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**Reconnection with DNA: Policy and Issues with direct-to-consumer DNA Testing for
Indigenous Māori Identity Reclamation:**

Would you give away your identity to find your identity?

A thesis

submitted in partial fulfilment

of the requirements for the degree

of

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by

Karen L. Turanga



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

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Dedicated to my Mother

Lynton Annette Riley (nee Maister, nee Turnbull, nee Wilson)

We struggled to connect in life, but in death, you have become the catalyst for this work and what follows; who would have ever guessed?

Mō tātou, ā, mō kā uri, ā muri ake nei

For us and our children after us.

Abstract

The disconnection of *tangata whenua* (indigenous people born of the land) impacts all social determinants. A clear sense of identity and connection to the land and culture is an important solution to this problem. The purpose of this research is to share a personal and *whānau* (family group) story of using direct-to-consumer (DTC) autosomal DNA genetic testing (GT) to determine ancestry and show others a potential path forward to identity reclamation. To fulfil this purpose and explain the policy context, the research examines historical assimilation policies of closed cross-cultural adoption, and the possibilities DNA technology offers for *whakapapa* (genealogy, lineage descent, family history) reconnection. This includes addressing two key research questions: How does DTC-GT facilitate reconnection to Māori identity and whakapapa for cross-cultural adoptees? What are the short, medium and long-term risks and advantages of DTC autosomal DTC-GT testing for iwi Māori? A bricolage methodology frames this research and draws on *kaupapa Māori* (Māori approach, principles, and ideology), autoethnography, and interpretive phenomenology, which are used to analyse academic commentary and key policy decisions. An autoethnographic layered practice approach presents insights and key findings by combining personal narratives with various media types, academic research, policy documents and popular culture. The research highlights how the implicit processes of policy-led assimilation and colonisation still need to be challenged today. Existing literature has identified the importance of giving Māori pathways to reconnect with their identity. The personal story shared explains how DNA technology offers a way to do that, but the research completed for this thesis demonstrates this approach has serious risks and limitations that require consideration before utilising this technology.

He Mihi - Acknowledgements

He Mihi

Ka kitea (Waiata Kai Tahu)

Ka kitea ki te tonga	As I look to the south
Ko tāku raukura he iti Kahurangi e	To my plume
	My precious jewel
Papaki	
Papaki kau ana ki runga te maunga	Blow gently on the mountain
Aoraki e koro e	Aoraki, my koro
Tū ana	
Tū ana ki te Rangi heke ana ki te Papa	Up to the heavens
Ko tāku tūranga e	Down to the earth
	This is where I stand
Ko Te Wai	
Ko Te Waipounamu	This is Te Waipounamu
Ko Tahu Pōtiki	Tahu Potiki is my ancestor
Tāku tupuna e	

(ref: Otago University Waiata; songs. <https://www.otago.ac.nz/Māori/world/te-reo-Māori/waiata-songs#ka-kitea>)

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To Matthew, the steady Eddy to my ADHD crazy, you had my back and kept the home fires burning while I chased my dreams. How lucky am I to have you in my life? I love you.

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List of Abbreviations

DNA	<i>Deoxyribonucleic Acid</i>
DTC	<i>Direct-to-consumer</i>
GT	<i>Genetic Testing</i>

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Chapter 1 Introduction

The purpose of Chapter 1 is to provide an overview of the core ideas and concepts underpinning this thesis and outline the study's research questions, aims, and structure. It begins by examining the social phenomenon at the heart of this research, the rise of direct-to-consumer (DTC) Deoxyribonucleic Acid (DNA) genetic testing (GT) and its implications for Indigenous communities, particularly in the context of identity reclamation. The chapter then introduces the autoethnographic dimension of the thesis, situating the research within a personal narrative that explores the impact of colonial policies, with a specific focus on closed cross-cultural adoption in *Aotearoa New Zealand*. *Aotearoa* and *New Zealand* will be used interchangeably throughout the thesis based on context, quotes, and legislation, as deemed appropriate for historical or contemporary information. This historical and structural context highlights how identity loss has become a key driver for Māori and other Indigenous peoples seeking to reconnect with their whakapapa through DTC-GT. The chapter concludes by outlining the structure of the thesis and its broader contributions to understanding Indigenous identity reconstruction. As the activist and artist Tame Iti (2015) noted, *mana* (to be legal, effectual, binding, authoritative, valid) is the power in knowing who you are:

Everyone has some form of mana. Your mana comes from knowing who you are, where you come from and the connection to your land. Mana grounds you. Mana makes you solid. Mana bridges you to your past, present and future.

~ Tame Iti (2015)

Direct-to-Consumer DNA Genetic Testing

DTC-GT has become popular globally among Indigenous communities, including Aotearoa's Māori population. While DTC autosomal DNA testing offers potential insights into ancestry and genetic heritage, its use among Māori raises significant technical, cultural, and ethical concerns in the context of Māori identity and *whakapapa*. Concerns include ensuring the accuracy and representation of Māori genetic data, respecting the cultural significance of *whakapapa*, maintaining privacy and data security, and addressing issues of informed consent and data ownership. Ancestral *whakapapa* information is considered *tapu* (sacred, prohibited or restricted); however, as a form of *whakapapa* information, autosomal DNA swabs or a saliva sample could be provided to DTC autosomal GT providers for those Māori disconnected from their *whakapapa* searching for identity. Given the level of disconnection from tribal contexts and circumstantial desperation, such information can be shared without knowing the implications.

Given the endogamous¹ nature of Indigenous communities due to isolation, including Māori, the accuracy and representation of genetic data produced by testing companies can be challenging to interpret due to pedigree collapse², which is created by fewer individual contributing ancestors. This endogamous process can skew the units of measure, known as centiMorgans (cM), making other DNA testers appear more closely related than they are, challenging the accuracy and representation of Māori genetic data in this context. Adding to the complexity, different testing companies use different testing panels and algorithms, which produce different results from the same genetic data across each company (Privacy

¹ Endogamy in anthropology refers to the custom of marrying only within the limits of a local community, clan, or tribe.

² Pedigree collapse refers to a phenomenon where a person's family tree has fewer unique ancestors than expected due to related individuals marrying, especially in recent generations.

Commissioner, 2019). In addition, the use of clickwrap³ and browsewrap⁴ agreements call into question informed consent and data ownership, as they are skewed to benefit the commercial interests of online multinational organisations, which profit from a range of services offered through DTC-GT, including on-selling information (Phillips, 2016). Data security and privacy have also been challenged. For example, there have been reports of a security breach at DTC-GT company 23andMe, with The Guardian reporting in 2024 that “hackers got nearly 7 million people’s data” (DeGeurin, 2024).

This research is a personal reflection (autoethnography) on the phenomenon of DNA testing as a mechanism of reconnection for cross-cultural adoptees created as part of historical colonial policies of assimilation and integration. The autoethnographic elements of in this thesis take the form of embedded narrative vignettes or ‘mystory’. These vignettes are placed between sets of three asterisks to form a reflexive ‘layered account’ of autoethnography (Denzin, 2014; Rambo Ronai, 1995; Piercy, 2022). This postmodern ethnographic technique describes the lived experience as narrative and critique without privileging it over the research; rather, it offers representation and reflectivity of lived experience (Collins, 2017; Denzin, 2014; Holdstock, 2024; Piercy, 2022; Rambo Ronai, 1995).

The intergenerational impact on identity and the use of DNA as the medium that carries genetic information enable the process our whānau used to reclaim our identity, whakapapa, and place of belonging, specifically by using non-health-related ancestry evaluations through genealogical DTC autosomal *GT* (DTC-GT). The autoethnographic

³ Clickwrap is an online contracting agreement that normally requires viewing the document, though not always reading. The consumer scrolls through the document and then normally signals their agreement with the terms by clicking a button, e.g., “I agree” (Phillips, 2016).

⁴ Browsewrap resembles the ‘clickwrap’, and there is sometimes an overlap, but the terms are typically located on a hyperlink, and the consumer may not be required to even open the document before signalling their acceptance by clicking “I agree” (Phillips, 2016).

insights shared in each chapter describe my lived experience of pursuing one's identity, the challenges, frustrations, anger, and hope for peace of completeness. The embedded narrative vignettes as 'mystory' are placed between three asterisks to allow for the layered revelation of the lived experiences that might otherwise be hidden, inviting the reader on a journey, positioning the researcher as the insider, and collaborating to share the knowledge gained (Piercy, 2022; Pitard, 2019). Be under no illusion; the process is not easy, and the results are not always what is expected or wanted.

I use my personal story to consider and connect to the additional challenges that remain for iwi Māori to legitimise DTC autosomal GT, as a process to enable others impacted by disconnection, to reconnect when they cannot use other commonly accepted DNA methods. These commonly accepted methods include mitochondrial DNA (mtDNA) for direct maternal ancestry and Y Chromosome (Y-DNA) for direct paternal ancestry; however, these methods are not always possible due to the genealogical tree structure. The hope is that my research will not only discuss mechanisms to identity reclamation, deepening the understanding of those disconnected from identity verification; but enable the possible reconnection to Indigenous identity and whakapapa through DTC-GT processes, adding another tool in the *kete* (basket) that may improve adverse social determinates through a culture-as-cure model for Māori, a remedy created by historical policies based on assimilation and integration from Aotearoa's past (Burke & Stets, 2023; Hobbs et al., 2019; Matika et al., 2017; MoH, 2024; Muriwai et al., 2016; Palmer et al., 2019). By doing so, the research aims to identify new pathways using DTC DNA that will benefit iwi Māori practices and outcomes. Overall, the research argues it is essential to approach DTC-GT with sensitivity and respect for Māori cultural values and traditions to avoid undermining their identity and heritage.

The impacts on our whānau have been lifelong. They impacted mental health, risk-taking practices, and, for some, the difficulty of reconciling identity and place when that had been stripped away. A path set to repeat the past if it cannot be reconciled ... for when you have no past, you sometimes see no future and therefore do not care about the consequences of your life... you make up perfect worlds in your mind, the world of others with their happy nuclear families that you want so bad you can almost taste it ... but it is not your life ... you with the different coloured skin, you who your birthparents did not want ... you are nothing. Yet, still, you want to be loved so badly, to belong, to understand who you are and where you are from.

DTC-GT opens a door of possibilities that can answer all the questions of who you are, where you belong and who your people are.

Research Design:

This study explores historical policies' social and personal impacts, particularly cross-cultural adoption, and their intergenerational effects on adoptees navigating the loss of identity and whakapapa. Employing an epistemological bricolage, this research adopts a multi-pronged interpretive qualitative approach. Bricolage is a qualitative method that uses a combinational research technique coined by the French ethnologist Lévi-Strauss (1966) as a “professional do-it-yourself” (Denzin & Lincoln, 2011, p.11) metaphor that allows multiple tasks and perspectives to be employed simultaneously (Denzin et al., 2024). This interdisciplinary approach that integrates autoethnography as a central methodology weaves scholarly and secondary data sources, personal narratives, and interpretative phenomenological analysis to provide a nuanced understanding of identity reconnection (Piercy, 2022).

Autoethnography offers a deeply personal lens to examine the lived experiences of identity loss and reclamation. This method aligns with Indigenous epistemologies as it values

knowledge that emphasises the significance of whakapapa, kaupapa *kōrero* (tell, say, speak, read, talk, address), *pūrākau* (myth, ancient legend, origin stories), and *tikanga* (customary practices) in shaping Māori identity and knowledge systems (Denzin, 2014; Nisa-Waller & Piercy, 2023). My research approach ensures a culturally grounded and methodologically robust approach by situating personal memory data, observation, artefacts [documents], and archival research within a broader kaupapa Māori and *mātauranga Māori* (Māori Knowledge, Indigenous knowledge systems) framework.

The narratives provided throughout each chapter document my lived experience of using DTC autosomal DNA testing to reclaim ancestral knowledge and explore the emotional, social, and cultural challenges embedded in this process. By doing so, my research humanises the impacts of identity loss and lays the foundation for developing a recognised framework for Indigenous and Māori peoples seeking to reconnect with their whakapapa through genetic genealogy. Building on these ideas, the following research aims and questions guide the focus of this research.

Aims and Objectives

- Humanise the plight of cross-cultural adoptees (or others who have been disconnected) who fall outside of the currently accepted testing and
- Lay the foundations (at least) for policy and guidelines for using autosomal DTC-GT to reconnect tangata whenua from an iwi perspective.
- Show a potential path forward to identity reclamation.

Research Questions:

1. How does DTC-GT facilitate reconnection to Māori identity and whakapapa for cross-cultural adoptees?
2. What are the short, medium and long-term risks and advantages of DTC autosomal GT testing for iwi Māori?

Social Policy lens: Social justice, decolonisation and well-being

Social Policy is an academic discipline concerned with how societies respond to human need, inequality, and well-being through institutional, legislative, and community-based mechanisms (Drake, 2001; Cheyne et al., 2008). It draws on interdisciplinary perspectives to understand how power, policy, and practice shape social outcomes. The significance of social policy in this thesis lies in its critical lens on the legacy of colonialism and the state's role in shaping Māori experiences of disconnection from identity, whakapapa and culture. Social policy provides the theoretical and analytical tools to examine the historical trajectory of assimilation and integration policies and their ongoing impacts on Māori health, well-being, and cultural continuity. It has influenced the development of this research by framing identity reconnection through DTC-GT not simply as a personal or cultural issue, but as a response to structural harm, thus positioning the research within broader debates on social justice, equity, and Indigenous rights.

Drake's (2001) *Principles of Social Policy* outlines key principles for understanding the impact and aims of social policy, including equality, equity, identity and need. Cheyne et al. (2008) highlight the importance of understanding the practices of social policy, such as welfare provision and social services, and their role in addressing inequality, an aim that is not always successful. Māori endured significant oppression, with the colonial system aiming to eliminate cultural differences and assimilate Māori into the predominantly white population

(Hynds et al., 2016). In the context of colonisation, cultural erosion, and identity loss, Drake's principles highlight how state policies, often framed as welfare-oriented, can instead contribute to systemic marginalisation. The imposition of settler colonial social policy structures in Aotearoa, such as the Treaty of Waitangi 1840, the Native Land Act of 1865, the Native Land Claims Adjustment and Laws Amendment Act 1901, the Tohunga Suppression Act of 1907, and the Social Security Act of 1938 facilitated Māori dependency on state systems, undermining traditional social structures and economic autonomy, with detrimental effects of cultural assimilation and the erosion of their traditional identity and connection to land (Roberts et al., 1995; Rose, 1965; Walker, 2004). These enforced policy processes disrupted whakapapa-based social organisation and extended family structures, and the transition to a nuclear family model has contributed to a loss of cultural cohesion and support systems by reinforcing assimilationist policies that eroded cultural identity and, for some cross-cultural adoptees, eliminated it altogether (Brown, 1991; Else, 1991). The historical inimical exclusion of agency in Indigenous perspectives privileged hegemonic policymaking and perpetuated disconnection (Drake, 2001; Smith, 2012; Walker, 2004). This process of policy-driven social engineering has had far-reaching consequences for the Māori, leading to poor social outcomes and cultural erosion since the signing of Te Tiriti o Waitangi.

Background: The impact and implications of colonisation and closed cross-cultural adoption

Aotearoa's historical and contemporary public and social policies have played a significant role in severing Māori identity and whakapapa, contributing to today's cultural and socio-economic inequities (A. Durie, 1997; M. Durie, 1997, 1998; Else, 1991; McCarthy, 1997; Reid, 2011). Cultural disconnection, marked by the forced separation from language, traditions, and land, was not incidental but a deliberate outcome of colonial policy (Else, 1991; M. Durie, 1997). *Te Tiriti o Waitangi* (The Treaty of Waitangi, 1840), intended to

protect Māori rights, was systematically breached, leading to widespread land dispossession and assimilation policies, mainly through the education system (Reid, 2011; Tomlins-Jahnke & Warren, 2011; Walker, 2016;). A broad spectrum of legislation, government practices, and societal attitudes facilitated the processes of assimilation and integration, undermining Māori cultural, economic, and social structures in favour of a system designed to consolidate colonial power and control over land and resources (Piripi, 2011).

The Social Security Act (1938), while introduced to provide financial support for those in need, reinforced European-centric social norms and expectations, imposing Western family structures and economic dependencies on Māori whānau (McCarthy, 1997). Further exacerbating this cultural erosion, post-World War II urbanisation policies uprooted Māori from their ancestral lands and communal support systems, forcing them into urban centres where they faced systemic discrimination, economic hardship, and further cultural alienation (Hunn, 1960; Meredith, 2015; Walker, 2004).

There were also less recognised policies like cross-cultural adoption, a practice cloaked in secrecy and social stigma, enabling generations of predominantly part-Māori tamariki to be placed in closed and sealed adoptions in Pākehā families (Else, 1991; NZLC PP38-2, 1999). The impacts of these policies, which led to closed cross-cultural adoptions in Aotearoa, have left enduring intergenerational disconnections for those it directly impacted and the generations that followed (Else, 1991; A. Durie, 1997).

These policies, designed to serve colonial and economic interests, have had long-lasting effects on Māori well-being, contributing to intergenerational disparities in health, education, and socio-economic outcomes (M. Durie, 1997, 1998). The legacy of forced assimilation continues to shape the inequities experienced by Māori today, necessitating a critical examination of the role of historical policy in shaping contemporary social determinants of health and identity (Orange, 2023).

Contemporary policies have sought to address and provide redress for some of the detrimental impacts on Māori, though heterogeneity is an issue (Kukutai, 2004). Recognition and revival efforts have been made to address historical wrongs with treaty settlements and the revitalisation of *te reo Māori* (Māori language). The health impacts on Māori have also been acknowledged with efforts to improve health outcomes through policies such as the Whānau Ora 2002 policy and the 2014 Māori Health Strategy (He Korowai Oranga), recognising a holistic approach to Māori health and the importance of cultural identity and traditional practices. There has also been an effort to integrate Mātauranga Māori, the Māori knowledge systems and worldviews, into broader societal contexts, including education and environmental management.

Cross-cultural adoptees also benefited from the Adult Adoption Information Act (1985), which finally allowed adoptees access to their previously sealed original birth certificates and information. However, even this change to policy regulation did not always give the information needed to answer the questions of those impacted. In a cruel twist of historical stigma, finding incomplete details in official records has left those searching without the necessary information to answer the most important question of identity: “Who am I, and where am I from?”. Modern technological advances in DNA testing have allowed affordable DTC-GT to be readily available. Unsurprisingly, Māori (and others) seek to fill these gaps in information by using DNA testing to reconnect with their whakapapa and identity to counteract the disconnection caused by historical policies.

Sitting between the lines of truth and imagination is a void that those without identity long to fill with the knowledge of who they are. To discover their 'place', the anchor that gives meaning to belonging, that wanting that is forever calling but never close enough to reconnect. Persistently creating scenarios of what might have been and haunted by the relentless questions of who I am and where I am from. That

relentless search for meaning in the pieces of identity you have that do not reconcile with the situation or place you find yourself in. Why is my skin a different colour from my family's? Why are my features so different to theirs... they are my family, and I love them, but we are not the same.

Identity

Identity is at the heart of this thesis, so it needs to be clearly understood. The following section first explains general identity theory, then outlines the connections between the theory and identity in accordance with *Te Aō Māori* (Māori worldviews), and whakapapa, and finally, it explains identity in relation to cross-cultural adoption and cultural dislocation.

Identity Theory

The study of identity has become a crucial area of academic inquiry, as it illuminates the complex and dynamic nature of the self and its relationship to social, cultural, and historical contexts. Individual identity is a complex and multifaceted concept explored extensively across various academic disciplines, including psychology, sociology, and philosophy. According to identity theory, a person's self-concept comprises various aspects of life, such as social roles, age, gender, and reference groups (Burke & Stets, 2009, 2023; Scheuringer, 2016). These different identities can become increasingly salient and vital in shaping how individuals interpret and respond to various situations (Heird & Steinfeldt, 2013). Recognising this multiplicity of identities has been a significant theoretical development in recent decades, as researchers have acknowledged that a single, fixed identity does not define individuals but is a dynamic and evolving set of identities shaped by social interactions and contexts (Scheuringer, 2016).

Some scholars argue that identity can be viewed in two ways or directions; Benwell and Stokoe (2006) identified a "public phenomenon, a performance or construction that other people interpret", as well as "an 'essential,' cognitive, socialised, phenomenological or psychic phenomenon that governs human action" (as cited in Flowerdew & Wang, 2015, p. 81). This construction takes place through discourse and other social and embodied conduct, such as how we move, where we are, what we wear, and how we talk (Flowerdew & Wang, 2015). According to Jenkins (2014), social identity is a dynamic process shaped through interactions between individuals and society. It is internally constructed, how individuals see themselves, and externally defined by social structures, cultural expectations, and group memberships. This dual aspect highlights the fluid and relational nature of identity formation.

In addition to these individual and social aspects of identity, researchers have also explored the concept of collective identity, which refers to the shared sense of belonging and identification with a particular group or community (Snow, 2001). Jenkins (2014) emphasises that collective identity emerges through shared social experiences, symbols, and practices that distinguish one group from another. Group identity is reinforced through inclusion and exclusion mechanisms, fostering a sense of belonging while defining boundaries between "us" and "them." This process plays a crucial role in maintaining social cohesion and cultural continuity. Collective identity can surface in various contexts, such as gender, ethnicity, religion, and nationalism, and is expressed through symbolic and expressive forms (Snow, 2001).

Identity - Māori identity and whakapapa

Māori settled in pre-colonial Aotearoa before 1300 CE as identified in oral histories that relate beyond the arrival of *iwi waka* (allied kinship groups from migrating canoes that occupy set territory) (Royal, 2005). These societal groups, known as *iwi*, *hapū* (*subtribe* or

clan) or whānau, worked together to preserve their collective groups and were strengthened by the familial ties that bound them together; this ancestral information was considered tapu and is known as whakapapa (Walker, 2004). Familial ties were strengthened through *mārenatanga* (marriage) between iwi and hapū, often to seal alliances, calm hostilities, or share resources, and the practice of *whāngai* (foster or adopt; *alternately atawhai or tamaiti whāngai*) within whānau and hapū ensured all tamariki knew their *pepeha* (phrases that define and describe connections to people and places), and whakapapa, ensuring they remained connected to their identity (Mead, 2016: Walker, 2004).

Whakapapa was historically used to confirm access rights to resources, safe passage, and leadership rights, so it was guarded within iwi affiliations to ensure one was who one said they were. Whakapapa remains a crucial part of Māori identity and sets one's place of belonging in the world with ties that anchor that place to the *whenua* (land and placenta) (Mead, 2016: Walker, 2004). It was and is still used to recognise leadership, land and fishing rights, kinship and status. A Te Aō Māori worldview connects all things physical and metaphysical; without knowing one's whakapapa, one has no place, no grounding in the *whenua* or identity.

The loss of identity and whakapapa through social, economic and state-based processes has been a significant driver of poorer social outcomes for Māori in Aotearoa, no longer connected to their *whenua* or able to recite their *pepeha* or *whakapapa*. In the words of Hirini Moko Mead (2016), “without it [whakapapa] an individual is outside looking in” (p.47). The disruption of cultural identity and heritage caused by various policies mentioned previously has had profound and lasting effects on various aspects of Māori life. The disconnection from whakapapa has contributed to numerous adverse social outcomes, driven by cultural suppression and dislocation (Walker, 2004). This weakening of cultural identity, self-esteem and cohesion has led to challenges with mental health, educational achievement, and economic stability (M. Durie, 1998, 2021; Reid, 2011; Walker, 2004). Additionally, it has contributed to health disparities, social issues and intergenerational

trauma (M. Durie, 1998, 2021). These factors, in turn, have been linked to higher rates of substance abuse, crime and family breakdown that continue to perpetuate cycles of disadvantage and social challenges for many (M. Durie, 2021).

The impacts of Cross-Cultural adoption on Indigenous identity

Whakapapa is unique in that it traces Māori back to the beginning of time; not knowing one's whakapapa can be likened to “physical pain” (Hurihanganui, 2019, para. 20).

The feeling of disconnection described by cross-culturally closed adoption adoptees in Haenga-Collins's (2019) research of walking between two worlds, where you are too brown to be white, too white to be brown, caused great shame when asked, "*Nō hea koe?* (Where are you from?)" (Hurihanganui, 2019, para. 26). For the colonial lost generations severed from whakapapa, culture and isolated by 'difference' it was a reminder of identity lost (Haenga-Collins, 2015 & 2019; Hurihanganui, 2019).

Disconnection from identity and whakapapa by cross-cultural adoption doesn't go away because one generation passes. It is simply passed on to the next. The loss caused by cross-cultural adoption for my mother was profound and lifelong; the physical and mental distress it had caused her was etched in the sadness that bubbled to the surface, the sometimes-poor decisions that were made, and often the belief that she deserved less somehow. When she developed and later died of Motor-neurone disease without ever knowing the answer to the biggest question in her life - No hea koe? (Where are you from?), it was the catalyst that sparked my journey of reconnection and reconciliation for our whānau. However, I hadn't anticipated the discovery of so many others trying to answer the same question. As

an insider, I feel that pain; as an outsider, I can do more to help improve the odds of reconnecting Indigenous Māori identity and whakapapa to those who choose to look for it. Mo tatou, a mo ka uri, a muri ake nei (for us and our children after use)" (Brown & Norton, 2017, inside cover).

It is important to note that Poata-Smith (2013) contests the simplicity of whakapapa-based concepts of identity by examining their unreliable and amorphous nature. His observations are particularly significant in understanding the identity of Indigenous cross-cultural adoptees.

The social relations and assimilation agenda between Māori and the State cause individuals bearing multiple identities to have their Indigenous identity to be shaped, negotiated, and renegotiated through "multiple intersecting social and identity attributes that help comprise their self-identity" (Poata-Smith, 2013, p. 31). Therefore, the notion of authentic Māori identity, fixed relatively unchanged through space and time, sits in a cultural nationalist political ideology that the 'essence' or innate characteristics that define Māori identity remain constant. However, Poata-Smith (2013) references the competing discourses contested in the contemporary understanding of Māori identity that are worth remembering in relation to cross-cultural adoption.

Māori cross-cultural adoptees suffered from the struggle of dual identities, "walking between two worlds, never fully belonging in either their birth or adoptive families or fitting comfortably with either a Māori or *Pākehā* (European) cultural identity" (Haenga-Collins & Gibbs, 2015, p. 62). The noticeable physical differences, along with language, culture, values, spiritual or religious expectations, and racism, caused the development of dual or multiple identities due to the insecurity of belonging (Haenga-Collins & Gibbs, 2015, p. 63). The "paradox" (p. 63) was between this conflict of identities and a 'stable home', resulting in *pāmamae* (hurt, pain, grief, distress) caused through denying Māori children knowledge of

their ancestry (Haenga-Collins & Gibbs, 2015). Haenga-Collins & Gibbs' (2015) research also talked of the cross-cultural adoptee participants "not having a secure sense of belonging within either culture" (p. 71), excluded and disconnected from their cultural heritage, in a constant battle of identity.

The idea of shame and self-contempt in the oppression projected from Nationalist ideals by the determination of colour, its outward manifestation of race (Fanon, 1967), could also draw parallels for cross-cultural adoptees who could never escape their subjection of colour. Categorisation by race meant brown Māori babies were "hard to place", enabling less desirable Pākehā options to be used, and whānau alternatives were actively blocked, highlighting the underlying "racism and disdain" for Māori that permeated cross-cultural adoptions (Haenga-Collins, 2019, p.38). Resulting in a constant negotiation between the lack of internal identity verification and the external categorisation of others from competing discourses of what it is to be Māori, producing a "dialectical relationship between the way we attempt to present ourselves and the way that others regard us" (Burke & Stets, 2023; Poata-Smith, 2013, p.31).

The impacts of any loss of identity seem to weigh heavy no matter where a person is from. Age, background knowledge, and race are mere signposts to be used when the urge to know becomes so great it cannot be ignored anymore. Social media pages are full of the lost and culturally isolated, using the modern science of DNA testing to try and re-establish their genealogy, their whakapapa, the connections that wairua (spirit, soul) arguably never sets us free of, always calling us back ...

Thesis Structure

This thesis is structured into seven chapters, each building upon the previous, to explore the intersection of colonial policies, identity loss, and the role of DTC-GT in indigenous identity reclamation:

Chapter 1: Introduction - as presented here, outlines the core issues, key concepts, and research approach taken in this study. It provides an overview of the study's research questions, aims and significance.

Chapter 2: Methodology - discusses the qualitative research framework, including epistemological bricolage, autoethnography, kaupapa Māori approaches, and interpretive methodologies. It details the research design, core concepts and analytical approaches.

Chapter 3: Policy context of assimilation and integration and cross-cultural adoption – examines the historical and legislative frameworks that facilitated Māori assimilation and integration, focusing on cross-cultural adoption as a tool of cultural disconnection.

Chapter 4: Adoption as colonisation practice – Explores adoption as an extension of colonial control, analysing its role in disrupting whakapapa and reinforcing Western legal, social, and cultural structures.

Chapter 5: Policies and issues of DTC DNA usage - Investigates the contemporary use of genealogical DTC-GT companies for genealogical purposes only and how it intersects with Indigenous identity and whakapapa reclamation.

Chapter 6: DTC DNA Usage Risks and Benefits - Investigates the potential risks and benefits of the contemporary use of genealogical DTC-GT and its ethical, legal, and social implications.

Chapter 7: Discussion – The discussion synthesises key findings, linking historical policy frameworks and contemporary resurgence, personal narratives, and contemporary reconnection efforts to critically assess the role of DTC-GT for Indigenous identity. The

chapter concludes by outlining a series of questions that can be used to guide those who wish to engage in identity reclamation through the use of DTC-GT.

Chapter 8: Conclusion – The conclusion summarises the research findings, reflects on the study's contributions, discusses implications for future policy, Indigenous self-determination, and identity reconstruction, and makes some key recommendations.

Torn between the very real emotions and memories of times past, the struggles to find a place, identity and peace from the immature raging of an adolescent mind. Lost to the conflicting emotions and rationalisations that come with a lack of identity. I carry that forward, mostly hidden in the recesses of my mind. Time has brought peace and understanding of place, but my identity is still fragile internally. I have learnt that no magic formula, piece of knowledge, or relationship can change the past, but with age, there is an acceptance of the things we cannot change.

This research has been cathartic!

It has allowed me the space to pull back the veil and expose what intergenerational identity disconnection means to me. However, with that comes the responsibility to be reflective and critical of my thinking, my positionality and the context from which it has come, the drivers behind my decisions, and the decisions I make. The final question at the end of this thesis will be: If I knew then what I know now about DTC DNA testing, would I make the same decision?

I know how I would answer, but now you can be the judge.

Chapter 2 Methodology

The purpose of this chapter is to describe the research approach, particularly its theoretical underpinnings and different epistemic lenses. The chapter begins by describing the overall qualitative research approach and revisits the research questions. This is followed by an in-depth explanation of the epistemic bricolage of post-modernism, identity and Kaupapa Māori research. The methods of autoethnography and interpretative phenomenology analysis are then explained.

Qualitative research is particularly suited to exploring lived experiences, allowing in-depth reflection and interpretation. A qualitative approach is also appropriate as the research engages with complex, unquantifiable phenomena related to identity, whakapapa, and the impacts of DNA testing. By employing autoethnography as a central lens, this study critically examines the intersection of DNA testing, identity reclamation, and whakapapa, situating personal narratives within broader sociohistorical contexts. This reflexive engagement adds depth and nuance, highlighting the emotional, cultural, and existential dimensions of reconnecting with whakapapa through contemporary genetic technologies.

Integrating autoethnography as the central methodology the research also draws on elements of kaupapa Māori, mātauranga Māori, tikanga, kaupapa kōrero, Pūrākau, and other ethnographic methodologies (autoethnographic reflection, personal memory data, observation, artefacts (documents), and archival research) to create a methodology that is interdisciplinary innovative and fit for purpose (Lee, 2009; Ware et al., 2017). To borrow and adapt a metaphor from Denzin et al. (2024, p. 4), like *rangaranga* (alternately *raranga*) (to weave), the interwoven *harakeke* (flax) symbolises the interconnective nature between historical moments, policies, politics, Indigenous colonisation practices, heterogeneity of Māori identity and whakapapa, impacts to social determinants of health and wellbeing, and modern DNA technology phenomenon.

Due to the complexities and interplay of these epistemological and ontological approaches, an interpretive bricolage was adopted. Employing epistemological bricolage to adopt a multi-pronged interpretive qualitative approach is useful for understanding contemporary reconnection to Indigenous identity, while the use of autoethnography and phenomenology connects to relevant literature on colonial assimilation and integration practices, including cross-cultural adoption for Māori and contemporary neoliberal positivist control practices across social policy in Aotearoa. The interweaving of these knowledges addresses the following research aims and questions.

Aim and Objectives:

- Humanise the plight of cross-cultural adoptees (or others) who fall outside of the currently accepted testing and
- Lay the foundations (at least) for policy and guidelines for using DTC autosomal DNA to reconnect Tangata whenua from an iwi perspective.
- Show the potential path forward to identity reclamation.

Research questions:

3. How does direct-to-consumer (DTC) DNA testing facilitate reconnection to Māori identity and whakapapa for cross-cultural adoptees?
4. What are the short, medium and long-term risks and advantages of DTC autosomal DNA testing for iwi Māori?

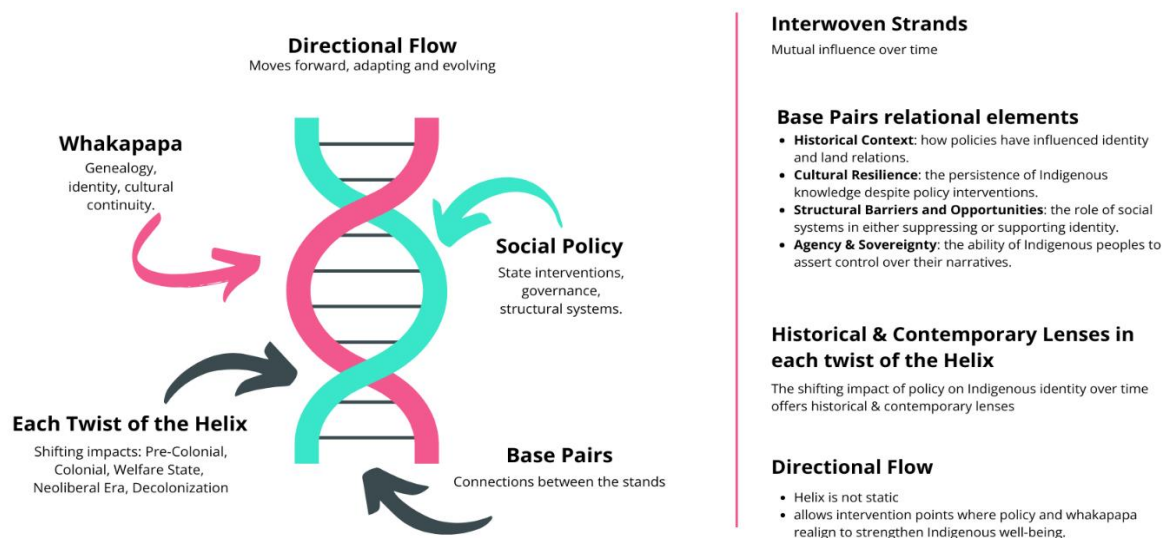
Epistemological Bricolage

Bricolage research is a qualitative method that uses various existing resources to address a problem or make sense of the world. It is a combinatorial approach involving various techniques, information sources, and methods, including being creative with the available resources. The French ethnologist Lévi-Strauss's (1966) concept of the bricoleur was a “professional do-it-yourself person” (Denzin & Lincoln, 2011, p. 11), allowing research to “perform a large number of diverse tasks” (Denzin et al., 2024, p. 16).

Using existing materials and resources that incorporate and fit the research undertaken, bricolage offers new ways of combining them to address problems from a different perspective or for new purposes. Combining various methods allows the researcher to make sense of complex issues or alternative purposes. Creativity can open opportunities to incorporate practices or resources that fit the research aims and objectives while exploring ways multiple phenomena could be connected. In addition, bricolage allows context considerations across historical, cultural, and institutional factors that shape phenomena. The bricolage approach can add rigour, breadth, complexity, richness, and depth by

Figure 1: Conceptual framework as a visual representation of the approach to epistemological bricolage. Turanga, K. (2025).

Conceptual Framework: Interconnectedness and dynamic nature of identity, policy, and structural influence



combining many methodological practices and empirical materials from different perspectives, as listed below (Denzin & Lincoln, 2011). Above (*see Figure 1*) is a visual representation of my approach to bricolage, bridging the epistemological, ontological, and kaupapa Māori methodologies with the interconnectedness and dynamic nature of identity, policy, and structural influence. Subsequent sections in this chapter elaborate on different parts of this model.

Postmodernism

Postmodernism is characterised by several key tenets that challenge traditional frameworks of understanding. Lawrence Kuznar (as cited in Salberg et al., 2017) emphasises that text and language are central to human existence. The application of literary analysis across all forms of phenomena, a persistent questioning of the nature of reality and representation, and a critique of overarching metanarratives that claim universal validity (Salberg et al., 2017).

Postmodernism also rejects established methods and evaluative systems, focusing instead on the fluidity of power relations and the hegemony embedded within them. This critique extends to Western institutions and knowledge systems, questioning their claims to universality and objectivity. Lawrence Kuznar defines postmodern thought as encompassing most or all of these elements, rooted in the subjectivity of human experience (Salberg et al., 2017).

As cited in Salberg et al. (2017), Melford Spiro describes postmodernism as a critique of science based on subjectivity, presenting both epistemological and ideological arguments. The epistemological argument of postmodernism posits that anthropology, and other social sciences, cannot claim the status of objective science due to human beings' inherent subjectivity. Furthermore, the ideological argument contends that objectivity itself is a constructed illusion, often wielded as a tool to maintain structures of oppression against

marginalised groups, including women, ethnic minorities, and those from third-world economies (Salberg et al., 2017). Through these critiques, postmodernism exposes the limitations of traditional scientific paradigms and advocates for a more reflexive, inclusive approach to knowledge and power.

Identity Theory

Identity is a complex and multidimensional construct widely explored across psychology, sociology, and philosophy. Identity theory posits that an individual's self-concept is shaped by multiple interrelated factors, including social roles, cultural affiliations, and personal experiences (Burke & Stets, 2021). Identity is neither static nor singular; it evolves dynamically through social interactions and contextual influences (Scheuringer, 2016). This perspective acknowledges that individuals navigate multiple identities simultaneously, with certain aspects becoming more salient in different contexts (Heird & Steinfeldt, 2013).

The fluid nature of identity challenges essentialist and singular conceptions of selfhood, particularly in cross-cultural and adoption contexts, where identity formation is further complicated by displacement and external classification. Scholars have argued that identity operates as a "public phenomenon, a performance or construction that is interpreted by others" (Flowerdew & Wang, 2015, p. 1). This construction occurs through discourse and embodied expressions, such as language, appearance, and social positioning (Flowerdew & Wang, 2015).

In addition to individual identity, collective identity is a crucial dimension of self-concept, referring to the shared sense of belonging to a particular group (Snow, 2001). Collective identity manifests across various social categories, including ethnicity, nationality, gender, and religion, and is often reinforced through symbolic and expressive forms (Snow, 2001). This dynamic interplay between individual and collective identity is particularly

relevant when examining Indigenous identities, where cultural preservation and intergenerational knowledge transmission play a central role in maintaining identity integrity.

Indigenous Identity and Māori Self-Identification

The identity of Indigenous peoples, including Māori, is profoundly shaped by colonial histories, structural categorisation, and cultural resistance, for example, using racialised constructs such as blood quantum that dictated ethnic classification based on ancestry percentages that classified Māori as “half-blood or more” (Hunn, 1960, p. 18). Māori identity is underpinned by whakapapa, tikanga, and mātauranga Māori, forming a holistic and intergenerational sense of belonging (Rameka, 2016). However, colonial assimilation policies and categorisation systems have profoundly disrupted these identity structures, often imposing externally defined frameworks of ethnicity and social classification (Roberts et al., 1995; StatsNZ, 2001).

The history of state-led assimilation policies, including forced adoption and reclassification based on blood quantum measures, illustrates the imposed fragmentation of Māori identity (Brown, 1991; Else, 1991, 2019; Hunn, 1960). For instance, policies such as “Taken for Adoption” systematically removed Māori children from their whānau and placed them in non-Māori households, severing connections to language, culture, and ancestral ties (Else, 2018, 2019; RCoL, 2024). This loss of cultural continuity has significantly affected identity formation and well-being among generations of Māori adoptees (Gupta & Bhugra, 2009; Hirtz, 2003).

Despite these colonial impositions, Māori identity remains dynamic and self-determined. The ability to select multiple ethnic identities in the Aotearoa Census (Stats NZ, 2001) reflects an acknowledgement of identity fluidity and self-identification rather than rigid racial categorisation. This shift acknowledges that identity is not a fixed category but an evolving construct informed by ancestry. Furthermore, identity as a form of categorisation

remains distinct from self-identification. External classification relies on observable characteristics and stereotypes, often serving colonial and administrative purposes, whereas self-identification is rooted in personal and communal affirmation of belonging (Burke & Stets, 2023).

Pluralism, Colonisation, and Epistemological Framing

Pluralism, as a colonial construct in Aotearoa, has been employed to justify the coexistence of diverse cultural identities while maintaining structures of colonial dominance. This thesis does not engage with pluralism's multiplicity in the broadest sense; instead, the thesis focuses on the dual identities of colonised and coloniser. This approach allows for an epistemological synthesis of postmodernism and kaupapa Māori theory, acknowledging the intersection of Indigenous knowledge systems and critical perspectives on power, identity, and historical injustice.

By framing identity within this duality, the research critically examines how Māori identity has been shaped by Indigenous self-determination and colonial imposition. The juxtaposition of these forces highlights the contested nature of identity in Aotearoa and reinforces the importance of whakapapa, cultural continuity, and self-definition in resisting assimilationist narratives.

Identity and Well-Being

Identity is integral to well-being, extending beyond momentary happiness to encompass cultural continuity, belonging, and self-actualisation. Well-being, broadly defined as "the state of being comfortable, healthy, or happy" (Oxford Languages Dictionary, n.d.), is deeply interconnected with identity stability and cultural security. For Māori, well-being is relational, encompassing spiritual, social, and environmental dimensions alongside individual health (M. Durie, 1998). The erosion of Māori identity through assimilation policies has had

significant implications for well-being, reinforcing the need for cultural reclamation and Indigenous-led frameworks of identity and social policy (Ahuriri-Driscoll, 2020; M. Durie, 2005, 2021; Te Wānanga o Taukawa, 2021).

Summary

The study of identity in the context of Māori self-determination and colonial impact necessitates an approach that recognises the fluidity of identity, the legacy of imposed categorisation, and the resilience of Indigenous cultural frameworks. By integrating identity theory with Indigenous perspectives, this research highlights the dynamic interplay between self-identification and external classification, demonstrating how Māori identity continues to evolve in response to historical and contemporary challenges. In doing so, the thesis contributes to broader discussions on identity, cultural preservation, and the role of social policy in shaping Indigenous self-determination.

*I am the coloniser and the colonised, the lost and the found, the walker
between worlds (epistemologies). Pragmatic through necessity. My whakapapa, like
an invisible tread that has the strength of harakeke's muka (prepared flax fibre), but
invisible in the physical world, forever binding my duality of identities, forever
contesting, struggling to solidify and bind all the pieces together in a cohesive sense*

of self ... a brokenness, flawed, filled with doubt and confusion as the invader and the invaded struggle for Kotahitanga⁵ in unifying the self.

Kaupapa Māori research

This study is grounded in the principles of kaupapa Māori research, which centres Te Aō Māori values, and experiences as the foundation for the research process. Drawing from Te Aō Māori mātauranga, tikanga, kaupapa kōrero, pūrākau as a method, kaupapa Māori research is based on the premise that Māori had ways of defining, accessing, and protecting knowledge before Europeans arrived in Aotearoa (Lee, 2009; Ware et al., 2017). This epistemology challenges the dominance of individualistic research approaches and power positioning. Pūrākau, mātauranga Māori, and tikanga will be central to guiding this research.

Pūrākau

Pūrākau is an ancient practice that transcends the mere transmission of ideas, serving as a means of creating shared meaning and identity (Stansfield, 2020). In Māori culture, myths and legends carry this function, deeply embedding cultural values and a sense of 'place' into the collective consciousness. Stories about 'place' play a pivotal role in *hāpori* (community) development, fostering a shared identity that enables individuals and *whānaunga* (relative, blood relation) to negotiate collective action, particularly when genealogical whakapapa is absent (Shevellar, 2011). This shared identity, rooted in 'place',

⁵ Kotahitanga – to unify the Nation” ~ Kiingi Tuuheitia National Hui ā Motu (the National unity Hui) at Tūrangawaewae Marae 20 Jan 2024. To unify ourselves.

forms bonds that facilitate collaboration, a dynamic increasingly critical in response to external pressures and modern geographically spread contexts. Lee (2009) states that:

Pūrākau, a traditional form of Māori narrative, contains philosophical thought, epistemological constructs, cultural codes, and worldviews that are fundamental to our identity as Māori...Furthermore, pūrākau can continue to be constructed in various forms, contexts and media to better understand the experiences of our lives as Māori - including the research context (p. 1).

For example, an Australian study found that rural communities with strong place-based identities mirrored the cohesion in communities united by the common threat of fire. In both cases, 'yarn' (*storytelling in a culturally safe environment*) was instrumental in building identity, enabling cooperation, resource-sharing, and collective action to ensure family safety during crises (Prior & Eriksen, 2013). Such insights underscore the importance of storytelling as a cultural tradition and a mechanism for resilience and unity.

In Aotearoa community development, the stories of the community become integral to its identity, offering members a way to connect and identify with one another. As Stansfield (2020) notes, these narratives provide a foundation for collective belonging and action. For Māori, storytelling is not merely recounting history but a living practice that reinforces cultural identity, maintains connections to the land and inspires shared experiences and purpose. Through this lens, pūrākau emerges as both a cultural cornerstone and a strategic tool for fostering collaboration and resilience in the face of shared challenges (Lee, 2009; Stansfield, 2020).

Mātauranga Māori

Māori knowledge and ways of knowing are the foundations that centre Māori worldviews. Whakapapa's historical and cultural significance in Māori society is more than a genealogical record. It encompasses identity, belonging, and relationships with whenua, iwi,

hapū, and *Atua* (deities). The loss of these connections through colonisation, land alienation, and assimilation policies has had enduring effects on Māori identity and well-being. The emergence of DNA testing offers an opportunity for Māori to engage with a tool that might facilitate reconnection, albeit with considerations of cultural appropriateness and sovereignty.

Drawing a narrative that bridges mātauranga Māori's pūrākau whakapapa, *Atua*, and *kupu* (word, vocabulary) with scientific principles of DTC autosomal DNA testing's double helix, chromosomes, SNPs (*single nucleotide polymorphisms*), and centiMorgans (cM) offers an opportunity to integrate indigenous and Western knowledge systems, creating a dynamic dialogue that informs new ways of understanding identity and origins. Below is a narrative framework for this alignment.

Mātauranga Māori and the Double Helix: A Shared Narrative of Origins and Connection

Mātauranga Māori, pūrākau and whakapapa weave together the spiritual, genealogical, and relational aspects of existence across generations and realms. Similarly, the iconic double-helix structure of DNA serves as a potent metaphor for the interconnectedness of life, identity, and origins. While whakapapa encodes relational and cultural knowledge, linking people to *tūpuna* (ancestors), *Atua*, and *whenua*, DNA encodes biological information.

Drawing a narrative between cultural frameworks and the double helix reveals a symbiotic dialogue in which Western genomic science is enriched by Indigenous wisdom, generating new knowledge grounded in holistic understanding. Whakapapa can be viewed as a symbolic representation of the double helix. Its intertwining strands echo the recitation of genealogies, where names, events, and relationships spiral together to form a continuous, living legacy. Layers of whakapapa connect people to their origins and responsibilities, mirroring each rung of the DNA ladder formed by base pairs.

Social policy can adopt the double helix metaphor as a model for relational frameworks, emphasising the interplay of historical, cultural, and structural factors in shaping identity and social outcomes. Policies addressing disparities for Māori must account for these interconnected layers of whakapapa, ensuring culturally resonant interventions.

Whakapapa and Chromosomes as Lines of Connection

In genomic science, chromosomes carry genetic information passed from ancestors to descendants in patterns that can be traced and mapped. Similarly, whakapapa is the Māori framework for understanding lineage and ancestry, connecting individuals to their tūpuna and Atua through a web of relationships. Both systems represent the intergenerational transmission of identity and knowledge.

Chromosomes can be likened to the lines in a whakapapa recitation, where each branch represents a tūpuna or a connection to the spiritual and physical realms. Just as chromosomes hold genetic instructions, whakapapa holds a person's lineage's stories, values, and mana.

Policies addressing intergenerational trauma, land alienation, and cultural revitalisation must recognise the holistic inheritance of tangible and intangible assets. Initiatives could focus on reconnecting Māori with their whakapapa through educational programs, support for iwi and hapū governance, and cultural competency in public services.

Pūrākau and SNPs: The Stories Within

As genetic variation markers, SNPs tell stories about ancestry, diversity, and shared origins. Pūrākau, similarly, are narratives that encode the origins of life, relationships with Atua, and the dynamics of human interaction with the natural world. These stories reflect the

diversity and unity within whakapapa, and both systems emphasise uniqueness within shared systems of connection.

Each SNP represents a “story” encoded in our DNA, contributing to the narrative of who we are. These genetic markers parallel the layers of meaning in pūrākau, where variations in storytelling reflect the richness and adaptability of knowledge across iwi and hapū. SNPs and pūrākau serve as identity markers, mapping connections to specific ancestors and broader human origins.

Recognising the narrative power of SNPs and pūrākau, policy can incorporate storytelling for empowerment and education. Initiatives could include digital platforms or community projects that enable Māori to explore genetic and cultural narratives in tandem, fostering identity and resilience.

CentiMorgans and the Concept of Relational Proximity

In genetics/genomics, cM measures the degree of relatedness, quantifying closeness within family networks. In Māori thought, relational proximity is not only biological but also spiritual and cultural, defined by shared whakapapa and obligations to one another. cMs quantify biological closeness, while whakapapa quantifies relational and spiritual closeness through shared ancestry and Atua. Both frameworks emphasise that connections are not merely linear but layered and multifaceted, creating a network of interdependence.

Policies can draw on relational proximity to build programs emphasising collective well-being. For example, housing, health, and education policies can prioritise whānau-centric (family-centric) approaches, emphasising the collective rather than individual needs.

Atua, Origins, and the Cosmos in DNA

Māori pūrākau describe the origins of the universe through the separation of *Ranginui* (sky father) and *Papatūānuku* (earth mother) and the birth of Atua, who embody natural forces. These stories provide a cosmological whakapapa, linking all life to a shared source. In genetics, DNA testing traces evolution and human origins to shared ancestors and migrations, offering a parallel cosmological narrative. The cosmology of DNA, tracing migrations and ancient ancestry, resonates with Māori pūrākau, where Atua symbolise foundational forces of creation. This alignment emphasises shared origins, positioning DNA as a modern storytelling tool that echoes pūrākau.

Kupu and SNPs: The Language of Identity

The interpretation of SNPs requires a scientific language, like whakapapa, encoded in kupu, names, stories, and terms that carry meaning and identity. Mātauranga Māori views words as having mana, shaping reality and preserving history. The naming and interpretation of SNPs can draw inspiration from the mana of kupu, ensuring that scientific language respects and aligns with cultural values. For example, genomic tools could use Māori kupu to describe haplogroups or ancestry in a way that reinforces rather than commodifies whakapapa.

Kupu and the Genetic Code: Language and Framework

The genetic code is the language of life, determining biological functions. In Mātauranga Māori, kupu carry mana and embody whakapapa, shaping reality and transmitting knowledge. Both systems rely on interpretation and contextual understanding.

Policies can integrate Māori kupu and conceptual frameworks into interpreting scientific data and policy design. This ensures that Western paradigms do not overshadow Māori perspectives, promoting equity and *tino rangatiratanga* (Self-determination, Māori

Sovereignty). For instance, health data initiatives could incorporate Māori terminology and values to frame genetic research and health equity efforts.

Mātauranga Guiding Science: Informing New Knowledge

By positioning Mātauranga Māori as a lens through which genomic data is interpreted, this narrative ensures that whakapapa remains central to identity and is not reduced to mere data points. Western genomic science benefits from indigenous relational frameworks, adding depth and context to its findings. Mātauranga Māori provides an ethical and relational framework for interpreting genomic data, ensuring that identity remains holistic and grounded in the community. Genomics offers tools to visualise and validate whakapapa, expanding its scope to global contexts. Together, they create new knowledge that respects both the scientific precision of genomics and the spiritual and cultural integrity of Mātauranga Māori.

As a symbol of life and connection, the double helix parallels the Māori concept of whakapapa and the relational narratives within pūrākau. These narratives reveal that chromosomes, SNPs, and cM are not just technical aspects of DNA testing; they are part of a broader story that mirrors the relational and interconnected worldview of Mātauranga Māori. Aligning genomic science with Mātauranga Māori, a powerful narrative of interconnectedness emerges, fostering a holistic understanding of identity that respects human existence's molecular and spiritual dimensions. Thus, we can ensure that science serves as a vessel for indigenous knowledge, creating a dialogue that enriches both paradigms and fosters a deeper understanding of identity, whakapapa, and the shared origins of humanity. This integration informs Western knowledge and fosters *kotahitanga* (unity, togetherness, and solidarity) with a shared future where science and culture co-create pathways for understanding and belonging.

Research principals

Although this research is not directly a kaupapa Māori research paper, it would be remiss not to acknowledge the ethical principles and Tikanga given below and acknowledge the kaupapa Māori epistemological views in relation to Māori identity and whakapapa. The principles listed below are drawn from Smith's (2012) work on theory and research design, with kaupapa Māori theory and principles in qualitative research (Moyle, 2016). In retrospective reflection, this author has instinctively followed Smith's principles and will always keep them in mind to guide and inform further research.

- Aroha ki te tangata (Respect for the people you are working with)
- Kanohi kitea (The seen face)
- Titiro whakarongo kōrero (Look and listen first: Speak later)
- Manaaki ki te tangata (Be generous in sharing with and hosting people)
- Kaua e takahia te mana o te tangata (Take care not to trample on the mana of people)
- Kia tūpato (Be cautious)
- Kaua e māhaki (Do not flaunt your knowledge)
- The principle of Te Tiriti o Waitangi

Methods: Autoethnography, phenomenology, and Kaupapa Māori

This research adopts a layered autoethnographic approach, integrating personal narratives, literature, and phenomenological analysis to critically examine the intergenerational impacts of cross-cultural adoption on Māori identity and whakapapa.

The methods used include autoethnography and interpretive phenomenology, which are underpinned by kaupapa Māori principles. These three research methods were used to analyse academic commentary on key policy decisions, popular culture, digital media, and autobiographical experience.

Autoethnography serves as both a methodology and method, offering a profoundly reflexive and interpretive approach to understanding personal and cultural identity. It foregrounds lived experience as a legitimate and valuable form of knowledge, challenging positivist paradigms by situating the researcher within the research (Denzin & Lincoln, 2011). As Denzin (2017) argues, "questioning and unveiling the self is at the heart of critical autoethnographic work" (p. 9), reinforcing its role in uncovering hidden narratives and power structures. Phenomenology is the study of a lived experience, or an event as experienced and lived by a person, deriving existential shifts in understanding while monitoring the biases, beliefs and personal experiences displayed in autoethnographic vignettes (Alase, 2017; Pitard & Liamputtong, 2019).

Kaupapa Māori and Insider status:

Smith (2006), as cited in Moyal (2016, p. 33), identifies the "methodological risks inherent in 'insider' research as ... the potential for bias, lack of distance and lack of objectivity and...underplay the need for rigour and integrity, ... to mistake the research role with an advocacy role". Due to the autoethnographic nature of the research based on the author's role in using DTC autosomal DNA to identify and whakapapa, this author is an 'insider' and cannot be fully detached from the research. Navigating the complexities of insider and outsider perspectives is a central consideration in this research. As both participant and researcher, I must critically engage with my positionality and how my experiences shape the research process. Autoethnography allows nuanced engagement with this dual positionality, providing space for subjective reflection and critical interrogation.

By integrating kaupapa Māori approaches with autoethnographic methods, this study offers a framework for understanding how Māori adoptees and those disconnected from their whakapapa might reclaim their identity through DTC-GT while maintaining Indigenous knowledge systems. It contributes to a growing body of scholarship that challenges colonial narratives of Indigenous identity, centring lived experience as a legitimate and powerful site of knowledge production.

A layered approach to Autoethnography

The layered practice approach, as explained in Chapter One, presents insights and key findings combined with personal narrative vignettes (as indicated by the italicised text between three asterisks). The emphasis on the personal reflection as a form of analysis as well as policy and literature-based insights is consistent by the practices of phenomenology.

The layered autoethnographic approach provides a multifaceted exploration of the topic. As Rambo-Ronai (1995) describes, this approach is taken because it allows for incorporating multiple layers of consciousness, including personal experiences, academic literature, and critical analysis, to create a rich and holistic understanding of the phenomenon under investigation.

This postmodern autoethnographic technique allows the lived experience as narrative and critique without privileging it over the research, offering representation and reflectivity of lived experience (Collins, 2017; Denzin, 2014; Holdstock, 2024; Piercy, 2022; Rambo Ronai, 1995).

Decisions shape our world, but our world is a social construct, shifting and morphing with time. Choices are made, policies are implemented, ideologies are held, all for the 'GOOD.' As a child, I was the product of its forces, disconnected from

culture as an intergenerational byproduct, disconnected from my mother due to ideologies of illegitimacy and policies of welfare, categorised by society with no internal grounding to place, to belonging. Was this GOOD? The confusion of 'being but not being' and 'belonging but not belonging' as a child made the internal struggle of self-verification impossible! I learnt very early that everything in life was transient, even family.

Interacting with the disconnected, the identity searchers, colonial misplaced, culturally lost, inter-generationally disconnected from origins, histories, bloodlines, whakapapa, Indigenous Māori - am I? ... from as far back as I can remember I hid behind a wall, staunch, definite, angry, if you got too close to what was behind it you might get burned. My best defence was offence, and I was good at it! Behind it I was scared people would see, see me, lost and broken, a little monster not worth keeping, hell even my mother gave me away to my Nan, the oldest child and illegitimate ... I was categorised even then; "Oh yeh, the oldest always goes to their grandparents, that's how it is with Māori," I never corrected it because it was better than my truth! My grandparents had adopted my Māori-European mum, and they were Pākehā. At home, I was just me, without labels, loved, mostly happy and a bit broken. In the outside world, I was categorised by others without identity verification or even self-identification at the deepest level - who am I really? What am I that others decide I am ... Am I just the 'chameleon' ... hiding from the questions I can't answer, scared to find out, angry I don't know, learned survival from hidden secrets, myths and dreams...

Holdstock (2024) describes "a layered approach to exploring positionality" (p. 2) and open engagement with personal vulnerability laid bare to critically examine identity loss and cultural disconnection. As the daughter of a cross-cultural adoptee, my narrative is both

deeply personal and reflective of broader social structures, where individual agency intersects with historical forces of assimilation and colonisation. Engaging in critical self-reflection, I examine my dual position as both an insider and an outsider. As an intergenerationally and culturally disconnected Māori through the practice of cross-cultural adoption, I must acknowledge how “my biases, beliefs, and lived experiences” (p. 1829) shape my research perspectives and methodological choices (Pitard & Liamputtong, 2019). This self-examination is necessary to maintain the integrity of the research and ensure it remains critically aware of its subjectivity.

Sources/data for analysis

To provide a historical and theoretical foundation, an extensive review of literature on colonisation, assimilation and integration policies, Māori identity and cultural loss, cross-cultural adoption, and the role of DTC-GT in Indigenous reconnection was considered. By drawing upon secondary data sources, the research situates contemporary identity reclamation within the broader historical and social contexts that have shaped Māori experiences of displacement and reconnection. This historical lens is crucial for understanding how colonial systems have disrupted whakapapa and how emerging technologies such as DTC-GT are being used as tools for Indigenous self-reclamation.

Personal narrative and lived experience are central to this research, as autoethnographic accounts document the journey of identity rediscovery and whakapapa reconnection. Through the process of DTC DNA testing, I explore the emotional, social, and cultural complexities involved in using genetic data to reconstruct a sense of belonging. This inquiry is more than an individual pursuit; it speaks to broader Indigenous experiences of identity loss and reclamation, offering insights into how Māori and other Indigenous peoples navigate the intersections of science, ancestry, and cultural belonging.

Popular culture significantly informed my thinking around reconnecting with identity and whakapapa. Television (TV) programmes like *Lost and Found*, *Missing Pieces*, and *DNA Detectives* normalised rediscovering ancestry, the emotional and cultural significance, particularly for those disconnected through colonisation, adoption, or migration. Beyond TV, literature, music, social media, and podcasts also contribute to a broader cultural narrative valuing ancestral connection and reclamation. These platforms often centred Indigenous experiences of loss and resilience, framing the use of DTC-GT not just as a scientific tool, but as a legitimate and sometimes necessary means of cultural revival and healing through identity reclamation. Collectively, popular culture motivated and shaped my understanding of the possibilities that DTC-GT offered to our whānau in our desire to undo the cultural severance that State social policies had enforced. It also highlighted some of the adverse outcomes that DTC-GT can produce when dealing with the social constructs of 'others' lives intertwined within that genealogy and whakapapa.

The analysis is framed through critical theory and interpretive frameworks, which serve as a "basic set of beliefs that guide action" (Guba, 1990, in Denzin & Lincoln, 2011, as cited in Hughes & Pennington, 2017, p. 11). By embedding personal experiences within the historical and social structures of colonial assimilation policies, this study underscores the enduring impact of these policies on Māori identity formation. Autoethnography, as a critical, reflexive, interpretive inquiry, facilitates a systematic and scientific exploration of personal experiences in relation to cultural groups, whether perceived as similar (*us*) or different (*them*) (Hughes & Pennington, 2017; Mojškerc, 2023). The hybridity of this methodology makes it both a "standalone methodology" and a "complementary method," drawing from phenomenology, ethnography, narrative inquiry, case study, and grounded theory (Hughes & Pennington, 2017, p. 11).

Conclusion

Using an epistemological bricolage grounded in postmodernism, this thesis explores identity and cultural connection loss and reclamation. Underpinned by Kaupapa Māori

research principles that centre Māori worldviews, values, and experiences, it allows authenticity to indigenous processes. Combining autoethnography and phenomenology explores the personal and collective significance of DTC-GT use as a method to reclaim whakapapa and resist assimilation and integration imposed by colonial policies. By centring Māori ways of knowing and being, this approach challenges dominant narratives and reframes identity as relational, lived, and historically situated. The use of DTC DNA becomes a contemporary response to the legacy of assimilation and integration, offering a pathway toward reconnection to those with no other choices. The following chapter turns to the historical policy context that enabled the processes of cultural dislocation, examining how assimilation and integration were embedded within Aotearoa's social policy framework.

Chapter 3 Policy Context of Assimilation and Integration

The purpose of this chapter is to understand the foundations and ongoing impacts of colonisation in Aotearoa, which is essential to this research. It also aims to explore my evolving understanding of colonisation as a historical and personal journey, tracing its impact on my grandparents, my mother, and myself. I occupy a dual position: I am both colonised and a coloniser. To make sense of this complex identity, I felt it was necessary to systematically break down the processes of colonisation over time using a *layered* timeline approach.

This chapter's first layer examines colonisation's global foundations and its initial impact on Aotearoa before formal settlement. This layer sets the stage for understanding how colonial ideologies were embedded and enacted. The second layer of the chapter focuses on the period of settlement, particularly the consequences of the Treaty of Waitangi being breached, the resulting losses of sovereignty and land, and the central role the Crown, and increasingly the State, played in advancing colonisation throughout the end of the 19th and 20th centuries. The third layer examines how the State assumed greater control in the late 19th and 20th centuries, as the focus shifted from land acquisition to assimilation. Having already experienced the loss of sovereignty and whenua, Māori were subjected to pernicious policies and institutional practices that sought to erase cultural identity. These assimilation efforts, enacted through education, health, and welfare systems, severed many Māori from their indigenous sense of self. The chapter concludes by discussing the legacy of the 1960 Hunn Report, which marks a transition point from assimilation to integration. This provides a bridge into Chapter Four, which focuses on the effects of adoption and cross-cultural adoption.

First layer pre-settlement - Historical foundations of colonisation 1500 –
1840

Kia whakatōmuri te haere whakamua - 'I walk backward into the future with my eyes fixed on my past' (Rameka, 2016).

The past... oh, how its tail can sting. In my youth, I remember hearing that 'the better you understand the past, the better you can predict the future.' I thought at the time, what a stupid way to look at the world. Old people have some weird ideas. But time itself has shown the wisdom of that knowledge, and those I had thought silly had a far more profound wisdom than I appreciated at the time. The ignorance of youth, at least this youth, might have made better choices or understood far more had I stopped long enough to consider the messages I was given. To ponder as I do now the implications of that statement and that of the whakataukī above. The past gives context to our present, the current state of events, decisions and impacts. It allows us the potential to understand better the forces that might impact our future... This historical look at assimilation and integration policies has angered me. The little cynic that lives in my head is saying, 'Look... look at the current political framing, look at what they're doing; this is still happening!' Who will be the collateral damage this time ... still Māori, always Māori, and now youth, the disabled, who will be next to be considered a liability? The modern neo-liberal cannibalistic capitalism that discards those it deems unproductive in the pursuit of individual gain ... how sad the ideology of 'I' is, always fighting to monopolise the 'we'...

Historical foundations of colonisation

The foundation of Western colonialism⁶ that underpinned European belief that they had a right to colonise countries in the New Lands⁷ was set in motion long before the Dutch, French and British set foot on Aotearoa's whenua. The British colonial policy path from the 15th century was shaped by several key ideological and legal foundations, notably the 'Doctrine of Discovery,' 'The Great Chain of Being,' and Christianity.

The 'Doctrine of Discovery' was a legal and theological principle originating in the 1452 *papal bull*⁸ *Dum Diversas*⁹, which broadly authorised Portugal to reduce any "Saracens (*Muslims*) and pagans and any other unbelievers" to perpetual slavery; followed in 1455 bull *Romanus Pontifex*¹⁰ which extended to the Catholic nations of Europe dominion over discovered lands including sanctifying the seizure of non-Christian lands and enslavement; with that "authority" evolving the 1493 papal bull *Inter Caetera*¹¹ (Pope Alexander VI) that gave European Christian nations, including Britain, not only the right to claim territories "discovered" by their explorers, disregarding the sovereignty and rights of Indigenous peoples, but to actively search out and subjugate the none-believers of Christ, thereby establishing the Law of Nations¹² which served as the basis and justification for the

⁶ A political-economic phenomenon whereby various European nations explored, conquered, settled, and exploited large areas of the world. Ref: Magdoff, H. Nowell., Charles, E. and Webster, Richard, A. (2024, September 6). *Western colonialism*. *Encyclopedia Britannica*. <https://www.britannica.com/topic/Western-colonialism>

⁷ A term used to distinguish the earth's 'western hemisphere' that was new to Europeans during the 16th century discovery period, differentiating it from the 'old world' as they had known it.

⁸ The format of a decree; an edict issued by a Pope.

⁹ Indigenous Values Initiative, "Dum Diversas," *Doctrine of Discovery Project* [DODP] (23 July 2018), <https://doctrineofdiscovery.org/dum-diversas/>.

¹⁰ Indigenous Values Initiative, "The Bull Romanus Pontifex," *Doctrine of Discovery Project* [DODP] (23 July 2018), <https://doctrineofdiscovery.org/the-bull-romanus-pontifex-nicholas-v/>.

¹¹ Indigenous Values Initiative, "Inter Caetera," translated by Sebastian Modrow and Melissa Smith, *Doctrine of Discovery Project* [DODP] (13 June 2022), <https://doctrineofdiscovery.org/inter-caetera/>.

¹² Law of Nations (noun phrase) International Law; first known use circa 1548, in the meaning defined. "Law of nations." Merriam-Webster.com Dictionary, Merriam-Webster, <https://www.merriam-webster.com/dictionary/law%20of%20nations>. Accessed 21 Dec. 2024.

Doctrine of Discovery and the age of Imperialism (DODP, n.d.; IVI, 2022; Modrow & Smith, 2022; NWŌ, 2018). This doctrine framed indigenous lands as *terra nullius* (*Nobody's Land*¹³) unless governed by Christians, justifying European conquest and colonisation; it provided the ideological foundation for the British colonial expansion and could be seized by the Crown.

In parallel, the 'Great Chain of Being' provided a hierarchical worldview that positioned European Christian civilisations superior to non-European, non-Christian societies and further divided by ethnicity, as evident in the anthropology of the time (Phillips, 2014). This powerfully pervasive belief system influenced colonial theory, reinforcing the notion that European domination of Indigenous peoples was part of a divinely ordained order, from most superior to inferior: God, white people, and then an arrangement of non-white people, with blacks at the bottom.

Anglican missionary Samuel Marsden arrived in 1814, and later, the Methodist missionaries arrived in 1823, aiming to convert Māori to Christianity, becoming the 'go-betweens' with Māori and early European settlers (Derby, 2018; Shoebridge, 2018). Christianity further legitimised colonial expansion, as missionaries often accompanied settlers, promoting conversion and framing colonisation as a civilising mission to save "heathen" populations (Simon & Smith, 2001). This religious dimension was deeply entwined with colonial policies, particularly in justifying land appropriation and cultural assimilation.

Economic motives and mercantilism

A central driver of British colonialism was economic gain. From the 16th century onward, Britain pursued a mercantilist policy, where colonies were considered vital sources

¹³ Terra nullius - Nobody's Land, deemed unoccupied or uninhabited at the time of discovery.

of raw materials and markets for British goods (NWÖ, 2018). For instance, the East India Company's activities in India were guided by commercial interests, with the company operating as a quasi-governmental body. The British government granted charters to such companies, giving them monopolies over trade and the right to engage in diplomacy, war, and administration (Bromley, 2023). These commercial entities laid the groundwork for formal colonial rule as Britain used its military and naval power to protect and expand its trade routes.

In Aotearoa, the British initially showed interest in the country's natural resources, including timber and flax, as well as its agricultural potential. Early interactions with Māori were commercial, with traders and missionaries establishing informal relationships. However, as settler interest grew, so did the pressure for formal colonial control, leading to the signing of the Treaty of Waitangi in 1840 (Walker, 2004).

Political control and legal frameworks

British colonial policy also focused on establishing political control through legal and administrative structures. In regions like North America, Australia, and Aotearoa, the British used treaties, such as the Treaty of Waitangi, to legitimise their presence, often under the guise of protecting indigenous populations. However, these treaties were frequently undermined by differing interpretations between British officials and indigenous peoples (Orange, 2023; Walker, 2004). In many cases, the British established colonial governments that mirrored the political institutions of Britain, such as representative assemblies and legal systems based on English common law. Public records reflected this, as published under 'Colonisation' in the 1899 New Zealand Official Yearbook:

About the same time, namely, on the 29th January, 1840, Captain Hobson, R.N., arrived at the Bay of Islands, empowered, with the consent of the Natives, to proclaim the sovereignty of the Queen over the islands of New Zealand, and to

assume the government thereof. A compact called "The Treaty of Waitangi," to which in less than six months five hundred and twelve names were affixed, was entered into, whereby all rights and powers of sovereignty were ceded to the Queen, all territorial rights being secured to the chiefs and their tribes. New Zealand was then constituted a dependency of the Colony of New South Wales, but on the 3rd May, 1841, was proclaimed a separate colony. ~ Statistics New Zealand: New Zealand Official Yearbooks 1899 [digital collection].

Cultural assimilation and the civilising mission

The belief heavily influenced British colonial policy in the form of a "civilising mission," which justified imperial domination as a moral duty to bring Western civilisation to supposedly "backward" peoples (Lee, 2009). This ideology was a key feature of British policy across its empire, manifesting in efforts to assimilate indigenous populations into British cultural norms, languages, and religions. Missionary activity played a central role, with the spread of Christianity often serving as a means to exert cultural control.

In Aotearoa, the British attempted to assimilate Māori into European society through education and religion, promoting English as the dominant language and encouraging the abandonment of Māori tikanga, *mauri* (life principle, life force), mana and tapu beliefs (Walker, 2004). Blending religious beliefs to incorporate 'Christian teachings' into their worldview "covertly worked to destroy traditional Māori belief systems" and created a Eurocentric assimilation that "reflected Pākehā worldviews" (Lee, 2009, p.6).

With the arrival of Pākehā, so was the arrival of new diseases that ravaged Māori with no immunity. Venereal infections resulting in sterility and stillbirths, measles, influenza, typhoid, dysentery and tuberculosis all had significant impacts through the early 19th century, and by 1840, the population had declined by 10-30% continuing through to 1901, disease and the results of war brought dislocation and death for Māori making them vulnerable to

assimilation (Lange, 2018). The Tohunga Suppression Act of 1907, which outlawed traditional Māori healers, is one example of how British authorities sought to dismantle indigenous knowledge systems and replace them with Western medicine and education.

The Tohunga Suppression Act 1907 and the targeting of Māori knowledge systems

The Tohunga Suppression Act was introduced in response to colonial authorities' concerns about the influence of *tohunga* (chosen expert, priest, healer) on Māori communities. Tohunga were experts in Mātauranga Māori, including spiritual and medicinal healing, and played a crucial role in maintaining the well-being of iwi and hapū. The state viewed tohunga and their practices as backward and a barrier to the assimilation of Māori into Western civilisation, particularly in public health.

The Act criminalised the activities of tohunga, effectively outlawing the practice of *rongoā Māori* (Māori remedy, medicine, traditional healing practices), which included herbal remedies, spiritual healing, and holistic approaches to health passed down through generations. The state promoted Western medicine as the superior alternative, framing Māori healing practices as superstitious and harmful and highlighting the emergence of second-rate tohunga charlatans (Jones, 2007; Stephens, 2001).

The Act, though framed to prompt Māori health reform, was also an attempt to “neutralise powerful Māori leaders” such as Rua Kēnana¹⁴ a Tūhoe prophet, faith healer, and activist, who was the main target of this (Binney, 1996; NZH, 2023; Stephens, 2001, p. 438). The Act was supported by Māori leaders, such as Māui Pōmare, Te Rangi Hīroa (Sir Peter

¹⁴ Rua Kenana biography: <https://teara.govt.nz/en/biographies/3r32/rua-kenana-hepetipa>

Buck), and Sir Āpirana Ngata, who believed that suppressing certain tohunga could improve Māori health outcomes; Ngata despaired at the 1907 Māori health budget of £3,000 for 46,000 people (Stephens, 2001; Jones, 2007). The Act was contentious and seen to directly attack Māori autonomy and cultural heritage, with “many Māori continued to seek rongoā” (Jones, 2007, p. 5; Stephens, 2001).

“Ngata, in what was, after all, his first Parliamentary speech in 1907, also issues a warning:

‘Legislate as you will, you will never suppress tohungaism. You cannot do it. All the laws that could be passed in this House could not do it...You are getting down to bedrock when you get to tohungaism.’

In view of this statement and his glowing description of the roles and functions of traditional tohunga, his assertion at the end of his speech that he had “very great pleasure in supporting this Bill” leaves questions unanswered. In reality, his speech and support of the bill was probably designed to lobby the House for more Māori health resources (Stephens, 2001, p.449).”

Stephens (2001) noted the Act's symbolic intent to appease the Pākehā majority's fear of Māori's political power gains, which needed to be clawed back to reassert certainty and colonial political dominance. Some debate remains around Rua Kēnana's lack of prosecution under the Act. If ‘political factionalism within Tūhoe’ was known to the legislators, the prosecution would obstruct the acquisition of Tūhoe land in Te Urewera, for which they need his support. The 1865 Native Minister, Col Russell, argued that:

true policy requires that all exceptional law should gradually cease and the Natives be encouraged to conform to that of Europeans.’

[Premier Sir Joseph Ward] points out that such a concern for a system of 'one law for all' often disguised a desire to strip away remaining protections for the alienation of Māori land. (Stephens, 2001, P.444(16)).

Loss of Rongoā and Tikanga

The suppression of tohunga under the Act contributed to the erosion of rongoā Māori, as traditional healing knowledge became stigmatised and marginalised. Rongoā was more than just a form of healthcare; it was deeply connected to Māori cosmology, spirituality, and the relationship between people and the natural environment. The loss of rongoā practices meant a disconnection from these cultural foundations, as Māori were pressured to adopt Western medical approaches.

Alongside the loss of rongoā, the state's assimilation policies undermined tikanga. Tikanga guided health practices, social organisation, governance, and the interaction between people and their environment. The imposition of Western health standards, driven initially by the benevolent missionaries, became increasingly dominated by Pākehā assimilation to Western public health standards, which often failed to respect or understand the holistic and spiritual aspects of Māori well-being, which led to the erosion of tikanga in health and other areas of Māori life (Lang, 2011, 2018).

Assimilation to Western Public Health Standards

Colonial ideals heavily influenced Western public health standards at the time, prioritising the individual and the physical body while often neglecting the spiritual, emotional, and collective health aspects central to Māori views of well-being. This 'disconnect' between Māori and Western health systems contributed to significant disparities in health outcomes. Māori communities, stripped of their traditional healers and practices, faced barriers to accessing appropriate healthcare within the Western system. The Tohunga

Suppression Act reverberated throughout the 20th century, reinforcing the state's ongoing efforts to marginalise *Hauora* (Health and well-being), Māori health practices and mātauranga Māori knowledge systems. This suppression persisted even after the Act was repealed, as evident in the continued state control over Māori health initiatives, including establishing *Te Aka Whai Ora* (the Māori Health Authority), where government-maintained oversight prevailed rather than enabling genuine Māori self-determination in healthcare.

The state's failure to accommodate Māori perspectives on health exacerbated these challenges, leading to ongoing and persistently poor health outcomes, as demonstrated in the WAI 2575 Māori Health Trends Report (MoH, 2019). Even efforts of self-preservation were stifled when, in 1929 'Princess Te Puea' Hērangi CBE, a *Kiingitanga* (Māori King/Queen movement) leader, achieved the task of building Māhinārangi intended as a hospital for Māori at Tūrangawaewae in Ngāruawāhia (Bryder, 2022; Cook, 2011). Although the intention was to provide a European-style hospital, and Āpirana Ngata had helped secure some government funding, upon completion, health authorities refused her application, despite very high Māori death rates (Bryder, 2022; Cook, 2011). It was ironic and fitting that the Waitangi Tribunal's first hui for hearings of WAI 2575 Hauora Report: Stage One of the Health Services and Outcomes Kaupapa Inquiry claims was a centenary since the Spanish Flu that took so many Māori lives and was the motive that built Māhinārangia wharehenui at Tūrangawaewae Marae (Waitangi Tribunal, 2023, p. 6).

Mehemea ka moemoeā tātou, ka taea e tātou. If I dream, I dream alone. If we dream together, we shall achieve." Te Puea Herangi, her legacy lives on, housing the poor and marginalised. She is well known as one of the most influential female leaders in New Zealand ~ Kiingitanga¹⁵ [FB Post].

¹⁵ 'Kiingitanga' Facebook post from 2016, May 26. <https://www.facebook.com/Kiingitanga/posts/if-we-dream-together-we-shall-achievemehemea-ka-moemoe%C4%81-ahau-ko-ahau-anake-mehem/1028831650538222/>

Broader Implications and Long-term Impacts

The Tohunga Suppression Act was part of a broader pattern of assimilation policies that sought to integrate Māori into the Western public health system. The state framed Western medical practices as modern and progressive, while Māori health practices were seen as obstacles to progress. As a result, Māori were encouraged, or in some cases, forced, to abandon their traditional knowledge systems in favour of Western medicine (Waitangi Tribunal, 2023). However, the Act was not just about health; it was part of a broader colonial agenda to assimilate Māori into a European way of life, reassure settler colonisers, and stem Māori prosperity. By targeting rongoā and tikanga, the state sought to weaken Māori cultural identity and bring them under the control of Western institutions. This loss of cultural autonomy had far-reaching consequences, as Māori became increasingly disconnected from their traditional ways of knowing and being.

The long-term impacts of the Act are still felt today. Efforts to revitalise rongoā and reclaim Māori healing practices are ongoing, but the legacy of suppression and marginalisation continues to affect Māori health and well-being, with shorter life expectancy (M. Durie, 1998; MoH, 2019, 2024). Contemporary health policy in Aotearoa has begun to acknowledge the importance of integrating Māori perspectives, with initiatives such as Whānau Ora aiming to address the holistic needs of Māori families. However, the historical damage caused by state-led assimilation policies like the Tohunga Suppression Act remains a significant challenge.

Summary

The Tohunga Suppression Act of 1907 was a key tool in the state's assimilation of Māori into Western public health systems, resulting in the loss of rongoā, tikanga, and Māori autonomy in healthcare. By criminalising traditional healing practices, the state marginalised Māori knowledge and imposed Western medical standards, contributing to long-term health

disparities and a culture of institutional and structural racism. Understanding the impact of this Act is crucial for addressing the ongoing legacy of colonisation's social determinants on health and supporting the revitalisation of Māori cultural practices in health to reduce inequities.

Settler colonialism and land dispossession

In settler colonies like Aotearoa, Australia, and North America, British policy was explicitly geared towards facilitating the migration of British settlers. This often led to the dispossession of indigenous peoples from their lands through legal mechanisms, such as the establishment of land courts, and coercive measures, such as military conflict. In Aotearoa, the establishment of the Native Land Court in 1865 was a key tool in the dispossession of Māori land, converting communal landholdings into individual titles that were more easily sold to settlers.

Land dispossession was a central aspect of British colonialism, as it enabled settlers to establish agriculture, mining, and other industries, thereby creating an economic foundation for the colonies. In many cases, such as Pukekohe's 'No Māori allowed' policies, Indigenous peoples were pushed into marginal areas or forced into labour for the colonial economy, further entrenching social and economic inequalities (Bartholomew & Ringer, 2022).

Summary

These ideological and legal doctrines formed the foundation of British colonialism worldwide. The Doctrine of Discovery and the Great Chain of Being provided the intellectual framework for dispossession and control, while Christianity reinforced colonial authority and legitimacy. Although the British Empire's expansion employed different strategies in various

regions, it consistently pursued resource extraction, political domination, and cultural assimilation. Through mercantilist companies, treaties, settler migration, and legal frameworks, the British state systematically extended its global reach. This expansion was driven by economic, strategic, and ideological motives, with state and private interests often working together to establish and maintain control over colonised territories, including Aotearoa. The consequences were profound for Indigenous societies, leading to the loss of land, sovereignty, and cultural identity. The legacy of these colonial policies continues to shape post-colonial nations as they confront historical injustices and navigate the enduring effects of British imperialism.

He Whakaputanga – Declaration of Independence united tribes of NZ 1835

Missionaries concerned with the “conduct of Europeans, and... the Government’s failure to control the behaviour of British people in the raw frontier” helped guide Māori to petition the king of England for assistance, resulting in the appointment of James Busby as British Resident (Walker, 2004, p. 87). Coincidentally, a NZ ship had been impounded in Sydney for not flying a recognised flag (ensign), prompting Busby’s first official act in 1834, to convene with Māori to select the country’s first flag (*see Figure 2*). On 28 October 1835, Busby again convened a meeting with thirty-four Northland Rangatira (*chiefs*) “to sign a

Figure 2: New Zealand Company / United Tribes flag, 1839, maker unknown. Gift of Andrew Haggerty Richard Gillespie, 1967. CC BY-NC-ND 4.0. Te Papa (GH002925)



declaration of confederation and independence,” referred to as He Whakaputanga o te Rangatiratanga o Nu Tīreni, the Declaration of Independence of the United Tribes of New Zealand [He Whakaputanga] (Aoake, 2017; Walker, 2004, p.88). Moon (2024, p. 26) summarises the four articles that comprise the text:

Article One declared New Zealand an independent country under the sovereignty of the United Tribes of New Zealand (that is, all the chiefs who signed the agreement).” Article Two stated that the chiefs who signed the declaration would be the only law-making body in the country. Article Three asserted that these chiefs would gather annually to make laws for the country, while the final article looked to Britain acting as the parent of their (the chiefs’) infant State.

A copy of *He Whakaputanga* was officially recognised when sent to the King of England, and it also acknowledged his recognition of their flag (Archives NZ, 2024; Walker,

2004). As a constitutional document, it is vitally important, as it sets the intent of Māori, but could not change their epistemological worldview. By 1839, 52 Rangatira had signed *He Whakaputanga* asserting “that Aotearoa was an independent Māori state, that power resided fully with Māori, and that foreigners would not be allowed to make laws,” requiring them [Māori] to meet yearly at Waitangi for lawmaking that preserved peace and regulated trade (Archives NZ, 2024, para 4; Walker, 2004).

Māori were extraimperial to the British Empire, though a local British Resident [Busby] was there to manage the few hundred subjects’ resident and/or trading in Aotearoa; as a separate sovereign domain, British laws were not extended to include Aotearoa (Aoake, 2017). Walker (2004) highlighted the contradictory nature of two different epistemological worldviews when considering notions of a central Māori administration for law-making, given that an independent tribal society construct had existed for centuries, and “Māori nationalism was alien to tribal society” (p. 89). Nevertheless, as Aoake (2017) points out, “Māori motivations to sign *He Whakaputanga* were, and still are, transparent.” It was an alliance, a strategic investment in a working relationship with the Crown. It would affirm and enhance their mana and ratify the covenant with King George and William IV.” Settler numbers and demands for land increased, while the lack of Māori nationalism and law-making exacerbated tensions, culminating in missionaries George Clarke and Henry Williams calling for British intervention and requesting a governor with military power to support his authority (Walker, 2004, p. 89).

Second layer – Disconnection: loss of sovereignty and land 1840 – 1950

My mother was born in 1944, the illegitimate child of a Pākehā mother and a Māori father, in Ōtautahi (Christchurch), Te Waipounamu (Aotearoa's South Island). It was all a secret, who she was and where she came from. My Nan used to foster babies that were going to be adopted. It was a short-stay arrangement while the paperwork was completed, and the babies were handed over to their 'new' family. That's how my mum found my Nan; she was meant to be a short-stay, on her way to a new family. But the life and thinking of humans will constantly challenge the ideologies and social norms that try to manipulate them into ... well, in case, to give away your baby.

My Aunty D was my Nan's only birth child and was about 10 years old when my mum arrived. In her 80s, I asked her what she remembered about that time. She was sharp with an excellent memory for her age, and we discussed that time as she remembered it.

My mother arrived, as had all the rest, but this time, 'the birth mother' was unsure she wanted to adopt her baby out. So, it seems Mum was in a type of limbo. My Aunty and I surmised that, given the times that the birth mother would have had to fight prejudice against her and the baby, a lack of financial support and without family support, the inability to work and support a child. Life was harsh! By the time Mum was 9 months old, the sad decision was made, as my Aunty remembers it, for her birth mother to adopt her out. In another twist of human nature, bonds had been forged and relationships made. My Nan and her husband would adopt my mum, and just like that, another cross-cultural adoption was cemented in law.

Loss of sovereignty and loss of land through sale and confiscation

The colonisation of Aotearoa and its impact on Māori sovereignty and land rights is a fundamental area of study in social policy and the role of the State. The systematic undermining of Māori authority through legal, political, and military means led to a significant loss of sovereignty and land. This era of settlement explores how state policies during and after colonisation facilitated these processes and the ongoing consequences for Māori.

Walker (2004) discusses the duplicity used to undermine the authority structures of Māori society and its *Ariki's* (paramount chiefs) in the lead-up to the signing of the Treaty of Waitangi by subverting the Ariki's authority to denounce the Treaty by using gratuities to gain and aggregate the signatures from other chiefs, then disseminating them to circumvent the process in the colonial favour. Once the Treaty had been signed on 6 February 1840, Hobson used it on the 21 May to proclaim sovereignty over the North Island and, unwilling to wait for the South Island signatories, declared it *terra nullius* ignoring the existence of Kāi Tahu and Māori who had already converted to Christianity as he proclaimed sovereignty there, too (Walker, 2004). Between 1840 and 1846, Aotearoa was a Crown Colony, with the Governor appointed from Britain, resulting in a form of British control. However, various forms of self-government emerged, leading to progressively independent actions, despite the establishment of constitutional arrangements.

Loss sovereignty

Tino Rangatiratanga was grounded in their control over land, resources, and political systems. Before European colonisation, Māori operated a complex system of tribal governance where decisions were made by iwi and hapū. The signing of the Treaty of Waitangi in 1840 between Māori chiefs and representatives of the British Crown marked a turning point in the erosion of Māori sovereignty (Tawhai & Gray-Sharp, 2011; Walker, 2004). The Treaty contained two key articles that have been points of contention: Article I,

which Māori understood to mean a sharing of governance, and Article II, which was intended to guarantee the protection of Māori lands and their political authority over their own affairs (Moon, 2024; Knox, 2011; Walker, 2004). However, due to significant differences between the English version of 'The Treaty of Waitangi', signed by only 39 Māori and 'Te Tiriti o Waitangi', the Māori versions of the Treaty signed by 530-540 Māori, many Māori believed they were entering into an agreement that would preserve their sovereignty, not ceding power to the Crown as the British wanted it believed (Orange, 2023; Walker, 2004).

Following the Treaty, state policies and actions systematically eroded Māori sovereignty. The Crown established its legal and political authority, often ignoring or undermining Māori leaders and decision-making structures. One of the most significant expressions of this was the assertion of British sovereignty over the whole of Aotearoa in 1840 without full consent from all Māori groups (StatsNZ, 1899; Tawhai & Gray-Sharp, 2011). As the Crown extended its power, Māori political authority was marginalised, and their ability to govern their own affairs was increasingly limited.

Loss land

The loss of Māori sovereignty was closely tied to the loss of land. Land was central to Māori identity, social organisation, and economic livelihood. The Crown's land acquisition, through both legal and coercive means, was a key strategy in its colonisation efforts (Boast, 2015; Walker, 2004). The Native Land Acts, which began in the 1860s, played a crucial role in this process. These Acts introduced a legal framework that individualised Māori land ownership, facilitating land sales and alienation from Māori communities. The Native Land Court was established in 1865 to convert communal Māori land into individual titles, making it easier for the Crown and settlers to purchase land. This process disrupted the traditional collective ownership systems and contributed to the fragmentation of Māori landholdings. By

the early 20th century, Māori had lost most of their land to European settlers (Knox, 2011; Walker, 2004).

Land loss and the role of the State

One of colonisation's most significant impacts on Māori was the loss of land. Before European arrival, Māori had established systems of land tenure based on communal ownership, with land being integral to their social, economic, and cultural identity. However, with the signing of the Treaty of Waitangi in 1840, a legal framework was established that purported to protect Māori land rights. In practice, the Treaty facilitated land transfer from Māori to European settlers (Know, 2011; Walker, 2004).

Through mechanisms employed by the State, such as the Native Land Court (established in 1865), individualisation of land titles, and the Crown's purchasing strategies, large tracts of Māori land were alienated (Riseborough & Hutton, 1997). By the late 19th and early 20th centuries, around 95% of their ancestral lands had been lost (Pool, 2019; Thom & Grimes, 2022). The state's role in this process was pivotal, as it enforced legal structures that undermined Māori communal landholding and promoted the interests of settler colonialism. The dispossession of land had profound social and economic impacts, contributing to Māori marginalisation in rural and urban areas alike (Thom & Grimes, 2022; Walker, 2004).

Economic marginalisation and income disparities

The economic consequences of land loss were devastating for Māori. Land was a primary resource for subsistence, economic activities, and social organisation. Its alienation left Māori communities economically vulnerable. As the 20th century progressed, Māori faced limited employment opportunities, particularly in the growing urban centres, where

many had relocated due to land loss, urbanisation policies and changes in rural economies (Hunn, 1960). Māori income levels have consistently lagged behind those of non-Māori, a legacy of colonisation and the state's failure to address structural inequalities. State welfare policies introduced in the 20th century often reinforced existing disparities rather than addressing them. For instance, Māori were sometimes excluded from full access to benefits due to discriminatory policies, further entrenching economic marginalisation (Baker & Du Plessis, 2018).

Impact of State Policies

The state's role in land alienation was not limited to legal mechanisms. The 'New Zealand Wars' (1845-1872), fought between Māori and British forces, were primarily driven by land disputes and conflicts. After the wars, large areas of Māori land were confiscated under the New Zealand Settlements Act of 1863, often from tribes that had not been involved in the conflict. These land confiscations were a significant blow to Māori sovereignty, as they deprived Māori of their economic base, autonomy, and capacity to organise politically (Piripi, 2011; Walker, 2004). State policies during colonisation were designed to weaken Māori control over their land and resources, ensuring that European settlers could dominate Aotearoa's economic and political landscape.

The ongoing effects of these policies are evident today in the form of land loss, economic marginalisation, and Māori efforts to reclaim sovereignty through mechanisms such as the Waitangi Tribunal, established in 1975, to address breaches of the Treaty.

Language Suppression and Cultural Erosion: Native Schools Act – loss of language assimilation to Western values and knowledge

Alongside the loss of land, colonisation severely affected the te reo Māori and cultural practices. Introducing English as the dominant language in education, governance, and public life marginalised te reo Māori (Black, 2011; Walker, 2004). In the late 19th century, state-led school policies actively discouraged or banned te reo, framing it as inferior to English. These language policies and broader societal attitudes devalued Māori culture, hastening a sharp decline in Māori speakers throughout the 20th century, with Governor Grey's "Education Ordinance subsidising the mission schools, and insisting that instruction be conducted in English (Walker, 2004, p. 146). Language suppression was not just about communication; it was a tool of cultural domination, as te reo Māori was closely tied to identity, traditions, and worldviews that caused erosion and weakened the social fabric of Māori communities. The state's role in language suppression is a stark example of how colonisation sought to assimilate Māori into a European framework, diminishing their cultural sovereignty.

In 1944, World War II (WW2) was still raging in Europe, reducing the number of eligible bachelors available to wed in Aotearoa. So was I surprised to find out that my mum's birth mother had got pregnant without being married, no. However, there were a few other details available on Mum's original birth certificate, other than the birth mother's name, her age, and the location of the child's birth. Perhaps it seemed unimportant to put the father's name on the birth certificate as well? It could have been the stigma of having an illegitimate child, or was it just because the father was Māori, or were there bigger secrets behind the mystery of our whakapapa ... The 1985 Adult Adoption Information Act had opened the door to our Pākehā ancestry, but it remained firmly shut to our Māori whakapapa.

We learned she was a teacher, that she originated from the Geraldine area, and at 26 years old had put her baby up for adoption. Using that information, my mum went to find her birth mother in the hope of finding out who she was and where she was from, only to learn she had passed away in 1973 at the age of 55. The family member my mum met was not interested in acknowledging this skeleton that had just fallen out of the cupboard, and after a brief but emphatic rejection, the door seemed to have closed for good on learning more. The impact of that meeting followed my mother for the rest of her life ... an incomplete sense of self that weighed heavily on every part of her being. That same incomplete sense of self that was passed on to us, because if the mother doesn't know, the children don't either. Another generation to brown to be white and to white to be brown, but no idea how. Are we even Māori?

Social Security and Employment Relations as Colonisation: Welfare benefits – Social Security Act 1938

The *Social Security Act 1938* was a cornerstone of Aotearoa's welfare state; however, for Māori, it served as a tool of assimilation and integration within a colonial policy framework. While the Act promised universal social protection, its implementation reinforced structural inequalities, as access to benefits was often conditional on Māori participation in the Pākehā economy and adherence to Western norms (Baker & Du Plessis, 2018). Between 1938 and 1950, state policies encouraged Māori migration to urban centres for employment, weakening traditional whānau and hapū structures and accelerating cultural disconnection. The shift from communal land-based economies to individual wage labour undermined Māori economic independence, creating a climate for entrenched dependency on state welfare. Discriminatory practices, such as lower benefit payments for Māori and paternalistic oversight, reflected broader colonial attitudes that sought to integrate Māori into the dominant Pākehā society rather than support tino rangatiratanga (Walker, 2004). This

period laid the groundwork for ongoing disparities, as state-controlled welfare systems continued to marginalise Māori, contributing to intergenerational social and economic disadvantage. Baker and Du Plessis (2018) noted in the section 'the family wage and social security' that:

While the Act did not explicitly discriminate against Māori, the provision for the payment of benefits at a lower rate... allowed officials to pay Māori less, with communal living often cited as a reason for the reduction of Māori benefits.

Summary

The colonisation of Aotearoa by British colonial settlers led to a significant loss of Māori sovereignty and land, facilitated by state policies and legal structures designed to favour European settlers. The erosion of tino rangatiratanga and the alienation of land were intertwined processes that profoundly impacted Māori communities and cultural identity. The British settler legal and political frameworks systematically displaced Māori governance, replacing tikanga-based systems with colonial institutions that controlled economic, social, and cultural life (Tawhai & Gray-Sharp, 2011; Walker, 2004). Land confiscations, fraudulent transactions, and legal mechanisms such as the Native Land Court severed Māori from their whenua, disrupting the foundation of identity, belonging, and self-sufficiency (Mead, 2016; Walker, 2004). Forced integration into a colonial economy and increasingly dependent on state welfare, Māori experienced further cultural dislocation through policies like the Social Security Act 1938, which entrenched them in a Western welfare system that prioritised individualism over collective responsibility. Over generations, these policies weakened whānau and hapū structures, disrupted the transmission of te reo and mātauranga Māori knowledge systems, and reinforced assimilation, leading to enduring challenges in reclaiming Māori identity and sovereignty.

Third layer – Settler State Control: Social Policy Mechanisms 1950 – 1980

Settler State control and the loss of land

The colonisation of Aotearoa and the establishment of settler state control fundamentally reshaped the lives of Māori through various social policy mechanisms, contributing to the loss of sovereignty, land, and cultural identity. The state, as the driving force of colonisation, implemented policies and systems that facilitated settler domination while marginalising Māori communities. Under these policies, individuals identified as being “half-blood or more are counted as Māori, so any Māori of less than full blood who marries a Pākehā has his (or her) children counted as Pākehā,” pākehā being categorised as European, skewing demographic records and reinforcing colonial narratives of assimilation (Hunn, 1960, p.18). This categorisation method allowed the State to use blood quantum to determine an entitlement to benefits under the 1953 Māori Affairs Act or the 1877 Education Act for those deemed Pākehā. The role of the state and social policy as the mechanisms of loss experienced by Māori continued to mainly focus on land dispossession, assimilation, and economic marginalisation.

Assimilation and Land Loss

Alongside land dispossession, the state sought to assimilate Māori into European norms and values through various social policies. Education policies played a significant role in this process, introducing English-only schooling that marginalised te reo Māori and discouraged the use of Māori cultural practices. By prioritising the English language and Western forms of knowledge, the state aimed to integrate Māori into the settler society, often at the cost of their cultural identity.

The assimilation policies extended beyond education. Health, welfare, and housing policies were similarly designed to align Māori with European norms, often failing to account for the unique social and cultural needs of Māori communities. These policies reflected a broader colonial agenda of civilising the “native” population, further eroding Māori autonomy and self-determination.

Economic marginalisation

Economic marginalisation was another key mechanism through which state policies disadvantaged Māori. The loss of land, the primary resource for economic activities and social organisation, left many Māori unable to sustain themselves (Williams, 2019). The Crown’s focus on promoting settler agriculture and land development marginalised Māori from the growing colonial economy. Moreover, Māori were often excluded from state welfare provisions or were subjected to discriminatory policies that limited their access to benefits. For instance, early welfare schemes, such as pensions and unemployment relief, were often inaccessible to Māori (Hill, 2010; Hunn, 1960), reinforcing existing economic disparities. As the Māori population urbanised in the mid-20th century, the economic gap between Māori and non-Māori widened, reflecting the long-term impacts of colonisation and state neglect of Māori economic well-being.

The Role of Social Policy in maintaining Settler control

Social policy in Aotearoa during colonisation was not neutral; it was a tool used by the state to entrench settler dominance and manage Māori resistance (Terruhn, 2019; Williams, 2019). The state used legislation, education, health, and welfare policies to reshape Māori society in ways aligned with settler interests. These policies were not merely about assimilation and integration but were designed to undermine Māori autonomy and facilitate the consolidation of settler power.

The master's tools will never dismantle the master's house ... What does it mean when the tools of a racist patriarchy are used to examine the fruits of that same patriarchy? It means that only the most narrow perimeters of change are possible and allowable ~ Audre Lorde (Lorde & Brydon, 2000, p.1670)

In response, Māori have continually resisted these policies, seeking redress and restoration of their rights. The establishment of the Waitangi Tribunal in 1975, which addresses breaches of the Treaty of Waitangi, is one such mechanism through which Māori have sought to challenge the state's actions and reclaim their land, language, and cultural identity.

Scrolling through LinkedIn, I found an article on "Forgiveness - A tool of Oppression"¹⁶ by Kirkpatrick Mariner (2025). This was a concept I hadn't considered before, but it merited some thought. Is this a way to use the Christian concept of forgiveness to circumvent the culpability of colonisation's dishonest, misleading and coercive deeds? There is an inherent tension that prioritises redemption over justice. Tell Māori to get over it and move on from the past while simultaneously abstaining from the responsibility of reconciliation and retribution. "Nowhere is this more evident than in the history of colonisation, where colonial powers often leaned on faith to justify unspeakable atrocities, only to invoke forgiveness to absolve themselves without true accountability."

¹⁶ Kirkpatrick Mariner: 042 Forgiveness - A tool of oppression. Ref: [\(10\) Post | LinkedIn](#)

I'm not sure how I feel about this. It irks me the way religion is used to justify the human species' lack of care, honesty and accountability. Do as you like, for you are 'weak', as long as you confess your sins on Sunday, all will be forgiven and forgotten ... but it isn't, never was, and never will be!

Social security and employment relations as colonisation

Welfare benefits – Social Security Act 1938

The *Social Security Act 1938* was a landmark piece of welfare legislation in Aotearoa, reshaping the social landscape by introducing universal welfare benefits, including pensions, unemployment relief, and healthcare (WEAG, 2018). However, while the Act provided economic support, it also functioned as a tool of assimilation, reinforcing colonial state control over Māori identity, land, and culture (Piripi, 2011; Walker, 2004). Designed within a Western framework that prioritised individualism, the welfare system clashed with Māori communal structures, discouraging traditional economic and social practices. Welfare benefits subtly incentivised Māori migration to urban centres, integrating them into the cash economy while further detaching them from their whenua and collective ways of living (Meredith, 2015). These policies exemplified how social security and employment relations were used as mechanisms of colonisation, embedding Māori within state structures that prioritised Western norms over tino rangatiratanga (Hunn, 1960).

Urbanisation and Cultural Dislocation (1940-1980)

Before World War II, over 90% of Māori lived rurally, maintaining connections to papakāinga, hapū, and iwi. However, wartime labour shortages led to state intervention, with manpower regulations under the National Service Emergency Regulations 1942 directing Māori workers, both men and women, into urban industries (Keane, 2010; Walker, 2004).

Many Māori who had served in the war also sought employment in cities, furthering the trend toward urbanisation (Keane, 2010; Walker, 2004). By 1951, nearly 20% of Māori lived in urban areas, with rural depopulation occurring at a rate of 1% per year (Walker, 2004). By 1960, an urban relocation plan had been designed, where “Māori welfare officers exhorted rural families” to relocate for improved employment and housing options (Walker, 2004, p. 197). The three main drivers were work, money, and pleasure (Meredith, 2015, p.1).

However, the reality was far more complex. Many Māori were placed in low-paid, unskilled jobs, often in precarious industries with little opportunity for advancement. The realities were much more challenging, with low-skilled employment opportunities and the need to adjust to Pākehā cultural norms around capitalist economics and cultural separation from whānau, hapū, and iwi, leading to some struggling with “unemployment, loneliness, and antisocial behaviour” (Walker, 2004; Meredith, 2015, p. 2). As Walker (2004) noted, the choices were surrendering to Pākehā assimilation or maintaining cultural continuity. The Pepper-potting policy, which aimed to disperse Māori among Pākehā households, was intended to encourage assimilation but often resulted in social alienation.

By the 1960s and 1970s, working-class Māori had become concentrated in government housing estates, forming new urban communities based on shared experiences rather than whakapapa connections (Meredith, 2015). These urban Māori communities sought to retain identity, values, and culture despite ongoing pressures of assimilation. However, successive generations became increasingly disconnected from their marae, te reo Māori, and tikanga, leading to what Meredith (2015) describes as Māori who “looked Māori but could not speak the language and knew little or nothing about their heritage and traditions” (p.2).

Long-term Impacts and Māori Responses

The state's emphasis on economic integration over cultural preservation ensured that Māori welfare and employment policies remained mechanisms of control rather than empowerment. The legacy of urbanisation and state welfare dependency had long-term consequences, with Māori overrepresented in low-income employment, state housing, and social welfare dependency by the 1980s (Meredith, 2015; Walker, 2004). However, despite these challenges, Māori began asserting their identity in urban spaces, leading to the rise of urban Māori authorities and cultural revitalisation movements advocating for te reo Māori, tikanga, and Māori-led social services. By the 2000s, treaty settlements enabled iwi to re-engage in urban development and governance, yet persistent disparities in housing, health, and education highlight the enduring effects of these policies (Tawhai & Gray-Sharp, 2011; Walker, 2004).

The Social Security Act 1938 and subsequent employment and welfare policies illustrate how social security was used as a colonial mechanism to control Māori economic and social life. While intended to provide security, these policies reinforced Māori dependency on the state, undermined traditional structures, and deepened cultural dislocation. Today, the legacy of these policies continues to shape Māori experiences, underscoring the need for social frameworks that prioritise tino rangatiratanga and Māori well-being.

The Hunn Report 1960

Sir Walter Nash, as Minister of Māori Affairs, had a positivist view of Māori land use and profit, speculating if he should “arrive at an ‘accounting’ of Māori Assets and find a way of using them for the good of the Māori people as a whole (The Hunn Report, 1960, p.13).

The 1960 Hunn Report marked a pivotal moment in Aotearoa's social policy, reinforcing the state's commitment to assimilationist policies for Māori. The report's initiation was framed as a necessary review of the state of Māori affairs from all angles, allowing an evaluation of current policies to assess if change is required to promote the future well-being of Māori. It highlighted disparities in housing, education, and employment while advocating for the integration of Māori into Pākehā society rather than supporting tino rangatiratanga or the preservation of Māori culture as guaranteed in Te Tiriti o Waitangi. Hunn noted that in the 120 years since the signing of Te Tiriti, Māori birth rates had been rapidly increasing and were now outpacing efforts in land development, housing, welfare, education, and employment. However, Hunn also considered that integration would be complete in two more generations, driven by urbanisation, seen as the fastest method to integrate the "two species of New Zealander (p.14)." Previous assimilation and racial policy had not been effective at assimilation, and Hunn considered evolution over policy far more effective in integrating Māori and Pākehā. Additionally, Māori had adapted to colonisation in three broad groups, classified by Hunn (p.16) as:

- A. "A completely detribalised minority whose Maoritanga is only vestigial."
- B. "The main body of Māori, who are pretty much at home in either society, and like to partake of both (an ambivalence, however, that causes psychological stress to some of them)."
- C. Another minority complacently living a backward life in primitive conditions."

Hunn asserted the use of policy to eliminate Group C and allow Māori to decide whether to integrate or assimilate Groups A and B, advising that "no single prescription will work" (p. 16). Hunn saw this as promoting not a Pākehā way of life but a modern one. The report's recommendations influenced key policies and legislation, such as urban migration initiatives and education reforms, which aimed to accelerate Māori participation in the mainstream economy but often led to further cultural erosion and disconnection from whenua and whakapapa.

Conclusion

The early government viewed Māori Assets, both human and material, as central to colonial settler control processes and the survival of a non-funded colonial government (Hunn, 1960). The long-term impact extended into later policies, shaping government approaches to Māori development and contributing to ongoing socio-economic disparities while prompting future resistance and advocacy for Māori tino rangatiratanga.

The mechanisms of loss experienced by Māori during colonisation were deeply intertwined with state control and social policy. Understanding these mechanisms is critical to addressing the ongoing impacts of colonisation on Māori communities and developing social policies that prioritise Māori sovereignty, hauora, and tino rangatiratanga. Policies designed to serve settler interests and establish European dominance were not only facilitated by land dispossession, cultural assimilation, and economic marginalisation; there was also a human cost to the colonising method of assimilation, with children seen as a resource that could be distributed through mechanisms such as cross-cultural adoptions.

Chapter 4: Adoption as Colonisation Practice

The purpose of this chapter is to briefly highlight the mechanisms by which adoption was used within the different layers of settlement outlined in chapter 3. The chapter begins by providing an overview of the ways adoption was used as a form of colonisation that resulted in the loss of identity and culture. The following sections chronologically explain key pieces of legislation and state-based practices that demonstrate how adoption was used as a tool of colonisation as a tool of assimilation and control.

This chapter explores how adoption was employed as a mechanism of colonisation across the layers of settlement discussed in Chapter 3. It begins with an overview of how adoption contributed to the loss of identity and culture, functioning as a tool of colonial assimilation. The following sections chronologically explain key pieces of legislation and state-based practices that demonstrate how adoption was systematically used to enforce assimilation and exert control over Indigenous populations.

Adoption as Colonisation – Loss of Identity and Culture

State-based colonial objectives aimed at integrating Māori into Pākehā society by facilitating the loss of Māori cultural practices and language and destroying whānau family structures, enabling land and resource acquisition and cementing colonial State power structures (Black, 2011; Hunn, 1960; Walker, 2004). For example, the educational system discouraged the use of the Māori language, and urbanisation policies had uprooted many Māori from their rural, tribal communities, pushing them into cities where cultural disconnection deepened. This urban migration led to many Māori losing touch with their traditional support networks, exacerbating the sense of dislocation and alienation.

The purpose of this chapter is to narrow the focus on the role of cross-cultural adoption as a specific tool of colonisation, used as a tool in the loss of land as well as

separation from culture and identity. The chapter begins by outlining the legacy of the foundational social policy, the Neglected and Criminal Children Act 1867. The second section introduces additional legislation from the nineteenth century that influenced adoption practices. The third section explains the policies developed in the 20th century and how they were explicitly used in the processes of colonisation. The fourth section discusses the ongoing consequences of closed cross-cultural adoption in relation to identity formation and well-being.

Foundation policy for adoption-based assimilation and integration policies

The control of children as a mechanism for assimilation within the Aotearoa colonial framework began in the 19th century with the introduction of the Neglected and Criminal Children Act 1867, which legally defined "neglect" and "criminality." This Act did not require the consent of the birth parents and deemed a child to be 15 years or under within the meaning of the Act.(GANZ, 1867; RCol, 2024). The Act facilitated the forced removal of children from their homes and communities by provincial councils, including the ability of a constable to immediately apprehend, without warrant, any "neglected child" (p.2, section 14) and bring them in front of two regional Justices where they could be "convicted" (p. 2, section 15) and "sent forthwith to any ... industrial schools ... for not less than one year and no more than 7 years" (P. 2, section 15) (GANZ, 1881).

Children uplifted through the Neglected and Criminal Children Act 1867 were placed in industrial and reformatory schools, subjected to rigid discipline, shaped by Christian morals, and British cultural norms and labour practices. Once in care, there was little to no oversight into the abuses suffered by those taken, including sexual and physical assault, torture, and forced adoptions, as acknowledged by the Royal Commission of Inquiry Abuse in Care between 1950-1999, the findings of which were published in 2024. The inquiry found

that the role of the State was implicit in its negligence of oversight in State and faith-based institutions that failed the children in their care (RCol, 2024a, 2024b, 2024c).

Initially, the Act and its successors discussed later in this chapter primarily dealt with Pākehā children; however, once the State began more surveillance of Māori families in the 1940s, uplifts of Māori children increased, with rapid institutionalisation (Pollock, 2018). Māori children were often targeted, under the guise of care and rehabilitation, labelling them as neglected, homeless, delinquent, or criminal in ways that disproportionately captured Māori whānau affected by colonial displacement, land loss, and poverty (RCol, 2024). The structural causes of Māori socio-economic marginalisation were ignored, and the Act criminalised Māori ways of life and consciously disrupted the intergenerational inheritance of language, tikanga, and whakapapa. It served the colonial agenda of cultural assimilation by systematically separating Māori children from their iwi, hapū and whānau, thereby weakening collective identity and facilitating cultural erosion. These issues were a core part of the Royal inquiry, illustrated by the quote below:

Expert witness Dr Moana Jackson considered there to be connections between the Canadian and New Zealand governments and indigenous child removal into care, noting that the colonising governments shared the same assimilation intentions. Dr Jackson noted that the State had also seized land, forcibly transferred Māori, banned te reo Māori, persecuted spiritual leaders, forbidden spiritual practices, destroyed objects of spiritual value, and disrupted whānau to prevent the transmission of cultural values. Dr Jackson said the actions of the State could be “equally and properly” described as cultural genocide:

‘Colonisation has always been genocidal, and the assumption of a power to take Māori children has been part of that destructive intent. The taking itself is an abuse.’ ~ Dr Moana Jackson (RCol, 2024b, p.29)

By the 20th century this followed a pattern of what had now become a tested policy mechanism employed across Commonwealth Nations that was connected to “colonisation, assimilation and racist” (p. 28) processes, such as ‘Residential Schools’ in Canada (1883-1997), and ‘The Stolen Generation’ in Australia (1910-1970) (RCol, 2024b). Adoption practices also enabled greater state control over Indigenous lives, with adoption policies during the 20th century also rooted in assimilation and integration, such as the forced adoptions while in State care, and colonial societal norms around illegitimate babies by the 1940s (Else, 2024b; RCol, 2024a).

The adoption policies affecting Māori from the 1940s aligned with a broader governmental framework of assimilation that sought to “civilise” Māori by replacing their Indigenous systems with Western norms and identities (Else, 1991, 2018). Aotearoa's cross-cultural adoption policies, also driven by assimilation and integration ideologies, profoundly impacted Māori identity and cultural connection by severing whakapapa and culture, simultaneously (Ahuriri-Driscoll et al., 2022; Newman, 2013). These policies, implemented predominantly in the mid-20th century, aimed to assimilate Māori children into even unsatisfactory Pākehā families, believing they would “benefit” from exposure to Western culture, education, and values (Else, 2018, 2019b). However, this approach subverted many Māori from identity development typically gained through their traditional cultural structures of whakapapa, language, and tikanga, leading to a deep and lasting loss for both the adoptees and the wider Māori community (Ahuriri-Driscoll et al., 2022; Newman, 2013; Walker, 2004).

Adoption is loss, being separated from your parent(s) is loss, it creates deep and profound doubts about your worthiness to be loved, that you are enough, that you fit within the world with the same mana as those around you... that little voice that sits quietly in the back of your head telling you, you are never enough, try harder,

work longer, be better and you might, just might, get to the bottom of their ladder... imposter! That internal validation, whether good or bad, runs deep, but when externally validated negatively, the impacts are compounded and cemented into your psyche. Not only does a cross-cultural adoptee deal with that intimate separation of parents, but they also have to deal with being an outlier culturally.

Culturally alienated, not from one, but now both cultures! Always an imposter for Māori because you don't know who you are, you have no connections to whenua, iwi, hapū or whānau and you are culturally dearth ... always an imposter for Pākehā because you are the wrong colour, have the wrong features, must be dumb and needing compassion from the good white folk to teach manners and set them on the right path – OK that may have been in the 60s-70s but I still hear that in my head today.

Racism in categorisation and deficit of connection ... will finding out our whakapapa even fix the damage carried? DNA is all we have left to use ... I wonder?

Nineteenth-Century Adoption Policies

Aotearoa was the first country in the British Empire to formally legislate adoption (Newman, 2013). The Adoption of Children Act 1881 legalised the adoption of children under the age of 12 years, primarily serving the needs and interests of settler [Pākehā] families. It established a legal process protecting the interests of the adoptive parents by assuming full parental rights over a child, rather than the birth family, effectively severing all legal ties between the child and their birth family (NZLC, 1999, (2) 60-61; GANZ, 1881). One exception under the 1881 Act was that “benevolent or other institutions” (p. 2) not maintained by the government preserved the child's own [birth] name (GANZ, 1881). This Act did require “consent in writing”(p. 1) of the birth parents; however, it made no provision for maintaining the cultural identity or whakapapa of adopted children, nor did it recognise Māori

customary practices such as *whāngai*, in which children were raised by extended whānau in ways that preserved familial and cultural connections (GANZ, 1881, p. 1; Newman, 2013, 2020; RCol, 2024). Something that had significant consequences for Māori children who were adopted into Pākehā families.

By 1882, the *Neglected and Criminal Children Act 1867* had been repealed and replaced with the *Industrial Schools Act 1882*, removing provincial councils' ability to establish industrial and reform schools. The government now had to approve any state, local, or privately funded institutions, taking their establishment from a regional to a national level. This legislation still allowed for the unconsented uplift of children under 15 years who were seen as a problem. The new Act “permitted the boarding out of children in the care of such schools, and by 1895, 81 per cent of children from the schools directly controlled by the Department were in foster homes,” which was seen as more desirable option (McLintock, 1966, p. 3; Pollock, 2018).

Arguably, the Act could be accused of setting the foundations of a partial pipeline for closed adoptions. Dr Anne Else (2024a) in her testimony to the Royal Commission of Inquiry into Abuse in Care (RCoIAC) stated “pressure to adopt came from ... authorities such as social workers, and medical professionals ... it could be heightened for girls or young women who became pregnant while already in the care of the State themselves” (p. 13). The Adoption of Children Act 1881 Amendment Act 1885 (49 VICT 1885 No 9) was essentially a refinement and consolidation of the legal framework of the 1881 Act's formal adoption processes. It included minor updates and clarifications but did not significantly alter the framework set out in 1881 (GANZ, 1885). The 1885 Act continued the same colonial logic, formalising adoption as a legal severance from the child's birth family (Else, 2018; Newman, 2013). Both Acts contributed to the loss of or disconnection from Māori identity through legal mechanisms that prioritised assimilation into Pākehā norms and continued to disregard the cultural and collective rights of Māori children, families, and communities.

Cross-cultural adoption in the twentieth century

Initially, Māori were exempt from the adoption laws outlined above. However, cross-cultural adoption in Aotearoa was rooted in colonial assimilation policies that reinforced postcolonial dominance, which initially focused on the loss of land and sovereignty. The introduction of the Native Land Claims Adjustment and Laws Amendment Act 1901 allowed the State to assert control over Māori adoption practices by legislating the circumstances under which Māori children could be adopted. It was not merely a bureaucratic adjustment, but a strategic move aimed at disrupting the social structures of iwi, hapū, and whānau. These policies employed the colonial settler strategy of '*not talking*,' which used secrecy to undermine traditional Māori practices such as whāngai. By undermining whāngai practices and asserting state authority over the transmission of children and, by extension, inheritance rights, the state was able to implement another pathway to dispossess Māori of their land and whakapapa-based systems (Coulthard, 2014; NZLC, 1999, pp. 12, 317–320). State-based control over adoption and succession weakened Māori social cohesion, as it disrupted the intergenerational continuity that underpinned communal land ownership and cultural identity described as a form of “cultural violence” (Newman, 2013, p. 239). This erosion of Māori adoption practices contributed to the broader displacement of cultural traditions and identity.

Infants Act 1908

The *1908 Infants Act* in Aotearoa aimed to consolidate laws regarding infants, including guardianship, custody, contracts, wills, adoption, and protection, and was used to deal with guardianship and custody of infants orphaned or surrendered to the State (NZGA, 1908). This set the legal frameworks for guardianship and custody, including removing the father's presumed right to custody. The 1908 Infants Act was repealed by the Infants Act Repeal Act 1989, paving the way for the Children, Young Persons and their Families Act

1989, which replaced the Infants Act and the Children and Young Persons Act 1974. Notably, in June 2017, amendments to the 1989 legislation were passed, renaming it to the Oranga Tamariki Act 1989.

The Infants Act of 1908 was also used for adoptions to deal with guardianship and custody of infants orphaned or surrendered to the State until the Adoption Act of 1955 superseded it (NZGA, 1908). During the period 1920–1939, fewer than a third of adoptions involved children under 12 months old, suggesting that adoption was not primarily about infant placement but often involved older children, potentially removed from their families due to poverty, stigma, or state intervention. By 1939, fewer than 2% of babies were adopted, which increased to 4% by 1944. By the 1950s, adoption demand had outstripped supply, with more applicants seeking children than children available for adoption (Else, 2019a). This environment intensified pressure on Māori families, who were often targets of state scrutiny and intervention, particularly as cross-cultural adoptions, where Māori children were placed in Pākehā families, became more common.

Adoption Act 1955 and Closed Adoptions

The Adoption Act 1955 was a critical piece of legislation institutionalising closed adoptions in Aotearoa. Under this Act, Māori children could be adopted by non-Māori families, often with no provision for maintaining ties to their whānau, iwi, or hapū. Birth records were sealed, and the child's new identity was constructed entirely within the adoptive family's context (Haenga-Collins, 2017).

The 1955 Act fully endorsed Western epistemology beliefs with closed adoptions, underpinned by the reconstituted colonial construct of the nuclear family, which incidentally did not match almost one-third of the Aotearoa NZ population at the time. Closed adoption was driven by secrecy, where elaborate precautions were undertaken to conceal the child's

identity and birth parents, with the 1959 Adoption Regulations allowing the adoptive parents' identities to remain secret.

This was the case for my mother, a cross-cultural adoptee with a Pākehā birth mother who thought it unimportant to register the Māori father's name on the original documentation. When my mother tried to reconnect with her birth mother, it was too late as she had sadly already passed, taking any information with her.

The closed nature of adoption ensured Māori children did not know their whakapapa (*genealogy*), a central pillar of Māori identity. Cross-cultural adoptions under the Adoption Act severed this vital link, leaving Māori children disconnected from their cultural heritage and identity. The Act failed to comply with the Conventions on the Rights of the Child, the Human Rights Act, the Bill of Rights Act, or “with the child’s right to understand its identity,” and has been criticised nationally and internationally (Else, 2019b, p. 740- 741). Else (2019b, p.724) explains below the likely conditions and social norms of the 1950s:

The majority of Māori babies who came into the formal Pākehā adoption system were the children of Pākehā mothers and Māori fathers. In many cases of adoption, ex-nuptial pregnancy, the girl's parents would not want her to have anything to do with the father, but that was doubly so where the father was Māori, and she was Pākehā. So, the young woman was liable to know very little about the father; she would know his name, but she didn't know, for example, what iwi he was or anything like that. As I say, the fathers were generally kept out of the process, but Māori fathers were particularly kept out of the process because of the - well, racist assumptions of the people concerned (Else, 2019b, p.724).

The Consequences of Closed Cross-Cultural Adoptions

Closed adoptions meant that the birth records were sealed, and the adopted children were given new identities reflective of their adoptive parents. Haenga-Collins and Gibbs (2015) state that most adoptions between 1955 and 1985 of whakapapa Māori children through at least one parent were given to white adoptive parents. Given that closed adoptions were considered culturally inappropriate in relation to tikanga, there were only a relatively small number of Māori, compared to Pākehā mothers, who agreed to closed stranger adoptions (Haenga-Collins & Gibbs, 2015; Haenga-Collins, 2019). There were, however, many children from white mothers and Māori fathers who accounted for the high numbers of Māori children available for adoption (Haenga-Collins & Gibbs, 2015; Haenga-Collins, 2019). At the time, adoption of Māori children by European strangers was socially seen as more desirable than a white woman marrying the Māori man who got her pregnant. Inter-racial marriage was socially and familiarly discouraged, illustrating the dominance of colonialism epistemologies (Haenga-Collins & Gibbs, 2015).

For Māori, the social norms and the closed-adoption policy devastated identity and Māori whānau structural understanding as “a corporate body in its own right, involving at least three generations” (Else, 1991, p.175). Māori children are seen as belonging to the broader whānau, hapū and iwi, and the collective nature of child-rearing in Māori culture meant that children were traditionally raised with a strong sense of knowledge of and belonging to their whenua, connection to their whakapapa as essential for personal identity and their role and responsibilities within the wider community. Without knowing their whakapapa, ancestral links to land and history are lost, as is the individual's place within Māori and Pākehā societies (Walker, 2004). Essentially, Māori children placed in Pākehā homes became displaced and culturally lost.

Impacts on Māori Identity

Adoption has a profound and often damaging impact on a person's sense of self or identity. Blake et al. (2023) highlight the profound disruption caused by severing whakapapa connections and removal from culture through closed cross-cultural adoption with significant and often damaging impact on the self-identity of Māori adoptees. Being raised in Pākehā families, many adoptees were socialised to "become as if born to" their adoptive parents, resulting in a disconnect between their internal self-image and their external, visible Māori identity. A clash between external categorisation and lack of internal verification of identity that enhances self-esteem (Burke & Stets, 2023). This dislocation, often intensified by racial microaggression and the absence of affirming cultural narratives, led to many adoptees experiencing a sense of not belonging, identity confusion, and "psychic homelessness" (Blake et al., 2023, p. 177).

The cultural as well as familial displacement experienced by many Māori adoptees had a profound and lasting impact on their sense of identity and belonging. Separated from their Māori culture, many grew up feeling disconnected and uncertain about their place within both Māori and Pākehā worlds (Blake et al., 2023; Haenga-Collins & Gibbs, 2015). Traditionally, Māori whānau structures were holistic and "self-sustaining", with collective caregiving responsibilities shared among members acting *in "loco parentis,"* ensuring tamariki were nurtured by all, creating a sense of security and resilience entrenched in whakapapa (Walker, 2004, p. 63). Such structures offered a foundation of security that allowed resilience to loss or abandonment through whakapapa, identity formation, and emotional well-being (Walker, 2004).

Contemporary research consistently highlights the damaging effects of adoption and assimilation policies on the development of Indigenous identity, especially when children are placed in non-Indigenous environments (Rameka, 2016; Te Wānanga o Raukawa, 2021). For many Māori adoptees, the removal from their cultural context and immersion in

unfamiliar cultural settings can lead to a profound disconnection from their heritage and a fractured sense of self (Burke & Stets, 2023). The disruption of cultural continuity and loss of ancestral ties have had long-term consequences for identity development, with individuals often struggling to reconcile their Māori whakapapa with their lived realities as cross-cultural adoptees (Te Wānanga o Raukawa, 2021; Walker, 2004). This highlights the need to understand identity as a complex, dynamic process that can be shaped and destabilised by historical and social forces, particularly the enduring effects of adoption (Brown, 1991; Burke & Stets, 2023). The fractured sense of identity, in turn, contributes significantly to broader issues of hauora Māori and well-being. Else (2019b, p. 739) elaborates below on the very specific short and long-term impact of these policies on Māori.

This kind of deprivation has consequences. Dr Alison Green yesterday very eloquently spoke of the consequences of the loss of those connections. Now, they particularly have wider and different consequences for people of Māori heritage, given the way in which your birth connections and history are such a crucial part of who you are in the Māori world. But they have consequences for all adopted children, and they were only partly mitigated by the Adult Adoption Act, which often proved very little use to Māori because if their father was Māori and not recorded, they had great difficulty finding out anything further.

Closed cross-cultural adoption into Pākehā families resulted in a disconnection from Māori cultural frameworks, contributing to a complex range of self-identified cultural identities. Over time, this has given rise to a heterogeneous spectrum of Māori self-identification, shaped by both personal experience and broader societal influences (Matika et al., 2017; here). For instance, those with more European features may feel a degree of social protection, while others who are more visibly Māori often face discrimination (Else, 2019a, 2019b; Reid et al., 2016).

The impact of adoption policies on Māori children was profound and often damaging, not only to their identity but also to their well-being.

Impact on Māori Wellbeing

The loss of identity experienced by many Māori cross-cultural adoptees could lead to significant psychological and social challenges. Many struggled with low self-esteem, identity confusion, and a deep sense of cultural isolation due to the inability to access their language, cultural heritage, whānau, hapū, and iwi, which can foster feelings of alienation and trauma (RCOl, 2024). The psychological and social consequences of these policies resulted in displacement, contributing to various social issues, including mental health problems, suicide, substance abuse, and a loss of self-worth among many adopted Māori individuals (Else, 1991; MoH, 2019, 2014; Thom & Grimes, 2022).

The Royal Commission of Inquiry into Abuse in Care (2024) found these consequences were magnified by violence, sexual abuse, and neglect by carers and adopters appointed by the State via the Neglected and Criminal Children Act, working in tandem with the Adoption of Children Act.

Without traditional cultural anchors or whakapapa to foster security and resilience, feelings of exclusion from both Māori and Pākehā worlds, cross-cultural adoptees are more susceptible to poorer social determinants (Haenga-Collins, 2015; Walker, 2004; here). This cultural displacement and identity confusion have contributed to a range of social issues, including mental health struggles, suicide, substance abuse, and a diminished sense of self-worth (Else, 1991; MoH, 2019).

The impact extends beyond the individual, eroding collective histories and disrupting the intergenerational transmission of knowledge across generations that allowed the placement of tamariki that once “strengthened ... whānau structures” (p. 174) was destroyed

with secrecy and exclusion (Else, 1991). Adoption policies not only severed ties between tamariki and their whakapapa, but also disrupted the continuity of te reo Māori, tikanga, and customary practices among the adopted Māori population, making it difficult and in some cases impossible to reconnect to whānau, hapū and iwi even with the *Adult Adoption Information Act 1985* (O'Carroll, 2013). The 1985 Act allowed many closed adoptees access to previously sealed documents such as original birth certificates. However, in many cases with Pākehā mothers and Māori fathers, the father was not included in the documentation, leaving many still culturally bereft. The long and short-term impact of these policies is ably illustrated by the following acknowledgement from the Royal Commission of Inquiry:

I'd particularly like to acknowledge the experience of birth mothers who experienced their babies being forcibly removed or their being coerced into relinquishing them or those birth mothers who felt they had no choice in decisions being made about their babies ... And then the last group I just wanted to acknowledge is wider family, who, even these days, are searching for connections to put together the pieces of whakapapa for relatives who were adopted themselves and the limitations of the legislation in terms of enabling them access to critically important information (RCOI, 2024a, p.31).

Conclusion

Aotearoa's cross-cultural adoption policies, shaped by assimilation and integration ideologies, resulted in significant cultural dislocation for Māori. By severing Māori children from their whakapapa and placing them in Pākehā families, these policies disrupted Māori cultural continuity and identity, with long-lasting effects on individuals and communities. That disconnection also affected Māori whānau, who lost contact with their tamariki and could not pass down cultural knowledge, traditions, and language, creating an intergenerational void within their own whānau.

Efforts to address this legacy continue for those still looking for the missing pieces of their identity, and the impact of these policies is still profoundly felt today. In the absence of traditional methods of cultural and whakapapa reconnection through documentation searches made available by the Adult Adoption Information Act 1985, many Māori adoptees and others disconnected over decades of colonisation could now turn to DTC-GT as a modern tool to reclaim lost identity. Technological advancements in DNA and cost-effective access available to the public may offer the possibility to navigate questions of ancestry and reconnect with their genealogy and whakapapa. However, does the commercial marketing fully disclose the implications and challenges associated with using and understanding DNA genealogy for Indigenous people? The following two chapters address these questions while explaining the broader context and ramifications of DTC-GT.

Chapter 5: DNA Policy and Issues of DTC DNA Usage

The purpose of this chapter is to outline how DTC-GT is provided and explain how it can be used as an identification tool for identity reclamation. Firstly, the chapter identifies the services DTC-GT companies can offer to the public domestically and internationally, their scope and limitations, and what policies and guidelines exist to protect domestic users. Secondly, the chapter explores the specific aspects of genealogical DTC-GT companies and their testing processes, the types of DNA used and the limitations of the tests for genetic matching. Thirdly, the chapter explains how autosomal DNA is used to identify genetic matches to discover genealogical descent, including whakapapa, and the relationship of these processes for Indigenous populations.

I was told I was 'dogmatic' by one Col Chris Richards during my Army career. Something that was hintingly framed as a flaw in my twenties has had its advantages throughout my life: the tenacity to not give up on a cause or pursuit that I, in all my wisdom, decreed worthy. Taking a DTC DNA test to find mine/our whakapapa was one of those pursuits. I just couldn't let it go ... I had to find the answer, not just for Mum but for all of us. With my sibling's blessings and their DNA tests sent off, I took over ... driven by forces far more powerful than I understood, relentlessly using any online tool at my disposal to understand the processes of finding out who we were. The dream was to confirm our ethnicity and reconnect with those whom we were lost to. My previous anger and frustration had dissipated by the fact that I had a plan, a course of action that could solve this mystery once and for all. I would find all the missing pieces of our family history; we would know who Mum's birth parents were, reconnect with them and be whole again. We chose 'Ancestry DNA' to test with, for

no particular reason than it was the one advertised. It would be so easy with DNA; the expectations were enormous, and the company promised results.

Range of DTC DNA Services available

DTC-GT services have rapidly expanded in scope and availability over the past decade, offering individuals unprecedented access to their genetic information without the need for medical or scientific intermediaries (AGenDA, 2022; Horton et al., 2019; Shelling et al., 2022). Internationally, companies such as AncestryDNA, 23andMe, MyHeritage, FamilyTreeDNA, and Living DNA dominate the market, offering a wide array of testing options that include ancestry and relationship discovery, health risk assessments, carrier status reports, nutrigenomics, and even skincare recommendations. In Aotearoa, while no large-scale DTC DNA companies are headquartered domestically, these global services are accessible online and heavily marketed to the local population. The proliferation of these services raises critical questions around access, cultural relevance, and data sovereignty, particularly for Māori and Pacific populations whose genetic data may be underrepresented or misinterpreted.

It is important to acknowledge the types of DTC-GT services advertised and sold domestically and globally in Aotearoa, which contribute to a \$2 billion global industry (GMI, 2023). Due to the scope and size of this thesis, a detailed explanation is not possible, but a brief description of each testing type can be seen below (see *Figure 3*). These test types can be broken down into three primary access pathways: DTC-GT, clinic-based testing, and provider-mediated testing.

Figure 3: Types of Genetic Testing: Table sourced from NHGRI (2023).

	Description	Who orders the test?	How is consent obtained before the test?	Who discloses the results?
Direct-to-consumer genetic testing (DTC-GT)	Healthcare professional not involved	Consumer	Direct to consumer via written information	Report issued directly to consumer
Provider-mediated genetic testing (PM-GT)³	Consumer-initiated with healthcare professional involvement	Consumer or healthcare professional	Direct to consumer with/without healthcare professional	Report issued directly to consumer with optional access to healthcare professional
Clinic-based genetic testing	Facilitated by healthcare professional	Healthcare professional	By healthcare professional	Facilitated by healthcare professional

DTC testing allows individuals to independently purchase and undertake genetic tests, typically via saliva samples, with results delivered online through proprietary platforms. These services, such as those offered by AncestryDNA, 23andMe, and MyHeritage, are often marketed for ancestry exploration, health traits, or recreational insights and are widely accessible in Aotearoa through international providers. In contrast, clinic-based genetic testing is administered within a healthcare setting, usually under the supervision of a geneticist or clinical specialist and is used to diagnose or confirm medical conditions. These tests are held to stringent standards, involve comprehensive genetic counselling, and often require general practitioner or specialist referrals. Provider-mediated genetic testing occupies a middle ground, where tests are ordered through healthcare providers (often private) but may be analysed by external commercial laboratories, sometimes including elements of both DTC and clinical services. In Aotearoa, the public health system predominantly offers clinic-based testing for specific conditions (e.g., cancer predisposition, rare diseases), while private providers may facilitate access to more personalised or predictive genetic screening (e.g., diet, fitness or skincare). Globally, the integration and regulation of these testing models vary significantly, with implications for test accuracy, ethical oversight, data security, and health equity.

Indigenous Implications

The implications of genetic testing models for Māori and other Indigenous populations are profound and multifaceted, touching on issues of equity, cultural integrity, data sovereignty, and historical mistrust of research and health systems. DTC-GT, while offering broad accessibility and empowerment through self-discovery, often fails to consider

Indigenous perspectives on identity, whakapapa, and collective rights (Credence Research, 2024; KPMG, 2018). Most DTC platforms are built upon Eurocentric reference datasets, which can result in inaccurate or incomplete representations of Indigenous ancestry, leading to misinterpretation of whakapapa. Furthermore, DTC DNA companies rarely meet the ethical expectations of Indigenous data governance, with little transparency or accountability around how Indigenous genetic data is stored, shared, or commercialised.

While more regulated, clinic-based genetic testing may also present barriers to Māori due to systemic inequities in access to healthcare, lack of culturally competent services, and limited Māori representation within clinical genetics (M. Durie, 1998, 2021). However, this model has potential when underpinned by kaupapa Māori frameworks and guided by partnership, protection, and participation principles in line with Te Tiriti o Waitangi (Borrell, 2025; M. Durie, 2021).

Provider-mediated testing sits in a grey area, raising concerns about inconsistent ethics oversight and the commercialisation of Māori and Indigenous genetic material without meaningful consent or benefit-sharing (Borrell, 2025; Carroll et al., 2020; Hudson et al., 2016). Across all models, the lack of Māori governance over genetic data remains a central issue. Addressing these concerns requires not only improved representation and consultation but also the implementation of Indigenous data sovereignty frameworks such as Te Mana Raraunga and adherence to the CARE Principles (Collective Benefit, Authority to Control, Responsibility, and Ethics) to ensure Indigenous rights are recognised, protected, and upheld in genomic research and services (Carroll et al., 2020).

Policies related to Domestic DNA Testing Users

Several domestic policy areas are relevant to this thesis. Some offer legislative protection, while others advocate for wider protections through recommended guidelines supported by or developed in partnership with independent lobby groups, as indicated in *Figure 4* below.

Figure 4: Policy Areas Governing Use of DTC DNA for Genealogy Research (NZ)

Policy Area	Policy / Framework	What It Governs / Example Applications
Privacy & Data Protection	NZ Privacy Act 2020	Storage, consent, and sharing of personal genetic information. Participants must know how their DNA data will be used.
	General Data Protection Regulation (GDPR) (EU)	Informs best practice globally. e.g., right to withdraw, informed consent, anonymisation of genetic data. (Aotearoa is not a member of the EU, so it has no direct control over this policy. As a collective, however, the EU is largely influential and far-reaching, which gives power to its influence.)
	DTC Company Privacy Policies	Governs third-party sharing (e.g., law enforcement, research), opt-in consent for commercial or academic research use. (Aotearoa located companies must comply with all domestic policies in accordance with legal frameworks.)
Ethics in Human Research	Health & Disability Ethics Committees (HDECs)	Ethics approval is required for collecting and analysing human DNA in research. Informed consent must include DNA specifics.

	NEAC Ethical Guidelines	Protects participant rights, especially for sensitive data like whakapapa and Māori identity.
Indigenous Data Sovereignty	Te Mana Raraunga Māori Data Sovereignty Principles	Ensures Māori retain control and governance over their genetic and whakapapa-related data.
	CARE Principles for Indigenous Data Governance	Emphasises Collective benefit, Authority to control, Responsibility, and Ethics—especially in genomic research.
	UNDRIP (Articles 18 & 31)	Affirms Māori rights to protect their genetic resources and traditional knowledge.
Genomics & Biobanking	He Tangata Kei Tua (MoH)	Framework for involving Māori ethically in genomics and biobanking projects.
	Genomics Aotearoa Guidelines	Advises ethical handling of Māori genetic data; requires engagement and co-design with Māori.
Consumer Protection	Fair Trading Act 1986	Governs how ancestry and ethnicity estimates are marketed to consumers (e.g., disclaimers on accuracy).

	ASA Code of Ethics (Advertising Standards Authority NZ)	Ensures that genetic testing kits are not misleading or exploiting fears/identity issues.
Treaty of Waitangi Obligations	Te Tiriti o Waitangi (Partnership, Participation, Protection)	Requires research to be kaupapa Māori-aligned when involving Māori participants or data; benefit-sharing required.
	Institutional Māori Research Policies (e.g., University strategies)	May require Māori consultation, co-design, or Māori advisory boards to oversee research involving whakapapa.

DTC Genetic Testing Services and Identity Reclamation

DTC-GT has become a tool for identity reclamation for many individuals, particularly those impacted by colonisation, adoption, or disconnection from ancestral and cultural connections. These services offer a way to uncover lost or hidden ancestry, reconnect with extended whānau, or affirm cultural belonging when traditional records or oral histories are incomplete or absent. For Māori and other Indigenous peoples, DTC testing can spark a powerful process of rediscovery, serving as a starting point to trace whakapapa and re-establish cultural ties. However, this pursuit often intersects with challenges, such as inaccurate ethnicity estimates, lack of representation in databases, and the commodification of identity by commercial platforms. While not a replacement for lived experience, community validation, or genealogical research, DTC testing can provide valuable clues in the deeply personal and often emotional journey of reclaiming identity and belonging. While DTC-GT can serve as a meaningful entry point for those seeking reconnection, the value and limitations of such services depend heavily on the company chosen and the tools they provide. To better understand what is possible and what is not, it is important to examine the leading genealogical DTC-GT companies and how their services support (or restrict) the identity reclamation process through genealogical and whakapapa research and discovery.

Tests taken and results back: No magic answers, no simple fixes, what the hell! Now what?

I needed to understand what the results of our spit tests were telling me and ask questions of anyone I thought could help me. There was a long list of DNA matches, but how did they all fit together? Who was this second cousin from Hawaii, and how were they related to the cousin from Aotearoa and us? Not to mention the

thousands of matches (67,995, Ancestry matches 15 Jan 2025), with close matches of 4th cousins or closer at 20,676 and additional distant matches another 47,319.

My naturally critical mind, which some might suggest is a little cynical, was also a blessing because it would not let me take things at face value. I needed corroboration, but there was none. Now, I was working with the realisation that not all that glitters is gold; in other words, the 2017 DTC DNA marketing hype far outshone the reality! Considerably more so for Māori and Indigenous DNA. But I had an ace up my sleeve! All three siblings had different fathers; they were all Pākehā, which provided me with straightforward triangulation with my siblings regarding our mother's Polynesian ancestry (the generic label at the time). Not everyone is that lucky.

I was still having difficulty making sense of the matches. The relationship charts provided didn't seem to line up outside of our European family trees. It was a frustrating process of sending emails to potential matches and getting either no reply or one from someone as confused as me about the connection. I searched for social media groups that might be able to help... 'Polynesian DNA' on Facebook held my first big breakthrough. In discussions with their 'admin,' Kalani Mondoy, he explained the importance of CM size and consanguinity. Only look to matches with segments of 30 cM and above. My list just shrank to two! I emailed them immediately to see if they could help with my DNA puzzle pieces. I was shocked, excited, and ridiculously overjoyed to receive a reply from both of them, and they were cousins!! For the first time, I felt like I was on the right path to discovering Mum's dad, our koro (grandfather), and why we didn't look like anyone else in our family.

Genealogical DTC-GT Companies (recreational testing)

Taking a DTC DNA test has gained widespread popularity, allowing individuals to explore their ancestry, health or trait predispositions, and familial connections with unprecedented accessibility. This section focuses on ancestral and relationship DNA testing, specifically with the five largest DTC DNA companies: Ancestry, MyHeritage, Family Tree DNA's Family Finder, 23andMe, and Living DNA, and though health or trait predispositions are acknowledged, it does not include any in its analysis in relation to identity reclamation. For some, DNA testing is a passing curiosity; for others, it is the only hope of reconnection and identity. However, in the exhilaration of testing, the decision to use DTC DNA services often overlooks critical considerations, such as data privacy, potential emotional impacts, and the implications of discovering unexpected familial relationships or ethnic heritage. Furthermore, cultural contexts and the intersection of genetic information with Indigenous identity, particularly in colonised nations like Aotearoa, are frequently ill-considered or ignored. Before embarking on any genetic journey, assessing these tests critically and the testing company concerning ethical, personal, and societal consequences is essential, recognising that the results can be empowering and unsettling.

Five main ancestry and relationship testing companies provide DTC-GT and can be chosen for genealogy searching. Brief explanations and links to more in-depth information that this thesis cannot accommodate can be found in the footnotes. These companies are located outside of Aotearoa, and though all advertise they are used for genealogical and personal ancestry, 23andMe also advertises medical testing. 23andMe testing is advertised to include carrier and predictive testing, including new breast, prostate and colorectal cancer reports and nutrigenomic testing. Though reports produced by 23andMe claim to be >99% accurate, they have limitations noted in their disclaimer, included in full below:

*The 23andMe PGS test includes health predisposition and carrier status reports. 23andMe health predisposition reports include both reports that meet FDA requirements for genetic health risks and reports which are based on 23andMe research and have not been reviewed by the FDA. The test uses qualitative genotyping to detect select clinically relevant variants in the genomic DNA of adults from saliva for the purpose of reporting and interpreting genetic health risks. It is not intended to diagnose any disease. Your ethnicity may affect the relevance of each report and how your genetic health risk results are interpreted. Each genetic health risk report describes if a person has variants associated with a higher risk of developing a disease, but does not describe a person's overall risk of developing the disease. The test is not intended to tell you anything about your current state of health, or to be used to make medical decisions, including whether or not you should take a medication, how much of a medication you should take, or to determine any treatment. Our carrier status reports can be used to determine carrier status, but cannot determine if you have two copies of any genetic variant. These carrier reports are not intended to tell you anything about your risk for developing a disease in the future, the health of your fetus, or your newborn child's risk of developing a particular disease later in life. For certain conditions, we provide a single report that includes information on both carrier status and genetic health risk. For important information and limitations regarding each genetic health risk and carrier status report, (23andme.com/test-info/).

The International Society of Genetic Genealogy (ISOGG)¹⁷ and the associated ISOGG wiki¹⁸ provide comprehensive and authoritative information on genetic genealogy.

¹⁷ International Society of Genetic Genealogy (ISOGG): <https://isogg.org/>

¹⁸ ISOGG Wiki: https://isogg.org/wiki/Wiki_Welcome_Page

The ISOGG wiki includes resources and guidelines for DNA testing, such as the '*Genetic Genealogy Standards*¹⁹, and the widely referenced *Autosomal DNA Testing Comparison Chart*²⁰ administered by ISOGG member Tim Janzen. Tim is a doctor in Oregon, USA, with 35 years of genealogical research and experience in genetic genealogy, particularly in autosomal DNA analysis. He also serves on the ISOGGY Y-DNA Haplogroup Tree committee and ensures intellectual integrity to the Autosomal DNA testing comparison chart as all additions, corrections and updates from ISOGG members must be made through him. The New Zealand Society of Genealogists (NZSG) has a publicly accessible 'DNA Overview'²¹ page and also endorses ISOGG as authoritative and promotes ISOGG wiki's information. Anderson's (2024) article noted that, unlike medical and paternity testing, that has 100% accuracy, DTC-GT results can depend on the test taken, service provider chosen, and the different algorithms used as stated here:

DNA testing to discover ancestry and ethnic makeup is less accurate. The same company, for example, may give you and your siblings dramatically different ethnicity percentages, or you may get very different ethnicity percentages if you use two different services. This is because there's no one right way to divide and categorise humans.

DTC-GT for genealogy and identity reclamation typically involves three key types of DNA analysis: autosomal DNA, mitochondrial DNA (mtDNA), and Y-DNA. Each of these tests offers distinct insights into an individual's ancestral heritage. Autosomal DNA, inherited from both parents, provides a broad picture of genetic relationships across recent generations and is most commonly used for identifying close relatives and constructing

¹⁹ ISOGG Genetic Genealogy Standards: <http://www.geneticgenealogystandards.com/>

²⁰ Autosomal DNA testing comparison chart (ISOGG Wiki): https://isogg.org/wiki/Autosomal_DNA_testing_comparison_chart

²¹ NZSG DNA Overview: <https://genealogy.org.nz/DNA/11167/>

family trees. Mitochondrial DNA, passed down unchanged from mothers to their children, traces maternal ancestry deep into the past, making it helpful in exploring ancient maternal lines. Y-DNA, inherited through the paternal line and available only to individuals with a Y chromosome, reveals direct paternal ancestry and can identify surname lineages and ancient haplogroups (Jobling & Tyler-Smith, 2003). Together, these DNA types provide a layered understanding of genealogical connections and can support efforts to reclaim lost or disrupted identity, especially for individuals and communities affected by colonisation, migration, or adoption. To understand these key types of DNA better, see the explanations below.

Autosomal DNA

Autosomal DNA is a mixture of all your blood-related ancestors' DNA as it relates to you. Each child receives 50% DNA from each parent, and that 50% is a different recombination for each child; unless you are identical twins, the DNA results are different for each person. Each generation's contribution, in theory, becomes more diluted. The size of the centiMorgan (cM),²² a unit of genetic measurement used to indicate the size matched to 'others' DNA segments in their autosomal DNA, which is important in determining relationality. The total amount and the size of the largest single cM play a crucial role in matching potential family members. The total cM amount gives you an approximate relationship to others who have tested, and the size of the largest cM can help determine proximity generationally, particularly with endogamous²³ communities such as Indigenous Māori. DNA microarray technology²⁴ is used in DTC-GT by analysing genetic markers,

²² centiMorgan (cM): https://isogg.org/wiki/CentiMorgan#cm_values_per_chromosome

²³ Endogamy: is the practice of marrying within the same ethnic, cultural, social, religious or tribal group. In endogamous populations, everyone will descend from the same small gene pool. People will be related to each other in a recent genealogical timeframe on multiple ancestral pathways, and the same ancestors will, therefore, appear in many different places on their pedigree chart (ISOGG Wiki, n.d.).

²⁴ DNA Microarray Technology Fact Sheet: <https://www.genome.gov/about-genomics/fact-sheets/DNA-Microarray-Technology>

producing a genetic profile that can be used to determine genealogy or genetic predispositions to disease (Ancestry.com, n.d.; Horton et al., 2019; Jorde, 2020).

Mitochondrial DNA (mtDNA)

mtDNA links back through the maternal (mother's) ancestral line and can identify other matches who share your mtDNA. This is helpful if male descendants do not break the lines of descent you are interested in and can identify migrations of your maternal-line ancestors through generations.

Y DNA

Y DNA and Big Y DNA trace the paternal (father's) line back to a single common ancestor. It can also trace the migration of paternal ancestors by using a single-nucleotide polymorphism (SNP)²⁵ to determine a Y-DNA haplogroup²⁶.

Figure 5 below briefly summarises the uses and limitations of the key DNA types. It should also be noted that Autosomal testing is the most widely used method for general genealogy, and its utility increases dramatically when combined with known genealogical data or multiple family testers. It is also the only option if direct paternal or maternal ancestral lines are not the focus of discovery, or the distance of unknown familial relationships is not close enough for the accuracy of a direct parental DNA test. The genetic accuracy of these DNA tests diminishes as the distance between matches extends, highlighting the limitations of DNA and the need for a combination of genealogical processes that use DNA results to identity reclamation, rather than the answer.

²⁵ Single-nucleotide polymorphism (SNP): https://isogg.org/wiki/Single-nucleotide_polymorphism

²⁶ Y-chromosome DNA haplogroups: <https://isogg.org/wiki/Haplogroup>

Figure 5: Types of Genealogical DNA Testing

Test Type	What it Traces	Best For	Limitations
Autosomal DNA	All ancestral lines (from recent generations)	Close relative matching (up to 5–6 generations)	Decreases in accuracy with time and endogamy
mtDNA (Mitochondrial DNA)	Maternal line only	Deep maternal ancestry, identifying maternal migration	Not useful for close relatives unless the maternal line is of interest
Y-DNA	Paternal line only (males only)	Deep paternal ancestry, surname studies, haplogroups	Limited to male testers; only one line
Big Y	Advanced Y-DNA analysis	Deep SNP-level paternal studies	Costly, requires a male line and understanding of SNP analysis

Genealogy Support Tools and Data Integration

Additionally, to maximise the genealogical capabilities of these websites, several additional support tools can be accessed; some are provided exclusively by the companies in question and others by third-party entities that do not provide testing services but do provide additional analysis tools. These features are generally designed to help interpret individual results in a genealogical context, algorithms across individual sites and AI-

generated prompts continually offer users potential data hints, new DNA matches or related family trees that may help find connection links. Some examples of the most popular tools are briefly discussed below:

- Ancestry's DNA Matches and ThruLines™ - These features help users identify and visualise genetic matches and how they may fit into a family tree by integrating DNA results with user-submitted family trees to suggest possible common ancestors.
- MyHeritage's Theory of Family Relativity™ and AutoClusters - The Theory of Family Relativity™ combines DNA results with historical records and family trees to propose potential relationships, while AutoClusters visually group shared matches into clusters, helping identify branches of your family.
- GEDmatch's free and paid tier tools (e.g., chromosome browsers) - GEDmatch allows users to upload raw DNA from multiple testing companies to find matches and use tools like chromosome browsers, segment analysis, and admixture calculators to investigate shared ancestry and ethnicity more deeply.
- DNA Painter for segment analysis - DNA Painter is a visual tool that allows users to "paint" segments of DNA shared with known relatives, helping map which parts of their chromosomes came from specific ancestors.
- Uploading to other platforms for cross-comparison - Some DTC companies allow users to download their raw DNA data and upload it to other platforms (e.g., GEDmatch, MyHeritage, FamilyTreeDNA), increasing the chance of finding matches across different databases and enhancing genealogical research.

All DTC-GT companies involve a range of costs, from purchasing the testing kit and processing fees to extending to tiered access to genealogical records, data analysis tools, and advanced features. Many platforms require ongoing subscription fees to maintain access to results or to unlock extended databases and matches, often across multiple services. These cumulative expenses can create significant financial barriers, particularly for individuals and whānau seeking to reclaim identity and whakapapa. As a result, the

commercial structure of these platforms can reinforce inequities, limiting access to ancestral information for those who may benefit from it most.

While scouring social media and talking to other DNA testers, it was mentioned that not everyone tests on the same site, and I should upload our whānau data across as many sites as possible. This made perfect sense to me, and I immediately discovered how to do it and that I needed permission from my siblings to do the same. Once we agreed, I uploaded to all the other sites I could. I didn't include 23andMe or Living DNA (I don't remember why now, but I think it wasn't available, or the database was too small), but I did include MyHeritage and FamilyTree DNA, and a third-party DNA analysis site, GEDmatch²⁷. This opened up many new matches that needed to be assessed and confirmed a number of others. Progress was being made in small steps ... each creating new questions, some consolidating information, some just plain confusing! People are lazy and don't always cross-check and confirm information; they just cut-and-paste, assuming the information is correct. So, there are wrong spellings, wrong lines of descent, deviations due to adoptions or disconnections, lots of wrong ... wrong ... wrong! I learnt early, trust nothing, try to confirm everything with at least two verification methods, and proceed cautiously. DNA was clearly only a tool; the needle in my haystack, if you will, it can point me in the right direction, but you still need documentation and oral histories to unravel the mystery of mystory/ourstory ...

²⁷ <https://www.gedmatch.com/>

Summary

Because all major DTC-GT companies operate from jurisdictions outside of Aotearoa, there are significant challenges in protecting consumers under domestic laws. These companies are governed by their own terms and conditions and privacy policies, which are not subject to Aotearoa regulatory oversight. In addition to these policy and governance concerns, the accuracy and limitations of DNA testing itself must also be acknowledged. The results provided, especially regarding ethnicity estimates and relative matching, can vary significantly between platforms, and are based on exclusive algorithms and reference databases that may not adequately represent diverse populations such as Māori.

Despite these issues, for some individuals, DTC-GT may represent the only available pathway to exploring ancestral connections when family records have been lost or concealed. In such contexts, autosomal DNA testing becomes a powerful, if still limited, tool in genealogical research. It can reveal relationships across both maternal and paternal lines and offer a starting point for those seeking to rebuild whakapapa where traditional sources of information are no longer accessible. Therefore, it is important to understand fully the significance and limitations of autosomal DTC DNA testing.

Autosomal DNA

Autosomal DNA uses the 22 matching chromosome pairs, excluding the X and Y sex chromosomes, to trace all ancestral genetic descent to map genealogical descent and whakapapa (Ancestry, n.d.b). Some companies, such as AncestryDNA®, report an average

accuracy rate of over 99%²⁸ for each marker tested against their database of 25 million testers across 80 different world regions (not a recommendation). DNA is accurate for close relatives but dilutes with each extended generation as only 50% of DNA is shared from each parent, making it virtually non-existent beyond 8 – 10 generations. The matches within the chromosomes, cMs, tend to get shorter the further back generationally travelled, making the cM length an important indicator of whether the match is valid. Autosomal DNA is a significant form of testing for individuals seeking identity reclamation with limited information, as it links all matches identified from both parents, which offers a wide net to investigate through genealogical processes.

Autosomal DNA - Identification Tool

Predicting relationships with DNA matches for genetic descent has its challenges. Parent-to-child and sibling relationships have a high degree of accuracy, but other relationships become more difficult to assign, which is compounded when people share the same amount of DNA. Examples are Grandparents and grandchild, double first cousins, half-siblings or an aunt or uncle all share around 25% of their DNA with each other, shown in *Figure 6*. Genealogical and record matching are needed to determine the relationships of matches to genealogical descent and whakapapa (AncestryDNA Learning Hub, n.d).

²⁸ Ancestry DNA testing accuracy <https://www.ancestry.com/c/dna-learning-hub/ancestrydna-test-accuracy>

Whakapapa and Genealogical Descent

Whakapapa is the traditional record of genealogical descent for Māori and conveys how people are related to their ancestors to the present day. There is an ancestral paradox: Each person, in theory, has two parents, with the number doubling at every generation. This would mean that by 37 generations, there would be 137,438,953,472 people, more than the 117,000,000,000 people who have ever lived on Earth, which is impossible (Duke, 2024). It does highlight the role of endogamy and pedigree collapse, where the number of unique ancestors decreases. Using the paradox above, introducing endogamy with geographic limitations and small ancestral groups limited the options for propagation, with relations between cousins diluting the total number of unique ancestors dramatically. Duke (2024), using the same mathematical equation above, also demonstrated how a first-cousin coupling could eliminate 34 billion ancestors or how a fourth-cousin coupling could eliminate a further 4 billion. Irwin & Walrond (2016), in the early 2000s, established settlement dates in Aotearoa through the 24-27 generations of Māori whakapapa. Population estimates for Māori in 1769 were around 100,000 before colonisation, and disease reduced numbers to around 40,000. Given the generational depth, endogamy played a significant role, with the population sharing a small number of genealogical ancestors. This can produce extremely small segments of DNA that can skew the total DNA shared by DTC DNA testers. However, this is whakapapa, the person, family or group from an ancestral lineage from whom you descended.

Genetic Descent

It is the transmission or variation of inherited characteristics from chromosomes and DNA that is used to infer ancestry. These genes are passed down from a much smaller number of ancestors. You get 50% of your genes from each parent. This reduction in inherited genes means some genes do not get passed on, resulting in fewer or no genes

from some ancestors or extra genes from others. This reduction through generations means most distant ancestors do not pass on any DNA. Through reduction, you only have a 50% chance of inheriting any DNA from ancestors 10 generations back, which further reduces to 3% by 15 generations. There is almost certainly nothing being passed on further than that.

When I initially looked for unknown family members, I realised DNA testing was only the start of the journey. It is not a singular method for tracing family and whānau. It only linked me with those tested on that site and a disjointed, overwhelming and confusing collection of matches. If I was serious, I had to pay extra for tools that unlocked genealogical and record searches. I also realised that not everyone tests on the same sites, so I need to test on all of them to get maximum results. It's a bit like the McDonald's sales ploy ... "Would you like anything else with that order?" From a cost perspective, Ancestry (not a recommendation; that's a personal choice, and you have to make your own assessments about whom to use or even if you proceed) had been a good choice for our circumstances because I could download my data and upload it to other testing sites for free or at a minimal cost. That sounds great, but ... Disclaimer from Ancestry: Once you download your DNA data, they are no longer responsible for its privacy. I hardly considered the implications of this statement or what other policies, terms, or conditions that ought to be carefully considered. I was on a mission to find Mum's dad, and it was proving difficult with my limited knowledge and the endogamous nature of Māori, Pacific and Indigenous populations. The need to know, connect, and be something solid and real, instead of the deficient, broken and lost part that resided deep within my soul, was far more powerful than thoughts of consequences. I joined as many social media groups as I could find, checked out links from testing sites, emailed and talked to as

many people as possible. I also developed a relationship with my two cousins, Grant Thomas and Donna B, who shared over 30 cM DNA with me.

Genetic Genealogy

DNA ancestry and relationship results are neither linear nor precise to interpret without including genealogy and historical data. DTC-GT is just a tool for tracing genealogy using your genetic markers, to possibly find your whakapapa. Ancestry and relationship testing are Eurocentric, which can mean limited use for Māori or Indigenous communities searching for familial connections. When doing ethnicity estimates, each company uses a different set of subjects, looks at different time periods, and uses different algorithms and database sizes to work it all out, with no standardisation across the testing companies (NZSG, 2019). This accounts for the differentiation between each company's results when comparing the same person's tests across multiple sites. Understanding endogamy when searching for any founder or endogamous community is essential because, though DNA does not lie, it is not always linear either.

Genetic genealogy is the term used when traditional genealogy practices are combined with genetic test results. As an emerging interdisciplinary practice, traditional genealogical methods, such as archival research, oral histories, and family trees, are used with genetic data derived from DTC-GT. By analysing shared segments of DNA among individuals, this approach can confirm, refine, or expand known family lineages, often uncovering previously unknown ancestral connections. While genetic genealogy offers powerful tools for tracing biological relationships, it also raises complex questions around identity, whakapapa, and the reliability or availability of genetic and historical records, particularly for Indigenous communities whose genealogical knowledge may be grounded in oral histories. A comparison chart of both methods can be seen below (*see Figure 7*).

Figure 7: Comparison Chart - DNA vs Genealogy

Autosomal DNA	
DNA	Genealogy
<p>Ethnicity tests use chromosomes to determine your approximate ethnicity. i.e., results say you're 22% Māori, meaning 22% of your DNA, which matches the theoretical 100% Māori profile for that company. However, results are ambiguous and variable between companies due to genetic variations within the population and their theoretical profile.</p>	<p>Combines other data and artefacts:</p> <ul style="list-style-type: none"> • Family Trees • Census Documents • Church Records • Transport lists (ships) • Newspapers • Births, deaths and marriages • Other historical records
<p>Tests approximately 1% of your genome. Only accurate about five or six generations back. Further familial testing can significantly increase the amount of ancestry information.</p>	<p>Compare Family Trees of known DNA matches with 5-6 generations combined with other data and artefact sources to confirm matches and relationships.</p>

Conclusion

The five genealogical DNA testing companies considered here market their services as personal empowerment, identity discovery, and family reconnection tools. In the context of Aotearoa, these companies may appear to offer individuals, including Māori, an opportunity to explore ancestral connections and recover disrupted family histories and whakapapa, which could contribute to broader aspirations of cultural reconnection and healing. Their global databases, user-friendly platforms, and ability to connect individuals

across geographic and familial boundaries can seem to align with social justice goals, particularly for those affected by colonisation, migration, and the fragmentation of family histories. Without close familial ties or direct DNA lineage, autosomal DNA is the last option for many for reconnection, but can become lost in translation for Māori, through founder and endogamous effects.

However, these multinational corporations are not grounded in the cultural frameworks, ethical obligations, or tikanga that underpin Māori understandings of whakapapa. None of the five companies has explicit partnerships with Māori or other Indigenous communities, demonstrating a commitment to Indigenous data sovereignty through their public policies or terms of service. However, one company offers a 'projects' platform for external users that currently hosts a Māori DNA project that works as an adjunct to their core business. While they offer access to genetic information, commercial models prioritising individual consent and data ownership are framed within Western legal and ethical norms, with limited regard for collective cultural rights or community benefit (Phillips, 2016, 2019).

Their models of consent, data ownership, and interpretation raise critical concerns about the protection, use, and potential exploitation of genetic data from Indigenous users. These tensions highlight the dual nature of DTC DNA services, as both promising and potentially problematic. The following chapter will explore these dynamics in greater depth by examining the risks and benefits associated with DTC DNA tests, particularly for Māori and other Indigenous peoples seeking to navigate identity and belonging through commercial genetic tools.

Chapter 6 DTC DNA Usage: Risks and Benefits

The purpose of this chapter is to explore in depth, not just the risks and benefits of testing, but the implications arising from the rapidly expanding digital technology context in which the testing results are being interpreted and made available. For example, while DTC-GT offers opportunities for identity reclamation, the assumptions made in the probability models used as part of DNA analysis can make interpretation challenging for Indigenous and endogamous communities. The first section of this chapter will consider the implications of DTC-GT as a commodity, followed by sections covering the ethical, technical and cultural challenges of using DTC-GT for Indigenous people with an emphasis primarily on Māori identity reclamation.

While offering pathways for reconnection to identity and whakapapa, it also poses risks that could undermine the holistic understanding of whakapapa to Māori identity. Balancing these positive and adverse outcomes is crucial for ensuring that genetic testing is a respectful and empowering tool for individuals and communities. However, consumers can easily overlook these and other critical considerations, such as the implications of data storage in offshore servers, the potential commercialisation of genetic information, and the need for culturally sensitive practices due to the nature of online policy acceptance (Phillips, 2016, 2019). Addressing these regulatory gaps is essential to ensure that Aotearoa citizens are protected and informed before using DTC-GT (Phillips, 2016, 2019; GIDA, 2023).

DTC DNA Use – Risks and Benefits

The emergence of DTC-GT provides both positive and negative outcomes for any individuals seeking to reconnect with their identity and/or whakapapa: it can be a valuable tool for individuals who have lost touch with their ancestral heritage due to colonisation, migration, or adoption. It provides an accessible means to explore genetic heritage, potentially leading to reconnections with whānau and iwi. This reconnection can have a

profound impact, fostering a sense of belonging, identity, and engagement with culture and cultural support systems. Additionally, DTC-GT information may inspire Indigenous individuals to explore traditional practices, languages, and histories, ultimately reinforcing their cultural identity and community ties that may have been lost through assimilation and integration policies with detrimental social determinants associated with them.

However, there are also significant adverse outcomes associated with DTC-GT. The commodification of genetic data raises ethical concerns about ownership and privacy, particularly when individuals unknowingly contribute to the exploitation of their genetic information, as individuals may prioritise DTC-GT results over medical and cultural knowledge and practices (Carroll et al., 2020; Phillips, 2016, 2017, 2019; Shelling et al., 2022). Moreover, one of the most concerning issues is the implication that whakapapa is reduced to mere genetic ancestry, undermining the cultural narratives of whakapapa genealogical descent that define Māori identity. This genetic essentialism focuses on individualism, diluting the collective significance of whakapapa. DNA testing in reconnecting with Māori identity and whakapapa is complex, presenting a blend of technical, cultural, and ethical challenges.

Commercialisation – DTC-GT Commodity

DTC-GT companies are commercial enterprises contributing to an industry estimated to be worth over USD \$3 billion and expected to grow to between USD \$10.5 -17.35 billion by 2033 (GMI, 2023; Precedence Research, 2024; Vision Research Reports, 2024). Their commercial success has not been universal. For instance, in November 2024, 23andMe reportedly faced severe financial difficulties, with a 98% drop in share value widely covered

Figure 8: Exemplar of Clickwrap 'New Privacy Policy Update' from deidentified DTC DNA website

New Privacy Policy Update

Our Privacy Policy has changed since your last login. By checking the box below and clicking Continue, you agree that you have read and agreed to be bound by these new terms. If you don't agree to our updated terms, you can choose to discontinue using our services and close your account by emailing us at support@[redacted].com

I agree to the **Privacy Policy** *

Continue

by international media (Rodgers-Coltman, 2025). This downward trend has continued, with reports in 2025 indicating the company has filed for bankruptcy and received approval to sell customers' medical and ancestry data, raising significant concerns about the future of the DNA data it holds (Dyos, 2015; Liu, 2025).

Commercial drivers are pushing rapid global expansion, with DTC-GT outpacing the development of comprehensive international and domestic policies, leaving significant gaps in

regulation that could directly impact consumers (Phillips, 2019; 2016). Internationally, privacy protections and genetic data usage vary widely, with some jurisdictions enforcing robust safeguards while others leave consumers vulnerable to data misuse and genetic discrimination (Phillips, 2019; Privacy Commissioner, 2019). In Aotearoa, the lack of specific regulations tailored to DTC-GT raises unique concerns, particularly for Māori and Indigenous communities whose genetic data may be used in ways that perpetuate inequities or fail to uphold principles of tino rangatiratanga and data sovereignty (Caroll et al., 2020; Cormack et al., 2019).

Review of Policy contracts

DTC-GT companies such as 23andMe, Ancestry DNA, MyHeritage, Family Finder DNA, and Living DNA operate within a complex legal and ethical framework, particularly in their use of clickwrap and browsewrap contracts. As Phillips (2016, 2019) discussed, these

contracts raise important considerations regarding consumer consent, data privacy, and corporate control over genetic information (Becher & Phillips, 2022). While these contractual mechanisms provide businesses with legal protection and operational efficiency, they also pose risks to consumer autonomy and privacy.

These wrap contracts, including clickwrap and browsewrap agreements, are prevalent in DTC genetic testing. Clickwrap contracts require users to actively consent by clicking an "I agree" button, whereas browsewrap contracts assume consent through continued website use. Phillips (2019) critiques these mechanisms, arguing that they obscure the complexities of genetic data ownership and data-sharing policies. Many consumers accept these agreements without fully understanding the implications, particularly regarding third-party data sharing and secondary research use (Phillips, .

One of the key benefits of these contractual arrangements is the streamlined user experience they offer. Companies can efficiently obtain legal consent for a wide range of uses, including ancestry analysis, health-related insights, and participation in large-scale genetic research. Phillips (2016) notes that DTC genetic testing has facilitated public engagement with genomics, democratising access to personal genetic information. This accessibility allows individuals to explore their ancestry, connect with biological relatives, foster a greater understanding of genetic heritage, identify, and even potential health risks and health predispositions in the case of 23andMe.

However, the risks associated with these contracts are significant. Wrap contracts often include broad and evolving terms that allow companies to share genetic data with third parties, including pharmaceutical firms and law enforcement agencies. Phillips (2019) highlights concerns about informed consent, emphasising that many consumers are unaware of how their genetic information might be used beyond the initial testing service (Becher & Phillips, 2022; Phillips, 2017). Unlike traditional medical research, which requires

explicit consent for each study, DTC companies often secure blanket consent through their contractual terms, granting them extensive rights over consumer data.

Privacy concerns are further exacerbated by the potential for re-identification (Becher & Phillips, 2022). Even when genetic data is anonymised, researchers have demonstrated that it is possible to re-identify individuals based on genetic markers and publicly available information. This raises ethical questions about data security and the potential misuse of genetic information for purposes such as insurance discrimination, employment screening, or criminal investigations. Phillips (2016) warns that the regulatory landscape for DTC-GT remains fragmented, with varying levels of consumer protection depending on jurisdiction (Becher & Phillips, 2022).

In addition to privacy risks, wrap contracts create power imbalances between consumers and corporations (Becher & Phillips, 2022). Companies retain the right to unilaterally modify their terms of service, often without direct notification to users. This means that consent given at one point in time may extend to unforeseen future uses of genetic data. Phillips (2019) argues that this dynamic undermines consumer autonomy, as individuals may be unable to withdraw consent or fully control how their genetic data is utilised over time.

In conclusion, while wrap contracts and browsewrap agreements enable the widespread adoption of DTC genetic testing, they also introduce significant risks related to consent, privacy, and data ownership. Policymakers and regulatory bodies must address these concerns by enforcing stricter transparency requirements and consumer protections. As the DTC-GT industry expands, ensuring ethical and legally sound practices will be essential in balancing innovation with consumer rights.

Ethical Issues

Informed Consent and Understanding

In the context of DTC-GT, informed consent is critical, particularly for Māori participants whose genetic data holds collective cultural significance. Effective consent must ensure a clear understanding of how data will be used, stored, and shared. However, complex legal language, an individualised consent model, and limited public knowledge of DTC-GT's scientific limitations further challenge meaningful consent that could conflict with Māori collective decision-making (Becher & Phillips, 2022; Keogh, 2019). Ethical engagement requires transparent, accessible consent processes that align with Te Aō Māori values and protect both individual and collective rights (Phillips, 2016, 2019).

Ownership of Genetic Data and Collective Rights:

The ownership of genetic data raises significant ethical concerns, particularly for Māori, whose understanding of whakapapa frames DNA as a collective taonga rather than individual property (Carroll et al., 2020). DTC-GT companies often claim broad rights over submitted samples, including the ability to store, use, or sell genetic data, practices that conflict with Māori values of *kaitiakitanga* (guardianship, trust) and collective consent (Phillips, 2016, 2019). These individualised ownership models undermine Māori sovereignty and cultural integrity by disregarding the shared responsibilities and rights tied to whakapapa.

Data Sovereignty

The use of Māori genetic data by third parties, often without community consultation or benefit-sharing, raises further concerns about data sovereignty and potential exploitation.

Many DTC-GT companies partner with pharmaceutical firms or academic researchers who pay for access to genetic data or law enforcement (Becher & Phillips, 2022). For Indigenous communities, the use of genetic data without informed, collective consent mirrors historical patterns of appropriation, where Indigenous knowledge and resources have been taken without fair compensation or respect (Garrison, 2013). In this context, data sovereignty, the right of Indigenous communities to govern their data, becomes a crucial principle, underscoring the need for Māori to retain control over how their genetic information is used. Without data sovereignty, Māori genetic data risks being commodified and utilised in ways that do not benefit or align with Māori values.

Figure 9 below shows the practical implications of applying Indigenous Data Sovereignty (IDSov) rights across DTC-GT frameworks. Using the 'Indigenous Peoples' Rights in Data' framework, the multinational DTC-GT ecosystem was assessed in the context of Indigenous Data Sovereignty, and its application across current data governance in multinational commercial practices was applied (GIDA, 2023; Hudson et al., 2023).

Figure 9: IDSov Rights in Data: “SNAPSHOT” In relation to International DTC-GT (Source: Data Rights: <https://www.gida-global.org/data-rights>)

Data For Governance				
Right	Assessment of use (Y / N / Partly)	Caveats (But – legal, ethical, moral)	Practical Implications	Ref
Right to Self-Determination	Y – personal information and agreed access, and N – to a collective self-determination	Combination of legal (clickwrap & browsewrap contracts) for individual use, underscored by ethical and moral dilemma of sharing collective data	<ol style="list-style-type: none"> 1. Not everyone who submits DTC-GT knows they have an indigenous identity, retrospective limited self-determination 2. Consent is based on individual application without consideration of the collective identity context to data access and control 3. Commodification of DTC-GT in a ‘Big Data’ commercial context can drive commercial policies that increase power imbalances and company profits, limiting self-determination on an individual and collective basis. 	Prabhakar, 2021; Phillips, 2019;
Right to Process	Y – some control over personal information, and N- indigenous or collective	Legal (clickwrap & browsewrap contracts) viewed as private legislation	<ol style="list-style-type: none"> 1. Terms and conditions, opt-in and privacy policies are used by companies as a form of private legislation to self-regulate and govern transactions 2. Privacy policies are skewed toward DTC-GT companies’ interests to share and sell genetic information to third parties for profit 	Phillips, 2016, p.17; Prabhakar, 2021, P.67;

	agreement provisions		3. An absence of specific regulation for multinational companies who conduct business globally through online services	
Right to Use	Y	Legal and Ethical	<ol style="list-style-type: none"> 1. The DTC-GT for ancestry purposes is set up for individuals to interact with other individuals for the purpose of genealogical linking 2. User information is aggregated to some extent and relies on individuals to extend 'permission' to manage their DNA data, directly contact and/or view their hidden information, giving individual, not collective, control. 	
Right to Consent	Y & N	Combination of Legal (clickwrap and browsewrap agreements), Ethical and Moral	<ol style="list-style-type: none"> 1. User belief of a fiduciary relationship could be misplaced with clickwrap and browsewrap agreements skewed to benefit DTC-GT companies 2. Collective Indigenous consent is not and would be extremely difficult to execute for genealogical processes given the 'origins' ethnicity breakdowns offered by DTC-GT companies. The question would have to be asked, and an international consensus would have to be reached on what parameters could be used to define indigenous people and who would govern that consent. There is little likelihood that DTC-GT companies would pursue this without a financial incentive. 3. Withdrawal from consent in the world of 'Big Data' also questions informational privacy, and the unprecedented sharing of data online is open to surveillance and aggregation across multiple sources who can then on-sell that data. 4. Individuals who want the service badly enough will overlook the long-term cost of informational privacy 	Prabhaker, 2021;

Right to Refuse	N	Legal (clickwrap and browsewrap agreements)	1. DTC-GT companies offer similar terms and conditions, so offer a “Hobson’s choice: people must take the product or leave it,” with their ‘I consent’ or ‘I accept’ agreements.	Prabhaker, 2021, p.67;
Right to Reclaim	N	Legal – lack of legal protections for Aotearoa using DTC-GT for ancestry	1. In the multi-national context of DTC-GT, there is no legal framework for legislation for protection in Aotearoa. There is a reliance on the European Union (UE) General Data Protection Regulation (GDPR) ‘s international influence on DTC-GT companies. Aotearoa has a relationship with the EU but is not a member, so it has no legal protections through it. 2. DNA data storage is indefinite by most DTC-GT companies	ISOGG: Autosomal testing comparison chart (n.d.).
Governance for Data				
Right to Govern	Y – *Partly through some collaborations. N – In general	Y - *Ethical Guidelines – Group Project Administrator Terms & Policies N - Legal (clickwrap and	1. *Family Tree DNA: Te Ira Tangata Māori DNA project which reports that “DNA test results can be used to make connections with known and unknown whānau, hapū and iwi” through their ‘Group Projects’ service. FamilyTreeDNA Group Projects usually focus on a common geographic origin, surname, or ethnic heritage, but may also be based on other aspects of a paternal (Y-DNA) or maternal (mtDNA) lineage. 2. *Projects and administrators are subject to compliance with the EU GDPR, which can be seen as a “data governance framework” for any organisation collecting or processing personal data of EU members	Hoofnagle et al., 2019, P.67; Family Tree DNA, n.d.a, n.d.b, n.d.c; Data NZGovt, 2021; Phillips, 2016. 2019; Prabhaker, 2021.

		browsewrap agreements)	3. The Privacy Act 2020 provides rules that you must comply with when collecting and using the data within New Zealand only	
Right to Define	N	Legal (clickwrap and browsewrap agreements)	1. Defining collective Indigenous data use relevant to indigenous worldviews would be extremely difficult to execute for genealogical processes given the 'origins' ethnicity breakdowns offered by DTC-GT companies. The question would have to be asked, and an international consensus would have to be reached on what parameters could be used to define indigenous people and who would govern that consent. There is little likelihood that DTC-GT companies would pursue this without a financial incentive.	
Right to Privacy	Y – Individual protections but questionable effectiveness with practical implications N – Collective rights and practical implications	Legal (clickwrap and browsewrap agreements)	1. Privacy protection in the world of 'Big Data' also questions informational privacy and the unprecedented sharing of data online that is open to surveillance and aggregation across multiple sources who can then on-sell that data. 2. Individuals who want the service badly enough will overlook the long-term cost of informational privacy 3. Questions to consider are: What partnerships, third-party agreements or potential data harvesting for profit are hidden behind commercial sensitivity policies, Privacy breaches (ie 23and Me), Impact of 'Big Data' invasive surveillance, data tracking, and surveillance capitalism?	
Right to Know	N	Legal (clickwrap and	1. Hidden in clickwrap agreements that require viewing, often "done without reading" before clicking an 'I agree' type button, and browsewrap agreements, which are similar to the clickwrap but with terms located in hyperlinks that	Phillips, 2016, p.16; ISOGG: Autosomal testing

		browsewrap agreements)	consumers might not even have to open before clicking the 'I agree' type button. 2. DNA data storage is indefinite by most DTC-GT companies	comparison chart (n.d.).
Right to Association	N	Legal (clickwrap and browsewrap agreements)	1. Defining provenance through DTC-GT data would be extremely difficult to define through the genealogical processes used, given the ethnicity breakdowns offered by DTC-GT companies. Interpretation would be difficult with multiple ethnicity listings for individual users.	
Right to Benefit	Y – individual data comparison with other users N - Collective	Legal (clickwrap and browsewrap agreements)	1. Individual benefit is derived through your data, and any data consented to your control to link identity, whakapapa and genealogical processes. 2. Collective indigenous DNA is still largely extractive, with no fair and equitable benefit-sharing for the collective through individual users.	

Data Sovereignty and Indigenous-Controlled Alternatives

The absence of Indigenous-controlled genetic databases limits Māori engagement with DNA testing on culturally appropriate terms. Commercial models prioritise individual ownership and profit, conflicting with Māori values of collective guardianship and whakapapa as taonga (Hudson et al., 2016; Smith, 2012). Indigenous-led platforms, such as Āhau (n.d.), which enable whānau, hapū, and iwi to securely manage and share cultural information, demonstrate principles of tino rangatiratanga and data sovereignty (Kukutai & Taylor, 2016). Although Āhau does not currently include genetic data, it offers a model for future systems that uphold collective rights, ethical standards, and Māori control. Without such alternatives, Māori face ongoing risks to both personal identity and collective integrity in engaging with DTC genetic testing.

Regulation of Genetic Testing:

The lack of comprehensive regulatory frameworks governing DTC-GT in Aotearoa presents challenges. Current legislation may not adequately address the unique concerns of Māori communities regarding genetic data, privacy, consent, and the use of genetic information in research (Phillips, 2019).

Intellectual Property and Indigenous Rights:

There are significant concerns about how genetic research, informed by DTC-GT, might be used without Māori consent or benefit. The potential for commercial exploitation of Māori genetic material without equitable benefit-sharing raises questions about protecting Indigenous intellectual property rights and the obligation to consult and engage with Māori communities regarding research involving their genetic data (Borrell, 2025).

Forensic and Investigative Genetic Genealogy:

The *Criminal Investigations (Bodily Samples) Act 1995* (CIBS Act) grants Aotearoa Police authority to collect, retain, and use DNA for criminal investigations. A comprehensive review by the New Zealand Law Commission (NZLC, 2020a, 2020b) found the Act outdated, lacking alignment with advancements in forensic science, international best practices, and evolving public and cultural expectations. The review identified serious legislative gaps, including inadequate independent oversight and failure to uphold human rights, tikanga Māori, and Te Tiriti o Waitangi (MoJ, n.d.). The government accepted the Commission's recommendation that the current regime is no longer fit for purpose; however, no timeline has been established for reform (NZLC, 2020a, 2020b).

In parallel, the Australia New Zealand Policing Advisory Agency (ANZPAA) provides strategic guidance for using Forensic/Investigative Genetic Genealogy (F/IGG), advocating a 'reasonable use' principle. F/IGG is recommended for serious crimes or cases involving unidentified human remains (ANZPAA, n.d.a, n.d.b). Internationally, several DTC-GT companies differ in their cooperation with law enforcement. GEDmatch and MyHeritage permit access under specific agreements, while companies such as AncestryDNA, 23andMe, and FamilyTreeDNA adopt more restrictive policies, offering opt-in or opt-out features (Becher & Phillips, 2022; Keogh, 2019). This raises ethical concerns around consent, privacy, and data sovereignty, particularly for Indigenous populations whose genetic data may be used without adequate safeguards, cultural considerations or consideration of discrimination to wider whānau (Keogh, 2019a).

Technical Issues

Genetic Database Limitations

The underrepresentation of Māori and broader Polynesian genetic data in commercial genetic databases significantly constrains the utility of DTC autosomal GT for Māori and Pasifika peoples. Most major DTC-GT companies rely on reference panels predominantly derived from European descent. As a result, algorithms often extrapolate Māori ancestry from non-specific or adjacent population groups, leading to generalised or inaccurate results (Bush, 2024). Resulting in Māori ancestral 'origins' often being misclassified, generalised, or placed under broad regional categories such as "Polynesia" or "Oceania," offering little specificity regarding iwi or ancestral ties within Aotearoa (Aotearoa) (Hudson et al., 2016; Kukutai & Walter, 2015).

Further limitations undermine the reliability of results for those seeking to reconnect with whakapapa. Ancestry estimation algorithms, which rely on probabilistic matching, perform poorly when Indigenous populations are underrepresented, leading to inaccurate or incomplete interpretations of genetic heritage (Bush, 2024). Such errors are not merely technical; they risk distorting personal identity and misrepresenting cultural connections. Although this has reduced with the growth of genetic databases such as AncestryDNA's 27 million, 23andMe's 15 million, and MyHeritage's 9.2 million, allowing results to be more precise (ISOGG, n.d.b).

Compounding these technical issues are phenomena such as endogamy and founder effects, common in small or closely related populations, which can further obscure relationship estimates and complicate genetic analysis (TallBear, 2013). While some platforms, including recent updates like AncestryDNA's "Pro Tools," attempt to address these challenges through improved matching and segment analysis, the efficacy of such

tools remains limited for populations underrepresented in the reference panels they rely upon (Bush, 2024).

Data Interpretation Challenges

DTC autosomal GT presents significant interpretive challenges for Māori seeking to reconnect with whakapapa and identity. Unlike the generality of 'origins' ancestral regions probabilistic matching, these tests rely on specific chromosomal DNA matching with other database users. However, these autosomal results are not always definitive, as the 'total' number of matching cMs probabilistically suggests. Relationality can be better refined by the largest single cM match, which, due to endogamy and relational distance, often gets lost in totals and otherwise lacks the granularity needed to identify specific iwi or genealogical connections (Hudson et al., 2016). For users, this can generate confusion, disappointment, or misinterpretation of their cultural identity.

Another core issue lies in the mismatch between Māori understandings of whakapapa and the reductionist framing of identity within DTC-GT platforms. Whakapapa is not merely a biological construct but a relational, cultural, and spiritual system linking individuals to tūpuna, whenua, and community. DTC-GT interpretations, however, reduce identity to totals, percentages and population clusters, offering an incomplete and sometimes misleading view of Māori heritage (Kukutai & Walter, 2015; Mead, 2016; TallBear, 2013).

Moreover, expressing identity as divisible fractions, e.g., "20% Polynesian," conflicts with Māori epistemologies, which emphasise holistic and undivided belonging through whakapapa lines. Such representations risk reinforcing essentialist and Western-biased conceptions of ancestry that are culturally incongruent with Māori worldviews (Smith, 2012).

Data Privacy and Security Risks

Data privacy and security are critical concerns when engaging with DTC autosomal GT to explore identity and whakapapa (KPMG, 2018; Privacy Foundation NZ, 2023). DNA companies store genetic data digitally, which makes them vulnerable to breaches, unauthorised access, and commercial misuse (Becher & Phillips, 2022; DeGeurin, 2024; Hern, 2023; Liu, 2025; Phillips, 2018). For Māori, whose genetic data represents personal identity and collective heritage, such risks constitute more than privacy violations; they represent cultural infringements on whakapapa as taonga (Mead, 2016). A significant concern is the unclear ownership of submitted genetic data. Many DTC companies claim broad rights over users' DNA, including the ability to store, analyse, and sell data to third parties, often without ongoing, informed consent (Hudson et al., 2016; Phillips, 2019). This undermines kaitiakitanga and tino rangatiratanga principles, as it removes control from iwi Māori over genetic information that holds deep cultural significance.

Security breaches further exacerbate these risks. Unlike passwords, genetic data cannot be changed; the consequences are irreversible once exposed (Dyos, 2025). Past incidents involving companies like 23andMe illustrate the potential for such breaches, exposing users to identity theft, discrimination, or profiling (DeGeurin, 2024; Hern, 2023). For Māori, this also raises concerns about cultural surveillance, data extraction, and exploitation by external actors. Moreover, many DTC companies share data with research institutions or commercial partners without transparency regarding access, purpose, or their privacy and security processes.

Weak regulatory protections compound these issues. In most jurisdictions, including Aotearoa, legal frameworks have not kept pace with the growth of genetic technologies, offering limited recourse for Indigenous communities whose data is misused (Phillips, 2016). Western legal norms around individual consent and data ownership often conflict with Indigenous worldviews, which prioritise collective rights and relational accountability (Kukutai

& Taylor, 2016). The privacy and security risks associated with DTC-GT pose significant threats to Māori autonomy over whakapapa. Without robust safeguards grounded in Te Ao Māori, these technologies risk perpetuating new forms of dispossession under the guise of personal discovery.

Cultural Issues

Reduction of Whakapapa to Genetic Ancestry

Reducing whakapapa to genetic ancestry through DTC autosomal GT presents significant risks for Māori identity and cultural integrity. Whakapapa is not solely a biological construct but a holistic, relational framework encompassing connections to land, spirituality, kinship, and lived experiences (Mead, 2016). DTC-GT, however, frames ancestry through a narrow, scientific lens, privileging genetic data over cultural, historical, and spiritual dimensions. This reductionist approach distorts the richness of whakapapa and undermines Mātauranga Māori.

Genetic ancestry testing uses a Eurocentric lens to interpret genealogy as a series of biological connections, using algorithms to assign percentages to broad geographic regions. Such results lack the specificity to identify iwi or reflect the cultural responsibilities inherent in Māori identity and whakapapa (Hudson et al., 2016). By treating ancestry as a set of quantifiable traits, DTC testing risks reinforcing genetic essentialism, the notion that biology alone defines who we are. For Māori, identity is shaped through intergenerational relationships, participation in cultural practices, and obligations to whānau, hapū, iwi, and whenua. These aspects cannot be captured by DNA alone.

Moreover, the individualised nature of DTC testing contrasts with the collective orientation of whakapapa. Māori identity is shared and relational, not privately owned.

Marketing ancestry as personal insight fragments this collective view, potentially weakening communal ties and undermining traditional modes of identity transmission, particularly among younger generations (Kukutai & Walter, 2015). This shift may erode the cultural mechanisms through which whakapapa is maintained, remembered, and lived.

The dominance of Western scientific frameworks in DTC-GT also contributes to the marginalisation of Indigenous knowledge systems. Framing whakapapa solely in genetic terms risks subordinating Mātauranga Māori to Eurocentric paradigms, undermining Māori sovereignty over identity and cultural heritage (Smith, 2012; TallBear, 2013). This dynamic reinforces colonial patterns of knowledge dominance, where Western science is positioned as the authoritative interpreter of Indigenous identity.

In summary, DTC-GT may offer some insights into Māori ancestry, it cannot replace whakapapa's relational, spiritual, and cultural depth. For Māori, identity is not measured in DNA segments but lived through collective connection, obligation, and cultural practice. To honour whakapapa authentically, any engagement with GT should be guided by tikanga and Māori-led frameworks that uphold the integrity of Indigenous identity.

Individual vs. Collective Identity

Māori identity is inherently collective, grounded in whakapapa as a living network of relationships, responsibilities, and obligations to whānau, hapū, iwi, and whenua (Mead, 2016). DTC autosomal GT, by contrast, promotes an individualised framework of identity, offering personalised genetic reports highlighting ancestry percentages disconnected from social and cultural context. This tension risks shifting Māori understandings of whakapapa from a shared legacy to an individual possession, potentially undermining the communal structures at the core of Māori society (Kukutai & Walter, 2015).

DTC-GT centres on individual ownership and interpretation of genetic data, often at odds with the Māori view of whakapapa as a collective taonga governed by principles of kaitiakitanga (Hudson et al., 2016). In Mātauranga Māori, whakapapa is not merely biological but also spiritual, relational, and intergenerational. When individuals engage with DTC-GT in isolation, there is a risk that the communal responsibilities embedded in whakapapa may be obscured, particularly among younger generations more influenced by individualistic narratives.

Furthermore, the commercialisation of Māori genetic data intensifies this incoherence. By submitting DNA to private companies, Māori individuals may inadvertently contribute to the commodification of whakapapa, relinquishing collective control over data that holds deep cultural significance (Smith, 2012). This shift threatens Māori sovereignty and disrupts traditional systems of knowledge transmission, which prioritise collective guardianship and intergenerational continuity.

The individualistic lens of Western science also fosters genetic essentialism, reducing identity to biological markers, potentially distorting Māori concepts of belonging, which are shaped through cultural participation and community connection (Cram, 2020). Such framing may lead some to interpret identity as a matter of genetics alone, sidelining whakapapa's rich cultural, historical, and spiritual dimensions. To navigate these tensions, culturally aligned frameworks are needed that respect both personal journeys of reconnection and the collective foundations of Māori identity. Ideally, any engagement with DTC-GT should occur within the boundaries of tikanga, supporting the integrity of whakapapa as a shared and living cultural inheritance.

Risk of Cultural Misappropriation and Misuse

The increasing use of DTC autosomal GT presents significant risks of cultural misappropriation and misuse, particularly for Indigenous communities such as Māori. While

these tools may aid in reconnecting with whakapapa, they also risk commodifying and distorting Māori identity when used without appropriate cultural context or community validation (Cormack et al., 2019; TallBear, 2013).

For Māori, identity is not merely defined by genetic markers but encompasses many cultural, historical, and social factors. When individuals rely on genetic tests as definitive proof of their ancestry, it can lead to misunderstandings about their cultural identity and an oversimplified view of what it means to be Māori, disregarding the responsibilities and relational dimensions that underpin Māori belonging (Kukutai & Walter, 2015; Mead, 2016). This reductionist framing perpetuates cultural appropriation by detaching identity from its genealogical, historical, and community-based foundations.

Commercial DTC-GT companies often retain rights to consumer-submitted DNA, raising ethical concerns about exploiting Māori genetic data for profit or research without consent or benefit-sharing (Hudson et al., 2016; Keogh, 2019b). Such practices risk reinforcing colonial power dynamics and marginalising Māori perspectives in how their genetic information is interpreted and used. Furthermore, the marketing strategies of some DTC companies trivialise Indigenous identities by invoking Māori symbols, language, or narratives to appeal to consumers interested in “exotic” ancestry. Often devoid of proper context or permission, these representations contribute to cultural stereotyping and erode the mana of Māori culture (Smith, 2012).

To mitigate these risks, there is a critical need for culturally informed, community-led frameworks that respect Māori concepts of identity, kaitiakitanga, and tino rangatiratanga. DTC companies must engage meaningfully with Māori communities, ensuring that whakapapa is not reduced to a commercial product but upheld as a taonga requiring collective stewardship and cultural integrity (Kukutai & Taylor, 2016).

Potential for Exploitation:

The commercialisation of Māori genetic data through DTC-GT poses serious risks of exploitation. Operating in a largely unregulated, profit-driven industry, DTC companies often claim ownership over submitted DNA, enabling them to use or sell Māori genetic information without consent, consultation, or benefit to Māori communities (Dyos, 2025). This undermines kaitiakitanga and perpetuates patterns of cultural appropriation, as whakapapa, a collective taonga, is commodified in ways that conflict with Māori values and sovereignty.

Benefit Sharing

Another concern is using Māori genetic data in research without meaningful consultation or benefit-sharing. Genetic research has a history of extracting valuable biological data from Indigenous populations, often with little to no return for the communities involved (Borrell, 2025). For example, genetic data from Māori individuals may be used to develop new pharmaceuticals or medical treatments that are then sold globally at considerable profit. Without frameworks that require benefit-sharing, Māori communities gain no direct advantages from such research, even though their genetic information underpins it. This approach reflects extractive practices that prioritise external profits over Indigenous well-being, mirroring historical patterns of exploitation in which Indigenous resources were taken without fair compensation.

Pretendians – Indigenous Identity Fraud

Internationally, the proliferation of fraudulent Indigenous identity claims, commonly referred to as “Pretendian” or “Indigenots,” a contraction/portmanteau used as a colloquial term by First Nations, poses significant ethical, cultural, and political risks to First Nations, Métis, Inuit, and other Indigenous populations (Kolopenuk, 2023; Ridgen, 2021; TVO, 2013; Yellowhorse Kesler, 2022). Internationally and in Aotearoa, fraudulent claims of Indigenous

identity, often legitimised through self-identification, unverified genealogy, or misuse of DTC-GT, pose ethical, cultural, and political risks (Jensen, 2023; NZHerald, 2023; TallBear, 2013a, 2013b; Taylor, 2022). These claims can displace Indigenous peoples from resources, distort cultural representation, and undermine community-based systems of identity validation (Taylor, 2022; Tuck & Yang, 2012).

In the Māori context, identity is grounded in whakapapa and collective ties to iwi, hapū, and whenua, not blood quantum or legal recognition (Mead, 2016). However, growing interest in *mana Māori* (autonomy, authority, rights) has led to assertions of identity without verified connections, raising concerns about exploitation, resource entitlement, and the erosion of tikanga-based belonging (Galbraith, 2024; Taylor, 2022; Waitangi Tribunal, 1999). While safeguarding identity is essential, responses should avoid replicating colonial exclusions and support mana-enhancing, community-led processes of reconnection and identity affirmation (Atatoa Carr et al., 2012; Garrison, 2013; Kukutai & Walter, 2015; Smith, 2012).

Artificial Intelligence

A more recent and pressing risk is the emergence of artificial intelligence (AI) and machine learning models that rely on large genetic datasets for health predictions, ancestry mapping, and forensic applications (Baker et al., 2025). Māori and Indigenous genetic data could be incorporated into AI systems without community consent or understanding, creating further ethical issues (Samlali et al., 2022). The consequences could be significant if AI tools are used for law enforcement profiling or predictive health analytics. These AI applications could impose stereotyped patterns or even compromise personal privacy and autonomy if Māori individuals or communities are profiled based on genetic predispositions.

Data Sovereignty

As discussed previously, the lack of Indigenous governance over genetic databases limits Māori control over how their data is accessed and used. Indigenous-led initiatives are rare, and commercial or Western research entities control most genetic databases. Without Indigenous governance, there is minimal oversight to prevent exploitation or misuse, leaving Māori genetic data at the mercy of external actors. In this context, data sovereignty, whereby Māori have the right to govern their genetic information, is essential for protecting against exploitation and ensuring that Māori genetic data is used to respect their cultural values and collective rights.

Impact on Mātauranga Māori (Māori Knowledge Systems)

Emphasising genetic ancestry risks diminishing the role of Mātauranga Māori, such as oral histories, traditions, and community-based genealogy encompassing whakapapa, tikanga, and spiritual connections (Mead, 2016; Walker, 2004). The overreliance on genetic testing as an "authenticator" of identity can lead to the devaluation of these non-genetic yet culturally vital aspects of Māori identity. While DTC-GT may help some Māori reconnect with their biological roots lost through colonisation or adoption, it often lacks the cultural specificity needed to affirm iwi or hapū identity and can oversimplify whakapapa into purely biological terms. Scientific use of this data, often without community consultation, can lead to cultural misrepresentation and further erode Indigenous knowledge. Oral histories and traditional ways of knowing could be sidelined, weakening the intergenerational transmission of mātauranga Māori through whakapapa and by default reinforcing Western scientific dominance in identity formation.

Conclusion

This chapter critically examined the use of DTC autosomal GT in the context of Māori identity and whakapapa, highlighting both its potential benefits and substantial risks. While DTC-GT can offer pathways for some Māori individuals to reconnect with their biological heritage, particularly in the wake of colonisation and disconnection from whenua and whānau, it also introduces significant ethical, cultural, and technical concerns. The reduction of whakapapa to genetic ancestry risks misrepresenting Māori identity, which is relational, spiritual, and deeply embedded in collective kinship and lived experience (Mead, 2016; TallBear, 2013). DTC-GT privileges individualism and genetic essentialism, which can conflict with Māori values of collective belonging and kaitiakitanga (Hudson et al., 2016; Kukutai & Walter, 2015).

Key concerns also include inadequate representation in genetic databases, leading to inaccurate or generalised ancestry results, and limited regulatory frameworks that fail to protect Māori data sovereignty. Many companies retain rights to use or sell genetic data, raising issues around consent, privacy, and control (Phillips, 2018; Smith, 2012). To ensure ethical and culturally appropriate use of DTC-GT, Māori and Indigenous advocacy communities must continue actively shaping policy and practice. This requires co-designed frameworks grounded in tikanga and Mātauranga Māori that respect whakapapa as a taonga and uphold Māori autonomy in the genomic era.

While the preceding chapter critically examined the risks and benefits associated with DTC-GT, including around commercialisation, ethical dilemmas, technical limitations, and cultural implications, the following chapter advances the discussion by exploring how individuals and communities navigate identity within the broader context of ethnicity, policy and culture.

Chapter 7 Discussion: Navigating Identity in a Genetic Era

Introduction

The purpose of this chapter is to synthesise the key findings of the thesis and explore the broader implications of Indigenous identity reclamation in contemporary Aotearoa. The first section draws on the contemporary cultural renaissance supported by policy, and its demise with the sociopolitical discourse raised through nationalist policy and its impact on Indigenous data sovereignty, the social determinants, and identity loss and reclamation. In section two, the research has critically examined the tensions and possibilities of using DTC-GT as a mechanism for Māori reconnection to whakapapa and cultural identity. Framed by the question, “Would you give away your identity to find your identity?”, the thesis engages with the sociopolitical, cultural, and ethical implications of leveraging genomic tools in Indigenous identity reclamation.

Divided by race: interpretations, ideologies, power and self-preservation

This section explores the cultural and political shifts in Aotearoa New Zealand during a period marked by growing tension between state policy and Indigenous rights. Under the Coalition Government of National, ACT, and New Zealand First, significant legislative and structural changes, such as the disestablishment of *Te Aka Whai Ora*, the Oranga Tamariki (Repeal of Section 7AA) Amendment Act 2025, and the proposed Treaty Principles Bill, signal a shift away from previous commitments to Te Tiriti o Waitangi and Māori-led approaches. These developments have reshaped the political tone and intensified debates around Indigenous identity, sovereignty, and the role of the state. This chapter considers how Māori efforts to reconnect with whakapapa, culture, and identity persist and adapt within this increasingly unsettled landscape.

Contemporary Resurgence and Policy Focus 1980-2023

Looking back at the past with our eyes fixed firmly on the future, it is easy to see that the undercurrents of assimilation and integration are still present in Aotearoa 185 years after the signing of Te Tiriti o Waitangi. The intergenerational impacts of policies, ideologies, and colonisation have passed through generations, swirling and shaping claimed and lost identities of those who carry them, and the social impacts they manifest. These undercurrent tensions hold threats that are still able to dislocate tangata whenua from whakapapa and culture, while conversely, at the same time, Indigenous Māori culture is assimilating the homogeneous Pākehā majority within Aotearoa to a heterogeneous future. Policies born out of the cultural resurgence started in the 1970s, supported by research and Waitangi Tribunal findings that have highlighted the injustices, inequality and inequity for Māori, as well as solutions (Durie, 2021; Mead, 2016; Smith, 2012; Tawhai & Gray-Sharp, 2011).

Education and Te Reo

Education has once again become a driver of assimilation and integration for contemporary Aotearoa; the impacts of te reo Māori's revival through Kohanga Reo and Kura Kaupapa have now spread to State schools, and the implementation of Aotearoa history in schools offers a path to Kotahitanga. Wider introductions of Māori placenames and their meanings, tikanga principles across governance and government, continue to challenge and educate Aotearoa citizens of Aotearoa's history and inspire its future.

Health

Te Aka Whai Ora was established in 2022 as a response to longstanding disparities in health outcomes between Māori and non-Māori populations in Aotearoa. Its formation was

a direct attempt to give effect to *Te Tiriti o Waitangi* within the health system by enabling Māori-led design and delivery of health services. The Authority aimed to shift the system from one of monocultural service provision to one that recognised mana motuhake in health governance, supporting hauora Māori by ensuring culturally embedded, whānau-centred care. It also aimed to elevate Māori data sovereignty, kaupapa Māori methodologies, and strengthen partnerships with iwi, hapū, and Māori providers to improve entrenched health disparities. The parallel recognition of rongoā Māori in policy further signalled an effort to decolonise health approaches by validating Mātauranga Māori. Official recognition of rongoā, alongside funding and research investment, acknowledged its contribution to Māori wellbeing and affirmed its place within a holistic model of care. For many Māori, rongoā's connection to whenua, whakapapa, and wairua, and its inclusion, represented a form of cultural reclamation after generations of suppression through legislation such as the *Tohunga Suppression Act 1907*.

Child Welfare

The *Oranga Tamariki Act 1989* (originally the *Children, Young Persons, and Their Families Act 1989*) was intended as a child welfare statute to provide for the care and protection of children in Aotearoa. From its inception, the Act acknowledged the significance of family, whānau, hapū, and iwi in the lives of tamariki Māori. However, in practice, the child welfare system has long been criticised for disproportionately removing Māori children from their families and placing them into state care, often with non-Māori caregivers, perpetuating a cycle of cultural disconnection and systemic assimilation (Eles, 2019a, 2019b). In 2017, in recognition of the ongoing inequities Māori face within the child welfare system, section 7AA was introduced into the Oranga Tamariki Act, coming into effect in July 2019. This amendment imposed specific duties on the Chief Executive of Oranga Tamariki to *recognise and provide a practical commitment to the principles of the Treaty of Waitangi (Te Tiriti o Waitangi)*. Section 7AA required the agency to partner with iwi and Māori organisations,

develop policies that reflect Māori values and practices, and seek to improve outcomes for Māori children in care. Section 7AA marked a shift toward a model of care informed by tino rangatiratanga and cultural authority. Despite these intentions, critics argued that the operationalisation of section 7AA remained weak, and reports from the Waitangi Tribunal and Ombudsman revealed that Māori children were still being uplifted at disproportionately high rates, with little regard for whakapapa, tikanga, and whānau-centred approaches. Policy measures such as these might be seen by some of the homogeneous majority as a threat to their culture, or is it Kotahitanga in action?

Changes in Tone - Coalition Government (National, Act, and New Zealand First) 2023 - 2025

The political context in which this research has taken place, specifically the 2023–2025 coalition government led by the National Party (38.06%) in alliance with ACT (8.64%) and New Zealand First (6.08%), has marked a conservative ideological (Cheyne et al., 2008; Drake, 1999) turn in national discourse around race, identity, and Treaty-based rights (Electoral Commission, 2023). Political resistance to co-governance, Te Tiriti o Waitangi commitments, and Māori-specific policies has intensified (New Zealand Government, 2023), creating an increasingly hostile environment for Indigenous Māori and identity reclamation initiatives.

Disestablishment of Te Aki Whai Ora – The Māori Health Authority

However, both the establishment of Te Aka Whai Ora *and* the formal support for rongoā were short-lived. In 2024, the newly elected government announced the disestablishment of the Māori Health Authority, citing concerns about separatism and efficiency (Reti, 2024). Similarly, public funding and policy recognition of rongoā were rolled

back, with critiques couched in scientific rationalism and a rejection of parallel systems Te Aka Whai Ora was disestablished on 30 June 2024 with the Minister of Health National's Dr Shane Reti noting that the Authority's "functions would be redistributed within the public health system" (Wilson et al., 2024, para 2).

The repeal of both initiatives represents a clear reversion to assimilationist policy logics, those that universalise service provision under a Western framework while marginalising Indigenous worldviews and authority. This regression undermines Te Tiriti commitments and erases hard-won progress toward Māori health equity. In practice, it reinstates a model in which Māori are expected to integrate into state-defined systems of care that have historically failed them, and where Indigenous knowledge is once again subordinated to dominant paradigms of biomedicine.

Oranga Tamariki (Repeal of Section 7AA) Amendment Act 2025

In 2024, the Aotearoa government announced its intention to repeal section 7aa of the Oranga Tamariki Act, driven by the ACT party member and Minister for Children Karen Chour, framing the decision as part of a broader shift away from what it characterised as co-governance. The repeal has been met with widespread concern and condemnation from Māori leaders, legal scholars, and child welfare advocates (UoA, 2024; Eketone, 2024). The removal of section 7AA signals a regression from obligations to uphold Te Tiriti and threatens to entrench a monocultural child welfare model (One News, 2024). The implications of this repeal are significant. It undermines efforts to decolonise child protection services and re-establish Māori control over the wellbeing of their tamariki. It risks further marginalising Māori voices in decisions affecting their children and contributes to the historical pattern of state-driven assimilation policies. The repeal also sends a broader message about the status of Te Tiriti obligations within social policy, reflecting a policy

environment that may be increasingly resistant to Indigenous partnership and equity. Oranga Tamariki (Repeal of Section 7AA) Amendment Act 2025, came into force on April 7, 2025.

The Treaty Principles Bill

The Treaty Principles Bill was a Member's Bill introduced in 2024 by ACT Party leader David Seymour. The Bill sought to redefine and limit the principles of Te Tiriti o Waitangi as they are interpreted and applied in legislation and public policy. Specifically, it proposed replacing existing interpretations of the Treaty principles, such as partnership, active protection, and redress, with three redefined principles: freedom, equality, and democracy (RNZ, 2024). This reframing would have effectively nullified the Crown's obligations to partner with Māori, undermining the foundation for Māori self-determination within the public sector. The purpose of the Bill was publicly framed to remove what they [ACT & The Coalition] considered "race-based" or "separatist" policies and to restore what was described as a universalist approach to rights and citizenship. However, the Bill was widely condemned by Māori leaders, legal scholars, constitutional experts, and civil society groups as an apparent attempt to roll back the recognition of Māori rights under Te Tiriti and to entrench a monocultural, assimilationist framework. The Bill was part of a broader political project to dismantle co-governance, Indigenous authority, and Te Tiriti-based commitments across government.

The Bill passed its first reading, as part of the Coalition Agreement, when it was brought before Parliament in November 2024. However, it failed to secure majority support and was voted down in its second reading in early 2025. While the governing coalition included parties sympathetic to the Bill's ethos, public pressure, mass protest, legal opinion, and the constitutional risks associated with undermining Te Tiriti contributed to its rejection. The defeat of the Bill was viewed as a significant, though fragile, defence of Indigenous rights and the constitutional role of the Treaty.

Summary

The disestablishment of Te Aka Whai Ora, the devaluation of rongoā, the Oranga Tamariki (Repeal of Section 7AA) Amendment Act 2025, and the initiation of the Treaty Principles Bill signal a reinforcement of colonial norms within contemporary governance, raising urgent questions about the Crown's ongoing role in perpetuating or dismantling structural inequities. Despite the failure of the Treaty Principles Bill, its introduction also reflects a resurgence of assimilationist rhetoric in contemporary policy discourse. It illustrates a deliberate attempt to redefine the relationship between the Crown and Māori on terms that diminish Indigenous sovereignty and revert to a one-nation, integrationist narrative. The Bill's short-lived trajectory in Parliament highlights the tensions within Aotearoa's democratic system between upholding the promises of Te Tiriti and resisting structural change that challenges the colonial status quo. Aotearoa Herald reporter Julia Gabel (2025) reported, "Seymour remained defiant, telling reporters outside the debating chamber,

For the purposes of this conversation, putting the same thing right back is a possibility, amending another law is a possibility. There are lots of options."

These policy proposals and reversals must be understood not as isolated administrative changes but as part of a broader ideological movement resisting Indigenous self-determination with conservative ideologies based in colonial thinking. The conservative ideologies influencing political policymaking also threaten to perpetuate continued identity loss, cultural loss and disconnection.

Reconnection in an Unsettled Landscape 2023 - 2025

Cultural dislocation caused by cross-cultural adoptions and State Care has contributed to intergenerational trauma, with many Māori adoptees and their descendants still grappling with the loss of their identity and disconnection from their heritage. The Māori cultural revival has progressed in parallel to political policy gains, which have seen a push to

address the legacy of some historical policies and their social impacts. For instance, opening adoption records, efforts to reconnect Māori adoptees with their whānau, and the broader Māori renaissance have helped some reclaim lost identity and whakapapa. However, the long-term effects of these policies continue to resonate, as many Māori still struggle with the trauma of disconnection from their culture and community. Aotearoa's adoption policies, underpinned by assimilation and integration ideologies, contributed to a significant cultural dislocation for Māori. By severing ties to whakapapa and promoting Western child-rearing practices, these policies profoundly disrupted Māori identity, with lasting impacts on individuals and the broader Māori community. A fear that the Oranga Tamariki (Repeal of Section 7AA) Amendment Act 2025 will continue to do.

Identity and the Social Determinants of Health and Equity

This research confirms that identity is a foundational determinant of health, particularly within Indigenous contexts (Houkamau & Sibley, 2010; Marmot et al., 2008; Reid et al., 2016). For Māori, disconnection from whakapapa is associated with poorer health outcomes, including psychological distress, intergenerational trauma, and reduced access to culturally appropriate services (Houkamau, 2010; Williams et al., 2018). Conversely, reconnection fosters *oranga tonutanga* (continued well-being, survival, sustenance), enhances well-being, and strengthens whānau cohesion (Durie, 1998; Cram, 2014). Frameworks such as *Te Whare Tapa Whā* (Durie, 1998) and *He Ara Oranga* (2018) reinforce the centrality of identity to wellbeing. A culturally nuanced understanding of identity reclamation is necessary to uphold Te Tiriti obligations and deliver equitable outcomes across the health and social care systems.

While not culturally comprehensive, DTC autosomal GT may serve as a catalyst for reconnection to iwi, hapū, or whakapapa for those whose cultural links were disrupted by colonisation and associated policy impacts. This has implications for equity in service

delivery. Many services designed for Māori are accessed based on eligibility defined through static legal and institutional frameworks, such as iwi registers, government agency criteria, or legislation requiring verified whakapapa. Often slow to adapt, these frameworks risk excluding individuals who reconnect to their whakapapa through genetic means but may not yet meet formal registration or legal requirements. As a result, identity reclamation through DTC-GT may not guarantee access to the services, supports, or rights intended for Māori, highlighting a tension between evolving identity pathways and rigid institutional systems.

Justice, Data Sovereignty, and Ethics of Belonging

DTC autosomal GT does not occur in a vacuum. The data produced through these services is typically owned and controlled by international corporations, governed by privacy agreements that do not reflect Indigenous values or rights (Hudson et al., 2023). Māori genetic data, when held outside of Indigenous governance structures, is at risk of misuse, misinterpretation, and exploitation.

Indigenous Data Sovereignty (IDS) frameworks offer a counterbalance by asserting collective control over how Māori data is stored, interpreted, and shared (Kukutai & Taylor, 2016). This research supports calls for tikanga-based governance over all forms of Indigenous genetic data, including those voluntarily provided through DTC services.

The ethics of belonging also demand scrutiny. If autosomal DNA becomes a proxy for legitimate Māori identity, we risk reinforcing exclusionary practices fixed in colonial hierarchies of authenticity. This is antithetical to Māori relational identity, which centres on *whanaungatanga* (relationship, kinship, sense of family connection) and communal recognition (Mead, 2016). Belonging must be defined through cultural engagement and collective acceptance, not genetic certification.

Barriers to Acceptability and the Challenge of DNA “Proof”

Many Māori remain sceptical of DTC-GT, and for good reason. Historical abuses in scientific research, the tapu nature of whakapapa, and concerns about privacy and data misuse contribute to low levels of cultural acceptability. Intra-Māori tensions arise, as individuals seek recognition based on genetic results rather than cultural participation or community involvement.

This climate of retrenchment pressures Indigenous self-determination and further complicates efforts to reclaim identity through DTC-GT. The expectation that Māori should prove their identity biologically aligns with historical colonial mechanisms such as blood quantum policies and racial classification systems (Else, 2019a, 2019b; Hunn, 1960; TallBear, 2013). These systems undermine the mana of whakapapa and ignore the nuances of Indigenous belonging, which are neither static nor solely biological. As Māori engage with genetic tools in a political moment marked by rollback and resistance, the need for tino rangatiratanga over identity processes becomes urgent. Cultural reconnection, including through DNA, should be shielded from policy frameworks that seek to reduce Indigenous identity to measurable criteria.

Reclaiming Identity in a Genetic Marketplace

For Māori disconnected from their whakapapa through colonisation, state interventions (such as the Tohunga Suppression Act 1907 and child welfare policies), and forced urbanisation, DTC autosomal GT offers a new, though contentious, entry point to reconnection. The emergence of consumer genetic testing has enabled individuals to trace biological ancestry, locate potential relatives, and begin the process of cultural restoration. However, autosomal DNA use alone is not an exact science and should be used concurrently with genealogical processes such as matching documents, family trees, and chromosomes. The commodification of identity through DTC services raises significant

concerns. Whakapapa is deeply embedded in a Te Aō Māori worldview, and is relational, spiritual, and grounded in community and land (Durie, 1998; Mead, 2016). In contrast, DTC-GT reduces identity to quantifiable cMs, often interpreted through Western scientific frameworks that do not reflect tikanga Māori or the metaphysical dimensions of identity for Māori (Garrison, 2013). This ontological disconnection risks re-inscribing colonial logics where identity is externally validated by technology rather than community.

While autosomal DNA may catalyse identity inquiry, this thesis cautions against treating it as definitive. Reconnection must remain grounded in Māori-led processes that privilege lived experience, collective belonging, and cultural revitalisation (Smith, 2012). DTC autosomal GT should be the last resort for Indigenous Māori identity reclamation, as the risks outlined in chapter 6 can outweigh the potential benefits now and into the future, as the technology continues to expand.

This research encountered concerns about authenticity, tokenism, and the dilution of tikanga when identity is reduced to a test result. Reconnection is a process, not an event, and must be supported by whānau, hapū, and iwi through a willingness to engage *kanohi ki te kanohi* (face to face, in person), to assess the possible connection of DTC-GT results to whakapapa. There is also a need for educational resources and kaupapa Māori-led engagement around what DTC autosomal GT can and cannot offer. To increase acceptability, policy and practice must accommodate a diversity of experiences. Reconnection through DNA should not be positioned as lesser or invalid but rather integrated into broader identity frameworks that respect lived, relational, and spiritual dimensions. This is particularly important when DTC-GT is the only tool available for identity reclamation.

Choosing a Testing Company: What's Your Why?

One of the research aims of this thesis was to highlight a potential path forward to identity reclamation. As part of fulfilling this aim, the following section provides a roadmap to guide decision-making when navigating the complex world of DTC testing.

When selecting a DTC-GT company, understanding your underlying motivations is crucial. Are you searching for an unknown biological family, ethnic identity, or genealogical confirmation? Your “why” should shape your decision. Testing companies differ not only in their database sizes and services but also in the depth of their genealogical tools, privacy policies, and access to third-party platforms. According to the International Society of Genetic Genealogy (ISOGG), important considerations include: the types of DNA tests available (autosomal, Y-DNA, mtDNA), the size and diversity of the testing database, Access to raw data and external upload options, built-in genealogical tools (e.g., chromosome browsers, triangulation features), and finally privacy, consent, and third-party sharing policies (ISOGG, n.d.a). As ISOGG (n.d.a) outlines in its *Choosing a DNA Testing Company* guide²⁹, no one company suits every purpose. Your test should match your goals, whether that's ethnicity estimates, close match identification, triangulation with known relatives, or confirming whakapapa lines.

Questions to ask yourself:

- What am I hoping to learn?
- Am I emotionally prepared for unexpected results?
- Have I read the fine print on data use and privacy?

²⁹ https://isogg.org/wiki/Choosing_a_DNA_testing_company

- Have I considered comparative reviews of company offerings?

What Is Your Why? – Reflective Considerations Before Testing

Before taking a DNA test, especially when driven by a desire for reconnection or identity, it's vital to reflect on your motivations and expectations. Are you prepared for surprises, such as unknown siblings or unexpected heritage? Are you seeking answers for health, identity, or whakapapa? What happens emotionally and practically when you find what you're looking for, or don't? And how will you interpret these results when the tools and databases are built from predominantly Eurocentric samples?

Chapter 8 Conclusion: Towards a Future of Reconnection

The purpose of this chapter is to conclude the thesis by addressing the research aims and questions, indicating directions for future research and making recommendations on how mātauranga Māori should be a guiding principle for the use and interpretation of DNA in Indigenous identity reclamation and how the context of social policy needs to shift away from the principles of colonisation and assimilation and embrace kotahitanga; where a shared future is strengthened when science and culture co-create pathways of understanding and belonging.

The following aims and objectives have guided this research including the need to: humanise the plight of cross-cultural adoptees (or others) who fall outside of the currently accepted testing and, lay the foundations (at least) for policy and guidelines for using DTC autosomal DNA to reconnect tangata whenua from an iwi perspective, and highlight a potential path forward to identity reclamation.

The thesis also asked the following research questions:

- How does direct-to-consumer (DTC) DNA testing facilitate reconnection to Māori identity and whakapapa for cross-cultural adoptees?
- What are the short, medium and long-term risks and advantages of DTC autosomal DNA testing for iwi Māori?

Research in choosing a DTC-GT company shows emotional appeal and awareness that drives buying responses based on cost, marketing promises, or being empowered with the allure of quick results and personalised insights (Credence Research, 2024; KPMG, 2018). However, this choice carries significant implications that extend beyond the initial purchase. Key considerations such as the size of the company's database, data privacy policies, ownership and potential sharing of genetic data, and how results are interpreted, are frequently overlooked (Phillips, 2016, 2019). Additionally, the company's geographical

focus and database diversity can impact the accuracy and relevance of ancestry results, particularly for individuals from underrepresented populations, such as Māori and other Indigenous communities. Ethical concerns, including the risk of commodifying cultural heritage and how the company addresses the rights of marginalised groups, should also play a role in this decision. By critically evaluating these factors, consumers can make informed choices that align with their values and the broader implications for privacy and cultural integrity.

This research has demonstrated that while DTC autosomal GT is not culturally comprehensive, it offers a powerful tool for identity reclamation for cross-cultural adoptees and others disconnected from their whakapapa. However, current static legal and institutional frameworks, which define Māori identity through fixed criteria, may not recognise individuals who reconnect through genetic means. This misalignment risks excluding those seeking to reclaim their whakapapa from access to services, supports, and rights intended for Māori. In doing so, it highlights a critical equity issue that must be addressed.

The findings humanise the complex and emotional journey of reconnection for cross-cultural adoptees, illustrating the potential and the challenges of using DTC-GT in this context. They also point to the need for iwi-led policy development that can flexibly accommodate new forms of reconnection while upholding cultural integrity. A pathway forward must balance DTC-GT's opportunities for individual and collective identity reclamation, with careful management of its short, medium, and long-term risks for iwi Māori.

Directions for future research

Based on the findings of this research thesis, several future research directions could further strengthen understanding and improve outcomes across the social determinants of health and well-being for Māori.

1. Exploring how DTC-GT can be integrated with kaupapa Māori approaches to education, health, and social services to support cultural reconnection and identity restoration in a mana-enhancing and community-led way.

There is limited research on the intersection between DTC-GT and Māori identity from a social policy perspective, particularly on how this form of genetic reconnection can influence collective well-being and cultural regeneration. While DTC-GT is growing in popularity, its implications for whakapapa, tikanga, and Indigenous data sovereignty remain underexplored in policy and academic contexts.

2. Investigate the long-term impacts of identity reconnection on whānau, hapū, and iwi well-being, socially, emotionally, economically, and spiritually. This includes examining how whakapapa restoration contributes to improved outcomes in mental health, suicide prevention, and whānau resilience.

There is a lack of longitudinal studies examining the outcomes of identity reconnection for Māori across key social determinants of health, such as mental health, education, housing, and social cohesion. Most research to date focuses on individual or biomedical outcomes rather than culturally grounded and collective measures of well-being.

3. Assess how public policy and legal frameworks can evolve to better recognise and protect Indigenous data sovereignty, particularly in the rapidly expanding field of genomics.

A notable gap in policy-focused research explores how State systems, such as health, education, justice, and welfare, can support or hinder whakapapa restoration and identity reclamation. The absence of culturally responsive frameworks within

these institutions limits the ability of Māori to navigate reconnection journeys safely and meaningfully.

4. Comparative research with other Indigenous communities engaging in similar reconnection efforts could offer valuable insights into decolonising social policy and embedding Indigenous worldviews into governance, health, and social care systems.

Cross-cultural and comparative research with other Indigenous peoples is sparse. Opportunities to learn from global Indigenous reconnection experiences and co-develop best practices in decolonising genomic technologies and policies remain largely untapped. Addressing these gaps would contribute to a richer, more culturally anchored social policy landscape that affirms Māori rights, identity, and self-determination.

These directions would support a more equitable and culturally grounded policy landscape that upholds Māori aspirations for self-determination and holistic well-being.

Recommendations – (that have come out of the research)

Mātauranga Māori as a Guiding Framework

The double helix, chromosomes, SNPs, and cM provide tools for understanding the biological underpinnings of identity. However, Mātauranga Māori extends these insights by embedding them in a relational, ethical, and spiritual framework. This synthesis creates a platform for innovative policies honouring the scientific and cultural dimensions of identity.

Policy Implications:

- Develop guidelines to support Iwi governance to navigate the use of DTC-GT technologies and genealogy relating to whakapapa, identity reclamation and Māori data sovereignty.
- Promote culturally aligned genetic support services for those using DTC-GT to reconnect with whakapapa and identity reclamation.
- Design educational curricula that combine genomics and Mātauranga Māori, fostering a generation equipped to navigate both worlds.

Social Policy for Aotearoa: A New Paradigm

By aligning genomic science with Mātauranga Māori, this narrative proposes a shift in social policy from reductionist to relational approaches. This paradigm recognises that identity, health, and well-being are not isolated but interwoven through whakapapa, pūrākau, and contemporary science. Policies informed by this synthesis can address systemic inequities while respecting Māori *motuhaketanga* (independence, autonomy, self-determination). Whether in health, education, or social welfare, Western science and Mātauranga Māori knowledge interplay to create a more inclusive, equitable future for Aotearoa. By honouring whakapapa and its modern expressions through genomics, social policy can embody the dual strands of the double helix: grounded in the past, spiralling toward a future of Kotahitanga, where we are all valued and included.

As I stand on the precipice of risking acceptance, risking the surveillance of those who are of me but unknown to me, I wait to be seen. I feel small, unworthy of that acceptance ... the comfort of no expectation limits the pain of denial. Braced for rejection again, holding my breath, waiting, wanting, hoping to be seen, to be heard from the part woven into my whakapapa from my koro. I have spent years working to know who I was, learning and using the science now available for those lost to their

past. The generations impacted by others, other countries, other policies, other ideologies that are equally part of me and all that I am.

The Question

At the end of chapter One, I asked: If I knew then what I know now about DTC DNA testing, would I make the same decision ... Would I give away my identity to find my Identity? The answer is Yes!

It has been challenging, frustrating, confronting and overwhelmingly joyful. I have connected with whānau, whānaunga and whenua. There are risks, pitfalls and costs to time, finances and sanity, but knowing WHO you are, WHERE you are from, and how you BELONG is indescribable. As the metaphysical invisible strands connect all and bind the pieces of self, you know you are whole. The imperfect in an imperfect world.

I am ... Ko Ngai Tahu te Iwi!

I have all the information from DTC-GT and genealogical searches; I whakapapa to Wairewa. I knew my Koro was William (Bill) James Thomas, his mother was Wikitoria Ropata, and his grandmother was Puaka (Roka) Korehe. I have 34 direct DNA matches from Puaka Korehe, across four direct descendants and through seven generations ... I know!

Wairua and our tupuna also work their magic to reconnect whakapapa – my mokopuna whakapapa back to Wairewa through their Robinson whānau, so from four generations of disconnection, they had found their way home anyway.

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Glossary

Aotearoa	<i>New Zealand</i>
Ariki	<i>paramount chief</i>
Atua	<i>deities</i>
Hauora	<i>health and well-being</i>
Hapori	<i>community</i>
Hapū	<i>sub-tribe</i>
harakeke	<i>flax</i>
Iwi	<i>tribe, people, nation</i>
Iwi waka	<i>allied kinship groups from migrating canoes that occupy set territory</i>
Kaitiakitanga	<i>guardianship, trust</i>
Kanohi ki te kanohi	<i>face to face, in person</i>
Kaupapa	<i>topic, policy, matter for discussion</i>
Kaupapa Māori	<i>Māori approach, principles and ideology</i>
Kete	<i>basket</i>
Kīngitanga	<i>Māori King/Queen Movement</i>
Kōrero	<i>to tell, say, speak, read, talk, address</i>
Koro	<i>grandfather</i>
Kotahitanga	<i>unity, togetherness, and solidarity</i>
Kupu	<i>word, vocabulary</i>
Mana	<i>to be legal, effectual, binding, authoritative, valid; authority</i>

Mana Māori	<i>autonomy, authority, rights</i>
Mana motuhake	<i>autonomy, self-government, self-determination</i>
Mārenatanga	<i>marriage</i>
Mātauranga Māori	<i>Māori Knowledge, Indigenous knowledge systems</i>
Mauri	<i>life principle, life force</i>
Moe mai rā korua	<i>rest in peace, both of you</i>
Mokopuna	<i>grandchild</i>
Mō tātau, ā mō kā uri, ā muri ake nei	for us and our children after us
Motuhaketanga	<i>independence, autonomy, self-determination</i>
Muka	<i>prepared flax fibre</i>
Nō hea koe	<i>where are you from</i>
Oranga tonutanga	<i>continued well-being, survival, sustenance</i>
Ōtautahi	<i>Christchurch</i>
Pākehā	<i>European</i>
Pāmamae	<i>hurt, pain, grief, distress</i>
Papatūānuku	<i>Earth mother</i>
Pepeha	<i>phrases that define and describe connections to people and places</i>
Pūrākau	<i>myth, ancient legend, origin stories</i>
Rangaranga (alt. Raranga)	<i>to weave</i>
Ranginui	<i>Sky father</i>
Rongoā Māori	<i>Māori remedy, medicine, traditional healing practices</i>

Tamariki	<i>Children</i>
Tangata whenua	<i>indigenous people, born of the land</i>
Tapu	<i>sacred, prohibited or restricted</i>
Te Aka Whai ora	the Māori Health Authority
Te Aō Māori	<i>Māori worldviews</i>
Te Reo Māori	<i>Māori language</i>
Te Tiriti o Waitangi	<i>The Treaty of Waitangi, 1840</i>
Te Waipounamu	<i>South Island</i>
Tikanga	<i>customary practices / customs</i>
Tino Rangatiratanga	<i>Self-determination, Māori Sovereignty</i>
Tohunga	<i>chosen expert, priest, healer</i>
Tūpuna	<i>ancestors</i>
Wairua	<i>spirit, soul</i>
Whakapapa	<i>genealogy, lineage descent, family history</i>
Whānau	<i>Family group</i>
Whanaungatanga	<i>relationship, kinship, sense of family connection</i>
Whāngai (alternately atawhai or tamaiti whāngai)	<i>foster or adopt</i>
Whenua	<i>land</i>

Translation

Māori translations of *kupu* (word, vocabulary) are taken from Te Aka Māori Dictionary (n.d). All Māori kupu used will have a translation on the first use only unless the context of that translation changes for a particular sentence or paragraph.

Annexe

Annexe 1: Principles for the Application of Forensic Investigative Genetic Genealogy (ANZPAA, n.d.).

Principles for the Application of Forensic/Investigative Genetic Genealogy

Purpose:

These Principles provide high-level, strategic guidance for jurisdictions in the development and application of policies and procedures related to Forensic/Investigative Genetic Genealogy (F/IGG).

Definition:

F/IGG is a specialised field that combines more expansive DNA techniques and traditional genealogy to identify suspects and unknown remains, using commercial DNA databases to establish familial relationships of the unknown individual.

KEY PRINCIPLES			
REASONABLE USE		APPLICATION	
Due to the use of genetic data with publicly available commercial databases, F/IGG should be reserved for the investigation of serious crime, involving significant harm or posing a substantial threat to public safety, and for the resolution of unidentified human remains cases.		As a resource-intensive intelligence technique with implications for individual privacy, F/IGG should be considered once other investigative and forensic examinations have been reasonably exhausted. The use of commercial databases for F/IGG-based investigations should cease if identity is established by other means.	
UNDERPINNING PRACTICES			
TRAINING	GOVERNANCE	BEST PRACTICE	TRUST & CONFIDENCE
Police and forensic agencies should:			
<ul style="list-style-type: none"> ensure high quality training is provided to staff to ensure competency and to promote continuous learning investigate a program of proficiency testing for in-house experts 	<ul style="list-style-type: none"> maintain a central register of use, issues and opportunities to promote continuous improvement and allow for transparent review conduct periodic internal reviews of relevant governance processes develop local processes for interstate and international requests for assistance with F/IGG cases provide guidance as to the reasonable assessment of compliance of an interstate or international request with these Principles. whether the capability is in-house or with external service providers, undertake due diligence around technical, legal and privacy compliance, including data management, ownership, disclosure, technical suitability, and competence 	<ul style="list-style-type: none"> develop best practice guidelines, standard terminology, reporting and operating models in consultation with the jurisdiction's representatives of relevant specialist cross-jurisdictional groups¹ establish policies and practices with a focus on privacy and informed consent, and in consideration with local context promote and share research in the use of F/IGG and related technologies recognise that F/IGG is an evolving capability and regularly review established policy and process to ensure they are contemporary and fit-for-purpose. 	<ul style="list-style-type: none"> foster public trust and confidence in F/IGG through its transparent use adhere to the terms and conditions set by external service providers, and monitor and adapt to any changes, promoting ongoing co-operation work to develop a peer-reviewed process for actionable intelligence
UNDERPINNING CONSIDERATIONS			
Police and forensic agencies should:			
consider any Australian and/or New Zealand obligations under international treaties when developing policies and practices that guide the application of F/IGG, including with respect to the death penalty.		consider any jurisdictional laws and policies when establishing practices that guide the application of F/IGG, including with respect to the identification of foetal remains.	

Footnotes

¹ The Forensic/Investigative Genetic Genealogy Project Working Group (F/IGG) is an ANZPAA NIFS Group.