

Language exposure and the development of a proto-lexicon

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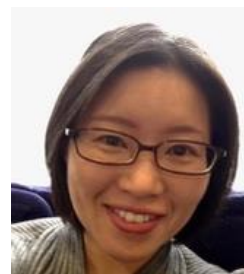
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Background



- Population of 5.7 million
- 15% Māori
- Official languages: English, Māori, NZ Sign Language

Te reo Māori in Aotearoa New Zealand

Revitalization efforts

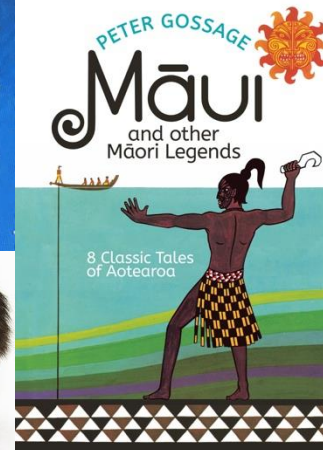
Widespread in culture

- Rituals / ceremonies
- Books / TV / music
- News
- Place names
- Loanwords
- Greetings



**KIA KAHA
TE REO MĀORI**

TE WIKI O TE REO MĀORI
14-20 MAHURU 2020

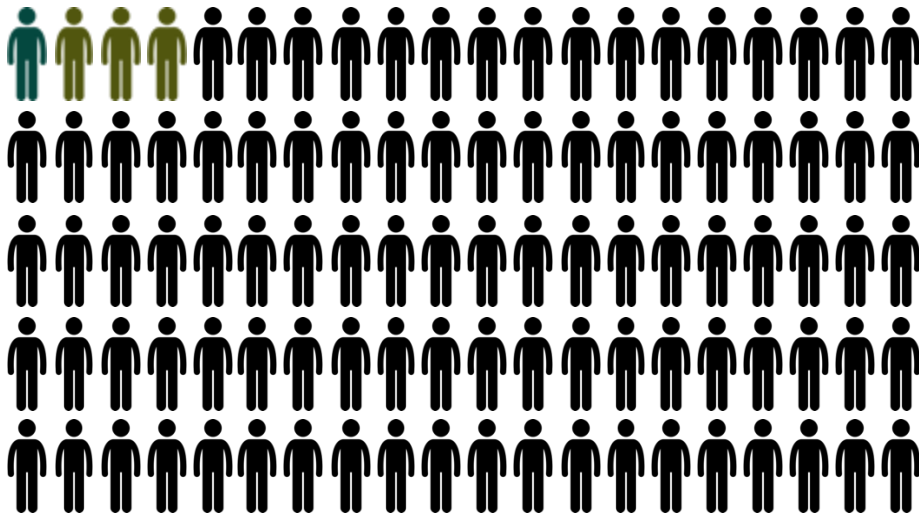


Te reo Māori in Aotearoa New Zealand

Most NZers have very little explicit knowledge of Māori

1% can speak Māori **proficiently**

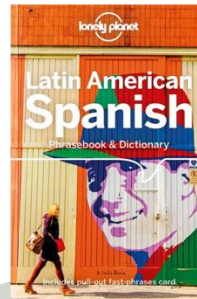
+2.7% can hold a **basic conversation**



Everyone else?

Typically knows the meaning of only **70-80** extremely common Māori words (Macalister 2004)

What does it mean to “know” a language?



Sounds
of the
language

Words,
but not
meanings

Meaning
of some
words /
phrases

Can express
/ understand
anything

Explicit

Implicit

Phonotactics

How sounds get sequenced into words

What are possible and impossible words in a language

✓ **blisk**

✗ **bnisk**

What makes a (possible) word “sound good” for a language

clenk

>

shishosh

Phonotactic knowledge

What if you don't explicitly know many words at all?

Young children are sensitive
➔ to phonotactic “goodness”

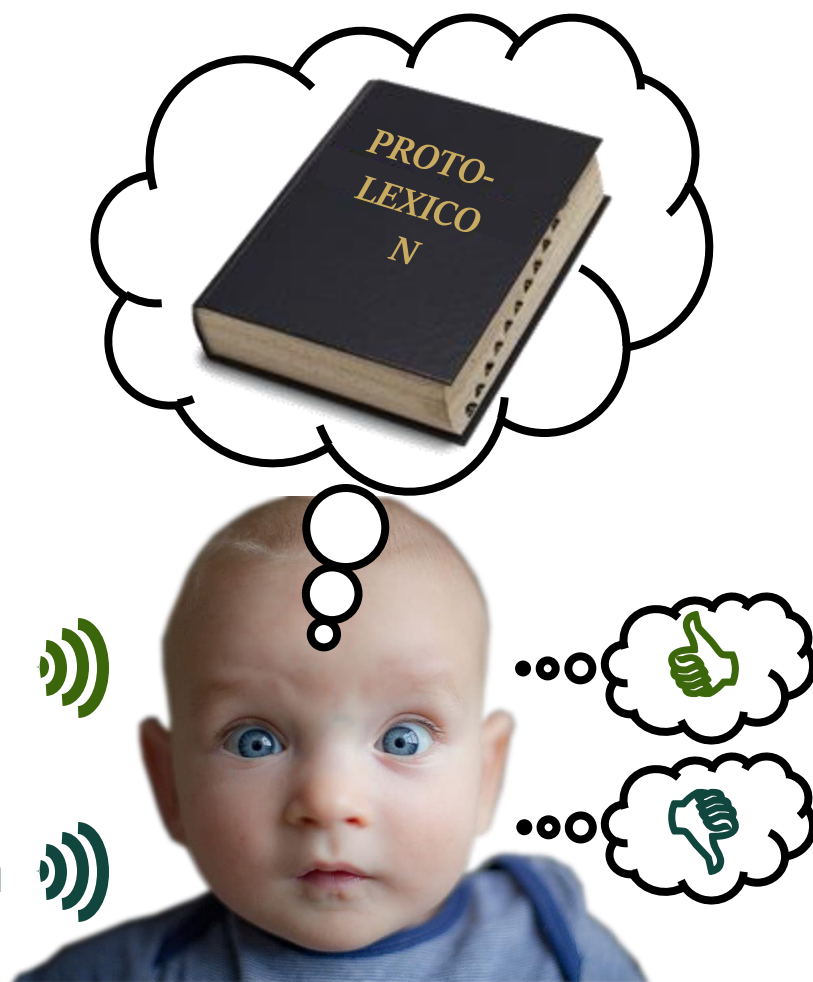
Proto-lexicon:

implicit knowledge of
words, without meaning

clenk



shishosh



Lexicon

① **ability** /ə'bilɪti/ *noun* 1. the force or capacity to do something ○ *She has many abilities but singing isn't one of them.* (NOTE: The plural in this meaning is **abilities**.) □ *I'll do it to the best of my ability* I'll do it as well as I can 2. the fact of being clever ○ *a person of great or outstanding ability*

abject /'æbdʒekt/ *adj (formal)* 1. very bad ○ *abject poverty* 2. making you feel ashamed ○ *an abject apology* ○ *abject terror*

ablaze /ə'bleɪz/ *adv* 1. on fire ○ *Thirty hectares of trees were ablaze.* 2. shining brightly ○ *At midnight the house was still ablaze with lights.*

① **able** /'eɪb(ə)l/ *adj* 1. (NOTE: In this sense, **able** is only used with **to** and a verb.) □ *to be able to do something* to be capable of something or have the chance to do something ○ *They weren't able to find the house.* □ *will you be able to come to the meeting?* can you come to the meeting? 2. being strong enough or clever enough to do something ○ *He's a very able general.*

Proto-lexicon

ability

abject

ablaze

able

Experiments

Experiment 1: phonotactic rating

Do non-Māori-speaking NZers have phonotactic knowledge of Māori?

hino

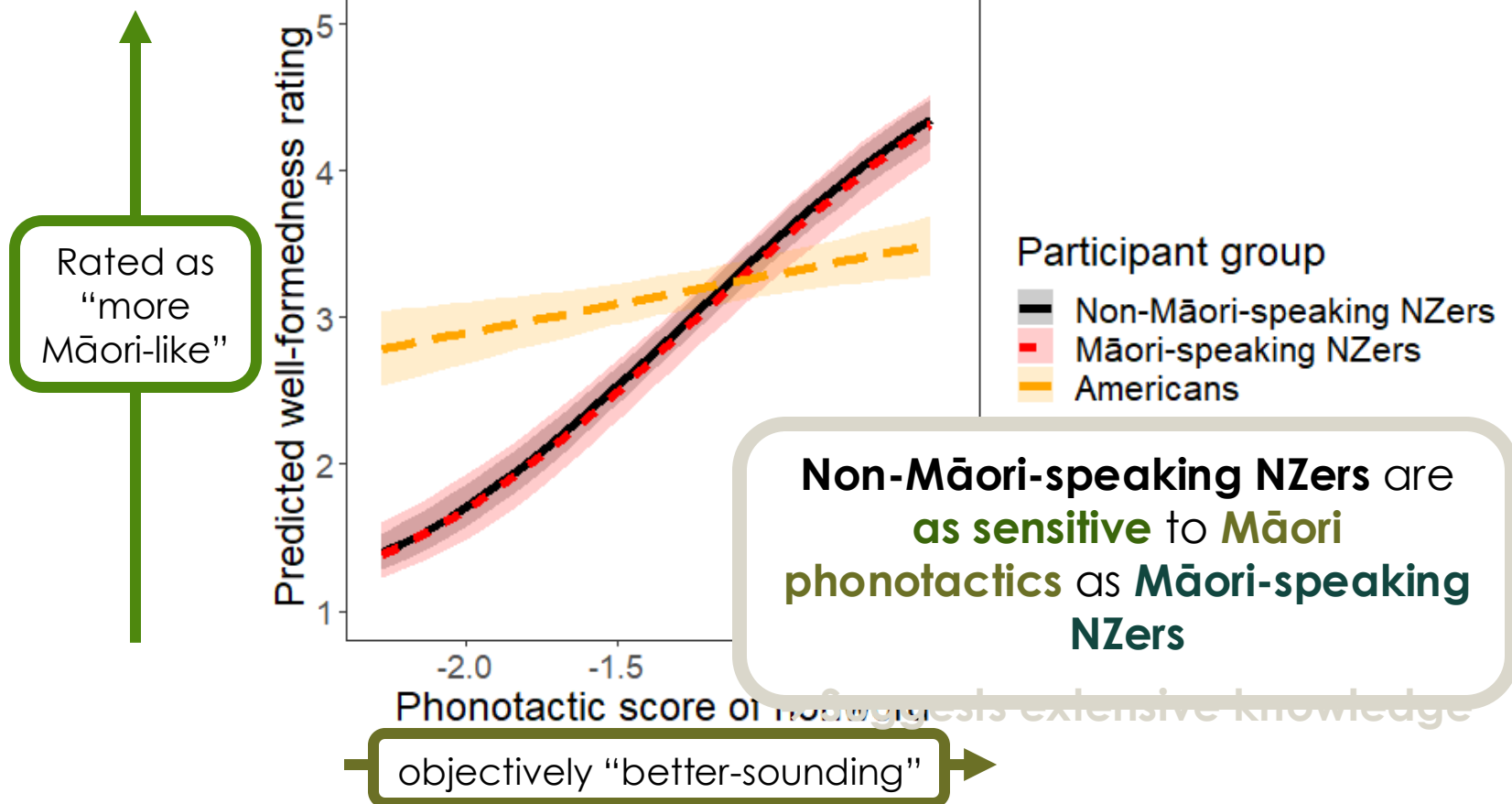
Non Māori-like non-word

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Highly Māori-like non-word

Next ▶

Experiment 1: phonotactic rating



Experiment 2: word identification

Can they tell real Māori words from non-words?

tāne

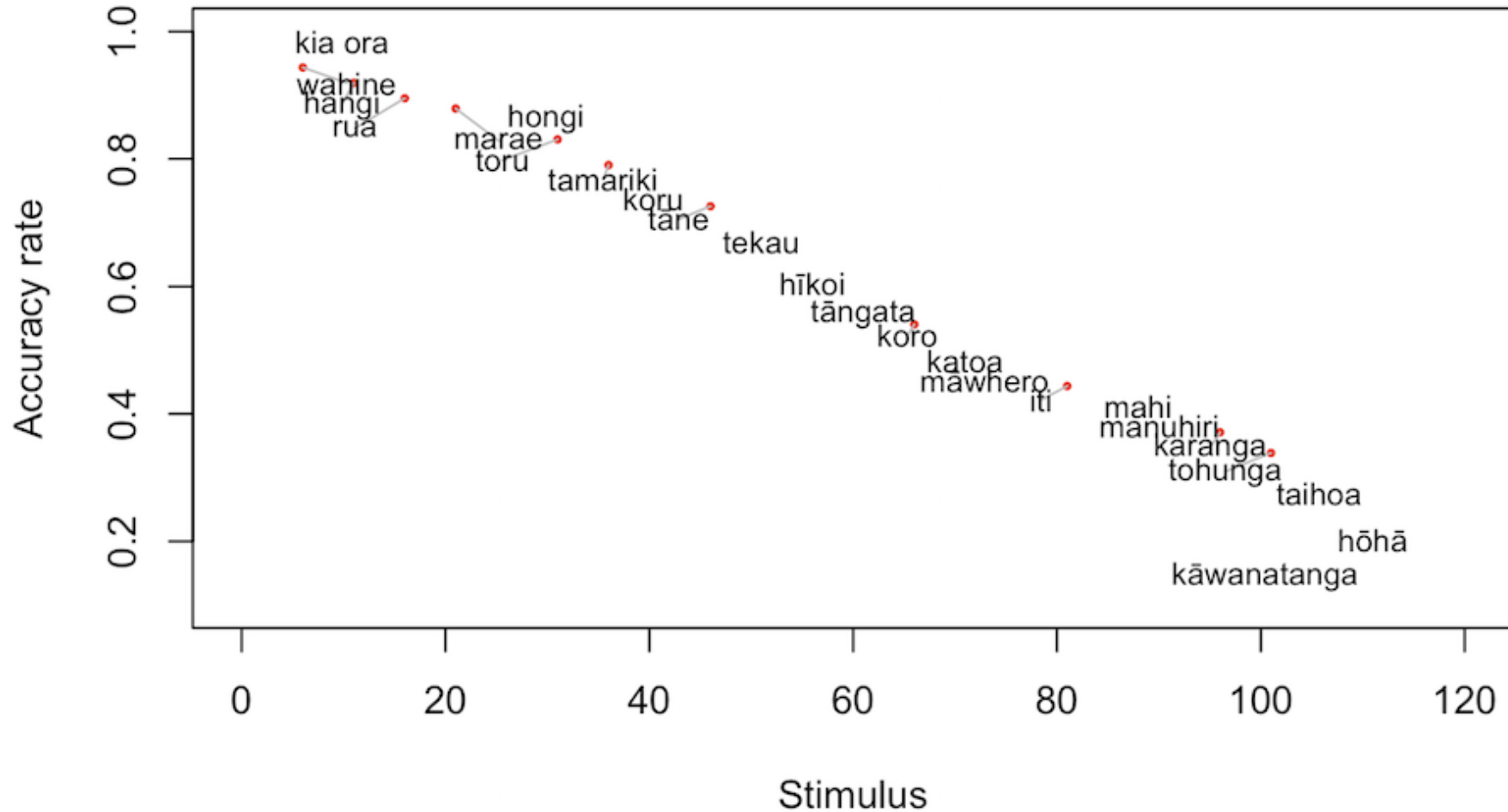
Confident that this is NOT a Māori word ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Confident that this IS a Māori word

Next ▶

Oh et al. 2020

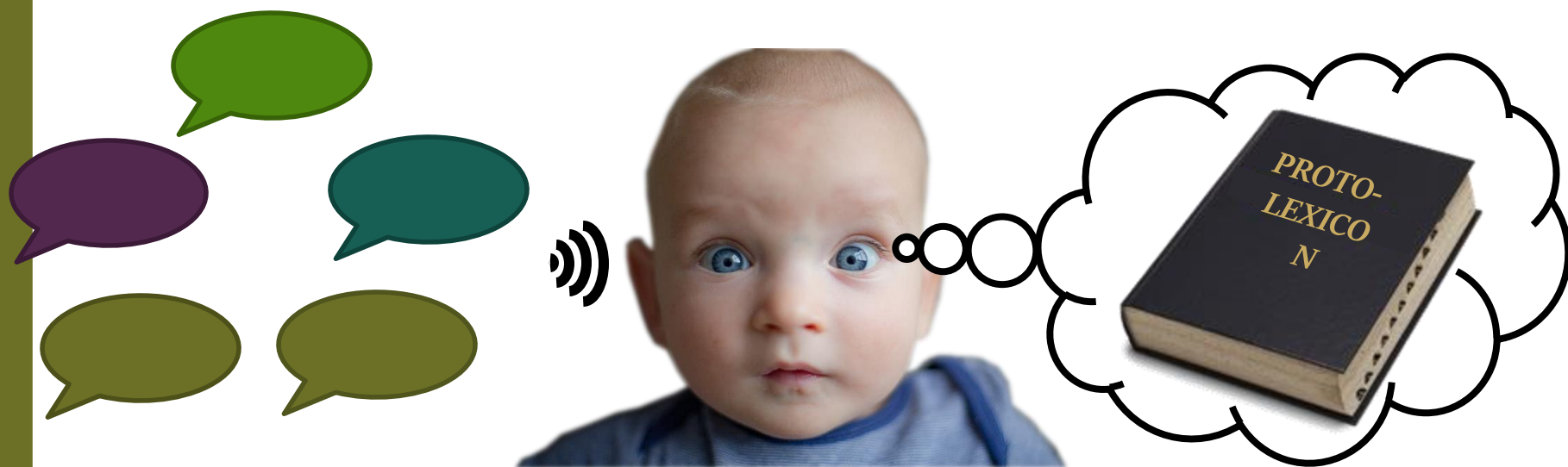
Experiment: Māori word definition task



Building phonotactic knowledge

Where does the proto-lexicon come from?

Listening to language in the ambient environment



Awakening the Proto-lexicon L2 implications

Conversational Māori for beginners course

- Taught at University of Canterbury
- Taught three times per year
- Over 240 students take the course
- Participants tested on vocabulary knowledge:
 - Before course starts
 - At end of course
 - Four months after the course concludes



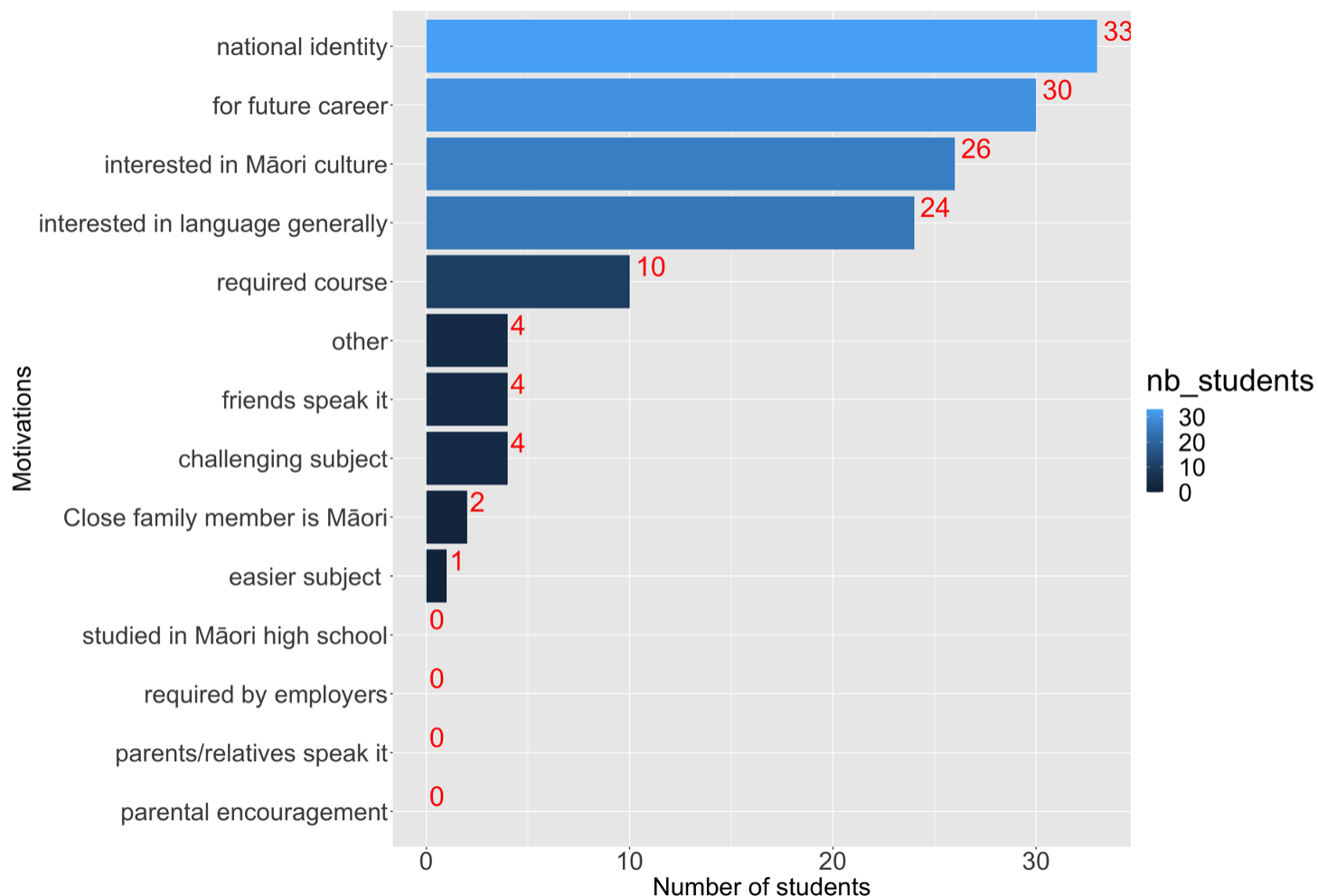
Unaiki Melrose

Participants (n=35)

- Mostly female (30)
- Mostly 18-24 years old (27)
- Most are first language speakers of English (32)
- Most born in New Zealand (31)
- Majority have lived in NZ since aged 7 (23)
- Majority have never learned Māori before (21)
- Most claim low levels of knowledge or exposure to Māori

Motivations for learning Māori

(Students were allowed to select multiple answers)



Tasks

1. Well-formedness task
2. Word-identification task
3. Word definition task

Well-formedness Task (60 non-words)

wetua

Non Māori-like non-word ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Highly Māori-like non-word

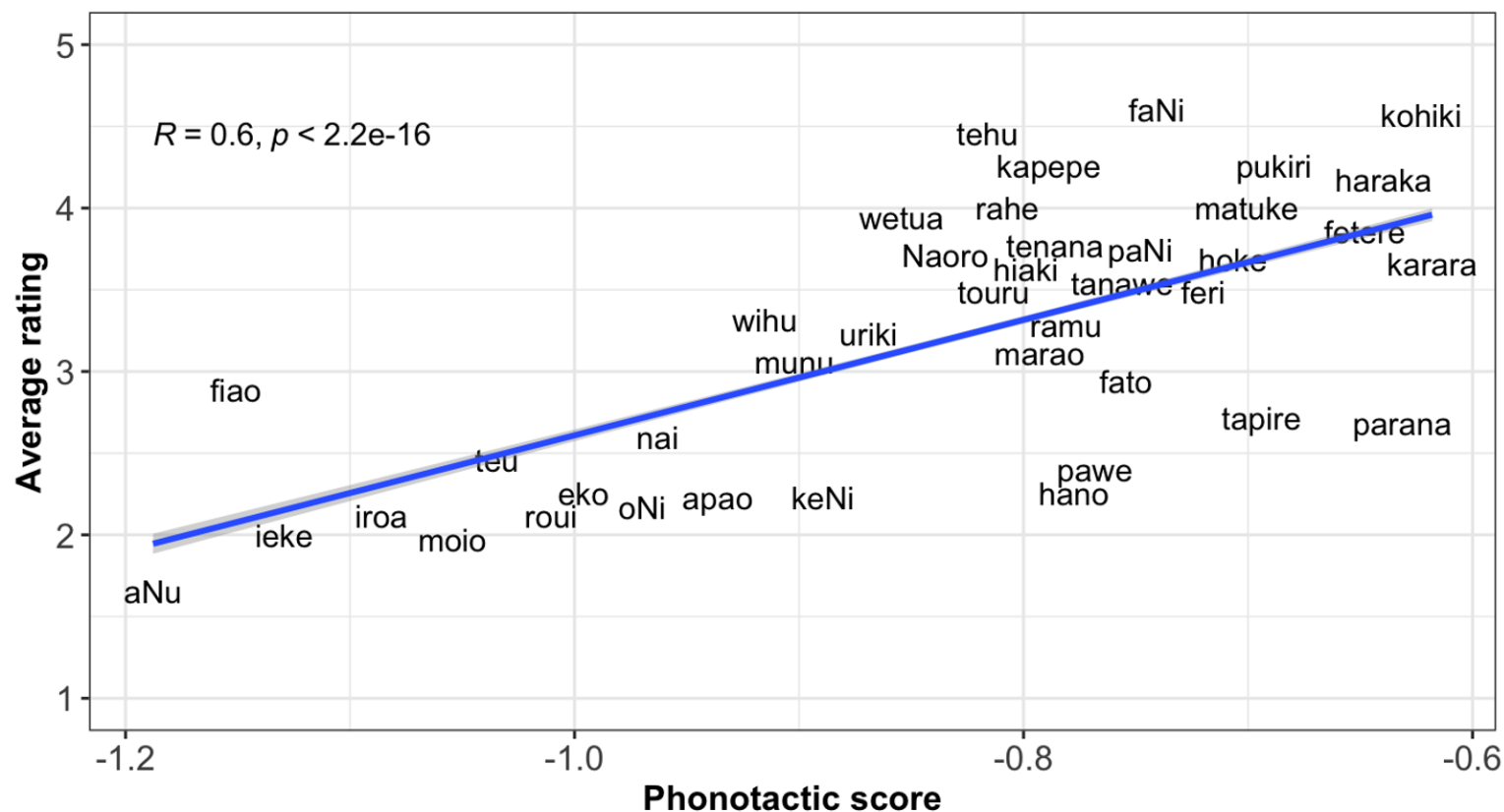
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Well-formedness task

Mean wordlikeness rating per item vs. phonotactics

S2_2021



Word-identification Task

(30 **word/nonword** pairs)

tuku

Confident that this is NOT a Māori word ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Confident that this IS a Māori word

Next ▶

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Word-identification task

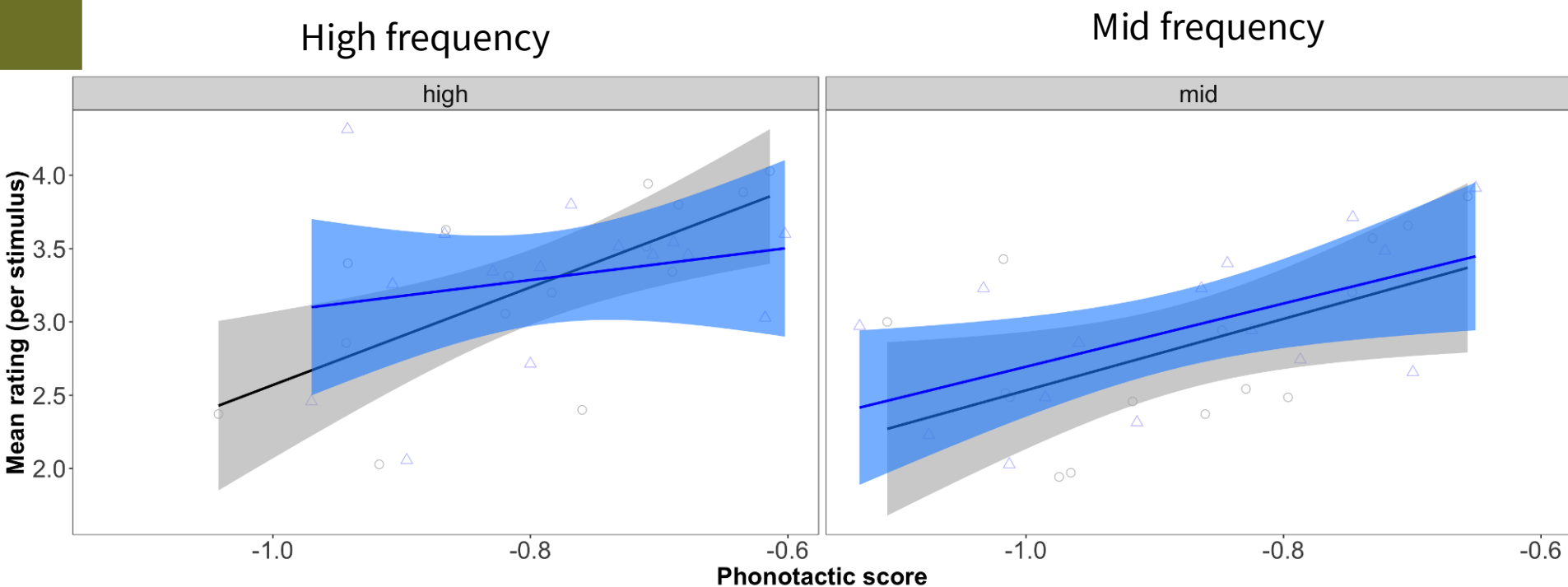


Figure 2: Mean confidence rating vs. phonotactic score for each stimulus for real words and nonwords by frequency bin. Lines show correlations within each bin, for each stimulus type.

Blue = real words

Grey = matched non-words

Word-definition Task (87 words)

tama

Provide the definition of Māori word. If you don't know the answer, please type 'NA'.

Type response here

How confident are you with your definition? If you typed 'NA', please click '1'.

Not sure ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 Very confident

Next ►

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Most responses (82%) were NA

Only 7 % of responses provided a correct definition

Summary

- Further data to come
- Also online experiments
- Results have implications for L2 learning
- Sister project to determine whether you need to have lived as a child in New Zealand to develop a Māori proto-lexicon

References

- Macalister, J. (2004). A survey of Māori word knowledge. *English Aotearoa*, 52, 69–73.
- Oh, Y., Todd, S., Beckner, C., Hay, J., King, J., & Needle, J. (2020). Non-Māori-speaking New Zealanders have a Māori protolexicon. *Scientific reports*, 10(1), 1–9.