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RESEARCH ARTICLE



## Shared mobility in a Māori community

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### ABSTRACT

Shared mobility is being advanced as a novel, technologically sophisticated approach to reducing the environmental impacts of high levels of car ownership. However, communities have long shared modes of transport for reasons other than environmental quality. We describe the shared mobility practices undertaken in a Māori community in the East Cape region of New Zealand. They reveal long-established ways of sharing that are underpinned by, and support, cultural principles. Shared mobility provides an appropriate and comfortable environment for people to share vital and sacred information and to strengthen social bonds. It also reflects the desire of tribal members to retain cultural practices that benefit the collective. The findings make it clear that sharing transport has far more than economic and environmental benefits. We suggest that it is time for the social and cultural benefits of sharing transport to become part of the global narrative on twenty-first-century collaborative consumption.

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## Introduction

Notions of shared mobility have become a fundamental component of twenty-first-century aspirations for sustainable, low-carbon transport systems (Köhler et al. 2009). In many parts of the world, various forms of shared use or collective ownership of cars and bicycles have been established by cities, businesses and groups of citizens. These schemes usually aim to reduce the negative impacts of high levels of car ownership such as road congestion, greenhouse gases (GHG) and particulate emissions, as well as reducing the cost of mobility (ITF 2015). In the academic literature, such schemes are generally presented as a novel outcome of the recent rise of collaborative consumption and the ‘sharing economy’ (Botsman and Rogers 2010), involving the use of intelligent technologies and information systems such as smart cards, location tracking and smartphone applications (Heinrichs 2013). It is further claimed that connected and autonomous vehicles will offer options for mobility as a service whereby personal car ownership may eventually become irrelevant (Greenblatt and Shaheen 2015).

But is shared mobility so novel? While the twentieth century saw a widespread expectation of personal car ownership and the emergence of multi-car households, there are still situations where shared use of vehicles is a long-established everyday practice. The

research presented in this paper was stimulated by a desire to explore whether (and how) shared mobility is practised as a tradition rather than as a novel twenty-first-century experiment. It was undertaken as a case study of a geographically dispersed community in the East Cape region of New Zealand. The fieldwork was undertaken by the first author – a young Māori researcher in his own *tūranga wāwae* (place of belonging by birth-right). The rich findings are underpinned by the strong relationship between the researcher and the community members involved.

We start with a brief review of the literature on shared mobility in its modern iteration, introduce the case study and the qualitative research methodology and outline some key concepts relating to the Māori world view that will be used in the paper. We describe the research approach which combines in-depth interviews and auto-ethnography. We then present the findings and conclude with thoughts on what this might mean for a richer understanding of the social and cultural values of shared mobility.

## Theoretical and cultural context

### *Collaborative consumption and shared mobility*

Collaborative consumption and the sharing economy are terms used to describe a socio-economic movement. Both are argued to be relatively recent trends, away from individualised forms of hyper-consumerism which value the ownership of material items to forms of consumption which place more value on the act of sharing and the service provided (Botsman and Rogers 2010). The sharing economy is often predicated on peer-to-peer interactions which involve individuals ‘exchanging, redistributing, renting, sharing, and donating information, goods, and talent, either organizing themselves or via commercial organization by social media platforms’ (Heinrichs 2013, p. 229). Examples include formal and informal social collaborations such as community gardens, tool libraries and food recovery through to services provided by businesses such as peer-to-peer sharing of electricity, micro-financing and sharing of office equipment. It has been argued that the sharing economy challenges hyper-consumerism’s foundational message that consumption and ownership convey power and status (Mont 2004); however, its corporatisation, especially through major businesses such as Airbnb (home rentals), eBay (peer to peer shopping) and Zipcar (car sharing), is arguably less about challenging consumerism than about new financial models that are facilitated through ICT-enabled efficiencies in resource use, leading to cost savings for consumers.

Shared mobility generally involves either shared ownership of transport technologies or access to their use where they are owned by others, most often cars and bicycles. Carpooling, car sharing and other forms of shared mobility have been shown to achieve considerable reductions in the number of cars on the road, improve efficiency and decrease congestion as well as being less costly in most instances than single-occupier car use (Parzen 2015). Car sharing can enhance accessibility while simultaneously reduce car ownership and environmental impacts: one shared car replaces 9–13 cars and can achieve a reduction of 34%–41% in household GHG emissions, monthly household savings of \$US154–\$US435 and 27%–43% reduction in distance travelled (Shaheen and Chan 2015). It is also claimed that shared mobility can provide more mobility choices, offering first mile–last mile solutions to help people connect with public transport,

reducing traffic congestion, reducing GHG emissions, lessening parking pressure, creating independence for those who cannot afford to buy and maintain a vehicle, reducing household transportation costs and increasing efficiency and convenience (Shaheen and Chan 2015).

Along with these environmental and economic benefits, some social benefits have also been claimed, such as the ability of shared mobility to build a sense of community (PSFK LABS 2013) and provide greater social equity (Litman 2015). However, the social outcomes of shared mobility appear to be under-researched, possibly because most schemes are relatively recent. Examining the social and cultural parameters of long-established shared mobility may broaden our understanding of the potential for long-term social benefits of sharing mobility.

Belk (2014) notes that sharing is more likely to ‘take place within family, close kin, and friends than among strangers’. Belk contrasts ‘sharing in’ (sharing amongst friends and family) with ‘sharing out’ (sharing with relative strangers), and suggests a spectrum of intimacy which may make ‘sharing in’ easier for many than ‘sharing out’. He notes that this difference may place limits on the transition towards a sharing-based economy. Examining shared mobility practices that are founded on forms of ‘sharing in’ may provide insights into whether aspects of these practices are transferable to less cohesive community situations.

In selecting our case study, we sought to explore the hypothesis that a geographically dispersed community with long-established relationships would be more likely to practice collaborative consumption (including shared mobility) than locations that lacked these characteristics such as urban suburbs. As well, in exploring how Māori cultural practices support and respond to shared mobility practices, we hoped to contribute to an improved understanding of the cultural as well as social attributes of shared mobility. At a more generic level, we were interested in whether Māori principles could help contribute to innovative developments in the notion of a modern-day ‘sharing economy’.

### ***Tikanga Māori: Māori cultural principles***

A brief explanation of some fundamental Māori cultural principles is necessary at this point, both to provide a rationale for why we chose the case study and also to assist the reader to understand the use of Māori terms throughout this paper. It should be noted at the outset that our explanations are necessarily brief and generic. A proper understanding of the concepts discussed would require deep immersion into Māori society, and indeed may be interpreted or applied slightly differently between tribal regions, but for the purposes of this paper, we draw from high-level explanations offered by Māori scholars.

One thing that sets the Māori world view apart from Western ideologies is a vital connectedness between people and their surroundings (Rangihau 1992). In Māori culture, when one is asked who he/she is, the respondent would reply not with their name but instead recite their pēpeha, usually citing their ancestral mountain, river, canoe, tribe and sub-tribe. From this information, the listeners can gauge their relationships with the individual. For example, the pēpeha of the first author would read,

*Ko Tihirau te maunga (I hail from the ancestral mountain Tihirau)*

*Ko Whangaparāoa te awa (I belong to the river of Whangaparāoa)*

*Ko Kauāetangohia te hapu (I descend from the sub-tribe of chiefly Kauāetangohia)*

*Ko Tauira-mai-tawhiti te waka (I descend from the great voyager canoe, Tauira-mai-tawhiti)*

*Ko Te-Whānau-ā-Apanui te iwi (I belong to the family of sovereign chief, Apanui-Ringamutu)*

When one references their pēpeha, they always place their tribal affiliations before citing their own name, recognising that they are merely one facet within a larger community. This etiquette recognises that one's community comes before one's own mana (prestige or authority). It is, after all, the community that has moulded the individual. Perhaps what is most significant within the pēpeha for the purposes of this paper is the explicit recognition of tribal affiliations, which underpins a commitment to the interests of the collective (Ka'ai et al. 2004).

Inherent within the pēpeha is the core concept of whakapapa. Whakapapa refers to genealogy, but in a wider sense than descent from one's *human* ancestors. One is also related to the physical world, being descended from Papatūānuku (Earth Mother) and Rangi-Awatea (Sky Father), and thereby related to all natural elements and living things (Raumati et al. 2007). Through whakapapa, there is a continued recognition of one's ancestral roots in the people and their place, which underpins the prioritisation of the community and the local environment that nourishes them.

Māori concepts of whānaungatanga similarly instil this culture of community. Whānau means family and whānaungatanga refers to the nature of kinship within the community. Whānaungatanga is about one's familial relationships and more broadly is also about being part of the greater whole and knowing that one is never alone. Whānaungatanga recognises interdependence and can be contrasted with western notions of independence and individualism (Raumati et al. 2007).

A third key concept is māramatanga which refers to enlightenment and is underpinned by the concepts of mātauranga (knowledge) and mōhiotanga (understanding). To attain enlightenment requires firstly attaining the knowledge and then bridging to understanding. Māramatanga thus captures the process of cognition, placing equal emphasis on the methods of sharing information (often oral and metaphorical) as well as realising cognition (Tumoana Williams and Henare 2009).

The fourth concept, mana motuhake, is a fluid term broadly referring to self-determination and is used in multiple contexts. It was prominently used in the context of the mid-nineteenth-century kingitanga movement, which resisted the European rule and aimed to achieve self-determination for Māori (Ka'ai et al. 2004), and in the 1980s, it was adopted as the name of a political party that stood for independent authority by Māori. It is also used in many other contexts such as the struggle to have Māori epistemologies accepted within the academy (Pihama et al. 2015). In this sense, mana motuhake conveys an aspiration of cultural autonomy.

Despite the impacts of European colonisation in the nineteenth century, the principles described above are still widely adhered to in Māori society.

## Research methods

### *The case study*

For our case study, we sought a predominantly Māori community in a rural location, where we considered that there was a reasonable likelihood that shared mobility practices

would be undertaken. The selected study area was in the northern East Cape region of New Zealand, the rohe (tribal district) of the iwi (tribe) of Te Whānau-ā-Apanui. The field research was undertaken by the primary author, who was born and raised in the community, and has whakapapa and whānaungatanga ties there.

The region has a number of characteristics that make it a pertinent study site. First, tribal members of Te Whānau-ā-Apanui make up 41.2% of the Cape Runaway population (Statistics New Zealand 2016). Second, it is a rural area with many small settlements along the coast, and minimal public transport provision, so private means of transport are necessary. Third, the iwi has a relatively young population and low median income of NZ\$22,400 compared to the national average of \$28,500 (Statistics New Zealand 2015) which together suggest that rates of driver's licencing and car ownership may be relatively low. Lastly, the region is sparsely populated and the case study area was approximately 100 km on poor roads from the nearest town of Opotiki (population c. 4000) and 150 km to the service town of Whakatane (population c. 20,000). We considered that the case study should therefore offer insights into how infrastructural, economic and geographical deterrents to travel are overcome in order to access school, recreation, shopping, medical appointments and social and cultural events.

### ***Qualitative research methods***

The research approach fits largely within the broad umbrella of a kaupapa Māori approach: that is research that has been developed by Māori, for Māori, undertaken by Māori and which demonstrates respect for Māori tikanga and practices (Walker et al. 2006). A key point of difference, however, is that the research topic was not developed by Māori but was identified as an under-researched and potentially fruitful area for research by the second and third authors. However, from that point onwards, the fieldwork and analysis undertaken by the first author were aligned with kaupapa Māori principles of recognising tino rangatiratanga, a concern for social justice, recognising Māori world views, using te reo where appropriate and reflecting the importance of relationships and connectedness (Walker et al. 2006). Kaupapa Māori research does not stipulate that particular methodologies are used, but in-depth interviews and focus groups, as described below, align well with Māori preferences for face-to-face kōrero.

In-depth interviews were undertaken with five participants within the case study area to collect empirical material for this research. In-depth interviews involve sharing dialogue to understand personal, place and time dependents accounts. Legard et al. (2003, p. 14) frame the interviewer as

a traveller who journeys with the interviewee [...]. The traveller [...] asks questions that lead the subjects to tell their own stories of their lived world and converse with them in the original Latin meaning of conversation as 'wandering together with them'.

As the Te Whānau-ā-Apanui community remain largely entrenched in the oral tradition of knowledge being passed through shared dialogue, the traveller model of interviewing is a culturally appropriate approach. A total of three interview sessions were conducted, with Interview A involving three participants and B and C with one each.

Auto-ethnography was also used by the first author to reflect on everyday shared mobility behaviours and their social and cultural relevance. Auto-ethnographic research

involves personal accounts which build on the researcher's own experiences in order to extend sociological understanding of a particular phenomenon (Denshire 2014). To do this, Turner (2013, p. 225) points out that 'auto-ethnography endeavours to [...] scrutinize [...] dominant narratives, suggest alternatives and proffer viewpoints previously discarded as unhelpfully subjective'. Thus, it is situated within an interpretive research paradigm. As an embedded community member, the primary author's observations provide culturally aware knowledge and interpretations that would not be available to an external researcher.

## **Analysis**

The interviews were designed, conducted and analysed by the first author (NH) in collaboration with the others in the research team (JS and DH). All interviews were audio-recorded which allowed for a deep reflection subsequent to the interviews. A thematic coding process was adopted, which explored the interviews for the diverse themes that were brought forth by the participants. The qualitative interview material was interpreted alongside the auto-ethnographic insights from the first author.

## **Findings**

Te Whānau-ā-Apanui community members use many forms of shared mobility, including sharing their cars with others, multiple passengers riding in others' cars and the use of vans and mini-buses owned by the tribal authority (Te Rūnanga o Te Whānau-ā-Apanui), sports groups and education initiatives such as kōhanga reo (Māori language pre-school). The key recurrent themes that emerged from the interviews were the practical imperatives for sharing (drivers licencing and economics) and the cultural components that supported sharing (whakakotahitanga, whānaungatanga, māramatanga and mana motuhake). The following sections discuss these themes in turn, with observations in first person from NH.

## **Licensing**

Drivers licencing, or the lack thereof, was one influence on shared mobility practices. When asked 'why are you [Hilary] always the driver?' she responded 'because I'm the only one with a full licence'. She went on to list the number of people who rely on her to drive in town as they either have no licence or still have a learners' or restricted licence.

... out of all the girls, I'm the only one with a full licence ... Then they'll be like, 'Do you wanna come to town?' And then I'll be like 'Yes' and they'll show up and they're waiting for me in the passengers [seats]. (Hilary)

Through my own observations, I have seen the same situation. Many family and friends have no licence, or are still on a learner's or restricted licences so have limited ability to take passengers. Some also lack confidence when driving in town among heavier traffic as opposed to the minimal rural traffic they are used to. Additionally, the cost of licencing is a financial impediment for many residents who not only have to find money for the three-stage application process but also have to travel to Whakatane to take the driving tests, along with paying for fuel for a round trip. Lack of fully licenced drivers is one aspect of why Te-Whānau-ā-Apanui community members favour practices of shared mobility.

### ***Economic imperatives***

The cost of travel was a recurring theme. In Interview C, Hilary discussed the arduous travel to town for shopping. When asked if she prefers to use her own car, Hilary said ‘I don’t actually prefer to go on my own vehicle. I’m easy to go on others [laughs]. Use their mileage, their tread on their tyres’. While this was articulated partly in jest, it reflects a broader concern about the poor road quality and its impact on personal vehicles, and financial conditions which underpin decision-making. The discussion about the notorious East Coast roads leads to an agreement that the poor quality takes an inevitable toll on both vehicles and, by extension, finances.

Where possible, Te-Whānau-ā-Apanui residents will attempt to reduce the costs by either travelling together to town or paying a small fee to avoid the trip and have shopping delivered. Hilary described a recent local innovation:

There’s this thing starting up and her name’s Aunty [M]. And she’s got this truck with a chiller at the back ... and she’s starting up this thing where she can do a shop for you. And it’ll cost you twenty dollars. So say you ring New World and because New World has a personal shopper you just have to ring them before 8 o’clock and he does your shopping but it costs you ten dollars to do your shopping and then she’ll pick it up for twenty dollars. So that’s thirty dollars which will [otherwise] get you from here to Omaio. (Hilary)

Community vans are a common feature. In Interview A, I was told about the van service provided for kaumātua (elders) by Te Rūnanga o Te-Whānau-ā-Apanui (the tribal administrative body). This entailed transporting kaumātua into Opotiki for significant medical appointments, shopping and other necessary appointments. This service is offered to all kaumātua across the tribal region of Te-Whānau-ā-Apanui from Potaka to Hāwai, stretching approximately 122 km.

In discussing the van provided by the local kōhanga reo (Māori language pre-school), Hilary explained that the children come from a 32-km radius to attend. She outlined what drove the decision to offer this service:

The reason that it started ... was my mum ... because parents just couldn’t afford to take their kids to kōhanga so they wouldn’t, so the kōhanga would only have one or two kids a day and then you wouldn’t get any attendance. (Hilary)

Shared mobility practices reduce the costs and complications of vehicle maintenance, as well as the cost of fuel. There are thus economic incentives to sharing transport by reducing the cost of accessing services that are only available in places that are a lengthy and arduous trip away. Locally sourced shared mobility services are critical for this relatively economically deprived region that receives little governmental assistance.

### ***Whakakotahitanga – unity***

Shared mobility offers more than convenience and cost saving. When questioned about the kaumātua van service, George explained that it provides kotahitanga. Sharing trips presents an opportunity for kaumātua who live across the region of Te-Whānau-ā-Apanui to be together and discuss current affairs or simply share a story about ‘days gone by’. When kaumātua converse, they almost always do so in Te Reo Māori, thus providing a link to the past when Māori language was the norm.

A further reason for kaumātua to use the van service was how it enables those who might otherwise rarely see each other with a chance to engage with others who live far away. As Elizabeth noted in Interview B,

He wa whakakotahitanga tenei (This is a time for unity). Because we rarely get to see each other in a social capacity, we are often only brought together in times of hui (formal meetings) or other events like that. So, when we have time together, like all kuia everywhere we must kōrero (talk). (Elizabeth)

I witnessed this first-hand. On a trip to Taupiri Maunga, the ancestral mountain in Ngaruawahia, a van collected several kaumātua, from Waihou Bay to Hāwai, to attend my Grandfather's kauae mate (ritual for the dead). Throughout the entirety of the 7-hour trip, not a single kaumātua took time to rest, but used it to catch up with one another, share stories of the 'old days' and reflect on how my recently passed grandfather had impacted everyone's lives. Amongst the kuia (elderly women), much of this time was spent discussing local affairs and criticising recent educational reforms in the region.

Thus, not only is the kaumātua van a vital service for the region but also a means of connecting the elderly of Te-Whānau-ā-Apanui. Shared mobility provides a sense of Whakakotahitanga or unity among the elderly community.

### **Whānaungatanga – family**

Another theme which emerged from interviews was the overriding importance of whānaungatanga. Sharing transport is a way to reflect family togetherness and to emphasise the importance of the collective. Through my own observations, I have noted many occasions where vehicles are filled to maximum capacity on trips to town for shopping and appointments or for local road trips to the shop or the beach. On many occasions, I have been asked by family members, 'What are you up to?' and following this they would say 'Come for a ride?' and of course, I would oblige, even if I had no particular place I needed to get to. In this context, it is the travelling together that is the purpose of the mobility, the social connectedness enabled by being mobile. This is further exemplified by in the example of a convoy to New Plymouth for a whānau (family) wedding, when one cousin was driving alone in their car up front, so a passenger in my own vehicle said, 'Oh! Pull up next to him and I'll jump in and drive to New Plymouth with him'.

Thus, it is culturally important to travel *with* someone as opposed to travelling alone. As one respondent in Interview A puts it, when sharing rides in general 'it's about socialising'. Indeed, this is very much the case, as longer journeys provide an opportunity to be with family who we have not seen in a while. Perhaps, this comfort with travelling with others derives from our keen sense of family and our relationships to one another. And within Te-Whānau-ā-Apanui, everyone knows everyone.

It is not only rides in cars that are shared – cars are also shared. As George from Interview A puts it:

In this area everyone is all related, you're free to give your vehicle whereas in a city environment, I'm just guessing that because it's such a nuclear environment they're not going to want to give beyond that defined group of people. (George)

Whānaungatanga not only underpins the sharing of vehicles but of other resources as well. I have seen first-hand and participated in sharing out of resources, sharing diving equipment, taking pāua (abalone) and kina (sea urchins) to feed others, as well as lending out my own car and clothes. As Hilary affirms when asked what other resources are shared out she responds,

Kai (food) definitely, tools and utensils ... Whether you get them back is a different story. But you don't get them back how you have given them ... Māori's they're like, you ask for something they pretty much give it eh. There's no 'can I get your insurance details?' none of that around here. (Hilary)

The distinction Hilary seems to be making is with dominant Pākēha culture, suggesting that Māori do not ask about insurance because there is a trust in sharing between families, and an acceptance that the lent objects may end up getting damaged, but that it does not matter because the benefit will be returned in another way. Certainly, there is an unspoken obligation of service within Te Ao Māori to one's whānau, hapu and iwi – the foundations of an individual's identity. This is similar to the ethic of care, especially for the elderly, found by Spiller et al. (2011) in Māori organisations, and is perhaps one of many reasons that promote shared mobility within Te Whānau-ā-Apanui.

Whānaungatanga also underpins Te Whānau-ā-Apanui Rūnanga's mandate to make resources available for community needs such as marquees, data projectors, crayfish for hui and tangi, as well as vehicles for school and other iwi events. These resources are accessed often with little paper work: as an interviewee notes 'you just rock up' so long as it is for the purpose of an iwi event. Whānaungatanga is not only what motivates shared mobility practices but also what directs executive policy within the Rūnanga for sharing resources more generally. Te Whānau-ā-Apanui functions as a strong 'sharing economy'.

### ***Māramatanga – enlightenment***

As already noted, ride-sharing allows kāumatua to spend time with one another, but more than this, it also provides an opportunity for sharing vital information. When discussing the importance of the kāumatua vans, George noted 'while they're together they say things like "I remember when ..."'. At this, I injected with an anecdote of a time I sat with my grandfather and his brother recounting the old whaling stations that sat on the shore behind Tihirau, our ancestral maunga (mountain). It was not until I had heard this story while I was driving them to town that I finally realised what were the concrete ruins that I had seen while hunting. George affirmed with, 'You can pick up a lot of kōrero (stories) by sitting in the van and just listening to them'. Elizabeth made a similar comment, 'You know on these rides you come to hear stories of old that aren't only about reminiscing, but they also help you to understand some of the kōrero (stories) about the places around here'. The stories and the viewing of places while travelling come together in understanding.

Shared mobility provides an opportunity to learn ancient and tapu (sacred) mōteatea (songs of lament). These waiata (songs) are sung after the completion of whaikōrero (ceremonial speeches). When a group travels together to events where they will be formally welcomed, they can practise the relevant waiata so that they can, as Julia puts it, 'get up

and sing confidently without being whakamā (shy)'. Similarly, I observed journeys where teachers of the local schools have held informal meetings while travelling together about the prospects of the educational year, and sat in on car trips with the local constables who discuss work informally and share crucial information to help with court cases.

Sharing transport thus provides an opportunity for vital and sacred information to be shared in a comfortable environment among their peers.

### ***Mana Motuhake – self-determination***

While discussing the kaumātua van service provided by the Rūnanga, George began to tell me of the upcoming Treaty negotiations between the iwi and the government. I asked 'How much of Te Whānau-ā-Apanui is Māori owned?' and he replied '97%'. Surprised by this, I enquired further, and he began to talk in detail, and with passion, about the history of Māori-Pākehā relations in the region, and the tribal aspirations for self-determination.

Upon subsequent review of the audio recordings, it became apparent that all of the interviews contain an undercurrent of a staunch sense of mana motuhake. The interviews indicate that the sharing of transport and other resources is in part motivated by a desire to reinforce Māori values and to do things 'their own way'. George compares this commitment to the community and interdependence to western ideals of independence:

That's the thing about whānau, ae, as you well know, a whānau isn't just you, your mother, your father, your brother, your sister ... it's all those Waititi's, it's all those Haerewa's, and when someone says I need a car, well [ushers to give keys], that's just how it goes, you give the car, cause Pākehā, a car to a Pākehā is an asset and it's a valuable asset at that, but it doesn't necessarily mean the same thing to a Māori eh? To a Māori it's a way of maintaining whānaungatanga. And if it ever gets crashed up well you'll worry about that later, but whānaungatanga is always the first thing on your wavelength. (George)

Hilary makes a similar point in relation to the kōhanga van when asked about the difference between Māori and Pākehā approaches:

Yeah they've never had to rely on ... Pākehās never really rely on others to help them out in that way. They just do what they got to do. Māori's they're like, 'Are you going to kōhanga? Can you stop in and pick mine up?' (Hilary)

In pointing out the difference in approaches between Pākehā and Māori, George and Hilary are drawing attention to the way that the community's transport decisions are shaped by a desire to maintain a Māori way of doing things, as opposed to a westernised focus on the individual. Not only is the sharing of transport governed by the importance of mana motuhake but so too is their sharing of resources more generally.

### **Conclusion**

The sharing economy is strongly and historically embedded in Te Whānau-ā-Apanui. Here, the sharing of resources between community members is a long-established tradition founded in the Māori world view whereby communal interests are paramount, and this applies to transport as much as to other resources. Shared mobility takes a number of forms, from lending vehicles and sharing car journeys to the provision of

community-based communal transport such as vans for kaumātua and kōhanga reo. The concept of ownership (e.g. of a car) seems to sit in an overlapping space of individual and collective, with non-exclusivity of use being an accepted norm.

In contrast to twenty-first-century collaborative consumption, which focuses on benefits to individuals and to the environment, sharing in Te Whānau-ā-Apanui is primarily undertaken to benefit the community. The population within which sharing occurs does not quite fit with Belk's (2014) notion of 'sharing in', because transport is shared not just with close friends and family, but within the wider social arena of people who are genealogically connected. These relationships may be quite distant, but mutual support and sharing is still a social and cultural imperative.

The adoption of shared mobility practices could be interpreted as simply a way to live within constrained resources; i.e. not many people with full licences, relatively low incomes, long distances to shops and services, and poor roads. It makes financial sense to limit personal expenses by sharing transport. However, this *homo economicus* version falls well short of the full story, with the testimonies of the interviewees and the primary author's auto-ethnography showing that shared mobility is deeply embedded in cultural principles and practices.

Sharing transport reflects whakakotahitanga or unity, by providing community members with an opportunity to spend time on journeys meeting and catching up with friends and relatives who live further away. They not only value their extensive whakapapa or familial relationships but also seek to reinforce these through spending time together and sharing resources, both of which are achieved through car sharing and ride sharing. Being alone when travelling is not considered appropriate, whereas travelling together reflects and reinforces whakakotahitanga.

Shared mobility behaviours are also motivated by māramatanga, building understanding and enlightenment. Travelling together provides an opportunity to share knowledge such as whakapapa and stories, locate these within the landscape and to learn and rehearse waiata with those who are the appropriate recipients of this knowledge within a secure shared environment.

Overall, sharing transport is underpinned by mana motuhake, the desire to retain Te Whānau-ā-Apanui authority and distinctive cultural principles. Sharing mobility is not only a continuation of collaborative practices from the past but also is one way of showing how collective interests are valued over self-interested individuality. By 'doing' mobility in a different way to the majority of Pākehā New Zealanders, Te Whānau-ā-Apanui are staunchly defending their unique values and practices.

We acknowledge that this is a single case study and that further research on other traditional forms of shared mobility is needed, to explore the extent to which these findings are relevant more widely, such as among Māori and other cultural groups that value collective interests. The findings, however, still raise some important considerations.

Firstly, they reveal a positive feedback loop between the economic, social and cultural *drivers* of sharing mobility, and the economic, social and cultural *benefits* thereof. There may be under-explored opportunities to develop and promote shared mobility based on these insights. For instance, which communities might be a good fit for promoting shared mobility based on these characteristics, and how can it be done in a way that ensures health and safety while achieving the benefits?

Secondly, the findings show that sharing mobility is alive and well in more traditional forms. What challenges are faced by those communities that are still using more traditional forms of shared mobility, and how can these challenges be minimised?

Finally, the findings make it clear that sharing transport has more than economic and environmental benefits. The principles and practices of shared mobility in Te Whānau-ā-Apanui may help to inspire innovative approaches elsewhere. We suggest that it is time for the social and cultural benefits of sharing transport to become part of the global narrative on a twenty-first-century collaborative consumption.

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