
THE PRONUNCIATION OF *wh* IN MĀORI:

A CASE STUDY FROM THE LATE NINETEENTH CENTURY¹

Margaret Maclagan: *Department of Speech and Language Therapy, University of Canterbury (Private Bag 4800, Christchurch, NZ.)*

<m.maclagan@sph.canterbury.ac.nz>

Jeanette King: *Department of Māori, University of Canterbury (Private Bag 4800, Christchurch, NZ.) <j.king@canterbury.ac.nz>*

Abstract

This case study presents an analysis of *wh* in the Māori and English speech of one speaker, Raureti Te Huia (RTH), Ngāti Maniapoto and Tūwharetoa, born in Te Awamutu in 1885. RTH is the oldest Māori speaker whose pronunciation has been analysed in this way. The analysis shows that he used four different variants for *wh*, [h], [ϕ], [ʌ] and [f], with [ϕ] being the most common. There is a great deal of variation in his production of *wh*, the same word is pronounced with up to four different variants. In order to evaluate the significance of this case study an analysis of the reasons for the late recognition of *wh* as a phoneme of Māori is presented. The factors considered include dialect variation in the Māori pronunciation of *wh* in the nineteenth century, the influence of the pronunciations of the early missionaries on their ability to hear the sound, and the pronunciation of *wh* in the speech of nineteenth century Pākehā speakers.

1. Introduction

This case study presents an analysis of the pronunciation of *wh* by one nineteenth century Māori speaker, Raureti Te Huia (RTH), who was born in 1885 and recorded by the Mobile Disc Recording Unit of the New Zealand

Broadcasting Service in 1947. We present first a description of the speaker followed by the results of the analysis. The analysis shows that, for this speaker, there was a wider range of pronunciations for *wh* than is currently used or taught. In order to evaluate these results, we then discuss the formation of the Māori alphabet as we know it today, factors which may have impeded the recognition of the Māori phoneme *wh* and the English pronunciation of *wh* by non-Māori living in New Zealand at the time when RTH was born. Reasons for the virtual disappearance of several of the variants found in RTH's speech and the collapse of *wh* pronunciations on the modern [f] majority pronunciation are discussed.

2. The Speaker

The speaker whose pronunciation is analysed in this paper is Raureti Te Huia of Ngāti Maniapoto and Tūwharetoa descent, born in 1885. His father, Te Huia Raureti, fought alongside Rewi Maniapoto at the famous battle of Orakau during the Waikato land wars in the 1860s. Te Huia and RTH were informants for the historian James Cowan, who wrote numerous books and articles, printed from the turn of the 20th century onwards.

RTH had a life-long interest in historical matters. He was secretary for an important hui in 1912 convened to record important historical information from his tribal area and was one of the seventeen founding members of the Te Awamutu Historical Society, formed in February 1935.

RTH was recorded by the Mobile Disc Recording Unit of the New Zealand Broadcasting Service in three recording sessions in Te Awamutu in October 1947. A copy of the recording is held in the Mobile Unit archive in the Department of Linguistics and in the Macmillan Brown Library at the University of Canterbury. In the recording, RTH talks in Māori and then translates into English. Much of the English material actually consists of whakapapa, often with large sections that are almost straight Māori.

Most of the Mobile Unit recordings were undertaken in town halls, with a number of people in the room, and in the presence of recording apparatus which would have been quite unfamiliar to those being recorded. The most usual format was for the interviewer to ask the interviewee a series of questions about their early recollections. Maori informants were asked to talk about various topics in Maori and their translations into English were often interrupted by the interviewer asking questions.

RTH's recordings are different in that at no time did the interviewer feel the need to question or prompt his informant, unlike with other interviewees. RTH's long experience in both the Pākehā and Māori environments would explain his confidence in the recording situation. The fact that there are manuscript copies of much of RTH's recordings² also shows a degree of organisation that was undoubtedly characteristic of the man. For the first recording session there is only one page of manuscript, undoubtedly typed up after the event. RTH prepared himself thoroughly for the two subsequent sessions, bringing along typescripts which he often followed virtually verbatim. However, he never sounds as though he is just reading directly from the page; his speech is fluent and confident, indicating complete knowledge and mastery of his topic.

The manuscripts are largely in Maori, therefore his pronunciation when speaking English cannot be influenced by written conventions. Undoubtedly he used the manuscripts as a prompt for his translation.

3. Methodology

In this paper we discuss the results of an analysis of RTH'S pronunciation of *wh* which is one of the ten consonant phonemes of Māori. The other consonants are /h, k, m, n, p, r, t, w and ŋ/. *Wh* is only one of the sounds we have analysed; the results of the other analyses will be published elsewhere.³ The tape of RTH was analysed auditorily. Both authors analysed the sounds individually and then compared analyses. Where we disagreed, we listened again, and came to a consensus. Because the recording was made in 1947, the sound quality does not match that of modern recordings. Nevertheless, in spite of some background noise, the quality is usually adequate for detailed phonetic analysis. It is usually adequate for distinguishing between [f] and [ɸ], though this is often helped because an example of a Māori [ɸ] and an English [f] are often very close to each other in the English sections of the tape and can therefore be compared. We analysed all of the English recorded on the tapes (38 minutes) and a similar length of the Māori (33 minutes). We found 143 tokens of *wh* in the Māori sections and 84 Māori tokens when RTH is speaking in English. To complement the analysis of sounds in Māori, we also analysed RTH's pronunciation of *wh* (16 tokens) and /f/ (85 tokens) in English words when he was speaking in English.

4. Results

4.1 Overall usage in Māori words

When he is speaking Māori, RTH uses [ϕ], [ɬ], [h] and [f] to realise *wh*. He uses the same set of variants when he is saying Māori words within the English sections of his recording. [ϕ] is by far the most common variant, being used 50% of the time. The other variants are much less frequent: [ɬ] is used 18% of the time and [f] 13%. We found that when the variant [h] is used, the following vowel is usually rounded and approximately [ʊ] in quality, though occasionally it is more open and closer to [ɔ]. [h] followed by a rounded vowel occurred in 16% of the tokens analysed. It probably corresponds to the ‘labialised [h] probably with back of tongue raised’ referred to by Harlow (1979: 126). In the remaining 4% of the tokens [h] was followed by an unrounded vowel. Table 1 and figure 1 separate out the relative frequency of the variants when RTH is speaking Māori and when he uses Māori words in the English sections of the recording. [*h*] *unrounded* indicates that the variant [h] was followed by an unrounded vowel, and [*h*] *rounded* indicates that the [h] was followed by a rounded vowel.

[ϕ] is the most common variant for *wh* when RTH is speaking in both languages. It is slightly more common when he is speaking in English than in Māori. [h] followed by a rounded vowel and [ɬ] are equally common in Māori, whereas [ɬ] is slightly more common in English. [f] reaches 11% when he is speaking in English, and is more common when he is speaking in Māori.

Table 1: RTH’s pronunciation of *wh* in Māori words in both Māori and English speech.

| | MĀORI WORDS IN MĀORI | | MĀORI WORDS IN ENGLISH | | TOTAL |
|---------------|-------------------------|--------|---------------------------|--------|-------|
| [h] unrounded | 6 | (4%) | 2 | (2%) | 8 |
| [h] rounded | 26 | (18%) | 10 | (12%) | 36 |
| [ϕ] | 64 | (45%) | 49 | (58%) | 113 |
| [ɬ] | 26 | (18%) | 14 | (17%) | 40 |
| [f] | 21 | (15%) | 9 | (11%) | 30 |
| Total | 143 | (100%) | 84 | (100%) | 227 |

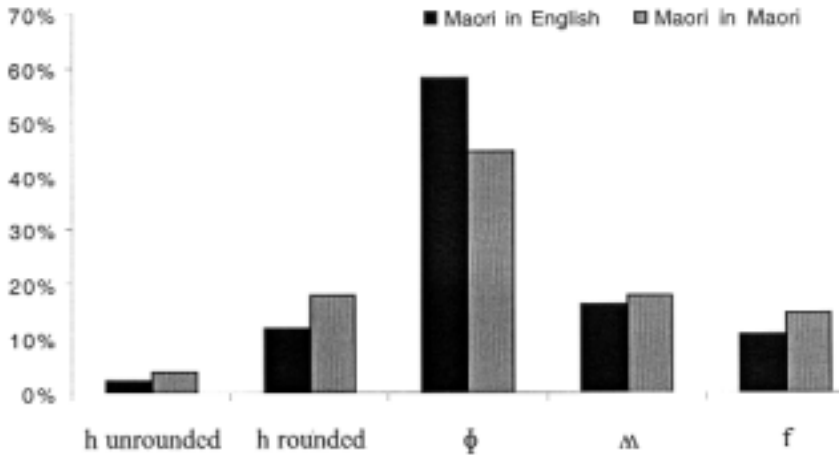


Figure 1: RTH's pronunciation of *wh* in Māori words in Māori and English speech.

[h] followed by an unrounded vowel is extremely uncommon in both language situations. The chi-squared statistic with Yates' correction⁴ shows that there is no significant difference between RTH's usage of the different variants for *wh* in Māori words when he is speaking both in Māori and in English ($\chi^2 = 3.14$, $df = 4$, $p > 0.05$). This indicates that although RTH is basically speaking in English for half of the time analysed, his pronunciation of *wh* in Māori words does not change; the English does not seem to be influencing this particular feature of his Māori pronunciation. Nevertheless figure 1 shows that RTH uses relatively more of the non-English variant [ϕ], and relatively less of the English sounds [h] and [f] in Māori words when he is speaking English than when he is speaking Māori. His Māori pronunciation therefore does not seem to become more English like when he is speaking English, rather the opposite is happening, and he seems to be making his Māori *wh* less like English sounds.

4.2 Usage in English

We only found sixteen tokens of *wh* in English words. For 10 of them, RTH used /w/ as in modern NZE. For the other six, he used [ɰ], including two tokens of *who* which would normally be pronounced with [h]. It is possible that these tokens represent a spelling pronunciation or hypercorrection, however since his notes were entirely in Māori, this is unlikely, especially

since there are 53 other instances of *who* with the expected [h] pronunciation. These results do not indicate any influence from Māori on his English pronunciation of *wh*. We found 85 tokens of /f/ in English words. The majority of them (78, or 92%) were realised as [f]. The remaining seven tokens (8%) were realised as [ϕ], showing a clear influence from Māori on RTH's English for this sound.

4.3 Phonetic context

When we considered phonetic context, we found that the variants of *wh* were not evenly distributed before the vowels. As would be expected, there were no tokens of *wh* before /o/ or /u/ since these combinations do not occur in Māori except for a few words, all transliterations, words phonemically derived from English words (see Ryan 1995: 322). Table 2 shows the distribution of *wh* variants before /a/, /e/ and /i/ when RTH is speaking in Māori and in English.

The chi-squared statistic (with Yates' correction) shows that the variants of *wh* are distributed significantly differently before vowels when RTH is speaking in Māori ($\chi^2 = 29.8$, $df = 8$, $p < 0.005$), but not when he is speaking English ($\chi^2 = 13.6$, $df = 8$, $p > 0.05$). The most obvious asymmetry in the distribution of variants is that [h] appears almost exclusively before /a/. The chi-squared test confirms that this is statistically significant both when RTH is speaking in Māori and when he is speaking in English (for Māori, $\chi^2 = 19.9$, $df = 1$, $p < 0.005$, for English, $\chi^2 = 8.1$, $df = 1$, $p < 0.01$). [h] preceding a rounded vowel appears only before /a/, and [h] preceding an unrounded vowel,

Table 2: Distribution of variants of *wh* before different vowels.

| REALISATION | MĀORI | | | ENGLISH | | | MĀORI TOTAL | ENGLISH TOTAL |
|---------------|-------|-----|-----|---------|-----|-----|----------------|------------------|
| | /a/ | /e/ | /i/ | /a/ | /e/ | /i/ | | |
| [h] unrounded | 5 | 0 | 1 | 1 | 1 | 0 | 7 | 2 |
| [h] rounded | 26 | 0 | 0 | 10 | 0 | 0 | 27 | 10 |
| [ϕ] | 35 | 20 | 9 | 27 | 6 | 16 | 63 | 49 |
| [ʌ] | 8 | 7 | 11 | 3 | 4 | 7 | 26 | 14 |
| [f] | 14 | 4 | 3 | 8 | 1 | 0 | 21 | 9 |
| Total | 88 | 31 | 24 | 49 | 12 | 23 | 143 | 84 |

which is relatively rare, appears six out of eight times before /a/. The use of the glottal fricative [h] before /a/, whether it is realised as a rounded or unrounded relatively back vowel, could reflect phonetic conditioning. However because [h] is not the only variant that appears before /a/, the phonetic conditioning does not create a simple allophonic distribution. For example, the prefix *whaka-* occurred 34 times when RTH was speaking Māori. As expected, it is realised 22 times with [h] and the vowel is rounded. However it is also realised with each of the other variants that RTH uses: once with [h] without the vowel being rounded, four times as [ϕ], three times as [ɮ] and four times as [f]. The variants are not conditioned by preceding context.

[ϕ], [ɮ] and [f] appear before all three vowels. [ɮ] is also significantly more common before /a/ than before other vowels (for Māori, $\chi^2 = 12.7$, $df = 1$, $p < 0.005$, for English, $\chi^2 = 9.4$, $df = 1$, $p < 0.005$). [ϕ] is more common when RTH is speaking in English than in Māori and relatively more common before /i/. The chi-squared statistic shows that the [ϕ] is actually not significantly more common before /i/ (for Māori, $\chi^2 = 0.6$, $df = 1$, $p > 0.5$, for English, $\chi^2 = 1.6$, $df = 1$, $p > 0.05$).

As part of the analysis of phonetic context, we considered position in the word. *wh* appeared 152 times in initial position in the word and 75 times in intervocalic position within the word. The distribution of variants does not differ in these two contexts when RTH is speaking in either language (for Māori, $\chi^2 = 6.9$, $df = 4$, $p > 0.05$, for English, $\chi^2 = 8.3$, $df = 4$, $p > 0.05$). Position in word therefore does not significantly affect the variant of *wh* used.

4.4 Variability

Fifteen words were repeated more than once when RTH was using Māori words in English and 25 words were repeated more than once when he was speaking in Māori. These words are displayed in the Appendix. We found considerable variation within these repeated words. When he was speaking in Māori, the *wh* was realised in different ways in 13 of the 25 repeated words, and when he was using Māori words in English it was realised differently in seven of the fifteen words. From the table in the Appendix it can be seen that *whare*, for example, appeared 19 times when RTH was speaking in Māori. It was realised ten times with [ϕ], eight times with [f] and once with [h] followed by an unrounded vowel. *Whare* was also realised three times with [ϕ] and once with [ɮ] when RTH was speaking English. The name *Uenuku-Tūwhatu* was used three times, each time with a different variant of *wh*: [ϕ], [ɮ] and [h] followed by an unrounded vowel. By contrast, *whetū* appeared 16 times when

he was speaking Māori, and each time it was realised with [ϕ]. There is not a sufficient number of repeated words to be able to ascertain whether any patterns appear as to which variants are more stable or less stable before individual vowels.

5. Discussion

The analysis of RTH has shown that, although [ϕ] was the most common realisation of *wh*, there was a great deal of variability in the pronunciation of *wh* for this particular speaker. In order to evaluate the results of the analysis, and gain an indication of whether or not this might be typical of earlier states of *te reo*, we first discuss the development of the Māori alphabet and factors that impeded the recognition of *wh* as a phoneme. In particular we focus on the effects of variability in the realisation of *wh* by Māori speakers, the choice of *wh* to transcribe the sound and the ability of the early transcribers to hear some of the variants produced. We then discuss the pronunciation of Pākehā speakers during the nineteenth century and the effect this might have had on the realisation of *wh* in Māori before considering the pronunciation of *wh* today.

5.1. Early orthographies

It is usually accepted that, unlike the English alphabet, the Māori alphabet is a good indication of the phonemic contrasts in the language. Until recently, the formation of the Māori alphabet had been attributed to Professor Lee in Oxford with the assistance of Kendall and the Northland chiefs Waikato and Hongi who had travelled to England in 1818 (Biggs 1968: 66, but see Parkinson 2000). However, this alphabet was substantially different from the one we know today as it included letters such as B, D, G, J, L, S, V, X, Y and Z, many apparently for use in borrowed English words (Kendall and Lee 1820: 1). The alphabet we now recognise, without these letters, was stabilised in 1827 and used in the two subsequent publications from the Church Missionary Society Press (*Bible* 1827 and 1830). The notable omission in this alphabet was the digraph WH. However, with both W and H being in the alphabet, their combination was theoretically possible. Nevertheless, in all writing and publications up to and after the Treaty of Waitangi in 1840 this combination was not used.

WH was recognised as a combination in an 1840 Wesleyan mission publication (*Bible* 1840) and consistently from this press at Mangungu from

1841 onwards (H. Williams 1975: 19). Colenso notes that on arriving in New Zealand in 1834 he soon became aware that a new letter was required as ‘w was made to stand and do duty both for its own simple sound of w, and for the more complex one of wh’ (1888: 24). Colenso himself favoured the adoption of the letter *v* to represent the *wh* sound for reasons of ease of printing, the preference for avoiding a digraph, and for consistency with other Polynesian orthographies. Colenso felt that another point in favour of the *v* was that there was a ‘similarity (though distant) in the Māori sound, for which a character is now sought, to the sound of the English “v”’ (1888: 49). Other options canvassed by him included *w* and *f*. But the *wh*, already in use by the Wesleyans, proved resilient, and *wh* was consistently adopted by the Church Missionary Society from 1844 (Porter 1974: 317).

Nevertheless, in the numerous Māori grammars and dictionaries which subsequently appeared, *wh* was not recognised as a separate phoneme and letter in the alphabet until much later. William Williams’ various editions of his dictionary of the Māori language illustrate this gradual change. In the first edition in 1844 he notes that ‘W is pronounced as in *water* or as *wh* in the Irish *what*’ (1844: xi). But he does not use the *wh* digraph in the dictionary, employing an apostrophe to indicate when *w* is sounded as *wh* (1844: vii). Words so distinguished are included with words beginning with W. The second edition of the dictionary in 1852 uses the *wh* digraph but it is not regarded as a separate letter in the alphabet, these words being included under the letter W. The third edition of the dictionary in 1871 recognises *wh* as a separate letter in the alphabet putting these words in their own separate section after words beginning with W (1871).

Thus, while the alphabet was reasonably quickly determined in the years from the first publication of the Māori language in 1815 to its stabilisation in 1827, the perception of *wh* as a distinct sound took much longer. Its recognition as a separate phoneme, or as a single letter of the alphabet, took longer again. This length of time illustrates how difficult it was for missionaries to recognise that they were dealing with a separate phoneme of the Māori language. The two major reasons for this difficulty are probably the variability in the realisation of *wh* in the nineteenth century and its inherent difference from the English spoken by most of those who had contact with the Māori.

5.2 Realisation of wh in the nineteenth century

It has been suggested that the use of the digraph *wh* for what is now pronounced [f] indicates the early missionaries heard the Māori phoneme as

more similar to [ɱ] in *which* than to English /f/ (Harlow 1996: 3), and it is interesting that although Colenso noted that the sound of *wh* was similar to the English *v* (1888: 49) he did not mention it sounding like /f/ though some early spellings with *f* are recorded, at least in the South Island (see Harlow 1987).

As RTH demonstrates, it is likely that there was considerable variation in the pronunciation of *wh* in the nineteenth century. Dunmore (1999) and Bauer (1993) both comment on the difficulty in clarifying Māori pronunciation before European contact. Birth dates are not given for the informants whom Bauer used for her 1993 work, but although it is clear that they were older speakers, it is unlikely that they were born before 1900. Bauer also made use of the cassettes *Ngā Ingoa o Aotearoa* which were recorded by Hugh Young from 1984 to 1993 (Young 1991–1994). Biographical details are not available for the speakers, but again it is unlikely that they were born before 1900. Because RTH was born in 1885, the results presented here, even though they are based on only one speaker, provide data that are earlier than the material so far available.

One way of further clarifying the amount of variation in the pronunciation of *wh* in the nineteenth century is to look at the variability in the pronunciation of this sound today. Both Bauer (1993) and Harlow (1996, 2001) agree that [f] is the most common pronunciation for *wh* in modern Māori. Both also agree that there is still a great deal of variation today. Bauer notes ‘The realisation of orthographic *wh* varies sometimes by dialect, sometimes by speaker, and sometimes varies with a single speaker from one token to another’ (1993: 531). The other pronunciations indicated by Bauer and Harlow are the voiceless bilabial slit fricative [ɸ], the voiceless labial-velar rounded fricative [ɱ], a lip rounded /h/ [h^w] or a lip rounded glottal stop [ʔ^w].

It is also recognised that there is dialectal variation throughout the country today, and probably therefore also during the nineteenth century. In addition to the variants noted above, Bauer notes that [ʔ^w] is used in the Taranaki-Whanganui region and [hw] or [wh] in the far north of Northland, with [wh] usually only being used intervocally before non-rounded vowels (1993: 532). Harlow says that [ʔ^w] is used in parts of the West of the North Island (1996: 2). Overall variability, including dialectal variation, may therefore provide some of the reasons for the difficulty in recognizing and transcribing *wh*.

5.3 Influence of the transcriber

The difficulties faced by early twentieth century English speakers in hearing and analysing *wh* in Māori are highlighted in a letter in *The NZ Journal of*

Education. Commenting on the pronunciation of *Whangarei*, Harold S. Blow says, ‘The first syllable will always remain a stumbling block, for no combination of our letters can express the sound which is a sort of mixture of “phong” and “fwang,” with the addition of a peculiar native twang,’ (1st August, 1913).

If the pronunciations of *wh* heard by the first transcribers of Māori were [ϕ] rather than [f], English speakers would have been presented with a consonant that did not exist in their own language and they would presumably have used the English sound that most resembled it, probably [f]. Had they been working in areas where *wh* was pronounced as [w], then spellings such as *wenua* (=whenua) in the Treaty of Waitangi would make the most sense. However, it seems most likely that the earliest missionaries were working in the far north where the indications are that [hw] or [ʌ] were the earlier pronunciations of *wh*. The missionaries would thus have been presented with a distinction (between /w/ and /ʌ/) that had once been common in English but was declining by the start of the nineteenth century. If the transcribers had merged [ʌ] with [w] in their own speech, we could expect them to transcribe [ʌ] as *w*.

[ʌ] is the traditional English pronunciation of words spelt with *wh* such as *when*, *white*, *whale*. Wells (1982: 228) indicates that the merger with /w/ that is now the norm in English English had taken place by 1800. If this were the case, we would expect that the missionaries who were the first transcribers of the Māori language would not have used [ʌ] in their own speech, and may not have been sensitive to it in the speech of others because speakers who no longer make a phonemic distinction find it difficult to perceive the contrast (see Labov 1994). However the timing of the loss of /ʌ/ in English is disputed, with MacMahon (1998: 467) indicating that although speakers from the lower classes had lost the [ʌ] by 1800, most speakers of educated Southern English retained it until the second half of the nineteenth century. In addition, speakers from Scotland and Ireland, but not from Wales, would have retained the distinction (Wells 1982: 228). We cannot therefore simply argue that none of the early missionaries would have been able to hear the distinction between [w] and [ʌ]; rather we need to look at them as individuals, and to this we now turn.

It appears that very few of the early missionaries, those who arrived in New Zealand before 1830, came from the south of England and, since many of them were lay artisans, few were ‘educated.’ Samuel Marsden, for example, came from Yorkshire and worked in his uncle’s smithy before attending Magdalen College Cambridge. Thomas Kendall came from a farming back-

ground in Lincolnshire and is reported to have retained his Lincolnshire accent throughout his life (Department of Internal Affairs 1990: 224). William Yate who clarified the spelling system devised by Lee but did not recognise *wh* as a phoneme (Parkinson personal communication) was born in Shropshire and apprenticed to a grocer. We would not expect any of these missionaries to have retained the *w/ɹ* distinction in their speech. By contrast, Henry Williams (born in Hampshire in southern England), and his brother William (born in Nottingham in the north) did come from educated backgrounds and may have retained the contrast. None of the early missionaries came from Scotland or Ireland. If they did not make the *w/ɹ* contrast in their own speech, we could expect these early missionaries to use *w* for the [ɹ] pronunciation of *wh* which is the likely variant that was used in the far north of Northland (Bauer 1993) where many of them, including Yate, were working (see Davidson 1991).

However two crucial missionaries may have been able to hear the *w/ɹ* contrast. John Hobbs, a Wesleyan missionary who seems to have introduced the WH spelling into the alphabet in 1841 (Parkinson personal communication), appears to have been reasonably well educated. He came from Kent which is in the south of England and is regarded as a skilful linguist, who eventually spoke nine languages (Department of Internal Affairs 1990: 195). Both his birthplace and his educational level would suggest that he may have made the *w/ɹ* contrast in his own speech and thus been more easily able to hear it in the speech of the Māori with whom he worked (at Wesleydale near Kaeo, in the far north). Robert Maunsell, a Church Missionary Society missionary who arrived in 1835, was born in Ireland and is also likely to have made the *w/ɹ* contrast in his own speech. He also was a respected scholar of the Māori language, and a supporter of the adoption of the WH spelling (Porter 1974: 315 & 318).

A consideration of the probable variation in the pronunciation of *wh* in the nineteenth century together with a consideration of the speech of the early missionary transcribers of *te reo* thus sheds light on the difficulties in recognising *wh* as a phoneme of Māori and including it in alphabets. We turn now to a consideration of the speech of Pākehā New Zealanders at the time when RTH was growing up, in particular their usage of [ɹ] for *wh*.

5.4 /hw/ in Pākehā speech

The earliest English speaker recorded in the Mobile Unit archive was born in 1851 and the youngest English speakers were born just after 1900. The Pākehā speakers in the archive thus give an indication of the extent to which [ɹ] was

used for *wh* by non-Māori speakers in New Zealand during the second half of the nineteenth century.

Approximately half the speakers in the MU archive use [ɥ] at least some of the time and there is a slight increase in its percentage use over time, with those speakers born later using it relatively more often. Speakers in the Mobile Unit who were born in the North Island use [ɥ] less frequently than MU speakers who were born in the South Island (Gordon et al. forthcoming; Sudbury and Hay unpublished ms). Although the [ɥ] usage of speakers in NZ does not relate directly to its usage by the early transcribers of the Māori language, these findings are in accord with MacMahon's indications that [ɥ] was still used by some southern English speakers in the second half of the nineteenth century (MacMahon 1998).⁵ However the relatively low percentage of speakers who actually use [ɥ], together with the fact that even these speakers rarely use [ɥ] in all possible contexts, confirm Wells' contention that the *w/ɥ* phonemic contrast was disappearing from English. It therefore reinforces the probability that many of the early transcribers would have had difficulty in hearing realisations of [ɥ] for *wh* in Māori.

It is also possible that Pākehā may have influenced the use of [ɥ] by Māori speakers. Analysis of the Pākehā speakers in the MU archive shows that by the time RTH was born, [ɥ] usage was increasing slightly in New Zealand. However RTH was born in the North Island where [ɥ] was used less frequently. We can therefore assume that, as he grew up, RTH would have heard [ɥ] used by Pākehā with variable frequency; [ɥ] was not used consistently by all speakers, but it would have been heard considerably more frequently than it is today. While it does not look as though the frequency of [ɥ] usage among Pākehā would have been high enough to have a strong influence on the pronunciation of Māori, its presence in the speech of Pākehā would potentially have supported its use by Māori speakers in both Māori and English. By contrast, there would obviously have been no support for [ϕ] as a pronunciation of *wh* in Māori from speakers of English. There would, however, have been support from English for the use of [f] for *wh* in Māori.

5.5 *The Pronunciation of wh in Māori today*

Although the pronunciation of *wh* as /f/ is widespread today, especially amongst the large number of second language speakers, this is only one of several pronunciations used by native speakers. The pronunciation of the digraph WH is most often taught as /f/, following the language textbook *Te Rangatahi* where learners are advised to pronounce WH like the 'f' in the

word ‘fat’ (Waititi 1962: 169). The *Te Rangatahi* textbook series had a long history of use in schools throughout the country from the early 1960s until surprisingly recent times, and has undoubtedly been of immense influence in indicating Māori pronunciation. Other Māori language textbooks describe variant pronunciations. In *Modern Māori* learners are told that ‘wh’ is usually sounded like ‘f’, but this varies from district to district. ‘Sometimes it is spoken like an ‘h’. ... Sometimes it is spoken like a ‘w’ alone and sometimes like a ‘wh’ in English’ (Ryan 1978: 1). Biggs’ seminal description of Māori grammar (1969: 132) describes the pronunciation of *wh* as being ‘as in ‘whale’ (not ‘wail’), or as f.’ There is therefore much less variability today than is encountered in RTH’s speech.

6. Conclusion

A consideration of the early missionaries who worked with the Māori in the far north of Northland indicated that the first transcribers of Māori were unlikely to make the *w/ɱ* contrast in their own speech or to hear it in the speech of others. If the variant of *wh* they heard was [ɱ], as can still be found in the areas where they worked (Bauer 1993), this would account for the early transcriptions of *w* for the sound. Hobbs, who apparently first used *wh* to transcribe the sound, came from the south of England and Maunsell who supported the introduction of *wh* came from Ireland. Both these men probably used the *w/ɱ* distinction in their own speech and this may well have accounted for their ability to recognise and transcribe the sound. Analysis of Pākehā speakers in the Mobile Unit archive indicated that the [ɱ] pronunciation for *wh* would still have been heard in their speech. This could have supported such a pronunciation for the sound in Māori. Nevertheless none of the Pākehā speakers who have been analysed produced [ɱ] for *wh* in all possible contexts, indicating that its use was declining, especially in the North Island.

Analysis of *wh* in the speech of RTH, a Māori speaker born in Te Awamutu in 1885, shows that the most common pronunciation for RTH is [ϕ] rather than the [ɱ] suggested by the modern spelling. However [ϕ] accounts for only 50% of the *wh* productions analysed. There is a great deal of variation in RTH’s speech, with [ϕ], [ɱ], [h] and [f] all being used as realisations of *wh*. The analysis clearly supports Bauer’s statement that the pronunciation of *wh* ‘sometimes varies with a single speaker from one token to another’ (1993: 531). Not only does RTH vary his pronunciation of *wh* from word to word, but

he is not consistent in the production of individual words. More than half of the words RTH repeated in the recording did not have consistent realisations of *wh*. The analysis also shows that the most common modern pronunciation of *wh*, [f], is relatively rare in his speech, only reaching 13% of the total number of productions analysed. However RTH's most common realisation of *wh* [ϕ], could easily have been heard as [f] by English listeners for whom it was not a phoneme, and thus provided support for the modern pronunciation. RTH's pronunciation of *wh* does not provide support for the suggestion that early speakers produced a sound that was more like [ɰ] (Harlow 1996). This, however, may well be due to dialectal variations.

Even though this case study is based on a single person, it demonstrates that there have undoubtedly been a number of realisations of the *wh* phoneme in Māori. It also shows that for the speaker studied, the modern [f] realisation was in fact not the most predominant. Further analysis of other MU Māori speakers will help to determine whether the preference indicated by RTH is true for speakers from other areas. The virtual disappearance of these pronunciations in modern Māori, especially in the teaching situation and amongst second language speakers, reflects a common effect in situations where a number of variants exists for a particular phoneme, especially in language or dialect contact situations. In such situations, the variants tend to focus and coalesce on one realisation (see Le Page and Tabouret-Keller 1985: 181-182; Trudgill 1986. See Britain 2002: 22 for an example of loss of variant pronunciations of individual items). Undoubtedly this process has been occurring at least since the arrival of the missionaries, and has probably been accelerated in recent years with the pronunciation explanations in language textbooks such as *Te Rangatahi*. Having just one realisation for each phoneme and its corresponding letter of the alphabet is much more convenient for teachers, especially when the phoneme chosen already exists in the learners' native English.

Notes

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- 2 Te Awamutu District Museum, archive 3462.
- 3 Preliminary results on the aspiration of RTH's stop consonants were presented at the conference of the Linguistics Society of New Zealand (King and Maclagan

2001) and at New Ways of Analysing Variation in Language (Maclagan and King 2001).

- 4 Yates' correction for continuity was used for all chi-squared calculations where the expected values were low (see Portney and Watkins 2000).
- 5 Evidence from the Origins of New Zealand English Project (ONZE) indicates that the majority of early New Zealand immigrants came from the south of England (see Gordon et al. forthcoming).

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Appendix: Realisation of wh in repeated words

| | [h] unrounded | [h] rounded | [ϕ] | [ʌ] | [f] |
|-----------------------|------------------|----------------|-----|-----|-----|
| Speaking Māori | | | | | |
| Tawhana | | | 2 | 2 | |
| Tāwhiao | | | 1 | 1 | 1 |
| Tāwhiri-mātea | 1 | | 3 | | |
| Tūwharetoa | 1 | 2 | 1 | 2 | |
| Uenuku-Tūwhatu | 1 | | 1 | 1 | |
| whā | | | 3 | | |
| whai | | | 2 | | |
| whakaaro | | 2 | | 1 | |
| whakahaere | | 1 | | | 1 |
| whakairo | | 2 | | | |
| whakapākanga | | 2 | | | |
| whakapapa | | | 2 | | |
| whakarito | | 2 | | | |
| whakaruru | | 2 | | | |
| whakatupu | | 3 | | | |
| whakatupuranga | 1 | | | 1 | |
| whare | 1 | | 10 | | 8 |
| whariki | | | 1 | | 2 |
| whatu | | | 5 | | |
| whea | | | 2 | 2 | |
| whenua | | | 2 | 1 | 1 |
| whero | | | | | 2 |
| whetū | | | 16 | | |
| whiriwhiri | | | | 4 | |

| | [h] unrounded | [h] rounded | [ϕ] | [ʍ] | [f] |
|-------------------------|------------------|----------------|-----|-----|-----|
| Speaking English | | | | | |
| Kawhia | | | 4 | | |
| Rangawhana | | | | 3 | |
| Tāwhaki | 1 | 3 | 2 | | 1 |
| Tawhana | | | | 1 | 1 |
| Tāwhiao | | | 1 | 2 | |
| Tāwhiri-mātea | | | 3 | | |
| Tawhito | | | 2 | | |
| Tūwharetoa | | | 2 | 1 | 2 |
| whaeapare | | | 2 | | |
| whakaotirangi | | | 1 | | 1 |
| whakarito | | 1 | 1 | | |
| whakaruru | | 2 | | | |
| whare | | | 3 | 1 | |
| whati | | | 4 | | |
| whero | | | 2 | | |

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