's Research Project

1. I am undertaking the research for the degree of Doctor of Philosophy at the University of Waikato.
2. The subject of my research is "The role of culture brokers in intercultural science education".
3. Through the research I aim to understand the potential role of "teacher as culture broker" within the field of science education through an understanding of its wider role in cross-cultural mediation, and its relationship to other similar identified roles. I believe that a conflict of worldviews arises when teaching of western science concepts takes place without acknowledgment of indigenous ways of knowing. My research will identify and evaluate practices in this area where a teacher takes on the role of a culture broker by considering both worldviews and bodies of knowledge.
4. The methodology I am using in this research is similar to Kaupapa Maori research, involving participants in interviews or conversations, then preparing collaborative narratives or biographies of people's experiences as culture brokers. Analysis of the narratives will lead to conclusions regarding the role of "teacher as culture broker".
5. The types of questions I am likely to ask in the interview are primarily designed to look at your experience and underlying philosophy. Parts of the interview will relate your experiences to your published research, so it will be difficult to indicate the nature of the questions in that context. I would hope that the interview will be more a conversation. The interview will also establish how we may be able to collaborate in writing the collaborative narrative. I've given some examples of the types of questions on the next page.
6. If you would like to have more details about the research, you can obtain a copy of the research proposal, either by contacting me or off the Internet. It is located at <http://www.ozemail.com.au/~mmichie/proposal.htm>.

Questions in the interview

The following are the sorts of questions which I may ask in the interview. As the interview is seen as open-ended, these are perhaps the main focuses rather than specific questions. My intention is to use the interview to explore each participant's writings.

- What is your understanding of the role of a culture broker?
- Do you think of yourself as a culture broker?
- Tell me about your experience in cross-cultural situations. How do you think you acted as a culture broker?
- How does your life experience lead you to be a culture broker?
- How you relate this to your research and publications?
- How do you think teachers need to behave in cross-cultural settings? Is being a culture broker appropriate to teachers?
- What kinds of experiences do teachers need to function as culture brokers? How do they get them? Is there any way of doing this?
- What awareness do teachers need when dealing particularly with western science in the classroom?
- What do you feel about the power relationships which may be implicit or explicit in culture broking?

The interview will also establish how each participant and the researcher may be able to collaborate in writing the collaborative narrative.

The University of Waikato

**Centre for Science and Technology Education Research and the School of
Education**

Participant Consent Form

This form should be read in conjunction with the attached “Information for Prospective Participants”.

I understand that participation in this research project will involve the following:

- 1 I will be involved in a study on the role of culture brokers in intercultural science education
- 2 Data gathered for this project will not be made available to any third party and will be subject to the provisions of the New Zealand Privacy Act (1993)
- 3 I understand I will be identified in data records or reports of the research findings. This is because the researcher will be using a record of interview and my publications, with my subsequent input, to produce a collaborative narrative.
- 4 I may withdraw from parts of this study at any stage, and if I wish I may withdraw from the project completely. If I withdraw I can expect that any material that I have provided through interview or subsequent review or discussion will no longer be part of the project data and that it will be destroyed. However pre-existing reference material which is in the public domain may still be used.
- 5 If I have any concerns about my participation in this research project I may approach the chief supervisor Dr Bronwen Cowie at the Centre for Science and Technology Education Research (Email bcowie@waikato.ac.nz, Phone IDD+ 64 7 8384987).
- 6 I request that any correspondence of draft materials to sent to me be by
(indicate choice)
 1. e-mail attachment
 2. mail
 3. facsimile

Signed

Date

APPENDIX 2. FULL NARRATIVE FOR GLEN AIKENHEAD

GLEN AIKENHEAD: Walking the walk

Glen Aikenhead has been a professor in education at the University of Saskatchewan since 1971 and is now an emeritus professor there. Glen's papers dating back to 1996 have been very influential in the area of culture studies in science education. Aikenhead (1996) is the first of the papers on border crossing and science teachers as culture brokers and it has stimulated the work I have done in this current research.

I chose to interview Glen for a number of reasons: he has been the primary researcher and writer about science teachers as culture brokers; he extended this work to deal with indigenous students, including implementation of a project called *Rekindling traditions*; and he has continued to research the nexus between western and indigenous science and science education. I interviewed Glen in Vancouver in April 2004.

Early influences

In the period immediately after World War 2, large-scale immigration from Europe commenced in Canada, Australia and New Zealand; later this was to lead to the formulation of government multicultural policies. For Glen, this diversity was an influence while growing up in early multicultural Canada, both in his family and school life.

GA: I grew up in a family who celebrated diversity and so I was taught well that diversity was to be expected. ... the outcome is that it was always intriguing to me to have schoolmates who couldn't speak English at first. Somehow this opened the world to me that there were other ways of talking about the world that I hadn't known about because someone was using a different language. (Aikenhead, interview, lines 31-36)

For Glen, the diversity that was part of his family's history had been passed down from his grandfather.

GA: He had been in western Canada on a surveying team, back in the 1860s when there were no farms. It was the Wild West, the Canadian west. I've read his diary and I was quite surprised to learn about the respect and admiration he had for the Indians. I think they [the survey team] survived

successfully because they had some help from the Aboriginal people.
(Aikenhead, interview, lines 23-27)

With his appointment to the University of Saskatchewan in 1971, Glen became involved in its teaching programs in education. During the 1970s these programs included courses for Canadian First Nations students. Some Canadian First Nations courses were taught separately from the mainstream courses, a similar approach taken elsewhere in the world (e.g. in Australia and New Zealand). In the mid-1980s Glen was asked to teach a science methods course to First Nations students in a centre north of Saskatoon.

GA: I took this very seriously, reading to better understand the potential problems that Aboriginal people might have with learning science.
(Aikenhead, interview, lines 46-48)

At that time there was not much written about the interaction between indigenous people and western science, although in retrospect Glen realised that he had read Maddock's paper on science as a cultural enterprise (Maddock, 1981). He took on this new teaching assignment quite willing to make changes to his mainstream courses but found that he did not need to make any substantial changes.

GA: ... as I explored it I came to the conclusion that I wasn't going to have to change too much because the methods courses I had been delivering, if you like, were to women, mostly women in the elementary program who have been traditionally marginalised; and I had been working in that area, the girls in science, ... And in trying to see what I should do differently for Aboriginal students, I came to the realisation that women and Aboriginal students had this commonality: they were marginalised from traditional science. (Aikenhead, interview, lines 56-63)

This was during a period when there was emphasis on gender studies in science education research. He continued to teach this course for five or six years, making improvements both to it and the mainstream course:

GA: As I improved the course for the Aboriginal students, I incorporated those changes in the sections of the course for non-Aboriginal students and found out that was a good thing. (Aikenhead, interview, lines 66-68)

There were benefits for all students through this approach, similar to the anecdotal reports from the gender in science research that changes to be inclusive of girls also often benefited boys.

Culture brokerage and culture brokers

As the person who has written much about culture brokers in science education, Glen had a clear idea of what a culture broker was, and described it in terms of two different cultures. He perceived the role as an insider role, particularly from the perception of a western teacher teaching western science to non-science and First Nations students.

GA: I describe it as someone who understands that there are two cultures. The two cultures are always different and ... the culture broker assumes there is a border crossing and that they articulate this border crossing to students in some appropriate way... (Aikenhead, interview, lines 2-5)

Glen's description mirrored what he had written previously (Aikenhead, 1996) which was to resolve the problem he saw with students dealing with conflicts between the subcultures of home, friends, school and school science, which for some students were difficult, hazardous or impossible (Phelan *et al*, 1991; Costa, 1995). This was conceptualised as some sort of border or boundary between them which needed to be crossed and the role of a culture broker could be seen in terms of a tour guide or travel agent facilitating a border crossing (Aikenhead, 1996; Lugones, 1986).

The model of a teacher as culture broker that Glen has chosen to use is one he considered to be useful for science teachers and the way they thought.

GA: And I thought, "... I'm working with science teachers and they do seem to see the world in mechanistic ways." ... I think this metaphor of culture broker is one that will have resonance with teachers. (Aikenhead, interview, lines 141-145)

He saw that being a culture broker was a pragmatic way to bring outsiders into the world of western science.

GA: The reason why culture brokering is so pragmatic to me is I've been in the position of having been the outsider trying to sort of make border crossings smoother for my students ... (Aikenhead, interview, lines 364-366)

This is evident in some of his publications (Aikenhead, 1996, 1997; Aikenhead & Otsuji, 2000; Jegede & Aikenhead, 1999), where he develops a hierarchy which relates the type of culture broker to the difficulty of the border crossing. He

portrays teachers as possible tour guides, travel agents and culture brokers, depending on the level of difficulty of the border crossing.

The idea of assisting people in some way came through strongly in the interviews and Glen's response is probably the most direct and focuses more on a mediating role.

GA: Somebody helping these two people *get along*. (Aikenhead, interview, line 201)

This is certainly the case in terms of the modern use of the term mediator in law and business (e.g. Herman, 2006) more as an intermediary between two contesting groups, although previously the term has been more akin to culture brokering (Bochner, 1981; Schwimmer, 1958; Weidman, 1983).

Although he spoke of the role of a culture broker relative to the border crossing in this way, Glen did not particularly suggest how someone became a culture broker. In Aikenhead (2006) he suggests that a humanist teacher would consider that science was another culture and they have had undergone their own border crossing.

Teachers need to articulate and reflect on their own personal culture before they can learn about their students' cultures, and they need to immerse themselves in their students' cultures cognitively, metacognitively, and emotionally before they can develop their own classroom culture to support their role as an effective culture broker. (Aikenhead, 2006, p.122)

Science teachers have come through the education system themselves as 'potential scientists' (Costa, 1996) so often they do not have the experience or understanding of science as another culture and so identify as canonical or 'pipeline' science teachers. Teachers need to be aware of the likelihood that there is going to be some sort of clash or conflict between the two cultures. Glen saw it was possible with students in western schools and understood that strategies were needed to reduce the impact.

GA: And that as a culture broker you are mindful that there might be cultural conflicts that arise so you are vigilant or sensitive to potential conflicts that arise with the students. And lastly that you have some strategies to help students deal with those conflicts. (Aikenhead, interview, lines 8-10)

He suggested that some of these strategies could incorporate Jegede's ideas of collateral learning (Jegede, 1995; Jegede & Aikenhead, 1999).

Aikenhead (1997) suggests that knowledge be treated by dividing it into western scientific and indigenous knowledge and suggests a strategy in which the two sets of knowledge are compartmentalised. Glen also considered the input of indigenous academics when deciding how to approach his materials for Aboriginal students.

GA: It is always substantiated by, "This is what Madeleine MacIvor [1995] argued for. This is what Ebor Hampton [1995] claimed was absolutely essential." So I have taken on and totally accepted my Aboriginal colleagues' points of view, which are not always consistent and they disagree amongst themselves. I make choices but the choices that I make I find are compatible with my way of thinking; but they're not, "Oh, these Aboriginal scholars have got it wrong. They should really see the truth and see it my way." (Aikenhead, interview, lines 404-409)

The influence of the indigenous authors was particularly relevant in developing the *Rekindling traditions* project (Aikenhead, 2001). Glen has also undertaken research projects with a number of non-western educators, including Masakata Ogawa, Hisashi Otsuji (Japanese), Jegede (Nigerian) and Bente Huntley (Metis Canadian), as part of his ongoing research in CSSE.

During the interview Glen gave two instances where he considered he had acted as a culture broker in helping to establish good communications between people. In the first, which had taken some years before, he had acted as an intermediary between two groups of English speakers, one from the United Kingdom and the other from North America.

GA: So my job was to literally butt in, to make the communication much more eloquent, I guess. It was never about words, it was about the experiences, the formal ways things are organised that had a totally different meaning, things like that. So looking back on it (I had forgotten about this until this interview), that's classic culture broking. It's not translating a language, that's why the word "translation" was humorous, but there was no other word we knew how to use. (Aikenhead, interview, lines 439-444)

Even though they were ostensibly speaking the same language, having a culture broker with knowledge of both cultures in this case facilitated the meeting. In the second instance, which took place a day or two before I interviewed him, Glen

mediated between two academics for both of whom English was a second language, to help them understand a point one was making during a conference presentation.

GA: “I’m sorry I don’t understand your language, ...but I’m supposing you’re using English in a different way than he’s using English.” And as you say that, as in the case yesterday, the conclusion was, “You’re talking about the same thing”. (Aikenhead, interview, lines 434-437)

In both cases Glen saw himself as a culture broker trying to clarify the meanings between two groups or people.

Power relations in culture brokering

Concerning the issue of power in culture brokering, Glen acknowledged that he was in a privileged position as a cross-cultural worker.

GA: And being a non-Aboriginal person working in the Aboriginal area, right from the very beginning ... I understand what a privileged position I’m in because of being white, male, middle-class and in science – it’s the check, check, check in terms of who has the social privilege and cultural capital. I also am very aware that what one can do things that would be seen as exerting power without that being the intention. (Aikenhead, interview, lines 395-400)

Glen understood that many westerners would exploit the inequality of the power relationship as they had done historically (Downing, 1988) although he suggested that in some cases this would be done unconsciously.

GA: Definitely there would be some people that would exploit them, for all different types of reasons. I dare say that most of those people that would exploit them would be doing so unconsciously. Just as we were talking about personalities here, there are people you know and people that I know in my circle of acquaintances, they have to be in control, they’re power mad. They don’t feel comfortable unless they have this sense of being in control. Control freaks. (Aikenhead, interview, lines 383-388)

Such would be the case of the borderline situation of the traditionalist teachers (Kleinfeld, 1976) who are actively demanding of their students while keeping their professional distance. This can be offset by being a reflective practitioner, more a quality associated with the border worker. Glen pointed out the possibility of people wishing to accomplish something without losing control.

GA: On the other hand ... I think about the natural predispositions of certain people who feel like they're in control, they're the person who people can feel good about because something has to be accomplished and so they go ahead and do something for the sake of doing it rather than sitting back and reflecting on, "Is it the best thing to do?" And they would be seen, I think, as exerting power. But again it's for all sorts of different reasons. (Aikenhead, interview, lines 389-394)

Cross-cultural teaching

Teachers as culture brokers teaching science

In Aikenhead (1996, 1997), Glen suggests that students, including indigenous students, may need assistance to cross the borders between their cultural knowledge and school science. One way to facilitate this is for science teachers to take on the role of a culture broker. In the interview, he considered that being a culture broker was an appropriate role for a science teacher.

GA: I'm working with science teachers and they do seem to see the world in mechanistic ways. ... I think this metaphor of culture broker is one that will have resonance with [science] teachers. (Aikenhead, interview, lines 141-145)

One of those mechanistic ways was that many science teachers would see the idea of two cultures from a modernist perspective. Glen felt that it was important for a culture broker to be up-front with their students.

GA: The first thing I mentioned a few minutes ago [about being a culture broker] was the point that you must realise there's the two cultures and you make that conscious for your students. (Aikenhead, interview, lines 169-171)

He saw the role of the culture broker as facilitating border crossings for students. He had previously seen border crossing and the role for a culture broker as being appropriate for movement between different types of subcultures (Jegade & Aikenhead, 1999; Aikenhead & Otsuji, 2000).

Glen considered that often border crossing was something which people did without having to think about it first.

GA: The point I was going to make is that even border crossing is something that we naturally do ... Border crossing is a way of understanding how we deal with different social situations everyday; it's how we switch around.

It's intuitive in that sense, we do it all the time. It's not intuitive in the sense that we're making it explicit as a topic to cogitate on. (Aikenhead, interview, lines 189-194)

However this is mostly the case when such crossings are smooth but when they are not smooth then there is a need for assistance or maybe the crossing is not attempted. In reflecting on *Rekindling traditions*, Glen considered that the border crossings had been made explicit but not obviously so.

GA: I think you would find the border crossing to be explicit in those materials. But you would have to know about border crossings to find where they are explicit. They're not that explicit. (Aikenhead, interview, lines 211-212)

Part of this was because the teachers in the development team did not see things in the same way as Glen but they already had strategies which they used to communicate with their students.

GA: So my sense was that the six teachers involved, who were very competent teachers ... didn't buy into border crossing to the extent that I would have thought they would, but they had other ways of making students feel comfortable – at ease in this other culture. ... Making border crossings explicit for the students wasn't part of their old ways but they were still going to work well. If you were watching the teachers, you would not have seen the border crossings. They wouldn't probably describe themselves as culture brokers, they would have used other expressions which, as I said, came from the success of their past teaching. (Aikenhead, interview, lines 225-235)

He did not go into any detail as to what these other strategies might be; some may have been equivalent to 'teacher as culture broker', or 'teacher as anthropologist' perhaps.

A dilemma of identity: When might an insider be considered an outsider?

In Glen's interview he talked about two Canadian First Nations people who took part in his *Rekindling Traditions* project and the troubles they had with identity. In the first instance, an indigenous man who was teaching in his home community found that when he sought advice on his unit, he was treated as an outsider.

GA The teacher who developed the Trapping unit, he already had a way of interacting with the students and so that didn't change. What changed for him was... he was a teacher in his own community and then to go out to the community to get more information that he needed to bring into the teaching, he had a border-crossing event that became a temporary problem

for him and his identity. ... he [became] So-and-so, the teacher of the school who wants to get us involved with helping decide what should be going on in the school. (Aikenhead, interview, lines 330-338)

In this case he was identified in the role of teacher and associated with the outsider institution, the school. Significantly he chose not to confront the issue and continued his work in the project as an outsider.

GA: So his dilemma was an identity one. Suddenly he was seen as a person who is on the other guy's side, the bad guy's side, and so he could not involve the people that he'd learnt his trapping knowledge from, he could not involve them in his school because that was a border that his people could not cross. So all of a sudden he was seen as one of the bad guys. ... He had to come to terms with that and he properly chose not to interrupt the relationship he had with his own people. (Aikenhead, interview, lines 344-349)

The second was a Cree woman who came from a different community who was also treated as an outsider. She sought assistance from the community where she was living and teaching but no help was forthcoming as she was identified as an outsider from another community.

GA: The other Aboriginal teacher, she grew up on a reservation in another part of Saskatchewan from where she was working. And she had been working there for four or five years, so she was well known up there. But it wasn't her group – it's not really a tribe at all, both were Cree – but a different community. To summarise a series of conversations that she and I had as we were developing materials: she was almost treated like a European, because she was an outsider. (Aikenhead, interview, lines 352-357)

In both cases the difficulty became a political one about the standing of these indigenous peoples in their communities, primarily because of their engagement in the western world. In terms of the communities, the teachers were considered as outsiders even though in other situations they would have been accepted as insiders. The significant difference appeared to have been their identification with the western institution, the school, through the development of the curriculum materials. Harper (2000) found similar consideration of outsider-ness by women teachers working in northern Canadian schools, including a First Nations teacher who was not only from another community but from a different tribe:

... her association with non-Aboriginal teachers and with the equation of *teacher* and *whiteness* that threatened her sense of credibility and

authenticity both as teacher and as Native. (Harper, 2000, p.148, emphasis in original)

Indigenous researchers have also reported themselves being treated as outsiders when researching in indigenous situations (Brayboy & Deyhle, 2000; Haig-Brown & Archibald, 1996).

Synthesis

In Glen's career there is no notion of a critical incident which precipitated a border crossing, it would seem from his family history that he was predisposed to become a border worker and took on this work when the opportunity came along. Glen does not particularly identify himself as a border worker, more as a culture broker, and he uses culture brokerage strategies as part of his work. Why else would he do this kind of research if he was not a border worker?

Glen sees culture brokerage as a pragmatic strategy, one suited to science teachers, but there is no expectation that they will be border crossers. His expectation is that they realise that some of their students need to cross borders and they will assist them. His work with indigenous students, for instance in *Rekindling traditions*, is to assist them cross borders into western science.

APPENDIX 3. MERCENARIES, MISSIONARIES AND MISFITS

Kowal (2006) describes as a trope the statement that there are three types of people who work in Indigenous communities in Australia – mercenaries, missionaries and misfits. Nobody seems to know the origin of this classification and neither Kowal (2006) nor Townley (2001) were able to trace its origin⁵⁴. However it has been reported being used in parts of the Pacific, Papua New Guinea and throughout the remote areas of Australia, in some cases apparently from early in the 20th century, and seems to be becoming globalised (e.g. Silverman's [2005] reference to refugee workers in Chad). It can be seen often as being a challenge to a person's identity; Jordan (2005) found it easy to identify others in the community she was living in as mercenaries and misfits but she found herself uneasy in identifying herself, by a process of elimination, as a missionary, albeit a latter-day, non-theistic one. While many people might suggest that they can identify elements of each type in their character, I believe that the classification is bogus and is more about creating stereotypes rather than understanding identity. However it has been used or referred to by others and some participants, so it needs to be critically examined.

The use of mercenary fits its common use and appears to be relatively non-problematic. Mercenaries can be seen as seeking or pursuing personal power, interest or monetary gain (Townley, 2001) or self-enrichment at the expense of naive indigenous communities and cynical public services (Price & Price, 1998). Both indigenous and non-indigenous people make money from the 'aboriginal industry' (Price & Price, 1998; Hughes, 2007). For teachers many of the benefits are financial: reasonable salaries with allowances and subsidies for food, housing and travel but nowhere to spend the money means that many invest their savings. New teachers can expect preferential subsequent appointments after spending two years or so in an aboriginal community and similar opportunities may be available for teachers in promotion positions (Harper, 2000; Hickling-Hudson & Ahlquist, 2004; Martinez, 1994).

⁵⁴ I contacted two local Darwin historians, Dr Mickey Dewar and Peter Forest, both of whom had heard the expression but neither was aware of its origin.

On the other hand, the use of missionary is certainly seen by many to be problematic (e.g. Christie, 1995; Kowal, 2006; Price & Price, 1998). Price and Price (1998) include both “the old, Christian and conservative and the new, rationalist and radical, out to change the world” (p.18); accordingly it would seem that anyone who has an agenda of change fits into the missionary group and this can include teachers (Christie, 1995) and health researchers (Kowal, 2006).

Christie (1995) suggests that modern secular teachers could be interpreted as neo-missionaries who feel that they have a mission of enlightenment, “to bring Aborigines from a state of darkness into the light” (p.31), and that “they harbour semi-religious assumptions about absolute truth, certain knowledge and the march of progress” (p.31). They influence aboriginal education in two ways, both in school administration and in the classroom. In school administration they maintain the middle class norms of western schools through enforcing behaviours such as punctuality and regularity of attendance (Burbank, 2006). In the classroom they maintain their position of authority rather than participating in producing negotiated knowledges through considering alternative ways of knowing. This resonates with Ryan (2008) in her discussion about expatriate curriculum developers in Papua New Guinea whom she regarded as neo-colonisers. Christie (1995) sees the alternative position as being where non-aboriginal teachers are “participants in education by Aborigines for Aborigines, as long as they acknowledge their position, listen respectfully ... and work cooperatively to negotiate together” (p.33).

Kowal (2006) refers to a group of “white nonracist researchers” as postcolonisers who take the charge of being called ‘missionaries’ seriously as they realise that because they are white they will have an impact on Indigenous people by exerting power over them. As such, they attempt to minimise their agency by “act(ing) without acting on Indigenous people” (p.233). To make their position tenable, Kowal (2006) suggests that they make use of a number of strategies. One is to act in the belief that in five years the postcoloniser will be redundant, replaced by a suitably-trained Indigenous person⁵⁵. Secondly, they can act because the

⁵⁵ Kowal (2006) indicates that this discourse has been around for decades, that Indigenous people will take on the positions in the communities held by whites and that whites will act as mentors in the process.

alternative person may not be as suitable, or the postcoloniser considers they will do less harm than the alternate, what Kowal calls the ‘good-enough postcoloniser’⁵⁶. A third alternative is to create roles which are more accepting to the postcoloniser and Kowal (2006) discusses the possibility of a fourth M, motherers, as describing this role. A final strategy is for postcolonisers to divest themselves of power, to take on the subservient role to indigenous experts.

There appears to be three ways of interpreting ‘misfit’ so it would seem that it is more problematic than it first appears. Townley (2001) suggests that misfits are social outcasts from mainstream society. Price and Price (1998) consider misfits to be “‘colourful characters’ [who] find a ready acceptance in *yapa* [Aboriginal] communities” (p.18) although there seems to be no easy explanation given for the ‘ready acceptance’ by aboriginal people. Jordan (2005) identifies misfits living with other westerners, Aboriginal families and sometimes on their own in Maningrida. Another reading of misfit, particularly by Townley (2001), is that long-term westerners in communities become afraid of becoming ‘bushed’ (Townley’s term, used by Brody [1975]) or ‘going native’ (Harper, 2000), in terms of becoming acculturated into aboriginal modes of behaviour. Townley (2001) suggests rather that these people, although their behaviour may appear odd in comparison to the mainstream, may use these terms as a “self-ascriptive label” and they “derive a good deal of influence and status from their involvement in the Aboriginal domain ... by helping people in ways other Whites do not” (p.293)⁵⁷. Kowal (2006) sees the misfit label used in “light-hearted quips about us ‘mangy collection of odd-bods’ who work in Indigenous health” (p.232). A third possible reading, drawing on Townley’s (2001) equivalence of ‘misfit’ to ‘bushed’ and ‘gone native’, is as a pejorative used against people who value their relationship with indigenous people by other westerners (e.g. expatriates) who do not enjoy that relationship (Tompkins, 1998). The misfit group shares some features in common with the group I identified above as the nonconformists as well as the cross-culturalists.

⁵⁶ I used this defence myself when asked to write a chapter on Australian Indigenous science for a secondary-school textbook some years ago.

⁵⁷ People who work in indigenous communities in the Northern Territory are also likely to call themselves ‘bushies’ and speak of visits to larger towns as ‘coming in from the bush’.

My contention is that the classification is not an authentic classification, that it provides a stereotypical view of a group of people and its use is somewhat disparaging (and we have no real sense of its original intent). This short analysis provides evidence that a non-missionary group can be shown to exist which is neither mercenary nor misfit (e.g. Jordan, 2005), more evidence for the dubious value of the original classification.