Contemporary Australia
and Emerging Challenges

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Acknowledgements to the
Traditional Owners and Custodians

We would like to acknowledge the Traditional Owners and Custodians of the many lands across Australia on which we conduct research. We pay our respects to the Elders, past, present and emerging.

Acknowledgements

Dany Adone and Anna Gosebrink

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Contemporary Australia and Emerging Challenges

Introduction

Australia today is a nation in transition concerned with sustainability, justice, and the maintenance of cultural and linguistic diversity. As witnessed on other continents, Australia has to tackle wild bushfires, loss of biodiversity and water scarcity, which started with colonisation and aggravated by human-induced climate change.[1] We also observe justice issues throughout Australia's social structure, the marginalisation of Indigenous Peoples and the treatment of immigrants and refugees. Also, globalisation tied to economic development and rapid urbanisation continue to impact cultures and languages of this rich and very diverse land.

In this Special Issue we discuss some of the challenges that contemporary Australia encounters. We embrace themes ranging from the role of the English language in Australia-run detention centres, the importance of equitable communication, and cultural resilience to merging Indigenous and Western knowledges. The contributions include articles, short interviews, reflection papers and Indigenous perspectives offering insights that may challenge but also inspire the readers.

This Special Issue covers three thematic areas under the headings of *Justice, Accessibility, and Human Rights*, *Language, Culture, and Resilience*, and *Indigenous Knowledges, Worldviews, and Methodologies*. Given the interconnected and transdisciplinary nature of these themes, this Special Issue highlights the significance of showcasing and combining perspectives from diverse fields such as Cultural Studies, Linguistics, Literary Studies, Environmental Studies and Geography.

Justice, Accessibility, and Human Rights

In the initial paper,[2] Arianna Grasso reflects on social justice, the role of English and social media in the context of the Australian mandatory refugee detention system. After presenting Australia's controversial border policy, the linguistic reality of detention is briefly explored to show that, on the one hand, refugees gain linguistic agency by acquiring and using English with different actors while, on the other, the 'linguascape' of detention remains embedded in broader dynamics of oppression and subjugation. The article further discusses how refugees' digital counter-discursive practices enacted on social media concurrently aim at

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1   Cf. e.g. Elmira R. Khairullina et al.: Global Climate Change; Anthony S. Kiem et al.: Natural Hazards in Australia.
2   This paper builds extensively on the findings presented in Arianna Grasso: Digital Media and Refugeehood in Contemporary Australia and id.: Refugee *Linguascapes*.

dismantling the dehumanising, exclusionary, and obliterating anti-refugee rhetoric that pervades political and media landscapes in contemporary Australia.

Heiyeon Myung and Meng Ji examine the challenges of accessibility in communicating environmental risks in culturally and linguistically diverse communities throughout Australia. In order to bridge language barriers in the nation, the provision of language services has received ample attention from scholars.[3] However, different cultural and linguistic backgrounds are not the only contributing factors to a communication barrier; according to the 2011-2012 Programme for the International Assessment of Adult Competencies (PIAAC), about 44 per cent of Australians are reported to have literacy level two and below. Against this backdrop, researchers, especially in the UK and Australasia, have recently shown an increased interest in accessible information.[4] Accessible information, easy-to-read or easy-read are interchangeable terms commonly used to describe information specifically designed for people with literacy needs.[5] This paper addresses these challenges in the context of fire risk management and reduction by measuring the level of accessibility of existing online fire and rescue information in NSW, collected in 2023, revising texts that do not score an ideal reading level and suggesting key strategies to improve the readability of information.

In their paper, Dany Adone and Anna Gosebrink in collaboration with David Newry, Agnes Amstrong, Glennis Galbat Newry, Jimmy Paddy, Julie Bilminga, Rozanne Bilminga, Bryan Gallagher, and Knut J. Olawsky from the Mirima Dawang Woorlab-gerring Language and Culture Centre argue that language maintenance and revitalisation are two examples of Linguistic Justice within an Environmental Justice framework. They discuss two projects in which a two-way collaboration approach was taken from the beginning and how this has shaped the journey and the outcome of the projects. The initiative to document the two languages, an Indigenous Sign Language and the use of a Creole language in an Aboriginal community, was a conscious decision taken by the community. Ground-up and community-led research is a vital first step in the implementation of Language documentation projects in which Indigenous methodologies (Yarning, Storytelling, among others) together with Western methodologies are applied. Language documentation has to be followed up by the appropriate programme (Maintenance, Revitalisation, Reclamation, Revival) driven by the community needs in order to achieve Linguistic Justice in the long run. Both projects discussed here illustrate these steps towards Linguistic Justice.

Language, Culture, and Resilience

Thomas Batchelor in collaboration with Jimmy Paddy and Bryan Gallagher from the Mirima Dawang Woorlab-gerring Language and Culture Centre examine

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3   Cf. Claudia V. Angelelli: Medical Interpreting and Cross-Cultural Communication; Uldis Ozolins: Communication Needs and Interpreting in Multilingual Settings, p. 21.
4   Cf. Deborah Chinn, Claire Homeyard: Easy Read and Accessible Information for People with Intellectual Disabilities, pp. 1189-1200.
5   Cf. ibid., pp. 1189-1200.

the maintenance of cultural identity through language preservation in a context of language shift. Language shift has been a major feature associated with the linguistic history of Australia since European invasion, with catastrophic results for the linguistic ecology of the continent. Whilst language shift is often associated with the loss of traditional cultural, ecological and linguistic knowledge, there is still the potential for their transmission into the newly adopted language. The paper explores the potential for continuity of Miriwoong culture as the community has shifted towards Kununurra Kriol as their main language of everyday use, a Creole language that emerged in the community following the devastating impacts of colonisation and the subsequent decline and endangerment of the traditional Miriwoong language. The transmission of Miriwoong knowledge and culture is demonstrated through the use of code-switching and integration of Miriwoong loanwords into Kununurra Kriol, as well as the calquing of Miriwoong-language concepts into the new language. A strong Miriwoong identity is further reflected in individuals' conceptions of the new language. This paper shows that, whilst the effects of language shift are catastrophic, the culture remains a living one.

The interview with James Smith, also known as Uncle Jimmy, provides a personal perspective on Indigenous worldviews and resilience. He highlights the significance of Country as a source of nourishment and responsibility. By critically contemplating the colonial mindset based on dominance and the impacts on traditional lands, he emphasises the respect for nature, intergenerational knowledge and altruism. Nonetheless, Smith advocates for collaboration between Indigenous stakeholders and non-Indigenous communities and scholars in contexts such as fire management practices. This interview thus calls for mutual respect and the acknowledgement of Indigenous contributions to the various challenges faced by Australia.

Indigenous Knowledge, Worldviews, and Methodologies

The paper by Teresa Cochrane, Scott McManus, Peta Jeffries, Gaye L. Krebs, Alexandra Knight, Lee J. Baumgartner, Anjilkurri Rhonda Radley, Richard A. Dacker, Kara Westaway, Merinda Walters, and Scott Castle reflects on the academic and personal journey of Teresa Cochrane, a proud Dunghutti Gumbaynggirr woman with strong cultural connections to Birpai/Birripi and Bundjalung Country on the east coast of Australia. The paper examines how Indigenous and Western approaches can work together. Indigenous knowledges are and have been used to support Indigenous communities to sustainably exist with Australia's fragile ecology for thousands of years but are only recently being valued for their role in creating a sustainable future for Australian fauna. Indigenous Ecological Knowledges can play a vital role in the future management and recovery of Australian native species. But the value of this knowledge needs to be recognised by those in decision-making roles. The paper thus presents these concepts using

Cochrane's family totem, the Koala, as a case study for how these two knowledge systems can be merged.

In their paper, Bettina Burger and Lucas Mattila explore the potential of yarning as a literary and educational method grounded in Indigenous theories of knowledge. This paper examines how Ambelin Kwaymullina explores alternative forms of postcolonial education i.e., through Aboriginal storytelling / yarning. Drawing from 'Message From the Ngurra Palya' (2020) and 'Teacher/Decolonizer' (2024), as well as 'Catching Teller Crow' (2018), written with her brother Ezekiel, it is considered how the works mobilise yarning to actively challenge hegemonic forms of education. The paper argues that yarning carries great anti-colonial potential and can be identified as a formally distinct literary approach. Rooted in Indigenous Australian epistemologies, yarning serves as both an educational method and a form of resistance to colonial narratives. Through close readings, the paper highlights its role in fostering connection, transmitting knowledge, and imagining decolonised futures, and calls for a broader engagement with yarning as a transformative, decolonial practice, particularly in addressing pressing global challenges.

In the interview on mapping and land management, Rohan Fisher provides insights into his research on tropical savannas in Northern Australia, the globally most fire-prone ecosystems. Traditional Indigenous fire management historically maintains healthy landscapes by preventing large-scale bushfires. Fisher highlights that these practices are of immense importance when it comes to applying modern instruments for combatting uncontrolled wildfires, such as satellite mapping and new fire management technologies. Fisher's work emphasises the fruitful collaboration between Indigenous communities and non-Indigenous scholars, but he also addresses challenges such as navigating bureaucracies and overcoming instances of miscommunication due to misconceptions about fire.

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Justice, Accessibility, and Human Rights

Arianna Grasso

Countering Obliteration in Australia-Run Detention Centers

The Significance of English and Social Media in Refugee Experiences

Abstract: This reflection paper[1] focuses on the role of the English language and social media in the context of the Australian mandatory detention system. After presenting Australia's controversial border policy, the linguistic reality of detention is briefly explored to show that, on the one hand, refugees gain linguistic agency by acquiring and using English with different actors while, on the other, the 'linguascape' of detention remains embedded in broader dynamics of oppression and subjugation. The article further discusses how refugees' digital counter-discursive practices enacted on social media concurrently aim at dismantling the dehumanizing, exclusionary, and obliterating anti-refugee rhetoric that pervades political and media landscapes in contemporary Australia.

The Australian Mandatory Detention Policy

In the last decades, Europe has experienced a substantial influx of asylum seekers and refugees, primarily due to its geographical proximity to major conflict zones. The rise of the so-called 'refugee crisis' has given rise to apprehensive and fear-driven discussions in the public sphere, leading to the endorsement of "constantly evolving restrictions on migration and asylum policies".[2] Consequently, values such as humanitarianism, inclusion, and diversity have been progressively sidelined in favor of establishing a 'Fortress Europe', which has increasingly involved the militarization, securitization, and reinforced protection of European borders.[3]

Meanwhile, Australia has also been affected by the arrival of forcibly displaced individuals. In fact, despite receiving minimal coverage from mainstream media, over the past twenty years, Australia's response to incoming asylum seekers and refugees has been one of the most severe worldwide. In the early 2000s, Australia pioneered the outsourcing of the assessment of asylum seekers' refugee status and the creation of offshore detention facilities for those deemed 'unauthorized arrivals'.[4] To be more specific, the Pacific Solution introduced in 2001 and its reimplementation in 2012 dictated that individuals attempting to reach Australia by sea without legal documents would face indefinite confinement in the Manus and Nauru Regional Processing Centers, located on the respective Pacific islands.[5]

1   This paper builds extensively on the findings presented in Arianna Grasso: Digital Media and Refugeehood in Contemporary Australia; id.: Refugee *Linguascapes*.
2   Michał Krzyżanowski, Anna Triandafyllidou, Ruth Wodak: The Mediatization and the Politicization of the 'Refugee Crisis' in Europe, p. 1.
3   Cf. e.g., Zoe Holman: Where the Water Ends.
4   Cf. Suvendrini Perera: Australia and the Insular Imagination.
5   Cf. Richard Devetak: In Fear of Refugees.

As of August 2021, the Immigration Detention and Community Statistics Summary reported the transfer of over five thousand asylum seekers to Manus and Nauru. More than thirteen Immigration Detention Centers, managed by Australia, remained operational, four offshore and nine onshore. Additionally, various hotels and motels were temporarily repurposed as Alternative Places of Detention (APODs).[6] As of today, the situation persists, with hundreds of refugees being held in both onshore and offshore facilities, uncertain about when or whether they will be released.

Multiple times has this policy been defined as a "criminogenic border policing practice", which has placed asylum seekers and refugees outside the reach of international law, enabling the systematic abuse of human rights in the detention centers.[7] Numerous official reports have been released to chronicle the human rights violations occurring within the offshore and onshore detention facilities operated by Australia, as well as the detrimental effects of prolonged detention on the mental and physical well-being of refugees.[8] Simultaneously, various international declarations and treaties, including the 1951 Refugee Convention, the 1948 Universal Declaration of Human Rights, and the 1984 Convention against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment – of which the Australian government is a signatory – have been violated in the pursuit of the protection of 'Fortress Australia'. Thirteen individuals have lost their lives due to violence, medical negligence, and suicide.[9]

Nonetheless, these controversial policies have been politically, juridically, and financially sustained by the major political parties in Australia in a bipartisan fashion.[10] Moreover, if at an initial stage these strategies of externalization and confinement were politically justified by the necessity to prevent drownings at sea and the arrival of 'illegal non-citizens' at the Australian shores, more recently, it has been argued that the detention policy has been consistently pursued by political leaders in order to secure votes and garner political consensus among Australian citizens, notwithstanding unanimous international condemnations.[11]

Colonial Legacies and Linguistic Struggles in Contemporary Australia

Numerous academics have claimed that the harshness of Australia's refugee policy has its origins deeply embedded in the legacy of British colonialism.[12]

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6 Cf. Department of Home Affairs: Immigration Detention and Community Statistics Summary.

7 Michael Grewcock: Our lives is in danger, p. 70.

8 Cf. Doctors Without Borders: Australia's Detention of Refugees and Asylum Seekers.

9 Cf. ibid.

10 Cf. John Minns, Kieran Bradley, Fabricio H. Chagas-Bastos: Australia's Refugee Policy, p. 2.

11 Cf. Michael Grewcock: Our lives is in danger

12 To some, Australia's mandatory detention policy is intertwined with the historical legacy of colonialism and the subsequent White Australia Policy, a legislation that effectively stopped all non-European immigration into the country and contributed to the development of a racially insulated white society (for an extensive discussion, cf. Sonia Magdalena Tascón: Refugees and Asylum Seekers in Australia). To others, it is strictly interconnected with the foundation of Australia, which was established as a penal colony during the British

While it can be argued that colonialism historically began with the arrival of the First Fleet to Botany Bay (Sydney) – which transported the first British settlers to what is now known as Australia, it is indisputable that it has stretched until the present, while taking the form of practices of otherization, discrimination and exclusion. In this regard, Omid Tofighian suggests that the systematic violence generated through border politics in contemporary Australia are components of a colonial ideology that has perpetuated the displacement, dispossession, and repression of Aboriginal and Torres Strait Islander people over the past centuries.[13] As a matter of fact, containment policies, such as the establishment of mission, reserves, and station to enclose Aboriginal people during colonial times as well as the recent implementation of detention centers throughout Australia and the South Pacific area to confine asylum seekers and refugees, have consistently been operated across different spatial and temporal scales against an inside / outside Other.[14] Overall, this containment logics has been viewed as a defensive measure to protect the cultural, social, and linguistic integrity of Australians and the Australian nation.

The latter is evident not only in the history and geography of Australia at large but also while considering the linguistic policies operating inside detention in the past years. To begin with, individuals seeking asylum under the mandatory detention policy have received minimal or no assistance from Australian authorities in learning English, arguably with the aim of "safeguarding against false hopes among detainees"[15] who aspired to be resettled in the country (or, one could argue, in other English-speaking nations like the United Kingdom, New Zealand, Canada, or the United States). Reports from Save the Children and Amnesty International have indicated that within detention facilities, English language classes have been sporadically provided, or when provided they have been affected by substandard teaching and learning conditions, insufficient access to educational materials, and inadequately equipped facilities. Additionally, there has been a shortage of qualified teaching personnel, leading to a high incidence of illiteracy and truancy among learners.[16]

Moreover, the management of asylum seekers and refugees in offshore and onshore detention facilities has implicitly led to a form of *segregational multilingualism*, where individuals from diverse linguistic backgrounds have been compelled to coexist within the confined space of detention without sharing a common language.[17] The latter has frequently meant the linguistic and social isolation of detainees, which has been further exacerbated by the structural challenges and systemic violence encountered by refugees attempting to acquire proficiency in English in detention, i.e., the abusive and discriminatory behaviors

Empire. In Omid Tofighian's words, "the prison is inseparable from Australia as a nation, the nation's origins as an offshore prison which multiplied into many similar sites" (Omid Tofighian: Introducing Manus Prison Theory, p. 11).

13 Cf. Omid Tofighian: Introducing Manus Prison Theory.
14 Cf. Kate Coddington: The Re-Emergence of Wardship; Alison Mountz, Kate Coddington, R. Tina Catania, Jenna M. Loyd: Conceptualizing Detention; Sonia Magdalena Tascón: Refugees and asylum Seekers in Australia.
15 Scott Morrison: Operation Sovereign Borders Update (22 October).
16 Cf. Amnesty International, Refugee Council of Australia: Until When?
17 Cf. Arianna Grasso: Refugee *Linguascapes*.

and the consequent mental and physical deterioration of potential participants in English language courses.[18] The precarious nature of the learning environment has, as a result, hindered refugees from establishing meaningful communication not only with fellow detainees but also with the broader international community, meaning refugee advocates, activists, legal representatives, journalists, who could shed light on the detention regime, provide psychological support, and offer legal protection to detainees.[19]

The neglectful approach towards enhancing the detainees' linguistic capabilities may be interpreted not just as an effort to discourage refugees from envisioning a future in any Anglophone country of the Global North but also as a continuation of broader systems of exploitation that suppress the linguistic and non-linguistic agency of otherized individuals. In other words, the juridical subordination of refugees, ostensibly implemented to safeguard Australian national borders and preserve its way of life,[20] has inevitably led to the linguistic hierarchization of these subjects in the space of detention and beyond. Interestingly, though, the restrictive linguistic policies that have been in place in the detention system starkly contrast with those enacted within Australia, where instead language policies have contributed to establishing a 'dominant monolingualism' in the country, with English being the de facto national language. This notwithstanding the 150 Aboriginal languages still spoken by Aboriginal peoples and the ever-decreasing percentage of Aboriginal and Torres Strait Islander communities and individuals using an Indigenous language at home.[21]

The (Perceived) Role of English in Australia-Run Detention Centers

While extensive documentation has been produced on the denial of refugees' fundamental rights and its consequential physical and psychological impacts, the literature has largely overlooked the infringement of refugees' linguistic rights and the strategies employed by detainees to counteract it. Acknowledging this research gap, I have elsewhere[22] attempted to explore the 'linguascape'[23] of detention and its dynamics, by focusing on the *perceived* role played by the English language in such constrained linguistic environment.[24] The study is theoretically grounded in Critical Sociolinguistics,[25] a framework that understands

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18   Cf. ibid.
19   Cf. Linda Briskman: Courageous Ethnographers or Agents of the State.
20   Cf. Anthony Burke: Fear of Security.
21   The number is believed to have dropped from 16.4 per cent in 1991 to 9.5 per cent in 2021. Cf. Australian Bureau of Statistics: Language Statistics for Aboriginal and Torres Strait Islander Peoples.
22   Cf. Arianna Grasso: Refugee *Linguascapes*.
23   Cf. Grit Liebscher and Jennifer Dailey-O'Cain: Language, Space, and Identity in Migration.
24   To achieve this research goal, the research has employed a content-analytical ethnographic approach using the purposefully constructed Refugee Interview Corpus (RIC), which consists of twelve online interviews conducted with currently or formerly detained refugees in the English language.
25   Critical sociolinguists assert that "linguistic discrimination serves as a proxy for other forms of discrimination", linking it to broader phenomena such as racism, classism,

language use as intricately woven into historical and political processes, which in turn emerge from the linguistic practices adopted by individuals and groups of speakers.[26] To put it another way, the work has sought to explore how the refugees' linguistic capital[27] is self-regulated within detention, while being situated within the broader framework of the Australian detention policy. Given the impracticality of conducting sociolinguistic fieldwork in the onshore / offshore detention centers, the investigation has relied on the metalinguistic reflexivity[28] of interviewees, through which they have reflected on their own linguistic practices and repertoires.[29] Overall, it can be argued that the English language has been appropriated by refugees to counter the material, communicative, and symbolic marginalization experienced within the Australian carceral system. Findings have further revealed the multifarious roles that English serves within detention, which form dialectical continuums of usage in various situational contexts. English has in fact been viewed and represented by detainees as a bridge language ('lingua franca'), a resistance language ('lingua liberatrix'), an oppression language ('lingua opprimens'), a socio-digital language ('lingua socialis'), and an educational language ('lingua instruens').

When employed as a 'lingua franca' or 'lingua socialis', English has fostered interpersonal relationships and transmediation communicative processes, allowing the circulation of linguistic practices between digital and non-digital contexts, e.g., through the sharing of information but also songs, poems, and arts produced between fences. In doing so, English has facilitated relational patterns that have empowered refugees to counter the regime of spatial immobility and deterritorialization imposed upon them during detention. Additionally, when being used as a 'lingua liberatrix', English has allowed refugees to contest discriminatory linguistic practices and regain visibility, political capital, and a sense of agency, e.g., when rejecting the prescribed monolingual and monocultural policies enforced in their country of origin in favor of an international language such as English. On the other hand, through their first-hand accounts, it has become evident that the lack of access to language resources and proficiency in the English language has led to the utter silencing of refugees and their subsequent invisibility within both local and global linguistic spheres. Their linguistic isolation, therefore, has

nationalism, sexism, and more (Melissa Curtin: Language and Globalisation, p. 551). Therefore, in investigating linguistic practices associated with a specific social and geographical context, scholars working in the field of Critical Sociolinguistics should always consider their connection to wider socio-political, economic, and political dynamics that establish, reinforce, and perpetuate imbalanced power relationships.

26   Cf. Suresh Canagarajah: The Routledge Handbook of Migration and Language.

27   According to Bourdieu, the distribution of linguistic capital – which refers to the accumulation of linguistic competence influencing individuals' and groups' social positions within institutional and sociocultural settings – is closely tied to the distribution of other forms of capital (economic, cultural, political, etc.). Cf. Pierre Bourdieu: Language and Symbolic Power.

28   Cf. Nikolas Coupland, Adam Jaworski: Sociolinguistic Perspectives on Metalanguage.

29   Linguistic repertoires are cohesive sets of "variant codes, ways of speaking, and usage patterns" that individuals utilize for their communicative projects. The expansion or contraction of a linguistic repertoire is influenced by factors such as "process of socialization, social mobility (or immobility), gender and class interactions, institutional access, colonization (and post-colonization), and global linguistic expansion" (Marco Jacquemet: Beyond the Speech Community, pp. 2f.).

hindered them from forming transnational support networks, questioning institutional language hierarchies, and engaging in meaningful practices of (linguistic) reterritorialization crucial for their self-legitimization.

English has also been identified as a 'lingua opprimens', signifying an oppressive language used to not only physically dispose of undesired subjectivities but also morally degrade them. In such instances, English has worked as the derisive language within the detention context, e.g., with Australian officers repeatedly mocking and bullying refugees. In this particular scenario, however, lacking a proficient command of the English language has somewhat shielded detainees from experiencing additional verbal discrimination. On the contrary, refugees have unanimously perceived the self-study of English as a means to pursue their educational aspirations and exercise their educational rights in the constrained space of detention ('lingua instruens'), i.e., when signing up and participating in language programs provided by third parties such as non-governmental organizations, humanitarian associations, and universities based in Australia. In so doing, refugees have aimed to bridge the educational gap resulting from the uneven distribution of and limited access to educational and linguistic resources between citizens and non-citizens of the Australian nation-state. Nevertheless, these competing processes continue to operate within broader dynamics of power, subjugation, and violence enacted by various institutional and non-institutional actors. In other words, English has emerged as a carrier of hegemonic ideologies and a matrix of counter-practices, which are shaped dialectically through top-down institutional practices and bottom-up social counteractions.[30]

Further research is nonetheless needed to investigate the linguistic practices enacted in the understudied 'linguascape' of detention and the ideologies embedded in the linguistic policies enforced by the Australian government within the detention network (versus the Australian country). It is also crucial to contextualize refugees' communicative practices, acknowledging the tangible and intangible effects of containment policies on linguistic competence and semiotic repertoires *precisely* as a consequence of multidimensional forms of obliteration. As a matter of fact, linguistic repertoires are not acquired in neutral circumstances but evolve as outcomes of intersecting processes wherein interactants appropriate, use, and reject specific semiotic resources. Therefore, as critical sociolinguists, we should seek to uncover the power asymmetries underlying communicative practices among individuals and social groups. A critical academic approach is in this sense essential for reflecting on, rethinking, and rediscussing refugee 'linguascapes' from a social-justice oriented perspective. Moving in this direction, the work here presented has ultimately attempted to offer a multileveled lens for investigating refugee 'linguascapes', invoking the redistribution of resources, recognition of dignity, and authentic representation of refugees' subjectivities across different settings and contexts.[31]

30　Cf. Norman Fairclough: The Dialectics of Discourse.
31　Cf. Nancy Fraser: Social Justice in the Age of Identity Politics.

Social Media and Refugees' Digital Self-Representations

Concurrently with the fabrication and dissemination of an anti-refugee rhetoric by mainstream media and political discourse in Australia – which have commonly depicted asylum seekers and refugees through processes of massification, dehumanization, criminalization, or victimization[32] – social media have growingly accounted for promising platforms where asylum seekers and refugees have been able to shape their own counter-discourses. In particular, Facebook and X (formerly known as Twitter) have proven as empowering technological devices, allowing detainees to engage in decolonial forms of resistance, by harnessing social media to counteract the government's punitive confinement measures and expose the structural violence of the prison system to the outer world.[33] More specifically, Twitter has been pivotal to bridge the gap between the under- and mis-representation of discourses *about* asylum seekers and refugees and the lack of *their own* discursive self-representation.

I have identified a wide range of discourses that have aimed at offering the refugees' discursive perspectives to the digital audiences of Twitter, i.e., discourses of diversification, which have been employed to emphasize refugees' diversity, individuality, and self-determination; discourses of dignity and condemnation that have been articulated to resist discrimination and challenge illegitimate power structures; discourses of humanization that have countered dehumanizing narratives from hardline political and media circles; discourses of equality and legitimation that have sought justice while holding policymakers accountable; discourses that have highlighted the spatial suspension, temporal uncertainty, and existential vulnerability of refugees in prolonged detention settings; and discourses related to the historicization of detention, which have framed the prison system within a historical perspective through references to totalitarian regimes.[34]

Moreover, while leveraging the communicative infrastructure of Twitter, refugees have employed the typographic conventions of the platform, such as mentions, to confront the policymakers they hold responsible for their incarceration, seek public attention by reaching out to news media outlets, establish international networks of solidarity, and endorse other fellow refugees.[35] Simultaneously, refugees have creatively utilized the semiotic tool of hashtags to garner visibility and support from their audiences and condemn a state of emergency. Notably, hashtags have also functioned as persuasive slogans that have effectively captured

32 Cf. Cheryl M. R. Sulaiman-Hill, Sandra Thompson, Rita Afsar, Toshi Holdliff: Changing Images of Refugees; Scott Poynting and Greg Noble: 'Dog-Whistle' Journalism and Muslim Australians since 2001; Fiona H. McKay, Samantha L. Thomas, R. Warwick Blood: Any one of these boat people could be a terrorist for all we know; Roland Bleiker, David Campbell, Emma Hutchinson, Xzarina Nicholson: The Visual Dehumanisation Of Refugees.

33 Cf. Kate Coddington, Alison Mountz: Countering Isolation with the Use of Technology.

34 For a comprehensive discussion, cf. Arianna Grasso: Digital Media and Refugeehood in Contemporary Australia. The research has investigated what kind of visual and non-visual discourses emerged from a purposely built corpus of ca. 7000 tweets and by means of what semiotic and rhetorical strategies these discourses were constructed. The analysis has employed corpus-driven critical-discursive and multimodal approaches.

35 Cf. ibid.

public attention and promoted civic engagement in both digital and non-digital arenas, while feeding sentiments of indignation. Overall, in the face of the geographical isolation, institutional silencing and media embargos orchestrated by the Australian government to avoid accountability, refugees have acquired digital agency through these social media platforms, that is the capacity to act, advocate or speak for themselves in digital (and virtually also non-digital) contexts.

Refugees have also tapped into the in-built multisemiotic resources of Twitter to produce their visual perspectives on the platform.[36] For example, through selfies, refugees have produced their own viewpoint on the social reality experienced in detention while exerting their self-representational power within the digital setting. Detainees have also used Twitter to document the aggressions perpetrated against them and report self-harm practices and their bodily sufferings in an explicit and unfiltered way.[37] Importantly, these multimodal contents have established a moral *us* versus an immoral *they*, which has often resulted in two conflicting and irreconcilable ethical positions. Para-legal documents, such as the petitions physically signed by detainees while in detention and then digitalized and uploaded on Twitter, have also been visually represented. Resembling the pamphleteering genre, these contents have attempted to moralize the perspective of the image-recipient by presenting the social reality of refugees as ethically unacceptable.[38]

These visual elements have also illuminated the conflicting "hierarchical zones of viewing", contrasting spaces of safety / invulnerability with spaces of unsafety / vulnerability that have mirrored the broader asymmetry in power and privilege between the image-maker and the image-recipient.[39] In these opposing contexts, the mobile phone and the Twitter platform have served as a digital nexus between the two spaces, simultaneously presenting the reality of detention and prompting viewers to question their social responsibility. On the other hand, in the very act of expressing themselves (in the English language), refugee voices and perspectives have generated discourses, or better, counter-discourses that have redistributed the "political capital",[40] by effectively challenging, competing with, and dismantling pervasive exclusionary anti-refugee discourses and practices.

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36 Cf. ibid.
37 Cf. ibid.
38 Cf. Lilie Chouliaraki: The Spectatorship of Suffering.
39 Ibid., p. 5.
40 Norman Fairclough: Media Discourse, p. 182.

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Heiyeon Myung and Meng Ji

Improving Linguistic Accessibility of Fire Risk Reduction Information in Australia

Abstract: Australia is a country where many culturally and linguistically diverse (CALD) communities reside, with more than 300 languages spoken. In order to bridge language barriers in the nation, the provision of language services has received ample attention from scholars. However, different cultural and linguistic backgrounds are not the only contributing factors to a communication barrier. According to the 2011-2012 Programme for the International Assessment of Adult Competencies (PIAAC), about 44 per cent of Australians are reported to have literacy level two and below. Against this backdrop, researchers, especially in the UK and Australasia, have recently shown an increased interest in accessible information. 'Accessible information', 'easy-to-read' or 'easy-read' are interchangeable terms commonly used to describe information specifically designed for people with literacy needs. Despite a growing body of literature on the accessibility of information, the research to date has tended to focus on health information accessibility and there is still insufficient data for accessibility of fire risk reduction information. This paper seeks to fill the research gap by measuring the level of accessibility of existing online fire and rescue information in NSW, collected in 2023, revising texts that do not score an ideal reading level and suggesting key strategies to improve the readability of information. Linguists reviewing community-targeted fire risk reduction information produced by authorities in the country will help assess community accessibility of current information, provide a practical writing style guideline to different stakeholders and create a cost-effective approach to writing future fire risk reduction information in Australia.

Wildfires or bushfires are a global issue adversely affecting human lives not only for people living at the site of a fire but also for others, not directly in the fire zone who may experience negative effects from the fire: smoke and ash affecting health, transport, agriculture and biodiversity.[1] The concern is that there is a growing incidence of bushfires in Australia, costing millions of dollars each year and labelling the country as a fire-prone zone in the world.[2] Equally problematic, more than half of the fire-related injuries and deaths in Australia are due to residential fires.[3] As the aftermath of a bushfire is dire, several studies have focused on Australia's fire disaster management and prevention. However, accessibility and readability of fire-related information have received scant attention. Therefore, we aim to address this gap in the literature by investigating the readability of fire prevention information provided by authorities for community members.

Australia is home to more than 25 million people where about 23 per cent of the total population belongs to culturally and linguistically diverse (CALD) communities.[4] The 2021 Census data reported by the Australian Bureau of Statistics reveal that, in this multicultural country, 3.4 per cent of Australian residents who reported using a language other than English (LOTE) at home do not speak English well or not at all.[5] Furthermore, the 2011-12 Programme for the International

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1   Cf. Timothy Neale: Burning Anticipation.
2   Cf. Marco Desisto, Jillian Cavanagh, Timothy Bartram: Bushfire Investigations in Australia.
3   Cf. W. Kathy Tannous, Kingsley Agho: Domestic Fire Emergency Escape Plans Among the Aged in NSW, Australia.
4   Cf. Sophia Ra, Jemina Napier: Community Interpreting.
5   Cf. Australian Bureau of Statistics: Cultural diversity. Census.

Assessment of Adult Competencies reported that approximately 44 per cent of Australians aged 15 to 74 years had literacy skills at level two or below. People with literacy skills level two are able to match texts that were paraphrased or require low-level inferences. Literacy skills level one indicates that a person is able to read short texts and identify only one piece of information when identical or synonymous information were given in questions. In other words, if any piece of information is delivered in complex texts and has too much information to detect, 44 per cent of adult Australians are unable to understand the writing. Providing information without considering the literacy level of target readers, i.e. the general public, will hinder people understanding and applying the information.[6] Considering the above mentioned cultural and linguistic characteristics and literacy levels in Australia, when disseminating fire prevention related information to the public, it is crucial that this bushfire-prone country provides readable fire prevention related information.

Methods

Data Collection

The main purpose of the study is to evaluate the level of difficulty of the authentic fire prevention information released by the fire and rescue authorities in NSW. Hence, publicly available information on the Fire and Rescue NSW (FRNSW) website, especially pertaining to fire prevention, was collected in 2023 by one of the researchers. A total of 184 segments from different pages of the website were recorded in an excel spread sheet in order to analyse the readability level of the content.

No ethics approval was needed in this study as there were no human participants involved.

Initial Assessment of Data:
Fire and Rescue NSW Online Information Readability Assessment

In this study, a total of 91 segments of information from the Fire and Rescue NSW website were selected and assessed for their readability level. Out of 184 segments imported to an excel spread sheet, one of the researchers was able to assess and revise only 91 segments due to time constraints. Each segment was scored and revised in order. The readability level was calculated using a readability scoring website,[7] where a total of seven different formulas exist: i) Automated Readability Index (ARI) which calculates the average number of characters per word and the average number of words per sentence, ii) Flesch Reading Ease

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6   Cf. Hana Moon, Geon Ho Lee, Yoon Jeong Cho: Readability of Korean-Language COVID-19 Information From the South Korean National COVID-19 Portal Intended for the General Public.
7   Cf. Readability Formulas: Readability Scoring System Plus.

that counts the total number of words, sentences and syllables in a given text, iii) Gunning Fog Index which analyses the average number of words per sentence and the percentage of complex words in the text, iv) Coleman-Liau Index, which assesses the average sentence length and average number of characters per word, v) Linsear Write Readability Formula that looks at the number of two or more syllable words and one or two syllables, excluding proper nouns and jargon, vi) Flesch-Kincaid Grade Level and vii) SMOG Index.

Initially, all available readability formulas were used for a validity reason. However, it was decided to use only vi) Flesch-Kincaid Grade Level and vii) SMOG Index to calculate text readability of the archived sentences by the authors as their scores correspond with a school grade level and enable easier interpretation of the results. For instance, if a sentence is analysed with the Flesch-Kincaid Grade Level and SMOG Index, and gets a readability score of eight, it means the text requires eight years of schooling, or the average U.S. students in 8th grade can read and understand the text. On the other hand, Flesch reading ease, for example, uses 0 to 100 scale. A text scoring close to 100 equates to 'very easy' and 0 'very confusing'. Using both a 0-100 scoring system and a grade level system may complicate the interpretation of readability as researchers may need to convert the 0-100 scoring system into grading system to ensure that the mean score is easy to interpret.

The Flesch-Kincaid Grade Level calculates the average number of words per sentence and the average number of syllables per word. The SMOG Index requires 30 sentences to assess readability, but it essentially counts the average number of syllables per word that is the number of polysyllabic (having more than three or more syllables) words. The SMOG Index also looks at different punctuation marks, including a semi-colon and a hyphen, in order to count the total number of words per sentence. By using both indices, sentence structure, the average number of total words and polysyllabic words per sentence, the average number of syllables per word can be calculated.

Once readability scores from two indices were recorded, the mean grade level was calculated using the excel spreadsheet formula. Sentences with a mean readability level of eight and higher were revised by the authors using different writing strategies until the grades reached level eight and lower. The reason grade eight is the benchmark of the ideal readability level is because the Style Manual for accessible and inclusive content published by the Australian Government suggests writing content to an Australian year seven level.[8]

It explains that the year seven level of writing enables the content to be useable for most people. Furthermore, students in all States and Territories in Australia are mandated to complete Year 10 and study full time until they are at least 17 years old. Considering the mandatory education and literacy level in Australia, the researchers concluded that the readability of any content should be seven or below.

However, a readability score often has a decimal point, e.g. 7.2. When interpreting scores with a decimal point, only the left of the decimal point is to be

8   Cf. Australian Government: Style Manual: Literacy and Access.

read, e.g. if you get 7.2 that means the text was written at a grade level seven. In order to include scores up to 7.9 as a suitable readability level, which means grade level seven, texts assessed as grade eight and above were selected for revision.

Fig. 1: Data collection and analysis process

Results

Readability Score

Out of the 184 segments collected from online fire risk reduction information released by Australian authorities, only 22 of them scored below eight. Out of those 22 texts, 17 segments consist of only one sentence. In other words, out of 184 pieces of information, 162 were mean grade eight and above or difficult to read and understand.

Those sentences with low readability had distinct characteristics in common; they had more than five words or eight syllables in one sentence or excessive use of formal or long words, such as 'inherent' or 'collaboration'. In order to make these sentences easier to read, they were revised by one of the researchers using a number of basic strategies listed below.

Revision: Main Strategies

Use of Punctuation

As most readability assessment tools count the total number or the average number of words in a sentence, having fewer words in each sentence helps achieve a score eight or below. In order to have short sentences, the first approach was to use more punctuation, such as full stops; in other words, breaking one long sentence into several short sentences (e.g., Table 1).

If the original sentence has a high word count, this means that one massive sentence includes ample information. In such a case, instead of explaining much information in one sentence, a sentence can be broken into multiple short sentences and clauses to have only one main piece of information in each sentence.

	Text	Flesch-Kincaid Grade Level	SMOG Index	Mean Readability Score (Grade Level)
Original version	(Segment number 36) Fire and Rescue NSW runs the Youth Fire Intervention Program which provides face-to-face and over-the-phone help for families to understand and manage children's fire-starting behaviour.	16.3	18.2	17.3
Revised version	Fire and Rescue NSW has the Youth Fire Intervention Program. The program provides face-to-face help or over-the-phone help for families. Families can understand and manage children's fire-starting behaviour.	7.3	7.6	7.5

Table 1: Example of shortening a long sentence

	Text	Flesch-Kincaid Grade Level	SMOG Index	Mean Readability Score (Grade Level)
Original version	(Segment number 5) To help prevent your child playing with fire, FRNSW recommends: Teach children that fire is not a toy, Keep smoking materials such as lighters and matches in a secure place, Watch for evidence of fireplay, such as burns on bedding or clothing, or fire-starting devices in children's pockets, Ensure children are supervised around fires; and Ensure you have working smoke alarms, rehearse a home escape plan and call Triple Zero (000) in an emergency.	20	20	20
Revised version	To stop your child from playing with fire, FRNSW suggests the following: • Teach your child that fire is not a toy. • Keep lighters and matches in a safe place where children cannot reach them. • Look out for signs that your child may be playing with fire. Signs include burns on their clothes or fire-starting objects in their pockets. • Always watch your child closely when they are near fires. • It is important to have working smoke alarms in your home, practice an escape plan, and call Triple Zero (000) if there is an emergency.	5.3	4.4	4.9

Table 2: Example of using listing

Use of Listing

Another method is to have a list of information in bullet points (e.g., Table 2). Similar to the strategy where one long sentence is broken up into several short sentences, lists rather than paragraphs can improve readability as each sentence has a lower total number of words and each information is emphasised by bullet points.

Reducing Multisyllabic Words

The third strategy is to reduce the number of multisyllabic words in one sentence and use more monosyllabic words (e.g., Table 3). A syllable is a part of a word or a whole word that is pronounced as a unit, usually containing a vowel. For instance, the word 'syllable' /ˈsɪl.ə.bəl/ has three syllables as there are three units of speech -/si/, /luh/, /bl/- in the word. Both the monosyllabic and multisyllabic words have prefixes; 'mono-' meaning 'one or single', and 'multi-' meaning 'many', making monosyllabic and multisyllabic one-syllable-word and two or more-syllables-word respectively. As explained above, many readability assessment tools count the number of syllables used in a text. Therefore, using shorter words or words with two or fewer syllables per word helps receiving lower grades in a readability assessment.

	Text	Flesch-Kincaid Grade Level	SMOG Index	Mean Readability Score (Grade Level)
Original version	(Segment number 18) Maintain adequate supervision of your children. (Total 12 syllables)	12.3	11.2	11.8
Revised version	Make sure you watch your children. (Total seven syllables)	0.5	1.8	1.2

Tab. 3: Example of writing in favour of words with two or fewer syllables

Most of the words used in the original segment number 18 are multisyllabic: 'maintain' /meɪnˈteɪn/ (two syllables) + 'adequate' /ˈæd.ə.kwət/ (three syllables) + 'supervision' /ˌsuː.pəˈvɪʒ.ən/ (four syllables) + 'of' /əv/ (one syllable) + 'your' /jɔːr/ (one syllable) + 'children' /ˈtʃɪl.drən/ (two syllables), resulting in 13 syllables in one sentence. Although it is a short sentence containing only six words, the number of syllables is 13. It means that the average number of syllables per word is two and a half. On the other hand, the revised version of the same text consists of six small words: 'make' /meɪk/ (one syllable) + 'sure' /ʃɔːr/ (one syllable) + 'you' /juː/ (one syllable) + 'watch' /wɒtʃ/ (one syllable) + 'your' /jɔːr/ (one syllable) + 'children' /ˈtʃɪl.drən/ (two syllables), having seven syllables in one sentence. By reducing

the total number of syllables in a sentence from 13 to seven, the readability score drops below eight.

Use of Swadesh Word List

Morris Harry Swadesh is a linguist who developed a field of lexicostatistics[9] and created the Swadesh 100 and 200 lists to determine relationships among languages and the relatedness of them.[10] Swadesh's vocabulary list, often referred to as 'basic vocabulary', is a collection of words which he believed to be present in all languages, such as 'we, 'come' or 'water'.[11] The main reason for using vocabulary from the Swadesh word list is that it reduces the readability score because most of these words have two or fewer syllables per word. However, replacing multi-syllabic words with those from Swadesh word list offers more than reduced number of syllables in a sentence. As mentioned, words included in the Swadesh list are common in any language. In other words, it excludes specialised or cultural vocabulary.[12] Although the texts analysed in this study were expected to be read by Australians, or native English speakers, given that Australia is a multicultural and multilingual country where more than 300 languages are spoken,[13] including more words from the Swadesh list may be beneficial to help readers with a CALD background understand the information more effectively.

Providing Definitions or Visual Aid

However, in some cases, we cannot avoid using multisyllabic or polysyllabic words or technical terms, such as 'electricity' or 'firefighters' as they are keywords of essential information. They often constitute domain-specific jargon and substitute words are difficult to find. On such occasions, the words can be used in the body of the text but definitions to explain the meaning in shorter words must be included. Below is an excerpt from existing Easy English health information released by the Victoria State Government:

> How to make a health support plan
> To make the plan, you might use reports from
> – your family doctor
> – other allied health professionals.
> Allied health professionals are experts such as speech pathologists.[14]

9   Cf. Anthony P. Grant: Swadesh's Life and Place in Linguistics, pp. 1-6.
10   Cf. Uri Tadmor, Martin Haspelmath, Bradley Taylor: Borrowability and the Notion of Basic Vocabulary; Jennifer Sullivan, April Mcmahon: Phonetic Comparison, Varieties, and Networks Swadesh's Influence Lives on here too.
11   Cf. Uri Tadmor, Martin Haspelmath, Bradley Taylor: Borrowability and the Notion of Basic Vocabulary.
12   Cf. ibid.
13   Cf. Andrea C. Schalley, Diana Guillemin, Susana A. Eisenchlas: Multilingualism and Assimilationism in Australia's Literacy-Related Educational Policies, pp. 162-177; Sophia Ra, Jemina Napier: Community Interpreting, pp. 45-61.
14   Scope (Aust) Ltd.: Health Support Plans for Your Child At School the Department of Education and Training, S. P.

As seen in the example, the term 'allied health professionals' was considered a jargon or difficult-to-understand word, therefore, a definition was provided in plain English. The same strategy was used in this study. In the example illustrated in Table 4, the term 'mechanical failure' was explained using simple and short words, and the mean readability score is reduced by almost half. Simply providing additional information is not the only factor contributing to lower grades. When a text is revised, it is essential that the sentence contains words that replace somewhat difficult words in the original text (e.g. 'majority' was replaced to 'most of'). Therefore, by having definitions in plain English, the average number of difficult words may have been reduced.

	Text	Flesch-Kincaid Grade Level	SMOG Index	Mean Readability Score (Grade Level)
Original version	(Segment number 72) The majority of residential fires begin in the kitchen and are often as a result of cooking being left unattended on the stove. Other common causes of fire include mechanical failure and falling asleep whilst smoking.	11.8	11.2	11.5
Revised version	Most house fires start in the kitchen. Often the fire starts because people did not watch and leave cooking on the stove. Other common reasons for fire are: • mechanical failure • falling asleep while smoking *Mechanical failure means machines not working	7.9	5.0	6.5

Tab. 4: Example of providing definition of a difficult word

Also, using pictures to explain difficult words or concepts while providing definitions can provide additional help for readers to understand the context.

Rewriting

Rewriting refers to combining two or more strategies listed above. When using this set of skills, caution is required, because if an editor does not fully understand the original text, the revised text may convey a completely different meaning. The easiest way is to replace 'difficult' words with their easier synonyms or definitions from dictionaries (e.g., Table 5).

As in the below instance, instead of using the word 'seek', use an easier word, such as 'get'. Rather than using the multisyllabic word, like 'immediately', use 'straight away' to have words with two or fewer syllables. By doing so, the information becomes easier to read and understand for more people because less

difficult and shorter vocabulary is used, meaning the text is suitable for people with lower literacy levels. If it is challenging to find monosyllabic words to replace long and difficult words, rephrasing the whole sentence can help reduce the mean readability level as well.

	Text	Flesch-Kincaid Grade Level	SMOG Index	Mean Readability Score (Grade Level)
Original version	(Segment number 38) Seek help immediately by calling the Fire and Rescue NSW toll-free number 1800 600 700.	20	14.6	17.3
Revised version	Get help straight away by calling the Fire and Rescue NSW. The call is free, and number is 1800 600 700.	2.6	1.8	2.2

Tab. 5: Example of rewriting

Discussion

The aim of the present research was to investigate the readability level of existing online fire risk reduction information in Australia. Our results demonstrate that almost 90 per cent of the content we collected on fire risk reduction information from the Fire and Rescue NSW website in Australia was found to have a readability score of eight and above which is above the recommended English writing level in Australia.[15] Fire risk reduction information is important for reducing Australian residents' injuries and deaths by fire. Therefore, for the information to be read and understood by the general public, such content must be written in plain English to help communities in Australia understand the information.

After analysing and revising currently available fire prevention information, some writing strategies were found to create community-oriented fire risk reduction information for the general public to access and understand, and to lower readability scores. Generally, in the sentences with a score below eight, the use of punctuation, pronouns and auxiliaries, subordinating conjunctions to link two clauses, words from the Swadesh word list or monosyllabic words, were predominantly observed. Using punctuation and pronouns lowers the readability score because the readability formulas account for the total number of words in each sentence. The more words a sentence has, the higher the readability score becomes. In other words, having many short sentences with fewer than five words rather than one long sentence consisting of more than five words lowers the score. When breaking up a long sentence into several sentences, it is inevitable to use increased punctuation, such as a full stop. Also, because English

15   Cf. Deborah Chinn, Claire Homeyard: Easy Read and Accessible Information for People with Intellectual Disabilities.

disprefers repetition, when a long sentence is broken up into different sentences, pronouns must be used to avoid the repetition of a subject or an object in previous sentences. Using pronouns can also make a text shorter and easier. Similar to punctuation and pronouns, conjunctions help separate one long sentence into two or more short sentences and clauses. As conjunctions connect sentences or clauses, and explain the relationship between the sentences, they help readers understand the context better while keeping each sentence shorter.

Readability formulas also count the number of syllables in a word and a sentence. Hence, using monosyllabic (one-syllable) words or words with fewer than two syllables reduces the readability score. Auxiliaries play an important role here. Instead of using multisyllabic words that describe possibilities, such as 'potentially', shorter auxiliaries, like 'can', help keep the number of syllables low. Furthermore, considering the fact that words from the Swadesh list, including 'I', 'you' and 'big', are mostly basic words with fewer than three syllables, it is worth using words from the Swadesh list to lower readability scores. Lastly, when a sentence includes multisyllabic keywords that are essential to deliver central information, definitions can be provided with plain vocabulary. Added to this, when a more accessible word cannot replace a multisyllabic keyword, visual aids like pictures or drawings can also be used at the same time. However, it is important to note that using visual aids does not lower the readability score because readability scoring systems do not account for features other than text.

Conclusion

Accessibility of information began to receive ample attention from researchers, however, most literature on information accessibility are focused on health information.[16] While this paper presents data to fill the research gap present in fire risk reduction information accessibility, the results also serve as practical guidelines for people who write not only fire risk reduction information but any information that aims to be read and understood by the general public. The strategies outlined above will be especially useful when potential readers include people from CALD communities or with low literacy levels as the readability score benchmark used in the study was based on Australian residents' literacy level and their backgrounds.

Limitations and Future Study

The data was collected from only one website and was analysed based on the general Australian's average literacy level known, not the level of those accessing the fire prevention information on the website. Furthermore, the evaluation of actionability or comprehensibility cannot be made as the resources were not

16   Cf. ibid.

evaluated by target readers and community members. It is important to remember that the readability level is only a rough estimate and may not always translate into actual readability, comprehensibility and actionability of individuals.

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Dany Adone and Anna Gosebrink

Language Maintenance and Revitalisation as Linguistic Justice

In Collaboration with the Mirima Dawang Woorlab-gerring Language and Culture Centre (David Newry, Agnes Amstrong, Glennis Newry, Jimmy Paddy, Julie Bilminga, Rozeanne Bilminga, Bryan Gallagher, Knut J. Olawsky)[1]

Abstract: This paper discusses Language Maintenance and Revitalisation as Linguistic Justice with two community-initiated and -led Language Documentation Projects on the Indigenous Sign Language and Creole language used in the Miriwoong community in Kununurra, Western Australia. The paper explores how the 'Two-Way' collaboration is important in shaping the process and outcomes of Language Documentation (here Maintenance and Revitalisation). We argue that 'Ground-up' and community-led research is vital to the successful implementation of Language Maintenance and Revitalisation in which Indigenous Methodologies (Yarning, Storytelling, among others) together with methods of Western Sciences are applied. Depending on the needs of the community Language Documentation (as Language Maintenance, Revitalisation or Reclamation) is a way to achieve Linguistic Justice.

In the field of Environmental Justice (henceforth EJ) struggles focus on Biodiversity and Nature Conservation, Climate Justice, Water Justice.[2] We argue that Linguistic Justice (henceforth LJ) is part of Environmental Justice as it advocates for Equity, Accessibility and Inclusion in language and linguistic matters. It is undeniable that language matters play a significant role in many domains in which Justice is sought, e.g. in Native title claims, in the promotion of community resilience, and prosperity, in the economic development and sustainability of regions, in the domain of mental health and Wellbeing, and Repatriation among others.[3]

In the discussion on LJ, we see many different issues being dealt with. Two central issues in LJ relevant to the discussion here are: Children getting access to their own first languages (L1) and taught their L1 in the schooling system and communities of minority languages or less dominant languages in settler colonial societies such as Australia should be able to maintain their Traditional languages and cultures. The basic Human Rights state that every child is entitled

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1   All data included within this article belongs to the Miriwoong community, represented by the Mirima Dawang Woorlab-gerring Language and Culture Centre. David Newry, Agnes Amstrong, Glennis Galbat Newry, Jimmy Paddy, Julie Bilminga, Rozanne Bilminga, and Bryan Gallagher are credited as the Knowledge and Language Owners of MwSL and KnK shared within these pages. As some Elders involved in both projects passed, we have respectfully removed their names. Dany Adone and Anna Gosebrink are responsible for the linguistic analysis of MwSL and KnKriol which was discussed and approved by the community in several steps prior to this paper.
2   Cf. Neil M. Dawson: The Role of Indigenous Peoples and Local Communities in Effective and Equitable Conservation.
3   Cf. John Henderson, David Nash: Language in Native Title; Nola Purdie, Pat Dudgeon, Roz Walker: Working Together; Cressida Fforde, C. Timothy McKeown, Honor Keeler: The Routledge Companion to Indigenous Repatriation; Grace Koch: We have the song, so we have the land; Glenn James, Bentley James, Joe Morrison, Douglas Paton: Resilient Communities and Reliable Prosperity; Ghil'ad Zuckermann: Revivalistics; Rob Amery: Warraparna Kaurna.

to "enjoy his or her own culture […], or to use his or her own language".[4] Furthermore, inclusive and equitable quality education is one of the 17 sustainable development goals (SDG) of the United Nations.[5]

This paper is organised as follows. Section two provides an overview of our understanding of what Linguistic Justice means. Section three describes the two projects on two endangered languages in Western Australia: Miriwoong Sign Language, the Traditional Indigenous Sign Language on Miriwoong Country, and Kununurra Kriol, a contact language that emerged during colonisation. These projects highlight the importance of community-led language initiatives, emphasising the central role of community agency in Language Documentation. We argue that these two projects provide evidence for LJ in practice. In section four we chose some examples to shed light on how Language Documentation counts as Linguistic Justice. Section five concludes that Language Documentation is an important contribution in achieving Linguistic Justice when it is conducted the 'right way' that is under Indigenous Governance and collaboration is based on Equity.

Understanding Linguistic Justice

Before we look at LJ, we need to examine what EJ is. Justice being concerned with Equity, recognition and the fair distribution of benefits, burdens and opportunities across society portrays a multidimensional concept reflected in social, cultural and environmental domains. EJ highlights the disparate distribution of profits being the outcome of certain environmental practices such as mining, on the one hand. On the other hand, EJ also addresses the inequity of "who receives the bads"[6] such as pollution, lack of natural resources, and decline of local environmental knowledge.[7] It is to have the right to a healthy environment, which is at the heart of Indigenous Cosmology and Epistemology. The intricate relationship that exists between Land, People and Language[8] and consequently the obligation to care for the Land often expressed as 'Caring for Country' means to manage the traditional natural resources in the right way.[9] A healthy ecosystem is essential to personal Wellbeing, also referred to as 'environmental heritage'.[10] Indigenous People thus see it as their responsibilities to take care of their Country in order to maintain their own health and Wellbeing. In this respect EJ

4   United Nations: United Nations Convention on the Rights of the Child, Article 30.
5   Cf. United Nations: Sustainable Development.
6   David Schlosberg: Defining Environmental Justice, p. 83.
7   Cf. ibid.
8   Cf. Dany Adone, Bentley James, Elaine L. Maypilama: Indigenous Languages of Arnhem Land.
9   Cf. Sonia Leonard, Meg Parson, Knut Olawsky, Frances Kofod: The Role of Culture and Traditional Knowledge in Climate Change Adaptation; Marie C. D. Adone, Thomas Batchelor, Roxanne Bilminga, Melanie A. Brück, Brian Gallagher, Jimmy Paddy: Caring for dat land…, as mob bin teik keya of dat Kantri longtaim.
10   Robert M. Figueroa: Indigenous Peoples and Cultural Losses, p. 233.

highlights that access to natural resources is not just an environmental issue but a fundamental matter of human rights and Equity.

The close connection between Land, People and Language underlines that Language equally reflects a speaker's cultural values, beliefs and identity.[11] In the context of Linguistic Justice, Language functions as a vehicle through which issues of equality and cultural survival are addressed.

While most approaches agree on Linguistic Injustice being a form of "unequal linguistic equipment",[12] there are different parameters to define Linguistic Justice more precisely. Some frameworks focus on the asymmetry in multilingual contexts, where native speakers of 'peripheral' languages are forced to learn the 'central' language of their area,[13] such as a supraregional lingua franca like English. Van Parijs[14] refers to this type of situation as asymmetric pluri- or bilingualism, which is deeply rooted in the conflict between language dominance and unequal access to economic or educational opportunities. This imbalance could, for instance, be mended by language programmes promoting the teaching and learning of the less dominant languages by means of cost sharing between the learning community and governmental institutions.[15]

Further approaches address LJ from a more legal and egalitarian perspective. The concept of Linguistic Human Rights, for example, argues that the right to use and learn one's native language is a fundamental human right.[16] This concept mainly revolves around the idea that Language functions as a central marker of identity.[17] The breach of Linguistic Human Rights is mainly preceded by forced 'subtractive' rather than 'additive' language learning, where language policies commonly portray the acquisition of a dominant language and the abandonment of the dominated language as being necessary, instead of adding the dominant language to the existing linguistic repertoire.[18] The continuous absence of Indigenous languages in educational curricula is also an example of Linguistic Injustice.[19]

While LJ frameworks show differences in their reasonings for inequitable language rights, there is a clear consensus: linguistic inequalities are a prevalent issue that many marginalised populations encounter.

Linguistic Justice advocates for the rights of communities to maintain and transmit their languages, cultures, and identities and it emphasises recognition and protection of cultural practices and linguistic diversity in the face of dominant powers. The decrease of sustainable living, the shrinkage of environmental knowledge and the decline of Traditional languages are all linked to colonial

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11   Cf. Bruno de Witte: Language as Cultural Heritage; Farzad Sharifian: Cultural Conceptualisations in Intercultural Communication.
12   Philippe Van Parijs: Linguistic Justice, p. 60.
13   Cf. ibid., p. 72.
14   Cf. ibid.
15   Cf. ibid., pp. 72 f.; Philippe Van Parijs: Linguistic Justice for Europe and for the World, pp. 59-63.
16   Cf. Tove Skutnabb-Kangas: Communication and Power; id.: Language Policy and Linguistic Human Rights.
17   Cf. Tove Skutnabb-Kangas: Language Policy and Linguistic Human Rights, p. 274.
18   Cf. Tove Skutnabb-Kangas: Communication and Power, p. 145.
19   Cf. Tove Skutnabb-Kangas: Language Policy and Linguistic Human Rights.

practices.[20] The dispossession of lands, a core issue in Environmental Justice, is often linked to cultural and linguistic displacement. This connection between EJ and LJ brings to light the central role LJ occupies in achieving EJ.

Language Maintenance and Revitalisation in Indigenous Australia

The impact of colonisation on the cultural and linguistic diversity in Indigenous Australia is still very present today. Many Traditional Indigenous Languages in Australia have ceased being transmitted intergenerationally. This break in the intergenerational transmission has led to the dramatic endangerment, decrease and disappearance of many Traditional Indigenous Languages. Over 650 spoken languages were once attested and to-date around twelve languages are regarded to be stable and healthy languages, while over 100 are classified as being endangered.[21]

The linguistic landscape of Australia is also characterised by 'young' Indigenous languages, that have arisen during colonisation, such as Creole languages as seen in various communities in the Northern Territory (NT) and Western Australia (WA).

Two studies were conducted in Kununurra, WA: i) Miriwoong Sign Language (henceforth MwSL) which is the Traditional Indigenous Sign Language on Miriwoong Country. It is classified as a critically endangered language, and ii) Kununurra Kriol (henceforth KnK), a young contact-induced language which emerged during colonisation. It is not yet endangered but there are some indicators that it might decreolise with time. KnK now serves as the main means of communication and first language for many of the Indigenous communities.

MwSL is used by both hearing and deaf people in Kununurra community on Miriwoong Land and has been classified as an alternate sign language.[22] The Executive Committee with the Traditional Elders and the language workers at the Mirima Dawang Woorlab-gerring Language and Culture Centre argued in 2013 that there was an urgent need to document the signs and gestures that they have been using in their daily interaction with other community members together with spoken languages. There has been no publication prior to the publication of the MwSL dictionary and grammar by the community. Vague reference to an existing sign language in the surrounding has been made in several studies.[23] The groundwork consisted of the collection of signs by Indigenous language workers together with a non-Indigenous linguist. The community decided to name this sign language Miriwoong Sign Language. In order to document and recognise the existence of this sign language as a living Indigenous Sign

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20 Cf. Robert M. Figueroa: Indigenous Peoples and Cultural Losses, p. 240.
21 Cf. Department of Infrastructure, Transport, Regional Development, Communications and the Arts: National Indigenous Languages Report; Doug Marmion, Kazuko Obata, Jakelin Troy: Community, Identity, Wellbeing.
22 Marie C. D. Adone, Agnes Armstrong, Knut J. Olawsky: Miriwoong Sign Language Dictionary, pp. 8 f.
23 Cf. e.g. William B. McGregor: The Languages of the Kimberley, Western Australia.

Language of Australia they applied for an ISO 639-3 Code with SIL. Today MwSL is listed in the Ethnologue[24] and is identified as an Indigenous Sign Language (ISO-639-3: rms). The decision to acknowledge the existence of MwSL is not what all linguists would agree with because of the different views on language. However, what is more important here is that the speakers have taken justice in their hands and made a decision about their languages.

The ongoing work on Kununurra Kriol (KnK) is also a community-based and -led documentation project and KnK distinguishes itself from other Creole languages in the Northern Territory (e.g. Roper River Kriol, Barunga Kriol, Broome Kriol). Based on the existing data, we note differences in the lexicon (e.g. kinship terms, seasons) and minimally in syntax, e.g. in the Verb Phrase (VP) domain (Serial Verb Constructions).[25]

As these projects are community-initiated and -led endeavours, they take place under Indigenous Governance. It starts from the rationale for documenting KnK which came from the awareness of the speakers that KnK might not be at threat now but in the long run it might decreolise due to pressure from English, which theoretically can lead to language disappearance. Also, the community speaking KnK as their L1 was not satisfied with the view that their Creole language has been referred to as a Creole variety spoken in the area. This view goes against the Indigenous view of the Land, People and Language connection which allows Indigenous people to identify themselves as a specific group. Although this Creole language is not a Traditional Indigenous language, it is undeniably a vehicle of Aboriginal identity.

As such this documentation work is a 'ground-up' work initiated by Indigenous People for Indigenous People. Identifying this Creole language as KnK was a bold step in the process of Linguistic Justice. The views of the speakers on their languages are valid and it is important that they are expressed and heard. As non-Indigenous scholars collaborating with Indigenous People, we have a duty to listen to what they have to say about their language, and to accept these views.

Another aspect worth mentioning is the effort of practising the 'Two-Way' collaboration that is bringing together Western and Indigenous Methodologies. The language workers combined concepts within Western Methods such as definitions of sign languages, parameters in the description of signs, and Indigenous Methodologies such as Yarning, Storytelling to describe the sign language. The MwSL dictionary is thus descriptive and by far not exhaustive.

While both projects are under Indigenous Governance, we put much effort to combine Western views with Indigenous views where possible. Here we see the linguists' task to mediate the two worldviews and advise on linguistic matters. Ultimately the decision rests in the hands of the speakers. This endeavour is challenging and time consuming, but at the same time it is a testimony of the struggle for Linguistic Justice in Indigenous Australia. Co-authorship in publications, Acknowledgement of linguistic and cultural Knowledge, Recognition of Language Ownership (a concept foreign to Western Sciences) in Knowledge

24   Cf. David M. Eberhard, Gary F. Simons, Charles D. Fennig: Ethnologue.
25   Cf. Dany Adone, Connor Brown, Anna Gosebrink, Thomas Batchelor, Language Workers at the MDWg (forthcoming).

Co-Creation were also important steps in the 'Two-Way' Collaboration. We also rely on Storytelling, orally transmitted History, Yarning, and Personal accounts, some of the Indigenous Methodologies to co-create and share Knowledge ensuring that the views of the speakers are respected and reflected in the linguistic analysis.

From Language Documentation to Linguistic Justice

The cases of MwSL and KnK illustrate that documentation work is essential for moving towards Linguistic Justice. Fig. 1 illustrates how these programmes are related to each other. Language Documentation is either used in the field as an umbrella term to cover all of these programmes/projects, but it can also be seen as the initial step necessary to save languages. We understand Language Documentation as a general term to cover any type of Maintenance, Revitalisation, Reclamation, Revival work.
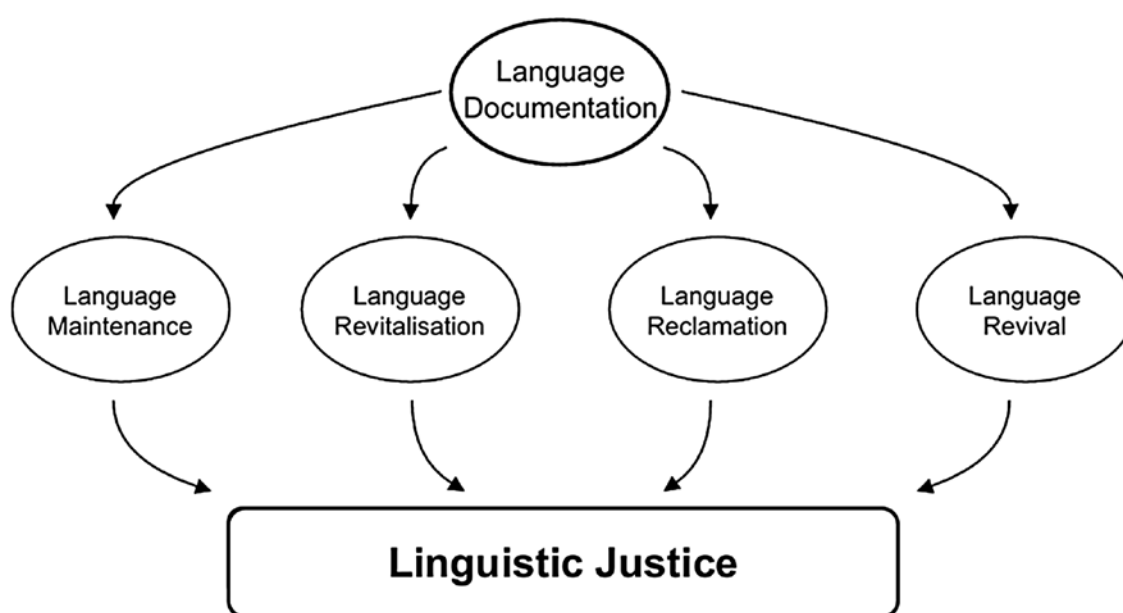
Fig. 1: From Language Documentation to Linguistic Justice

The process of Language Maintenance describes efforts to sustain the language within its current community of speakers, as it commonly stands in competition with a more dominant or a majority language. This programme involves promoting daily use and continuing the transmission of the language, to keep it alive, dynamic and a central tool of communication within the community.[26] In many cases, Language Maintenance can precede Language Revitalisation or Language Reclamation, as it focuses on preserving the language in use before it faces critical endangerment. In the case of KnK maintenance is necessary so that it can stand the pressure from Aboriginal English (an Indigenised English),

26   Cf. Anne Pauwels: Language Maintenance, pp. 719f.

and Mainstream English which is also used by the white Australian population living in Kununurra.

Language Revitalisation is often understood as going a step beyond Maintenance with the objective of supporting the recovery of a language that is used in significantly less domains or one that has fallen into disuse due to language shift. This may involve various language programmes based on teaching the language to younger generations in order to revitalise language use within the community. We document the language and besides the production of a MwSL dictionary and grammar sketch for the community, several workshops were organised between 2013-2019 to raise public awareness on the existence of this Indigenous Sign Language within the Non-Indigenous community (including teachers, office workers, nurses, police staff). Furthermore, several generations of young people were invited to numerous workshops on MwSL to ensure that they understood the importance of keeping this language alive as language transmission is necessary for language longevity and continuity.

Thus, Language Maintenance and Language Revitalisation in themselves function as foundational steps and evidence for Linguistic Justice in recognising Indigenous languages as valuable Knowledge systems.

Looking into the Future

As the loss of a language goes hand in hand with the loss of cultural Knowledge, any effort to counteract these losses can be understood as a step towards LJ. This paper has showcased two projects whose goals were to maintain and revitalise the languages concerned. Both projects started as community-initiated and community-led work in which the speakers were considered to be best positioned to make decisions on their linguistic and cultural needs. The projects bring to light the importance of Respect, Recognition and Equity in collaboration which are all essential to achieve LJ.

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Language, Culture, and Resilience

Thomas Batchelor

Cultural Resilience in the Face of Language Shift in Kununurra, Western Australia

In Collaboration with the Mirima Dawang Woorlab-gerring Language and Culture Centre (Jimmy Paddy, Bryan Gallagher)[1]

Abstract: Language shift has been a major feature associated with the linguistic history of Australia since European invasion, with catastrophic results for the linguistic ecology of the continent. Whilst language shift is often associated with the loss of traditional cultural, ecological and linguistic knowledge, there is still the potential for their transmission into the newly adopted language. In this paper, we examine the potential for continuity of Miriwoong culture as the community has shifted towards Kununurra Kriol as their main language of everyday use, a Creole language that emerged in the community following the devastating impacts of colonisation and subsequent decline and endangerment of the traditional Miriwoong language. The transmission of Miriwoong knowledge and culture is demonstrated through the use of code-switching and integration of Miriwoong loanwords into Kununurra Kriol, as well as the calquing of Miriwoong-language concepts into the new language. A strong Miriwoong identity is further reflected in individuals' conceptions of the new language. This paper shows that, whilst the effects of language shift are catastrophic, the culture remains a living one.

Language shift is a catastrophic event that can happen to a linguistic community. Language shift not only entails the loss of traditional language, but also traditional ecological and cultural knowledges connected to it.[2] It entails knock-on effects that have wider implications for the mental health and wellbeing of community members, often tied to the loss of community cohesion and identity that comes with the loss of language.[3]

Whilst there has been much attention drawn to the devastating impacts of language shift, there has been less focus on the resilience of Indigenous and minoritised language communities in preserving their culture in spite of these conditions. In this paper, we will examine the continued transmission of cultural values across one language shift boundary occurring in the Miriwoong community around the town of Kununurra, in the Kimberley region of northern Western Australia.

Miriwoong, the traditional language of the area, has become severely endangered following European settlement and assimilation policies. Most Miriwoong people instead have shifted towards Kununurra Kriol as their main language,

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1   All data included within this article belongs to the Miriwoong community, represented by the Mirima Council of the Mirima Dawang Woorlab-gerring Language and Culture Centre, who are the owners of the language. Jimmy Paddy and Bryan Gallagher are credited as the primary sources of cultural knowledge shared within these pages.
2   Cf. Luisa Maffi: Endangered Languages, Endangered Knowledge; K. David Harrison: When Languages Die.
3   Cf. Richard T. Oster, Angela Grier, Rick Lightning, Maria J. Mayan, Ellen L. Toth: Cultural Continuity, Traditional Indigenous Language, and Diabetes in Alberta First Nations; Leda Sivak, Seth Westhead, Emmalene Richards, Stephen Atkinson, Jenna Richards, Harold Dare, Alex Brown: "Language Breathes Life"; Ghil'ad Zuckermann: Revivalistics; Rob Amery, Mary-Anne Gale: Language, Land, Identity, and Wellbeing.

an English-lexified Creole language and a variety of Australian Kriol. Despite the circumstances, Kununurra Kriol has been embraced as a marker of local Miriwoong identity and carries within it several indicators of Miriwoong cultural vitality.

Theoretical Background

Linguistic Ecologies and Language Shift

Languages are to be understood not in discrete terms but as participants within a wider interdependent system. Mühlhäusler describes this wider system in terms of linguistic ecology.[4] Individuals are able to be, and very much often are, multilingual. They are also social, demonstrating an array of cultural and social practices that transcend their own linguistic boundaries. People are receptive to changes in their social environment, and therefore, the languages that individuals speak are receptive to the changes in other languages as well. This situation forms an ecology that is made up of interconnected and interdependent systems that influence one another.

Language shift represents a catastrophic outcome of a major disruption to the linguistic ecology of a region. In Australia, as in much of the world, manifested most notably through the introduction of a new hegemonic colonial power, which has brought its own language and social organisation. Explicit causes of language shift may occur in the forms of direct oppression of language and culture. This can involve the banning of traditional languages, or threats of violence against a language's speakers.[5]

Language shift can also be the result of more indirect pressures; forces which are more prevalent in present-day disruptions to linguistic ecologies.[6] Assimilatory policies in education can, for example produce younger generations whose dominant language is no longer the traditional one. Attitudes amongst adults may shift so that the traditional language is no longer seen as a sufficient vehicle for social mobility, leading to a loss in motivation to transmit the language to younger generations.[7]

Economic changes that are brought about through colonisation can result in significant reorganisation of society, placing the colonial language as the most socioeconomically powerful language.[8] The enforcement of a colonial hegemon produces a hierarchy that produces barriers between communities that prevent or discourage direct communication outside the hegemonic language. Urbanisation places speakers of many different languages together in a single community, often with administration conducted in the hegemonic language. This may

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4 Cf. Peter Mühlhäusler: Preserving Languages or Language Ecologies; ; id.: Linguistic Ecology.
5 Cf. Stephen A. Wurm: Language Death and Disappearance; Walt Wolfram: Language Death and Dying; David Crystal: Language Death.
6 Cf. Gerald Roche: The Necropolitics of Language Oppression.
7 Cf. Nancy Dorian: Language Death; George Broderick: Language Death in the Isle of Man.
8 Cf. Braj Kachru: The Power and Politics of English.

then be combined with the desire for a lingua franca, which is often the more powerful language.[9] These pressures, among others, have often resulted in the abandonment of smaller, Indigenous languages, in favour of the larger, more powerful colonial language.

When an Indigenous speech community also becomes minoritised, as has been experienced in many settler-colonial societies, they may find themselves under the pressure of cultural assimilation. Language shift, therefore, goes hand in hand with cultural shift. Despite this, the post-colonial era has seen a flourishing of Indigenous revitalisation movements, aiming to reclaim long-suppressed cultures and their self-determination, recognising the connection between language and cultural revitalisation.[10]

Creole languages are another potential outcome to the severe disruption of linguistic ecologies. Creolisation occurs in situations where there is a mixed linguistic community, and regular intergenerational transmission is no longer possible. Out of a communicative need, contact languages emerge, incorporating elements of languages present in the community, and innovating their own grammars as well.[11] Whilst there remains much debate around the role of children and adults in the genesis of Creole languages, it is nevertheless agreed that Creole languages, unlike other contact languages such as pidgins and jargons, are spoken as a native language.[12]

Subsequently, Creole languages are used as everyday vernacular languages within the community, often supplanting the usage of previously dominant traditional languages.[13] They occupy a unique position in linguistic hierarchies, being the outcome of catastrophic disruption to the linguistic ecology. Whilst they may supplant traditional languages, reflecting the circumstances of their genesis, they also often remain derided by speakers of the hegemonic superstrate language, attitudes which may extend to the speakers themselves, who may regard the language as a 'broken' variety of the superstrate.[14] Concurrently, Creole languages may be reassessed by their speakers and seen as an expression of a new, post-colonial identity, regarding the language to be one created by their own people in the wake of colonisation and reclaimed after decades of social derision.[15]

9   Cf. Peter Mühlhäusler: Linguistic Ecology, pp. 51 ff.

10   Cf. Deborah House: Language Shift among the Navajos; Cindy Louise Bennett: Lotjpa Yorta Yorta.

11   Cf. Derek Bickerton: Roots of Language; Jacques Arends, Pieter Muysken, Norval Smith: Pidgins and Creoles.

12   Cf. Sarah Grey Thomason, Terrence Kaufman: Language Contact, Creolization, and Genetic Linguistics; Sarah Grey Thomason: A Typology of Contact Languages.

13   Cf. Salikoko Mufwene: Jargons, Pidgins, Creoles and Koines; Jane Simpson: What's Done and What's Said.

14   Cf. Jane Simpson: What's Done and What's Said; John Rickford: Language Attitudes in a Creole Continuum; id.: Standard and Non-Standard Language Attitudes in a Creole Continuum; Diana Eades, Jeff Siegel: Changing Attitudes towards Australian Creoles and Aboriginal English; Maïa Ponsonnet: "Brainwash from English".

15   Cf. Jane Simpson: What's Done and What's Said; Diana Eades, Jeff Siegel: Changing Attitudes towards Australian Creoles and Aboriginal English; Sylvie Dubois, Megan Melançon: Creole is, Creole ain't.

Cultural Continuity and Cultural Concepts

Ordinary cultural continuity is secured through the regular transmission of language, present in stable linguistic ecologies.[16] When linguistic ecologies are disrupted, so too may intergenerational transmission of language, and therefore also of culture.[17] The same pressures and motivations that lead to language endangerment and language shift are also applied to cultural values and knowledges. Amongst Navajo people in the United States in the first half of the 20th century, for example, government initiatives for education were seen by administrators not just as means of advancing the dominance of English, but also as a way to instil mainstream white American cultural values and norms. These norms, in turn, came to be seen as the only viable way for Navajo participation in economic activity outside their own reservations.[18]

In Australia, the intent of assimilation policies was ever more overt and forceful. Child removal schemes were devised by state governments to take children away from their Indigenous parents and place them in Anglo-Australian families, with the intent to, over several generations "breed out the colour", thereby raising them fully culturally and linguistically assimilated.[19] For many other Indigenous Australians, the only reprieve from colonial frontier violence was in church missions, where traditional languages were forbidden and a European Christian teaching imposed.[20] In more recent times, government education policy has been strongly assimilationist in nature, prioritising English medium learning and literacy. The brief existence of Indigenous bilingual school programmes in the Northern Territory was cut short by a change in government priorities, justified by cost-cutting and the ostensible importance of English skills for the workforce.[21]

As has been discussed, the outcome of a disrupted transmission of language may be language shift, whether to the new dominant language or through the genesis of a contact language such as a Creole. In the case of the former, this new dominant language may experience indigenisation, producing a new variety of the language now local to the area, which incorporates some features of the Indigenous language.[22]

One of the most salient linguistic aspects reflecting cultural continuity across a language boundary is in code-switching and the use of loanwords. Schneider notes that the process of indigenisation often features the expansion of the lexicon through borrowing of terms, particularly of local flora and fauna and culturally specific practices, as well as the semantic shift of existing terms to reflect cultural understandings.[23] Creole languages inherit a large lexicon from

16   Cf. Peter Mühlhäusler: Preserving Languages or Language Ecologies.
17   Cf. Luisa Maffi: Endangered Languages, Endangered Knowledge.
18   Cf. Deborah House: Language Shift among the Navajos, pp. 4-12.
19   Brian Butler, John Bond: Sorry and Beyond; Anne Maree Payne: Stolen Motherhood, pp. 4 f.
20   Cf. John Sandefur: Aspects of the Socio-Political History of Ngukurr (Roper River) and Its Effect on Language Change.
21   Cf. Brian Clive Devlin: Policy Change in 2008; id.: Threatened Closure.
22   Cf. Edgar W. Schneider: The Dynamics of New Englishes.
23   Cf. Edgar W. Schneider: Linguistic Aspects of Nativization.

the superstrate language, but also see a restructuring of these lexical forms to reflect substrate cultural values.[24]

Sharifian introduces the term 'cultural conceptualisations' describing these culturally-relevant concepts that may be transmitted between languages.[25] In Australia, for example, Sharifian identifies the kinship as a major category common to Indigenous cultures – and encoded within their languages through terminologies – that has been transmitted into Aboriginal Englishes.[26] English terms have been adapted to reflect the complex kinship terminologies present in many Indigenous languages. For example, 'cousin' may be used to signal a community relationship, even when the interlocutors are not related, and the repurposing of 'auntie' and 'grandmother/father' towards respected Elders in the community, again without necessary familial relationship.[27]

Between the two involved languages, code-switching has many pragmatic and social functions.[28] For example, where a minoritised language remains more widely known, alongside the hegemonic language, code-switching may be practised by speakers in order to flag their distinct identity. Code-switching, in contrast to borrowing, requires a more active knowledge of both languages to be effective. This requires constant adjustment and accommodation according to the speakers involved, as some proficiency in the switched language is generally assumed between interlocutors.[29] Even amongst less proficient speakers, the act of code-switching with an Indigenous or minoritised language may be seen as an act of resistance or self-determination, asserting their distinct identity.

Indeed, code-switching as a practice for expressive, rather than strictly communicative, purposes such as signalling a distinct identity has been documented to produce its own contact languages. Mixed Languages are proposed by some to be the outcome of conventionalised code-switching and, in some cases, pressures of language endangerment. Shortly before the emergence of Gurindji Kriol, for example, extensive code-switching was documented amongst members of the Gurindji community in the midst of language shift towards Australian Kriol. In turn, Gurindji Kriol became conventionalised as there was a concerted effort to preserve the distinct Gurindji identity of the community, thereby creating a new language.[30] Similar practices may be seen in the recent emergence of Light Warlpiri, as an assertion of Warlpiri identity amidst a shift towards Kriol.[31]

Whilst language shift may result in the loss of traditional language itself, there is often a chance for at least some traditional cultural practices and knowledges of a community to be retained. This may be reflected through borrowing of lexicon or through code-switching practices, which may, occasionally, further result in the emergence of new varieties of language. This is done both as a means

24   Cf. Claire Lefebvre: Relabeling in Language Genesis.
25   Cf. Farzad Sharifian: Aboriginal Language Habitat and Cultural Continuity; id.: Cultural Linguistics.
26   Cf. Farzad Sharifian: Cultural Linguistics.
27   Cf. ibid., pp. 188 f.
28   Cf. Carol Myers-Scotton, Agnes Bolonyai: Calculating Speakers.
29   Cf. René Appel, Pieter Muysken: Language Contact and Bilingualism, pp. 22-31.
30   Cf. Patrick McConvell, Felicity Meakins: Gurindji Kriol; Felicity Meakins: Case-Marking in Contact; Felicity Meakins: Which Mix.
31   Cf. Carmel O'Shannessy: Light Warlpiri.

of transmitting the cultural frame of the Indigenous language into the new language, and as a means of signalling a continued cultural identity amongst its members.

Miriwoong and Kununurra Kriol

The traditional language of the Kununurra area is Miriwoong, the surrounding area being known in the language as Mirima Dawang, or Miriwoong Country in English. Miriwoong Country is located in the northern part of the state of Western Australia, in the east of the Kimberley region near the state border with the Northern Territory. It also includes Lake Argyle, a large artificial lake that was home to many Miriwoong people before the damming of the Ord River in the 1960s.[32] The Indigenous population of the modern town itself is approximately 1 300, out of a total permanent population of 4 515, as of the most recently available census data, conducted in 2021.[33] Whilst the primary traditional language is Miriwoong, Indigenous people of the area are also known to speak neighbouring languages, particularly Gija and Ngarinyman.

The Miriwoong language is classified as a Jarrakan language, a small family within the non-Pama-Nyungan grouping of Australian languages.[34] Miriwoong is today considered to be critically endangered, as less than a dozen elderly native speakers presently remain. The Mirima Dawang Woorlab-gerring Language and Culture Centre has been leading community efforts to revitalise the language. These revitalisation programmes, including Master-Apprentice and language nest schemes, have enabled the reappearance of a number of L2 speakers of Miriwoong within the community, some of whom may be regarded as fluent.[35] More recent developments have seen the establishment of a Miriwoong curriculum in the local primary school. These efforts hope to reverse the critically endangered status and build a renewed population of Miriwoong language speakers.

The majority of the Miriwoong community has largely shifted towards a Creole language as the main language of everyday communication, known locally as Kununurra Kriol, Miriwoong Kriol, or Jarrakan Kriol (henceforth Kununurra Kriol, its most common designation in scholarly material due to its relatively neutral status as a geographic indicator). Kununurra Kriol is an English-lexified Creole language and the local variety of Australian Kriol, an umbrella term describing a collection of English-lexified Creole languages spoken by Indigenous Australians across the north of Australia, with approximately 20 000 speakers altogether by most recent estimates.[36] Kununurra Kriol exhibits a range of substrate influences from Miriwoong, including the cultural lexicon discussed in

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32 Cf. Frances Kofod: Introduction to Miriwoong Grammar.
33 Cf. Australian Bureau of Statistics: 2021 Census.
34 Cf. William B. McGregor: The Languages of the Kimberley, Western Australia, p. 40.
35 Cf. Knut Olawsky: Revitalisation Strategies for Miriwoong; id.: Going public with language; id.: The Master-Apprentice Language Learning Program Down Under.
36 Cf. Eva Schultze-Berndt, Felicity Meakins, Denise Angelo: Kriol; Thomas Batchelor: Making Sense of Synchronic Variation; Gregory Francis Dickson: Kriol.

this paper, as well as independent innovations since creolisation.[37] These factors contribute towards the Miriwoong community's view of Kununurra Kriol as a distinct language from Australian Kriol, and their subsequent assertion of ownership over the language.

Alongside Kununurra Kriol, Indigenous residents of Kununurra also speak Aboriginal and Standard Australian varieties of English, particularly in communications with non-Indigenous individuals. As in much of Australia, the wider community lingua franca and primary language of government, education and media is Standard Australian English, although Aboriginal interpreting services do exist, including English-Kriol interpretation.

Data Analysis

The primary data for this project was collected on two field trips to Kununurra in 2018 and 2019, hosted by the Mirima Dawang Woorlab-gerring Language and Culture Centre, consisting of approximately seven hours of recorded spoken Kununurra Kriol with nine Miriwoong consultants. This was supplemented by archival data supplied by the Language Centre, consisting of transcribed Kriol recordings dating back to the 1970s. Due to the onset of the COVID-19 pandemic and imposition of strict border regimes, additional fieldwork was not possible. The gap was filled by remote interviews over ZOOM, and additional data collected by staff at the Language Centre.

All data collection was done in collaboration with the Language Centre, with formal endorsement of the Miriwoong community, who desired further documentation of Kununurra Kriol. This is in line with expectations that the researchers give back to the community, rather than simply extract and exploit Indigenous knowledges.[38]

Miriwoong as an Embedded Language

One of the most salient aspects of the Miriwoong language in Kununurra Kriol discourse is its status as an Embedded Language in code-switching practices. Adopting the terminology of Myers-Scotton's Matrix Language Frame model, the Embedded Language is the language that has provided additional lexical material to the grammatical frame of the Matrix Language, which in this case is Kununurra Kriol.[39] Kununurra Kriol, as the Matrix Language, supplies the vast majority of system morphemes in these utterances. Miriwoong material largely consists of lexical items such as nouns and verbs, as well as some interjections, such as polar answers 'ngiyi' ('yes') and 'ngoowag' ('no').

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37 Cf. Connor Brown: Temporality and Aspect in Kununurra Kriol; Thomas Batchelor: The Verb Phrase in Kununurra Kriol.
38 Cf. Dany Adone: Fieldwork Research.
39 Cf. Carol Myers-Scotton: Duelling Languages.

It is especially clear from the verb phrase that Kununurra Kriol is unequiv-ocally the Matrix Language in these code-switching circumstances. In (1), for instance, the Kriol preverbal particle complex is used to contain the lexical value provided by the Miriwoong-origin main verb, marked in bold. As well, the Kriol third person pronoun is used:

(1) *Mardi e stil **yoog**.*

mardi	e	stil	**yoog**
maybe	3sg	still	sleep

'Maybe she's still sleeping'   [JP 20210303_Ji]

In contrast, the Miriwoong verb phrase typically consists of light verb construc-tions. These involve the use of a light verb or inflecting verb, which carries gram-matical information such as person and number agreement and tense marking, with a limited amount of semantic information, accompanied by a main coverb, which carries the core of the semantic information required of the verb phrase.[40] Only one token of code-switching of the verb was found with the inflecting verb maintained, shown below. All other instances of code-switching in the data only used a coverb.

(2) *He not **nyindanyan** tharran.*

he	not	**nyindanyan**	tharran
3sg	neg	3sg.GO/COME.prs	that.one

'She [that one] is not going'   [SD 1990_archive]

Miriwoong lexical items somewhat blur the line between borrowed and code-switched content, which are structurally similar processes.[41] Within the community, these lexical items are used frequently, but also coexist alongside equivalent English-origin Kriol items. This appears to exist on a continuum, where more Miriwoong-origin lexical items are heard in conversations amongst community members, whilst outsiders may encounter the English-origin equiv-alents more often.

However, they are not fully integrated into the Kununurra Kriol grammar. Miriwoong-origin verbs retain their early system derivational morphemes, which appear to remain productive. In (3-4), for example, the same verb is used in each utterance. In (4), however, the progressive aspect '-mib' is used on the verb, sug-gesting its productivity even when used in the Kununurra Kriol grammatical frame, as one would often expect from typical code-switching as opposed to an integrated borrowed item.

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40   Cf. Frances Kofod (in preparation).
41   Cf. Carol Myers-Scotton: Comparing Codeswitching and Borrowing.

(3) *Im **birrga** that jimilwiring naw.*

im	**birrga**	that	jimilwiring	naw
3SG	make	DET	lightning	sleep

'He makes that lightning now'   [BF 1994_archive]

(4) *Ngenjaying yu bin **birrgamib**?*

ngenjaying	yu	bin	**birrgamib**
that.one	2SG	PST	be.making

'Are you making that one?'   [AA 2014_archive]

Only one speaker regularly produces Miriwoong-origin verbs using the Kriol equivalent '-bat' suffix. Likewise, the typical Kriol transitive '-im' suffix, shared with other varieties of Australian Kriol, is rejected for use with Miriwoong-origin verbs, even when the utterance is analysed as being maximally transitive in its semantics.

These factors prevent the analysis of these code-switched items as being fully integrated into the Kununurra Kriol grammatical system. Nevertheless, their usage is considered to be unmarked in regular discourse in the language, demonstrating a strong degree of social, if not structural, integration. Underlying this fact, however, it must be acknowledged that there are very few fluent speakers of Miriwoong. Yet we see here that some of the grammatical system remains intact and even productive, even when embedded within another language. The first indicators of Miriwoong cultural resilience begin to emerge from within these structures.

There is, in the embedding of Miriwoong structures and lexicon within Kununurra Kriol, an intertwining of culture and language. Code-switching practices have become normalised within the community, both as a reflection of the state of the language shift that has taken place, and as an expression of a continued and resilient Miriwoong identity. The preservation of derivational morphology and some early system morphemes from the Miriwoong verb phrase suggests a degree of transmission of Miriwoong linguistic knowledge, however not to the extent that would revert the Matrix Language back towards Miriwoong.

Whilst the normalisation of code-switching has not produced an extreme outcome, such as the emergence of Gurindji Kriol as a new Mixed Language as has occurred in Kalkarindji some 400km away from Kununurra, it has strengthened Kununurra Kriol as an independent variety of Australian Kriol, distinctly connected to Miriwoong in particular.[42] Some features found within Kununurra Kriol may be compared to those that have arisen during the process of arrested language shift, as can be found in Gurindji Kriol, representing a fusion of grammatical structures within a single language.

In the case of Kununurra Kriol, however, the Creole structures remain a dominant core to the language, however visible the Miriwoong may be. Code-switching has allowed the preservation, retention, or perhaps reinforcement of substrate

42   Cf. Patrick McConvell, Felicity Meakins: Gurindji Kriol.

features in the grammar. Miriwoong remains relatively resilient, but as an Embedded Language within Kununurra Kriol.

Miriwoong Cultural Concepts

The choice of lexical items to be borrowed from Miriwoong into Kununurra Kriol further demonstrates the transmission of Miriwoong cultural and environmental knowledge across the language shift boundary. As is frequently observed amongst cases of indigenisation, names for local environmental features, including flora and fauna, are typically borrowed from the substrate language, as are local place names.[43] This is indeed true for Miriwoong terms found within Kununurra Kriol.

Beyond the borrowing of names, cultural verbs are also found embedded in the Kununurra Kriol frame. These offer particularly concise ways of referring to traditional cultural activities and ceremonial practices. In (5), the Miriwoong verb 'binkaj' is used to describe a component of a traditional ceremonial ritual for paying homage or inducing rain. This stands in contrast to any potential equivalent using the English-origin lexicon, which does not hold this cultural practice in any similarly concise terms.

(5)   *Kan **binkaj** longa him now.*

kan	binkaj		longa	him	now
cannot	'swish leafy twigs on rocks to make rain come or to pay homage'		LOC	3SG	now

'[You] can't swish leafy twigs on rocks to pay homage to him now.'   [BF 1991_archive]

In other instances, Miriwoong-origin verbs conceal deeper cultural transmission not immediately evident from their direct translations. The verb 'warralab' in (6), for instance, is directly translated as 'be lighting fires to burn grass', a translation that describes an action which, to outsiders, appears to be relatively

(6)   *They bin **warralab** la him*

they	bin	warralab		la	him
3PL	PST	'be lighting fires to burn grass'		LOC	3SG

'They were lighting fires to burn grass for him.'   [CTH 1989_archive]

straightforward, if somewhat specific. Yet within Miriwoong cultural practices, the act of burning grass is just one practice performed to take care of Country. Grass burning is seasonally performed to prompt the appearance of rainclouds

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43   Cf. Edgar W. Schneider: Linguistic Aspects of Nativization.

and the beginning of the oncoming rainy season. It also allows for the clearing of dry grasses at the end of the dry season, preventing potentially devastating bushfires, and allows for the growth of new, fresh grasses to take its place on fertilised ground.

As has been observed with Aboriginal Englishes, kinship terms are a major reflection of Indigenous cultural conceptualisations being transmitted across the language shift boundary.[44] In Kununurra Kriol, both Miriwoong and Kriolised kinship relations continue to exist. Speakers frequently use formal Miriwoong kinship terms when referring to specific individuals within the community. English-derived kinship terms also coexist alongside these, particularly evident where specific kinship relations may not be evident, yet in a broader sense than would be typically assumed of in Standard Australian English. In (7), for example, 'sista' ('sister') is used to refer to individuals who are not necessarily directly related, but are perceived to be of the same generational cohort together.

(7)   *Ah tu big sistawan bin laf la im.*

ah	tu	big	sista-wan	bin	laf	la	im
EMPH	two	big	sister-NML	PST	laugh	LOC	3SG

'Ah the two big sisters laughed at him.'   [BaG 20200901g_BaG_AD]

In (8), the speaker refers to a group of 'cousins', yet they are also subsequently remarked as collectively being 'sista' ('sister') and 'bratha' ('brother'). Although they are not siblings from the same parents, as one would define in Standard Australian English, but from a broader family grouping and assumed to be of the same generation, they are nevertheless described using such kinship terminology. Similarly, in more acrolectal conversation, consultants referred to kinship relations using similar terms as found in other Aboriginal Englishes. Even when no direct familial relationship is noted, acrolectal Kununurra Kriol uses terms such as, for example, 'auntie' and 'granny' when referring to older female members of the community, perhaps an influence from Aboriginal English practices more broadly. In basilectal and mesolectal Kununurra Kriol, the Miriwoong skin names for kinship relations are preferred.

(8)   *Ola kasin sista en bratha bala.*

ola	kasin	sista	en	bratha	bala
DET.PL	cousin	sister	and	brother	PL

'The cousin sisters and brothers.'   [GGN 20190815_GI]

Beyond kinship terminologies, the creolisation of language and culture is also seen in the expression of cultural concepts in new terms within Kununurra Kriol, again using the English-derived lexicon rather than universally borrowing

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44   Cf. Farzad Sharifian: Aboriginal Language Habitat and Cultural Continuity.

terms from Miriwoong. In describing a Miriwoong traditional practice relating to sustainability, whereby one consumes the catch of fish at the same location as the fishing took place, one Miriwoong consultant used the term 'gudenap'. Literally speaking, this would be derived from English 'good enough', but within a Miriwoong cultural – or Kununurra Kriol linguistic – context, this term refers to only consuming what you need, a definition somewhat more nuanced than the direct English etymon.

The continued use of the Miriwoong calendar is a further reflection of the transmission of traditional knowledges in the domain of environmental management. Rather than the four-season calendar introduced by European settlers, Miriwoong Country observes three distinct seasons. In Miriwoong, these are referred to as 'nyinggiyi-mageny', the wet season from December to March, 'warnka-mageny', the cooler season from April to September, and 'barndenyirriny', the hot and humid season from September to December.[45] In Kununurra Kriol, as well as the local Aboriginal English, these cultural conceptualisations of the traditional seasonal calendar are maintained through the use of calqued translations. Namely, the 'wet' ('wet') season, the 'kol' ('cold') season, and the 'bildap' ('build-up') season, respectively.[46]

Miriwoong Resilience Despite Language Shift

Miriwoong identity has remained an integral component of Kununurra Kriol, despite devastating language shift that has seen the L1 speaker population reduced to less than a dozen Elders. The centrality of Miriwoong identity in the new language is reflected even within one of the common ethnocentric names within the Miriwoong community: 'Miriwoong Kriol', which stands in contrast to the – relatively neutral – geographic description contained within 'Kununurra Kriol'. This is remarkable in that the Miriwoong community has experienced a major disruption to its linguistic ecology, yet cultural transmission has remained relatively intact. It has experienced creolisation of language, but not of culture.

There may be several reasons put forward for the relative cohesion of Miriwoong culture and continued transmission of Miriwoong knowledge within a new, Creole language. Perhaps central to this is the work of the Mirima Dawang Woorlab-gerring Language and Culture Centre, which has been the locus of community revitalisation efforts for the Miriwoong language. Explicit efforts from the language centre to encourage the use of Miriwoong in more spheres of life have doubtlessly affected not just the desire to use the language as a marked staking of core values, but also the proficiency of those involved in the language centre in the language itself. Indeed, almost all of the individuals consulted in the course of data collection for this project were associated in some way with the language centre, either as language workers or close associates. Consequently,

45   Cf. Dany Adone, Thomas Batchelor, Rozanne Bilminga, Melanie A. Brück, Bryan Gallagher, Jimmy Paddy: Caring for dat land…, as mob bin teik keya of dat Kantri longtaim.
46   These calqued seasonal terms are also commonly heard amongst non-Indigenous English-speaking residents to describe the three seasons experienced in the area.

the sample size for the preservation of Miriwoong culture within Kununurra Kriol consists largely of Miriwoong people who are themselves active advocates for Miriwoong culture and language.

The effectiveness of these efforts is likely to have been enhanced by the relatively small size and coherence of the community, with roughly a thousand Indigenous inhabitants in Kununurra. Whilst many Creole communities are the product of extremely diverse mixtures of substrate languages, the Indigenous community in Kununurra is largely and primarily Miriwoong at its core. Many individuals maintain connections with neighbouring communities, such as Gija and Ngarinyman, yet Miriwoong remains the primary identity practised within the Kununurra area. This enables the expression of a somewhat more consistent cultural identity that can be expressed and transmitted to younger generations, rather than presenting several competing identities in parallel, which, in many mixed Creole communities, may end up being subsumed into a new hybrid Creole identity.[47]

More broadly, the effects of the language centre and its work may have also produced some degree of arrested language shift between Kununurra Kriol and Miriwoong. The outcomes of an arrested language shift can be seen in the sustained use of Miriwoong lexicon within the Kununurra Kriol grammatical frame, with the preservation of some early system morphemes in code-switching practices. Unlike, for example, Gurindji Kriol, however, this has occurred later in the process of language shift, resulting in a mostly lexical preservation of Miriwoong-in-Kriol and, at this stage, less availability for productive Miriwoong late system morphology. Increased levels of Miriwoong usage may be seen in future generations, owing to the gradually expanding effectiveness of the language centre's revitalisation work. Nevertheless, Kununurra Kriol does remain the core of linguistic practices in everyday communication within the Miriwoong community, with Miriwoong as an Embedded Language.

Outside the language centre, the ideological reasons for the continued expression of Miriwoong identity within Kununurra Kriol are numerous. Riner conceives of the potential for language to be used as a weapon, and linguistic practices as potentially violent practices.[48] Likewise, in the context of Australia's ongoing colonisation, normative use of English is violent, having disrupted linguistic ecologies and rendered most languages of the continent critically endangered. In countering the inherent implied violence of linguistic oppression, Miriwoong people are motivated in turn to outwardly express their Miriwoong identity, even within the new Creole language to which they have shifted.

In many ways, this ideological expression follows a "logic of oppositional identity"[49] in creating a specific linguistic affiliation towards Miriwoong, staking their position both in contrast to the dominant English as well as distinct from other varieties of Kriol across Australia. This is seen even amongst speakers of Kununurra Kriol who are not proficient or regular users of Miriwoong, something that is observed amongst minority and Indigenous linguistic communities

47   Cf. Robert Chaudenson: Creolization of Language and Culture, p. 30.
48   Cf. Robin Conley Riner: Language and Violence.
49   Alexandra M. Jaffe: Ideologies in Action, p. 30.

whose own identity is not one that is formally recognised, in opposition to external imposition.[50] The use of Miriwoong within Kununurra Kriol is, therefore, a conscious, illocutionary act of resistance and revitalisation of an Indigenous culture that has experienced decades of colonial oppression, and a step towards the restoration of a previous, stable linguistic ecology.

Within Australia's specific context, the longstanding linguistic ecology has been that of small-scale multilingualism, owing to the diversity of the continent and its relatively smaller populations. Such an ecology sees multiple languages inhabiting the same immediate environment and interlocutors simultaneously, with users observed switching between languages in a single conversation.[51] This practice is reflected in Kununurra Kriol as well, as Miriwoong individuals transition freely between the Kununurra Kriol Matrix Language and Miriwoong as the Embedded Language. Small-scale multilingualism also allows the aforementioned reflection of important cultural identities in resistance to colonial imposition. Within each Kununurra Kriol speaker exist several languages; English, Kriol, Miriwoong, and often more, and the choice of language is, once again, motivated and intentional.

Conclusion

The Miriwoong community has, like much of Indigenous Australia since the arrival of Europeans, experienced catastrophic disruptions to the local linguistic ecology. Traditional Miriwoong has been rendered critically endangered, with less than a dozen remaining elderly fluent speakers. Much of the community has shifted to Kununurra Kriol, an English-lexified Creole language. Yet it has been demonstrated here that Miriwoong remains resilient despite the language shift. Miriwoong remains embedded within Kununurra Kriol both directly as an Embedded Language, but also via its values and cultural conceptualisations being transmitted successfully into the new language. This presents itself in contrast to the often apocalyptic predictions of the impacts of language shift, wherein the shift in language inevitably represents a total disconnection from previous ways of life. Whilst these impacts are nevertheless devastating and avoidable, what can be seen in Kununurra is that a smaller community can hold onto its cultural identity and, with adequate support and determination, use it as the basis for the revitalisation and reawakening of the traditional language.

50   Cf. Paul V. Kroskrity: Language Ideologies and Social Identities.
51   Cf. Alan Rumsey, Ruth Singer, Matt Tomlinson: Recent Research on Language and Culture in Australia and Oceania.

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Dany Adone

Interview with James Smith on Indigenous Worldviews and Resilience

Preface: James Smith, also known as Uncle Jimmy, has visited us at the University of Cologne and gave a lecture titled 'Land, Sky & Waters'. The following interview has been recorded after the lecture in October 2024.

Dany Adone: Well, good afternoon, everybody. Could you tell us what Indigenous worldviews mean? What do they consist of?

James Smith: First of all, thank you very much for having me here. Dany, you too, Anna and the Australian unit up there. It's so great to come across the other side of the planet here and to meet likeminded people, it is so welcoming, and to have the opportunity to lecture here at Cologne Uni, it is a great milestone in my world and my career, and I feel so welcomed, and I need to say these things because this is part of our worldview, but we need to acknowledge this kind of acceptance and good manners from people here and indeed, back where I'm staying at Bonn. I'm having an awesome time here. We are altruistic people, we are giving people. We are not colonisers. We do not take. Our world view is a deep respect for nature and a deep respect for human life as well, and that our knowledge bases, they are ancient and through those it's always been my view that we have so much to offer the world, because our track record speaks for itself, 60000 to 100000 years, there aren't many people who can say that across this planet. Being altruistic people, we are more than ready, willing and able to share so much of our ways of knowing and doing because we have a great voice that we want to tell the world there are better ways. There are different ways, and they have nothing to do with colonialism. They have the world to do with helping each other, altruistic ways and that of a better system of education that is inclusive, that is about lifelong learning, and that everybody is included and not excluded. So, there's a powerful knowledge basis that the world really needs to very least to listen to. There are plenty of people that we wouldn't tell that to, especially the political right. They just want to dominate. But there are good people across this planet and in Australia as well, who are prepared to listen because they understand the way it's going is not going to benefit nobody in the long run, let alone the Indigenous people, the native plants and the native animals, let alone the land itself. So, we have powerful knowledge bases, and we're more, as sharing people, giving people, we're more than ready and able to do this kind of work.

Dany Adone: Can you say something about the deep respect for Country?

James Smith: Absolutely, yes. Because the land nourishes us, and just as important, we have been charged with looking after the land. And as you can see in

this map that's behind us here, these are all the countries that are across Australia. They're not in states. There's 200 plus languages, and you add the dialects to those languages, and the number starts to skyrocket. And, you know, it's an amazing world, pre-European, and just as important, it is still there. Maybe the colonisers went out of their way to try and destroy much of it as possible. But we're still there. And we still have this altruistic nature about ourselves. We have not conformed to the way of the West, and that is so much about what makes Indigenous people acceptable to a lot of people, like in the media and the hand-me-down British ruling classes who occupy Australia and who want to dominate everybody. We don't want to dominate nobody. We just want to share a better way that, a more sustainable way, and that we all, that the Country, first of all, sees another 60 000 years, which is in the hands of the wrong people is not going to see anything like that, but we have the capacity to share these knowledges with the right people who want to listen.

Dany Adone: There is a lot of discussion on how Indigenous knowledges and Western worldviews can fit each other. Are they compatible?

James Smith: I don't know so much whether they have to be compatible. What it is, it's about survival more than compatibility. And the right people have already said it. David Suzuki, David Attenborough, have said it that the Indigenous peoples of the planet had the knowledge bases to save the planet from this incessant plunder, this incessant taking from the Country, whereas this is unsustainable, and somewhere in this people need to wake up and go, goodness me, what have we done, before they get around that same what have we done? Listen, listen to what people are offering. And we are not domineering people. We just want to save the planet, save the country of Australia, and indeed, Indigenous peoples all over the planet want a better way, and then we can share again. We don't want to dominate; we don't want to control people. We do not want to watch them. We're not going to sit back and watch them destroy the land. So that's a big part of that whole process.

Dany Adone: In some efforts to listen to Indigenous voices, we've seen, for instance, in the North of Australia, there are collaborations, collaborative work on the use of fire management to do controlled fires. I mean, it seems as if they are listening.

James Smith: And just as important farmers, not all farmers, but there are farmers who are listening and even mining companies, and not a lot of them, but there are mining companies who are listening and realise that there's a better way to do this. And up there on Groote Eylandt to the east of Arnhem Land, the traditional owners there have gone into a big agreement with the mining company that's gone in there, and they're working together on not only the health and the wellbeing of the community of Groote Eylandt, but that the mining company can mine their lands with their permission, so they don't have to go through this aggressive process of imposition, that if they communicate with the communities, you'll find that you can come out with a better outcome for the community and for the mining companies as well. All you need is the right people in control.

Dany Adone: We often speak of the two-way methodology when referring to genuine collaborative work between Indigenous and non-Indigenous people. Is such a collaboration realistic?

James Smith: Well, that's a good example on Groote Eylandt that it does work. All you need to do is communicate. That is the core of it. And you know, this goes right back to the early days of the settlement in Sydney, where the colony was verging on famine, because there was no food, and they wouldn't eat any food. So, what the Colonials would not do was to ask the Indigenous people, where do you get your food from? They lacked that humility to ask, and in that big disconnect, that disconnect continues today, 230-240 years later, it is still there where so many people don't have that capacity to want to communicate. I don't understand that at all, you know, and it's a great anathema of Australia, this lack of communication, and that colonials know better, that's basically arrogance, stupidity, and that we are better people. You couldn't be further from the truth. You know, you should be talking to the Indigenous peoples about, how do you do this? Just like asking them in the early days of the settlement there, where do you get your food from? Is it not a big ask. They were sitting there at a place called Yurong, they renamed it Macquarie's Chair, and waiting for ships to come in from England or from Indonesia to bring them European food. We've lived for 60 to 100 000 years there without worries about where food was going to come from, because we are part of nature. We don't want to see nature be destroyed. We don't want to see ourselves destroyed as well.

There is another point to mention: it is about listening. This capacity to listen, and Indigenous peoples even talk about it's called deep listening. People listen for and they don't listen for all sorts of reasons, assuming parliament, the other side's listening, until they see something they don't like, and they jump. They're not listening at all. They wait for the opportunity to attack. So, there's forms of listening and communication, and time has a lot to do with it. Our perspective in time is seasonal, so it's not a nine to five, this capitalist way, where the propaganda was put out there that time is money. You know, no, it's not. Time, it comes, and it goes and it's not going to come back, so you utilise it while you have it.

Dany Adone: Thank you very much.

Indigenous Knowledge, World-views, and Methodologies

Teresa Cochrane, Scott McManus, Peta Jeffries, Gaye L. Krebs, Alexandra Knight, Lee J. Baumgartner, Anjilkurri Rhonda Radley, Richard A. Dacker, Kara Westaway, Merinda Walters, and Scott Castle

Merging Indigenous and Western Research Methodologies

Reflections on a Journey

Abstract: We would like to acknowledge the traditional custodians of Country across Australia and the Torres Strait Islands. Indigenous knowledges are and have been used to support us to sustainably exist with Australia's fragile ecology for thousands of years but are only recently being valued for their role in creating a sustainable future for Australian fauna. Indigenous Ecological Knowledges can play a vital role in the future management, and recovery of Australian native species. But the value of this knowledge needs to be recognised by those in decision-making roles. Here, I present these concepts using my family totem, the Koala, as a case study for how these two knowledge systems can be merged. As part of my Honours research year, I completed reflections that were centred around the experience and challenges that I, as an Indigenous person, would experience when merging Indigenous and Western research methodologies. The key reoccurring findings of my reflections were categorised into 1) my growth as an Indigenous person, 2) gaining a deeper sense of ecology, 3) Indigenous Ecological Knowledge, and 4) incorporating culture into a Western science system. This experience overall showed that it is possible to bring your own cultural experience and way of conducting science into the current dominant scientific practice.

Acknowledgement of Country

My name is Teresa Cochrane, and I am a proud Indigenous woman of the Dunghutti and Gumbaynggirr mob on the Mid North Coast of Australia. I want to acknowledge the lands that I have grown up on as these are the places where I have learnt knowledge and that have shaped me into the person I am today. These places are Dunghutti Country for the first 10 years of my life, a place I have continually returned to because this is the land where my Indigenous family (father's side) was raised on and continue to live on. Birpai/Birripi Country is a place that has had the most significant impact on me with regards to my personal growth, and connections to Traditional Owners and Elders, as well as other local Indigenous people because it is the Country I have lived on for the majority of my life. I am also acknowledging Bundjalung Country, the lands on which my non-Indigenous family (mother's side) was raised on and a place I have a strong connection to. I would also like to acknowledge my connection to Gumbaynggirr mob and Country which are the lands which my Indigenous family and my great-great Grandfather King Bennelong and his family/children belonged to before they were forcibly taken to Burnt Bridge mission/reserve on Dunghutti Country. My final specific Acknowledgement of Country is Wiradjuri which is

a place that I visited while completing the laboratory analysis and data analysis for my Honours project.[1]

All authors would also like to acknowledge Indigenous peoples as the traditional custodians of Australia and we would like to pay our respects to Traditional Owners and Elders both past, present, and emerging. We would like to extend this respect to all Indigenous people who read this work. We would like to acknowledge the Birpai / Birripi peoples, biodiversity, and their Country because this is the land on which most of my reflection and work was undertaken. Additionally, we would also like to acknowledge Ngiyampaa Country, Wiradjuri / Wiradyuri Country, Kamilaroi and Gimuy Country where we all currently work, live, and have connection to.

Prior to Invasion, Indigenous people had been living as an integrated part of the Australian environment for more than 65 000 years scientifically and also culturally 'time immemorial'. They had an important and integral role in the interactions of ecosystems' fragile, interrelating relationships,[2] were the caretakers of the environment and viewed themselves as equal to all environmental processes, features, flora and fauna.[3] They hold a traditional ecological knowledge that has helped assist in the environmental management and conservation of Country for tens of thousands of years.[4]

I would also like to acknowledge my fellow authors who have been vital in the conceptualisation, writing, editing and key supports of my journey and publishing this paper. Without them I would not have been able to complete my research project and find my place in academia. This journey is just as much mine as it is theirs.

Introduction

An Acknowledgement of Country was included in this paper because it is important for Indigenous peoples of Australia to develop a sense of connection, which can be achieved in conversation, by Acknowledgement and discussion of Country as well as family groups and mob associations.[5] It was important to me to include an Acknowledgement of Country because it is a significant protocol in Indigenous lores and is a sign of respect to any Traditional Owners, Elders and Indigenous people who read this work. This also allowed me to pay my respect to Ancestors who despite the odds survived a cruel colonial genocide, as well as pay respect to those fallen.

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1   Cf. Teresa Cochrane, Gaye L. Krebs, Scott Mcmanus, Scott Castle, Peter G. Spooner: Effect of Soil Treatment on the Growth and Foliage Chemistry of Three Eucalyptus Species Grown in a Plantation as a Food Source for Koalas.
2   Cf. James L. Kohen: Aboriginal Environmental Impacts; Derek John Mulvaney: Aboriginal Man and Environment in Australia.
3   Cf. Natalie Stoeckl, Diane Jarvis, Silva Larson, Anna Larson, Daniel Grainger: Australian Indigenous Insights into Ecosystem Services.
4   Cf. Rosalie Schultz, Tammy Abbott, Jessica Yamaguchi, Sheree Cairney: Australian Indigenous Land Management, Ecological Knowledge and Languages for Conservation.
5   Cf. Reconciliation Australia: Acknowledgement of Country and Welcome to Country.

This paper is set up as a yarn about who I am, where I come from and allows me to share my story of what led me to undertaking my Honours journey, and also was heavily inspired by Sue Green, Jessica Russ-Smith and Lauren Tynan's paper 'Claiming the space, creating the future'.[6] My Honours journey was the first step into my academic career as an Indigenous researcher in the predominantly Western dominated discipline of environmental science and ecology. Since starting on this new journey, I thought it was important to reflect on the lessons learnt and experiences of using both Western and Indigenous methodologies.

The purpose of sharing them is to hopefully encourage and inspire other Indigenous people to follow their own cultural expression, as well as highlighting its potential to be used as a tool for other Indigenous researchers or supervisors who may be undertaking a similar experience. It is important in Indigenous culture to share our cultural experiences through storytelling and yarning, which has been a teaching practice used for tens of thousands of years for survival and guidance,[7] and this is the main purpose of this paper. In the absence of written language, storytelling and yarning are the main (and very critical) forms in which information was passed from generation to generation.[8] These conversations were not only critical for survival, but they also really acted in the same way as a Western encyclopedia.[9] They were the source of truth for all aspects of life.

Yarning the Journey of the Authors

In this paper I acknowledge that my learning journey has been a shared and relational approach where I have learnt with and co-produced understanding with others. This knowledge production has occurred within Indigenous, Indigenist and Western worldviews. Yunkaporta and Moodie state: "Indigenous Knowledge is only valid if it is produced in groups or pairs; individual analysis is considered to be invalid and lacking intellectual rigour",[10] therefore, my approach to learning in my Honours journey has been a form of Indigenous knowledge production.

The knowledge, cultural journey and developed understandings gained through the Honours project, was not done siloed and neither was the development of this paper. It was the combined experience of both Teresa Cochrane, Elders and Indigenous knowledge holders, and the supervisory team. It is important to share our collective journey within this experience and each of our own singular journeys to date to build trust and rapport with the reader and the work presented in this paper.

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6   Cf. Sue Green, Jessica Russ-Smith, Lauren Tynan: Claiming the Space, Creating the Future.
7   Cf. Lynore K. Geia, Barbara Hayes, Kim Usher: Yarning / Aboriginal Storytelling.
8   Cf. Dawn Bessarab, Bridget Ng'andu: Yarning About Yarning as a Legitimate Method in Indigenous Research; Ranjan Datta: Traditional Storytelling.
9   Cf. Nepia Mahuika: Rethinking Oral History and Tradition.
10   Tyson Yunkaporta, Donna Moodie: Thought Ritual., p. 90.

Teresa Cochrane

As a Wiradjuri Elder once shared with me, I am an individual that has her feet in two camps, to have both Australian Indigenous and non-Indigenous heritage. Both of these heritages have influenced both who I am, and my educational journey. Both sides of my family have a strong connection to the conservation of Country, protection of the environment and preservation of biodiversity because they see the values and importance of the environment, its features, its processes, flora and fauna. My need to pursue a Bachelor of Environmental Science and Management (Honours) at Charles Sturt University and a career in the environmental sector is a passion that had been passed on to me by my family. As I progressed through my degree it became evident that this was to be my calling in life because it incorporated my culture, my family's passion to conserve the environment and my need to help the world.

In my studies I majored in Conservation Ecology because the rate of extinction of native biodiversity through human urbanisation, deforestation, agriculture and introduced species in Australia, as well as internationally is important to me, but also of significant concern nationally.[11] My Indigenous Ancestors have lived on Country with the ecosystem by ensuring the sustainable conservation and longevity of biodiversity,[12] and I believed it was important for me to take on this responsibility for the environment to continue the work of my Ancestors.

Indigenous cultures use totems as a main practice for conservation and preservation of species, because the totem system dictates how Indigenous peoples interact with plants, animals, the landscape, water, and each other.[13] In Indigenous culture, a 'totem' is an Entity which an Indigenous person's "spirit came from",[14] it is also often related to a species, a totemic site, a sacred site, in the landscape, or is connected to the Ancestor.[15] The totem systems used differ depending on the Country and its unique culture, customs, lores and ceremonies, but the common understanding is that totems or the totemic system comes from the 'Dreaming' spirituality.[16]

Totemic systems and totems often derive from 'Dreaming' stories used as part of learning, initiation and ceremonies,[17] as well as being located in a place that an individual spirit comes from.[18] The totemic systems and totems also play a role in the different relationships between Indigenous people and their responsibilities

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11 Cf. Emily Burton, Andrew Tribe: The Rescue and Rehabilitation of Koalas (Phascolarctos Cinereus) in Southeast Queensland.
12 Cf. Heather J. Aslin, David H. Bennett: Wildlife and World Views.
13 Cf. Deborah Bird Rose: Indigenous Ecologies and an Ethic of Connection.
14 Daniel F. Robinson, Margaret Raven: Recognising Indigenous Customary Law of Totemic Plant Species, p. 33.
15 Cf. Vicki Grieves: Aboriginal Spirituality.
16 Cf. Heather J. Aslin, David H. Bennett: Wildlife and World Views.
17 Cf. Robyn Heckenberg: 2014 Australian Association for Research in Education Betty Watts Award Winning Paper.
18 Cf. Daniel F. Robinson, Margaret Raven: Recognising Indigenous Customary Law of Totemic Plant Species.

to Country.[19] They can be the physical embodiment of an Ancestor,[20] or they can be kin or family member.[21]

The koala is a significant totem of the Birpai / Birripi people and was the focus fauna of my Honours research project.[22] On 16th May 2022, Uncle Richard Dacker, a proud Birripi Traditional Owner and Elder stated that "Goola (Birripi word for koala) is the name of my grandfather, he was Goola / koala, that was his totem. He was given that very young – 10-year-old",[23] and he also goes on to say that when "your totem being koala, then you don't kill koala or ancestry, so koalas were very important for protection".[24] The conservation and preservation of Country, koala and Eucalyptus (the main food source of the koala) is important to Aunty Rhonda Radley who stated in a yarn on 17th May 2022 that she has a "responsibility to look after, more so Guula [Gathang (Birpai) word for koala], getting close to him, to nurture him but also the tree itself", along with discussing conservation of Country by saying "we are all connected, and we are all in this oneness together".[25]

It is important to also acknowledge my family for the totems they have given me. I have three totems: my personal totem is the koala and was also a significant totem of my great-great grandfather King Bennelong's people; one from my father's side which is a praying mantis; and one from my mother's side which is an Australian magpie. My mother's family is not Indigenous, but one day I was having a discussion with my (maternal) grandparents where I was sharing with them knowledge of culture and discussing totems. My grandfather, who has a strong personal connection to magpies, respectfully passed this totem on to me to be my totem for my mother's side of the family. It was a big moment in my life because it acknowledged the connection between both cultural sides of myself. It also showed that my grandparents recognised my Indigenous culture, one that is so different to their own. My grandparents grew up in a cultural norm and society that typically viewed Indigenous knowledge and culture as 'primitive' or 'lower' on a societal hierarchy,[26] and this was to no fault of their own but was represented through Australian historic and institutional norms since Invasion/Colonisation.[27] For them to accept and recognise my Indigenous cultural heritage and its importance to me, despite their own cultural heritage highlights the respect, acceptance and love they have for me.

Connection to Country and its conservation are a vital part of who I am, and it stems from my cultural standpoint from both sides of the family,[28] I also know

19 Cf. Heather J. Aslin, David H. Bennett: Wildlife and World Views; Deborah Bird Rose: Indigenous Ecologies and an Ethic of Connection.
20 Cf. Birripi Traditional Owner and Elder Uncle Richard Dacker, pers. comm., 16 May 2022.
21 Cf. Birpai Traditional Owner and Elder Aunty Rhonda Radley, pers. comm., 17 May 2022.
22 Cf. Teresa Cochrane: Effect of Soil Treatment on the Growth and Foliage Chemistry of Three Eucalyptus Species Grown in a Plantation as a Food Source for Koalas.
23 Birripi Traditional Owner and Elder Uncle Richard Dacker, pers. comm., 16 May 2022.
24 Ibid.
25 Birpai Traditional Owner and Elder Aunty Rhonda Radley, pers. comm., 17 May 2022.
26 Cf. Patience Elabor-Idemudia: Identity, Representation, and Knowledge Production.
27 Cf. Quentin Beresford, Paul Omaji: Our State of Mind; Susan Green: Colonisation, Post-Colonialism and Decolonisation.
28 Cf. Jay Phillips: Indigenous Australian Studies, Indigenist Standpoint Pedagogy, and Student Resistance.

that I am not alone in the feeling with many other Indigenous people both in Australia and internationally sharing similar personal connections, as well as non-Indigenous people in their own cultural experience. My culture also plays an important part in my career and research interests of using Indigenous methodologies of science, pursuing a career in environmental / ecological science and conserving my personal totem the koala. The cultural perspective of having both Indigenous and non-Indigenous ancestral lines influences the format of my research and this paper; incorporating both these cultural perspectives is a crucial factor in my story and journey.

Scott McManus

I am a Ngiyampaa man, although I also acknowledge my Wiradjuri, First Fleet and Settler heritage (including Irish, Scottish, English and Ashkenazi Jewish ethnicities). After 25 years as a consultant in the Mining and Geoinformation fields, I completed a PhD that focused on uncertainty assessment of spatial domains in early-stage mining projects using pXRF and Bayesian methods. My current research interests include implementing Machine Learning in Health Administration, Responsible AI, Digital Data Sovereignty, Ethical considerations with First Nation's Statistics, Deep learning techniques to identify river blockages in Southeast Asia, Geostatistics to quantify uncertainty in geological models and fire impacts on mangrove vegetation and regeneration on the mid-north coast NSW. When I first met Teresa, I was still completing my PhD and working as a sessional academic in spatial science. During that time, I began to work on updating the Australian Indigenous modules in two of my subjects to the Charles Sturt University Indigenous Curriculum expectations. Through this work, I began understanding and researching Indigenous Data Sovereignty and participatory mapping. I felt privileged that Teresa asked if I would assist her in her Honours Journey by providing cultural support to the supervision team. I have a strong geochemistry background, so I did understand the chemical part of her Honours work and, of course, the statistics and data methods, but I had little knowledge of the vegetation and Koala diet selection. Teresa was very keen to include her culture in her science-dominated dissertation.

This led to us (Teresa and others in the supervisory team and those who supported her from outside) looking for examples of dissertations or other work that was science-based but included culture. We were able to find lots of examples of qualitative studies and Honours situated in the humanities, health and social work disciplines. I was close to completing the write-up of my own thesis and took the strategic decision to delay my submission via a leave of absence so that I could fully appreciate the material and Indigenous scholars we were referencing in support of Teresa's work, so I could then decide how I wanted to approach culture in my own Thesis. We were lucky that Peta was happy to freely provide her time to talk and yarn with us and help us along this journey. I had met Peta in the Spatial subject's revitalisation work and really valued her thoughts and advice. I thought Teresa could gain insights for her work from Peta as well. This meant we

enjoyed many yarns, with the most important being around Ethics in Indigenous research. One work that I found very helpful in visualising how Teresa could include culture in her science dissertation was 'Research is Ceremony' by Shawn Wilson.[29] In addition, I found that the chats I had with Uncle Rick and with Dr Aunty Rhonda, also helped consolidate my understanding and new knowledge gained through this process. Throughout the process, there were high and low sections. Some of the high sections were the respect for culture that many of the team brought, as well as the connections and relationships. Yunkaporta and Moodie[30] make it clear that knowledge is never an individual process and that the relatedness of data and thoughts and our connections are very important to the process of analysing data.[31] In the end, I chose to include a one-page Acknowledgement of Country in my thesis, which situated me within the Ngiyampaa and Biripai Countries. I felt that was sufficient for my work, which was both National and International in scope, compared to Teresa's, where the context was very much tied to Biripai Country and thus deserved much more cultural contextualisation as well as having sections of the work written in a format that anyone, no matter their education level or reading age could understand the research that had been done. This is something we all felt strongly about: reciprocity in research when working on Country.

So now I am working with another Indigenous Honours student and again am honoured to be working with Teresa with her MPhil and DPhil. Through Teresa's work in her Honours, I feel much better prepared and more understanding of the kind of blockages that will be thrown up by the dominant research nomenklatura for those wishing to include culture in their research. I also now know of literature-supported ways to navigate those blockages (using the system to fight the system). However, it goes beyond that; not all Indigenous researchers will have done Indigenous Research or include culture as an aim, but all of them will need cultural support, and very few non-Indigenous supervisors can provide the needed support or understand some of the issues an Indigenous researcher will face without some deeper reading or understanding. Understanding the kind of issues that can impact an Indigenous person in their work and study is important. For example, Teresa and I were from different families, different peoples and different Country and Teresa grew up in culture, whereas I did not. However, despite these differences as Australian Indigenous people, we still had a shared knowledge and experience of intergenerational trauma and an understanding of the kinds of issues our families and we had faced and continued to do so. So, this shared understanding and lived experience allowed us to support each other. Through programs like the Charles Sturt University Indigenous Cultural Competency program and the desire of non-Indigenous people to educate themselves about the issues, they are also able to effectively support Indigenous researchers. It was pleasing and comforting to see the array of support from non-Indigenous people (many of whom are contributing to this paper) who

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29 Cf. Shawn Wilson: Research is Ceremony.
30 Cf. Tyson Yunkaporta, Donna Moodie: Thought Ritual.
31 Cf. ibid.

educated themselves and reflected on their standpoint and continually developed their cultural responsiveness:

> From the heart
> It's a start, a work of art
> To revolutionize make a change nothing's strange
> People, people we are the same
> No we're not the same
> 'Cause we don't know the game
> What we need is awareness, we can't get careless.[32]

Peta Jeffries

My identity is not fixed. I have both colonised and colonising heritage in my family history and although this does shape my ways of being and doing, it does not currently define who I am because I do not fit into one identity more than the other. Out of respect for those who survived, and because of the current dominant cultural norms within Australia (and elsewhere) that continue to situate identity as fixed I do not feel safe or comfortable to identify as Indigenous or non-Indigenous. However, I do respectfully and proudly acknowledge Indigenous heritage in my direct maternal family line on both my grandmother's and my grandfather's side of the family. My father's ancestry is currently unknown to me, yet it is that name that I carry with me. The long and slow process of learning about this heritage has shaped my adult education and research because it supports me in truth-telling, speaking out, understanding, and healing from my family history of forced separation, silencing and erasure. My story is not unique, because it reflects the pernicious violence of colonialism and the long-standing nature of its associated harmful logics and those who maintain them. The intersectional nature of oppression is what I am standing up against.

As a young person returning to my hometown after travelling Australia in search of family and a sense of belonging, I wanted to study what was then known as 'Aboriginal Studies' and / or anthropology because I thought this might provide insight into my own family history. I have oral history of this family history, and some family members have samples of material artefacts but the evidence or truth according to the Western tradition is difficult to locate and therefore disputed. From day one of my experience at the university I was threatened by what I now recognise as the patriarchal, logocentric, and hierarchical nature of the Western tradition so dominant in an academy that did not recognise oral history and the visual as evidence or truth.

This led me to study visual arts where I could explore my history and the associated theoretical and conceptual understandings of what has happened through making, doing and creating. Furthermore, my studies of visual arts led me to being awarded artists in residencies in geographical areas close to what I was learning about my own family history, with most of this being situated within what is today recognised as the Murray Darling Basin, Western Victoria

32   Public Enemy: Fight the Power.

and Tasmania. The residencies included working with ecological scientists, and I began to question why they did not consider the history of the land and its inhabitants prior to 1788 and or if they did it was only a brief note within the final write-up or publication of their research. The visual, the artefacts and oral histories were again dismissed. My art practice as research then began to focus on histories and geographies of ecological knowledge beyond the Western tradition.

This then led me to work for Gunditjmara peoples, the traditional owners of Budj Bim, to carry out extensive archival research into what was then considered to be 'traditional Indigenous ecological knowledge'. This research contributed to the Budj Bim geographical area becoming recognised as a World Heritage Listed Cultural Landscape. This work was an example of Indigenous-led research that I am still very proud to be involved with. I have also supported First Nations students from the beginning of their undergraduate journey to completion of their higher degree by research projects. Most of these projects focused on cultural revival or revitalisation and family history, with many using the archives and visual methods to support their work.

This work helped me to recognise the value and importance of adjusting curriculum to better align with the aspirations of Indigenous students and also the benefit of these methods and methodologies to healing from transgenerational trauma. This led me to study social work focusing on trauma, and ecological or environmental social work within an Indigenist practice framework. I also completed a PhD in history, which considered the co-production of social and ecological knowledge (the merging of Euro-centric / Western knowledges and Indigenous knowledges) during colonial scientific exploration along major rivers through Country that is today recognised as the arid / semi-arid centre of Australia.

Then I became a full time lecturer and researcher in critical Indigenous studies, where I have been involved in developing subjects, curriculum and courses in critical Indigenous studies; the complex and contested teaching and coordination of more culturally responsive approaches across the disciplines; an active member of the Indigenous Board of Studies where we embed Indigenous content across the entirety of Charles Sturt University; and supporting Indigenous students as they navigate their way through the academy. I still practice art and continue to learn about my family history, and every day I feel great privilege and respect for the work the authors and I continue to do to enact positive change.

Alexandra Knight

I am committed to care for Australian water- and land-scapes, the plants, animals and fungi that live within them, and the interactions, connections, intricacies and spaces that make them. This has been a lifelong passion, developed within my family's arms and thoughts, and communicated to me as a child. My extended family's care and respect for the river we lived and worked on was

transmitted to me early on, and that care continues in the next generations.[33] I do not know why my father was so interested in Australian plants and water quality - he immigrated to Australia in the 1950s as a 10-pound pom, but perhaps it came from his feelings of connection to the country he grew up in - the New Forest of southern England, and he wanted to feel that way in his new country. He was a persuasive and thoughtful community environmental activist. Mum too, born in Australia, was knowledgeable and careful of the beautiful bushland she grew up in, and I grew up in too, and shared her knowledge with urban young people and the local community through hands-on nature restoration projects.

Early in my career as a park ranger, I lived and worked on Ngiyampaa Country in central NSW, Australia, and was allowed to listen and learn from Ngiyampaa Aunties and Uncles and other Elders as they shared their knowledge about the plants, their properties and uses and the tracks of Baiami across the Country. I felt and continue to feel very welcomed and privileged to learn on Country this way and am grateful for the much deeper level of understanding it brought to my Western scientific university-earned knowledge of plants, animals and processes.

Now working as an academic I have been able to sit myself within feminist science[34] and ecofeminism,[35] in my ecological endeavours I am an intentional ecologist who uses multiple methods, acknowledges boundaries, reflects and relies on reflexivity and does her work care-fully.[36] I have been deeply influenced by the works of Deborah Bird Rose in understanding our native fauna and flora and our cultural relationships with them.

I have been very privileged to work with and support Teresa as she journeys through academia, and the yarning and sharing the team does together inspires me to think deeply about differences and connection and to act with kindness and strength. There are profound differences between the ways that Teresa, our first author, and I understand the world. In particular, these differences are around our life-experiences of First Nations' culture and also our beliefs about the relative roles of Western scientific and religious paradigms in understanding and responding to the devastation of Australian plants and animals since Colonisation. And so, I have reflected on why Teresa asked me to be a co-author on this paper, which is predominantly her own story. A few years ago, before Teresa started her Honours, we worked together on Teresa's special project which investigated the use of eucalypt leaves in feeding captive koalas. Since that time, I have continued in a mentoring and friendship role with her and the other authors of this paper. I consider the strength here is in the ongoing yarning, sharing and learning, where we continue to weave our ways and thoughts and share our learning with one another, building stronger, healthier and more meaningful approaches to the future of Australian culture and water- and land-scapes.

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33 Cf. Heather Goodall: Georges River Blues. Swamps, Mangroves and Resident Action, 1945-1980.
34 Cf. Helen E. Longino: Can there be a Feminist Science.
35 Cf. Carolyn Merchant: Ecofeminism and Feminist Theory.
36 Cf. Alexandra R. Knight, Catherine Allan: Intentional Ecology.

Gaye L. Krebs

My involvement in this journey initially started as a co-supervisor for Teresa's Honours project in the context of my expertise in animal nutrition. Teresa is the first Australian Indigenous student that I have supervised but I have previously supervised several Papua New Guinea Indigenous students. Part of supervising any Honours students goes beyond the reach of just educating them on scientific methods, how to write a dissertation etc.; it is about establishing a good relationship with these students, gaining their trust and establishing a two-way relationship built on open communication, respect and trust. This was how I wanted my relationship as one of Teresa's supervisors to evolve. Beyond my experience with Indigenous students in Papua New Guinea, my sister's three sons acknowledge their paternal Ngiyampaa heritage, so I am no stranger to Indigenous cultures and have always undertaken journeys of discovery about any culture.

When Teresa wanted to broaden her approach to undertaking her Honours project to include chats with Uncle Rick and Dr Aunty Rhonda and to reflect on her Honours journey, I realised we needed to think 'outside the square' somewhat in terms of how to present her actual Honours dissertation. Being an Honours Advisor within the Faculty, I was familiar with 'mixed mode' presentation of Honours dissertations, where the ultimate dissertation included both written and audiovisual components, so I knew we were not constrained to this concept of 'there is only one format'. So, in respect of Teresa's wish to be able to effectively acknowledge and showcase not only her own Indigenous heritage but also Australian Indigenous culture, we then embarked on the 'how to'. Inclusion of a preface is very common in written works, and so this was an obvious solution as to how to include the importance of koala conservation from an Indigenous perspective. Being a Preface, this was written in first person.

The classic Western science approach to writing a dissertation was applied for the usual literature review, methodology, results and discussion chapters of the dissertation. There is no formal 'restriction' on how many chapters can be included in an Honours dissertation imposed by the university, so an additional 'concluding' chapter was included where Teresa was able to reflect on her Honours journey. Similar to the preface, this 'reflections'-chapter was written in the first person. The change in effective writing styles through the dissertation was introduced in the Preface and so the reader was made aware of these different styles at the onset.

Ultimately, many things were achieved. I expanded the ways by which I could respect Teresa's wishes by looking 'outside the square', Teresa's dissertation format became a means of merging different communication styles, and the content of the dissertation provided any reader the opportunity to learn something about Australian Indigenous culture.

Lee J. Baumgartner

I am a non-Indigenous person who was born on Wathaurong Country but has spent most of my adult life on Wiradjuri Country. I have been passionate about nature, specifically our coasts and rivers my entire life. My earliest memory of being on Country is catching a fish with my dad when I was two years old. It was my first fish but sparked a lifelong journey. My classical training is in the ways of Western Science and the value of fish as a conservation concern. But more specifically, my entire professional career has been focused on cleaning up the various problems associated with river development, which has been a dominant feature of our rivers and streams since European settlement in Australia, on our waterways.

Only recently, and through a long career in the Mekong region, I have learned that fish are more than something to be conserved. The Mekong citizens have taught me that fish are a food source, a spiritual totem, a mechanism for social cohesion, a teaching resource and a source of physical and spiritual health. They are also a 'canary in a coalmine', often serving as a warning when river health has declined. This is a knowledge system which was not taught at university. It is handed down generationally. In that storyline, fish are so much more than a conservation concern. And in fact, when the rivers are healthy, fish are not a conservation concern at all, they sustain life! Seeing our waterways through the eyes of both Indigenous knowledge and Western science has allowed me a greater understanding of my 'fish' world. And so, when the opportunity arose to extend that knowledge to other forms of nature, here 'Koalas', I was extremely enthusiastic. The land and the waterways are connected. Removing water from rivers is removing water from the land. And removing water from the land is removing water from trees. And harming trees is harming koalas. And who does not love a koala? So even though I started my journey late, I am grateful for the new knowledge I have acquired and a new way of seeing ecological processes with a new perspective. I look forward to applying a new way of thinking to a range of different situations in the future.

An Overview of Indigenous Culture and Science in Australia

Since time immemorial (Indigenous Australian perspective), or 65 000 years (Western Science perspective) Indigenous peoples have lived on the lands we currently refer to as Australia.[37] During this time Indigenous peoples have developed a strong spiritual, physical, and emotional connection to Country and view themselves as part of the environment alongside animals, plants, land, climate, seasons, soil, stars, water, and fire.[38] Country is central to Indigenous customs,

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37   Cf. James L. Kohen: Aboriginal Environmental Impacts; Derek John Mulvaney: Aboriginal Man and Environment in Australia.
38   Cf. Natalie Stoeckl, Diane Jarvis, Silva Larson, Anna Larson, Daniel Grainger: Australian Indigenous Insights into Ecosystem Services; Mardie Townsend, Rebecca Phillips, David

lore, culture, and protocols, and continues to play a vital role in the survival of Earth's oldest living culture. The concept of Country is complex and is difficult to define as it is different to each and every Indigenous Australian. It is both the cultural place or boundary that separates different communities (or mobs), but it is also the spiritual and emotional connection felt, as well as Country being regarded as family / kin.[39]

Embedded in Indigenous lores and cultures is the sustainable use of natural resources, conservation of the environment, and land management practices. Indigenous peoples were Australia's original ecologists and scientists. Their developing knowledge of Country and the environment has been passed down through generations via verbal communication and ceremony.[40] This knowledge is known as 'Traditional Ecological Knowledge' or 'Indigenous Ecological Knowledge'[41] and in modern-day application is also known as Indigenous Science.[42] Referring to Indigenous Ecological Knowledge as 'Traditional' places it in the past or as a 'static' knowledge system that does not evolve to work within current / contemporary times and spaces. Indigenous Science and Ecological Knowledge has continuously changed throughout the time and has played a significant role in the ongoing thriving of Indigenous Australians.[43] Some examples of the continuing cultural adaption of Indigenous Science and Ecological Knowledge can be attributed to survival after extinction of megafauna, an Ice Age,[44] and Indigenous resistance since Invasion / Colonisation.[45]

Indigenous Ecological Knowledge (IEK) is unique to each of the five hundred Indigenous mobs that live on the lands of Australia and the Torres Strait Islands.[46] Each mob has their own set of cultural protocols, lore, language, and environmental features of animals, plants, climate, soil, water, and fire use.[47] While there is uniqueness between each Indigenous mobs' knowledge and culture, many mobs do share similarities of lores, customs, protocols, and IEK. As a result of Invasion in 1788, a great deal of Indigenous culture and IEK has been lost or eradicated because of the Stolen Generation, Assimilation Policies, and Frontier Wars.[48] The impacts of Invasion prohibited practicing culture, language and rituals, which lead to many storylines becoming broken or lost.

Aldous: "If the land is healthy… it makes the people healthy".

39 Cf. Teresa Cochrane: Conservation through the Eyes of Indigenous Australian Culture; Alfred Michael Dockery: Culture and Wellbeing.
40 Cf. Peter J. Usher: Traditional Ecological Knowledge in Environmental Assessment and Management.
41 Cf. Liz Cameron: Indigenous Ecological Knowledge Systems.
42 Cf. Gloria Snively, Loran Wanosta'sa7 Williams: Knowing Home.
43 Cf. Helen Appleton, Maria E. Fernandez, Catherine L. M. Hill, Consuelo Quiroz: Claiming and Using Indigenous Knowledge.
44 Cf. James Charles, Lewis O'Brien: The Survival of Aboriginal Australians through the Harshest Time in Human History.
45 Cf. Yaqoot Fatima, Anne Cleary, Stephanie King, Shaun Solomon, Lisa Mcdaid, Md. Mehedi Hasan, Abdullah Al Mamun, Janeen Baxter: Cultural Identity and Social and Emotional Wellbeing in Aboriginal and Torres Strait Islander Children; Liam Sutherland: The Survival of Indigenous Spirituality in Contemporary Australia.
46 Cf. Damien Short: Reconciliation, Assimilation, and the Indigenous Peoples of Australia.
47 Cf. Mardie Townsend, Rebecca Phillips, David Aldous: "If the land is healthy… it makes the people healthy".
48 Cf. Nsw Public Defenders: The Bugmy Bar Book.

In my understanding, the theory and practical application of Western science or culture practice has governed the way that the Australian environment has been managed and conserved the past 250 years. The shift from Indigenous sciences or IEK and land management practices to dominant Euro-centric application has resulted in dramatic changes to Country and the Australian environment.[49] Over the past 250 years, Australia's once healthy ecosystems have become severely degraded, with the mass extinction and endangerment of many native animals and plants.[50]

In Australia, Western culture and science have not always had a strong connection to the conservation of the environment or its species. The predominant aim for alteration of the environment in early days of Invasion was to use Australia's natural resources, make the land arable and to support agriculture, as well as to establish a penal colony that could sustain the populations brought across the seas from England and Europe to then be developed into a larger community.[51] Many of the forests were cut down to make way for emerging towns or farmland, or timber was used to build houses or shops. The environment was altered and developed to match the lands which the colonists came from.[52] This alteration had flow-on effects to the ecosystems and the ecological balance that had been sustained for tens of thousands of years,[53] and native species population of plants and animals began to become endangered and extinct. In early colonial Australian history, koalas were culled by invaders for their pelts so they could be exported to the United States of America to be used to make hats, gloves and coats.[54]

This degradation of the environment makes it more important than ever for Indigenous peoples of Australia to become involved in conservation of Country as well as sharing their knowledge and experience of doing so. But it is important that the way in which Indigenous peoples are conserving Country, culture or people is reflective of them, rather than the Euro-centric cultural norm.[55] The ways in which Indigenous peoples of Australia have conserved Country has been significantly impacted through Invasion / Colonisation and thus there is need for our ways of knowing, being and doing to be present and to decolonise Australian Euro-centralism in particular in academia and research.

My Honours project, which started out not being centralised to Indigenous culture and IEK, shifted as I started to understand the role which my culture had in the ongoing conservation of Country and how Indigenous peoples sustainably managed the land for 65 000 years.[56] I started not only a research project, but I

49   Cf. Duncan E. Cook: Anthropogenic Environmental Change on the Frontiers of European Colonisation in Australia .

50   Cf. John Cz. Woinarski, Andrew A. Burbidge and Peter L. Harrison: Ongoing Unraveling of a Continental Fauna.

51   Cf. Brett M. Bennett: a Global History of Australian Trees.

52   Cf. Bill Gammage: The Biggest Estate on Earth; Aunty Rhonda Radley, pers. comm., 17 May 2022.

53   Cf. Aunty Rhonda Radley, pers. comm., 17 May 2022.

54   Cf. Isobel Roe: Koala Cull; Uncle Richard Dacker, pers. comm., 16 May 2022.

55   Cf. Cissy Gore-Birch, Oliver Costello, Teagan Goolmeer, Bradley Moggridge, Stephen Van Leeuwen: A Call to Recognise and Grow the Indigenous-Led Stewardship of Country.

56   Cf. Bruce Pascoe: Dark Emu.

started a personal journey of gaining a deeper understanding of my own cultural identity and the role it played in my passion for environmental science, ecology and koala conservation. Conservation of Country is sustainable land management and at its essence is environmental science and conservation. It plays a significant role not only in the survival and management of Country but also for Indigenous people's own health and wellbeing.[57]

To me it was about bringing my two camps together and showing respect for both my Indigenous and non-Indigenous cultures, exactly like my grandparents did. My Honours project focused on the conservation of koalas (my personal totem), and as a cultural responsibility I knew it was vital that I focused my research on developing ways to ensure their ongoing survival. It was heightened by the understanding that koalas on Birpai / Birripi Country in Port Macquarie-Hastings Council areas were estimated to go extinct by 2050.[58] This threat of extinction is a significant concern to not only the broader Port-Hastings Council and its community, but it is also a significant concern to the local Indigenous peoples and their Country.[59]

My non-Indigenous cultural heritage reflective of the Euro-centric cultural norms that are present in Australia, and the scientific knowledge I was using in my project is referred to as 'Western science'. Unfortunately, Western science often discredits IEK and culture, because Western science places itself on a higher level on the hierarchy of knowledge and status.[60] This mentality that Western science and knowledge is on a hierarchy higher than IEK plays directly into the narrative of Invasion / Colonisation and influences the "delegitimization of Indigenous knowledge by Western scholars".[61] Through this delegitimization of IEK and Indigenous culture, Invasion / Colonisation could inflict its Euro-centric cultural norms while imposing that the other forms of knowledge are "savage, superstitious, and primitive".[62] This line of thought is representative of a quote by Michel Foucault: "the way in which knowledge circulates and functions [has] its relations to power".[63]

My research came with a lot of challenges, trying to navigate a way in which Western science and IEK could complement each other to show a more reflective and holistic understanding of how we can conserve Country, koalas and the Australian environment. While some of the challenges came from ways to merge both together into a research project,[64] there were also external measures at play that created challenges and these at the core were reflective of academia and

57 Cf. Yaqoot Fatima, Anne Cleary, Stephanie King, Shaun Solomon, Lisa Mcdaid, Md. Mehedi Hasan, Abdullah Al Mamun, Janeen Baxter: Cultural Identity and Social and Emotional Wellbeing in Aboriginal and Torres Strait Islander Children.
58 Cf. Port Macquarie-Hastings Council: Koala Recovery Strategy 2018.
59 Cf. Uncle Richard Dacker, pers. comm., 16 May 2022; Aunty Rhonda Radley, pers. comm., 17 May 2022.
60 Cf. Patience Elabor-Idemudia: Identity, Representation, And Knowledge Production.
61 Francis Adyanga Akena: Critical Analysis of the Production of Western Knowledge and Its Implications for Indigenous Knowledge and Decolonization, p. 600.
62 Ibid.
63 Michel Foucault: The Subject and Power, p. 781.
64 Cf. Francis Adyanga Akena: Critical Analysis of the Production of Western Knowledge and Its Implications for Indigenous Knowledge and Decolonization.

research hierarchies.[65] My research was 'breaking the mould' of how an Honours was being completed or can be completed, and I think with this brought challenges, but it also allowed for a space to reflect and share my experience for other Indigenous researchers, or researchers who are wanting to bring in their own cultural identity or diverse ways of knowing, being and doing into academia.[66]

Background of Honours Research Objectives

For the research reported in my Honours dissertation both Indigenous and Western research practices were used to allow for a transdisciplinary understanding of what is needed to conserve and preserve the koalas of Birpai / Birripi Country. For Indigenous understandings, approaches and practices, also known as Indigenous methodologies – the merging of theory / knowledge and practice - the focus was not just addressing the research questions and objectives but also the reciprocity, relationality and respect of Indigenous peoples, their culture and relationship to Country.[67] Western scientific methodologies are mainly structured around predictions and answering the hypotheses in a logical manner that is objective and analytical.[68] Western science is a 'set of rules' that are commonly applied as a control mechanism to ensure scientific / academic integrity and are the dominant methods used globally.[69]

The main objectives of the research reported in my dissertation were to: (1) investigate the effects of soil treatments on the growth and foliage chemistry of three Eucalyptus species grown under plantation; and - the focus of this paper - (2) reflect on the experience and challenges as an Indigenous person of merging Western and Indigenous research methodologies.[70]

Reflection on Merging Indigenous and Western Research Methodologies

To keep to the theme of incorporating both Western and Indigenous sciences, it was important to understand how personal reflections can be used to advance both sciences. Indigenous cultures and sciences can use methods of storytelling and yarning to share personal experiences and reflections through verbal discussion.[71] Storytelling is a foundation of all human learning and teaching,

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65   Cf. Patience Elabor-Idemudia: Identity, Representation, and Knowledge Production.
66   Cf. Jay Phillips: Indigenous Australian Studies, Indigenist Standpoint Pedagogy, and Student Resistance.
67   Cf. Julieann Coombes, Caroline Lukaszyk, Cathie Sherrington, Lisa Keay, Anne Tiedemann, Robyn Moore, Rebecca Ivers: First Nation Elders' Perspectives on Healthy Ageing in NSW, Australia; Evelyn Steinhauer: Thoughts on an Indigenous Research Methodology, p. 69.
68   Cf. Charlotte Chambers: Mixing Methodologies; Fulvio Mazzocchi: Western Science and Traditional Knowledge.
69   Cf. Amy Massey, Ray Kirk: Bridging Indigenous and Western Sciences.
70   Cf. Teresa Cochrane: Effect of Soil Treatment On the Growth and Foliage Chemistry of Three Eucalyptus Species Grown in a Plantation as a Food Source for Koalas.
71   Cf. Nerida Blair: Researched to Death.

and in Indigenous culture it used more formally to teach Indigenous knowledge, cultural safety, as well as to share the knowledge of our history.[72] Storytelling is often informative, meaningful, linear or non-linear, and the knowledge holder may share different stories to different people or audiences.[73] Some stories of cultural significance to Indigenous peoples and communities are sacred, and it is therefore an honour to have these stories shared with you from Elders, Traditional Owners and knowledge holders.[74]

Additionally, yarning is an approach to storytelling that allows connection to culture and is a research method being increasingly used in social science and Indigenous studies.[75] It is a process of relating and connecting to each other or groups of people through open and holistic communication, as well as being used to pass on history or knowledge.[76] Yarning has no time tense and conversation topics can occur in the past, present and future.[77] It generally happens in a casual setting that is multi-way and is a circular journey meaning that people sit around in a circle or more typically around a fire.[78] Yarning protocols can be slightly different depending on the situation and location, and since the rise of technology with online communication, yarning has been occurring on digital platforms.[79] Storytelling and yarning can differ because yarning can be compared to a conversation with friends, family or work mates, while storytelling can be compared to a lecturer or teacher sharing knowledge.[80] For both it is important to have respect and listen to the person talking and hold space, as well as it being important to note that both storytelling and yarning can work together in conjunction.

From the Western tradition of research, one of the methods I used to support my personal reflections which allowed connection to Indigenous research and methodologies is autoethnography, which is an approach commonly practiced by social scientists and anthropologists.[81] The autoethnographic approach involves critical and reflexive analysis of one's personal reflections as documented in 'field notes' in the context of broader social and cultural factors at play to develop greater understanding and insights into the identified phenomena or experience.[82] Autoethnography considers the cultural, spiritual, emotional, political, or physical factors, which also allows for incorporation of previous experience and current experience, to create one's story.[83] My personal reflections were conducted during the period of July 2021 to July 2022. During the time of

72 Cf. Ranjan Datta: Traditional Storytelling; Thungutti Bundjalung Woman Aunty Kara Westaway, pers. comm., 18 September 2024.
73 Cf. Thungutti Bundjalung Woman Aunty Kara Westaway, pers. comm., 18 September 2024.
74 Cf. Aunty Kara Westaway, Merinda Walters, pers. comm., 18 September 2024.
75 Cf. Lynore K. Geia, Barbara Hayes, Kim Usher: Yarning / Aboriginal Storytelling.
76 Cf. Dawn Bessarab, Bridget Ng'andu: Yarning about Yarning as a Legitimate Method in Indigenous Research.
77 Cf. Aunty Kara Westaway, Merinda Walters, pers. comm., 18 September 2024.
78 Cf. ibid.
79 Cf. Karen Pinder Klemenchic: Aboriginal and / or Torres Strait Islander Students' Success in Higher Education.
80 Cf. Aunty Kara Westaway, Merinda Walters, pers. comm., 18 September 2024.
81 Cf. Heewon Chang: Autoethnography as Method; Sue White: Auto-Ethnography as Reflexive Inquiry; Carolyn Ellis: Heartful Autoethnography.
82 Cf. Sue White: Auto-Ethnography as Reflexive Inquiry.
83 Cf. Carolyn Ellis, Tony E. Adams, Arthur P. Bochner: Autoethnography.

personal reflections, regular digital yarns were conducted between and with the co-authors to further the critical and reflective analysis.

Cultural Protocols

To ensure that my research adhered to Indigenous lore and protocols, the first step was to get permission from the local Aboriginal Lands Council to allow me to complete fieldwork on Birpai / Birripi Country.[84] After a phone conversation with the President of the Bunyah Aboriginal Lands Council, I was granted permission to go ahead with my Honours project and fieldwork. This was an important step because it pays respect to the local Birpai / Birripi people and their Country using Indigenous methodologies.[85] For this step, it was important to be reciprocal by sharing the knowledge and findings of the research back to the local Indigenous people and communities.[86] It was also important to be actively involved within the community I was completing research with, and this was achieved through volunteering, giving presentations and meeting with local schools. The Honours research was not only about getting knowledge, collecting data and submitting a dissertation, it was about building my own cultural connections and capabilities in community.

Another cultural protocol was to gain approval from Charles Sturt University's Human Ethics Committee. The application was approved on 9th May 2022, and this allowed for informal yarns with Birpai / Birripi Elders and Traditional Owners on the conservation of koalas and Eucalyptus species on Birpai / Birripi Country. Two yarns were conducted with each lasting about 30 minutes. The knowledge and yarns of Birripi Traditional Owner and Elder Uncle Richard Dacker and Birpai Traditional Owner and Elder Aunty Rhonda Radley were incorporated in several sections of my dissertation and this paper. The knowledge gained from their yarns was used as quotes and reference material where appropriate to incorporate Indigenous perspective and culture. The yarn process and planning followed the National Statement on Ethical Conduct in Human Research (NSECHR) and AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research (AIATSISCE). This ensured ethical practice by addressing the four main values of NSECHR of research merit and integrity, justice, beneficence and respect,[87] as well as the four main ethics principles of Indigenous self-determination, Indigenous leadership, impact and value, and sustainability and accountability in AIATSISCE.[88]

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84   Cf. New South Wales Government: Aboriginal Land Rights Act 1983 No 42.
85   Cf. Michael Christie: Transdisciplinary Research and Aboriginal Knowledge; Maggie Walter, Michele Suina: Indigenous Data, Indigenous Methodologies and Indigenous Data Sovereignty.
86   Cf. Australian Institute of Aboriginal and Torres Strait Islander Studies: AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research.
87   Cf. National Health and Medical Research Council, Australian Research Council and Universities Australia: National Statement on Ethical Conduct in Human Research 2007 (Updated 2018).
88   Cf. Australian Institute of Aboriginal and Torres Strait Islander Studies: AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research.

The main aim of the yarns was to integrate Indigenous culture in the Introduction and Discussion chapters of my Honours dissertation. Indigenous culture and knowledge are passed on through oral / verbal methods,[89] a practice not very prevalent in Western science. To incorporate such specific knowledge from the Birpai / Birripi people meant that yarns needed to be undertaken. The yarns with Birpai / Birripi peoples were important because they highlighted the importance of the project and justification as to why it needed to be done. They serve as a as a form of triangulation to the findings in journal articles and government reports about the decline in koala population numbers. The knowledge gained and shared from the yarns was used as reference material in the same way as published material is referenced in scientific / academic writing in journal articles, books and reports.[90] To ensure respectful use of Birpai / Birripi Elders' and Traditional Owners' knowledge, a draft of my dissertation containing their statements and quotes was sent to them to ensure that information was being used the way they wanted it, and if not, it was either edited or removed, and the same was done for this publication.[91]

Personal Reflections

Each fortnight throughout my Honours year, I completed a personal reflection in the form of a journal entry. The reflection process was important and gave me opportunity to document my growth as a student, researcher, and an Indigenous woman in science. A major aim of my Honours project was to include Indigenous science, even though the research project had a very strong Western science foundation and content.

Having a theme for my journal entries continuously reminded me of the purpose of these reflections, while also allowing me to focus on tasks I needed to complete over the next two-week period to continue my learning journey. During each fortnight, I would note down topics in dot point form regularly. This would ensure that I did not forget key areas to reflect on and could focus until the time came to write up the reflections. This ensured I would not forget anything important and allowed for a structured process. It also allowed me to determine what the reoccurring themes throughout my journey were.

These reflections took place in the first stages of my research and academic career and hold the place of a 24 / 25-year-old who had just finished her undergraduate degree. The writing style and comprehension of knowledge is reflective of this time throughout the following sections, and the style of writing was done intentionally in a casual conversational style to allow for diversity in understanding. It is important to showcase true reflections of where we have come from so

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89   Cf. Pauline Foster, Terri Janke: Keeping Cultural Knowledge with Indigenous Research Protocols.
90   Cf. Colin Neville: Referencing.
91   Cf. Australian Institute of Aboriginal and Torres Strait Islander Studies: AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research.

that we can use this to help develop and reflect on where we are going particularly in our own learning and knowledge journeys.

Growth as an Indigenous Person

One of the most noticeable changes I documented was my own growth as an Indigenous person. As I began to learn and incorporate Indigenous methodologies in my research, I noticed that my outlook on the world both personally and in academia began to shift significantly as I was introduced to new knowledge and knowledge systems. I was starting to understand more about myself and how my approach to science / scientific method was based mainly on a Euro-centric-Western-tradition approach. I began frequently researching and chatting with Indigenous people about approaches to decolonising science and learning ways to move away from the predominantly Western scientific methods. Decolonising science, to me, was not about discrediting the work and place of Western Science, rather it was about allowing my own cultural representation within the work I was completing and the act of doing this and going against the euro-centric / colonial norm. As I began to research and put a heavy focus on incorporating Indigenous methodologies, it highlighted how I had grown to understand other ways of science. It also became apparent how little I knew about my culture in the scheme of academic practice and science. I felt excited and empowered to learn and connect to my culture in a way that reflected me and my love for environmental research / learning.

Additionally, conducting the yarns and incorporating Indigenous ecological knowledge of the Country on which the research project was undertaken was special. I got to give the Traditional Owners and Elders a voice for Country and share why the research was important to them. While not all the knowledge gained from the yarns was directly relevant to my research dissertation, it was relevant and vital to my growth and journey as an Indigenous person. It also resulted in creating stronger relationships with the Birpai / Birripi community, and the Country that I had grown up on for most of my life.

Gaining a Deeper Understanding of Ecology

During the earlier years of my degree, I had started to gain an understanding of the concept of ecology and how it impacts not only the environment but human society. Nonetheless, the majority of it was framed from a Western view with minor influence of Indigenous culture. As I started to investigate the literature around what influenced koalas and their diet selection, I began to realise the complexity and how little I really knew about ecology. My earlier studies had only introduced me to a broad understanding of the concept and not to how complex interrelating relationships can be and the impact they have on each other. Through my studies I had noticed that there were two different understandings /

concepts / interpretations of ecology. People either understand ecology as either including or excluding humans in ecosystems. I now recognise that historically the discipline of ecology in Euro-centric societies excluded humans from ecosystems and their interrelating environmental relationships, which was influenced heavily by religion,[92] while Indigenous cultures predominately view themselves as part of the environment and ecosystems.[93] I developed an understanding of how ecology plays a part in the morals, ethics and application of research and understanding or relation to the land. One of the key areas in my learning journey was the understanding of how complex Indigenous culture is and its direct link into a holistic ecology. It has been inspiring to reinforce the idea that Indigenous culture, lores and practices have been embedded in the environment for such an extended period of time that they themselves and their actions have become parts of the interrelating relationships within ecosystems.[94] This idea and knowledge development was further reinforced by the yarns I had with Elders and Traditional Owners.

Participating in yarns with two Birpai / Birripi Traditional Owners and Elders provided a deeper understanding of ecology and Indigenous culture. I was able to experience firsthand the different interpretations of ecology conservation and reinforced my ideas that ecology is more than just the environment, it incorporates people and can also incorporate culture and spirituality. At this current stage of my journey, I have developed a deeper understanding because I am now beginning to look at the bigger picture of ecology, that there are many more factors to ecology and that ecology in a sense is a part of everything. I have learnt the significance that koalas play in relation to Country and Indigenous peoples' lives, as well as learning the role of foliage chemistry in relation to diet selection, biological functions of koalas, and how societies need to be informed of this to ensure ongoing conservation and restoration.

Indigenous Ecological Knowledge

Indigenous peoples have used culture to sustainably manage the environment or Country for tens of thousands of years, but previously I was not aware of the practices they used. When I was young, I was told stories and yarns by my family about how they would know when they could gather food or when to hunt and fish certain species. Once I started my tertiary studies, I began to gain a greater understanding of the importance of this knowledge and its use. To study one niche of ecology around koala diet selection, and in the context of the Birpai / Birripi people, required a lot of work to meld the two. I was starting to learn about the concept in theory, but to then apply and seek the practical aspect of gaining Indigenous ecological knowledge as well was a large but rewarding task.

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92 Cf. Michel Loreau: Nature that Makes Us Human.
93 Cf. Nicole Redvers, Paula Aubrey, Yuria Celidwen, Kyle Hill: Indigenous Peoples; Natalie Stoeckl, Diane Jarvis, Silva Larson, Anna Larson, Daniel Grainger: Australian Indigenous Insights into Ecosystem Services.
94 Cf. ibid.

Learning the theory of IEK reinforced my understanding about each Country having their own unique culture and knowledge, and how this knowledge was unique to clans, family groups, and even to each person.[95] What I learned from the theory and practical application of yarns was that IEK was more than just the 'topic' I was studying; that it can include a magnitude of different interrelating information or relating knowledge and can be taught / shared in a magnitude of different ways such as song, dance, stories, and yarns.[96] I learnt that IEK is not always as direct as Western science but is as important when it comes to understanding the ecology of the Australian environment. By combining both IEK and Western science, I was able to develop a more holistic understanding, rather than just a singular one. Most importantly it was reflective of my own identity and cultural responsibility I have to the koala and my two camps.

Incorporating Culture and Indigenous Science into a Western Science System

Prior to undertaking Honours, I was unaware that science could be conducted in ways that were not the predominantly Euro-centric Western (science) methodology, and this was reflective of my education and standpoint.[97] Environmental science, especially in the ecology discipline, is viewed as being embedded in Western scientific knowledge systems, but from extensive reading I developed an understanding that there were niches of this discipline were qualitative or alternative methodologies to the Euro-centric norms, including Indigenous methodologies, could be incorporated.[98] It is important to note and reflect that Western science has an important place in academia and helps with gaining scientific insight through the use of its rigorous methodologies, technological innovation and application to gaining niche understandings,[99] and this paper provides an alternative look at how Indigenous culture in an Australian context offers new ways of knowing, being and doing. The ultimate use of a mixture of both quantitative and qualitative research methodologies reflected both my Western upbringing and scientific appreciation, as well as my desire to incorporate Indigenous science, culture and practices. Reflecting on my standpoint as a person with Indigenous and non-Indigenous heritage I have expanded my understanding of dominant Western scientific paradigms to reposition Indigenous science as central to ecology. However, prior to that I observed more explicit separation between humans and environment due to dominant scientific ways of being and doing.[100]

95 Cf. Teresa Cochrane: Conservation through the Eyes of Indigenous Australian Culture; Alfred Michael Dockery: Culture and Wellbeing.
96 Cf. Liz Cameron: Australian Indigenous Sensory Knowledge Systems in Creative Practices.
97 Cf. Jay Phillips: Indigenous Australian Studies, Indigenist Standpoint Pedagogy, and Student Resistance.
98 Cf. Linda Tuhiwai Smith: Decolonizing Methodologies; id.: Decolonizing Research; Alexandra R. Knight, Catherine Allan: Intentional Ecology.
99 Cf. Jed Brown, Andrew Merchant, Lachlan Ingram: Utilising Random Forests in the Modelling of Eragrostis Curvula Presence and Absence in an Australian Grassland System.
100 Cf. Jay Phillips: Indigenous Knowledge Perspectives.

There has been a push from Indigenous peoples around the world to incorporate their culture and ways of knowing into research and science despite the Western / Euro-centric norm.[101] One of the first pieces of writing that was suggested to me about Indigenous methodologies and the ideology of decolonising research was 'Decolonizing Methodologies: Research and Indigenous Peoples' by Linda Tuhiwai Smith.[102] From further review of the literature,[103] I became aware of many others pursuing this research field and that culture and Indigenous science does have its place in academia. Another important source of information that helped in my growth as an Indigenous person navigating academia was within the special issue (January edition, 2022) of the Journal of Ecological Restoration and Management that focused around bringing Indigenous science, knowledge, and ways of doing into a Western system of research.[104]

The incorporation of my Indigenous heritage in my dissertation had many positives and negatives. As I started to understand the significance and importance of the research I was undertaking, and how I wanted it to reflect me, I realised that a vital part of that was my identity as an Indigenous woman and my cultural responsibilities to conserve Country and my totem the koala. I faced several challenges in the initial stages of my Honours largely due to a lack of understanding by others of my culture and how this could be merged into an Honours project. This ambitiousness to incorporate my culture into a Western science system was met with some opposition based on ideas such as: it was not how it is usually done, it would be too difficult, it was not within the framework of a 'traditional' ecology research project, or it would make the project larger than an Honours year would allow. The issues of having to explain and reiterate the importance of my culture and the role that Indigenous science and culture had, took a severe toll on my mental health and wellbeing. Feeling culturally unsafe through witnessing first-hand the hierarchical nature of Western science and how it delegitimises alternatives to the Euro-centric norm really hurt me, because this was not just critiquing a scientific practice, it was devaluing my culture and who I am. Having someone laugh in my face when I shared with them that I was feeling culturally unsafe during the project for the way that they viewed and commented on my culture and our ways of knowing, being and

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101 Cf. William M. Adams, Martin Mulligan: Decolonizing Nature; Margaret Hughes, Stuart Barlo: Yarning with Country; Val Plumwood: Decolonizing Relationships with Nature; Lester-Irabinna Rigney: A First Perspective of Indigenous Australian Participation in Science; Langaliki Robin, Kuntjupai Robin, Ettore Camerlenghi, Luke Ireland, Ellen Ryan-Colton: How Dreaming and Indigenous Ancestral Stories are Central to Nature Conservation; Frances Wyld, Bronwyn Fredericks: Earth Song as Storywork.
102 Cf. Linda Tuhiwai Smith: Decolonizing Methodologies.
103 Cf. Natalie C. Ban, Alejandro Frid, Mike Reid, Barry Edgar, Danielle Shaw, Peter Siwallace: Incorporate Indigenous Perspectives for Impactful Research and Effective Management; Michael Christie: Transdisciplinary Research and Aboriginal Knowledge; Malcolm Lindsay, Louise Beames, Yawuru Country Managers, Nyul Nyul Rangers, Bardi Jawi Rangers: Integrating Scientific and Aboriginal Knowledge, Practice and Priorities to Conserve an Endangered Rainforest Ecosystem In the Kimberley Region, Northern Australia; Naohiro Nakamura: Indigenous Methodologies; Vanessa W. Simonds, Suzanne Christopher: Adapting Western Research Methods To Indigenous Ways Of Knowing; Maggie Walter, Michele Suina: Indigenous Data, Indigenous Methodologies and Indigenous Data Sovereignty.
104 Cf. Emilie J. Ens (ed.): Indigenous and Cross-Cultural Ecology Perspectives from Australia.

doing was the 'straw that broke the camel's back'. On reflection there were a lot of red flags identified throughout the process of my Honours before this, but I ignored them as I did not place myself with the strength to stand-up and speak my truth against the microaggressions before it was too late for me mentally. I was thankfully incredibly lucky to have a strong support network of people that really helped me get back on track and respected my cultural expression. The issues were eventually resolved and resulted in the merging of different methodologies within my dissertation in a safe and supportive way.

A positive outcome of this somewhat challenging journey was that I found that both forms of science (Indigenous and Western) could be used in a way that was reflective of me, and I could be proud of. It was also incredible to not only gain more information on the koala to help in its conservation, but I was also doing it in alignment with my cultural responsibilities.

Conclusion

The design of this research project enabled the use of both Indigenous and Western science methodologies to create a more holistic and different approach to the way that ecological studies are normally designed. This was important as it allowed a reflection of my Indigenous heritage and my cultural responsibilities to koalas and my Ancestors. During this process I faced some significant challenges, but I was successful in completing my Honours because of my fellow authors and my support networks both physically and theoretically in literature. Going against the culturally dominant norms in any situation can come with its challenges, but if my Indigenous Ancestors could thrive on one of the world's 'harshest' continents since time immemorial (or 65 000 years), and more recently through Invasion and genocide, then I can draw on this strength and apply it throughout my continuing academic and research journey.

Acknowledgements

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Bettina Burger and Lucas Mattila

From Yarning to Learning

Decolonizing Education in Ambelin and Ezekiel Kwaymullina's Works

Abstract: In our article, we examine how Ambelin Kwaymullina explores alternative forms of postcolonial education i.e., through Aboriginal storytelling/yarning. Drawing from 'Message From the Ngurra Palya' (2020) and 'Teacher/Decolonizer' (2024), as well as 'Catching Teller Crow' (2018), written with her brother Ezekiel, we consider how the works mobilize yarning to actively challenge hegemonic forms of education. Yarning, we argue, carries great anti-colonial potential and can be identified as a formally distinct literary approach. Rooted in Indigenous Australian epistemologies, yarning serves as both an educational method and a form of resistance to colonial narratives. Through close readings we highlight its role in fostering connection, transmitting knowledge, and imagining decolonized futures. 'Message from the Ngurra Palya' envisions a hybridized educational basis featuring blended Indigenous and Western scientific literacies. 'Teacher/Decolonizer' critiques the burdens placed on Indigenous peoples while advocating for inclusive, relational teaching practices. 'Catching Teller Crow' embodies yarning through both its form and content, emphasizing intergenerational learning and the recovery of marginalized histories. Collectively, these texts demonstrate how literary yarning can resist hegemonic systems and inspire alternative forms of learning. We call for a broader engagement with yarning as a transformative, decolonial practice, particularly in addressing pressing global challenges.

As scholars of literary studies, we are compelled to tell you that stories are powerful, that storytelling is meaningful, and that there might be some value in spinning tales that goes beyond mere entertainment. You expect a big 'but' here, yet we will not offer one. We will offer a caveat, however. In the context of Australia, particularly in that of yarning, there is a specific decolonial, educational capacity to the oral tradition and its literary counterpart. Aboriginal people have made it clear: Teresa Cochrane has said that her yarning – her storytelling – is academia;[1] referencing David Suzuki's work, Jimmy Smith has also called attention to the ways in which oral traditions have preserved Indigenous knowledges.[2] Marnee Shay, an academic in Indigenous Education Studies, has even identified what she calls "Collaborative Yarning Methodology" based on existing Indigenist research conceptions.[3] The centrality of yarning to education is, thus, reflected in educational practices of writing, learning, and collaboration respectively.

Conventionally, yarning may be understood as unconventional. Its lack of all-encompassing standard stems from its widespread and differentiated use across the Australian continent. While, as Alexus Davis elaborates, "[y]arning is a term commonly used by Indigenous Australians that simply means to communicate", she goes on to note how the different "rules, languages and protocols" for "conducting conversations and sharing information" result in various forms of yarning.[4] While it, thus, becomes difficult to speak of 'yarning' rather than 'a (form of) yarning', some common facts do emerge. "Indigenous Australian people

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1   See Bec Beutel, Teresa Cochrane, Anke S. K. Frank: Yarning Together, s.p.
2   See Jimmy Smith: Land, Sky & Waters, s.p.
3   Cf. Marnee Shay: Extending the Yarning Yarn.
4   Alexus Davis: Birthing Vital Stories, p. 107.

have been practicing Yarning for thousands of years. It is integral to Aboriginal peoples' traditional (and contemporary) ways of understanding and learning".[5] We are primarily interested in the ways in which yarning might manifest in the context of literary narrativization, whether as a form of writing or as an educational practice advocated in literary works. According to wawa biik, a cultural organization managed by the Taungurung Land and Waters Council, the Taungurung people define yarning in these terms:

> Yarning is a way of connecting and purposefully sharing knowledge through narrative. It can include anecdotes, stories and experiences […] Yarns are typically non-linear and free flowing – so that means that topics and themes may seemingly go off on tangents, but these themes are often revisited, allowing for connections and learnings to surface as different parts of the yarn come together.[6]

Yarning might be read as a connective structure, one which may offer multiple non-linear forms of expression. Instead of positing or upholding a sense of linearity in terms of conventional, westernized temporal regimes, yarning may often chafe and resist these notions, exposing them for their constructed nature. In other words, as Geia, Heyes, and Usher point out:

> Aboriginal yarning is a fluid ongoing process, a moving dialogue interspersed with interjections, interpretations, and additions. The stories remain in our conscious state like a thread hanging, waiting to be picked up again, to be continued, reconstructed, reinforced and once again embedded in our ontology.[7]

Rather than merely reflecting a meandering stream of consciousness, yarning carries an ontological restructuring capacity that activates the aforementioned resistance to dominant (neo)imperial regimes of time and order. Geia, Heyes, and Usher go on to contend that this is made in part possible by the "threads of Aboriginal and Torres Strait Island history" embedded within yarning, which allows it to travel "into the present tense".[8] Tyson Yunkaporta argues that yarning and story together carry a sense of transformative potential and identifies them as key to the process of addressing far-reaching global issues like that of the ongoing climate crisis. He claims, in the context of global warming, that, the solution requires diverse stories to come together and to allow action to be taken.

> Through the generative practice of yarning […] [w]e sit together, lots of different people with different narratives, and we form an aggregate of narratives, and some of those are outliers, and some of those are similar to each other. But […] we have powerful thought […] when we have diverse narratives coming together. And even when they're contradictory, they're still together comfortably. And that's when you get the complexity of story and then of course arising from that, the complexity of thought, that allows for some kind of meaningful interface.[9]

For Yunkaporta and for us, yarning is about a multiplicity of story forms coming together, at times in accord and at times in seeming conflict. Our literary understanding of yarning is one such form that we hope can provide some small contribution to powerful thought. While Yunkaporta sees 'written yarns' with a

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5   Ibid., p. 108.
6   wawa biik: What is Yarning, s.p.
7   Lynore K. Geia, Barbara Heyes, Kim Usher: Yarning / Aboriginal Storytelling, p. 15.
8   Ibid., p. 15.
9   Tyson Yunkaporta: Main Program | Tyson Yunkaporta, s.p.

degree of skepticism, stating somewhat tongue-in-cheek, that "literary causes brain damage",[10] he does suggest mixing oral and written systems, referring to writings by the Greek philosophers "as dialogues, a record of yarns they'd had".[11] He highlights "yarning as a method of knowledge production and transmission" and as a way of "challenging grand narratives and histories",[12] which can be recorded in writing as long as it remains primarily an oral form.

In terms of literary studies, yarning ought to be understood in terms of how literature might itself engage with forms of yarning. While certainly not oral, literary works, especially poems, are known to carry oral residue and are nonetheless implicated in speech acts, if merely through their representation. Additionally, all three texts by Ambelin (and Ezekiel) Kwaymullina refer to yarning as a form of education. This is done directly, as in 'Message from the Ngurra Palya' and 'Teacher/Decolonizer', both of which mention 'yarnings' as essential to foster more positive ways for Indigenous and non-Indigenous people to co-exist. In 'Catching Teller Crow', however, it is more indirect, since yarning – "connecting and purposefully sharing knowledge through narrative"[13] – is central to the process of learning about the past. This occurs both on a content level, as the protagonists do sit together and share knowledge through speaking, and on a formal level, as the sections of the novel which are most focused on educating about the past – both recent and historical – are in the form of a verse narrative embedded within the prose narrative as being told to the characters and thus explicitly connected to oral poetry. We thus understand literary yarning to involve a mixture of representational and formal elements that centralize existing forms of yarning expressed primarily by Aboriginal writers. These forms of writing are themselves inherently decolonial and an example of 'writing-back' to invoke the old postcolonial paradigm. In a 'yarningup' event related to recent publications of Ambelin Kwaymullina and Karen Wyld, Kwaymullina states that Indigenous writers are "working in forms that are not [their] own and subverting those forms to suit [their] purposes"[14] and adding a witness statement in the form of a verse narrative to the Kwaymullinas' Young Adult detective novel may count as one of those subversions.

Rethinking Education in Postcolonial Australia

So-called educational practices within British colonies, but in Australia in particular, were tinged with genocidal ambition. Educational systems, systems which thrived upon standardization and conformity inherently aimed to weaken Aboriginal communities, through a linkage to "a missionary zeal to 'Christianise' and 'civilise' in order to eradicate the vestiges of what were seen as 'primitive'

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10   Tyson Yunkaporta: Sand Talk, p. 166.
11   Ibid., p. 166.
12   Ibid., p. 170.
13   wawa biik: What is Yarning, s.p.
14   Ambelin Kwaymullina, Karen Wyld, Elfie Shiosaki: Yarningup Aboriginal Women's Story-telling, p. 124.

cultures and replace them with a European way of life".[15] Oftentimes, the forced displacement of children, what is now called the Stolen Generations, would be carried out with the alleged desire to produce a more assimilated native population, alongside other "policies of exclusion, separation, [and] segregation".[16] In Amanda Barry's words: "The education of Aboriginal children was culturally destructive, breaking down traditional family structures, erasing language and cultural practice – 'internal colonialism'".[17] Tellingly, such educational damage did not end with the decolonization of Australia. Australian education has "absorbed much of the colonial mindset" and still carries "attitudes of paternalism" and the "programmes are still assimilationist in orientation".[18] Decolonization, it seems, remains as relevant as ever.

Narratives serve an important role in education even before considering a broader postcolonial perspective. Historical narrativization, for instance, is key to the instruction of history, albeit not always uncontroversial, since there are various competing definitions of 'narrative'. If we take a narrative to be "an overview understanding of the sequence and significance of sweeps of history or key episodes",[19] then there can be no doubt that history and historical education are full of narratives. Teachers are "shaping […] history into narrative stories […] as an important access point"[20] and as a way of increasing students' interest in the subject, though there is a certain amount of skepticism towards narratives as well because of a concern that such narratives might "be reproduced in an uncritical fashion".[21] In spite of such reservations, the connection between history and story is undeniable. As Grant Bage states in 'Narrative Matters – Teaching and Learning History through Story', "[h]istory is the construction and deconstruction of explanatory narratives about the past, derived from evidence and in answer to questions".[22] Using fictional stories rather than non-fictional narratives, however, is somewhat more contentious. The historical novel is credited with the "innate ability to encourage an audience into being knowingly misinformed, misled and duped",[23] which would arguably characterize it as the polar opposite of education. At the same time, historical novels can be used "to challenge mainstream and repressive narratives"[24] and recover previously ignored voices. It is important that such marginalized and alternative voices continue to offer counterpoints to master narratives of history, even more so in the (mis)information age. Australian historical fiction has already been "the focus of heated public debate about the role of fiction in representing the past",[25] surrounding specifically Kate Grenville's novel 'The Secret River' (2005), which aimed at "reinscrib[ing]

15   Nina Burridge, Andrew Chodokiewicz: An Historical Overview of Aboriginal Education Policies in the Australian Context, p. 12.
16   Ibid., p. 12.
17   Amanda Barry: Equal to Children of European Origin, p. 41.2.
18   Tom O'Donughue: Colonialism, Education and Social Change in the British Empire, p. 791.
19   Kate Hawkey: 'Could You Just Tell Us the Story?', p. 264.
20   Ibid., p. 265.
21   Ibid., p. 270.
22   Grant Bage: Narrative Matters, p. 33.
23   Jerome De Groot: The Historical Novel, p. 6.
24   Ibid., p. 3.
25   Kate Mitchell: Australia's 'Other' History Wars, p. 253.

and reactivat[ing] Aboriginal Australian history in the contemporary historical imaginary",[26] but was written by a white author. Nonetheless, as Kate Mitchell claims, the novel "writes Australia's traumatic history into contemporary cultural memory, eschewing objectivity in favor of constructing an affective approach to a shameful traumatic",[27] thus making full use of the emotional power of story-telling. While historians have frequently criticized "elevat[ing] fiction as a mode of historical understanding",[28] there is also the argument that fictional narratives are "best suited to telling a particular kind of truth about the past",[29] an argu-ment that we would tend to agree with and that we see as fitting with the idea that yarning can be an effective and relational method of teaching.

In the context of mobilizing yarning, it is important to acknowledge, as Pratt puts it, that "[w]ithin Indigenous communities, the role of storytelling has been, and remains, a powerful and primary means of knowledge transfer".[30] This trans-fer of knowledge is not merely an exchange of ideas for what may be considered conventionalized readings, in fact, one of the strengths of yarning is the possi-bility to return to the yarn and rethink its interpretation.[31] The interpretative act, an act that is not expected to be measured or graded to specific metrics allows for a pedagogy that is not so much concerned with preparing its students for careers under late stage capitalism, but rather seeks to convey differing valences of knowledge to different individuals. Importantly, the knowledge acquired through yarning is tied firmly to place and affirms as well as reprioritizes the "role of narrative in memory and knowledge transmission" in opposition to colo-nial education structures.[32] Learning here is also understood not as a means to an end, but instead as a lifelong process. Indeed, Jimmy Smith, referring to his people, the Wiradjuri, claims "[o]ur system of education is inclusive, and every-one gets through. It's about lifelong learning".[33] The transfer of knowledge that continues today through yarning is one that affords effective alternative ways of educational expression and acquisition.

Weaving Futures: Literary Yarning and Decolonizing

We argue that the three Kwaymullina texts – the fictional poem 'Message from the Ngurra Palya', the non-fictional poem 'Teacher/Decolonizer' and the young adult speculative fiction novel 'Catching Teller Crow' – engage with Aboriginal 'systems of education' on various levels. 'Message from the Ngurra Palya' pro-jects such methods into the future and posits that 'yarning circles' will be deci-sive in fostering a more positive way of existing in the world that even includes speculative staples such as spacetime travel. 'Teacher/Decolonizer', a poem

26   Ibid., p. 253.
27   Ibid., p. 254.
28   Ibid., pp. 253 f.
29   Ibid., p. 257.
30   Yvonne Poitras Pratt: Digital Storytelling in Indigenous Education, p. 117.
31   Cf. Bec Beutel, Teresa Cochrane, Anke S. K. Frank: Yarning Together, s.p.
32   Tyson Yunkaporta: Sand Talk, p. 170.
33   Jimmy Smith: Land, Sky & Waters, s.p.

within an academic essay collection, specifically uses the poetical form to impart instruction on how to establish a decolonial teaching practice, while 'Catching Teller Crow' engages with yarning and teaching on content, formal, and readerly, extratextual levels. The following close readings will bring to the fore the ways in which Ambelin Kwaymullina and her brother Ezekiel Kwaymullina embed yarning as an educational and relational practice into their writing.

'Message from the Ngurra Palya', written in 2020 as part of the 'After Australia' anthology, approaches education and its connection to yarning in a speculative mode. The text itself is deeply postcolonial, writing against existing hegemonic discourse by making use of the speculative future to present a utopian vision 'after Australia' as it is in our contemporary. Set in 2050, and sent back to 2020, the poem presents an Aboriginal futurism in which "Indigenous scientific literacies" and "Western technologies"[34] have come together. In doing so, time travel becomes possible, as linear, imperial time is proven to be non-existent. Instead, there is "[o]nly the now | with all possibilities | enfolded by | and unfolding from | what is".[35] The ability to travel and communicate through time is where both yarning and education enter the poem. Firstly, the poem is constructed as the initiation of a conversation between two different times and/or realities – perceived as 'present' and 'future' according to "the failed construct of linear time which forms a dominant point of reference for the iteration of reality to which this message is addressed".[36] The message itself is only intended to give a glimpse into the future following from "the last gasps | of a dying empire"[37] rather than to educate the past recipients, but the procedure involved in sending the message as well as its content both model successful yarning education. The poem locates the beginning of a more positive future in a panel discussion, in which "Aboriginal people were talking | about the keys to opening up a better future"[38] – a type of event which already occurs frequently in our 'present', as acknowledged by the lyrical I. However, the key difference is that the proposed solution is "listened to"[39] and prompts further "conversations | Different peoples | coming together | sharing knowledge | sharing aspirations | a thousand small beginnings | towards dismantling | settler colonialism".[40] 'Coming together' and 'sharing knowledge' is how diverse peoples are learning to co-exist and imagine new structures of being as well as new structures of education, not unlike Tyson Yunkaporta's aforementioned claim to the power of story and of yarning.

The poem describes a world in which there are "on-Country learning places | where Elders and other critical thinkers | teach people how to transform patterns of thought | so they can live in ways | that sustain all life".[41] While the poem does not specify how exactly teaching takes place, we can draw conclusions from the way in which the crew of the Ngurra Palya perform their scientific work

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34   Ambelin Kwaymullina: Message from the Ngurra Palya, p. 239.
35   Ibid., p. 248.
36   Ibid., p. 239.
37   Ibid., p. 244.
38   Ibid., p. 245.
39   Ibid., p. 246.
40   Ibid., p. 247.
41   Ibid., p. 242.

and make decisions. The vessel for their journey across spacetime is "designed by Indigenous scientific literacies | and built with Western technologies",[42] which suggests that an education enabling people to undertake this kind of futuristic voyage likewise includes both Indigenous and Western ideas. Additionally, the decision-making on board the spacetime vessel takes place within "yarning circles | over many cups of tea",[43] which seem to be an essential institution of the near-future society. The yarning practices, technology and implicit educational structures are all innately pluralized, hybrid ones that begin not with a binary colonizer-colonized relationship, but rather with a speaker-listener relationship founded on connection and mutual desire for understanding. While the poem does not contain concrete suggestions for decolonial educational practices, it posits that teaching, learning, and understanding depend on the connections and communication inherent to yarning practices.

'Teacher/Decolonizer', one of Ambelin Kwaymullina's most recent poems, renders the idea that teaching can happen through storytelling concrete. Published in the essay collection 'Critical Racial and Decolonial Literacies – Breaking the Silence' (2024), the text straddles the boundary between literary text and academic essay through the use of the poetic form for 'academic' content. The first stanza contains a thesis statement – namely that the lyrical I, who, like Kwaymullina, is an Indigenous Australian woman in academia has been an educator all her life. That this is born out of necessity is made clear as well, as the lyrical I is "born into | an attempt | to stem the tide of ignorance | before I drown in it | before we all do".[44] The next two stanzas clarify that this need for Indigenous people to educate others to protect their own existence "comes at a cost"[45] as the added workload to their regular (academic) professions includes "[…] worry | fear | grief | pain | anger | exhaustion".[46] Here, Kwaymullina makes good use of the affordances provided by the poetic form stressing each individual word and thus the respective emotions and concomitant emotional labor, evoked by them. It is important to note how the emphasis on emotion – typical for the poetic register – is later juxtaposed with expert theoretical language surrounding the field of didactics and scholarship. Despite Kwaymullina's initial harsh criticism, expressed in justifiably intense emotional terms, that the burden of education is placed on Indigenous people, the poem provides suggestions on how to ensure that education is decolonized. Following her direction might allow the burden to educate to be transformed into something more equally distributed among the participants in teaching, learning and storytelling and thus produce an alternative form of education that is based on connections and mutual understanding.

In order to foster new "pathways"[47] that do not rely on settler-colonialism, Kwaymullina stresses that there must be "conversations | yarnings | with local

42   Ibid., p. 239.
43   Ibid., p. 240.
44   Ambelin Kwaymullina: Teacher / Decolonizer, p. 317.
45   Ibid.
46   Ibid., p. 318.
47   Ibid., p. 318.

Indigenous peoples | nations"[48] so that a new kind of education can take place. This education is meant to understand racist thinking in order to dismantle it, rectify the distorted knowledge about Indigenous peoples accumulated by colonial scientific endeavors, and uphold the value and significance of non-western "knowledge-ways | law-ways | landholding-ways".[49] The following stanzas showcase the lyrical I's principles "[a]s a teacher" in the form of various rhetorical questions that delineate which teaching practices Kwaymullina promotes. The questions are directed inwards ("Have *I* embedded respectful behaviours";[50] "Is *my* curriculum strength-based";[51] "Is *my* curriculum evidence-based"[52]) but can be seen as directed towards the poems' readers as well, especially since they are likely to be educators within academia, considering the assumed target audience of the academic publication in which Kwaymullina's poem appears. Kwaymullina also provides some answers to these questions, suggesting that a decolonial teaching practice may include valuing "the great resilience | knowledges | cultures | of Indigenous peoples" while also "interrogat[ing] the structures of settler-colonialism".[53] Further, she suggests that decolonial scholarship ought to consider "the voices of Indigenous peoples as the primary sources of our own cultures | laws | histories | systems"[54] to avoid reliance on colonial scholarship, which was previously used to describe and categorize Indigenous cultures. She also advocates for an inclusive version of academia that incorporates not only Western scientific models, but also "Indigenous knowledges | systems | research methodologies".[55] As in 'Message from the Ngurra Palya', Kwaymullina's idea of decolonizing education and academia is not based on separatism that denies all Western-derived systems, but rather on the connections between Western and Indigenous sciences, "the points where two worlds meet"[56] as the space from which a new, decolonial teaching practice may emerge.

Connections and relationships are equally central to Ambelin and Ezekiel Kwaymullina's young adult novel 'Catching Teller Crow', in which it is precisely the connections between the Catching women, which foster learning between generations. Unlike the two poems, the novel depicts yarning directly within the text, and thus allows for stronger conclusions to be formed as it includes yarning both representationally and formally. At first, the novel follows the narratives of Beth Teller and Isobel Catching, two Aboriginal girls who are both dead but still remain tethered to the living world. Beth Teller, together with her father, the white police officer Michael Teller, investigate a fire at a children's home, first considering Catching a witness, only to realize that she and her friend Crow, a girl who disappeared twenty years ago, are more integral to the case than first thought. 'Catching Teller Crow' engages with conceptions of education

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48   Ibid.
49   Ibid., p. 319.
50   Ibid., our emphasis.
51   Ibid., p. 320, our emphasis.
52   Ibid., our emphasis.
53   Ibid.
54   Ibid.
55   Ibid., p. 321.
56   Ibid.

by juxtaposing the local and national institutional failings with the successful yarning education which allows Isobel Catching, one of the novel's three female protagonists, to survive and ultimately serve justice for past wrongs to her community. Catching's narrative begins with a road trip initiated by her mother in order to teach her "words that control fire"[57] by telling her stories of her female ancestors and encouraging her to draw strengths and lessons from them. Catching then continues yarning, first by talking to Crow in their shared imprisonment, thus encouraging her to gain courage and eventually take revenge on her tormentors. Catching also extends the conversation to the non-Aboriginal community by talking to Michael Teller. Their shared yarning allows him not only to solve the case, but also to overcome his grief and serve as an instrument of future justice in Australian society.

'Catching Teller Crow' focuses specifically on the way in which a predominantly white police force routinely fails Aboriginal women even in the present-day, but also on the failings of a social system that still overwhelmingly takes Aboriginal children out of their families.[58] The initial case at the heart of the novel centers on a burned down children's home, but the two detective figures – Beth and Michael Teller – soon realize that the case reaches back twenty years into the past and includes a number of missing girls, such as Sarah Blue, the title's 'Crow'. Michael Teller remarks that her file is "thin, for an investigation into a missing kid",[59] which is later confirmed to be due to racist bias within the police force:

> 'If a white girl had gone missing like that, just vanished on her way home from school-' he shook his head in disgust – 'there'd have been an outcry. It would have been on the news, in the papers, something everyone talked about on the street. Instead, the only people speaking for Sarah – her family, her friend – were ignored.'[60]

It is precisely these kinds of injustices that prompt Beth's father to be different, to "pay attention"[61] and to recognize Catching's storytelling as "telling the truth in a different way",[62] even if he does not always interpret it correctly and, at some points of the story, is deliberately excluded from the complete story shared by the three Aboriginal girls.

Aboriginal storytelling takes perhaps its greatest form in Isobel Catching's prose-poetry narration, which avails the Tellers' efforts to uncover the crime at the heart of the novel, but also the greater continued crime of predation on predominantly Aboriginal girls and young women. As Isobel's mother tells her daughter, "[k]nowledge can be a weapon",[63] which, though originally said to

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57 Ibid., p. 28.
58 We (cf. Lucas Mattila, Bettina Burger: 'Connections light up across time and space' – Detectives in the Magical Realist Web of Female Relationships in Catching Teller Crow) directly take up these points in another article by addressing how 'Catching Teller Crow' makes use of magical realist and detective fiction conventions to articulate alternatives to and to criticize systems of patriarchal and racial oppression such as police forces and foster homes: two institutions which necessarily share strong historical bonds to the Stolen Generations.
59 Ambelin Kwaymullina, Ezekiel Kwaymullina: Catching Teller Crow, p. 80.
60 Ibid., p. 128.
61 Ibid.
62 Ibid., p. 55.
63 Ibid., p. 47.

encourage Isobel to pursue a more Western-centric school education, ultimately becomes her tool to overcome oppression and exploitation. The knowledge Isobel utilizes is grounded in family and based on the names of her ancestors, whose names she lists in her mind in order to gain strength. It goes beyond a mere comfort through remembrance, however, as Catching takes very concrete lessons from her ancestors' stories. She is told that "all the strengths of the Catching women flow down the family line and into"[64] herself and so she utilizes her great-grandmother's ability to "swim like a fish"[65] in order to save herself after an accident has led to the Catchings' car being trapped in a flash flood.

Aside from providing Catching with practical knowledge to help her survive, the stories of the Catching women also invoke the Stolen Generations multiple times and, in doing so, educate Young Adult readers about this long-lasting and oppressive period of Australian history.

> When your Nanna was little the government took her away from her mum. They had a law back then that let them take Aboriginal kids just because they were Aboriginal …[66]

Throughout Catching's verse narrative, further information about Aboriginal Australian history since the invasion by white settlers are revealed, including the fact that the laws which enabled the removal of Aboriginal children from their families, "lasted for generations"[67] and affected multiple women in the Catching family. While Catching is taught about her family history through her mum's storytelling, which she then shares with Crow and the Tellers, the reader is taught about Australian history more generally, going back as far as the earliest days of colonization.[68] There is not a great amount of detail or factual information, the readers are merely told that "[t]errible things happened to [Trudy Catching]" and that "[a]ll her choices got taken away",[69] but the passage may encourage the Young Adult readership to engage more deeply with Aboriginal Australian history, as it is so closely related to one of the focal characters of the novel.

Even on a formal level, Catching's narrative invokes traditional ways of yarning. It is narrated entirely in the present tense while referring to events that are in the past from the point of view of her listeners, Beth and Michael Teller – in a distinct contrast to Beth's own narrative, which follows more Western conventions of storytelling by employing the narrative past tense. Catching's narrative "is filtered through the memories of the past as the two move simultaneously and at points collide and reveals fragments of the future",[70] as Geia et al. state in a different context. Catching's narrative is further reminiscent of Geia et al.'s findings as "Aboriginal and Torres Strait Island yarns are rarely an individual construct; they carry within them the shared lived experience of their families,

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64   Ibid., p. 28.
65   Ibid., p. 29.
66   Ibid., p. 31.
67   Ibid., p. 111.
68   A parallel strategy is employed in Doris Pilkington Garimara's famed 'Follow the Rabbit-Proof Fence' (1996), which similarly invokes a broader, inter- and trans-generational view of history through narrativization to come to terms with the Stolen Generations.
69   Ambelin Kwaymullina, Ezekiel Kwaymullina: Catching Teller Crow, p. 155.
70   Lynore K. Geia, Barbara Hayes, Kim Usher: Yarning/Aboriginal storytelling, p. 15.

and communities".[71] This mirrors how Catching's narrative not only functions as a record of her own experiences but also as an educational narrative centering the Catching women.

On a more abstract level, 'Catching Teller Crow' also educates non-Aboriginal readers on aspects of Aboriginal Australian epistemologies. In the "Authors' Note" at the end of the novel, the Kwaymullina siblings state that their writing was "informed by two sets of stories that are the inheritance of Aboriginal peoples",[72] that is stories of connection to Country, family, and culture, as well as stories of colonial violence. The novel incorporates both sets of stories and shows how storytelling can be used to both strengthen the aforementioned connections and heal from the violence endured – "as Catching knows, it is stories that get you through and bring you home".[73] In doing so, as we have argued before, the "Catching women […] upon the force of personal histories"[74] invoke the "lost voices and discarded fragments" which continue to be "pushed to the margins of consciousness by imperialism's centralizing cognitive structures".[75] The novel effectively showcases how Aboriginal voices can reclaim their place in history and share Aboriginal perspectives on the world. "It's all in the story",[76] Beth says, referring to how Catching finds the strength to escape her abusers while also encouraging others, such as Crow and Beth herself, to heal. Catching's strength – her special ability, so to speak – is in itself a part of an Aboriginal epistemology as she is able to "walk all the sides of the world",[77] which shows what the Kwaymullinas also state as part of their belief system in their authors' note; that "connections can also reach past one cycle of existence to shape the next"[78] and that a separation between life and death is not as strict as Western thought may suggest. Sofia Ahlberg refers to this experience as readers being released "from categories of knowing that crowd out a sense of wonder"[79] and considers it "a particular form of actively holding space for indeterminacy that allows a reader to become a conduit for new experiences on their own and other cultures".[80] Ahlberg uses the term 'in story' which "is adapted from the Indigenous Australian phrase, 'on Country', as Tyson Yunkaporta describes it involving people in a culturally prescribed protocol that joins stories to beliefs and practices"[81] for the active and conversational engagement with literature that we associate with 'yarning'. In 'Catching Teller Crow', the Kwaymullinas' yarning is present on multiple levels – first as the means by which a new, non-imperial order is brought into being,[82] and then again, more importantly, as a formal feature that educates readers on Aboriginal history and epistemology, even if merely at the middle grade level.

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71   Ibid., p. 15.
72   Ambelin Kwaymullina, Ezekiel Kwaymullina: Catching Teller Crow, p. 191.
73   Ibid., p. 192.
74   Lucas Mattila, Bettina Burger: Connections light up across time and space', p. 21.
75   Stephen Siemon: Magic Realism as Postcolonial Discourse, p. 415.
76   Ambelin Kwaymullina, Ezekiel Kwaymullina: Catching Teller Crow, p. 186.
77   Ibid., p. 186.
78   Ibid., p. 191.
79   Sofia Ahlberg: Magic, Literature and Climate Pedagogy in a Time of Ecological Crisis, p. 67.
80   Ibid., p. 67.
81   Ibid., p. 66.
82   Cf. Lucas Mattila, Bettina Burger: Connections light up across time and space', p. 26.

Conclusion

Yarning, we have shown, offers a forward-looking potential for ways of rethinking education in the (neo)imperial context. 'Message from the Ngurra Palya' reminds readers of the importance of yarning in the context of technological development and research, chiming with other works referenced in our article. The poem calls for a hybridized form of advancement in future societies but importantly links that to action that can be taken now, to take Aboriginal scholarship seriously and enter into a dialogue – to begin yarning – with it. 'Teacher/Decolonizer' establishes the necessity of recognizing alternative forms of education on the basis that the lyrical I has been forced to take on the burden of education and necessarily suffer under unpaid (emotional) labor. In the poem, Kwaymullina calls upon academics to come together – to yarn – in order to shatter "settler colonialism".[83] However, the potential of yarning for education is not only tied to research and the academy, but also relevant to younger audiences. The Kwaymullinas' 'Catching Teller Crow' demonstrates how yarning can intersect across form, representation, and on the readerly, extratextual level to argue for and in fact educate with yarning.

While we have only demonstrated one iteration of literary yarning through our analysis of the Kwaymullinas' work, we are certain yarning may take many different literary forms and allow people across the world to learn and rethink some of the dominant global north/western conceptions of our times. As Judy Iseke notes:

> Storytelling is a tried and true pedagogic practice that reflects the epistemologies of Indigenous communities. It may well challenge the very notions of what we think good teaching is and what educational processes we might consider in our educational environments. Storytelling is a process that can be simple for children, with growing complexity for the more deeply knowing, and can be a powerful space for the development of knowledge and skills.[84]

Now more than ever, in a time of environmental crisis, it is especially worth engaging with yarning as an educational practice, due to its unique ties to the specificities of place. Whereas our intervention here is minor in terms of the enormity of problems faced in Australia and in the world, perhaps it may spur discussion and encourage academics to, at the very least, listen to Aboriginal voices when they speak up at panels, and when they invite others to yarn with them. Importantly, to do so is not to simply listen and become passive, but to come together and share knowledge in order to answer the coming issues our world may face.

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83   Ambelin Kwaymullina: Teacher/Decolonizer, p. 247.
84   Judy Iseke: Indigenous Storytelling as Research, p. 574.

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Dany Adone

Interview with Rohan Fisher on Mapping and Fire Management

Preface: Rohan Fisher is a researcher at the Northern Institute, Charles Darwin University, Australia. His work focuses on fire management in Northern Australia, connecting Western Science approaches and Indigenous Knowledges. The following interview has been recorded in October 2024.

Dany Adone: The first question that we have for you today is, could you tell us what exactly your research is about?

Rohan Fisher: Alright, so I do a few different interrelated things, really focused on trying to support a bit of Land Management, primarily in Northern Australia, but some of the techniques and ideas I developed now working throughout Australia and within some international projects. The core of the work and where it started was around trying to support better bio management across Northern Australia and particularly the tropical savannas of Northern Australia. So, the tropical savannas globally are the most fire-prone biomes in the world. That's primarily due to the fact that as savannas, they are grasslands in the tropics, they receive heavy monsoonal rainfall each year. So, in Northern Australia, that is through the northern hemisphere winter, is our monsoon time. From December through to around May we get a huge amount of rain, and that huge amount of rain produces huge grass fuel load. Then we have a very long hot dry season. And that long hot dry season makes the grass very dry. It's very cured, it's primed to burn, and it's similar across the tropical savanna biomes around the world.

We get these environments that are really conducive to fire. Now in Northern Australia and most other tropical savanna ecosystems, historically, people have used fire to manage the landscape, to support grasslands. Grasslands are very productive landscapes for people to live in. So, people have maintained grassland landscapes through the use of fire, but also controlled the extent of fire through the use of fire. Now what's happened not only in Australia, but around the world, is traditional fire management practices have been severely impacted through, I guess, a sort of colonial expansion, and to a certain extent, colonial ideologies around what good land management looks like. And fear of fire is a big part of that. And I think it's a particularly, not exclusively, but a *particularly* sort of Western European export to much of the world, which sees fire as a problem. And fire and the way it's used traditionally by people, Indigenous people native to those landscapes, were seen as a problem.

In many cases, people being in those landscapes at all was seen as a problem, because troublesome landscapes can be quite productive, pastoral landscapes. So as people moved in, Indigenous people, Indigenous land management styles, were removed from those landscapes.

What didn't disappear, though, is fire. So, fire is a constant, and particularly in Australia it's the most important human ecological factor that has shaped the nature of the continent for the last 60 or 70 000 years.

I'll talk most directly to Australia, because it's what I know, what I can speak with confidence on, but I believe it'd be similar for many other places around the world, a really important tool. However, the fear of fire, colonial expansion, the removal of people from those landscapes, has changed the way that fire exists around the world, and particularly in the tropical savannas.

What happened in Northern Australia over the last 50 to 100 years, as people became disconnected from their traditional fire management practice, is we moved from a state where we had lots and lots of small fires across the Northern part of the continent where people moved, where they hunted, where they did some radial practice as those fires were removed, we got a disrupted ecology, and it was replaced with severe and large wildfires. What in Northern Australia, Indigenous people, Aboriginal people would call Country, landscapes which don't have well-managed fires, the ecology changes, the ecosystems change. And Indigenous people would call those lands, or, as we say, that Country, they'd call it unhealthy Country. And it's not healthy, because there aren't people there working to maintain the health of the Country. And it's really important to note this, because there's also been this, I personally think it's like this Judeo, sort of Christian ideology around the idea that people are somehow evil and people in the landscape, us, is somehow unnatural. And that's where you get the idea of wilderness. And we elevate the idea of wilderness as being somehow pure and better and natural, whilst for Indigenous people, there is no wilderness and landscapes without people are unnatural and unhealthy. And, you know, I do sort of think it comes back to that sort of Judeo-Christian sort of thing, where somehow people are the fallen, and somehow evil. And there's a lack of purity where people are. But it's also quite absurd. So, when people are removed from the landscape, you get large wildfires, you get a degradation of the quality of that landscape, and that's what we've seen across Northern Australia.

But over the last 20 years, there's been a movement supported by North Australian scientists, by new technologies, but really lead and motivated and pushed by Indigenous land management aspirations to get fire back in Country, across Northern Australia. And that's occurred. What we see now is, over the last 10 to 15 years, has been a revolution in the way that the fire regimes across Northern Australia, from out-of-control wildfires to, once again, really nuanced, controlled, thoughtful application of fires at a continental scale. So, this is not a small endeavour. So, this is going from Broome across towards Cairns. That's about 3000 kilometers across. I don't know where that would be from, you know, if you took London as a starting point, but it'd be sort of maybe somewhere towards Istanbul or further. But it's a huge area, and as part of the process of supporting that work and monitoring that work, my involvement has been watching it from satellite. So, every week a part of a team of people who produce satellite maps of what's been burnt, and we provide real time information about active fires, and we provide that in the format which is focused on ease of use for the utility of

land managers. So, it's really looking at fire as a land management tool, and for land managers to use fire information the practical way.

We're housed at a university, but our work is primarily not research. It's about the practical delivery of information for people in remote landscapes to do the hard work of good fire management. And I want to emphasise that this is hard work. You know, I'm sitting in my office here. It's hot outside, and I watch it from space. I've sort of got the easy job, but the people who are doing that work on Country, it's thousands and thousands of hours out, putting in that right fire, the right way fire, early in the year. So, the idea is, you put in small burns after the monsoon, when things are still green, and you will get small fires, but it will reduce the fuel for later in the year. So, this time of year from late August, September, October, November, that are serious wildfire times. So, you need to have all of your good burns put in those small, nuanced applications of fire that's usually completed by around June, July. And it's this time of year that people are watching and hoping that they've done enough work beforehand.

You know, I recommend the students, whoever, have a look at the web resource that we support, North Australia Fire Information (NAFI). And you can jump in there, and you can watch, you can see all the burns early throughout the year and how that impacts the fires that are starting up now later in the year.

And I think one of the important points here is how Indigenous knowledge is applied to the landscape in a new way. In the extensive use of helicopters, new fire delivery machines, obviously driving around cars, and the daily use of satellite derived information. So most Indigenous ranger groups, they'll wake up in the morning, the first thing they'll do is jump on the internet, look at the computer and see what fires are being detected from space.

Traditional fire practice. So, the word 'traditional' is a very loaded one, and traditional practices are always evolving to meet new challenges. Now traditional practice uses space technology. I would not call that non-traditional practice. I would call that traditional practice, which has always been evolving and now it uses all these other tools. It implies that traditional cultural practice is not a living thing. It implies that it's somehow dead if it doesn't evolve. And it's almost always non-Indigenous people who are making judgments about what Indigenous people can claim as their traditional practice and non-traditional practice.

There are some forms of burning that people might do when they're walking through Country with their children, where they're really focused on delivering a specific sort of older cultural narratives, but the large scale burning that's being done across Northern Australia that I refer to that is right way fire. So, they're trying to put fire in the landscape in the right way. And the right way means a way that respects all the traditional owner views of how things should be done. So, it's respecting those older cultural practices, but it also is using all of these other tools. All the technologies, all the tools, everything they can use in order to get the best outcomes. So, I think there's an important distinction there.

I mean, it's excellent work where people are starting to read. A lot of people have been disconnected from Country and been disconnected from traditional fire management practices, and they've got the opportunity to get back and start doing that and sort of reinvigorating their culture. But it's that form of burning

that is disconnected from a larger scale, landscape scale engagement in trying to get good fire management outcomes. So, they are slightly different things, yes. So, I mean, I've talked through a few things here, so that's the background to some of my work, which has been supporting that practice across Northern Australia. And part of the success has been about creating spaces where non-Indigenous people, and particularly coming from academia or the science world, where opportunities to not just provide information and tools, but to provide spaces where we listen.

And I mean, that's how this whole resurgence in fire management had occurred, because people listened to the old people who said, "this is a problem, we need to do something about it". And if it wasn't the old people on Country saying, "we need to work together to find a solution here", and if it wasn't for the right, non-Indigenous people, going, "we hear you. We're not here to tell you stuff, we're here to listen and we hear you, and we need to work together". And I think that's the biggest lesson.

I've been trying developing other tools and techniques to try and support and create spaces that allow people to share and listen together, so I can talk a little bit more about that.

Dany Adone: You've mentioned these, some of our challenges. I mean, it would be nice to give us one or two examples later, after we've talked about this deep listening, because this is an issue. People say yes, and they turn around and do their own thing. And there are certain terms that have been developed, even with the Yolŋu, they call it deep listening, which is exactly what you are saying, yeah.

Rohan Fisher: Yes. I mean, it's a challenge. And I think something which is also important in my practice, and you see it more deeply embedded in Northern Australia than maybe elsewhere is almost going beyond listening. It's sort of building skills and agency. So, you can almost try and do yourself out of a job as a researcher, where you don't need to tell other people's stories, and almost don't need to be there where the agency and the direction and the research is driven by the Indigenous people themselves.

Dany Adone: Yes. Indigenous and non-Indigenous people working together in a team, trying to, well, to move forward. Are there some challenges there, in terms of communication, in general?

Rohan Fisher: So, talk about the fire space and the fire management space. So that is largely, not exclusively, but largely run by Indigenous ranger groups. And a really important aspect of all of that burning work is, before people start, to do the correct consultations.

So, you'll have a ranger group for an area in Northern Australia, and they may be from that area, but then you have like clans, you know, clans and family groups within that area who are the traditional owners for that particular space. So, the rangers may be broadly from an area, but the rangers aren't the traditional owners of a particular place.

So, there's a long process of making sure the correct consultations are done with the right people, so they're informed, and they grant consent around the plans. But there's, in my experience, there's like a hierarchy. So, you'll get a, it's not a top-down hierarchy, in a way, but it's almost like a horizontal hierarchy. Different people who have different levels of engagement in that sort of the deeper complexity of making sure the right things are done the right way. So, at one end, you'll get non-Indigenous ranger coordinators, and their role is really important, because they work really closely with the Indigenous rangers, who are generally fluent in two languages and two worlds, but the non-Indigenous rangers often have a greater competency in dealing with the non-Indigenous bureaucracies that govern all our lives, and that's one of the biggest barriers.

You know, the federal government or somebody else will say, "Okay, there's a grant funding round to support your work", and it's immediately largely unavailable to Indigenous people directly because they have English as a second or third language, and you need to speak and be able to write the language of bureaucracy and deal with that space. So that's where the non-Indigenous coordinators play a really useful role at being able to actually engage with what we call that white fellow world, white fellow bureaucracy, and they then work with that next level of rangers who then have those family relations back into the broader community, and they will know who is the right person to talk to, who is the right person.

And from my experience directly, I just, I'm always aware that I don't understand, but I'm quite comfortable with that, and I don't think you need to understand if you are engaging with people in a respectful way, in a non-patronising way, and you facilitate and make sure there's agency and you don't get in the way, you don't need that to understand you can be guided. And I think that's the important thing, to allow yourself to make sure that you're guided in the right way and apply the skills that you have as is appropriate. And I think that's what I see happening, is that making sure you're aware of what you don't know, and making sure that you develop the right relationships with the people that do. And it's not always easy, but a lot of time is spent on making sure those protocols are done well. And for most groups across Northern Australia there's been a decade or two of having the right people work in the right way to build those relationships.

Dany Adone: But another thing is, you work with different groups across the Northern Territory, right? I mean different groups of people. Have you ever been in a situation where you were involved in a project and saw that things were not going well, and you had to take on the position of a mediator?

Rohan Fisher: Not so much, I mean, I'm in a reasonably fortunate space of the work that I'm doing, particularly with NAFI, is that we're seen as reasonably neutral and apolitical and just generally helpful. So, there's no real agenda other than to help people, so that where I have seen issues, it has primarily been non-Indigenous people making trouble.

So, for example, I've been working in places where we're looking at, well, there's been what they call joint management of national parks, and the idea

is that traditional owners of the places, which are national parks now, should be consulted with and involved in the daily running of the park. But I've seen non-Indigenous people within government bureaucracies feel very insecure about that, and be really quite disruptive. And that's where I've seen most trouble. It's really been where I see most often Indigenous people being incredibly patient, waiting often decades and decades and decades for honest engagement, and the opportunities arrive and non-Indigenous people don't come with the same patience or integrity. So that has just been my experience.

Working in the fire space, there is generally a fear of fire. It is the sort of Western European, sort of colonial mindset that fire is bad, which was taken on in all these landscapes where fire is an important thing. And we have had some really large and bad fires in southeastern Australia. The 2019/20 black summer fires were quite devastating. And so, generally, we have a culture of the fear of fire. And there is therefore very poor, I call it a pyro-ecological understanding of the nature of Australian landscape in general. So therefore, the fear of fire is transferred onto fire work being done across the rangelands and northern savannas of Australia. And so, there's a lot of misconceptions about what people are doing, and very poor understanding of, I would argue, world-beating outcomes.

And I must say, if you talk about poor behaviour, some of the poorest behaviour I've seen is from academics, from professors in southern Australia wanting to claim ownership of fire ecology as their field of expertise and casting judgment on what is happening in landscapes that they don't understand, on a culture that they don't understand. And their work, them promoting their own work through being aggressively denying the work of others in the North. And you know, academia can be quite like that. There can be some bigger egos who try to promote themselves through undermining the work of others, and they don't really understand what's going on. So, I mean, a lot of my work has been trying to educate the broader Australian population about what is actually going on and the good work in Northern Australia in terms of fire management, because I think that's where a challenge comes. If you maintain the fear of fire, you maintain a poor understanding of the fire ecology of places which aren't near Sydney, Melbourne, Canberra, or Perth, you have all of these misconceptions, and it can lead to conflict, you know, maybe not on the ground level, but it can be quite disruptive.

It can be a very closed, inward-looking world. I mean, one thing that's been great, particularly my institution, and something that's been pushed here from executive down, is this idea of what we call Bush universities. So, trying to really acknowledge traditional knowledge, and give it the respect. And in a different way, in envisaging the value of knowledge, and in trying to acknowledge and respect that from a university and by calling it a Bush University, and properly acknowledging the several PhDs worth of knowledge and skills and intelligence of people who will never get a formal PhD within a Western system. So that's something that is being pursued here, which I think is a really good thing.

Dany Adone: Thank you.

The Editors

Managing Editors

Stefanie Affeldt is an independent researcher who investigates the history of colonialism, racism, and whiteness in Australia. She holds a B.A. in Sociology from Macquarie University, an M.A. in Cultural and Social History from the University of Essex, and a Dr. rer. pol. from the Universität Hamburg. Stefanie's research focuses on analyzing the history of racism and whiteness in Australia. Her publications include 'Consuming Whiteness. Australian Racism and the 'White Sugar' Campaign' (Lit 2014), 'Buy White – Stay Fair' (Oxford Handbook of Political Consumerism 2019), 'Conflicts in Racism' (Race & Class 2019), 'Racism Down Under' (ASJ|ZfA 2019/20), 'Kein Mensch setzt meinem Sammeleifer Schranken' (Tor zur kolonialen Welt 2021), 'A Peculiar Odor is Perceptible' (ASJ|ZfA 2023), and 'Zenit des Weißseins (WerkstattGeschichte, 2024). Stefanie's DFG-funded post-doctoral project 'Exception or Exemption?' (2018-2022, University of Heidelberg) analyzed multiculturality and racist conflict in the Broome pearling industry. After this, she was a fellow at the Trierer Kolleg für Mittelalter und Neuzeit, where she researched the German contribution to colonization in Australia – the project is ongoing.

Stefanie is also a member of the executive board of the Gesellschaft für Australienstudien | German Association for Australian Studies (GASt) and the academic advisory board of the Specialised Information Service Anglo-American Culture (FID AAC).

She serves as the *Lead Managing Editor* of the 'Australian Studies Journal | Zeitschrift für Australienstudien'.

Christina Ringel completed her Ph.D. at the University of Cologne with a thesis on possession in the endangered Aboriginal language Miriwoong. She has held a post-doctoral position at the University of Cologne, a position as Subject Librarian at the Technical University of Dortmund, and is currently pursuing a post-doctoral project at the Technical University of Dortmund. Christina's recent conference papers and publications are concerned with the identification of rhetorical and linguistic features of certain genres using corpus linguistics, the research literacy of language teachers, app creation for endangered languages, definiteness and possession in Miriwoong, evidentiality in Australian languages, and the role of linguistic human rights, self-determination and country for language vitality.

Christina is a research affiliate at Centre of Excellence for the Dynamics of Language and a member of Australian Linguistic Society, the Foundation for Endangered Languages, and the Society for Endangered Languages, and the German Association for Australian Studies , and the Association for Research Infrastructure in the Humanities and Cultural Studies. She serves as Affiliate Team Member at the Centre for Australian Studies, on the Board of Directors of Cologne Centre of Language Science and on the Advisory Board of the Specialised Information Service Anglo-American Culture.

In the editorial team of the 'Australian Studies Journal | Zeitschrift für Australienstudien', Christina acts as *Reviews Editor*.

General Editors

Dany Adone is Professor and Chair of Applied English Linguistics at the University of Cologne and Co-Director of the Centre for Australian Studies. In Australia, she is also an Adjunct Professor at the College of Indigenous Futures, Arts & Society at CDU, a Visiting Professor at AIATSIS, a Visiting Scholar at the Language and Culture Centre in Kununurra, and Associate Professor at the University of Sydney. She has lived in Arnhem Land/NT, Australia for many years. Her current research projects focus on Yolngu Ethnoecology and Indigenous Sign Languages of Australia. Recent publications include Adone, James and Gosebrink: 'Indigenous Australia in the Anthropocene', a Special Issue of the Australian Studies Journal / Zeitschrift für Australienstudien (2024); Bartosch, Adone et al.: 'Zukunftsgestaltungskompetenz im Angesicht der Katastrophe: Überlegungen zu einer Ökologie interdisziplinärer, interkultureller und intergenerationaler literacies' in: Sippl, Brandhofer & Rauscher (eds.): Futures Literacy. Zukunft lernen und lehren (2023); James, Adone and Maypilama: 'Decolonizing Research Methodologies: Insights from Research on Indigenous Sign Languages of Australia' in: Sign Language Studies (2020); and Adone and Brück (eds.): 'Fire, Water and Land in Indigenous Australia' (Centre for Australian Studies, Cologne, 2019).

Eva Bischoff is Assistant Professor at the University of Trier. Her second thesis reconstructs the ambiguous role Quakers played in the process of settler colonialism in 19th-century Australia: 'Benevolent Colonizers in Nineteenth-Century Australia. Quaker Lives and Ideals' (Palgrave MacMillan 2020). She has taught at the Universities of Cologne, Bonn, and Münster in North American History and Postcolonial Studies and worked as a Lecturer at the Department of North American History of the John-F.-Kennedy Institute and as a Postdoc Researcher at the DFG Research Center on 'Governance in Areas of Limited Statehood'. At the University of Trier she teaches classes on Global History, British as well as German Imperial History and Gender History.

Carsten Wergin is Associate Professor of Anthropology at the Heidelberg Centre for Transcultural Studies, Ruprecht-Karls-University Heidelberg. He is co-chairperson of the GASt and founding member of the Environmental Anthropology working group of the German Association for Social and Cultural Anthropology (DGSKA). His research is located at the intersections of heritage, culture and ecology and has resulted in diverse journal articles and books that include 'Materialities of Tourism' (Tourist Studies 2014, co-edited with Stephen Muecke) and 'The Call of the Trumpet Shell' (HeiBOOKS 2018, with Corinna Erckenbrecht), a monograph on German anatomist and explorer Hermann Klaatsch and his work in the Kimberley region of Northwest Australia.

The Contributors

Guest Editor

Dany Adone is one of the General Editors of the Australian Studies Journal | Zeitschrift für Australienstudien.

Anna Gosebrink is a PhD candidate in English Philology at the University of Cologne. In 2022, she joined the Chair of Applied English Linguistics at the University of Cologne as a research assistant and lecturer. She is also a research coordinator at the Centre for Australian Studies in Cologne and is involved in the Digital Australian Studies MA-Programme. Her PhD project examines the dynamics of language contact in Western Australia. Her research interests include language contact and language change, cultural linguistics, and intercultural communication.

Text Contributors

Thomas Batchelor completed his PhD in the English Department of the University of Cologne, analysing the verb phrase in Kununurra Kriol, a variety of Australian Kriol spoken in the Kununurra area of northern Western Australia. Previously, he graduated with First Class Honours from the University of Sydney, with a thesis investigating transitivity in Barunga Kriol. He has worked as a Research Assistant at the University of Cologne, University of Sydney, and at the MARCS Institute at Western Sydney University.

Lee J. Baumgartner is an applied research leader and academic who has achieved substantial food security outcomes in countries working within the food-water-energy nexus. In many countries where he works, water is needed for life, but also provides an opportunity to grow crops using irrigation, and by generating hydropower. In these countries, fish are an important source of biodiversity, have cultural significance, supply animal protein, calcium and generate hard income but are declining because of river development. But the food and energy needs of countries is growing, necessitating expanded energy grids and irrigation systems. Lee's collaborative high-impact research focuses on the development and application of innovative technology, in the field of ecohydrology, to reduce pressure on fisheries systems and reverse declines. Specifically, his work focuses on irrigation and hydropower sustainability; applying innovation to ensure river communities can have food, water and energy. Lee's work is multi-disciplinary, requiring collaboration with engineers, functional ecologists and water professionals.

Bettina Charlotte Burger is a lecturer at the Heinrich-Heine University of Düsseldorf in the field of English Studies. One of their main research interests is speculative fiction with a particular focus on speculative fiction from the Australian continent, for

which they have interviewed various Australian speculative fiction authors, available on the YouTube Channel 'Charting Australian Speculative Television, Literature, Etc. (CASTLE)' and on the podcast 'Charting the Australian Fantastic'. Both media outlets were created as part of their Digi-Fellowship in 2021 with fellow project co-leader and Digi-Fellow Lucas Mattila. They are a co-founder and editor of the journal 'TALE: Translational Approaches, Literary Encounters', for which they are currently preparing a special issue on 'Postcolonial Education in Contemporary Fantasy'. Further research areas they are currently exploring and expanding include queer (often transcultural) media as well as visual narratives.

Scott Castle holds a BSc with honours in zoology, ecology and conservation. He is currently the Conservation Manager and co-manager of the Wild Koala Breeding Program for Koala Conservation Australia, based in Port Macquarie. With over eight years of hands-on experience in koala rescue operations, capture and handling training, triage, first aid, and spatial data management, Scott leads a team of over 50 rescue volunteers, including search and rescue on fire grounds, post bushfire. Scott is experienced in koala care and rehabilitation, clinical procedures, post-mortem investigations and data analysis. Also holding a Certificate III in Captive Animals, Scott's expertise extends to enclosure design and construction. Scott's current role also includes management of koala browse plantations – from propagation to harvest and storage, and also managing the procurement of koala browse to feed koalas in care.

Teresa Cochrane is a proud Dunghutti Gumbaynggirr woman with strong cultural connections to Birpai/Birripi and Bundjalung Country on the east coast of Australia. Her research and academic journey are centred around Indigenous methodologies, knowledge and culture along with using it to conserve her personal totem, the koala. She is currently studying a Doctor of Philosophy in Arts and Education (Indigenous Environmental Studies) through the Gulbali Research Institution as a First Nations Researcher, and a Master of Philosophy in Biodiversity, Conservation and Management at University of Oxford. In links with research, she is also an academic teaching 'ENM111 - Indigenous Environmental Studies', and 'IKC101 - First Nations Foundations: Knowing, Relating and Understanding Country'.

Uncle **Richard Dacker** is a Birripi Traditional Custodian and Elder. He is an internet marketer, community development manager and bookkeeper. He has graduated with a Bachelor Accounting Degree at Charles Sturt University, Port Macquarie. He has also previously studied an Accounting Diploma at North Coast TAFE, Port Macquarie in 2017 and a Web Development Diploma at Martin College, Sydney.

Arianna Grasso is a post-doctoral researcher at the Department of Literary, Linguistic and Comparative Studies at the University of Naples 'L'Orientale'. She is the author of Digital Media and Refugeehood in Contemporary Australia: Resistance and Counter-Discourses from Detention (Palgrave Macmillan, 2023), which was awarded the PhD Excellence Grant by the European Association for Studies of Australia. Her recent publications comprise 'Refugee linguascapes: The role of English in Australia-run detention contexts', 'On Documentation, Language and Social Media' in 'Freedom, Only

Freedom. The Prison Writings of Behrouz Boochani' (Bloomsbury Academic, 2023), and 'Populist Islamophobia: The Australian Refugee Crisis on Twitter'.

Peta Jeffries is passionate about learning, teaching, and research at the disciplinary intersections of critical Indigenous studies, visual arts/arts-led and based practices, (eco or environmental) critical social work, environmental studies, human geography and history with broad focus on the co-production of social and ecological knowledges. Peta's life-long learning and research considers themes of individual and collective identity, trauma, healing, memory, self and nature in relation to colonial processes of possession, appropriation, silencing and erasure. This transdisciplinary field of focus is motivated by personal histories and family experiences of colonialism.

(Christine) Meng Ji specialises in empirical translation studies, especially data-driven multilingual corpus analyses. She has published on environmental translation, health-care translation, statistical translation stylistics/authorship attribution, and international multilingual education. She is the editor of 'The Oxford Handbook of Translation and Social Practices', New York: Oxford University Press (with Sara Laviosa) (2020); editor of 'Advances in Empirical Translation Studies', Cambridge University Press (with Michael Oakes) (2019); guest special section editor of 'Leonardo: TransCreation: Creativity and Innovation in Translation', Cambridge: The MIT Press (2020); a founding editorial board member of the series of 'Cambridge Elements of Translation and Interpreting', Cambridge University Press; and the founding editor of 'Routledge Studies of Empirical Translation and Multilingual Communication', New York/Oxon: Routledge. She is a qualified professional translator between English, Spanish and Chinese having previously worked for international organisations before teaching at universities.

Alexandra Knight is an ecologist and social researcher with the School of Environmental Sciences. Alex's research focuses on the nexus between research and practice, addressing current problems and finding solutions. Alex's PhD research (completed in 2015) focussed on a small, little-known amphibian, Sloane's Froglet, and resulted in widespread community interest and support in protecting the species. Her current ecological research is focussed on burrowing frogs in the Murray and Mid North coast regions of New South Wales. Alex works closely with Landcare groups, other community groups and schools ensuring research is built collaboratively and that results are spread widely. Alex lectures in natural resource management, open space planning and wildlife management and ecology. Prior to working at CSU, Alex led the biodiversity program of the then Murray Catchment Management Authority, building a diverse range of projects with farmers and local communities to protect and enhance frogs, ground-nesting birds, native vegetation and mammals. Conservation on private land expanded on her foundation as a Ranger for the Queensland and New South Wales national park services, a job which she loved. Fire-fighting, undertaking comprehensive flora and fauna surveys, weed and pest species control, community relations and park planning were all part of her daily activities.

Gaye Krebs is an Associate Professor with almost 40 years' experience in supervising Honours and post-graduate students. Within the University she is an Honours Advisor,

guiding many students every year through their research journey. Her field of expertise is animal nutrition and metabolism.

Lucas Mattila is a research assistant at the University of Cologne, where he is the project manager of 'Australian Studies', an online European master programme in development, and a lecturer at the Heinrich-Heine University of Dusseldorf in the section: Anglophone World Literatures / Literary Translation. He is a co-founder and editor of the journal 'TALE: Translational Approaches, Literary Encounters' and the Anglophone Literary Studies Blog. In the context of Australian Studies, he is a co-founder, administrator, producer, contributor, and editor for the YouTube Channel 'Charting Australian Speculative Television, Literature, Etc. (CASTLE)'" and the podcast 'Charting the Australian Fantastic', as part of his Digi-Fellowship in 2021 with fellow project co-leader and Digi-Fellow Bettina Burger. His research focuses on Stimmung, affect studies, genre studies, Australian studies, and contemporary speculative fiction.

Scott McManus is a Ngiyampaa man, who has completed a Data Science PhD focusing on uncertainty assessment of spatial domains in early-stage mining projects using pXRF and Bayesian methods. He has over 25 years of consulting experience in data, data science, spatial science, quality control, Geostatistics and mineral resource estimation using geostatistical methods. His current research interests include implementing Machine Learning in Health Administration, Responsible AI, Digital Data Sovereignty, Ethical considerations with First Nation's Statistics, Deep learning techniques to identify river blockages in Southeast Asia, Geostatistics to quantify uncertainty in geological models and fire impacts on mangrove vegetation and regeneration on the mid-north coast NSW. Scott is a Registered Professional Geologist (Australian Institute of Geoscientists), MAIG, ATSIMA, and a Member of the International Association for Mathematical Geosciences.

Heiyeon Myung is a 2nd year PhD student at the University of Sydney. She completed her Master of Research at Macquarie University and researched emerging healthcare interpreting in Korea. She holds a NAATI accreditation as a certified Korean and English interpreter and translator, and has been a freelance interpreter and translator for many years, providing interpreting and translation services in various domains, including legal, health, business and art. She is currently a Korean tutor in Macquarie University's Master of Translation and Interpreting Studies. Her research interests lie in dialogue interpreting and discourse analysis, especially in healthcare settings.

Aunty **Anjilkurri Rhonda Radley** is a proud Birrbay/Dhanggati woman from the mid-north coast of New South Wales, Australia and walks with her saltwater, freshwater ancestors. Anjilkurri has recently finished her PhD in the field of language and education, MARCS Institute for Brain, Behaviour & Development, Western Sydney University, holds a Bachelor of Teaching, Graduate Diploma in Adult Community Education (Australian Catholic University) and a Master in Indigenous Language Education (University of Sydney). She is an active Aboriginal community elder supporting the revival of culture through language and practices in her local communities. Her passion is to revive Gathang language, she advocates for Aboriginal languages to be learnt, spoken,

taught and integrated into every-day life. Anjilkurri values the sharing of stories to; teach cultural expressions, learn from others and connect to other people's life journey. She often walks with her grandchildren on Country listening to the ancestors and messages from Ngaya Barray 'Mother Earth' encouraging the grandchildren to walk the right way on Country and in life.

Merinda Walters is a proud Kamilaroi woman, environmental scientist, and Indigenous stakeholder engagement consultant based in Far North Queensland. Merinda aims to use her knowledge and skills to contribute to the protection and restoration of the environment, and to support the rights and interests of Indigenous people. Merinda is passionate about bridging cultural understanding between Indigenous communities and environmental initiatives by elevating Indigenous voices and knowledge in the corporate industry. Merinda is also a contemporary artist, her artworks reflect her passion for nature, and conservation, as well as her culture and connection to Country.

Aunty **Kara Westaway** is a proud descendant of the Stolen Generations, with ties to Bundjalung, Thunghutti and Birpai countries. She has a passion for Social Justice and the Environment. Kara is a proud First Nations woman, and feels it is her duty to leave our country in a healthier state than she found it. Aunty Kara's passion is to see young Indigenous women, find their passion, and go onto study at University. Sadly, it is more likely for First Nations kids to end up in prison than university.

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